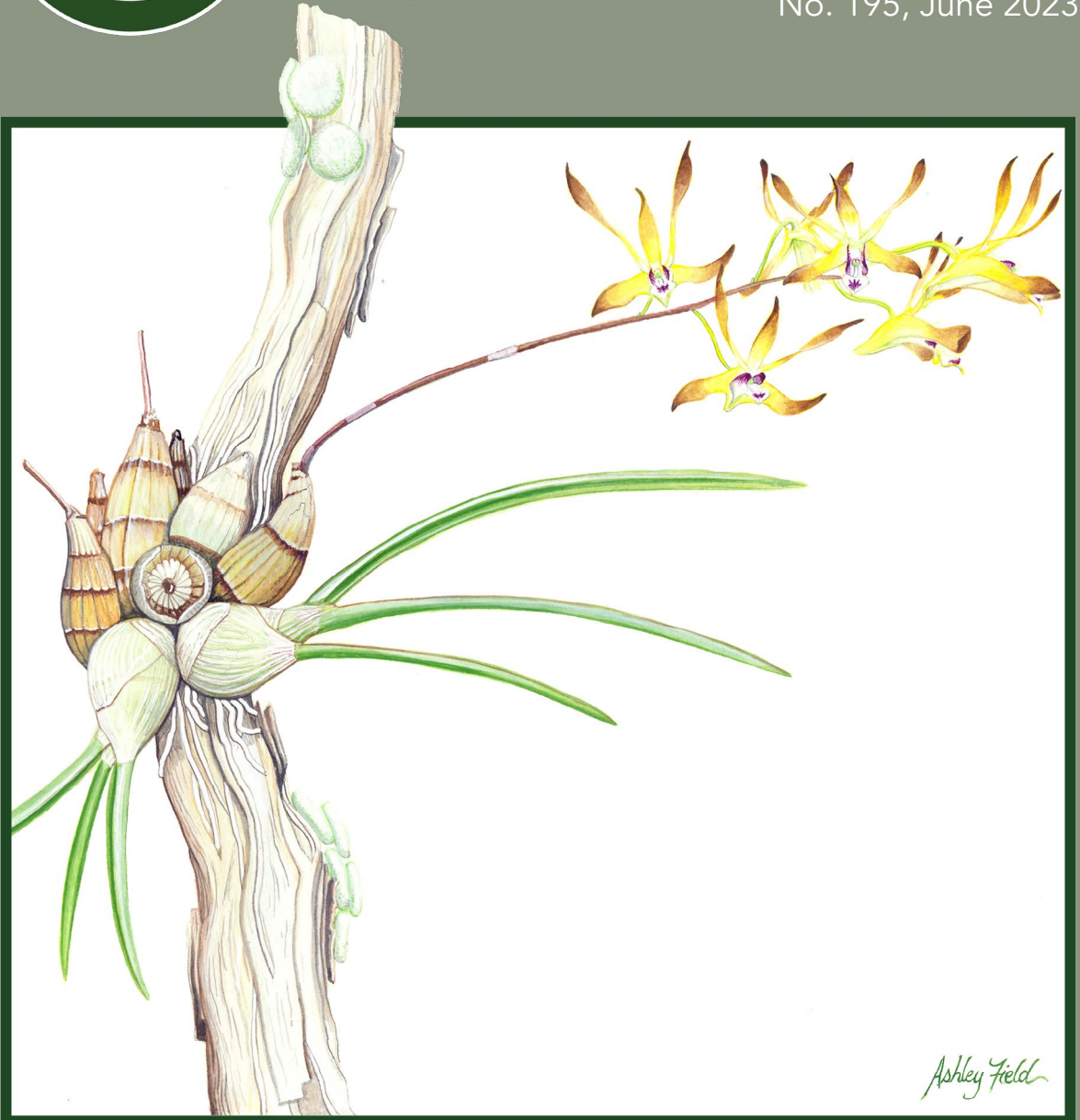




# Newsletter

Australasian Systematic Botany Society

No. 195, June 2023



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Biosystematics 2023 open

Visit the live website to  
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abstract

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New book reviews

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# From the President

*Katharina Nargar ASBS President*

It has been busy behind the scenes as preparations for our 50th anniversary celebrations now are in full swing. The website for the Biosystematics 2023 (<https://biosystematics2023.org>) conference has been officially launched and registrations for the conference, which will be held at Kambri (ANU) in Canberra from the 26-30 November this year have opened. This will be the first joint conference of the Society of Australian Systematic Biologists, the Australian Biological Resources Study, the Australasian Mycological Society, and our Society. At this conference, we will showcase and celebrate research in taxonomy and systematics in Australasia, fully in the spirit of this year's conference theme 'Celebrating the Past – Planning the Future'. Many thanks to Mike Bayly and the whole conference organising committee for their hard work so far.

The development of the new ASBS website has now entered into the exciting and sometimes slightly nerve-wracking phase of actually building the website with content that has been carefully prepared over the last 1.5 years for migration to the new website. Council has engaged a professional web design company called Silvercode which has now produced the blueprint of the website (in web design lingo 'wireframe') and developed the first design concept, which already looks great. The new website will give our web presence a fresh and modern look and provide much enhanced functionality. Many thanks to Steph Hunter from Silvercode and to Kelly Shepherd and Anna Monro for taking on the lion's share of the work on the new website to date.

Steady progress has also been made on the development of a new ASBS logo. Thanks to everybody who responded to our logo survey earlier this year. Your feedback was key to refining the design

brief. Council discussed several options for the design process ranging from: engaging a professional graphic designer, running a web-based design competition, or engaging someone with a background in botanical illustration from within our own community. After assessing the different options, Council settled on engaging Patricia Chan, one of our ASBS student members and winner of last year's student presentation award. Besides being an exceptional student, Patty is also a very talented artist holding an undergraduate degree from Cornell University with a minor in Botanical Illustration. Patty has already designed several logos, such as for the National Drosophila Species Stock Centre and for a conference of the North American Rock Garden Society. Based on the design brief, Patty will conceptualise several designs over the next few months. We will then seek your feedback on these design ideas via a survey, which will be incorporated in the process of selecting the most promising concepts and further refining their design. Please remember that it will be you, as ASBS members who will decide via voting at a General Meeting whether the Society will adopt a new logo or keep the existing one.

On another ASBS matter, Council has been reviewing the Society's processes for recruiting to ASBS Chapter Convener positions (prompted by a current vacancy), and came to the agreement that the existing process lacks transparency and did not provide members sufficient opportunity to express an interest in these roles. Therefore, a new procedure has been developed by which the membership associated with a Chapter will receive a call for expressions of interest for open ASBS Chapter Convener positions. If more than one nomination is received, the membership for this Chapter will elect the new Chapter Convener via vote. Council

also contacted current Chapter Conveners and received notice that further positions are becoming vacant. Three Chapter Convener positions will soon be recruited for Adelaide, Armidale, and Melbourne. We thank the outgoing Chapter Conveners Robyn Barker, Jeremy Bruhl, and Frank Udovicic for their long-standing service to the Society as local contacts for ASBS members.

Last but not least I am thrilled to congratulate the two awardees of the recent round of Hansjörg Eichler grants, Declan Blackburn (University of Melbourne) and Patty Chan (University of Wisconsin/Australian Tropical Herbarium). Well done, Declan and Patty! In the name of Council, I wish you all the best in your quest to advance Australasian systematic botany through your phylogenomics projects on Asteliaceae and *Darwinia*, respectively.

I am looking forward to seeing many of you, in person or virtually, at our Biosystematics Conference 2023 in November!

Best,  
Katharina



Joint conference of the Society of Australian Systematic Biologists, Australasian Mycological Society and Australasian Systematic Botany Society



**Above** Visit the Biosystematics 2023 website (<https://biosystematics2023.org>) for conference information, registration and abstract submission

# In the beginning...

A snapshot of 50 years

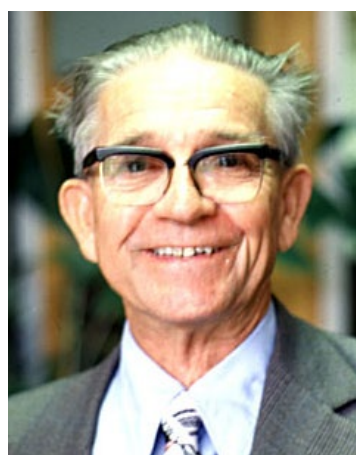
*John Clarkson*

As the Society prepares to celebrate its Golden Anniversary in November, here is a list of some of the significant events in the Society's history with reference to the Newsletter issue where appropriate. I'd appreciate hearing from you if you think I have left anything out.

Year	Event	Newsletter
1973	Inaugural meeting (Melbourne)	187: 38-40
1973	First AGM (Perth)	1: 4-6
1973	First Rules adopted	1: 4-5
1974	First <i>ASBS Newsletter</i> published	
1976	Logo featuring a <i>Xanthorrhoea</i> released	6: 8-9
1979	First Nancy Burbidge Lecture delivered (Selwyn Everist)	18: 6
1980	First conference held (Evolution of the Flora and Fauna of Arid Australia), Adelaide	23: 10-11
1981	XIII IBC Sydney	29: 10
1981	Publication of <i>Flora of Central Australia</i>	28: 4
1982	First cover illustration on <i>ASBS Newsletter</i>	31
1986	Incorporation	49: 13
1987	<i>ASBS Newsletter</i> no. 50 published	
1989	Proposal for an ASBS Research Fund	59: 6-7
1991	First meeting in New Zealand (Systematic & Ecological Relationships of South Pacific Floras), Auckland	69: 6-7
1994	Research Fund named in honour of Hansjörg Eichler	80: 3
1995	Website set up	83: 1
1997	First Hansjörg Eichler Research Grant awarded (Marco Duretto, Nikolas Lam, Bernard Pfeil, Elisa Raulings)	93: 3
1998	Approved Research Institute Status secured	97: 1
1998	First Life Membership awarded (Marlies Eichler)	95: 2
1999	<i>ASBS Newsletter</i> number 100 published	



1999	ABN Registration	
2000	Society endorsed as a deductible gift recipient	
2001	First Nancy Burbidge Medal awarded (Judy West)	109: 12-13
2001	First electronic <i>ASBS Newsletter</i>	108
2011	XVIII IBC Melbourne	147-8: 12-14
2011	Name changed to Australasian	146: 9
2012	<i>ASBS Newsletter</i> number 150 published	
2012	Charity registration back-dated to 3 December 2012	182-183: 15
2013	Facebook group launched	154: 2-3
2016	Research Fund passes \$1M	168-9: 8
2017	Marlies Eichler Postdoctoral Fellowship announced	170: 1
2017	First Marlies Eichler Fellowship awarded (Bee Gunn)	173: 17-18
2018	Launch of the <i>Decadal Plan</i>	175: 4-3
2019	Twitter account launched	181: 2
2020	Society registered as a charity with The Australian Charities and Not-for-profits Commission (back dated to 3 December 2012)	182-183: 15
2020	First colour illustration on <i>ASBS Newsletter</i> cover	182-3
2020	First virtual AGM	185: 8-29
2021	First virtual conference (ASBS2021 virtual)	188: 11-16
2021	Formation of Student and Early Career Researcher Subcommittee	189: 6



**Above** Selwyn Everist (**left**), who presented the first Burbidge Lecture; Judy West (**middle**), the first recipient of the Burbidge Medal, and Nancy Burbidge (**right**), after whom the awards are named.

# Little mat-rush, big surprise – a new *Lomandra* species

Jian Wang *Queensland Herbarium & Biodiversity Science*

The genus *Lomandra* is indigenous to Australia, with two species also recorded in New Guinea and one species extending to New Caledonia (Lee & Macfarlane 1986).

*Lomandra* has been recorded in all Australian states and territories. Queensland has a surprising diversity of *Lomandra*, second only to Western Australia (Council of Heads of Australasian Herbaria 2023). Of 61 recognised species in the genus, 22 are found in Queensland, including three subspecies. This represents more than one third the known species (Wang 2023a, 2023b). The majority of *Lomandra* species range in size from 30cm to 1m. However, a few species are much shorter, reaching less than 30 cm.

*Lomandra hispidula* is a newly described dwarf mat-rush, endemic to south-east Queensland (Wang 2023b). Most *Lomandra* species are recognised as glabrous plants, especially in eastern Australia. However, *L. hispidula* is covered with short hispid hairs. The plant is usually only up to 20 cm tall. This feature, combined with rare flowering and fruiting events, can make it difficult to spot amongst herbaceous species, grasses and sedges. It is, therefore, a very special and remarkable species.

The first specimen was collected in August 1994 by Paul Grimshaw and Peter Taylor, scientific officers of Queensland Herbarium at that time. When conducting a vegetation mapping program at Western Creek State Forest, approximately 2.4km WSW of Millmerran, they discovered several infertile tufted graminoids growing in small clumps amongst shrubs. Not recognising the species, or even its genus, Paul remembered his excitement and fascination. Almost two years later, in June 1996, he found the first fertile specimen with mature female flowers and fruits, on the summit of Walla Range.

This time he was conducting a mapping program with Gerry Turpin, Ethnobotanist at BRI. Three months later, the specimen was determined to be an unnamed *Lomandra* species.

For over 20 years, quite a few specimens of female plants, occasionally with mature flowers and fruits were collected, but no satisfactory male flowering specimens were collected until the 5<sup>th</sup> of September 2020. Tony Bean, Senior Botanist at the Queensland Herbarium, discovered and collected the holotype specimen from Durikai State Forest, W of Warwick (Fig. 1).

While the name indicates the new species is hispid, one specimen with three plants had gradually lost hairs and became glabrous with age. Interestingly, this was observed in the northernmost population. Although the collection site showed evidence of fire, the cause of this phenomenon is unclear and certainly worth further investigation.

*Lomandra hispidula* mainly grows in *Eucalyptus* forests on varied soil types. Queensland's open forests and woodlands contain a vast and unique biodiversity of Australian flora. Many rare species, unknown to scientific researchers, are hiding in plain sight, awaiting adventurous discovery.

The official scientific description of this *Lomandra* species was published in *Kew Bulletin: Lomandra hispidula* (Asparagaceae), a remarkable new species from south-eastern Queensland, Australia. April 2023, DOI: 10.1007/s12225-023-10076-1.

## References

Council of Heads of Australasian Herbaria (2023). Australian Plant Census. <http://biodiversity.org.au/nsi/services/apc/> (accessed 17 May 2023).





**Above** The holotype of *Lomandra hispidula*.

Lee, A.T. & Macfarlane, T.D. (1986). *Lomandra*. In A.S. George (ed.), *Flora of Australia* 46: 100–141. Australian Government Publishing Service: Canberra.

Wang, J. (2023a). *Lomandra grayi* Jian Wang ter (Laxmanniaceae), a new species from north-east Queensland, Australia. *Austrobaileya* 13: 1–6.

Wang, J. (2023b). *Lomandra hispidula* (Asparagaceae), a remarkable new species from south-eastern Queensland, Australia. *Kew Bulletin* DOI: 10.1007/s12225-023-10076-1

### Acknowledgements

Jill and Maggie are thanked for friendly editing.

# A new guide to the mistletoes of WA

Book review by Greg and Bronwen Keighery, Subiaco, Western Australia

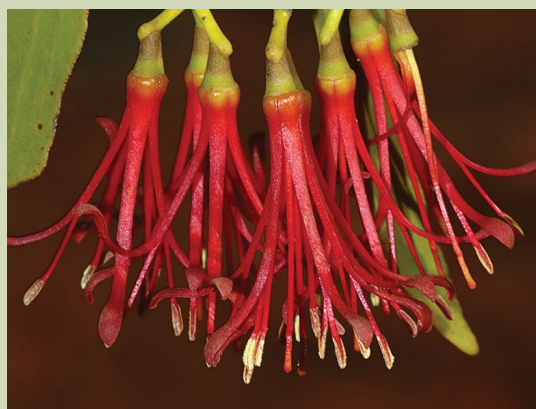
*Mistletoes of Western Australia*

Tony Start and Kevin Thiele

ISBN 9781486316144, paperback, 245 x 170 mm

CSIRO Publishing, Melbourne, 2023, 152 pp.

RRP AU\$59.99



## MISTLETOES OF WESTERN AUSTRALIA

TONY START AND KEVIN THIELE



A user-friendly guide to the stem parasitic mistletoes of Western Australia, including the 'traditional' members of the mistletoes, the Viscaceae, now included in the normally root parasitic Santalaceae and the Loranthaceae, a family predominantly of the southern hemisphere tropics. The first nine chapters introduce the reader to the plants, covering aspects of the biology of the group including reproduction, types of parasitic roots,

host variety, mimicry, threats especially fire, biogeography and their place in natural and agricultural Western Australian Ecosystems. This is a very good introduction to current knowledge about the group. The chapter on fire and other threats to mistletoes is the product of a lifetime of careful observations by Tony Start and his documentation of the elimination of mistletoes over vast areas of the deserts, Pilbara region and Kimberley region of Western Australia by too large and too frequent fires. This is an issue which should be widely known and hopefully this book will help spread interest in this problem and its actual and potential outcomes.

Most of the book is a field guide to the individual species of mistletoes of Western Australia. Very useful features include comprehensive keys to the genera and all species. The inclusion of a good key is a must in a field guide. When one is not included, page flipping to find a species is tedious and not very accurate. The authors avoid common names, but anyone feeling the need can find most in Watson (2011). Each species account details named subspecies and varieties, and these are segregated on the distribution maps if more than one occurs in Western Australia. Type locality is given for each species; however, this may seem a little puzzling to a 'normal' member of the public. There is then a brief description of each taxon where related and similar or confusing species are noted. An excellent distribution map is given, hosts are briefly listed, notes are detailed about each species, and threats and conservation status is stated. Colour photographs illustrate nearly all species, many for the first time.

For the taxonomically minded, the authors highlight issues with the taxonomy of many tropical species especially in *Amyema* (*A. benthamii*, *A. conspicua*, *A. congener*, *A. dolichopoda*, *A. mackyeensis*, and *A. villiflo-*

ra). Considerable variation is documented in *Lysiana casuarinae* which appears to be a species complex. *Amyema* itself is evidently potentially not monophyletic (Vidal-Russell & Nickrent 2008), and the authors hint at such issues in the discussion on variation in *Amyema sanguinea*. Much remains to be studied at all levels.

With regard to the Viscaeae, the very localised Western Australian endemic *Korthalsella arthroclada* has frequently thought to be a variant of the SE Asian *K. dacrydii*, but recent research by Sultan *et al.* (2019) shows it is very distinctive and not closely related to the Australian *K. leucothrix*. Even with the solid taxonomic backbone provided by Bryan Barlow for Australian mistletoes, there is evidently still much to learn about the limits of variation in Australian mistletoes, as many species occur in remote regions, or by their parasitic nature have very disjunct distributions. This book helps readers to fill these gaps in biology and taxonomy.

One cannot help comparing the book to that of Watson on southern Australian mistletoes. Watson's book has a much greater emphasis on the ecology, cultural significance (both European and Aboriginal), animal interactions, (especially mistletoe specialist butterflies), management of mistletoes (especially in urban and agricultural landscapes), and cultivation. That book covers 46 species, each illustrated by coloured paintings. Twenty species and five genera (*Amylotheca*, *Atkinsonia*, *Benthamina*, *Muellerina* and *No-tothixos*) are not found in Western Australia. Twenty species from tropical Queensland are not covered in either book. These two books complement each other well, and we share the authors' hope that: 'naturalists in Cape York, Arnhem Land and the Kimberley look out for these northern mistletoes and improve our collective knowledge.'

Well and colourfully illustrated, *Mistletoes of Western Australia* contains much information about our mistletoes that we were not aware of, and will be a very welcome addition to our field box. It would also be attractive to

any member of the public interested in these odd flowering plants, as it is an easy read and informative. Anyone with an ecological or taxonomic inclination will find it a great aid in confirming initial identifications of these plants.

## References

Watson, D. (2011). *Mistletoes of Southern Australia*, CSIRO Publishing, Melbourne.

Vidal-Russell, R. and Nickrent, D.L. (2008). Evolutionary Relationships in the Showy Mistletoe Family (Loranthaceae). *American Journal of Botany* 95: 1015–1029.

Sultan, A., Robertson, A.W., Callmender, M.W., Phillipson, P.B., Meyer, J.Y. and Tate, J.A. (2019). Widespread morphological parallelism in *Korthalsella* (Santalaceae, tribe Viscaeae): a molecular phylogenetic perspective. *Taxon* 68: 1204–1218.

# Determined to acquire them all

Book review by John Clarkson Queensland Parks and Wildlife Service

*The Peter Crossing Collection: An Illustrated Catalogue*

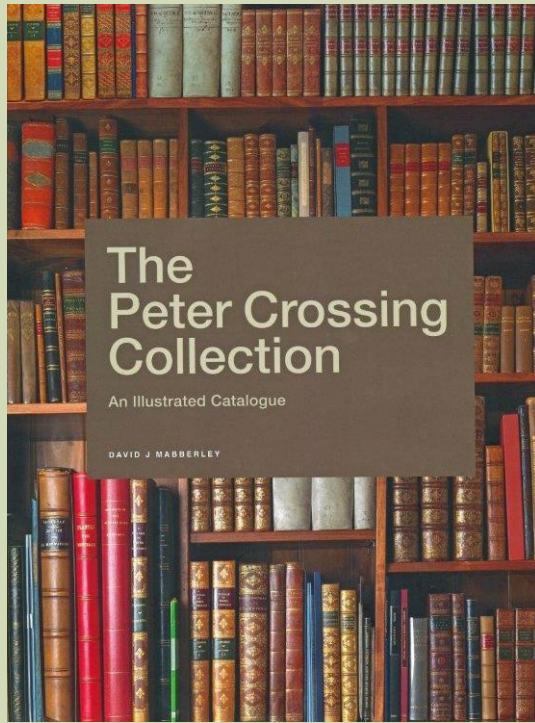
David J. Mabberley

ISBN: 978-0-6485982-1-3 (hardback) 300 × 240 mm

Peter Crossing AM, Greenwich NSW, 2022, pp. xii, 345.

RRP AUD\$95.00 plus P&P

Copies available via email request to:  
[peter@crossings.com.au](mailto:peter@crossings.com.au)



The Macquarie Dictionary (7th edition, 2017) defines catalogue as: 1. a list, usually in alphabetical order, with brief notes on the names, articles, etc., listed: 2. a record of the books and other resources of a library or a collection, indicated on cards, or, occasionally, in book form. Although subtitled 'An Illustrated Catalogue', this book far surpass-

es this definition. It is a tour de force of the cataloguer's art.

Peter Crossing's fascination with Australian flora and fauna was the genesis of the collection of rare books, art and ephemera that is the focus of this magnificent book. When told in the mid-1990s that many of the key works on Australia's natural history published mostly in England, France and Australia in the eighteenth and nineteenth centuries were unobtainable, he was determined to acquire them all. More than two decades later, the result of this quest is one of the finest collections of books from this period held by a private individual in Australia. Many of these books are not held by any public library in Australia and in one notable case (369 plates (of 800) from Leopold Trattinnick's *Pflanzen Abbildungen*) only one other comparable collection is known in the world.

In 2017, Peter invited his friend David Mabberley to bring order and context to his collection. The result was the magnificent book, *Botanical Revelation: European Encounters with Australian Plants before Darwin*, published by New South Publishing in 2019 and favourably reviewed in this Newsletter (Clarkson 2020). *The Peter Crossing Collection: An Illustrated Catalogue* based on recent acquisitions, further research, and works dealing with zoological titles not considered sufficiently relevant to *Botanical Revelation* is a must have companion.

Peter Crossing chose to have the catalogue printed and bound in Australia by award-winning, Sydney based company, Carbon8. It was designed by Jacqui Triggs and printed on 170gsm SilkHD paper with 190gsm endpapers and wrapped in a 150gsm SilkHD Matte Cello dust jacket. When I wrote to Carbon8 seeking details of the papers used, Nic Doyle, the Senior Account Manager, told me how very proud he was of how this



book turned out. This is not surprising. The book exudes quality. The minor print related quibbles I had with *Botanical Revelation* have been rectified here. Compare the reproduction of Edward Donovan's ghost moths on *Nicotiana odorata* (p.132) with the same image on page 203 of *Botanical Revelation*. As with *Botanical Revelation*, the dust jacket can be unfolded to reveal an image at a scale impossible to reproduce in the text even in a book of this size. In this case it is a plan of the Jardins de Courset probably the most significant garden on the Continent in terms of new Australian plants (see pp. 110-111).

The book begins with a foreword (2 pp.) by Peter Crossing in which he traces the history of the collection and the personal enjoyment that he has experienced from the collecting experience. This is followed by a short introduction (2 pp.) which highlights some of the significant works in the collection and their links to characters of the time including royalty, politicians, explorers, authors, naturalists and scientists. The introduction finishes with a brief discussion of the considerable influence Sir Joseph Banks wielded in the latter parts of the eighteenth and early parts of the nineteenth century in an attempt to ensure Britain retained its supremacy in scientific and geographical endeavours. The front matter concludes with a two-page chronology of events allowing readers to place the works discussed in relation to significant historical events occurring at the time. A useful list of terms used for paper sizes, some of which might be unfamiliar to many readers, is also provided.

The catalogue proper (337 pp.) is introduced by brief notes on the arrangement of the works, the information provided on each, and an explanation of the link between this book and material covered in *Botanical Revelation*. The catalogue is set out in strict chronological order beginning with John Ray's *Historia plantarum generalis* published in three volumes between 1693 and 1704 and ends with a previously unpublished watercolour of *Doryanthes palmeri* completed by Beverley Allen in 2022. In all, 201 works

are included. Each entry follows a standard pattern. Title and publication details are followed by a comprehensive description of the binding, papers used, information identifying the provenance of the work and often much more. The text which accompanies each work is a master class in bibliographic research full of all sorts of interesting information that brings each work to life. In various places throughout the text, in small blocks of red ink, are comments by Peter Crossing on what the acquisition of a particular work meant to him and the joy he experienced in finding it. Where appropriate, each entry ends with a reference to *Stafleu and Cowan's Taxonomic Literature*; a link to relevant standard bibliographies and collection catalogues; the call numbers for other copies of the work held by the State Library of New South Wales or the Royal Botanic Garden, Sydney; and a link to *Botanical Revelation* and other relevant literature. As the author points out, the absence of a call number gives some indication of the rarity of books in the collection.

The book ends with a short bibliography (3 pp.) and an index (5 pp.) listing the main characters discussed. The bibliography might appear to be rather short for a book of this size but it is in effect a supplement to the comprehensive bibliography provided in *Botanical Revelation*. A good reason to have both books.

This book is the result of the perfect partnership between a lover of books with the means to acquire them and a scholar with the skills necessary to bring order and context to the collection. In biological terms, a perfect example of mutualism. *The Peter Crossing Collection* is a book for lovers of books and one to keep handy and dipped into often.

## References

Clarkson, J.R. (2020). Wealth, prosperity, and civilization. *Australas. Syst. Bot. Soc. Newslett.* 185:61-64.

## In the News

Gibson studying *Duboisia hopwoodii* in the NSW Herbarium. Photo: Anna Kucera/The Guardian

Please send me anything that you think is of interest for the ASBS community, otherwise the news is just what I see on Twitter - Todd McLay [todd.mclay@gmail.com](mailto:todd.mclay@gmail.com).

## Online and in the media

From exquisite beauty to lingering horror: the secret world of NSW's herbarium

*The Plant Thieves: Secrets of the Herbarium*, by Prudence Gibson, explores the National Herbarium of New South Wales. The book delves into the beauty and importance of the collection, its role in preserving plant history and understanding climate change impacts, and the surprising ways in which plants communicate and exert their power. Gibson also reflects on the colonial erasure of Indigenous knowledge about plants and the need for a more caring and informed approach to the environment. This article is a story 'behind-the-book' sort of thing.

**Link to story:** <https://www.theguardian.com/books/2023/may/22/from-exquisite-beauty-to-lingering-horror-the-secret-world-of-australias-herbarium>

Happy birthday to one tree in particular

Black Rock locals threw a 100th birthday party for a tree in their community. The *Angophora costata* was planted in 1923 by CC Buckley, the then-director of the Semco art needlework company. The party was attended by over 100 people, who sang Happy Birthday, ate cake, and listened to a poem about the tree. Cute.

**Link to story:** <https://www.theage.com.au/national/victoria/black-rock-locals-throw-100th-birthday-party-for-magical-majestic-tree-20230427-p5d3vc.html>

Guerilla gardening in Campbelltown NSW

Local horticulturist Tim Pickles has planted ~100 trees in vacant lots and other areas around the city as part of a desire to improve the city's environment and make it more livable.

**Link to story:** <https://www.abc.net.au/news/2023-05-26/man-plants-100-trees-guerilla-gardening-campbelltown-tree-canopy/102392972>



## Chicago Botanic Garden gets \$21 million donation

A \$21 million gift from the Negaunee Foundation is the largest in the Chicago Botanic Garden's history. This funding will allow the garden to expand its conservation and eco-restoration efforts on a scale not previously possible in a significant step forward in the fight to save endangered plants from extinction. Maybe a sign that there is growing support for plant conservation.

**Link to story:** <https://news.wttw.com/2023/05/30/21m-gift-chicago-botanic-garden-will-accelerate-research-help-save-plants-risk-extinction>

## PhD students are doing it tough

Australian PhD students are struggling to make ends meet on their stipends which have not kept up with inflation, and many students are forced to live in poverty while they work on their research. While some universities are taking it upon themselves to top up government funded stipends, the government itself needs to take action so students can focus on their research without worrying about how to pay their bills.

**Link to story:** <https://www.afr.com/work-and-careers/education/why-australia-smartest-people-are-living-on-noodles-and-pizza-20230525-p5db7l>

## Crime Pays but Botany Doesn't: New Zealand

He's not for everyone, but social media's favourite Chicagoan train driver/botanist has spent the last couple of weeks in the North Island of New Zealand. You can check out his posts on Instagram, and listen to his podcast about divaricating shrubs.

**Instagram:** [https://www.instagram.com/crime\\_pays\\_but\\_botany\\_doesnt/](https://www.instagram.com/crime_pays_but_botany_doesnt/)

**Spotify podcast link:** <https://open.spotify.com/show/2zJDjluBz6qVCGrF1i8JhP>

## The true crime/plant podcast crossover we've been waiting for

Bad Seeds podcast adds yet another true crime podcast to the world, but this time it's about plant crime! Find it at your podcast provider, or listen at the link below.

**Listen here:** <https://www.playpodcast.net/podcast/bad-seeds/>



**Above** Sculpture of Linnaeus at Chicago Botanic Garden. Photo: Patty Wetli / WTTW News

## A bit too much bitou - tracing the invasion of one of Australia's worst weeds

Using a combination of genomic tools and historical documentation, the introduction pathway of bitou bush into Australia has been determined to be from a single source population in South Africa. The plant was likely introduced to eastern Australia in Newcastle, New South Wales, around 1900, potentially in the ballast of wooden sailing ships. The weed has since spread to over 1,600 kilometres of coastline and is a major threat to native vegetation and wildlife. The identification of the likely source population could lead to more effective biological control methods.

**Link to story:** [https://theconversation.com/a-botanical-detective-story-shedding-light-on-the-journey-out-of-africa-for-one-of-australias-worst-weeds-205183?utm\\_medium=Social&utm\\_source=Twitter#Echo-box=1684706883-1](https://theconversation.com/a-botanical-detective-story-shedding-light-on-the-journey-out-of-africa-for-one-of-australias-worst-weeds-205183?utm_medium=Social&utm_source=Twitter#Echo-box=1684706883-1)

**Link to paper:** <https://link.springer.com/article/10.1007/s10530-023-03017-3>



Bitou flower. Photo: Project Noah

## RNZ Critter of the week

Radio New Zealand's Critter of the Week recently did a story on *Utricularia australis*, which is nationally critical in New Zealand. After you've listened, check out the back catalogue which features ~100 other New Zealand critters, including other plants, lichens, and fungi.

**Link to story:** <https://www.rnz.co.nz/national/programmes/afternoons/collections/critter-of-the-week/audio/2018893739/critter-of-the-week-the-southern-bladderwort>

## Papers and publications

Articles can be provided by request to Todd at [todd.mclay@gmail.com](mailto:todd.mclay@gmail.com).

### Mass production of unvouchered records fails to represent global biodiversity patterns

Efforts to document biodiversity is increasingly coming from observation records that lack physical voucher specimens. A study of 1.9 billion occurrence records found that observation records are biased towards certain regions, clades, functional traits, and time periods. Voucher records are more congruent with expected biodiversity patterns, but are far less common. These differences could have implications for the utility of such data for biodiversity research.

**Read the paper:** Daru & Rodriguez (2023). Mass production of unvouchered records fails to represent global biodiversity patterns. *Nature Ecology and Evolution* <https://doi.org/10.1038/s41559-023-02047-3>

### Achieving zero extinction for land plants

This paper emphasizes the need for increased investment, improved data accessibility and quality, and the use of innovative approaches to ensure the conservation of plant species and prevent their extinction.

New technologies and citizen science can help, but we need to set national and global targets of zero plant extinction to attract greater support.

**Read the paper:** Corlett (2023). Achieving zero extinction for land plants. *Trends in Plant Sciences*. [https://www.cell.com/trends/plant-science/fulltext/S1360-1385\(23\)00099-7](https://www.cell.com/trends/plant-science/fulltext/S1360-1385(23)00099-7)

## New pollen resource: the 3D Pollen project

The 3D Pollen Project is an open-access repository of 3D pollen scans and surface files for 3D printing, aimed at providing a new and tactile way for audiences to interact with pollen and related research. Currently, the project includes scans of 35 species that cover a diverse geographic distribution and a comprehensive range of pollen morphological features. These 3D models are freely available for download online and have been utilized in various outreach, education, and research initiatives worldwide.

**Read the paper:** Wilson (2023). The 3D Pollen Project: An open repository of three-dimensional data for outreach, education and research. *Review of Palaeobotany and Palynology* <https://doi.org/10.1016/j.revpalbo.2023.104860>

## Is Australia weird? A cross-continental comparison of biological, geological and climatological features

Are Australia's ecological characteristics significantly different from those of other continents? Analysing a vast dataset, these researchers found that Australia ranked as the most distinctive continent for 26 variables, but no significant differences in most climate variables compared to the global average or in terms of its biotic and abiotic characteristics. The study highlights that while Australia has unique features, it is not an outlier, emphasising the relevance of ecological findings from Australia to other regions and vice versa.

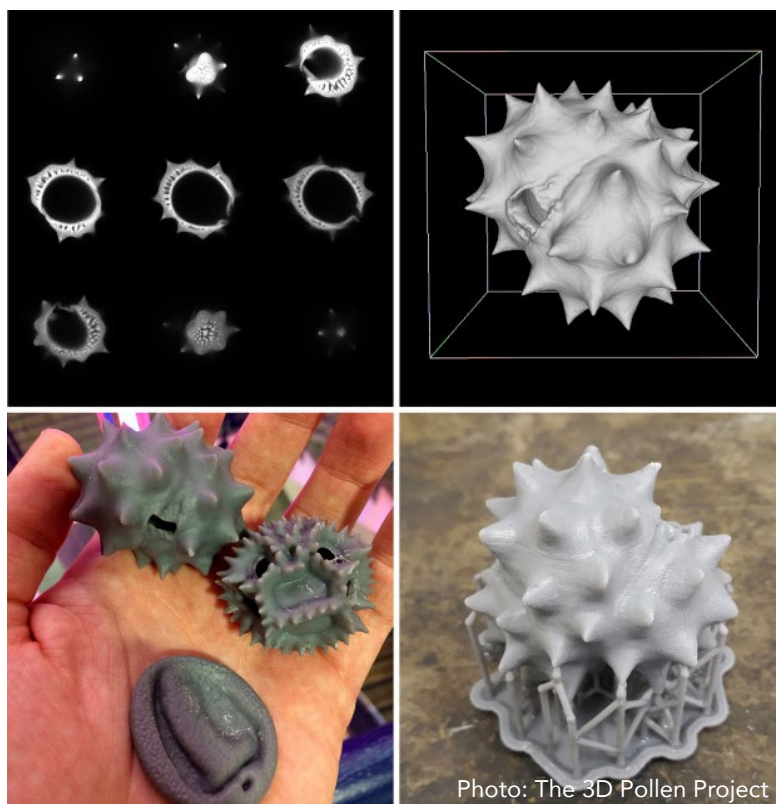


Photo: The 3D Pollen Project



**Read the paper:** Flores-Moreno et al. (2023). Is Australia weird? A cross-continental comparison of biological, geological and climatological features. *Frontiers in Ecology and Evolution*. <https://doi.org/10.3389/fevo.2023.1073842>

[cesses explaining the global cycad biodiversity/links/6486f959b3dfd73b77806d10/Reconciling-fossils-with-phylogenies-reveals-the-origin-and-macroevolutionary-processes-explaining-the-global-cycad-biodiversity.pdf](https://doi.org/10.3389/fevo.2023.1073842)

## Reconciling fossils with phylogenies reveals the origin and macroevolutionary processes explaining the global cycad biodiversity

The origin and geographic range evolution of cycads was investigated (again) by integrating molecular and morphological data and total-evidence dating analyses. The findings suggest that cycads originated in the Carboniferous on the Laurasian land-mass and expanded in Gondwana during the Jurassic. Antarctica and Greenland played important roles as biogeographic crossroads for cycads through now-extinct continental connections. Vicariance is identified as a key speciation mode in both ancient and recent times, and the latitudinal range of cycads expanded in the Jurassic but contracted toward subtropical latitudes in the Neogene. The study highlights the value of incorporating fossils into phylogenetic analyses for understanding the ancestral origins and evolutionary processes driving the global distribution of relict groups like cycads.

**Read the paper:** Coiro et al. (2023). Reconciling fossils with phylogenies reveals the origin and macroevolutionary processes explaining the global cycad biodiversity. *New Phytologist*. [https://www.researchgate.net/profile/Mario-Coiro/publication/371489209\\_Reconciling\\_fossils\\_with\\_phylogenies\\_reveals\\_the\\_origin\\_and\\_macroevolutionary\\_pro-](https://www.researchgate.net/profile/Mario-Coiro/publication/371489209_Reconciling_fossils_with_phylogenies_reveals_the_origin_and_macroevolutionary_pro-)

# ASBS student and ECR register

In order to promote the connectivity and visibility of our students and early career researchers (ECRs in ASBS, ASBS Newsletter publishes a student and ECR register. If you're a student or ECR and would like to opt-in to this register follow this link: <https://forms.gle/wxSzGA9F-pBTNXB6j8>. For any questions or to change your details, contact Lizzy at [editor.asbsnews@gmail.com](mailto:editor.asbsnews@gmail.com)

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# The newsletter

The ASBS newsletter keeps members informed of society events and news, and provides a platform for debate and discussion. The newsletter is published quarterly on the ASBS website and in print. Original articles, notes and letters (not exceeding ten published pages in length) are encouraged for submission by ASBS members.

*Have an article or an idea for the newsletter?*  
Send it to Lizzy at  
editor.asbsnews@gmail.com

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*Advertising* Advertising space is available for products or services of interest to ASBS members at the following rates (AUD):

Full page: \$200  
Half page: \$100  
Flyers: \$250

A 20% discount applies for regular advertisements. ASBS members are exempt from advertisement fees but not insertion costs for flyers (\$50). For advertising enquiries please contact the editor.

*Printing* Printed by Create Print & Design, Cairns.

# The society

The Australasian Systematic Botany Society is an incorporated association of over 300 people with professional or amateur interest in botany. The aim of the society is to promote the study of plant systematics.

Membership is open to all interested in plant systematics. Members are entitled to attend general and chapter meetings, and to receive the ASBS *Newsletter*. Any person may apply for membership by filling in a membership application form available at <http://www.asbs.org.au/membership.html>, and forwarding it to the Treasurer. Subscriptions become due on 1 January each year.

The ASBS annual membership subscription is AUD \$45, and a concessional rate of AUD \$25 is offered to full-time students, retirees and unemployed people. Payment may be by credit card or by cheque made out to Australasian Systematic Botany Society Inc., and remitted to the Treasurer. All changes of address should be sent directly to the Treasurer as well.



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