



# Botanic Gardens and Parks Authority *Ex-Situ* Conservation Strategy

*Caladenia busselliana*  
Bussell's Spider Orchid

**STATUS:** Threatened

**Botanic Gardens and Parks Authority**

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We acknowledge and respect the Whadjuk Noongar people as the traditional custodians of Kings Park and Bold Park.

# Ex-Situ Conservation Strategy

**Ex-situ conservation – the conservation of plant species and their genetic diversity “off-site” and away from their natural habitat – is a core function of botanic gardens and is central to the Botanic Gardens and Parks Authority (BGPA) purpose to practice and inspire environmental conservation.**

Ex-situ conservation methods include the collection and storage of plants or germplasm - living tissue - from which new plants can be grown.

BGPA maintains extensive *ex-situ* collections including a seed bank, tissue culture and cryostorage collections, fungi collections, plants cultivated by the Kings Park nursery, and the plants on display in the Western Australian Botanic Garden.

## Our vision

To preserve nature for our future by taking a leading role in *ex-situ* conservation, both within our parks, across the State and around the world.

## Our strategy

**Western Australia’s biodiversity faces ever evolving and increasing environmental threats, ranging from climate change, to biosecurity, to urbanisation.**

*Ex-situ* collections support the continual development of the Western Australian Botanic Garden, the management and restoration of the bushlands of Kings Park and Bold Park, and BGPA’s plant breeding, research, and education programs.

This strategy guides the development, management, and use of our *ex-situ* collections. It provides the framework for identifying new opportunities to:

- increase the synergies between the conservation, science, and education programs of BGPA
- raise the profile of the role of botanic gardens in *ex-situ* conservation; and
- to engage in external partnerships to support and build our *ex-situ* conservation capacity.

## Indicators of success



IMPACT OF  
RESEARCH



QUALITY + COVERAGE  
OF COLLECTION



ACCESSIBILITY  
OF COLLECTION  
INFORMATION



ENHANCED  
ENGAGEMENT +  
KNOWLEDGE

Focus Areas	Aims	Strategic Principles
CONSERVATION AND COLLECTION MANAGEMENT	Identify, collect, and maintain <i>ex-situ</i> collections of important WA native plant species	<ul style="list-style-type: none"> <li>• Provide high-quality, usable germplasm for conservation, restoration, plant development, and research</li> <li>• Ensure the Western Australian Botanic Garden thematic areas are considered as a collection</li> <li>• Work from an integrated and prioritised Collections Management Plan</li> <li>• Continual development and review of the Western Australian Botanic Garden collection to represent an increased and diverse species profile</li> <li>• Regular review of the <i>ex-situ</i> collection to align with current management priorities</li> <li>• Ensure accessible data management, practise, and use</li> <li>• Ensure ethnobotany and cultural considerations are prioritised in developing and maintaining collections</li> <li>• Enhance the herbarium collections and increase accessibility for varied stakeholders</li> <li>• Ongoing focus on risk and redundancy to inform security of collections</li> </ul>
SCIENCE AND INNOVATION	Deliver innovative science that underpins the collection, curation, storage, and use of germplasm to secure WA plant species and to restore degraded ecosystems	<ul style="list-style-type: none"> <li>• Undertake hypothesis-driven research into germplasm storage and propagation biology of Western Australian native species</li> <li>• Critically analyse collections data to support development and evaluation of a prioritised Germplasm Collections Plan</li> <li>• Invest in innovative tools and techniques to support germplasm conservation and collections management</li> <li>• Continue to deliver landscape-ready, climate-resilient plant varieties for ornamental and commercial horticulture</li> <li>• Engage in high-quality scientific collaborations with universities, research and conservation institutes to enhance capability and competitiveness</li> </ul>
DISPLAY AND EDUCATION	Attract and engage visitors to increase their understanding of WA native plants and biodiversity threats	<ul style="list-style-type: none"> <li>• Ensure all programs are innovative and provide for ways to present accessible collection information through digital innovation and immersive on-site engagement</li> <li>• Support collaborative training opportunities for the next generation of conservation practitioners</li> <li>• All botanic garden displays encourage active engagement with conservation projects through presentation and storytelling</li> <li>• Continue to use the Western Australian Botanic Garden and Parkland as an educational resource for industry and allied stakeholders to increase the availability of Western Australian species in commercial horticulture</li> <li>• Continue to develop conservation knowledge transfer programs with external stakeholders</li> <li>• Provide State-wide leadership and knowledge-sharing for the collection, processing and storage of native seed</li> </ul>
PARTNERSHIPS AND COMMUNITY	Broaden and deepen our partnerships with local and global communities to increase our impact, share our knowledge and expertise, and help meet our conservation goals	<ul style="list-style-type: none"> <li>• Maintain ongoing engagement with Traditional Owners and incorporate cultural recognition and ethnobotany knowledge into conservation and display practices</li> <li>• Deliver professional advice to stakeholders and the community to promote environmental conservation and sustainability, and develop public understanding of the role of BGPA</li> <li>• Further develop strategic partnerships (financial and non) with the business community to: provide support for the continuing conservation of collections in Kings Park and Bold Park; fund scientific innovation; and provide BGPA support to business partners to further external conservation activities and awareness</li> <li>• Continue to expand relationships with State and local government to encourage native flora use outside Kings Park and Bold Park</li> <li>• Build partnerships to continue to adopt an outward focus for the promotion of climate-resilient gardens</li> <li>• Facilitate the development of a Western Australian Botanic Gardens Network</li> </ul>



## Botanic gardens and ex-situ conservation

Botanic gardens and their *ex-situ* conservation programs have an important role to play to preserve our biodiversity.

Kings Park practices conservation horticulture through documented plant living collections used for conservation, research, display and public education purposes in the Western Australian Botanic Garden. We work actively to promote the value of plant biodiversity, connect visitors to nature, and prevent species extinctions and support their continued survival in the wild.

## Protecting WA flora

Western Australia is renowned for its rich and diverse flora, with a high level of endemism amongst the more than 16,000 taxa of plants and fungi found in the state, and the south-west of Australia recognised as a global biodiversity hotspot. Plant species and communities in WA are at-risk from myriad threats including habitat loss, biosecurity risks from diseases and invasive species, and changing climate and fire regimes. With more than 430 threatened plant species and more than 100 threatened ecological communities in Western Australia, there is a pressing need to increase conservation capacity and actions.

Kings Park sits within a global biodiversity hotspot and a threatened ecological community and is uniquely placed to contribute to the conservation of Australia's flora.

## Ex-situ conservation at BGPA

Seeds have been collected and banked at Kings Park for over 60 years, with the first collections supporting the establishment of the Western Australian Botanic Garden.

Kings Park now houses a unique conservation collection of more than 13,000 accessions of 34% of Western Australia's flora, including significant collections of WA's acacias, eucalypts, banksias, and orchids.

*Ex-situ* conservation is undertaken through state-of-the art seed banking, plant tissue culture, cryostorage, and nursery facilities.

## Our ex-situ collections

NURSERY LIVING COLLECTIONS

SEED COLLECTIONS

TISSUE CULTURE

CRYOGENIC STORAGE

FUNGI

PLANT BREEDING

## Our partnerships

We partner locally, nationally, and internationally with other botanic gardens and conservation agencies, universities, non-government organisations and other organisations to achieve *ex-situ* conservation goals.

We are a member of the Australian Seed Bank Partnership, an alliance of 14 organisations working together to conserve Australia's biodiversity. Seeds of two thirds of Australia's nationally listed threatened species have been banked through ASBP.

Duplicates of almost 2000 of our seed collections are stored at the Millennium Seed Bank as part of a global conservation collection from 97 countries.

Our *ex-situ* conservation at Kings Park contributes to the delivery of Australia's Threatened Species Strategy (2021-2031) and Australia's targets under the Global Strategy for Plant Conservation.

### PROUD SUPPORTERS OF



## Partner with us!

We welcome partnerships with like-minded organisations to help conserve Australia's flora.

If you are interested in partnering with us please contact [enquiries@bgpa.wa.gov.au](mailto:enquiries@bgpa.wa.gov.au)

