Newsletter

Australasian Systematic Botany Society

No. 206 October 2026



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The personal herbarium of Alex Purdie

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From the President

Jennifer Tate, Massey University

Spring has finally come to us here in Aotearoa New Zealand with a promise of summer around the corner. We look forward to seeing you all at the AGM online later this month and updating you with the work that Council has been doing this year and our plans for the coming year. Many of us at universities are busy with assessment marking and final exams, but the end is in sight! I know many of you will be out in the field already and making plans for summer botanical work.

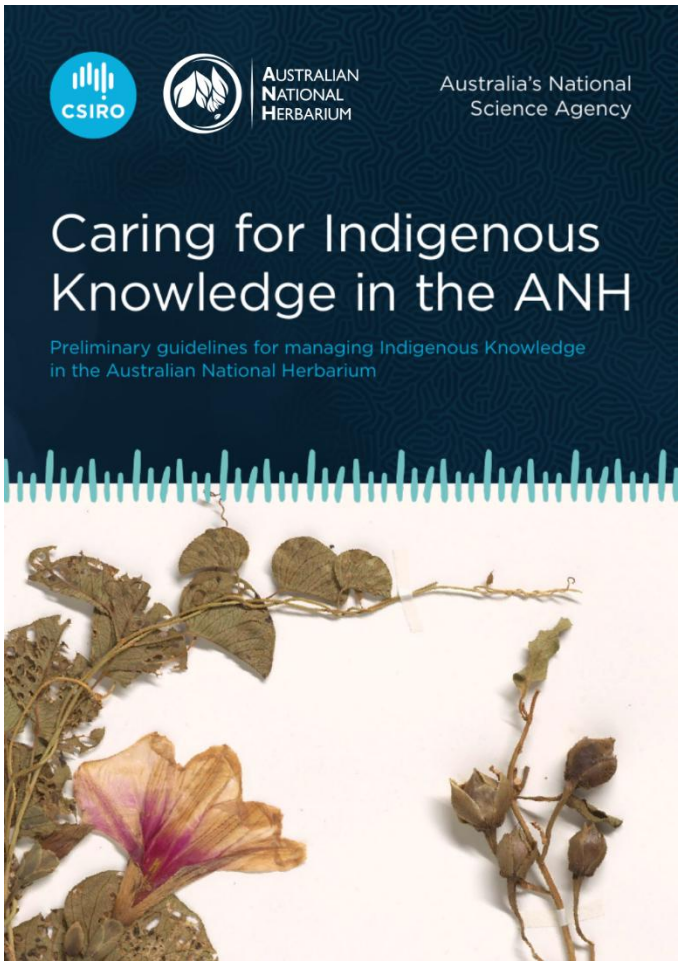
Many of you will have heard about the proposed job cuts at the Tasmanian Museum and Art Gallery, which would see the loss of critical leadership and curatorial expertise at the Tasmanian Herbarium. On behalf of ASBS, I sent in a letter of support to several government officials encouraging them to reconsider their proposal and to maintain those positions and expertise. While we await news of the outcome, our thoughts are with those whose roles are potentially affected. Situations such as these are occurring more frequently overseas as well, so it is important that we communicate the significance of our science to broad audiences, especially government officials holding the purse strings!

In the newsletter this month, we have some fantastic reports from postgraduate recipients of the Hansjörg Eichler Research Fund, a lovely tribute to Peter Michael who passed away mid-year, an update from the Western Australian Herbarium, and from Alexander Schmidt-Lebuhn an introduction to a recent report compiled by postdoctoral fellow Alexandra Marley on the historically recorded indigenous knowledge in Australian National Herbarium specimens (report pictured). Pat Hannah, the *Australian Systematic Botany* manager at CSIRO Publishing, reminds us that the journal will be celebrating its 40th anniversary in 2028. The journal has had a close association with our Society during that time, as it continues to, and we encourage members to consider publishing there.

Congratulations to two of our members on their new positions. Juliet Wege is now the Herbarium Curator at PERTH and is the first female botanist to hold that role – it's about time!! Todd McLay has taken over recently as Director Research at Royal Botanic Gardens Victoria – fantastic!

I look forward to seeing you all at the AGM in a few weeks.

--Jen



A recently published report, prepared by Alexandra Marley investigating historically recorded indigenous knowledge in the Australian National Herbarium.

Unpacking the taxonomy and distribution of Antarctic bryophytes

Stella Fish, Securing Antarctica's Environmental Future.

School of Biological and Environmental Science, Queensland University of Technology.

Antarctica invokes imagery of humpback whale flukes framed by icebergs and penguins tobogganing down gentle slopes, but there are other less obvious denizens of the icy continent. Small and unassuming, bryophytes are one of the dominant vegetation groups in Antarctica. There are *c*. 115 species of moss (Ochyra *et al.* 2008; Ellis *et al.* 2013; Sollman 2015; Ronikier *et al.* 2018; Câmara *et al.* 2019; Rehman *et al.* 2021; Ochyra *et al.* 2022; Cannone *et al.* 2024) and 27 species of liverwort (Bednarek-Ochyra *et al.* 2000). Most of the species are found on the warmer and wetter Antarctica Peninsula (Colesie *et al.* 2023). After crossing the biogeographic Gressitt Line to Continental Antarctica bryophyte diversity drops to 29 moss species and one liverwort species (Fig. 1. A).

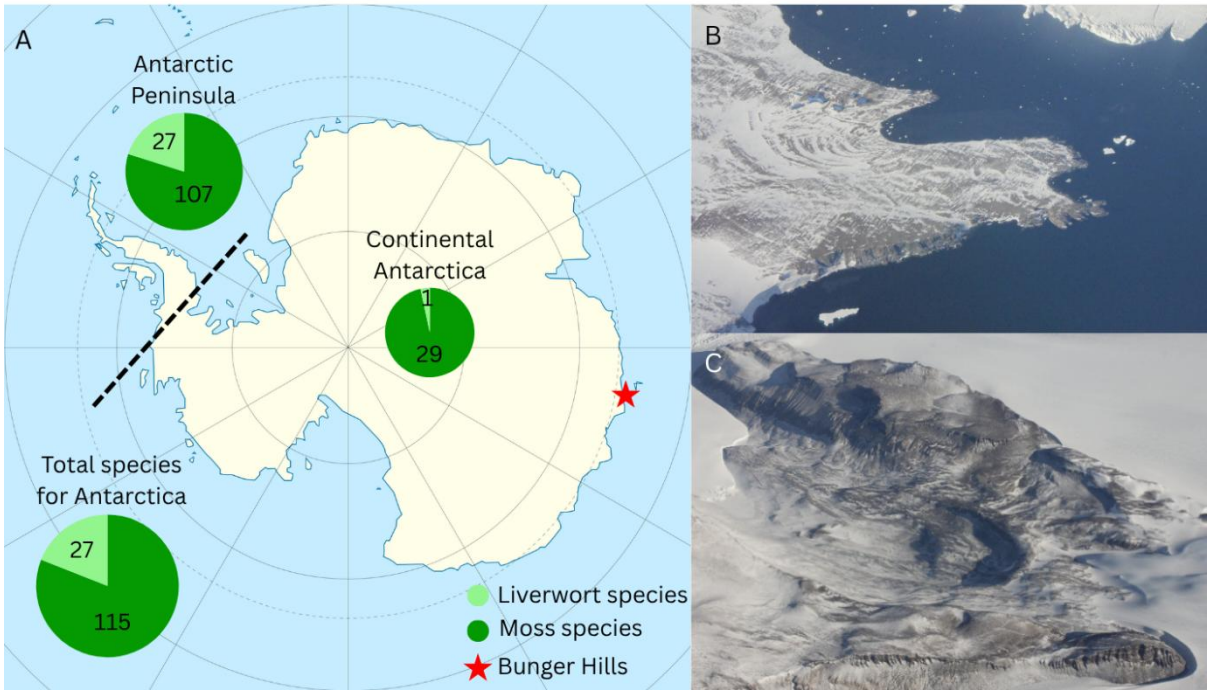


Figure 1. A – Map of Antarctica with bryophyte species diversity superimposed and location of Bunger Hills and Gressit Line (dotted line) marked, B – ice-free Terra Nova Bay, C – ice-free area in the Transantarctic Mountains, photographs by Stella Fish (B, C).

Bryophytes are limited to less than 0.5% of Antarctica (Tóth *et al.* 2025): they only occur on ice-free land, for example Terra Nova Bay, Bunger Hills and the Transantarctic Mountains (Fig. 1B & C). These ice-free oases are like islands in a sea of ice and as a result they often have unique community compositions (Chown & Convey 2007). Many oases are remote and logistically challenging to visit, meaning many places have only been opportunistically sampled. This has resulted in a patchy understanding of species presence and fine-scale distribution (Patterson *et al.* 2025). Additionally, identification of bryophytes is challenging. Plants are usually sterile, reducing the availability of diagnostic characters, particularly in the field and most species are phenotypically plastic, with depauperate forms frequent in Continental Antarctica (Ochyra *et al.* 2008).

The aims of my master's degree research were to:

1) use morphological and molecular techniques to identify bryophytes from the Bunger Hills, a remote ice-free oasis in the Australian Antarctic Territory with history of low survey effort;
2) integrate presence – absence data to understand bryophyte diversity patterns across the oasis;
3) compare diversity of the Bunger Hills with other nearby ice-free oases;
4) develop a field guide for the mosses of East Antarctica.

For my thesis, I had 192 bryophyte collections from two field campaigns in 2023/24 and 2024/25 and 77 existing collections lodged in the Tasmanian Herbarium from past field campaigns in 1977, 1985/86, and 2000. All specimens were identified, requiring viewing individual minute (often less than 1 mm long) leaves under a compound microscope and occasionally cross-sectioning them by hand. Every specimen was photographed, capturing its key diagnostic characters (Fig. 2).

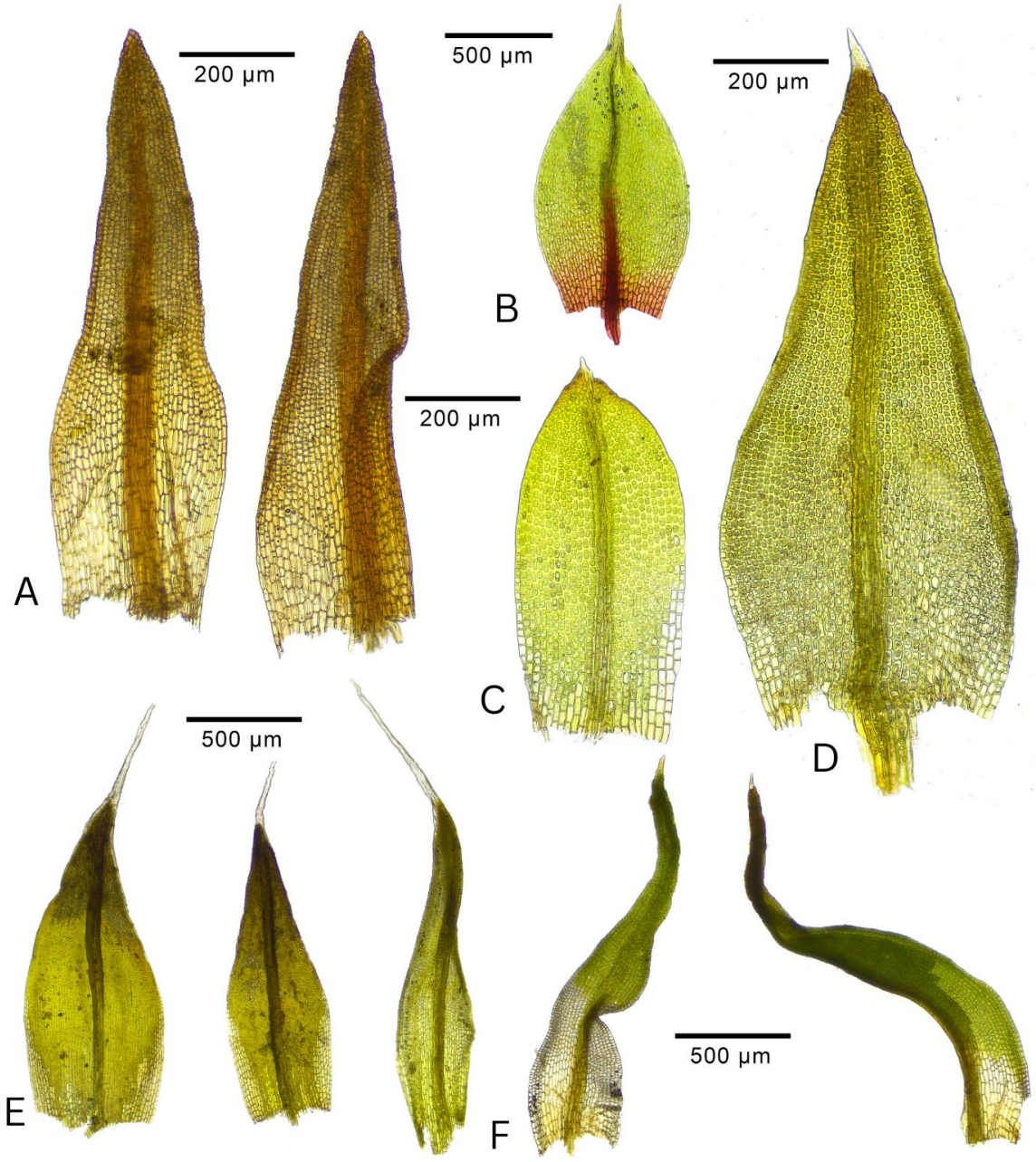


Figure 2. Microscopy images of Antarctic moss leaves that I identified during my research: A – *Bryoerythrophyllum recurvirostrum*, B – *Bryum pseudotriquetrum*, C – *Grimmia plagiopodia*, D – *Schistidium antarctici* (endemic), E – *Orthogrimmia sessitana*, F – *Syntrichia frigorideserticola* (endemic).

Thanks to the Hansjörg Eichler Research Grant, I was able to conduct a genetic pilot study on 55 specimens. These covered ten species and two genus-only identifications and tested three genetic markers: ITS1, ITS1-2 and *trn*L. Myorphological identifications were compared to the genetic results. This work aims to develop an efficient and accurate field sample to lab analysis pipeline for future field survey work. It has also provided additional information for identifying *Bryum* and *Bryoerythrophyllum* to species level. This pilot also provided some of the first DNA sequences for bryophytes from this area.

Research Learning and Collaborations

The grant enabled me to travel to two institutions. I first visited Distinguished Professor Sharon Robinson and her laboratory at the University of Wollongong (Fig. 3). The visit was a welcome relief from the cold of Hobart, and I also had the chance to work with some of the researchers who had collected specimens from the Bunger Hills. This provided me with additional context for the oasis.

After Wollongong, I travelled to the Australian National Herbarium in Canberra where I was hosted by Honorary Fellow Dr. Chris Cargill. During my stay, I worked on their extensive East Antarctic bryophyte collection. This enabled me to gain experience with other taxa found in the region.



Figure 3. Lunch with the moss lab at the University of Wollongong.

Research Results

With the morphological and genetic identifications, a new species list was constructed for the Bunger Hills, reporting 11 species. This is just over a third of the entire bryophyte flora for Continental Antarctica, including two new records for the Bunger Hills. Of the first small batch of samples sent for genetic extraction and analysis, 12 yielded reliable results. All 12 samples agreed with my morphological determinations. Those samples that did not yield reliable results enabled us to fine tune our approach, identifying the best markers. Another 23 samples are currently undergoing DNA extraction (at the time of writing). Now I am in the final stages of writing my thesis and will be submitting in the next two months. I am taking a research visit to the Field Herbarium (Chicago, USA) where I will give a presentation on my research on Antarctic bryophytes and examine bryophytes specimens from the sub-Antarctic to supplement my research.

During my candidature I was lead author of a research highlight article on a study of global bryophyte conservation, drawing attention to the lack of Antarctic bryophyte representation on the IUCN Red List (Fish *et al.* 2026). I have contributed bryophyte photographs (Fig. 2) and descriptions for the Australian Antarctic Division's upcoming guide to biodiversity in the Australian Antarctic Territory. I have provided the Australian Antarctic Data Centre with a spatially explicit species-level bryophyte dataset for the Bunger Hills.

My sincerest thanks to the Australasian Systematic Botany Society for awarding me the Hansjörg Eichler Research Grant in 2025. Including preliminary molecular results in my research has vitally improved our understanding of bryophyte diversity in the Bunger Hills.

References

Bednarek-Ochyra H, Váňa J, Ochyra R, Lewis Smith RI (2000) *The Liverwort Flora of Antarctica*. Polish Academy of Sciences, Institute of Botany, Cracow.

Câmara PEAS, Soares AER, Henriques DK, Peralta DF, Bordin J, Carvalho-Silva M, Stech M (2019) New insights into the species diversity of *Bartramia* Hedw. (Bryophyta) in Antarctica. *Antarctic Science* **31**, 208–215. https://doi.org/10.1017/S0954102019000257

Cannone N, Vanetti I, Convey P, Sancho LG, Zaccara S (2024) Molecular analyses support revision of species diversity of the moss genus *Bryum* in Antarctica. *Botanical Journal of the Linnean Society* **205**, 15–25. https://doi.org/10.1093/botlinnean/boad070

Chown SL, Convey P (2007) Spatial and temporal variability across life's hierarchies in the terrestrial Antarctic. *Philosophical Transactions of the Royal Society B: Biological Sciences* **362**, 2307–2331. https://doi.org/10.1098/rstb.2006.1949

Colesie C, Walshaw CV, Sancho LG, Davey MP, Gray A (2023) Antarctica's vegetation in a changing climate. *WIREs Climate Change* **14**, e810. https://doi.org/10.1002/wcc.810

Ellis LT, Asthana AK, Gupta R, Nath V, Sahu V, Bednarek-Ochyra H, Ochyra R, Cykowska B, Calvo Aranda S, Fischer E, Gabriel R, Górski P, Gremmen N, Hespanhol H, Kurbatova LE, Lewis Smith RI, Long DG, Bell D, Mogro F, Sérgio C, Garcia CA, Stow S, Martins A, Smith VR, Váňa J, Vanderpoorten A (2013) New national and regional bryophyte records, 34. *Journal of Bryology* **34**, 62–70.

Fish S, Wasley J, Shaw JD (2026) Assessing global conservation status of bryophytes. *Global Change Biology* **32**, e71049. https://doi.org/10.1111/gcb.71049

Ochyra R, Lewis Smith RI, Bednarek-Ochyra H (2008) *Illustrated Moss Flora of Antarctica*. Cambridge University Press, Cambridge.

Ochyra R, Saługa M, Ronikier M (2022) Taxonomic and nomenclatural novelties in *Syntrichia* (Bryophyta: Pottiaceae), with reinstatement of an endemic continental Antarctic species. *Plant and Fungal Systematics* **67**, 40–44. https://doi.org/10.35535/pfsyst-2022-0005

Patterson CR, Helmstedt KJ, Terauds A, Shaw JD (2025) A multidimensional assessment of Antarctic terrestrial biological data. *Diversity and Distributions* **31**, e13909. https://doi.org/10.1111/ddi.13909

Rehman WU, Gupta K, Bast F (2021) Morphophylogenetic assessment of a new moss species *Bryum bharatiense* sp. nov. (Bryaceae) from Larsemann Hills, Eastern Antarctica. *Journal of Asia-Pacific Biodiversity* **14**, 283–289. https://doi.org/10.1016/j.japb.2021.07.001

Ronikier M, Saługa M, Jiménez JA, Ochyra R, Stryjak-Bogacka M (2018) Multilocus DNA analysis supports *Didymodon gelidus* (Musci, Pottiaceae) as a distinct endemic of the austral polar region. *Acta Societatis Botanicorum Poloniae* **87**, 3609. https://doi.org/10.5586/asbp.3609

Sollman P (2015) The genus *Bryoerythrophyllum* (Musci, Pottiaceae) in Antarctica. *Polish Botanical Journal* **60**, 19–25. https://doi.org/10.1515/pbj-2015-0004

Generating a new genomic resource for *Eucalyptus* subseries *Subexsertae* (tropical red gums)

Robb Eastman-Densem, The University of Melbourne

Currently over 35 published reference genomes exist for the megadiverse and Australian iconic *Eucalyptus* (National Library of Medicine, accessed 29 July 2025), representing most major taxonomic groups including *E.* subgenus *Symphyomyrtus* (Schauer) Brooker, which contains over 400 species (Nicolle, 2024). Although species diversity within subg. *Symphyomyrtus* is highest within southeast Australia, diversity in this group also exists in northern areas, including the Australian Monsoon Tropics. This is a large bioregion (Bowman *et al.*, 2010; Moritz *et al.*, 2013) containing areas of particular importance such as the Kimberley region of Western Australia, the Top End of the Northern Territory, and the Cape York Peninsula in Queensland (Bowman *et al.*, 2010; Braby, 2008; Crisp *et al.*, 2001; Woinarski *et al.*, 2007). In these areas, members of *Eucalyptus* subg. *Symphyomyrtus* are found in lowland savannah as well as rocky uplands and plateaus. Upland areas contain isolated or relictual lineages that are either absent or sparse elsewhere (Ladiges *et al.*, 2003; Oliver *et al.*, 2019) and have been described as islands in a sea of savannah (Bowman *et al.*, 2010), making their taxa of particular interest.

While reference genomes exist for *Eucalyptus shirleyi* (sect. *Adnataria* ser. *Siderophloiae*) and *E. leucophloia* subsp. *euroa* (sect. *Platysperma*; National Library of Medicine, accessed 29 July 2025) which are two rocky outcrop specialists of subg. *Symphyomyrtus* from the Australian Monsoon Tropics in Queensland and the Northern Territory, there are no published reference genomes for upland species of Western Australia, or those from sect. *Exsertaria*. This represents a significant gap in currently available reference genomes for subg. *Symphyomyrtus* in terms of geographic and ecological representation, reflecting the current paucity of genetic data for biota, especially plants of the Australian Monsoon Tropics (Bowman *et al.*, 2010; Orel *et al.*, 2025). Increasing the breadth of publicly available reference genomes for subg. *Symphyomyrtus* could therefore benefit this region more broadly by better helping to represent its biodiversity within publicly available databases.

For my PhD project, I am investigating evolutionary relationships and patterns of genetic diversity within and among populations and species of several groups of widespread and narrow-range eucalypts from the Australian Monsoon Tropics, including *Eucalyptus* subg. *Symphyomyrtus* subser. *Subexsertae*. As part of this research, I am hoping to resolve species and evolutionary relationships within this group using target capture phylogenomics as well as investigating landscape scale patterns of genetic diversity through reduced representation sequencing (DArT-seq) (Sansaloni *et al.*, 2011), with the aim of understanding how this may differ among species endemic to rocky outcrops and those found in lowland savannah. To provide an additional genomic resource from an ecological group poorly represented by current reference genomes, and to improve aspects of my phylogenomic and population genetic work, I sought funding from ASBS's Gareth Nelson award to generate a reference genome for *Eucalyptus revelata* using PacBio HiFi sequencing. *Eucalyptus revelata* was chosen as it is a recently described, narrow-range endemic member of subg. *Symphyomyrtus* subseries *Subexsertae* from the Kimberley region in Western Australia (Nicolle & Barrett, 2018). It is listed as Priority Two under the Conservation Codes for Western Australia (Western Australian Herbarium, 1998–2026) as it is a poorly known species collected from only five mountains within the Wunaamin Ranges Conservation Park. The extremely limited distribution of this species, coupled with the current paucity of knowledge surrounding it, means a genome will provide a resource for future conservation of *E. revelata*, and will increase our understanding of it genetically.



Figure 1: The author preparing to grind *Eucalyptus revelata* leaves with liquid nitrogen during a high-molecular-weight DNA extraction trial. Photo: R. M. Fowler.

Leaf material from an F1 (first generation) individual of *Eucalyptus revelata* (voucher DN 1910) growing at Currency Creek Arboretum was shipped to the University of Melbourne for high-molecular-weight DNA extraction. While the extraction protocol used to generate a reference genome for *Acacia pycnantha* (McLay *et al.*, 2022) was initially trialled, some experimentation was needed to produce high-purity DNA with a fragment length of over 40 kilobases (per the requirements of our sequencing provider, AGRF). By adjusting the concentration of salt in the extraction buffer, performing an extra wash step, and being judicious during initial grinding, I was able to achieve an extraction that met these requirements.

My successful extraction was supplied to AGRF who performed library preparation and PacBio HiFi sequencing, with sequencing results returned in early June 2026. Using the assembler *hifiasm* (Cheng *et al.*, 2021), I was able to achieve an initial assembly comprising ~870 contigs. After following some guidance from collaborators Dr Chris Jackson and Dr Todd McLay, I filtered this assembly by removing haplotigs and heterozygous overlaps, as well as contaminant and organellular contigs. An unexpected outcome from this process was the recovery of a ~ 160,000 bp contig that was identified as a complete chloroplast genome. This has been set aside for a future chloroplast phylogenetic study of subseries *Subexsertae* and will be helpful in providing a starting point to assemble other chloroplast genomes from this group.

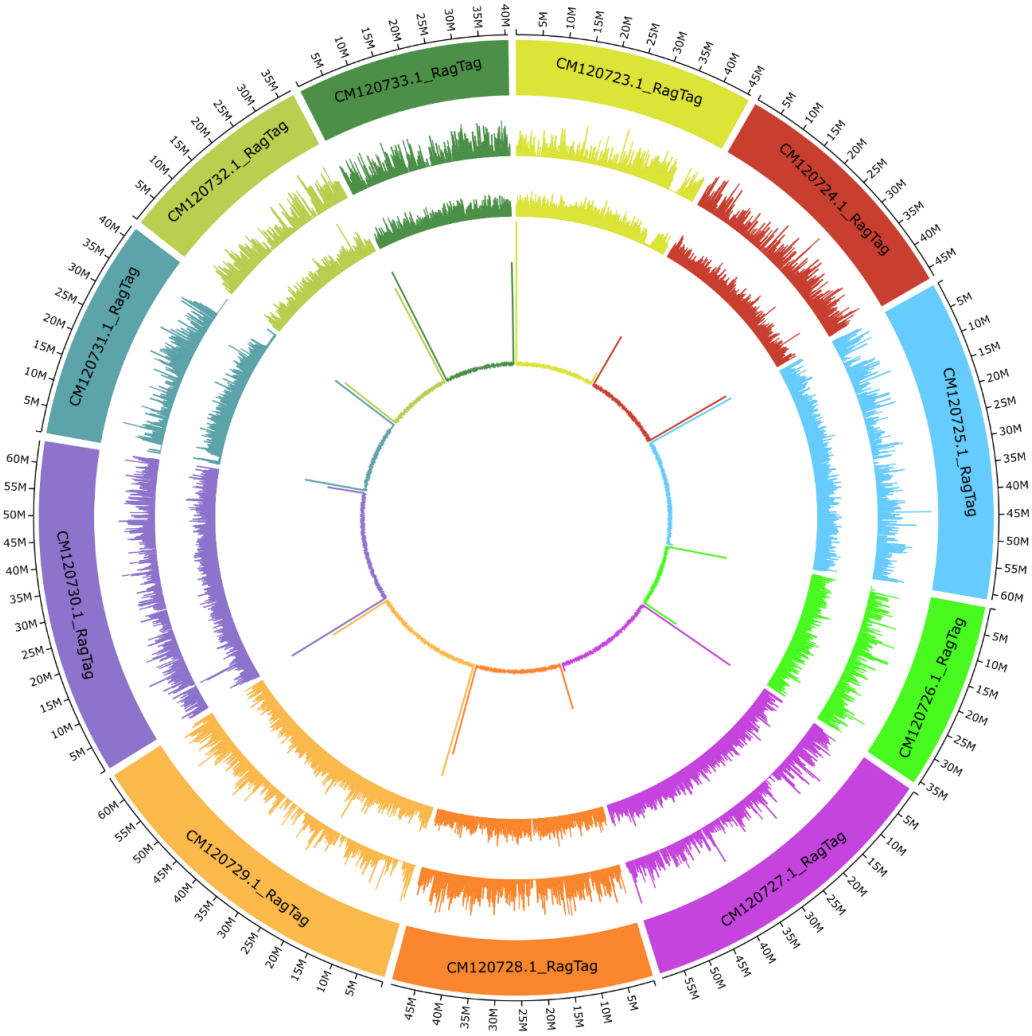


Figure 2: Circos plot depicting chromosome size and feature content for the 11 *Eucalyptus revelata* contigs, which matched the structure expected for the 11 chromosomes typical of eucalypts. From outermost track to inner: contig size, gene density, transposable element density, and density of forward or reverse plant telomeric sequences. Density of features was calculated over 10 kb (kilobase) windows.

After the filtering steps outlined above, the final assembly was 548 megabases in length and comprised 12 contigs. As eucalypts have 11 chromosomes, this result was exciting as it suggested I had (nearly) assembled complete chromosomes. This was validated by the observation of telomeric sequences at both ends of 11 of the contigs (Figure 2), while the 12th contained no telomeric sequences. Closer inspection of this contig revealed it to be an unplaced tandem repeat composed of rDNA gene clusters, indicating it may represent a misassembly. Similar rDNA contigs have been seen in other genome assemblies using PacBio HiFi sequencing (Jackson *et al.*, 2025) and may be due to these appearing as high-copy regions to *hifiasm,* causing it to create

extra contigs to accommodate them. Despite this small issue, my assembly appears to be overall of high quality, with an N50 value of 49.6 megabases and 95.3% complete single-copy eudicot BUSCOs (the remainder comprising 3% duplicated, 0.7% fragmented, 1% missing).

To annotate genes and transposable elements in the assembly, I then used *GeMoMa* and the *EDTA* pipelines (Keilwagen *et al.*, 2019; Ou *et al.*, 2019). These resulted in the initial annotation of 37,570 gene candidates, and 453,408 transposable elements respectively. To provide greater confidence around the gene candidates, I used several databases to try and assign them functional annotations, discarding candidates that lacked functional annotations. This resulted in a final gene annotation set of 36,600 genes. Telomeric sequence abundance, along with gene and transposable element density, were then visualised in a Circos plot (Figure 2).

With a high-quality assembled genome complemented by a set of annotated genes and transposable elements, I have begun to explore the *Eucalyptus revelata* genome further by comparing it to other available *Eucalyptus* genomes. Additionally, I have started analyses of genome-wide diversity and demographic history of *E. revelata.* Through comparison to other species I will be able to see if, as we might expect from a range-restricted species, *E. revelata* shows evidence of reduced genetic diversity, as well as declines in effective population size. Following the completion of my remaining PhD fieldwork this year, I have also begun to prepare for my target-capture and DArT sequencing. The nuclear and chloroplast assemblies created here will be used in the analyses of these data to improve inferences of population genetic statistics, and recovery of target-capture loci in subser. *Subexsertae* by having a closely related species to align sequencing results to.

Acknowledgements

In the first instance, I'd like to express my deepest gratitude to the *Australasian Systematic Botany Society*, and acknowledge the donations of members that have supported this work through a Gareth Nelson Award. For their ongoing support, mentorship, advice and assistance I would like to thank my supervisory team: Mike Bayly (University of Melbourne (UoM)), Rachael Fowler (UoM/Royal Botanic Gardens Victoria (RBGV)), and Dan Murphy (RBGV), as well as collaborators Todd McLay (RBGV) and Chris Jackson (RBGV). I would also like to extend many thanks to Eucalypt Australia for funding the other aspects of this project, as well as the University of Melbourne, and the University of Melbourne Botany Foundation for additional scholarship support. I am greatly appreciative to Dean Nicolle (Currency Creek Arboretum) for his generosity in supplying *E. revelata* material, as well as flexibility and patience in accommodating shipping idiosyncrasies. Thanks are given to Alex Johnston and the Plant Nutrition Lab at The University of Melbourne for allowing use of their lab space and megafuge, as well as Gareth Holmes and the Royal Botanic Gardens Victoria for providing DNA extraction advice, assistance, and tape-station use. Additional thanks are given to The University of Melbourne's Spartan High-Performance Computing (HPC) service for providing computer support for this work.

References

Bowman DM, Brown GK, Braby MF, Brown JR, Cook LG, Crisp MD, Ford F, Haberle S, Hughes J, Isagi Y (2010) Biogeography of the Australian monsoon tropics. *Journal of Biogeography* **37**, 201–216. https://doi.org/10.1111/j.1365-2699.2009.02210.x

Braby MF (2008) Biogeography of butterflies in the Australian monsoon tropics. *Australian Journal of Zoology* **56**, 41–56. https://doi.org/10.1071/ZO08021

Crisp MD, Laffan S, Linder HP, Monro A (2001) Endemism in the Australian flora. *Journal of Biogeography* **28**, 183–198.

Jackson CJ, McLay TG, Holmes GD, Allnutt TR, Robinson AS (2025) A high quality genome of the common swamp pitcher plant (*Nepenthes mirabilis*) using PacBio HiFi sequencing. *PLoS ONE* **20**, e0322885.

Keilwagen J, Hartung F, Grau J (2019) GeMoMa: homology-based gene prediction utilizing intron position conservation and RNA-seq data. In: Kollmar M (ed.) *Gene Prediction: Methods and Protocols*, pp. 161–177. Springer, New York, NY.

Ladiges PY, Udovicic F, Nelson G (2003) Australian biogeographical connections and the phylogeny of large genera in the plant family Myrtaceae. *Journal of Biogeography* **30**, 989–998. https://doi.org/10.1046/j.1365-2699.2003.00881.x

McLay TG, Murphy DJ, Holmes GD, Mathews S, Brown GK, Cantrill DJ, Udovicic F, Allnutt TR, Jackson CJ (2022) A genome resource for *Acacia*, Australia's largest plant genus. *PLoS ONE* **17**, e0274267. https://doi.org/10.1371/journal.pone.0274267

Moritz C, Ens EJ, Potter S, Catullo RA (2013) The Australian monsoonal tropics: an opportunity to protect unique biodiversity and secure benefits for Aboriginal communities. *Pacific Conservation Biology* **19**, 343–355. https://doi.org/10.1071/PC130343

National Library of Medicine (2025) National Center for Biotechnology Information. Available at: https://www.ncbi.nlm.nih.gov/datasets/genome/?taxon=3932 [accessed 6 November 2026].

Nicolle D (2024) *Classification of the eucalypts, genus Eucalyptus*. Version 7.1. Available at: https://www.dn.com.au/Classification-Of-The-Eucalypts.pdf [accessed 6 November 2026].

Nicolle D, Barrett RL (2018) *Eucalyptus revelata*, a rare new species related to *E. mooreana* (Myrtaceae) from the Kimberley region of Western Australia. *Nuytsia* **29**, 109–118.

Oliver PM, Ashman LG, Bank S, Laver RJ, Pratt RC, Tedeschi LG, Moritz CC (2019) On and off the rocks: persistence and ecological diversification in a tropical Australian lizard radiation. *BMC Evolutionary Biology* **19**, 81. https://doi.org/10.1186/s12862-019-1408-1

Orel HK, McLay TGB, Murphy DJ, Cantrill DJ, Udovicic F, Fahey PS, Franklin DC, Lewis D, Docherty PG, White A, Bayly MJ, Fowler RM (2025) Genetic differentiation of geographically overlapping sister species of *Eucalyptus* in northern Australia. *Ecology and Evolution* **15**, e71454. https://doi.org/10.1002/ece3.71454

Ou S, Su W, Liao Y, Chougule K, Agda JRA, Hellinga AJ, Lugo CSB, Elliott TA, Ware D, Peterson T, Jiang N, Hirsch CN, Hufford MB (2019) Benchmarking transposable element annotation methods for creation of a streamlined, comprehensive pipeline. *Genome Biology* **20**, 275. https://doi.org/10.1186/s13059-019-1905-y

Sansaloni C, Petroli C, Jaccoud D, Carling J, Detering F, Grattapaglia D, Kilian A (2011) Diversity Arrays Technology (DArT) and next-generation sequencing combined: genome-wide, high throughput, highly informative genotyping for molecular breeding of *Eucalyptus*. *BMC Proceedings* **5**(Suppl. 7), P54. https://doi.org/10.1186/1753-6561-5-S7-P54

Western Australian Herbarium (2026) *Taxon Profile of Eucalyptus revelata* D.Nicolle & R.L.Barrett. Florabase. Department of Biodiversity, Conservation and Attractions. Available at: https://florabase.dbca.wa.gov.au/browse/profile/48657 [accessed September 2026].

Woinarski J, Mackey B, Nix HA, Traill B (2007) *The Nature of Northern Australia: Its Natural Values, Ecological Processes and Future Prospects*. ANU Press, Canberra. https://doi.org/10.22459/NNA.07.2007

Peter W. Michael (27 April 1928–5 June 2025)

Peter G. Wilson, National Herbarium of New South Wales

Peter William Michael was born in Eudunda, South Australia, the fourth of seven children and the third, and youngest surviving, son of Herbert Donovan Michael (13 August 1890 – 27 April 1956) and his wife Flora Dorothy Michael (née Hawke). Herbert Michael was a grazier on a well-selected 2000-acre farm in otherwise marginal country just south of Goyder's Line, c. 12 km outside of the town. He took a keen interest in local politics and, in 1939, successfully ran as a candidate for the Liberal and Country League in a by-election for the South Australian State Assembly seat of Light, which had become vacant by the resignation of the South Australian Premier, Mr Butler. He served two non-consecutive terms in parliament: from 1939 to 1941 and from 1944 until his death in April 1956.

Peter completed primary school at Neales Flat, to which he commuted by horse and cart. He was sent to Adelaide for high school. At Adelaide High School he excelled in English and was awarded the Alfred Williams prize in English in December 1944. He started university at the age of 16 and would have preferred to have enrolled in an Arts degree,



Peter Michael with a large plant of *Xanthium occidentale* near the Mann River (NSW Northern Tablelands), 11 April 2004.

but his parents considered science to be a more viable career option, so he studied agriculture. This marked the beginning of his lifelong passion for botany and weeds.

On 1 February 1951, the *Eudunda Courier* published the following announcement:

> Peter W. Michael, third son of Mr. and Mrs. H. D. Michael of Eudunda has been appointed Assistant Biologist at Roseworthy College. Peter has just completed his course at the Adelaide University, gaining the Degree of Bachelor of Agricultural Science. He will take up duties in the near future.

He worked at Roseworthy Agricultural College before completing a PhD through the University of Adelaide where he studied the ecology and physiology of the weed *Oxalis pes-caprae*, graduating in 1958. In 1957 he married Janet (née Thomson) and they moved to Canberra where he began his career with the CSIRO Division of Plant Industry. He began his career at CSIRO as a Research Officer and progressed to Research Scientist in 1964. During his time at CSIRO, Peter continued his study of *Oxalis* but also worked on thistles (particularly *Silybum* and *Onopordum*), and weedy annual rye grass, with an emphasis on chemical control.

In 1965, Peter was awarded a Japan Society for the Promotion of Science (JSPS) Scholarship and spent a year in Japan at the National Institute of Agricultural Sciences in Tokyo researching *Echinochloa* (barnyard grasses). This was the start of his lifelong interest in this species and in weeds of rice.

In November 1968 he gave a lecture at a "Weeds School" run by the Department of Agriculture in Queanbeyan. In June 1969, the Canberra Times cited his appearance at a seminar on "The Importance of Weeds", where he noted the heavy financial cost to NSW woolgrowers of the control of serrated tussock (*Nassella trichotoma*).

In 1970 he moved his family to Sydney to take up a job as a lecturer in Agriculture at the University of Sydney, where he worked until his retirement as a senior lecturer in 1988. During this time, he spent much time in research on *Echinochloa*, *Verbena* and continued his study of thistle genera and *Oxalis* but developed interest in a number of others as well, particularly *Eryngium*. He supervised some PhD students, notably Ian Radford and Brian Sindel, who worked on the introduced daisy *Senecio madagascariensis*.

In his lectures at Sydney University, he would ask his students what they considered a definition of a weed and, after discussion, he would say that he considered a weed to be a plant whose virtue had not yet been discovered. He did value the virtues of weeds, as evidenced in his establishment of the Weed Appreciation Society with his very dear friend, Max Gray; a society with a very limited membership! His enthusiasm for weeds and grasses also spilled over into his life outside science, as demonstrated by his occasional addition of grasses into flower arrangements in his church with the intent to inspire appreciation of them.

After retirement, he was able to retain workspace as an honorary associate at the University for many years and at the Royal Botanic Gardens in Sydney, where he had colleagues to discuss his research with, and access to library and herbarium facilities. During this time, he continued his research, which was mainly focussed on *Echinochloa*, *Verbena* and *Eryngium*. In 2001, despite being officially retired, Peter and his wife spent another 6 months in Japan at Utsunomiya University, where he was again involved in research on *Echinochloa*.

Peter also had a wide range of interests outside of science, including language, orientalism and theology. He started to learn Arabic at the age of 90 and attended a conference on Dietrich Bonhoeffer and his theology at the age of 95. This continuing interest in research and learning new things is demonstrated in this verse that he wrote when he turned eighty:

> On reaching eighty
> do I give up my studies
> and luxuriate?
> No, I think not. Tomorrow
> new challenges will appear.

On his desk he kept, in large type, a translation of this quote from the Chinese neo-Confucian Wang Yangming (1472–1529) whose philosophy emphasised an understanding of the world from within the mind:

> The spirit of life of Heaven and Earth is the same in flowers and weeds.
> Where have they the distinction of good and evil?
> When you want to enjoy flowers, you will consider flowers good and weeds evil.
> But when you want to use weeds, you will consider them good.

Acknowledgements

I am particularly indebted to Peter's daughter, Diana Davey, for providing the photograph and many of the personal details included in this article.

Appendix 1. Plant names attributed to Peter Michael

Echinochloa chacoensis P.W.Michael ex Renvoize, *Kurtziana* 24: 161, fig. (1995).

Note: Peter annotated a specimen with this manuscript name at Kew in 1982 but he never published it. Accepted by Stephen Renvoize and published as new using Peter's intended type.

Echinochloa dietrichiana P.W.Michael, *Telopea* 8(3): 403 (1999).

Echinochloa elliptica P.W.Michael & Vickery, *Telopea* 2(1): 28 (1980).

Echinochloa kimberleyensis P.W.Michael & Vickery, *Telopea* 2(1): 25 (1980).

Echinochloa macrandra P.W.Michael & Vickery, *Telopea* 2(1): 27 (1980).

Echinochloa mentiens P.W.Michael, *Weeds, Journal of Asian-Pacific Weed Science Society* 1(1): 31 (2019).

Echinochloa picta (J.Koenig) P.W.Michael, *Philippine Journal of Weed Science* 5: 18 (1978).

Echinochloa praestans P.W.Michael, *Telopea* 2(1): 31 (1980).

Echinochloa rostrata (Stapf) P.W.Michael, *Proceedings of the Conference on Weed Control in Rice*: 293 (1983).

Echinochloa trullata P.W.Michael, *Weeds, Journal of Asian-Pacific Weed Science Society* 1(1): 32 (2019).

Eryngium paludosum (C.Moore & Betche) P.W.Michael, *Telopea* 7(2): 173 (1997).

Eryngium undulatum P.W.Michael & P.G.Wilson, *Telopea* 29: 87 (2025).

Verbena africana (R.Fern. & Verdc.) P.W.Michael, *Telopea* 7(3): 296 (1997).

Verbena gaudichaudii (Briq.) P.W.Michael, *Telopea* 7(3): 295 (1997).

Verbena incompta P.W.Michael, *Telopea* 6(2–3): 181–182 (1995).

Appendix 2. Bibliography

Michael PW (1958) Some aspects of the ecology and physiology of soursob (*Oxalis pes-caprae* L.). Unpublished PhD thesis, University of Adelaide, Adelaide.

Michael PW (1959) Oxalate ingestion studies in the sheep. *Australian Veterinary Journal* **35**, 431–432.

Michael PW (1960a) The control of thistles (*Silybum* and *Onopordum*) by perennial pasture species. In: *Proceedings of the Second Australian Weeds Conference*, Canberra.

Michael PW (1960b) The relevance of ecological and physiological studies to the control of soursob (*Oxalis pes-caprae* L.). In: *Proceedings of the Second Australian Weeds Conference*, Canberra.

Michael PW (1964) The identity and origin of varieties of *Oxalis pes-caprae* L. naturalized in Australia. *Transactions of the Royal Society of South Australia* **88**, 167–173.

Michael PW (1965a) Studies on *Oxalis pes-caprae* L. in Australia. I. Quantitative studies on oxalic acid during the life cycle of the pentaploid variety. *Weed Research* **5**, 123–132.

Michael PW (1965b) Studies on *Oxalis pes-caprae* L. in Australia. II. The control of the pentaploid variety. *Weed Research* **5**, 133–140.

Michael PW (1965c) Physiological comparisons between the pentaploid and tetraploid varieties of *Oxalis pes-caprae*. In: *Proceedings of the Australian Weeds Conference*.

Michael PW (1965d) Tentative key to *Oxalis* species established in Australia. *Australian Weeds Research Newsletter* **7**, 21–255.

Michael PW (1967) The combined action of 3-amino-1,2,4-triazole and ammonium thiocyanate on phosphatase activity in cotton thistle (*Onopordum acanthium* L.). *Weed Research* **7**, 145–154.

Michael PW (1968a) Perennial and annual pasture species in the control of *Silybum marianum*. *Australian Journal of Experimental Agriculture* **8**, 101–105.

Michael PW (1968b) Control of the biennial thistle, *Onopordum*, by amitrole and five perennial grasses. *Australian Journal of Experimental Agriculture* **8**, 332–339.

Michael PW (1968c) Thistles in southeastern Australia—some ecological and economic considerations. *Proceedings of the 1st Victorian Weeds Conference* **4**, pp. 12–16.

Michael PW (1970) Weeds of grasslands. In: Milton-Moore RN (ed.) *Australian Grasslands*, pp. 349–360. (ANU Press: Canberra.)

Michael PW (1971) Some weedy amaranths. *Australian Weeds Research Newsletter* **16**, 10–11.

Michael PW (1972) The weeds themselves: early history and identification. *Proceedings of the Weed Society of New South Wales* **5**, 3–18.

Michael PW (1976) The use of trifluralin and alachlor for weed control in soybeans. In: *Proceedings of the 5th Asian-Pacific Weed Science Society Conference*, Tokyo, Japan, 1975, pp. 313–315.

Michael PW (1978a) Some weedy species of *Amaranthus* (amaranths) and *Conyza*/*Erigeron* (fleabanes) naturalized in the Asian-Pacific region. In: *Proceedings of the 6th Asian-Pacific Weed Science Society Conference*, Jakarta, 1977, pp. 87–95.

Michael PW (1978b) Notes on *Echinochloa* in the Philippines. *Philippine Journal of Weed Science* **5**, 16–18.

Michael PW (1980) A new perennial species of *Echinochloa* from New Guinea. *Telopea* **2**, 31–33.

Michael PW (1981) Alien plants. In: Groves RH (ed.) *Australian Vegetation*, pp. 44–64. (Cambridge University Press: Cambridge.)

Michael PW (1983) Taxonomy and distribution of *Echinochloa* species with a special reference to their occurrence as weeds of rice. In: *Proceedings of the Conference on Weed Control in Rice*, pp. 291–306. (International Rice Research Institute: Los Baños, Laguna, Philippines.)

Michael PW (1987) Blue devil, *Eryngium ovinum* A.Cunn. reinstated. *Australian Systematic Botany Society Newsletter* **53**, 3–4.

Michael PW (1994a) Distribution and taxonomy of *Echinochloa*: a world view with a key to the species occurring in China. In: *Proceedings of the 5th Weed Science Conference of China*, pp. 161–166. (Weed Science Society of China: Kunming.)

Michael PW (1994b) Alien plants. In: Groves RH (ed.) *Australian Vegetation*, 2nd edn, pp. 57–83. (Cambridge University Press: Cambridge.)

Michael PW (1995) A new name for a widespread and misunderstood species of *Verbena*. *Telopea* **6**, 181–183.

Michael PW (1996a) Bracken: an environmental issue. In: Smith RT, Taylor JA (eds) *Bracken 94: Contributions to an International Conference, University of Wales, Aberystwyth, 18–21 July 1994*.

Agriculture, Ecosystems & Environment **60**, 214–215.

Michael PW (1996b) Necessary background for studies in the taxonomy of *Onopordum* in Australia. *Plant Protection Quarterly* **11**, 239–241.

Michael PW (1997a) A new combination in *Eryngium* (Apiaceae). *Telopea* **7**, 173–174.

Michael PW (1997b) Notes on *Verbena officinalis* sensu stricto and *V. macrostachya* (Verbenaceae) with new combinations in two closely related taxa. *Telopea* **7**, 293–297.

Michael PW (1997c) A putative hybrid in *Verbena* (Verbenaceae) and the application of the name *V. brasiliensis*. *Telopea* **7**, 299–300.

Michael PW (1999a) *Eryngium*. In: Walsh NG, Entwisle TJ (eds) *Flora of Victoria*, Vol. 4, pp. 260–263. (Inkata Press: Melbourne.)

Michael PW (1999b) *Echinochloa dietrichiana* (Poaceae: Panicoideae), a new species from Queensland and the Northern Territory. *Telopea* **8**, 403–405.

Michael PW (2001a) Plant links between eastern Asia and eastern Australia. *Weed Biology and Management* **1**, 157–163.

Michael PW (2001b) The taxonomy and distribution of *Echinochloa* species (barnyard grasses) in the Asian-Pacific region, with a review of pertinent biological studies. In: *Proceedings of the 18th Asian-Pacific Weed Science Society Conference*, pp. 57–66.

Michael PW (2003) *Echinochloa*. In: Barkworth ME *et al.* (eds) *Flora of North America*, Vol. 25, pp. 390–403. (Oxford University Press: New York.)

Michael PW (2009) *Echinochloa colona* versus "*Echinochloa colonum*" (Poaceae). *Taxon* **58**, 1366–1368.

Michael PW (2019) Taxonomy of *Echinochloa* (L.) P.Beauv. (barnyard grass) in the Asian-Pacific region: an update. *Weeds* **1**, 30–42.

Campbell MH, May CE, Southwell IA, Tomlinson JD, Michael PW (1997) Variation in *Hypericum perforatum* L. (St John's wort) in New South Wales. *Plant Protection Quarterly* **12**, 64–66.

Gray M, Michael PW (1975) List of plants collected at the old Flemington Saleyards, Sydney, New South Wales. *Plant Protection Quarterly* **1**, 135–143.

Greenhalgh WJ, Michael PW (1988) Recalcitrant weeds in herbicide trials at Camden, NSW. In: *Research and Development Conference on Vegetables, the Market and the Producer* (*Acta Horticulturae* **247**), pp. 253–256.

Lemerle D, Michael PW, Sutton BG (1979) The competitive abilities of wheat and triticale against different densities of *Lolium rigidum*. In: *Proceedings of the 7th Asian-Pacific Weed Science Society Conference*, Melbourne, pp. 447–450.

McKenzie PM, Michael PW, Urbatsch LE, Noble RE, Proctor GR (1993) First record of *Echinochloa stagnina* (Poaceae) for Puerto Rico and key to the *Echinochloa* in the West Indies. *SIDA, Contributions to Botany* **15**, 527–532.

Michael PW, Reyenga R (1968) Selectivity of paraquat against an annual rye grass in seedling mixtures with two perennial grasses and lucerne. *Weed Research* **8**, 156–158.

Michael PW, Ross MA, Tideman AF (1962) A new look at soursob. *Journal of Agriculture South Australia* **65**, 614–618.

Michael PW, Vickery JW (1975) Two new species and a new combination in *Echinochloa*. *Telopea* **1**, 44–48.

Michael PW, Vickery JW (1980) Three new annual species of *Echinochloa* from Northern Australia. *Telopea* **2**, 25–29.

Michael PW, Wilson PG (2025) *Eryngium undulatum*, a new name for the New Zealand plant long known as *E. vesiculosum* Labill. *Telopea* **29**, 83–89.

Nelson NR, Michael PW (1982) Germination and growth of *Senecio madagascariensis* Poir. (fireweed), a toxic plant of pastures in coastal New South Wales. In: *Proceedings of the Second Australian Agronomy Conference*, p. 173.

Radford IJ, Cousens RD, Michael PW (2004) Morphological and genetic variation in the *Senecio pinnatifolius* complex: are variants worthy of taxonomic recognition? *Australian Systematic Botany* **17**, 29–48.

Radford IJ, Liu Q, Michael PW (1995) Chromosome counts for the Australian weed known as *Senecio madagascariensis* (Asteraceae). *Australian Systematic Botany* **8**, 1029–1033.

Radford IJ, Muller P, Fiffer S, Michael PW (2000) Genetic relationships between Australian fireweed and South African and Madagascan populations of *Senecio madagascariensis* Poir. and closely related *Senecio* spp. *Australian Systematic Botany* **13**, 409–423.

Sindel BM, Michael PW (1988) Survey of the impact and control of fireweed (*Senecio madagascariensis* Poir.) in New South Wales. *Plant Protection Quarterly* **3**, 22–28.

Sindel BM, Michael PW (1989) Frost as a limiting factor in the distribution of *Senecio madagascariensis* Poir. (fireweed) in Australia. In: *Proceedings of the 12th Asian-Pacific Weed Science Society Conference*, pp. 453–459.

Sindel BM, Michael PW (1990) Competition between fireweed, *Senecio madagascariensis* Poir., and Italian rye-grass, *Lolium multiflorum* Lam. cv. Concord. In: *Proceedings of the 9th Australian Weeds Conference*, pp. 369–372.

Sindel BM, Michael PW (1992a) The spread and potential distribution of *Senecio madagascariensis* Poir. (fireweed) in Australia. *Australian Journal of Ecology* **17**, 21–26.

Sindel BM, Michael PW (1992b) Growth and competitiveness of *Senecio madagascariensis* Poir. (fireweed) in relation to fertilizer use and increases in soil fertility. *Weed Research* **32**, 399–406.

Sindel BM, Michael PW (1996) Seedling emergence and longevity of *Senecio madagascariensis* Poir. (fireweed) in coastal south-eastern Australia. *Plant Protection Quarterly* **11**, 14–19.

Sindel BM, Michael PW (2006a) Spread and potential distribution of *Senecio madagascariensis* Poir. (fireweed) in Australia. *Austral Ecology* **17**, 21–26.

Sindel BM, Michael PW (2006b) Growth and competitiveness of *Senecio madagascariensis* Poir. (fireweed) in relation to fertilizer use and increases in soil fertility. *Weed Research* **32**, 399–406.

Sindel BM, Michael PW, McFadyen RE, Carthew J (2008) The continuing spread of fireweed (*Senecio madagascariensis*) – the hottest of topics. In: *Proceedings of the Sixteenth Australian Weeds Conference*, pp. 47–49.

Charles Nelson (1951–2024) — his Australian contribution

Robyn & Bill Barker, Herbarium of South Australia

The passing of Irish botanist E. Charles Nelson has not been noted in the Newsletter and we were saddened to learn of it only recently.

There is a very full obituary of Charles (Shawnessy 2024), who spent 1971 to 1975 at ANU in Canberra completing a Ph.D. on *Adenanthos* (Proteaceae). These were the early days of ASBS and he was involved with the Canberra chapter through their meetings at that time. He already had a strong interest in botanical history and one of his earliest contributions to the *ASBS Newsletter* (Nelson 1975) was an introduction for ASBS members to the *Journal of the Society for the Bibliography of Natural History,* now more succinctly referred to as *Archives of Natural History.* Charles was heavily involved with this journal throughout his life as can be seen by the extensive list of his publications and his election as an Honorary Member of the Society in 2020 “for his signal services to the Society” for 50 years.



Some of the attendees at the ASBS *History of systematic botany in Australasia* conference at the University of Melbourne, 25–27 May, 1988. From LHS: **Front standing:** Eric Jackson (AD); **seated:** Jim Willis (MEL), Jocelyn Powell (NSW), Bernadette Hince (ANU), Mary Todd (MEL), Charles Nelson (DBN), Karen Wilson (NSW), Robyn Barker (AD), Barry Conn (NSW). **Rear standing:** Ian Pascoe (Burnley), Marlies and Hansjörg Eichler (CANB), Betsy Jackes (JCU Townsville), Helen Aston (MEL) with Margaret Corrick (MEL) half hidden behind, unknown. Photo: Bill Barker

Charles contributed greatly to our knowledge of early collectors of Australian plants, notably Labillardière, Furneaux, Surgeon-general John White, Eugene Fitzalan, William Baxter and W.H. Harvey as well as to our knowledge of which Australian plants were cultivated in Europe pre and post 1788. It was on this last subject that he presented at the ASBS History symposium in Melbourne in 1988 (Nelson 1990).



Charles Nelson (DBN) and Laurence Haegi (NSW). Photo: Bill Barker

References

Nelson EC (1975) Society for the Bibliography of Natural History. *ASBS Newsletter* **4**, 8. https://asbs.org.au/wp-content/uploads/2023/08/75-feb-004.pdf#page=10

Nelson EC (1990) 'and flowers for our amusement…'; the early collecting and cultivation of Australian plants in Europe and the problems encountered by today's taxonomists. In: Short PS (ed.) *History of Systematic Botany in Australasia*, pp. 285–296. (Australian Systematic Botany Society, Melbourne.)

Shaughnessy E (2024) E. Charles Nelson FLS, VMM (15 Sep. 1951–20 May 2024). *Archives of Natural History* **51**, 342–344. https://doi.org/10.3366/anh.2024.0939

Caring for and managing Indigenous Knowledge historically recorded on herbarium specimens

Alexander N. Schmidt-Lebuhn, CSIRO, Australian National Herbarium

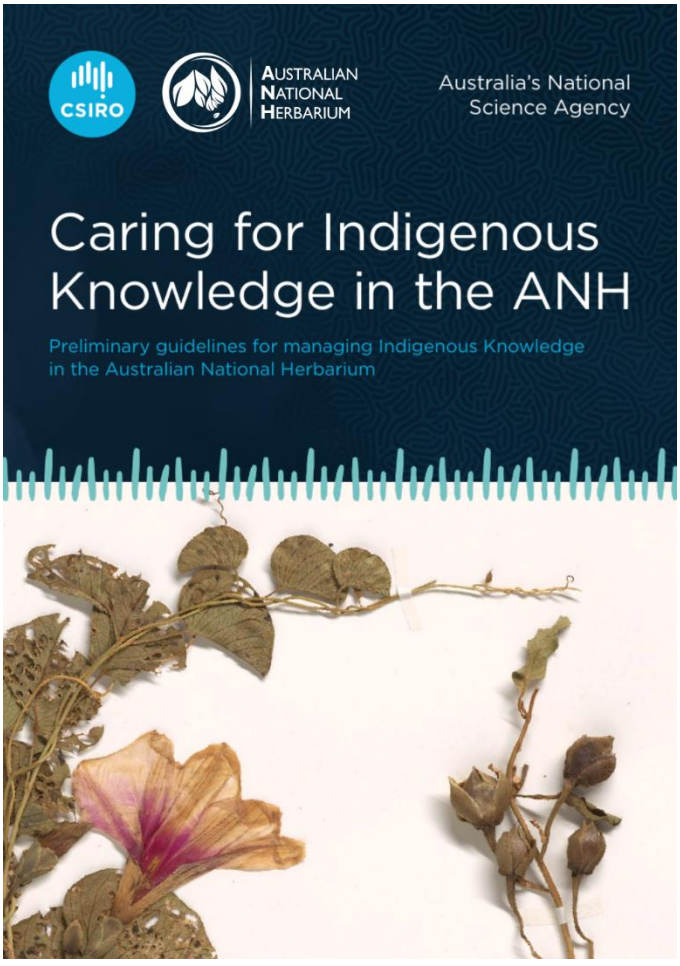
Specimen labels in herbaria contain a great diversity of data, including but not limited to the collector's name and field number, time and place of collection, the habitat, notes on the morphology of the specimen, observed ecological interactions, and/or common names. Historically, some botanists and specimen collectors also recorded Indigenous cultural knowledge (IK) on the specimen labels, often after questioning or observing Indigenous communities.

These past research practices do not align with contemporary principles for Indigenous Cultural and Intellectual Property, which recognise Indigenous data sovereignty, free, prior, and informed consent, and benefit sharing (e.g., CSIRO Indigenous Cultural and Intellectual Property Principles, accessed 4 September 2026). However, herbaria are the custodians of specimens whose labels contain this knowledge, and may even now unexpectedly obtain additional IK through exchange or donations of other historical specimens, albeit rarely. This raises the question of its appropriate and respectful curation and management, while the permission status of its collection often remains at best uncertain.

As part of her postdoctoral project in 2020–2024, Dr Alexandra Marley conducted an audit of IK in the Australian National Herbarium (CANB, a joint venture of Parks Australia and CSIRO). Subsequently, she created a report with draft suggestions for how to care for and manage this knowledge respectfully and appropriately (Marley, 2026).

To conduct the audit, specimen label data were queried from the Australasian Virtual Herbarium and searched for potentially relevant keywords (e.g., "name" or "eaten") and combinations of letters characteristic for many Indigenous languages but absent from or rare in English (e.g., "tj"). This approach retrieved 3,378 records across Australian herbaria containing IK, of which 800 were held by CANB, second only to the Northern Territory Herbarium (DNA and NT). Most of the information was recorded by specimen collectors in the 1970s. By far the most commonly recorded IK were Indigenous plant names, use as food, and use as medicine.

The recommendations of the report are to be understood as preliminary, noting that its author is not Indigenous Australian herself, and to be further developed in consultation with Traditional Knowledge Owners and as it becomes clearer which potential options work and which don't. However, they include: finding IK in the herbarium; updating the specimen database to manage the IK appropriately; tagging all specimens containing IK;



developing a content warning notice regarding deceased persons' names and offensive language; and developing a policy for managing community requests regarding the IK.

A first draft of the report was delivered internally in April 2023, and the report was subsequently revised by May 2024. Since then, specimens have been tagged consistently in the herbarium's database, the IK has been transferred into a dedicated, new database field that is not delivered to aggregators like the Atlas of Living Australia and the Global Biodiversity Information Facility, and specimen images containing IK were redacted from CSIRO's Data Access Portal, implementing the first few recommendations of the report. During this work, an additional 83 database records and 65 specimen images were found to contain IK. As a next step, the herbarium is working towards a policy for community requests regarding the IK on specimen labels.

At the same time, the report was edited to redact any specific examples of IK, updated regarding the actions CANB had already taken, and revised to implement feedback provided by CSIRO's Indigenous Science and Engagement team. The report was published in July 2026 and for the first time publicly presented at the International Society of Ethnobiology (ISE) in Cairns, 26–29 July 2026.

The report is available online and may be of interest to other herbaria who are considering how to manage and care for Indigenous cultural knowledge historically recorded on specimen labels.

Cultural sensitivity statement

This contribution discusses Indigenous ecological and cultural knowledge that has been recorded on specimen labels that are part of the collections at CANB. In recognition of the Australian National Hebarium's commitment to the protection of Indigenous Cultural and Intellectual Property, the permissions status of the knowledge contained within CANB is currently unknown. As such, no specific examples of use and preparation are mentioned in this contribution.

The Australian National Herbarium acknowledges that the historical research practices of recording the knowledge on specimen labels do not align with its current ways of working with Aboriginal and Torres Strait Islander communities and is working to address this in partnership with Aboriginal and Torres Strait Islander peoples.

Acknowledgements

Alexandra Marley's research was funded by a CSIRO Early Career Researcher (CERC) postdoctoral grant and by the Australian National Herbarium. Monica Wang redacted IK from data delivered to aggregators in collaboration with the digital team of the National Research Collections Australia, and while supported by CSIRO's Indigenous Science and Collections project.

References

Marley A (2026) Caring for Indigenous Knowledge in the ANH – Preliminary guidelines for managing Indigenous Knowledge in the Australian National Herbarium. CSIRO, Australia. DOI: https://doi.org/10.25919/1s0m-s222

News from the west

Juliet Wege, The Western Australian Herbarium

The Western Australian Herbarium is undergoing a significant transition as senior staff transition to retirement, new staff are appointed, and a new collections management system (Specify) becomes operational.

After 10 years at the helm, John Huisman stepped down as Herbarium Curator in early September although will continue with his algal research in a part-time capacity over the next year. Juliet Wege has stepped into the role and becomes the first female botanist to lead the Herbarium since its formation in 1929. Her appointment, and the looming retirement of Terry Macfarlane, will create a rare opportunity for the Herbarium to appoint new research staff.

The Herbarium's database has been offline for more than a year, creating a significant nomenclatural and specimen processing backlog. The data migration delays have largely been caused by legacy data issues and further complicated by a move to a bespoke taxonomic names management system called Nomos, which will manage Western Australia's botanical names alongside the state's faunal census. In addition to providing the taxonomic backbone for Specify and Florabase, Nomos will underpin Dandjoo, a centralised biodiversity data repository that aims to facilitate data sharing across all environment-related sectors. Complementing these major infrastructure updates are burgeoning plans to rebuild Florabase to support a Flora of Western Australia and virtual herbarium.

Dr Marion Isabell Blackwell passed away on August 22 at the age of 98. A former lecturer in mycology at the then University of Technology in Sydney and a part-time lecturer at the then Department of Botany and School of Architecture at the University of Western Australia, Marion was a visionary landscape architect and passionate conservationist with extensive botanical knowledge. She was instrumental in creating Murdoch University's renowned bush campus in the 1970s, incorporating Australian native plants into her designs long before they were generally acceptable. She received an Order of Australia in 2011 for her services to conservation and the environment, an honorary doctorate from Murdoch University in 2018, and is honoured by *Eremaea blackwelliana* Hnatiuk. The Western Australian Herbarium holds 853 of her collections, with additional materials having recently been bequeathed.



Marion Blackwell botanising near Jurien Bay on the 2012 ASBS conference field trip. Photo: J. Wege

Australian Biological Resources Study Update

The ABRS is heading into the final months of 2026 on a happy note. This year we were successful in securing two years of funding to support the uplift of the National Species List (NSL). The National Species List will be the authoritative list of accepted nomenclature and taxonomy for Australian biodiversity. It will present a single point of entry for names and taxonomy data curated from separate datasets such as Australian Plant Names Index (APNI), Australian Plant Census (APC), Australian Algae List (AAL), Australian Fungi List (AFL) and Australian Faunal Directory (AFD).

The uplift program will allow us to capitalise on work that has been underway for some time. The uplift workplan has been informed by the National Species List Review (2025) and includes projects on governance, data structure and higher taxonomy, automated data delivery and ingestion tools and targeted data improvement. The project will be delivered by ABRS and the Biodiversity Informatics team, both based at the Australian National Botanic Gardens.

To date, two new roles have been recruited to support the NSL uplift program. We'd like to introduce Mike Brightwood (program manager) and Kat Ng (technical analyst).

The current ABRS team is a mix of old and new colleagues, so we thought we'd provide a photo. Three dear friends and colleagues left the team this year. On the 11th of April 2026, Annabel Wheeler passed away. Annabel was a botanist, biochemist, taxonomist, bushwalker, choral singer and broadcaster/recordist of classical music on Canberra's Artsound FM radio. She was respected by numerous colleagues in CSIRO, ACT Forestry, the ABRS and the Department of Climate Change, Energy, the Environment and Water of Australia. In ABRS, Annabel contributed to maintaining our data sets, expert advice on biodiversity, and working on DCCEEW's Species Profile and Threats Database



Front L–R: Matthew Locket (scientific editor AFD), Mary Finlay-Doney (manager), Kat Ng (NSL uplift program), Rainbo Belton (scientific editor non-vascular flora), Phillip Kodela (scientific editor FOA). **Back L–R:** Glen Cook (grants and finance), Kiah Grogan (scientific editor AFD), Mike Brightwood (NSL uplift program), James Bickerstaff (scientific editor AFD)

(SPRAT). Her wealth of knowledge, generosity, friendship and home baked treats will be missed.



Annabel Wheeler (22 June 1947–11 April 2026)

Robyn Lawrence and Brigitte Kuchlmayr both retired from ABRS this year after many years of dedicated service. Their contributions to ABRS publications, non-vascular flora datasets, and numerous other initiatives have left a lasting legacy. The office feels quieter without them, and the depth of knowledge, expertise, and cheerful chatter they brought to the team are missed.

Flora of Australia

Phillip Kodela continues to lead the editing of the Flora of Australia. Recent contributors include Robyn Barker, Russell Barrett, Tim Collins, Darren Crayn, Ashley Field, Tim Hammer, Richard Jobson, Helen Kennedy, Phillip Kodela, Kristina Lemson, Bruce Maslin, Anna Monro, Francis Nge, Dan Ohlsen, Barbara Rye, Val Stajsic, Ian Telford, Fanie Venter, Juliet Wege, Annette Wilson and Peter Wilson.

The Flora of Australia will be migrating to the National Species List architecture shortly. Editing will cease in the current platform in November 2026. The new platform is in the final stages of development and we will update in 2027 with more information.

Non-vascular flora

Rainbo Belton (phycologist) leads the curation of the Australian Algae List and the Australian Algae Name Index and coordinates contributions to other non-vascular data sets. Roberta Cowan is currently working with Rainbo, contributing expert knowledge to the NSL algae datasets. In fungi, Tom May and Heather Merrylees (RBGV) are curating the NSL datasets and have established a taxonomic reference group to provide authoritative advice on fungi data curation. In lichens, Cecile Gueidan (CANB) and Gintaras Kantvilas (HO) have provided taxonomic expertise and advice for the NSL lichen dataset.

ABRS National Taxonomy Research Grant Program

The 2026–27 National Taxonomy Research Grant round is underway and ten grants were awarded across fauna, vascular and non-vascular flora. Details of the awarded projects are available here.

The ABRS grants team is back at full complement with the recruitment of a permanent grants officer after a 12-month vacancy. Glen Cook has worked with us in the past and we are happy that he has returned.

It is anticipated that the 2027–28 National Taxonomy Research Grant round will open in early February 2027. The round opening will be published on GrantConnect and the ABRS website.

If you have any questions in the lead up to the grant round opening, please contact ABRSgrants@dcceew.gov.au. For general enquiries for ABRS, please contact ABRS@dcceew.gov.au.

Herbarium Miscellany: The personal herbarium of Alex Purdie (1859–1905)

Neil Gibson, Albany, Western Australia.

Recent research into the activities of early plant collectors in Western Australia, together with investigations of the public and private herbaria that existed in the early twentieth century has shed new light on the history of Alex Purdie's personal herbarium and the fate of the herbarium established by the Mueller Botanic Society following its foundation in 1897.

Alex Purdie's personal herbarium

Alex Purdie was born in Edinburgh on 23rd October 1859. His parents subsequently migrated to New Zealand, arriving in Dunedin on 20 August 1860. Purdie was educated in Dunedin, later graduating with a Bachelor of Arts (1882) and Master of Arts in 1884 (Maiden 1909, White 1995, Godley 2004). He then held various teaching roles and in 1891 became the first Associate of the Otago University School of Mines (AOUSM) to graduate in geology.

In 1892 he was appointed to the Thames School of Mines but soon moved to a more senior position with the Victorian Education Department at the Kyneton School of Mines. This was followed by further promotion to similar establishments at Sale (1893), Bendigo (1894), Ballarat (1895), and back to Bendigo (1896–1898). In these positions he taught geology, assaying, chemistry and botany. In 1898 Purdie married Kate Allan (born Victoria, *c.* 1861 – death Emerald, Victoria, 20 June 1929[1]) before they moved to Adelaide where he took up the position of assistant lecturer and demonstrator in chemistry at Adelaide University. His stay there was also brief.

White (1995) recounts that Cyril Jackson (Inspector-General of Schools in WA) had met Purdie in 1897 on a visit to Victoria and was keen for Purdie to head the new Technical School envisaged for Western Australia. In due course the college was established and Purdie arrived in Perth to take up the role in February 1900. Initially the Technical College was to include a School of Mines but the local politics determined that this would be established in Coolgardie as a separate institution. Purdie was only to hold the role of Director of Technical Education in WA until 1905 when, at age 45, he died of typhoid after a short illness[2].

In addition to being a very able administrator and excellent lecturer[3] he was, like his father, a keen amateur botanist with a particular interest in orchids. His personal herbarium (now found in PERTH) includes specimens collected from 1892–1904 (George 2009). No definitive collections of his from New Zealand have been identified. Godley (2004) noted Purdie always referred to himself as 'Alex' on labels (Figure 1) and in correspondence[4] to avoid confusion with his father Alexander Callender Purdie (1824–1899).

Much of his personal herbarium in PERTH can be recognised by his small herbarium label with a heading (in an old English text font) reading: Collection. — Alex. Purdie (Figure 1). Not all extant

[1] Family Notices. (1929, June 28). *The Argus* (Melbourne, Vic.: 1848–1957), p. 1. http://nla.gov.au/nla.news-article4017159.

[2] Family Notices. (1905, July 18). *The West Australian* (Perth, WA: 1879–1954), p. 7. http://nla.gov.au/nla.news-article25519261.

[3] The Gippsland Times. (1893, March 31). *Gippsland Times* (Vic.: 1861–1954), p. 3 (Morning edition). http://nla.gov.au/nla.news-article62300912.

[4] *Alex Purdie – Bendigo – Application Position Assistant Lecturer and Demonstrator in Chemistry*. Adelaide Connect, University of Adelaide. Available at: https://connect.adelaide.edu.au/nodes/view/20412#idx197520

Purdie sheets have this label: some just have hand written slips (e.g. most of the 1904 collections).

Early in his time in Victoria Purdie got in contact with Mueller (via an appropriate letter of introduction[5]) and subsequently provided numerous duplicates to him[6]. In two articles Purdie published in the *Bendigo Advertiser* in November 1894 (under the by-line *Pakeha*) he details a week-long botanical excursion he undertook in northern Victoria[7][8]. The locations given in these articles closely match *c.* 100 collections in MEL. Purdie concludes the second article stating, "*The examination of my week's collection kindly undertaken by Baron von Mueller, showed that in the week I had added over 100 fresh plants to my collection, to me at any rate a more than sufficient recompense for any toil or hardships undergone.*" No images of the Purdie material in MEL are currently available. One sheet in the Paris Herbarium (P) that appears to have originated from MEL has a typical Mueller blue label and no other annotation (P02314326).

Purdie also distributed material to his Western Australian colleagues for incorporation into their own herbaria, but these generally lacked a Purdie label. Recipients included Cecil Rollo Payton Andrews (e.g. BM000990348); Alexander Morrison (e.g. K001573339); William Vincent Fitzgerald (e.g. NSW 227077, unusually also with Purdie label); and Bede Theodoric Goadby (e.g. PERTH 08891567). He also gave material to his good friend Ludwig Diels (e.g. the type of *Diuris purdiei*) but much or all of that material was lost with the bombing of the Berlin Herbarium (B) during World War II. In 1904 he donated two specimens to the Western Australian Museum herbarium (PERTH 09120874, PERTH 08266913); these also lack his personal herbarium label.

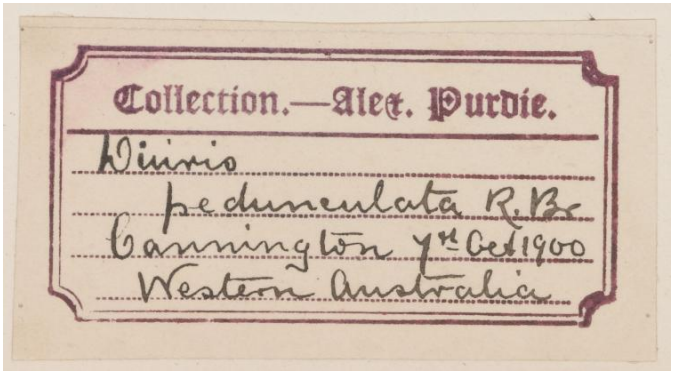


Figure 1. Herbarium label used by Alex Purdie for his personal herbarium from 1892–1904 (Isotype of *Diuris purdiei* Diels; PERTH 01004875).

The Purdie specimens from the BT Goadby herbarium were bequeathed to PERTH following Goadby's death in 1944 (Gardner 1947); these bear a specific PERTH label discussed elsewhere (Gibson 2025). Underwood (2011) in a note on the fate of Purdie's herbarium presumed it had been acquired by the Museum but, except for the two sheets listed above, none came via the Museum collections.

Purdie died (17 July 1905) without a will and a letter of administration was issued in August 1905 to Kate Maria Purdie for the sum of £46[9] (worth ca. $6000 in 2025). Kate would also have inherited his library and herbarium. Correspondence in Purdie's personnel file in the State Records Office shows Kate

[5] Ferdinand von Mueller to James Hector, 14 August 1892, in R.W. Home, Thomas A. Darragh, A.M. Lucas, Sara Maroske, D.M. Sinkora, J.H. Voigt and Monika Wells (eds), *Correspondence of Ferdinand von Mueller*. Available at: https://vmcp.rbg.vic.gov.au/id//letters/1890-6/1892/92-08-14-final.odt

[6] Alexander Purdie to Ferdinand von Mueller, 9 November 1894, in R.W. Home, Thomas A. Darragh, A.M. Lucas, Sara Maroske, D.M. Sinkora, J.H. Voigt and Monika Wells (eds), *Correspondence of Ferdinand von Mueller*. Available at: https://vmcp.rbg.vic.gov.au/id//letters/1890-6/1894/94-11-09-final.odt

[7] ON THE WALLABY. (1894, November 7). *Bendigo Advertiser* (Vic.: 1855–1918), p. 4. http://nla.gov.au/nla.news-article88936360

[8] ON THE WALLABY. (1894, November 23). *Bendigo Advertiser* (Vic.: 1855–1918), p. 4. http://nla.gov.au/nla.news-article88937026

[9] Late Telegrams. (1905, August 12). *Mount Magnet Miner and Lennonville Leader* (WA: 1896 – 1926), p. 2. http://nla.gov.au/nla.news-article159030995

was in considerable financial distress at this time[10]. Andrews (then the Inspector-General of Schools and Purdie's boss) wrote to the Education Minister requesting Kate be granted a compassionate allowance. This was approved in early 1906 and an allowance of £225 paid to her.

It appears that the Department of Agriculture was keen to purchase Purdie's herbarium for their botanist (A. Morrison). Correspondence between Andrews and the Director of Agriculture suggests this consisted of some 1200 specimens with a proposed price of £2 per 100. Kate had apparently refused an offer from an American botanist for the herbarium as she wanted it to remain in Australia, preferably in Western Australia. While confirmation of the proposed sale has not been located it appears likely that bulk of Purdie's herbarium went to the Department of Agriculture at this time (White 1995).

Fred Stockwell, Purdie's assistant at the Perth Technical School, assisted Kate in selling Purdie's extensive library. Tracking through the State Archive and the annual reports of the Mueller Botanic Society (and its subsequent incarnations[11]) indicates that some of his library was purchased by the WA Natural History Society in 1905/06[12] with other volumes being purchased by Andrews.

As a result of the highly patriarchal society at the time very little is known of Kate. The few references found describe her as having "*a wonderful knowledge of photography, botany and nearly every branch of study in the* [Perth Technical] *school* [13]". Elsewhere she "*is perhaps the best amateur photographer in Perth. Her knowledge is thorough and she is conscientious worker in detail, while she has the artistic faculty of "seeing" a picture where the ordinary person would not suspect it. In addition she is an enthusiastic and well-learned botanist, her knowledge of West Australian flora being marvellous*[14]".

Unpublished notes of Diels indicate a close friendship developed between Diels and Ernst Pritzel and the Purdies, probably driven by similar interests (botany & photography). Diels & Pritzel were regular visitors at the Purdies' home during their 14-month expedition in 1900–1901. Diels subsequently named four species for Purdie and a copy of Diels & Pritzel's (1904–05) *Fragmenta* inscribed for Purdie is to be found in the Royal Society of WA library – likely part of the library Kate had to sell after Purdie's death. (The RSWA is the last incarnation of the Mueller Botanic Society.)

The annual report of the Natural History and Science Society of Western Australia (NHSSWA) for 1911–12 notes the presentations to the Society of the late Mr Alex. Purdie's valuable collection of botanical specimens, the gift of Mrs Purdie. This appears to be the residual of Purdie's herbarium not acquired by the Agriculture Department in 1906; alternatively, the 1906 sale may not have eventuated, and this donation may represent the entire Purdie herbarium.

The electoral rolls show that Kate had returned to Victoria around 1907, moving to Ferny Creek in the ranges east of Melbourne in 1913. There she ran the

[10] State Records Office of Western Australia, S4085, cons1059, Purdie, A.
[11] The Mueller Botanic Society later became the West Australian Natural History Society (1903), then the Natural History and Science Society of Western Australia (1909), and finally the Royal Society of Western Australia (1914).
[12] *Journal of the West Australian Natural History Society* **2**(3) (1906), p. 9. Available at: https://www.biodiversitylibrary.org/page/46107725#page/11/mode/1up
[13] IN WOMAN'S WAY. (1903, December 17). *The Spectator* (Perth, WA: 1900–1905), p. 7. http://nla.gov.au/nla.news-article266873546
[14] IN WOMAN'S WAY. (1903, June 6). *The Spectator* (Perth, WA: 1900–1905), p. 13. http://nla.gov.au/nla.news-article266874466

Tandara guest house until the early 1920s[15]; she died in nearby Emerald in 1929 aged 68.

The fate of the Mueller Botanic Society's herbarium

That Kate left part, or possibly all of Purdie's herbarium to the NHSSWA (a direct descendent of the Mueller Botanic Society) was not surprising as Purdie had been very involved with the society, being elected on its council in August 1900[16] and he continued to serve on council up until his death in various roles including Treasurer and Librarian (Withers 1998). Fellow botanical enthusiasts of the society included his boss C.R.P. Andrews, A. Morrison, Richard Helms and Ernest John Bickford amongst others.

The formation of the Mueller Botanic Society in 1897 was primarily driven by E.J. Bickford (1861–1940) who was politically astute in installing the Western Australian Premier, John Forrest, as the first President of the Society. One of the aims of the society was to develop "*a botanical library and an herbarium.*"[17]Bickford had himself a collection of 200–300 specimens that were to be placed in the herbarium.[18] At the first annual meeting of the society, it was reported "*Miss Jessie L. Hussey* [1862–1899]*, of Port Elliott, South Australia, and Miss Cons,[19] of Bunbury, have presented the society with most valuable collections of flora, artistically mounted. Miss Hussey has also kindly offered to present your society with a collection of European and South African algae. Your council feel that the society is greatly indebted to these ladies, and that it has not exceeded its duty in electing them honorary members.*"[20] Other specimens collected by members on excursions were also considered valuable contributions to the new herbarium. Press reports and minutes of the annual meetings continue to refer to the library-herbarium and associated expenditure till 1905,[21] with position of "Curator of Herbarium and Librarian" listed as a council position of the West Australia Natural History Society in their 1905–06 and 1906–07 journal.

In subsequent years very little mention of the herbarium can be found; the next mention is Kate's donation in the 1910–11 annual report. With the formation of the Royal Society of WA in 1914 the herbarium had a non-existent profile until the annual report of 1928–29 when the minutes note "*The Council has transferred the botanical collections of the former Natural History and Science Society to the Department of Agriculture for the use of the Government Botanist and subsequent incorporation in the State Herbarium when such is established*[22]". The State Herbarium was created in 1929 with the amalgamation of the herbaria of the Department of Agriculture and Forestry Department and all of Purdie's personal herbarium has been in the State collection since that time.

[15] Classified Advertising (1921, October 19). *The Argus* (Melbourne, Vic.: 1848–1957), p. 2. http://nla.gov.au/nla.news-article4634171

[16] MUELLER BOTANIC SOCIETY. (1900, August 28). *The West Australian* (Perth, WA: 1879–1954), p. 6. http://nla.gov.au/nla.news-article23842653

[17] MUELLER BOTANIC SOCIETY. (1897, May 5). *The Morning Herald* (Perth, WA: 1896–1909), p. 6. http://nla.gov.au/nla.news-article295279170

[18] MUELLER BOTANIC SOCIETY. (1898, May 21). *The Morning Herald* (Perth, WA: 1896–1909), p. 4. http://nla.gov.au/nla.news-article295249971

[19] Probably Eliza Cons (1842–1924).

[20] MUELLER BOTANIC SOCIETY. (1898, July 5). *The West Australian* (Perth, WA: 1879–1954), p. 6. http://nla.gov.au/nla.news-article3202864

[21] WEST AUSTRALIAN NATURAL HISTORY SOCIETY. (1905, August 1). *The West Australian* (Perth, WA: 1879–1954), p. 3. http://nla.gov.au/nla.news-article25520243

[22] *Journal of the Royal Society of Western Australia* **15** (1928–1929), p. 14. Available at: https://www.biodiversitylibrary.org/page/46126049#page/16/mode/1up

Despite an auspicious start for the herbarium of the Mueller Botanic Society this early momentum was not sustained. There are several likely reasons for its demise. Firstly, a lack of a motivated curator. Initially Bickford appears to have fulfilled this role but his departure to the east in 1905[23] left a hole that was never filled. Andrews, Morrison, Goadby and others with strong interest in the WA flora were compiling extensive herbaria of their own and the Society's herbarium was not a priority for them.

Secondly, finance. Reading the annual reports indicates the Society had significant financial difficulty paying for the publication of their journal despite some Government grants. Also they had real difficulty finding secure offices leading to many moves and this was not fully resolved till 1916[24]. As their library grew not only were the moves more arduous but there was an increasing call for money for shelving and binding.

The continued issues of funding their publications and managing their library and dealing with numerous moves appears to have absorbed most of the council efforts over the years. The unused and un-curated herbarium was simply an unwelcome burden that was eventually dispensed with, thankfully to the State.

Of the original Mueller Botanic Society (and subsequent societies') herbarium collections only some of Purdie's collections can be traced back to that source (although which individual collections made up Kate's 1911–12 donation remains unclear). As yet there are no other collections in PERTH that can be definitely ascribed to the Mueller Botanic Society (or subsequent societiess) herbarium. There are no collections from Miss Con of Bunbury in PERTH. The extant Bickford collection (PERTH 03343219) came from MEL and is a duplicate of MEL 0278491A. Similarly, the single Miss Hussey collection (PERTH 00379328) from South Australia also came from MEL and has a "*National Herbarium of Victoria, Melbourne*" label.

Acknowledgements

My thanks to staff of PERTH for continued assistance with my research into the early plant collectors in WA, and to the increasing number of herbaria who make images of their collections freely available.

References

Diels L, Pritzel E (1904–05) Fragmenta phytographiae Australiae occidentalis. Beiträge zur Kenntnis der Pflanzen Westaustraliens, ihrer Verbreitung und ihrer Lebens-Verhältnisse. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* **35**, 55–662.

Gardner CA (1947) Western Australian State Herbarium. *Australasian Herbarium News* **1**: 19–21.

George AS (2009) *Australian botanist's companion*. (Four Gables Press: Kardinya, WA.)

Gibson N (2025) Herbarium Miscellany: WA Government Printer labels 1898–1985. *Australasian Systematic Botany Society Newsletter* **202**, 45–57.

Godley EJ (2004) Biographical Notes (56): Alexander Callender Purdie (1824–1899) and Alex. Purdie (c. 1861–1905). *New Zealand Botanical Society Newsletter* **78**, 18–19.

Maiden JH (1909) Records of Western Australian Botanists. *Journal of the West Australian Natural History Society* **2**(6), 5–33.

Underwood R (2011) *A botanical journey: the story of the Western Australian herbarium*. (Department of Environment and Conservation: Perth, WA.)

White MA (1995) Alexander Purdie, Western Australia's first director of technical education. *Unicorn* **21,** 103–107.

Withers P (1998) Officers and Councils of the Royal Society of Western Australia and previous Societies, 1897–1997. *Journal of the Royal Society of Western Australia* **81**, 5–12.

[23] SHIPPING. (1905, October 13). The West Australian (Perth, WA : 1879 – 1954), p. 4. http://nla.gov.au/nla.news-article25525885

[24] Royal Society of Western Australia. (1915). Annual Report. *Journal of the Royal Society of Western Australia: Vol. II* (p. xii) Available at: https://www.biodiversitylibrary.org/page/52467646

(Nearly) Forty Years On: Reflecting on the Success of *Australian Systematic Botany*

Pat Hannah, Journal Manager, CSIRO Publishing (pat.hannah@csiro.au)

Someone reminded me the other day that *Australian Systematic Botany* is approaching its 40th birthday in 2028. It's the kind of milestone that invites a look back, not just at how far the journal has come, but at what has actually driven its success over four decades.

Some of that story is easy to tell. Between 1990 and 2010, the journal published a number of defining papers. Small, Cronn and Wendel's work on the use of nuclear genes for phylogeny reconstruction in plants gave researchers new molecular tools for untangling evolutionary relationships (https://doi.org/10.1071/SB03015). Brooker's new classification of the genus *Eucalyptus* L'Hér. (Myrtaceae) reshaped how we think about one of Australia's most iconic plant groups (https://doi.org/10.1071/SB98008), while Woelkerling, Irvine and Harvey's work on growth-forms in non-geniculate coralline red algae (Corallinales, Rhodophyta) extended the journal's influence beyond land plants (https://doi.org/10.1071/SB9930277). These are the papers people point to when they talk about the journal's legacy.

What's spoken about less, but remains just as important, is that this isn't only a story about the past. Papers published after 2010 have continued that trend of high-quality research appearing in the journal. Morrone's 2015 reappraisal of the biogeographical regionalisation of the world (https://doi.org/10.1071/SB14042), Miller and Seigler's 2012 study of the evolutionary and taxonomic relationships of *Acacia s.l.* (https://doi.org/10.1071/SB11042), and the 2019 dated molecular perspective on eucalypt taxonomy, evolution and diversification by Thornhill and colleagues (https://doi.org/10.1071/SB18015) have each built substantial citation records. It's a reassuring sign for a journal in a field like systematics that the quality of the science hasn't dipped since the discipline's molecular "golden age": it's kept finding new problems worth solving.

Lowering the barriers to publish

None of that citation success happens in a vacuum, though. It depends on people actually being able to read and build on the work, and that's become harder to take for granted in an open access environment, particularly for a journal of our size. I'm genuinely proud that CSIRO Publishing has ensured no-cost open access publishing for the majority of our authors through our library agreements, as well as open access support for contributors from low-income countries. There's more we want to do here over the next few years, but I'd like to think that lowering these barriers to publication has played a real role in the journal's ongoing success. The best science can only provide impact if it's accessible to the researchers who need to see it.

A journal shaped by its Society

That sense of building something together runs through the journal's whole history, because *ASB* doesn't exist in isolation from the community it serves. It grew out of, and remains closely tied to this Society. The journal's sponsorship of Society awards is one of the clearest expressions of it, a direct channel back into the community of researchers, particularly early-career botanists, whose work the journal exists to publish. The Society keeps the discipline connected and supports its next generation, the journal, in turn, gives that research a home and, increasingly, delivers it to a wider audience.

Helping the next generation write

That commitment to supporting researchers extends into how they communicate their work, too. CSIRO Publishing's scientific writing workshops aim to help researchers at every career stage develop

the skills to write more effective journal articles, grant applications and technical reports, combining facilitator-led discussion with hands-on practice and individualised feedback, in person or online. It's a small but deliberate piece of the same puzzle we want to deliver as a publisher. If the journal's role is to lower the barriers between good research and the people who need to read it, part of that job starts well before a paper ever reaches submission.

Always Looking to Improve and Support Community

If you ever wish to discuss the journal, its strategy or ways in which it can better support community, please always feel free to reach out to our team. I'm personally always interested in hearing different perspectives from the community and to talk with people who care about *ASB* and the Australasian research environment.

Burbidge in Canberra's 'Top 100'

Murray Fagg, Australian National Herbarium

It is not often we find a botanist in a 'Top 100' listing of 'The people who made our city' but the feature in the ACT newspaper *'The Canberra Times'*, celebrating its centenary of publication, did just that. Moreover, plant taxonomist Dr Nancy Burbidge was ranked No. 24 in the list, which was prepared by a selected committee after public consultation.

Nancy was born in Yorkshire, England, in 1912, and came to Western Australia when her clergyman father was appointed to the parish of Katanning in 1913. There she spent her school years before graduating in Science at the University of Western Australia in 1937 and winning a prize of a free passage to England awarded by a group of shipping companies.

In the UK she spent eighteen months at the Royal Botanic Gardens, Kew.

On the eve of World War II, these were troubling times in the UK and during her spare time she trained as an air raid warden and first-aid officer.

On returning to WA, she was awarded a Masters degree for her thesis 'A revision of the Australian species of *Enneapogon* Desv.'.

She left WA in 1943 to take a position in South Australia as Assistant Agronomist at the Waite Agricultural Research Institute in Adelaide where she worked on the regeneration of native pastures in South Australia's arid and semi-arid regions.

Her next move was to Canberra in 1946 to take up the position of Systematic Botanist at the Division of Plant Industry, in what is now CSIRO.

In Canberra she laid the foundations for what we now know as the Australian National Herbarium, starting off in wooden pre-fab buildings on the Black Mountain campus, just down the hill from the current Herbarium.

During the 1950s and 1960s, Nancy had an assistant, Edna D'Arnay (who also had a colourful career, see ref. below) and botanist Max Gray (from 1955) with whom she published the *'Flora of the ACT'* in 1970.

During this period, she also published her *'Dictionary of Australian Plant Genera'*, and a comprehensive paper on the phytogeography of the Australian region, as well as studies of the plant groups *Nicotiana*, *Sesbania* and *Helichrysum*.

In all she was sole author of 52 new taxa (inc. 1 genus and 36 species).

Later in her career she became increasingly involved in the preparation of a new *'Flora of Australia'*, a project of keen interest to her ever since it was first mooted many years before. Nancy Burbidge was the obvious scientific leader for this project and in 1973 she was relieved of her responsibilities as Curator of the Herbarium to enable her to work full time on it until her death on 4 March 1977.



Nancy Tyson Burbidge, photographed by botanist Tamra Raven, on a trip from USA to Australia with husband Peter Raven, in 1970 (ANBG Photo Collection dig-58376).

She led the 'Australian Plant Name Index' (APNI) project in its early years and laid the groundwork for Arthur Chapman to take the lead from 1974.

For her research work she had been awarded the degree of Doctor of Science by the University of Western Australia in 1961, and in 1976 she was made a member of the Order of Australia in formal recognition of her services to botany in the widest sense.

But these activities were probably not those most influential for her inclusion in the 'Top 100' list. Instead it was her extra-curricular activities as the principal founding member of the National Parks Association (NPA) ACT in 1960, and her driving force to establish a national park for the national capital. She also helped lobby for other local reserves including Tidbinbilla Nature Reserve.

Her philanthropic activities were many and varied including improving educational opportunities for Aboriginal women via scholarships, and working towards the establishment of a women's hall of residence at the University of Papua and New Guinea.

She was an active member of several clubs and societies, including *the Australian Systematic Botany Society* (ASBS) where she is commemorated each year in the Nancy Burbidge Memorial Lecture. By the general public she is also remembered in the 'Nancy T. Burbidge Memorial', a small amphitheatre which was opened in 1980 on the eucalypt lawn of the Australian National Botanic Gardens.

References

The Canberra Times (2026) Celebrating 100 Years Feature, The Canberra 100, 31 August 2026. Available at: https://www.canberratimes.com.au/story/9338164/canberra-times-100-years-meet-the-first-25-people-of-the-canberra-100-list/ [accessed September 2026].

'Documents of Nancy Burbidge 1939–1960' (n.d.) HERBGEN RB 92 Bu, Australian National Herbarium Library, CSIRO, Canberra.

Australian National Herbarium. *Burbidge, Nancy*. Australian National Botanic Gardens. https://www.anbg.gov.au/biography/burbidge-nancy.html (accessed September 2026)

Australian National Herbarium. *D'Arnay, Edna*. Australian National Botanic Gardens. https://www.anbg.gov.au/biography/d'arnay-edna.html (accessed September 2026)

Australian National Herbarium. *Gray, Max*. Australian National Botanic Gardens. https://www.anbg.gov.au/biography/gray-max.html

Australian National Herbarium. *Australian Plant Name Index*. Australian National Botanic Gardens. https://www.anbg.gov.au/cpbr/databases/apni-introduction.html (accessed September 2026).

50 Plants that Changed the World

Book review by Alex George, Environmental and Conservation Sciences, Murdoch University

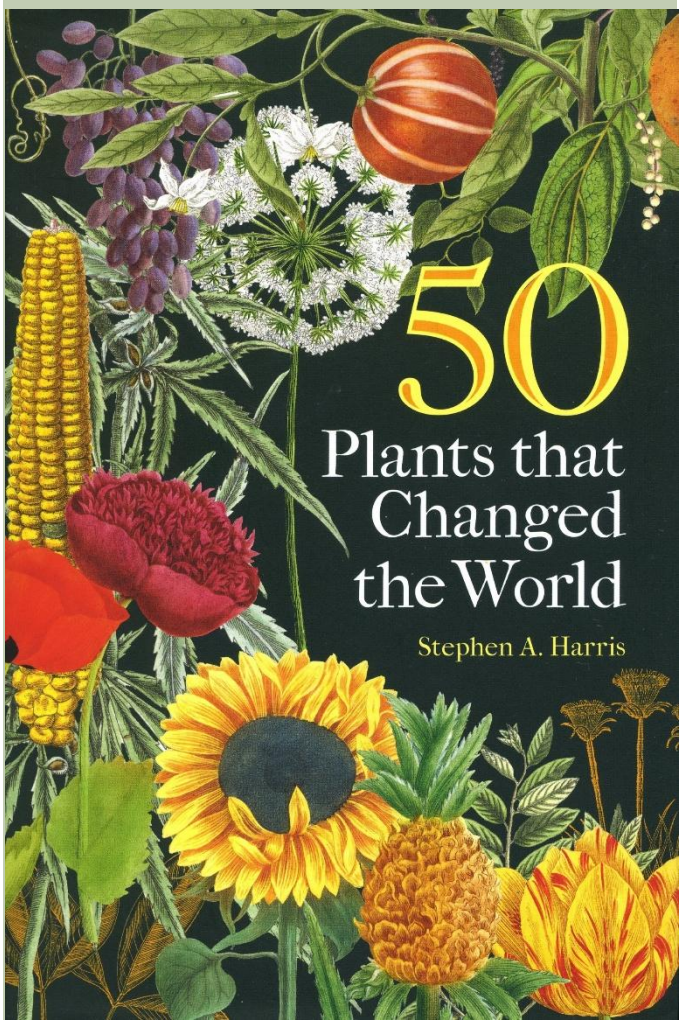
50 Plants that Changed the World

Stephen A. Harris

ISBN 978 1 85124652 6 (hardcover)

Bodleian Library Publishing, Oxford, 2026, 320 pp

RRP AU $49.99



I enjoyed this book thoroughly. It's well written, covering the main points about each plant without going into too much detail. For those that I already knew, e.g. barley, broad bean, rose, apple, rubber, it has expanded my knowledge, and for the others it provides a succinct account of what was essentially just a name before, e.g. papyrus, woad, quinine, corncockle, thale cress. As Harris says, each of us would choose differently according to our 'idiosyncracies and preoccupations'. He asked ten colleagues which 50 they would choose and found that there was 60% agreement among them. Understandably, no Australian plant makes the cut: there is a passing mention that eucalypts have contributed to 'global construction' but 'no mainstream Western food plants have their origins in Australian cultures'.

The plants chosen give us food, drink, paper, timber, spices, drugs, medicines. Just one pasture grass is included, *Poa pratensis*. Lycopods are included as the basis of coal deposits that, as Harris says, (with their cousins) 'built the modern world'.

A typical entry describes how the species came to be developed for human use (including any fossil record, ancient writings, geography) and its nomenclature, its geographical expansion, historical international rivalry in trade, social effects, current world production, and the damage to the natural environment through planting huge areas for cropping. There are fascinating quotes from writers over the ages.

Showing how many of these plants have been developed since ancient times, thirty of the fifty species were named by Linnaeus and retain his name as published. A further four bear his name as provider of the basionym. Eleven are headed by a general name rather than a particular species, e.g. alliums, rosa, pines, reeds, citrus, tulip, chilli, quinine, lycopods, cotton, oak. Only five were named by others.

A shortcoming in the book is that most illustrations, taken from early texts, are reproduced with their original captions that are sometimes hard to read. It would have been helpful to have these transcribed (and translated where necessary). The source of each plate is given in an appendix, Picture credits, at the back of the book.

The index is rather sparse. Many plants are indexed only by their common names, thus there is an entry for 'nutmeg' but not for '*Myristica*', 'tea' but not '*Camellia*'. China features in the account of tea but is not indexed, though the British East India Company is.

These are minor quibbles, however, when set against the book's many strengths. Whatever your background, you are sure to learn something new about the plants that have most influenced human societies. A blurb on the back cover recommends 'Stow this book away for your winter evenings, when your plants have gone dormant', but it is far too good to be stowed away.

Unsung Heroes of Pollination

Book review by Stephen D. Hopper, University of Western Australia Albany Centre

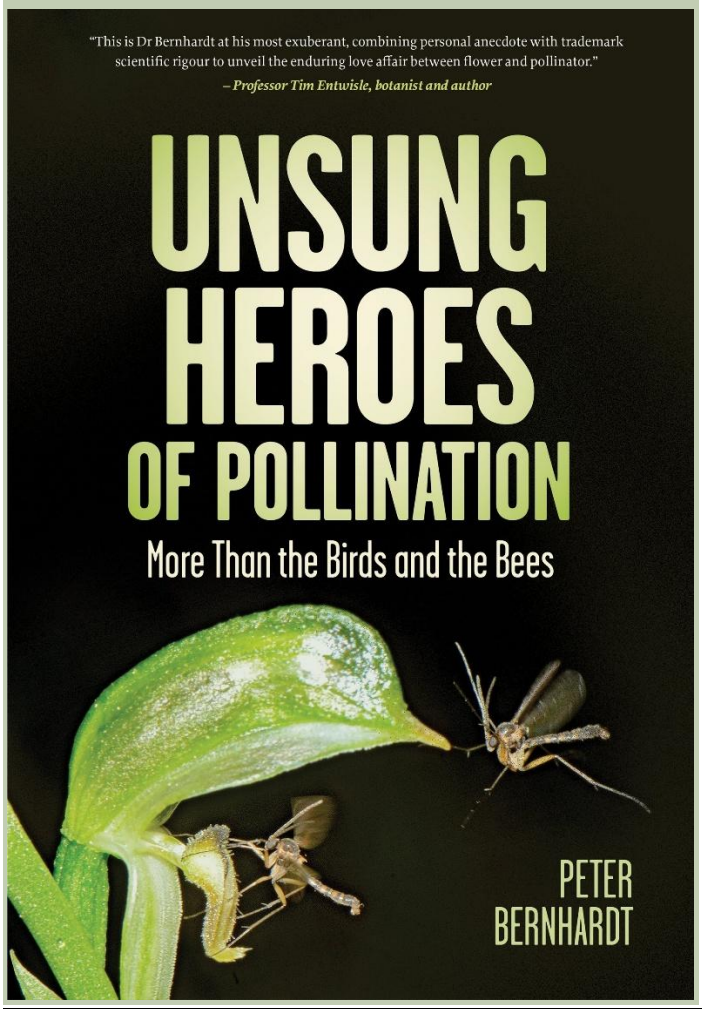
Unsung Heroes of Pollination More than the Birds and the Bees

Peter Bernhardt

ISBN: 9781486319619, (paperback), 245 x 170 mm

CSIRO Publishing, May 2026, pp 198

RRP AUD $59.99



After graduating in biology to Masters level in New York State, Peter Bernhardt (atypically for a North American) undertook his PhD studies on bird pollination of box mistletoes (*Amyema*) in Melbourne. He returned in 1985 to St Louis in the USA where he specialized in pollination ecology, particularly in China, and established career-long links with Missouri Botanical Garden. He retired in 2019. Often featuring on the ABC's science show as a US correspondent, Bernhardt evinces a dry wit and broad interest in science and its fashions and focus. He is widely published in the scientific literature, as well as author of 23 books and book chapters.

His latest book, *Unsung Heroes of Pollination*, begins with an overview of floral structure and the fossil history of pollinators, concluding that a range of insects were feeding at flowers on pollen and nectar 100 million years ago, not solely beetles as some contend. Moreover, Bernhardt introduces the contentious proposal of 'pollination syndromes' proposed by Faegri and van der Pijl, which argues that pollinators can be inferred from floral structure and biochemistry. Some authors are happy to accept this hypothesis and present broad reviews of pollinators and their floras based primarily on such speculation. Others, including myself, argue that there is no substitute for direct observation of which animals exactly visit flowers in a way that pollination is successfully achieved. Bernhardt claims to sit in the middle on this topic, although his own work shines through as meticulous in its attention to scientific detail. Hardly 'plodding', as he calls it in a later chapter.

Orchids, first made famous by Charles Darwin in his 1862 book-length review of their pollination, feature next. Bernhardt considers *Cypripedium* in the USA and China, and highlights the diversity of flower-visiting insects. However, few unexpected species are actual pollinators. Bernhardt concludes that 'orchids offer a window into the evolution of relationships between unlikely organisms'.

Mosquitoes (*Aedes communis* and *A. canadensis*) as pollinators of orchids such as *Platanthera obtusata* in Michigan bogs is then considered, together with small speckled moths of the genus *Xanthorhoe*. Because *Aedes aegypti* transmits various human diseases, interest in *P. obtusata*'s pollination ecology was pursued over decades to ascertain what chemical

attractants led to *Aedes* pollination, and what could we learn about human attraction of *Aedes*? It turned out to be a rare chemical mysteriously named nonanal was prominent among 13 chemicals emitted by *Platanthera*, constituting 54% of the smell attracting *Aedes* mosquitoes. This is a classic case of unique and unexpected interactions in pollination ecology.

Chapter 4 turns to Australian orchids of the genus *Corunastylis* (midge orchids) with their 'comically tremulous labellum'. Eye gnats or eye flies (*Caviceps* and *Osinisoma*, family Chlorpidae) were discovered to be the pollinators attracted by this tremulosity in early studies. Bernhardt joined a team of Australian and Chinese scientists in 2016 investigating pollinators of other midge orchids. Much remains to be investigated about this pollination partnership. Chapter 5 explores *Pterostylis* and *Corybas* pollination by fungus gnats in Australia before diverting to Chinese helmet orchids. Beautiful illustrations in colour highlight the unexpected insects at work as pollinators here too.

Bernhardt gives a brief treatment of the taxonomic turmoil underway in terms of generic treatments of Australian orchids due to the splitting by David Jones and others. The middle ground is again argued for by Bernhardt, a position that I, too, support.

Wasps are then introduced as pollinators in the Northern Hemisphere before a return to Australia where extensive radiation of flower wasps (thynnids) has enabled prolific speciation in several terrestrial genera of orchids, notably in *Caladenia* and *Drakaea*. I enjoyed Bernhardt's canter through aspects of wasp pollination here.

With Missouri Botanic Garden's Curator of African Botany, Peter Goldblatt's encouragement, Bernhardt was enticed to consider monkey beetles and their role as pollinators in the fynbos and succulent karoo vegetation of South Africa. They proved to be sole pollinators of many unscented wildflowers representing six to seven plant families including Asparagaceae, Hypoxidaceae, Asteraceae, Aizoaceae and Iridaceae. Bernhardt argues that monkey beetles have been domesticated by wildflowers in South Africa.

A consideration of moths as pollinators follows in China and *Boronia* in Australia, is followed by Yucca moths in North America. Then there is a brief treatment of bats as pollinators. The concluding chapter considers disdaining pollinators while loving flowers a little too much and expecting variation and novelty in pollination.

Intriguingly, Bernhardt asks 'how unique are Australia's pollination stories', and concludes not much. He argues that all pollination systems are understudied, and that 'stereotyping Australia as the centre of weird interactions between plants and animals is silly.' It all becomes relative he argues. To my way of thinking, this disdain for highlighting uniqueness significantly downplays new ways of thinking about pollination. The Global North, with thousands more scientists and far fewer species, should not be allowed to dominate thinking and investigation in science for much longer. In my own work, the recognition of old, climatically buffered infertile landscapes (OCBILs) mainly in the Global South, is opening up new lines of enquiry to balance the weight of Global North studies pursued since Darwin's time.

Bernhardt mentions briefly pollination networks or landscapes, which I would suggest might enhance views about the novelty and importance of Global south pollination stories.

Overall, the book is well written, with no grammatical errors I could detect, and beautifully illustrated. A glossary is provided. The annotated bibliography focusses too much for my liking on Northern Hemisphere contributions. I may be parochial, but there is virtually no mention of pollination studies in Western Australia, many of which have been published over the past half century and elucidate patterns of global significance. The General Index of the book is sparse but sufficient. Where is 'crone', for example? With the caveat that the text often strays into too many technical terms for a publication intended for a general audience, I commend the book to any readers interested in the science of pollination ecology.

Of Interest

Please send to the Newsletter Editor anything that you think is of interest for the ASBS community.

Employment Opportunities

Some amazing botanical jobs are currently being advertised in our region. As Juliet Wege put it on the ASBS Facebook page…'Awooga awooga!'

Research Scientist / Senior Research Scientist — Perth Metropolitan, Western Australia, Australia

Botanist-—Darwin Herbarium, Northern Territory

Senior Researcher / Researcher (Botanical Research – Herbarium) – Singapore Botanic Gardens

Lecturer Science Communication (Botany) – University of Western Australia, Crawley, WA

Unemployment Opportunities

But it would seem the Tasmanian Government missed the memo…

'Premier's STEM Researcher of the Year' among those set to lose jobs in Tasmanian cost cutting - ABC News

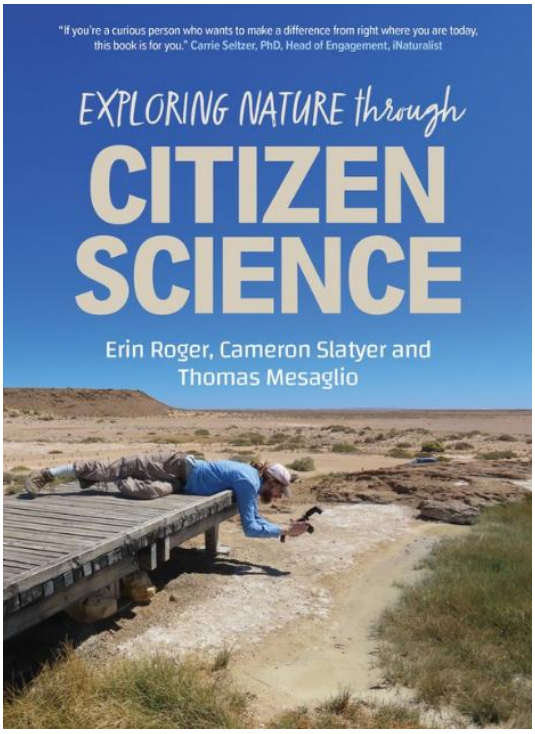
Natural History Collections Underpin Conservation

The IUCN has published a timely article highlighting the indispensable role of natural history museums and biological collections in conservation science.

From collections to conservation: the indispensable role of natural history museums – News | IUCN

New Book Highlights the Power of Citizen Science

So many of us benefit from it, but how much do you know about Citizen Science? This new book puts Citizen Science in the spotlight it deserves.



Exploring Nature through Citizen Science — CSIRO Publishing

Kings Park — 50 years research and discovery

Summary by Robyn Barker

Russell Barrett's recently published review of 50 years of botanical research and discovery by Kings Park and Botanic Garden in the international ***Journal of Zoological and Botanical Gardens*** is an informative read. It backgrounds the people working at the gardens between 1961 and 2015, the chosen years, with over 400 research papers being published in that time. Many of the researchers' names are known from plant collections in herbaria or the outcomes of their research, but still others have been more involved with work underpinning the outcomes of the research.

There is also a useful background history to the land encompassed under the term Kings Park. In Noongar times it was known under a number of different names, which highlighted natural features or animals. In colonial times the land was set aside for public purposes until it officially became Kings Park in 1901. The concept of Kings Park has changed since that time. Since 1965 it has included a botanic garden within its boundaries, this garden being variously referred to as the "Western Australian", the "Perth" and the "Kings Park" botanic garden depending on the

governing body or common usage. Bold Park, established in 1936, became part of the Botanic Gardens and Parks Authority with Kings Park in 1998, resulting in its inclusion as a subject for research.

Half a Century of Botanical Research and Discovery in Western Australia by Kings Park and Botanic Garden

The Economics of Botany

This article explores a fascinating place of intersection between economics, art and botanical science.

The botany of money: geographical and sociological patterns in plant images on currency - Australian Journal of Botany



Christmas orchid, *Calanthe triplicata*, 50 cents (Christmas Coin) Australia, 2025 . Image: Royal Australian Mint

The Economics of Education

A revealing examination of the disparities between doctoral stipends and employment conditions for PhD students across European countries. It would be interesting to see where our Australasian countries rank.

What does a PhD pay? Data reveal huge gaps across Europe | Nature

How accomplished are we for writing our national flora?

Summary by Robyn Barker

Venu & Sanjappa (2019) highlights the difficulties faced by Indian botanists trying to update their national Flora today. They explain the frustrations of working remotely from both the literature and the specimens they need to apply correct names. If they [as well as Australian botanists?] are experiencing such frustration even today when so much more information is available to us through JSTOR and a myriad of other sources, then how much more difficult would it have been for those carrying out their work in the earlier parts of the 20th Century?

How accomplished are we for writing our national flora? — Current Science

We are not alone!

Summary by Robyn Barker

The plea below, reproduced from a recent Italian paper echoes that of plant taxonomists everywhere. But who is listening? References cited in this paper may be useful for those who have reason to mount a similar argument.

“Once a foundational skill for understanding biodiversity, plant identification is now at risk of being marginalized in both research and education. Media reports have echoed this concern, lamenting the disappearance of botanists at a time when their expertise is more critical than ever (Bonari 2025).”

Bonari, G. 2025. Who Identified the Plants? Reclaiming Plant Identification Expertise in Vegetation Science.” Applied Vegetation Science 28, no. 4: e70046. https://doi.org/10.1111/avsc.70046.

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 three times a year on the ASBS website. ASBS members are encouraged to submit original articles, notes and letters.

Have an article or an idea for the Newsletter?

Send it to Helen Kennedy at editor.asbsnews@gmail.com

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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 at any time by filling in a membership application form available at http://www.asbs.org.au/membership/. 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 direct credit, credit card or by cheque made out to Australasian Systematic Botany Society Inc. Members can update their contact details online at https://asbs.org.au/login/.

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ISSN 2204-910X

Cover Image: *Hoheria sexstylosa*
(Photo credit: Jennifer Tate)