



Botanic Gardens and State Herbarium

Highlights Report 2017-2018



SOUTH
AUSTRALIA



Government of
South Australia



Board of the
Botanic Gardens and
State Herbarium





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Reconciliation statement

The Board of the Botanic Gardens and State Herbarium recognise South Australia's Aboriginal people as the traditional custodians of the State's lands, water, plants and animals – commonly known as Country.

We observe that Country is central to the social, cultural and spiritual lives of Aboriginal people.

We will build respectful and honest relationships through our work and develop a better awareness of Aboriginal history, knowledge and culture.



Message from the Chair

The work of the Botanic Gardens and State Herbarium is diverse and I am pleased to introduce our first Highlights Report, showcasing a selection of our achievements over 2017-18, which have helped us to deliver priorities in the Board's Strategic Plan. Here's a preview:

- The growing visitor numbers reflect the increasing importance of the Botanic Gardens of South Australia to our community. Mount Lofty and Wittunga Botanic Gardens have attracted more visitors and the Santos Museum of Economic Botany achieved record visitation.
- Mount Lofty Botanic Gardens and the Friends of the Botanic Gardens had their 40th birthday. This was celebrated via a community event and a special programme of garden experiences for our Friends.
- The South Australian Seed Conservation Centre continues to play a vital role in safeguarding all South Australia's threatened species. It preserves 3000 species, 78% of our State's threatened plants.
- Our Plant Nursery propagated thousands of plants this year to support our living collections succession planning efforts and the children's programme taught in the Little Sprouts Kitchen Garden.
- We convened the Plant Systematics Conference in partnership with the University of Adelaide and convened and hosted the 8th Congress of the Botanic Gardens of Australia and New Zealand Inc. This gave us an opportunity to showcase South Australia and our

scientific, horticultural and education efforts to a diverse range of colleagues, students and like-minded institutions.

- The BGSB staff work in partnership with the arts and cultural sector to create an exciting exhibition programme. By accessing our diverse collections, artists are able to explore and question the collections and create inspirational works that are curated and presented at the Santos Museum of Economic Botany.

These are only a few highlights – we did this and so much more!

I would like to thank the Department for Environment and Water, Adelaide Botanic Garden Foundation, Friends of the Botanic Gardens, and our business partners, collaborators and donors. Your ongoing support and commitment ensures we continue to achieve our vision of a community inspired to actively contribute to the sustainability of the world.

I acknowledge the tireless efforts of staff and the Executive team, who passionately dedicate themselves to creating an incredible destination for South Australians and visitors, and undertaking the science, horticultural, curatorial and conservation work that underpins this beloved institution. Thank you also to my fellow board members, your contribution is greatly valued.

Ms Judy Potter

Presiding Member
Board of the Botanic Gardens
and State Herbarium

Message from the Director

The Botanic Gardens and State Herbarium is a collections-based scientific and cultural institution. We are also the state's most visited public institution. Our visitors come to enjoy the beauty and tranquillity that has been on offer since we opened our North Terrace gates in 1857. Some of our work is visible to the public through our curation of living collections (at Adelaide, Mount Lofty and Wittunga Botanic Gardens). However, we also curate preserved collections (herbarium specimens and a seed bank) and cultural collections (museum, library, art and archives), as well as acting as custodians of diverse built heritage at our three garden estates. This Highlights Report from 2017-18 helps us to share the diversity of our work.

Our Staff, Honorary Associates and Volunteers continue to make an extraordinary contribution to science, education and public engagement. Through their passion, dedication and commitment we are advancing knowledge and understanding of flora in horticulture in Australia's driest state, broadening knowledge of our native flora and developing strategies to preserve our threatened plants.

This enables us to lead and contribute to global efforts to document and conserve plant species and threatened ecosystems.

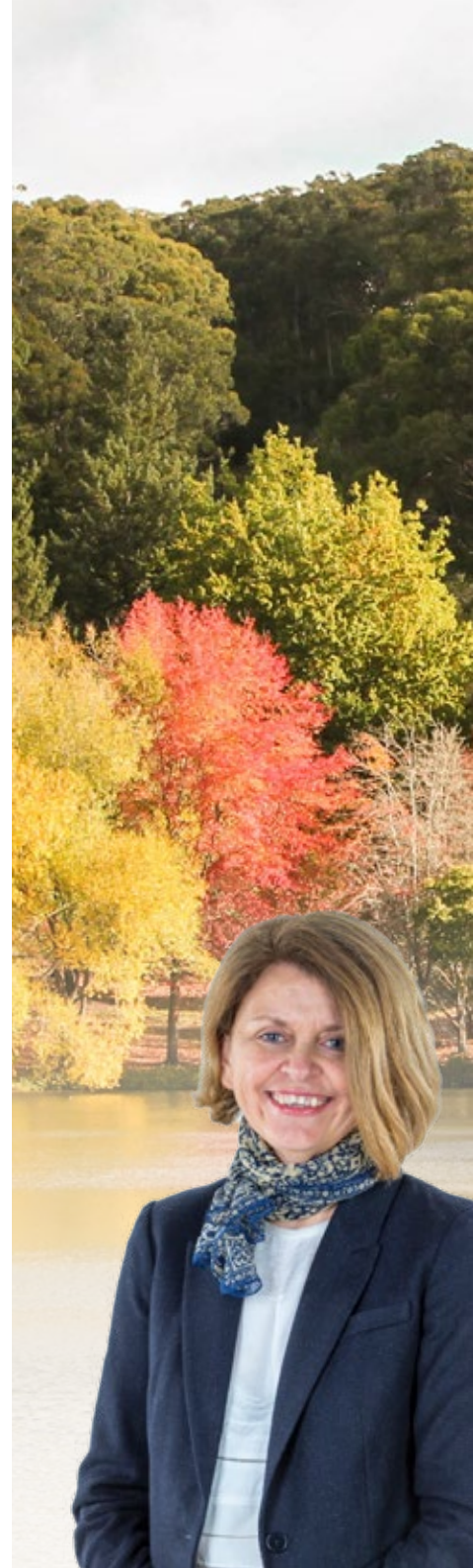
Utilising our horticultural displays, research and collections, our public programmes help us to reach a cross-section of the community and connect people to the plant world. Our events provide another dimension to the visitor's experience.

I congratulate staff on their achievements and extend my thanks to all our supporters. I would like to acknowledge our dedicated Board and make special mention of our Chair, Judy Potter, whose tireless efforts and leadership have been greatly valued. There is little doubt that the contributions from staff and supporters will be recognised and reflected upon in the decades to come.

Dr Lucy Sutherland

Director

Botanic Gardens and
State Herbarium



Botanic Gardens and State Herbarium

Our vision is a community inspired to actively contribute to the sustainability of our world.

Our mission is to build an understanding and appreciation of the botanical world.

Our strategic focus:

- Creating destination gardens
- Deepening our science
- Facilitating lifelong learning and engagement



2.1m
visitors

Adelaide Botanic Garden: 944,340
Botanic Park: 815,459
Wittunga: 124,059
Mount Lofty: 286,607



160,000
people
attended
major events

Murdoch Avenue

Highlights 2017–2018



1.058m

specimens
valued at over

\$78m

at the State Herbarium



46,000

volunteer hours



29,500

Facebook fans



21,000

children & adults
participated in our
education programs



12,000

Instagram
followers



78%

of South Australia's
threatened
flora protected
in the SA Seed
Conservation Centre



11,905

eNewsletter
subscribers



7,200

Twitter
followers



Mount Lofty



286,607
visitors



Wittunga



124,059
visitors



State Herbarium



55,708,200

digital records downloaded
from online data repositories



Creating destination gardens

We are dedicated to creating gardens that are destinations for public enjoyment, education, conservation and research. We bring communities together to share plant stories, connect people with nature and create garden memories. Our gardens are a place for all and the foundation is the living, preserved and cultural collections.

Living Collections

The plants in our three gardens are part of a living collection; a living museum that enhances our knowledge and understanding of plant sciences and horticulture. Over the past year, we increased the diversity of our collection by adding 447 new accessions, 23% of which were of known, wild origin. Our living collection now comprises plants representing over 100 countries.

Through the efforts of nursery staff and volunteers, we propagated over 40,000 plants, a 33% increase in production from 2016/17. These plants were used to enhance our collections and displays across our three botanic gardens:

- The Fleurieu Peninsula and Kangaroo Island collection at Wittunga Botanic Garden,
- The Rhododendron, Magnolia, Fern and North American Collection at Mount Lofty Botanic Garden, and
- The Little Sprouts Kitchen Garden, Garden of Health, Economic Garden and the Hackney Road entrance at Adelaide Botanic Garden.

The Classground Renaissance

Classgrounds have a long history in botanic gardens around the world as learning hubs for taxonomy. The Classgrounds at Adelaide Botanic Garden are currently undergoing a five year restoration; a renaissance to breathe new life into this botanical tradition.

Work began in 2016 to redevelop the Classgrounds into a collection that illustrates plant relationships. Overgrown sections were cleared and horticultural trainees have been allocated beds to use towards their studies. Heritage statues have also been restored including the 19th century bust of renowned Swedish botanist and father of modern taxonomy, Carl Linnaeus. Restoration will continue over the next few years to include new plantings and interpretation.

Santos Museum of Economic Botany

The Santos Museum of Economic Botany celebrates the importance of plants and plant diversity through the arts. A record 72,000 visitors came to marvel at our permanent collection of artefacts that showcase the enduring relationship between people and plants. We were also proud to host four special exhibitions, three of which were in collaboration with the Art Gallery of South Australia via the Adelaide Biennial of Art, the Tarnanthi Festival of Aboriginal and Torres Strait Islander Art and the Guildhouse Collections Project.

Events

Our Botanic Gardens and Botanic Park rank among Adelaide's premiere outdoor venues. We are delighted to bring together diverse communities through live music, visual arts exhibitions, theatre, weddings and festivals.

In 2017/18, we hosted five major events at Botanic Park: WOMAdelaide, Moonlight Cinema, and the Stevie Nicks, Yusuf Cat Stevens and Lionel Richie concerts, attracting 147,000 patrons. Across our three gardens, we also hosted 36 public events alongside 62 community groups, attracting more than 12,000 people. We were also proud to be part of the Adelaide Festival for the first time, bringing performance and sound installations to the gardens.

A place for science

Our gardens are a hub to share knowledge on scientific, horticultural and conservation research. Over the past year, we have hosted important regional and national conferences and meetings, placing South Australian science at the forefront. We hosted and convened the 8th Congress of the Botanic Gardens of Australia and New Zealand, welcoming 150 delegates from 75 botanic gardens. We also partnered with the University of Adelaide to host and convene Systematics 2018, which attracted 200 scientists. In addition, the meeting of the Australian Seed Bank Partnership was held at Adelaide Botanic Garden, bringing together expert seed scientists from Australia and the Royal Botanic Gardens Kew in the United Kingdom.





We are part of a global community of botanical institutes that undertake research to advance our understanding of the botanical world. Research into the identification of plants assists in solving some of society's greatest challenges including developing ecological resilience, conservation and sustainability. We are dedicated to sharing our knowledge and collections to support evidence-based decisions, which inform effective legislation, policy, education management and land-use practice.

State Herbarium

The State Herbarium of South Australia is the centre for knowledge of the state's plants, algae, fungi and lichen. The Herbarium houses a collection of preserved specimens that provide a point-of-truth for informed decision making in South Australia.

The Herbarium collection grew to 1.058 million specimens and is now valued at over \$78 million. Digitised collections data were also delivered to the Atlas of Living Australia and the Australasian Virtual Herbarium data repositories. In total, 730,800 specimen records were delivered, leading to around 56 million downloads by users.

Deepening our science

Research impact

We are committed to sharing our scientific outcomes and communicating the importance of our research. Our flagship scientific journal was rebranded from the *Journal of the Adelaide Botanic Garden* to *Swainsona*, in acknowledgment of South Australia's floral emblem. We published seven articles of *Swainsona*, which generated 1,364 downloads. Herbarium staff, associates and affiliates produced 80 research publications and 31 blog entries.

Saving Seeds

Native plants in South Australia form an integral part of our unique landscapes and ecosystems, yet 1 in 4 are threatened due to habitat loss, competition from introduced species, climate change and more. The South Australian Seed Conservation Centre protects the state's threatened plants from extinction by safeguarding seeds for future generations. This year the Seed Centre made collections of 158 taxa, 96 of which are listed as threatened. The efforts have enabled us to protect 78% of South Australia's threatened flora.

Weeding out weeds

The State Herbarium is responsible for the collection and identification weeds. The threats from weeds can be costly, particularly to our natural resources and primary production industries.

Over the past year, we detected 14 new weed species as naturalised or questionably established and added 69 updates to the Census of South Australian Plants, Algae and Fungi. Our Weeds Botanist delivered 12 community 'weedy' activities across South Australia's regions.

Bush Blitz

The State Herbarium joined Bush Blitz, Australia's largest nature discovery program that aims to document new plant and animal species. Our staff took part in the botanical survey of the Victoria Desert, and added 539 plants, 12 mosses, 12 macrofungi and 76 lichens to our collections. There were 48 new plant records for the survey, and two were the first ever for South Australian collections.

Taxonomy Decadal Plan

The race is on to name and document all of Australia's 600,000 predicted flora and fauna species. But with only 30% currently discovered, it will take another 400 years at our current rate. Our scientists are sharing their expertise and have collaborated with the Australian Academy of Science and New Zealand's Royal Society Te Apārangi on *Discovering Biodiversity: a decadal plan for taxonomy and biosystematics in Australia and New Zealand 2019 – 2027*. The plan aims to support, enhance and expand the fields of taxonomy and biosystematics to discover and document new species. We are part of the international conversation and driving strategy to showcase our nation's rich and unique biodiversity.



South Australia's floral emblem, Sturt's Desert Pea (*Swainsona formosa*) was planted in front of the Goodman Building at Adelaide Botanic Garden. The seeds were collected by the SA Seed Conservation Centre and now form part of our living collection.

First Creek wetland

Launched in 2013, the First Creek Wetland is part of a managed aquifer recovery scheme, located at Adelaide Botanic Garden. The water in the wetland originates from First Creek, which flows from the Adelaide Hills. After rainfall, water is harvested, treated and purified through the wetland. This water is then injected and stored in an underlying aquifer with the long-term aim of using this resource to irrigate Adelaide Botanic Garden. Our ability to recharge the aquifer is dependent on the flow within First Creek. Over the past year, we have managed to inject more than 61 megalitres into the aquifer, resulting in a total of 321.9 megalitres since its launch.



The Botanic Gardens and State Herbarium is a place of everlasting scholarship to connect people with the botanical and natural world. We inspire the community across all ages and interests to improve their understanding, appreciation and enjoyment of plants and gardens. From workshops to Masterclasses, outdoor education trails to teacher development, our visitor experiences attracted over 21,000 people.

Train the trainer (Teachers)

Teachers are critical to sharing botanical knowledge to a wider audience. We delivered nine professional development sessions to almost 300 teachers, including two special workshops: Aboriginal Histories and Cultures for South Australia's History Festival and a STEM learning workshop delivered in collaboration with the Art Gallery of South Australia and the South Australian Museum.

Little Sprouts Kitchen Garden (Early years and primary school)

Children have the opportunity to learn where their food comes from in our Little Sprouts Kitchen Garden. Through a series of curriculum-aligned activities from early years to primary school, children use all of their senses to explore and learn in our Kitchen Garden at Adelaide Botanic Garden. This year, our programme was fully subscribed, with 4,253 children taking part in the programme. We also partnered with the Department for

Lifelong learning & engagement

Education and two schools to deliver Gardens of Wonder, a research project developing new ways of using kitchen gardens to connect children with plants, culminating in a public exhibition of children's art in Noel Lothian Hall.

World Environment Day (Primary school)

Our annual World Environment Day event is the state's largest celebration of the environment for schools and this year, we were joined by more than 2,000 students and adults from 35 schools. The monumental celebration was the result of cross-institutional teamwork between the Botanic Gardens and State Herbarium and CSIRO, Sea Shephard, Cleland Wildlife Park and Natural Resources Management groups. In recognition of the successful and widely engaging event, the organising team was awarded a prestigious Green Globes Award from the Department of Environment, Water and Natural Resources.

SEEDS with schools (High school)

Classroom education and real-world conservation work are blended together through our Stewardship of Endemic Endangered Species (SEEDS) programme. Beginning in 2014, we have partnered with 14 schools to save threatened plant species. Each year our scientists work alongside students, passing on skills to propagate seeds of rare plants. These propagated plants are used for revegetation projects, passing on custodianship to the next generation (see the case study for what we did this year).

The Australian Centre of Horticultural Excellence (Tertiary and vocational)

As leaders in the provision and use of botanical knowledge, we have a strong role in creating learning experiences and pathways in community, vocational and tertiary education. Our Australian Centre of Horticultural Excellence (ACoHE) is dedicated to this strategic objective, as well as the state's Skilling South Australia agenda.

In partnership with local training provider ARO Education, ACoHE offers the Certificate III in Horticulture. This partnership enables us to mentor and develop future horticulturalists by giving them access to our expert horticultural staff and internationally-important botanical collections. Over the past year, 35 students and 10 trainees undertook the certificate and in June 2018, we were proud to celebrate 16 students graduating in a special ceremony.

Next generation botanists (Tertiary and postgraduate)

The State Herbarium has an ongoing partnership with the University of Adelaide to nurture the next generation of botanical scientists. Over the past year, we have delivered botanical training to more than 120 undergraduate science students. We have also supervised the research of five Honours, two Masters and six PhD students from the University of Adelaide, University of South Australia, Flinders University and the University of Melbourne.

Case study: Saving Orchids

Students from Kildare College's Orchid Club have been working alongside our scientists at the SA Seed Conservation Centre to save the white beauty spider orchid (*Caladenia argocalla*). As part of the SEEDS programme, students work with us across all aspects of conservation from monitoring, seed collection and propagation. It takes two years to propagate the orchid, which involves germinating the dust-like seeds with fungus through to growing small plants with bulbs in the nursery. In 2018, the hard work of the students resulted in the first successful reintroduction of the white beauty spider orchid into the wild. The SEEDS partnership with Kildare College continues and students have successfully propagated two other endangered species, ready for reintroduction in 2019.





Our people



Staff, associates and volunteers bring vast expertise to the work of the Botanic Gardens and State Herbarium. Through their passion, dedication and commitment, we are able to grow and develop into a global destination.

Volunteers

We are fortunate to have a dedicated and passionate volunteer community who contribute to the Botanic Gardens and State Herbarium. From the Friends group to garden societies, dedicated individuals to community organisations, we have volunteers from a diverse range of backgrounds and interests.

Our volunteers are crucial to our success and over the past year, new and existing volunteers have contributed an astounding 46,000 hours to support our activities! Thank you to all our volunteers for their dedication and commitment.

40 years with the Friends

The Friends of the Botanic Gardens of Adelaide celebrated 40 flourishing years. Established in 1977, the Friends provide an invaluable service to our gardens by offering free guided tours to the public, propagating plants for the living collection, fundraising for new projects, raising community support and much more. The Friends are our largest group of volunteers and in 2017/18, contributed over 28,000 volunteer hours!

To celebrate the 40th anniversary of the Friends and to thank them for their support, we hosted a series of lunchtime lectures at the Botanic Gardens Restaurant. The fully-subscribed Winter Lecture Series welcomed 214 participants, who enjoyed warming lunches while learning insights from our garden experts. We were also delighted to offer the Friends special behind-the-scenes tours of Adelaide, Mount Lofty and Wittunga Botanic Gardens and the State Herbarium. Thank you to the Friends for their enduring support.

Adelaide Botanic Gardens Foundation

Since 2004, the Adelaide Botanic Gardens Foundation has been raising funds to support the Botanic Gardens and State Herbarium. Thanks to the Foundation, we are able to undertake a variety of projects to save threatened species, train our horticulturalists, maintain the living collections and much more. In 2017/18, the Foundation received over \$350,000 from generous donors, enabling us to grow and thrive.

Mount Lofty Botanic Garden's 40th Anniversary

It's hard to imagine an Adelaide autumn without a trip to Mount Lofty Botanic Garden. It's even harder to think that Mount Lofty Botanic Garden opened to the public just 40 years ago. We celebrated this milestone birthday with a free community event. Over 2,300 people attended the relaxed celebrations which featured live music, food trucks, guided tours and a plant sale.



Partnering with us

Through partnering with us, together we can solve complex and multifaceted environmental issues.

Our loyal partners have worked with us to develop programmes to secure the future of our threatened native flora, educate children on the value of growing and harvesting their own food and build an understanding of the many uses of plants.

Santos partnership

As a major partner, Santos has supported the Botanic Gardens and State Herbarium through a variety of programmes. Santos' partnership assisted in the refurbishment of the Santos Museum of Economic Botany, the last museum of its kind in the world. They also supported the museum's exhibition programme from 2007 to 2017. Currently, we work with Santos to provide the School Based Aboriginal Traineeship, empowering young Aboriginal high school students to pursue a career in horticulture.

Research and Development with Neutrog

Neutrog has been a valued partner for over a decade. Neutrog supplies in-kind horticultural products including fertilisers, which are used across our three gardens. In turn, our horticultural staff work with Neutrog's research and development team to trial and test new products, providing them with valuable feedback on product performance.

Botanic Wine

In partnership with the National Wine Centre of Australia and Pernod Ricard, we were thrilled to produce two vintages of Adelaide Botanic Garden wines, made using grapes harvested from the vineyard straddling Adelaide Botanic Garden and the National Wine Centre. The limited edition wines are the world's first wine produced from grapes grown in a botanic garden, a testament to the innovations resulting from this unique partnership.

"It's incredibly refreshing to work with the Botanic Gardens - innovative collaborations like ours are a great example of a creative partnership between institutions that might at first seem not to have many commonalities of interest."

Jason Bird, General Manager
National Wine Centre of Australia,
University of Adelaide

Corporate Partners



Commercial Partners



Education and Research Partners



Cultural Partners



Board of the Botanic Gardens and State Herbarium

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