

# Flourish

Supporter News Spring 2021

## ISSUE 9

The 'Zombie' fungus

Northern conservation expeditions

Seeing the Invisible

Unlocking the Herbarium's secrets



Royal  
Botanic  
Gardens  
Victoria





## Seeing the Invisible

In September 2021, Royal Botanic Gardens Victoria will present an ambitious exhibition of contemporary artworks created with augmented reality, which will simultaneously premiere at 12 botanic gardens around the world.

*Seeing the Invisible* features commissioned artworks by more than a dozen international and highly respected

artists such as Ai Weiwei, Refik Anadol, El Anatsui, Isaac Julien CBE, Mohammed Kazem, Sigalit Landau, Sarah Meyohas, Pamela Rosenkranz, and Timur Si-Qin.

The free virtual exhibition will be accessible via the ***Seeing the Invisible*** app, which will be available for download and use on iPhone and Android smartphones in late September. The exhibition will be in place for one year.

## COVER

Therese Turner, Team Leader Gardens North, Andre Messina, Botanist, Gemma Cotterall, Horticulturist and Millie Wee, Horticulturist, in the Australian Forest Walk at Melbourne Gardens.

## INSIDE COVER

Ori Gersht, *On Reflection Virtual*, 2014.

# Welcome to the Spring issue of Flourish

**Spring has arrived and with it the joys of new leaves, new flowers and new life.**

I would like to start by recognising one of our former Chairman, the late Mr David Adam, who passed away earlier this year. David oversaw many developments at the Gardens, including the Ian Potter Foundation Children's Garden, and described his time leading the Board as "the best job I've ever had!" On retirement, David planted a sapling propagated from the original English elms *Ulmus procera* that were planted by John Arthur in 1846. We hope this gives his wife, Judy, and their children a special place to remember him long into the future. Vale David and thank you.

As part of our special 175<sup>th</sup> milestone year, celebrations continued with the well-attended Winter Garden Gathering Vol.2 on Oak Lawn and the launch of our new book *WONDER: 175 years of Royal Botanic Gardens Victoria* by Sophie Cunningham AM and Peter Wilmoth, a glorious collection of stories about this much treasured place. We've also digitised our one millionth plant specimen in the Herbarium as part of a 30-year Global Collection Project and made several collecting trips to increase biodiversity at the Gardens.

We were delighted when the Hon. Lily D'Ambrosio, Minister for Energy, Environment and Climate Change, announced additional one-off funding from the Government of \$8.52 million to support the delivery of critical asset maintenance and repairs identified in our Master Plans across both sites.

This support is testament to the important role the Gardens play in the lives of Victorians and we are grateful to the Government for this endorsement.

I hope you enjoy reading about the many activities shared in this edition of Flourish. See you in the Gardens soon!



A handwritten signature in black ink, appearing to read 'Tim Entwisle'.

**Professor Tim Entwisle**  
Director and Chief Executive



**ABOVE**  
David Adam with the Hon. Marie Tehan, formerly Minister for Conservation and Land Management, at the opening of Observatory Gate on 10 March 1999.



## **Conservation expeditions:** Our teams visit Northern Queensland's Central Highlands

### **IMAGES**

The conservation teams in action.





**In May 2021, two teams of Gardens scientists and horticulturists left for conservation expeditions to Northern Queensland, with thanks to support from Portland House Foundation.**

One team targeted selected National Parks of the Queensland Central Highlands for 14 days, including Blackdown Tableland National Park, Minerva Hills National Park, Carnarvon National Park and Expedition National Park.

While the environmental conditions and sheer distance between sites were challenging, the team still managed to collect samples of over 100 species with actual wild provenance, along with 104 pressed plant samples with collection data for future reference.

The other team visited the scientific collection held at the Atherton Arboretum, CSIRO Land and Water over four days. This team collected more than 90 species, many from wild-source origins.

These new collections will increase the health and vibrancy of the heritage Australian Forest Walk (est. 1887), and support the aims of the Landscape Succession Strategy and Living Collections Strategy to improve the climate change resilience of the Gardens' plant collections and future landscape projects.



These collecting trips and subsequent plant propagation program are a practical and positive way to respond to the impact of climate change on botanic gardens and other landscapes.

The trips also improve our horticultural expertise by allowing staff to study species in natural ecosystems and then later research and grow these plants in managed environments. The collection of herbarium specimens and curation of these plants improves systems, techniques and skills, which extends beyond the Gardens to other botanical, horticultural and plant-based industries in Australia and abroad.

The changing climatic conditions of urban spaces means many existing plants will need to be replaced with others more suited to warmer environments. Through post-graduate research, some of these new species will be trialled for suitability in cities and urban habitats to continue to improve urban biodiversity, provide ecological services and support human well-being.

With thanks to the generous funding provided by Portland House Foundation, these living assets will dramatically improve biodiversity and resilience in the Gardens as the climate warms in the coming century and provide benefits to generations of visitors.





## Australia's rarest fungus discovered clinging to life on French Island

### IMAGE

Penny Evans, Horticulturist, who discovered the largest population of Tee-tree Fingers ever recorded.



Until recently, the extremely rare Tea-Tree Fingers, *Hypocreopsis amplexans*, species was known to occur at only three sites along Western Port Bay, and one at Launching Place, so the team at the Gardens ventured to the comparable habitat of French Island in search of gold.

On the first day of the expedition, the team, led by Drs Michael Amor and Sapphire McMullan-Fisher, discovered a new population of nine distinct fruit bodies.

Further foraging by Horticulturist Penny Evans during a lunch break, led to the discovery of the largest-ever recorded population of Tea-Tree Fingers!

"This is the only existing Tea-Tree Fingers population within a protected National Park. Three out of four mainland sites have uncertain futures as they are adjacent to sand mines," states Dr Amor. "French Island is now regarded as the species' stronghold and its National Park status will hopefully provide some insurance against the increasing likelihood of Tea-Tree Fingers' extinction on the mainland."

**"The discovery of protected areas of habitat on French Island greatly improves the prospect of the species' survival into the future,"**

The fungus, named for its distinctive, finger-like form that seemingly grips its wooden substrate like a hand, requires large areas of long-unburnt habitat, the presence of a symbiotic fungus that it is believed to feed upon, and continual availability of freshly fallen wood for its host to grow on. It's threatened with extinction by bushfires, climate driven warming, coupled with land clearing for development and sand mining.

"The discovery of protected areas of habitat on French Island greatly improves the prospects of the species' survival into the future," says

Dr McMullan-Fisher. "This discovery also raises interesting questions, such as how it traversed a 2.5km stretch of ocean."

The team is keen to explore further areas across French Island and Gippsland in search of this unusual organism, with further surveys planned for the near future.

This research is part of the critical work carried out by Royal Botanic Gardens Victoria to catalogue, understand and conserve Victoria's plants, algae and fungi. Funding was provided by the Department of Environment, Land, Water and Planning (DELWP), as part of a collaborative program, Little Brown Things 2.0, to study the State's overlooked flora and fauna.



**ABOVE**  
Tea-Tree Fingers, *Hypocreopsis amplexans*.  
Cranbourne Gardens team members on French Island.



## Celebrating 175 years with you

We were delighted to welcome many donors to The Terrace in mid-July to celebrate 175 years of stunning landscapes, extraordinary conservation and plant science research and innovative learning and engagement nature programs for all ages.

We shared a sneak peek at *WONDER: 175 Years of Royal Botanic Gardens Victoria* by Sophie Cunningham AM

and Peter Wilmoth, through a fascinating panel discussion with three of the contributors, facilitated by Tim. Author Sophie Cunningham AM, donor Sally Browne AM and Gardens Manager Aboriculture Charlie Carroll shared some wonderful insights into their connections to the Gardens that echoed so many of our own. Thank you for coming and for sharing your love of the Gardens with us.

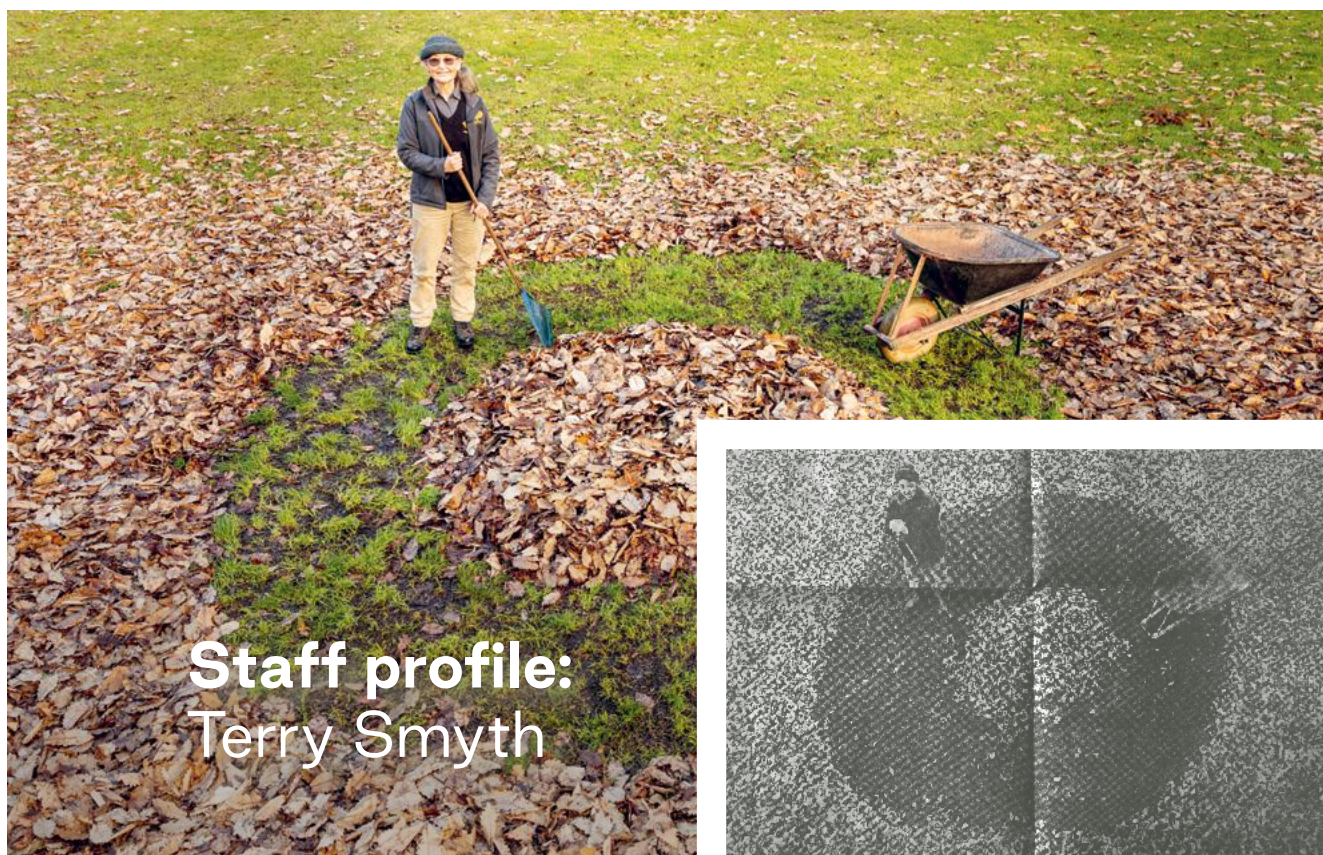
### ABOVE LEFT

Penny Fowler, Deputy Chair, Chris Trotman, Chairperson, Anthony Fitzwilliams Hyde, Sally Browne AM and Chloe Fitzwilliams Hyde; Garry Price and Judi Byrne.

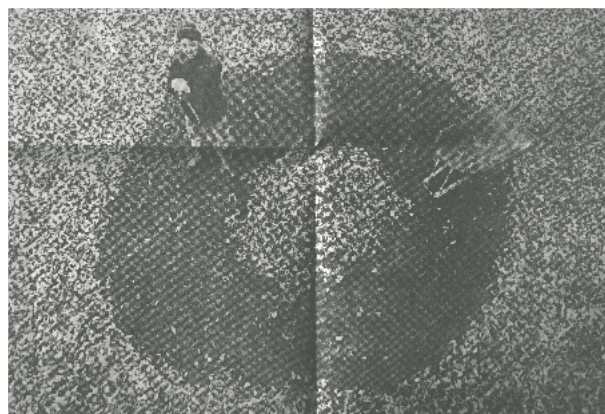
### ABOVE RIGHT

Mary and Frederick Davidson; Chris Russell, Executive Director Cranbourne Gardens, Geoff Steinicke and Prof Tim Entwisle, Director and Chief Executive.





## Staff profile: Terry Smyth



I began my career with an apprenticeship at Wellington Botanic Gardens when I was 19. I liked being outdoors and was fascinated with plants. At 12, I recall being spellbound by the beauty and perfume of a Frangipani.

I started working as a horticulturist at Royal Botanic Gardens Melbourne on 2 March 1988. This photo was taken three months after that for the Herald Sun newspaper.

Not long after that, I recall trying to rescue three domestic ducklings that had been dumped on Ornamental Lake. We caught the first two, but the third one evaded us for hours while we worked against the fading light. Eventually, after all three of us got very wet, we caught her and she lived happily ever after at a colleague's farm.

In the 1990s I was fortunate to go to south-west China to collect seed, plants and herbarium specimens for

the collection I curate. There is no better education for a horticulturist than seeing plants in the wild.

My favourite part of the Gardens changes with the seasons. I love Oak Lawn in winter with the sun light beaming through silhouetted branches. I love the romance of the Cockatoo Bed in very early spring when the indigenous feather grasses are flowering.

I am sometimes asked to make floral arrangements for special occasions. When Dame Elisabeth Murdoch celebrated her 100th birthday, I created a bouquet for her. Her birthday coincides with the blooming of a golden flowered bulb called *Lycoris aurea*. This plant is sometimes called 'Suddenly The Soil Smiles'. In China, the colour gold used to be a royal colour fit for emperors. I felt it fitting to cut these distinctive exquisite flowers for our Patron Dame Elisabeth.

### ABOVE

Terry Smyth in 1988 soon after starting at the Gardens and today.

# Unlocking the secrets of the National Herbarium of Victoria

This week, while throngs of Tan joggers sweated past the doors of the National Herbarium of Victoria, inside, Rita Macheda, Database Officer, added the one millionth plant specimen record to Royal Botanic Gardens Victoria's herbarium catalogue. She's been cataloguing botanical specimens at the National Herbarium of Victoria for the past 21 years.

The specimen, *Irenepharsus magicus*, is a white flowering annual and member of the mustard family, collected by Botanist, Andre Messina.

The Gardens began cataloguing the Herbarium collection in 1992 to make the scientific data associated with these plant specimens accessible to the world.

When Ferdinand von Mueller founded the Herbarium in 1853, he envisioned that it would be at all times accessible to the public, however, the logistics of caring for such a collection, and storing it in an ageing building that is no longer fit for purpose, means that's not possible.

## BELOW

Sally Bufe, Volunteer Curator (30 years), with the millionth specimen, *Irenepharsus magicus*, a rare cabbage-relative in Victoria and NSW.





But von Mueller's vision is now becoming a reality in another way. Now the specimen information – and, increasingly, high-resolution images of the specimens themselves – are available online for researchers, artists and students across the world in the Australasian Virtual Herbarium, one of the world's largest repositories of specimen-based botanical information.

"Herbarium specimens are like botanical time capsules," says David Cantrill, Executive Director Science, Royal Botanic Gardens Victoria. "They provide a permanent record of the occurrence of a species at a particular place and time and are the primary resource for research on Australian plants, algae and fungi."

"Specimen by specimen, they improve our understanding of species distributions and habitat preferences. They help us understand botanical diversity and the relationships between

species. They help us monitor the spread of invasive weeds and the loss of native plants due to habitat disturbance. And they help us predict how different species might respond to environmental change."

This milestone, made possible through the generous support of individual donors and Trusts and Foundations, is testament to the skill and dedication of the many botanists, herbarium curators and volunteers who have cared for this irreplaceable collection over the Garden's history.

**"Herbarium specimens are like botanical time capsules. They provide a permanent record of the occurrence of a species at a particular place and time and are the primary resource for research on Australian plants, algae and fungi."**

**BELOW**

Rita Macheda, Database Officer, with the millionth specimen.





### A big thank you from us

During a recent visit by Hon. Lily D'Ambrosio, Minister for Energy, Environment and Climate Change to Royal Botanic Gardens Cranbourne, she was particularly enamoured by the rare orchids. Led by Dr Noushka Reiter, our Orchid Conservation Program is one of the largest and most successful plant conservation programs in Australia, and a global leader in effective plant translocations, a critical step in rebuilding and safeguarding native orchid populations in the wild.

Thank you for the support you gave our orchid conservation appeal in late 2020. You have funded the next 6 months of management of this important ex-situ orchid conservation collection, which comprises of 20,000 living plants from 165 species, including 68 state and nationally threatened species, over 2,500 accessions of seed and 3,000 isolates of mycorrhizal fungi stored at  $-80^{\circ}\text{C}$ .

#### IMAGE

Minister Lily D'Ambrosio MP inspecting *Caladenia rosella* at Cranbourne Gardens.



Royal  
Botanic  
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