



Seed Banking throughout Australia in support of Target 8 and 9 of the GSPC

Damian Wrigley
National Coordinator
August 2018



Our vision is a future where native plant diversity is valued, understood and conserved for the benefit of all.

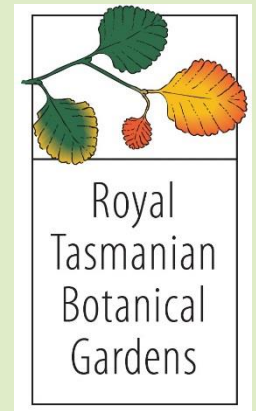


Lesley Hammersley, BGPA

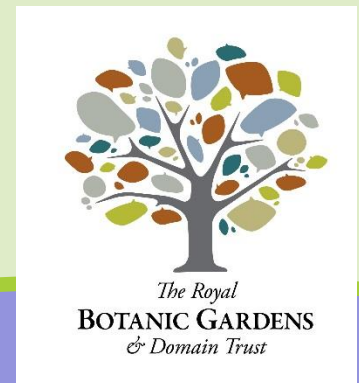


- The Council of Heads of Australian Botanic Gardens Inc.
- Not for profit organisation
- Business Plan 2011-2020
- National Steering Committee
- National Coordinator





Our Partners

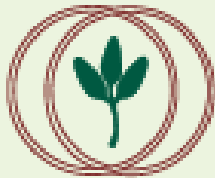




MILLENNIUM
SEED BANK
PARTNERSHIP



Our Partners



Australian Network for
Plant Conservation Inc





Centre for Australian
National Biodiversity Research



Our Associates



Australian Government

Department of the Environment and Energy

Business Plan 2011-2010



Acradenia frankliniae, RTBG

- Aligned with the targets of the Global Strategy for Plant Conservation
- Standard seed conservation approach across the states, territories and Australian Government
- Five Goals
- Four Key Projects

Our Goals

1. Collecting and storing seed
2. Conducting research
3. Developing national standards



Sclerolaena fontinalis, BGSB



Our Goals

4. Sharing knowledge and engaging the public
5. Securing and strategically managing our resources



Plectranthus acariformis, BBG

1000 Species Project

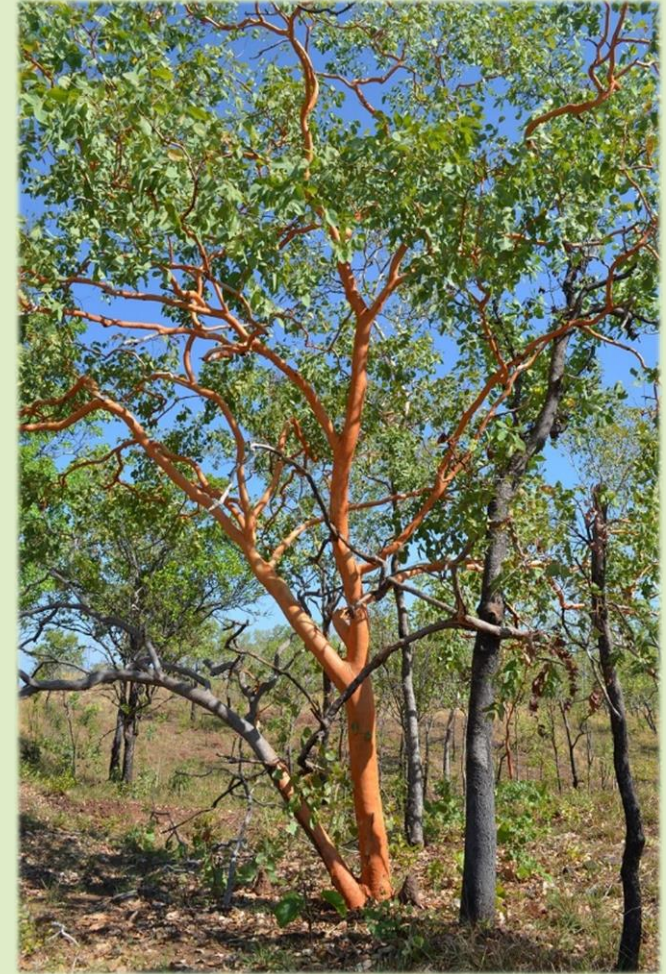
- Endemic, Endangered or Economically significant – Approx. 800 species
- Improving genetic diversity of collections
- Over 20,300 collections of 13,000 unique taxa. Over half of the known species.



Banksia verticillate, DBCA

Global Trees Seed Bank Project

- Support from the Garfield Weston Foundation, through the MSBP, Kew
- 380 species over three years that are new to Kew. Over 340 collected.
- 2018-2019 – Targeting up to 100 additional collections.



Eucalyptus tintinnans, GBDBG

Phytophthora cinnamomi

- Genetically diverse collections from species impacted by *P. cinnamomi*
- Collecting in four states
- Secured 60 collections of 27 taxa
- Seed orcharding and restoration



Prosanthera eurybioides, BGS

Restoring Diversity

- All collections are tested for viability & most are available for research or restoration.
- Collaborations with NGOs, Universities and business to restore degraded lands



A diversity of annuals near Ninghan, WA, BGPA

Crop Wild Relatives



Kakadu National Park collecting team, Shiona MacDonald, KNP

- 15 collections of 12 taxa
- *Cajanus*, *Glycine*, *Oryza*, *Sorghum* & *Vigna*
- Training & capacity building
- Wet season & cultural considerations



Fanny Karouta-Manasse, ANBG

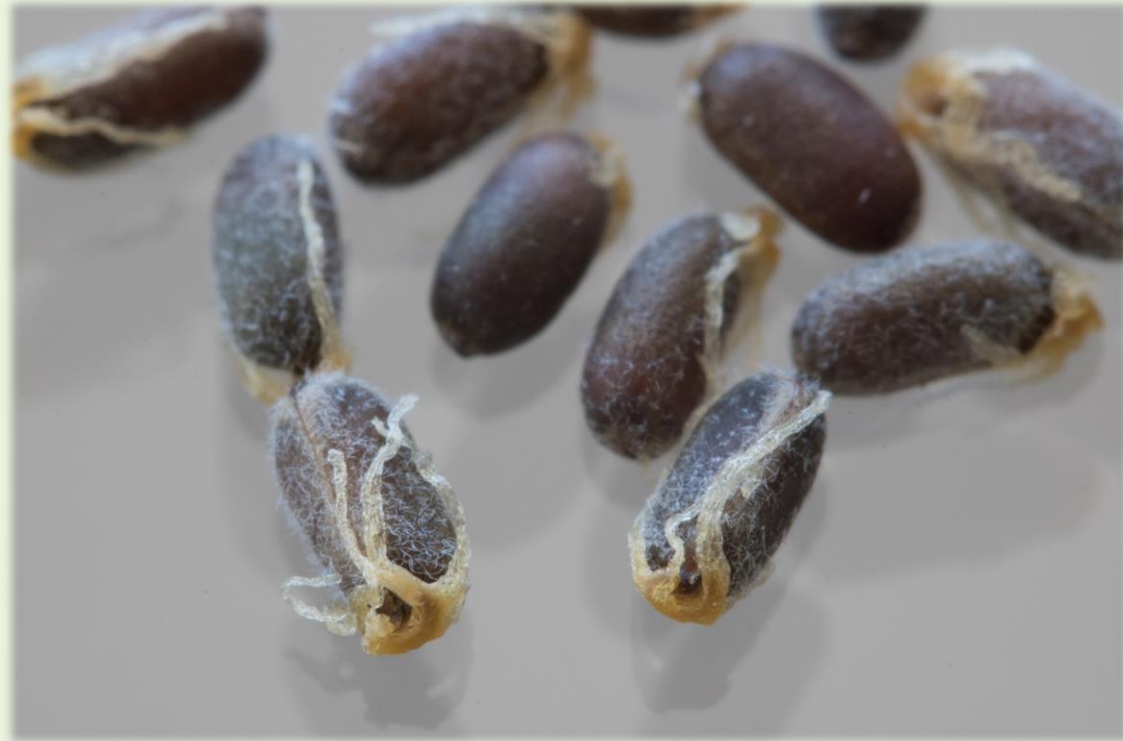


Sally Norton, AGG

MSBP Seed Conservation Standards



Science and Research



Lasiopetalum moullean, Dr Andrew Crawford,
DBCA

- National Seed Science Forum synthesis
- Saving rainforest seeds of S.Pacific
- Seed dormancy and germination
- Seed based tech for restoration
- Understanding and responding to weed invasions

Sharing Knowledge

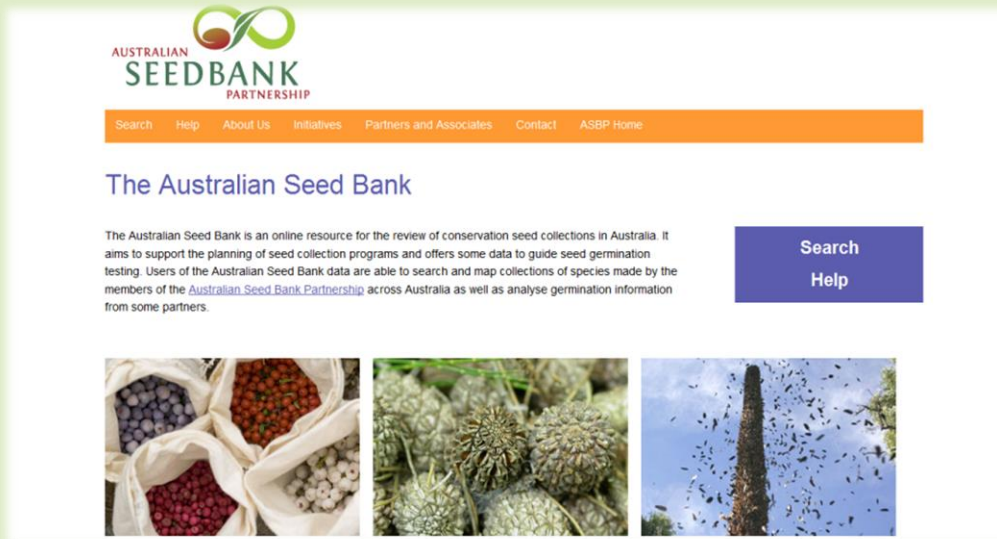
Seed conservation techniques training
New Zealand – Dec 2017 – BBG and RBGDT



Wellington and Auckland Seed Conservation Techniques Training. Image: MSBP

Australian Seed Bank online

- Open access
- Seed collections data




AUSTRALIAN SEEDBANK PARTNERSHIP

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The Australian Seed Bank

The Australian Seed Bank is an online resource for the review of conservation seed collections in Australia. It aims to support the planning of seed collection programs and offers some data to guide seed germination testing. Users of the Australian Seed Bank data are able to search and map collections of species made by the members of the [Australian Seed Bank Partnership](#) across Australia as well as analyse germination information from some partners.

Search Help



- Germination protocols under development

Plants on the Precipice



Collecting *Ranunculus anemoneus* from Mt Kosciusko, RBGDT

- Alpine and Montane
- Biodiversity Hotspots
- Coastal and Lowlands



Safeguarding Australia's Flora through a national network of native plant seed banks

2016 17 ANNUAL REPORT

safeguarding Australia's flora

Annual Report 2016-2017

Available on the ASBP website

www.seedpartnership.org.au/about/reports



WHO WE ARE

The Australian Seed Bank Partnership is a national collaboration of nine conservation seed banks and two flora research organisations. The Partnership bridges the gap between policy makers, researchers and the conservation and restoration sectors to help safeguard Australian plant populations and communities.

Seed banking is the principal tool for the safe and efficient storage of wild plant genetic material. A sound understanding of seed harvest, storage and germination is crucial to combining the global discipline of plant diversity together, these seed collections and the understanding of seed technology underpin our efforts to protect and restore natural ecosystems. Our Partners generously provide resources and knowledge that support the management of plant species and communities, and our collaborative efforts offer insurance against further loss.



Anna Cookson and Andrew Crawford give an early morning tour of our facilities here in the Seed Centre at Park Nature Day their knowledge of seed banking and conservation will be shared with the public. The team are an excellent example of the different disciplines in seed banking, offering inspiring mentoring to other seed banks throughout the country.



Seed collectors at the Australian Seedbank make their first collection of *Phoradendron mitchellii* (South Mitchellia). Collecting and conserving seed is essential to be prepared for the opportunity to do research that can help to restore the resilience of conservation efforts.

Our nationally cooperative initiatives focus on seed banking research, knowledge sharing and capacity building. We follow internationally recognised protocols for collecting environmental data crucial to our role in plant conservation, and make it openly available through the Australian Seed Bank online. Our research is vital in establishing germination protocols and in building the knowledge that helps practitioners restore plant communities throughout Australia's diverse landscapes. Our Partners have discovered and rediscovered species previously unknown populations, and rediscovered species previously thought to be extinct. We share our knowledge and skills, collectively manage, and develop, our regional expertise to optimise the effective use of our resources.

Our Vision

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

Our Mission

A national effort to conserve Australia's native plant diversity through collaborative and sustainable seed banking, research and knowledge sharing.

CONTENTS

- Letter from the Chair
- Letter from the National Coordinator
- Profiles of Our People
- Who We Are
- Australian Seed Bank Partnership Highlights for 2016-17
- Goals and Achievements
- Achievements around Australia towards our 1000 Species target
- Future Directions
- How You Can Help
- Annual Financial Report for the year ending 30 June 2017
- Governance of the Australian Seed Bank Partnership
- Thank You - Supporters and Associates
- Partner organisations of the Australian Seed Bank Partnership

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Abbrreviations
Australian National Botanic Gardens (ANBG)
Australian National Herbarium (ANH)
Bendigo Botanic Gardens (BBG)
Botanic Gardens and State Herbarium of South Australia (BSHA)
Botanic Gardens and State Herbarium of Queensland (BSHQ)
Botanic Gardens and State Herbarium of Western Australia (BSWA)
Georgiana Botanic Gardens and Domain Trust (GBGD)
Royal Botanic Gardens and Domain Trust (RBGD)
Royal Botanic Gardens, New South Wales (RBG NSW)
Royal Botanic Gardens, Victoria (RBG VIC)
Royal Botanic Gardens, Tasmania (RBG TAS)
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The Council of Heads of Australian Botanic Gardens Incorporated
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The Australian Seed Bank Partnership | Annual Report 2016-17

Aboriginal Parkkeeper (Parks and Wildlife) National Park, (Parks and Wildlife) National Park, (Parks and Wildlife) National Park

Seed Science Forum 2020

Australian SEEDBANK PARTNERSHIP

National Seed Science Forum 2016

14-16 March 2016 | Australian Botanic Gardens, Mount Annan, NSW

Forum themes Programme Registration Photo Competition Accommodation Travel and transportation Contact

Programme and keynote speakers

2 April 2015 - 3:39pm — asdp

Forum Programme

The Scientific Programme Committee is pleased to announce the presentations forming part of the National Seed Science Forum.

There is an exciting line-up of Australian and international keynote speakers, research presentations, panel discussions, poster and rapid fire presentations. The Programme also includes opportunities for early career researchers in seed science to showcase their work.

A draft copy of the complete Forum programme is now available in [pdf format](#).

Key themes to be explored at the conference include:

- Dormancy and germination
- Seed storage, conservation and utilisation
- Establishment and management
- Seed ecology

Keynote Speakers

- Dr Christina Walters** (Research Leader in Plant Germplasm Preservation Research at the National Center for Genetic Resources Preservation in the United States) - Christina is best known for her innovative studies of seed storage physiology and its application to ex situ conservation of genetic resources for diverse plant species. Dr. Walters' work stimulated a major debate about how to maximize seed longevity and economize on the costs of storage conditions adequate for short and long-term purposes. As a direct result of her research, the global standards for seed banking genetic resources for food and agriculture were recently updated. 
- Professor Kingsley Dixon** is Curtin Professor at Kings Park and Botanic Garden and a research scientist who has specialised in conservation and restoration of species and ecosystems with a current focus on implementing 





Hosted by Australian National Botanic Gardens

National and International seed scientists

www.seedpartnership.org.au



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