



Newsletter

Australasian Systematic Botany Society

No. 200, September 2024



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From the President

Katharina Nargar

Happy anniversary to our newsletter! With this newsletter, 200 issues have now been published over the 50 years since the first newsletter was published in March 1974. What a wonderful achievement and great testament to the vibrancy of our Society and the value that we all place on staying connected. Congratulations to all ASBS members who have contributed to this effort since then. Many thanks in particular to the 23 newsletter editors who have collectively seen the newsletter through to this issue and all those who have put ‘pen to paper’, providing a steady stream of delightful and well-crafted contributions over the years. Thanks everybody for sharing your news and thoughts in the ASBS newsletter.

Over its 50 years, the newsletter has been evolving and adapting to changes. Figure 1 shows ASBS Newsletter covers through time, from newsletters that were produced from manuscripts written on typewriters to electronically available issues and astonishingly recently, with cover images in colour. Council is currently discussing which form and shape the newsletter may take in future to ensure that it remains an effective and highly valued communication tool for our Society. We will be sharing our thoughts around the future of the newsletter with you at the upcoming Annual General Meeting for 2024 and are looking forward to your feedback and comments.

The XX International Botanical Congress (IBC 2024) in Madrid this July was an important milestone in

the botanical conference calendar. The IBC was a great success, attended by over 3,000 delegates from 95 countries. It was heart-warming to see a strong delegation of ASBS members attending the conference, contributing to the program as symposium organisers, session chairs, and presenters, or participating in the Nomenclatural Section held in the week prior to the conference. While at times the magnitude of the congress may have been somewhat overwhelming, I am sure that those who attended came back inspired and with lots of new insights and ideas which will advance our field further. Many thanks go to the ASBS Student and Early Career Researcher (SERC) subcommittee, in particular Andrew McDougal, for organising a meet-and-mingle over dinner in one of Madrid’s famous tapas restaurants for our students and ERCs at the IBC.

Last but not least, it is my great pleasure to announce this year’s Marlies Eichler Postdoctoral Fellowship, which has been awarded to Caroline Puente-Lelievre (University of Auckland). The Marlies Eichler Fellowship will provide Caroline with funding support for her research project entitled ‘Expanding the Epacrid Tree of Life’. Congratulations to Caroline, we wish you all the best for your project.

More news from Council at our upcoming AGM on Thursday, the 28th of November 2024, which will be held online.

Best wishes,
Katharina



Figure 1. Evolution of ASBS Newsletter covers through time. a: 1974 – 1975 (issues 1 – 5); b: 1975 – 1982 (issues 6 – 31); c: 1982 – 1996 (issues 30 – 89); d: 1997 – 2005 (issues 90 – 125); e: 2006 – 2019 (issues 126 – 181); 2020 onwards (issues 182 –current).

From the Editors

John Clarkson & Helen Kennedy

When Selwyn Everist penned his opening remarks for the first issue of this newsletter in 1974 (see page 23), we wonder if he had any idea that, 50 years later, it would still be going strong? In wishing the venture well, he pointed out that its success or failure was entirely in the hands of the membership. These comments were directed specifically to the younger generation of taxonomists who had taken the initiative in forming ASBS. That younger generation is now well and truly the older generation. Probably all of the younger taxonomists of 1974 are now retired although many are still actively involved in plant systematics and taxonomy. One

of the features of ASBS has been the way younger members have continued to step up to ensure the newsletter continues although one of the current team is a long way past young.

We would like to thank members who responded to our requests for articles for this significant issue. We have not had to play fairy godmothers and conjure up contributions out of the air.

Research Grants

John Clarkson

Vice President and ex officio Chair of the ASBS Research Committee

2024 Marlies Eichler Postdoctoral Fellowship

ASBS Council is pleased to announce that the 2024 Marlies Eichler Postdoctoral Fellowship has been awarded to Caroline Puente-Lelievre from

the School of Biological Sciences, University of Auckland. Caroline's research aims fill the gaps in the phylogeny of the Epacridoideae.



Figure 1. Caroline is ASBS' first New Zealand based Fellow.



Figure 2. *Styphelia triflora*. Image by: Thomas Mesaglio.

Hanging by a horsehair — chasing another species in the *Marasmius crinisequi* complex from northern New South Wales

Hansjörg Eichler Scientific Research Fund Report

Frances Guard, University of Southern Queensland, Toowoomba

History

Horsehair fungi were first collected with fruitbodies from the Richmond River area (New South Wales) in the 1870s. Ferdinand von Mueller was very excited when his collector, Mrs Maria Hodgkinson, sent him a specimen that included a few tiny fruitbodies (like minute parasols) (Fig. 1), arising from aerial rhizomorphs (Fig. 2) looking for all the world like horsehair. His correspondence with Rev. Miles Berkeley, a British mycologist (1875), records his delight and he sent the specimen to Berkeley without examining (hence destroying) any fruitbodies. He appropriately named the species *Marasmius equicrinis* (meaning ‘horse hair’) in his own journal (Mueller 1880). This strange fungus had been found by Mueller’s collectors in eastern Gippsland (Victoria), Sydney region (New South

Wales) and as far north as Rockingham Bay (Cardwell area, Queensland). Six months after Mueller’s publication of the name, the Hungarian mycologist, Karoly Kalchbrenner (1880), described and published the Rockingham Bay specimen in the journal, *Grevillea*, as *M. crinisequi*. There is still debate today as to which name was the first validly published and should have priority. Early Australian specimens, held in Kew, now consist only of rhizomorphs (pers. comm.) Subsequently, many collections of horsehair fungi were made across tropical Asia and Africa and were all thought to be *M. equicrinis*/*M. crinisequi*.

The questions

Quite aside from nomenclatural dilemmas, this species needed taxonomic revision with molecular data to resolve the suspicion that it



Figure 1. *Marasmius crinisequi* fruitbody detail and rhizomorphs. Image: Frances Guard.



Figure 2. Horsehair rhizomorph tangle. Image: Frances Guard.

is not a cosmopolitan/pan-tropical species as was previously accepted but may be a complex of several species within and beyond Australia. My field work in 2021 in north Queensland included collecting specimens from Rockingham Bay area (Murray Falls Section of Girramay NP) and further north. I then added data from southeast Queensland collections. This revealed at least three distinct taxa molecularly, though morphologically they are very similar, even cryptic. It was therefore important to survey the Richmond River area to see if any specimens could be found there and which, if any, of the three taxa discovered in Queensland they fitted.

Field Work 2022

The Hansjörg Eichler Grant enabled me to carry out a two week field trip in northern New South Wales, followed by laboratory work to collect morphological and molecular data from horsehair fungi and other related *Marasmius*. The trip commenced on 18 February 2022. I was accompanied by my supervisors, Dr John Dearnaley (University of Southern Queensland) and Dr Teresa Lebel (Botanic Gardens and State

Herbarium of South Australia), Grace Boxshall (fellow PhD student from University of Melbourne) and Bob Philpot (husband and chief support). National Parks visited included Border Ranges, Mount Jerusalem, Nightcap Range, Iluka and Dorrig, Rummery Park and Minyon Falls, as well as small remnants of 'The Big Scrub' conserved in Booyong Flora, Victoria Park and Rocky Creek Dam Reserves. Clearing and development has taken a huge toll on the original vegetation that Hodgkinson would have collected in. Only 1% of the original 75,000 hectares of subtropical lowland rainforest remains in the northern rivers district, so my expectations of finding horsehair fungi were low. However, those small remnants were rewarding.

Results

In total we made 30 collections of *Marasmius*, before the big floods of February 2022 cut short our field trip and made us flee to drier places. While the litter traps formed by rhizomorphs were not common, some of them were huge and fruiting well. A total of 19 collections were sequenced and 14 produced useable data. These



Figure 3. Frances Guard and Grace Boxshall collecting the *M. brunneolorobustus*. Image: Teresa Lebel.

confirmed that the widespread form of *M. crinisequi* occurs from far north Queensland as far south as Dorrigo, and would almost certainly have been present in the Richmond River area back in 1870. This group, though widespread in Queensland and New South Wales, appears to be restricted to Australia, whereas, the second of the cryptic taxa is tropical and has also been found in the Solomon Islands and Thailand. The third occurs only in north Queensland. Another species confused with *M. crinisequi* (*Marasmius* sp. 'tall dimpled buff') was also present in the areas we surveyed, extending its distribution well south of the Queensland/New South Wales border. An unexpected bonus was finding a giant specimen of *Marasmius* sp. 'robust brown' at Minyon Falls, which we have subsequently published as *M. brunneolorobustus* (Guard et al 2022). Another bonus was a *Marasmius* sp. 'lavender bells' in the Border Ranges NP, now has a known distribution

of Julatten, southeast Queensland and across the border into New South Wales. It is part of the *Marasmius haematocephalus* complex, which will form another chapter of my thesis. So, the collections we made during fieldwork supported by Hansjörg Eichler Grant funds were valuable in confirming and adding to the distribution of *Marasmius crinisequi* and placing it molecularly within the clade of cryptic horsehair fungi.

Acknowledgements

My sincere thanks to the Australasian Systematic Botany Society for awarding me a Hansjörg Eichler Grant in 2022. It enabled me to focus on a particular aspect of the history and taxonomy of *Marasmius crinisequi* and add new distributional data for both horsehair and other *Marasmius*, as well as appreciating the challenges of conserving the mycoflora in a highly modified and fragmented

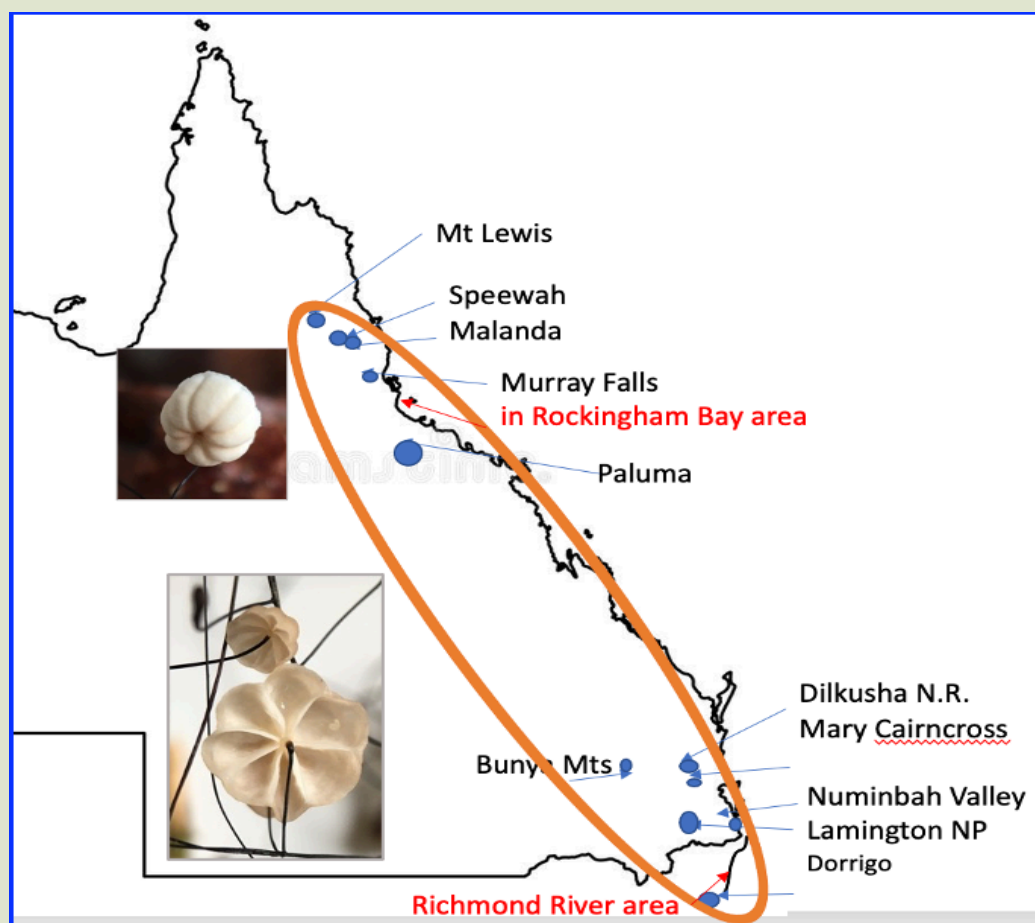


Figure 4. Distribution map for *M. crinisequi* (widespread form). Image: Frances Guard.

habitat. My thanks are also due to my supervisors, John and Teresa, for their continuing support, encouragement and enthusiasm for this project. Thanks too for the cooperation of National Parks in New South Wales and permission to make scientific collections of fungi. Other local people gave their advice as to best habitats to look for fungi, and one brave soul took us on an incredibly wet day to wade through Victoria Park before we retreated to a coffee shop in Alstonville to talk all things fungal! Lastly, my thanks to Bob Philpot, my travelling companion and partner, who continues to share the journey and encourage me.

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Phylogenomics of *Hibbertia* (Dilleniaceae)

Marlies Eichler Postdoctoral Fellowship Final Report

Tim Hammer, University of Adelaide and State Herbarium of South Australia

Hibbertia (Dilleniaceae) is a large and morphologically diverse genus with 380 species (c. 350 in Australia) and more than 100 known undescribed species (Fig. 1). The genus has been the subject of much recent taxonomic activity, including large revisions (e.g. Thiele 2019; Toelken 2024) and papers describing a small number of species (e.g. Hammer 2023; Thiele and Hammer 2024). In 2020, I was awarded an Australian Biological Resources Study (ABRS) Postdoctoral Fellowship to complete the *Flora of Australia* treatments for the Australian Dilleniaceae as well as generate a phylogeny of *Hibbertia* based on target capture methods. I was subsequently awarded an ASBS Marlies Eichler Postdoctoral Fellowship in 2021 to help fund the sequencing needed for such a large project. A preliminary report for this project was included in ASBS Newsletter 193–194. The following is the final report on the project.

For the overall ABRS project, Kevin Thiele and I have been making great progress on the *Flora of*

Australia treatment for *Hibbertia* (Hammer and Thiele 2022). Profiles are completed and uploaded on the platform for 309 *Hibbertia* species and 44 infraspecific taxa, of which 300 are currently published. Approximately 50 of the current species are unfinished for the *Flora of Australia*. Most of these species are in large species groups from eastern Australia that are planned to be revised in two forthcoming publications by retired botanist Hellmut Toelken (AD). These remaining species, as well as any new species, will be added to the *Flora of Australia* after the publication of the papers.

The phylogenomics aspect of the ABRS project began with sampling 96 species for Genomics for Australian Plants (GAP) Stage II using the Angiosperms353 (A353) and nuclear OzBaits bait sets. The aim of this GAP study was to reconstruct the relationships between the major clades of *Hibbertia* by including samples from each morphological species group identified from ongoing taxonomic revisions. Subsequently, these

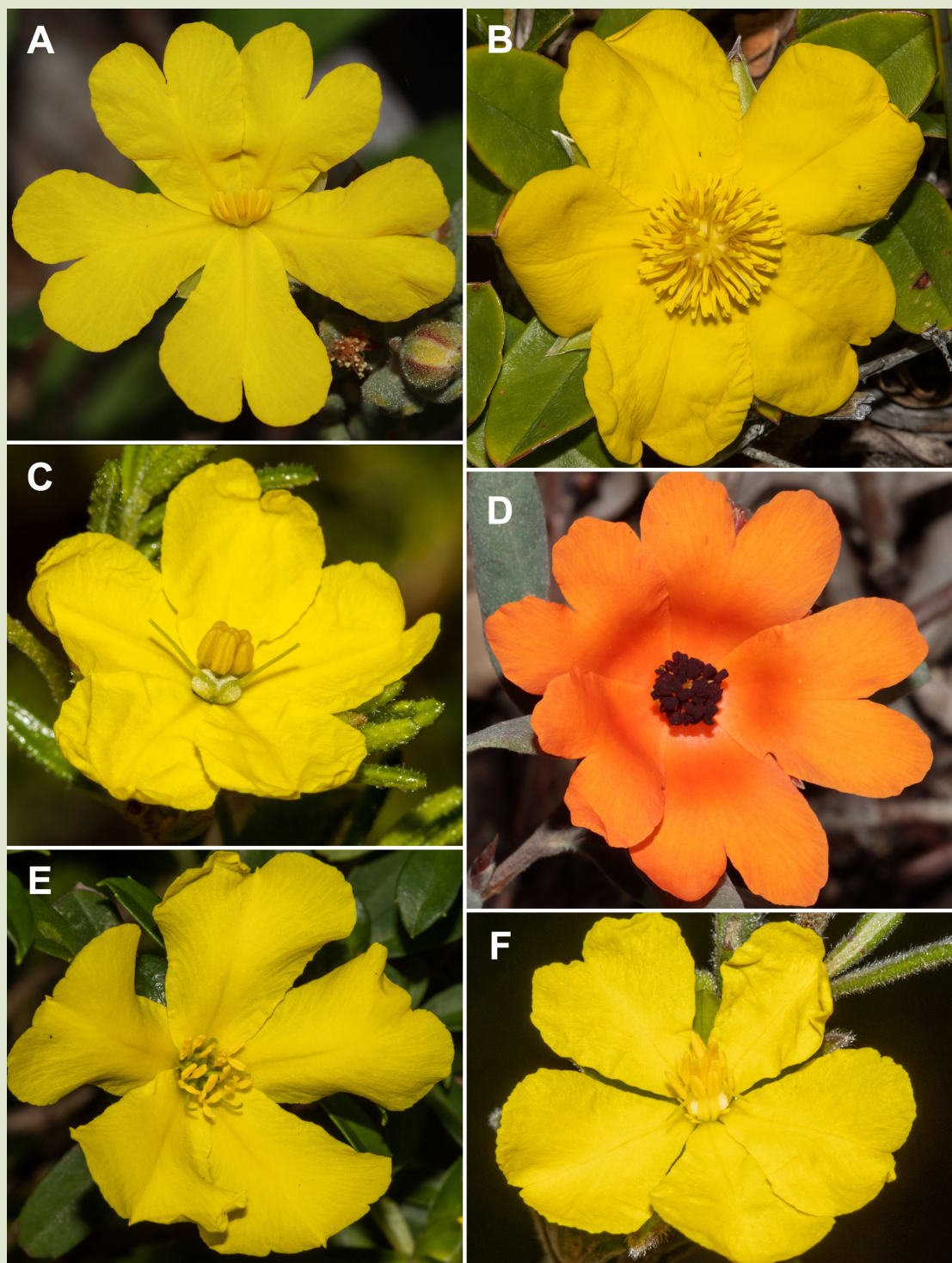


Figure 1. Representative morphology of six *Hibbertia* taxa from different morphological species groups: A) *H. cinerea*, B) *H. scandens*, C) *H. glebosa* subsp. *glebosa*, D) *H. miniata*, E) *H. cuneiformis* and F) *H. planifolia*. Photos: T. Hammer.

samples have also been sequenced using the chloroplast OzBaits bait set. The results of the *Hibbertia* GAP study have been written up and submitted for the GAP special issue in *Australian Systematic Botany* (Hammer *et al.* submitted). The sampling done for the GAP project was a

good scaffold to build on, and I have subsequently expanded the sampling to produce a nearly complete phylogeny of the genus with the help of funding from the Marlies Eichler Fellowship (Fig. 2).

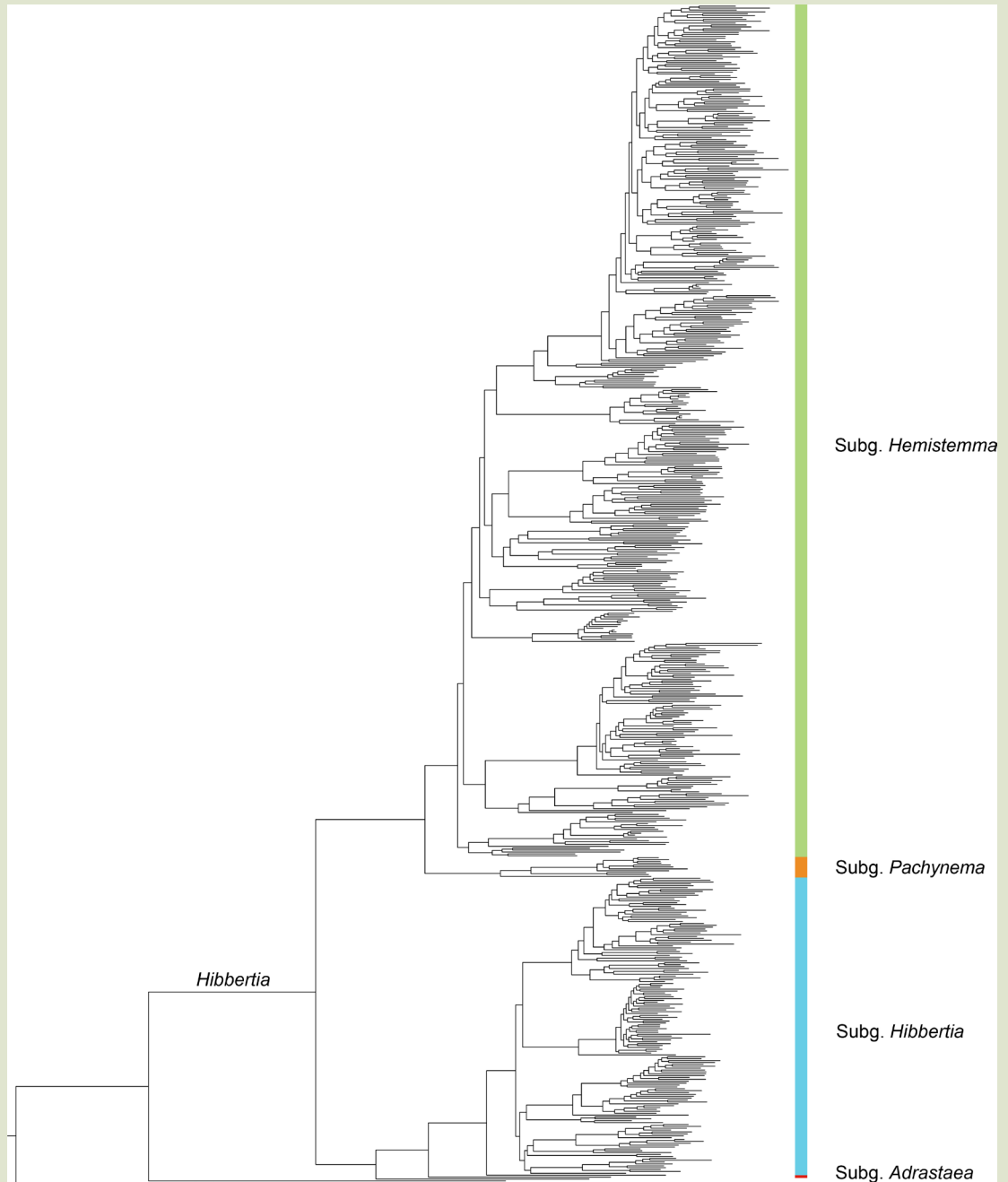


Figure 2. Preliminary IQTREE analysis of a concatenated supermatrix of 630 samples and the 100 best nuclear genes chosen by GeneSortR among the A353 and OzBaits bait sets. The current subgenera are labelled.

The sampling for the phylogeny presented in Fig. 2 includes 382 current *Hibbertia* taxa (358 of 380 current species) and 100 manuscript names, consisting of 482 taxa and putative taxa. Some of these taxa have been sequenced more than once, so the total number of samples included in the current dataset is 630; 77% of these were sampled from herbarium sheets, while the remaining 23% were from collections preserved in silica. It has been a particular challenge to source material of some very rare, usually remote, species or putative species that are often represented by few and quite old herbarium specimens. All samples have had their nuclear and plastid genomes sequenced using the A353 (nrDNA) and OzBaits (nrDNA & cpDNA) bait sets as well as a genome skim, resulting in a dataset of 448 nuclear and 80 plastid loci. Assembly of the data was conducted using CAPTUS (Ortiz *et al.* 2023), and the nuclear loci were subsampled to the 100 most phylogenetically informative loci using GeneSortR (Mongiardino Koch 2021). Phylogenetic reconstruction of the preliminary tree presented here was conducted using a partitioned supermatrix of these 100 nuclear genes in IQTREE (Nguyen *et al.* 2014).

The nearly complete phylogeny (Fig. 2) confirms the overall topologies of the GAP phylogenies (Hammer *et al.* submitted), with the subgenera and major clades within the two largest subgenera robustly supported. For the most part, membership within these clades corresponds well to hypothesised relationships within morphological species groups (e.g. Thiele 2019; Toelken 2023). Some groups were found to have transcontinental relationships (e.g. Hammer *et al.* 2022), contradicting previous assumptions that led to the taxonomic work (mostly centred in PERTH and AD) being split between southwestern Australia and the rest of the continent, with the thought that there was no overlap between the groups of these geographic regions. A few large clades comprised of species from eastern Australia have been found to have relationships that contradict hypothesised morphological species groups, calling into question the utility of the morphological characters used to diagnose these groups.

There are a few branches along the backbone of

the two largest subgenera as well within clades of eastern Australian species that are particularly short and poorly supported. Much care has been taken to eliminate any data-driven reasons for low support, such as poor alignments. Preliminary investigations using concordance and quartet-based methods (e.g. Quartet Sampling; Pease *et al.* 2018) indicate that discordance on these branches may be variously due to incomplete lineage sorting or introgression. Future work will focus on these recalcitrant branches to investigate biological causes for these poorly resolved relationships, potentially making use of network-based methods to investigate past and present hybridisation within these groups.

Despite poor resolution within some eastern clades, the phylogeny is largely well-resolved and makes sense. I am particularly excited to use this phylogeny to investigate the historical biogeography and evolution of the genus, especially the evolution of the very diverse floral characters within this key lineage at the 'base' of the eudicots. A particular goal is also to use the phylogeny to complete a taxonomic conspectus of the genus once all major planned taxonomic revisions are published. The ASBS Marlies Eichler Postdoctoral Fellowship is thanked for making this work possible.

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IBC Nomenclature Section in Madrid 14–19 July 2024

Karen Wilson, Secretary of the General Committee

The Nomenclature Section of the XX IBC began with registration and cool drinks in the Real Jardín Botánico in the heart of historic Madrid on Sunday 14 July. It was pleasant in the shade of the trees given the dry heat of the early evening. (As in inland Australia in summer-time, we experienced

maximum temperatures in the high 30s to 40°C each day, only cooling down in the pre-dawn.)

Deliberations began the following morning in the rather plush conference hall on the campus of the Consejo Superior de Investigaciones Científicas



Figure 1. Participants at the registration function at held at the Real Jardín Botánico in the heart of historic Madrid.

(CSIC) farther north in the city. The days were long Monday–Thursday, starting at 8.30 a.m. and finishing at 7 p.m., with a lunch break of 1.5 hours (very Spanish!). This enabled us to deal with the high number of proposals to amend the *Code* and other nomenclatural business before we had to vacate the building by 4 p.m. on the Friday.

Livestreaming, thanks to substantial financial support by CSIC and the International Association for Plant Taxonomy, enabled about 130 people per day to observe the proceedings from different parts of the world. This innovation is recommended for future congresses, but it is not cheap. A proposal to allow complete online participation in the Nomenclature Section is not expected to be feasible technically or price-wise for the near future. Besides, who would want to miss the informal person-to-person discussions during the breaks and over dinner?

The preliminary mail vote rejected about 25% of the original 433 proposals (Turland & Wiersema 2024) but that still left many proposals to be discussed in Madrid, with an extra 13 proposals made from the floor. A proposal to limit the number of proposals that any individual can make was rejected, but there was a strong feeling that quite a few proposals this time were minor

rewordings that did not improve the wording in the *Code*.

Sandra Knapp (London) chaired the sessions with great flair and good humour, as she had done in Melbourne (2011) and Shenzhen (2017). Her knowledge of [Roberts' Rules of Order](#) (Web ref 1) is exhaustive. Nicholas Turland (Rapporteur-général; Berlin) and John Wiersema (Vice-rapporteur; Washington) provided expert guidance on the *Code*, while Inés Álvarez Fernández (one of the two Recorders; Madrid) looked after logistics and Anna Monro (the other Recorder; Canberra) displayed her sangfroid in negotiating the Spanish version of MS Word to change the wording of proposals projected on the screen.

As in the past, only about a third of the proposals were accepted, often in an amended form, but these resulted in a range of significant changes. The most sensible change was to reverse the unfortunate consequence of an amendment to a proposal accepted in Shenzhen on Division III Provision 5: we are now back to voting to **accept** the recommendations on conservation proposals and binding requests from the General Committee rather than having to vote **not to reject** them – a situation that was very confusing!



Figure 2. The conference hall on the campus of the Consejo Superior de Investigaciones Científicas.

As reported by various media (mostly semi-accurately), amendments to Articles 51 and 56 of the *Code* allow for scientific names deemed to be derogatory to be rejected. This will be done by submitting a rejection proposal to the General Committee. It was agreed that it would be too disruptive to apply this retrospectively so this will only apply to new names published from 1 January 2026. It was, however, agreed that names based on 'caf(f)(e)r-' were an egregious case (Smith & Figuieredo 2021) and therefore all such names will be altered by deleting the 'c' and standardising on a single 'f' to produce names starting with 'af(e)r-', based on the geographical name Africa. This affects 200+ validly published names but most are synonyms; only four will end up as homonyms.

Four Special-Purpose Committees (SPCs) were mandated by the IBC to discuss major issues: on ethics in nomenclature (including but not limited to consultation about indigenous names and derogatory names); on types and typification provisions; on naming ambireginal organisms (i.e., those micro-organisms that have traditionally been named under more than one *Code*); and on DNA sequences as types, or as descriptors for typeless names, for micro-organisms unable to be preserved as physical specimens or illustrations. The latter committee is to confer with mycologists and others working on such 'dark taxa'. The General Committee is now authorised to create extra SPCs between congresses if needed.

The dual nomenclature used for fossil and non-fossil dinoflagellates was affirmed by changes to Art. 11 (Head *et al.* 2024). Typification of fossil names was clarified by various changes to Articles 8, 9 and 40 and conservation of some names was re-affirmed (Art. 14).

Registration of names of algae, bryophytes and vascular plants to provide a unique identifier for each name was re-affirmed as being voluntary and retroactive (unlike fungal names, which already have to be registered before publication). IPNI, Phycobank and several other potential repositories of names have been running registration trials for the last few years, and I can attest that registering a name on the IPNI website is easy. The Registration Committee and the General Committee will be working together in

this next term of office to clarify the procedures for registering names and making them readily accessible to users. It was pointed out that proactive submission of names to a repository before publication is already possible (to be made visible publicly after publication) but is not mandated by the *Code* for non-fungal names. As for fungal names, Tom May reported that about 20,000 names have been registered with the three fungal name repositories since 2013.

Article 20.2 has been amended so that it is only 'bare' generic names (i.e., a generic name not accompanied by a species name, e.g. 'Radicula') published **before 1 January 1912** that may not be the same as Latin technical terms in use in morphology at the time of publication. The ban also applies to terms such as 'Caulis', 'Herba' and 'Spina'. The practice is now **not** banned for names published after 1911 but it is **not** recommended. In light of this change, the Nomenclature Committees have been asked to assess a list of names that may now be considered validly published (mostly not angiosperm genera; see Table 1B in Wiersema *et al.* 2023).

Attempted retraction of a paper published electronically in a journal in 2013 prompted an addition to Art. 30 stating that once a name is effectively published electronically, it can't be 'unpublished', i.e., retracting a paper involving nomenclatural novelties does not alter the original effective publication.



Figure 3. NS President Sandy Knapp (UK) and David Mabberley (Australia).

Orthography is a difficult subject, with few people now expert in ancient Greek and Latin, and most proposals on orthography were rejected without much discussion. These included the proposal to make *Brachycome* a voted example (Demoulin 2019). A few proposals involving orthography or grammar that were accepted included:

- recognition that some epithets are adverbs rather than nouns or adjectives (Art. 23)
- using abbreviated personal names in epithets is regarded as an arbitrary formation and therefore the endings are not to be modified (Art. 60)
- clarification of transcription of diacritical signs (i.e., accented letters) from various languages (Art. 60.7)
- clarifying the gender of some generic names by adding more examples (Art. 62)
- deleting the recommendation to avoid names that are difficult to adapt to or pronounce in Latin (Rec. 20A and 23A).

Successful proposals from the floor included:

- clarification of which works can be suppressed (Art. 34)
- approval for the General Committee to explore different procedures for registration of non-fungal names (Art. 40) [this will be in consultation with the Registration Committee]
- specifying that specific and infraspecific epithets must consist of at least two characters and not more than 30 characters from 1 January 2026 (Art. 23.2)
- requiring 'full and direct reference' for valid publication only from 1 January 1973 (Art. 33.1 and 38.13).

What constitutes 'full and direct reference' to a basionym for a new combination (Art. 41.5) and fulfillment of requirements for valid publication from 1 January 1973 (Art. 33.1) was discussed. Some people took the view that a Harvard-style citation (e.g. 'Wilson 2011, p. 234') in the text with the full reference in the bibliography is not equivalent to full and direct reference. I don't agree with this view but it would probably be advisable in future papers to spell out such protologue details in the text rather than use the Harvard-style citation in case these rules are tightened in the future.

Division III of the *Code* was massively extended in Shenzhen in 2017 and only a few changes were made to it in Madrid. The major change was reducing the number of institutional votes to a single vote no matter what the size of the institution might be. This was one of the few proposals that was decided by a card vote. Another change was to agree to a separate Editorial Committee for the fungal Chapter F in the *Code*.

The Glossary will be reviewed by the Editorial Committee. I made a plea for the EC to include more terms that may cause confusion for non-expert users of the *Code*, given that is the majority of users. I suggested that EC members should get input from less-expert colleagues for this purpose.

The usual list of botanists, phycologists and mycologists who had died since the previous IBC included about 650 names – a sobering number but offset by seeing many new and/or younger faces at the NS (about 1/3 of the 150 total were at their first NS). Contact me through the Newsletter editors if you would like a copy of the list.

Other business during the week included electing members of the various Permanent Nomenclature Committees for 2024-2029 and appointing Nick Turland as Rapporteur-général to lead the Bureau of Nomenclature through to the next IBC in Cape Town in July 2029. We also watched a video of John McNeill being presented (in Edinburgh the previous week) with the first Vicki Funk Award for Distinguished Service from IAPT. John's health is

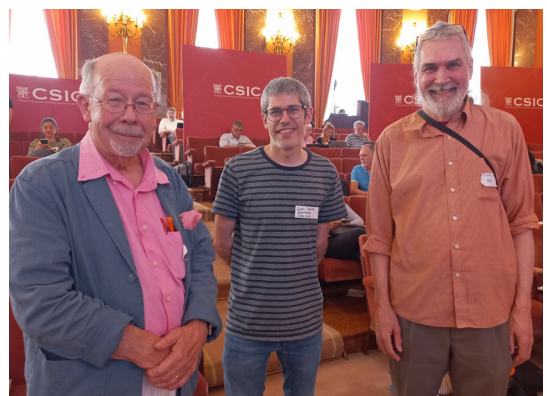


Figure 4. Three mycologists, David Hawksworth (UK), Juan Carlos Zamora (Switzerland), Tom May (Australia).

not good so he could not travel to Madrid: the first IBC that he has missed since Edinburgh in 1965.

The Editorial Committee will now work to incorporate all the mandated changes to produce the Madrid *Code*, which is expected to be published later next year. You can find the *Code* (when it is updated!) and details of the various nomenclatural committees and their reports on the IAPT website at <https://www.iaptglobal.org/>.

Acknowledgements

My thanks go to Nick Turland and David Mabberley for comments on this article.

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8th International Orchid Conservation Congress

Katharina Nargar, Australian Tropical Herbarium, Cairns

The 8th International Orchid Conservation Congress themed ‘A minute to midnight’ was held at Curtin University in Perth from 3-6 September 2024, organized by Kingsley Dixon, Mike Fay, Jacopo Calevo, and Katharina Nargar from the IUCN Orchid Specialist Group. The conference spanned themes from threats to endangered orchid species, the importance of in situ and ex situ conservation to prevent orchid extinctions, ecological interactions to improve conservation outcomes, and genetics and molecular tools for conservation. Among ASBS members who presented were: PhD student Stephanie Goedderz (ATH), presenting on a phylogenomics study in the orchid genus *Dipodium* elucidating

evolutionary relationships of rare and threatened mycoheterotrophic orchids; Lalita Simpson (postdoc, ATH), who presented on her conservation genomic study on the rare flying duck orchids (*Paracaleana gracilicordata*/*P. granitica* complex) to inform taxonomic and conservation assessments of this complex group; and Carlos Lehnebach (Te Papa Tongarewa), who spoke about uncovering symbiotic partners in one of New Zealand’s most threatened orchids, *Corybas carsei*. Katharina Nargar gave a plenary talk providing a synopsis of how molecular genomics is reshaping and refining our understanding of orchid diversity. Heidi Zimmer (CANBR) organized a preconference workshop on



Figure 1. Orchid research team attending the IOCC8 conference in Perth. Left to right Ashara Patterson (CANBR), Heidi Zimmer (CANBR), Lalita Simpson (ATH), Stephanie Goedderz (ATH), and Katharina Nargar (ATH). ATH: Australian Tropical Herbarium CANBR: Centre for Australian National Biodiversity Research

IUCN Orchid Red Listing and Emily Coffey (Atlanta Botanical Gardens) on ex situ conservation. The IOCC8 conference abstract booklet is available on

the conference website: <https://ioccc8.com/>.

Awards to two Australian mycologists

John Clarkson, Vice-President

The International Mycological Association, together with the Dutch Mycological Society and in collaboration with the Westerdijk Fungal Biodiversity Institute, hosted the 12th International Mycological Congress (IMC12) in Maastricht, Netherlands from 11-15 August.

Congratulations to two Australian mycologists, both from the Royal Botanic Gardens Victoria, who

were honoured with awards at the conclusion of the conference.

Tom May, principal research scientist, RBGV, was inducted as a Fellow of the International Mycological Association in recognition of his outstanding contribution to fungal taxonomy and nomenclature within the International Commission on the Taxonomy of Fungi.

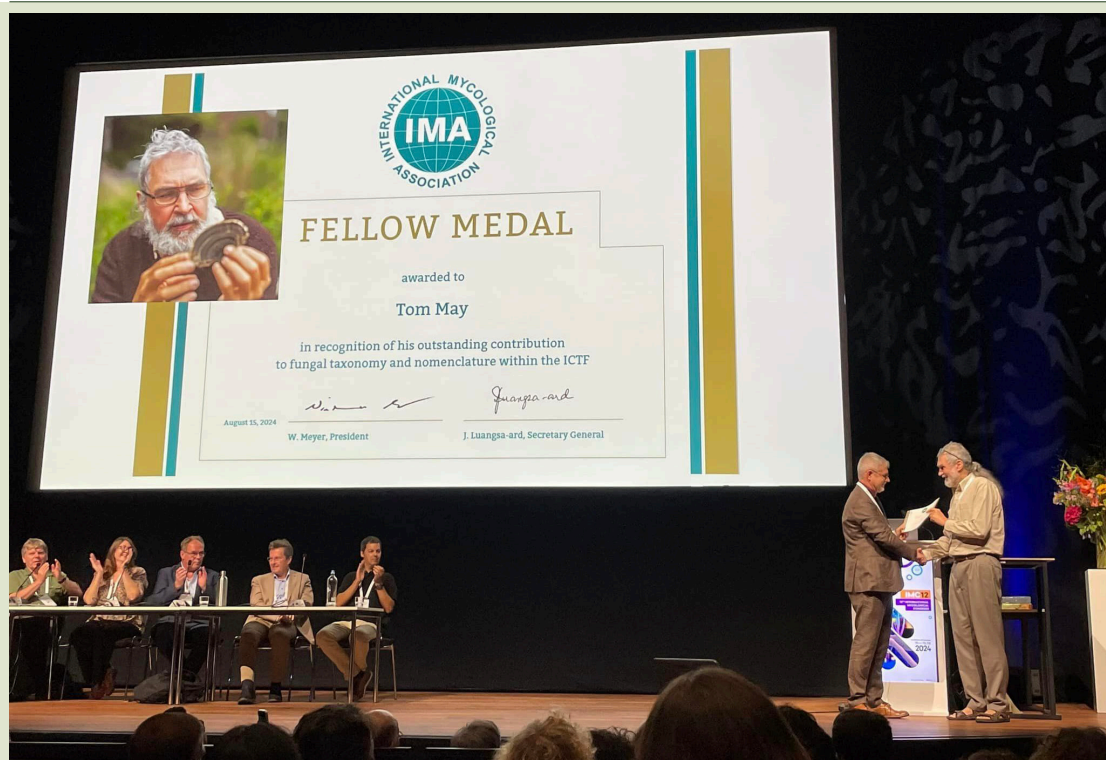


Figure 1. Tom May is inducted as a Fellow of the IMA. Photo: Francis Guard.



Figure 2. Camille Truong in the field. Photo: RBGV.

Camille Truong, research Scientist, RBGV, was awarded the Daniel McAlpine Medal. The medal is awarded to an early career mycologist from the Australasian region in recognition of an outstanding early mycological career.

Details of the awards criteria can be found in Hawksworth D.L. & Taylor J.W. (2013) [IMA Fungus](#) 4: 40–41.

A UNE Campus-wide Botanic Garden: vision, journey and tangible pilot

Jeremy Bruhl

Early days/It seemed like a good idea at the time

Good things take time. It seems great things take longer. More than 20 years ago, with input from Warren Sheather (a botany technician) and Ian Telford, a presentation was made to Armidale Council for the establishment of New England Regional Botany Garden (NERBG). Their response was surprisingly positive. Some time later they 'allocated' a steep, shallow gully that was part of a larger green space. I don't recall them offering any financial or major logistical support and there was no on-site infrastructure for propagation or maintenance of possible gardens. It was obvious to me that it was impractical and unrealistic for us to drive that project when the site was physically disconnected from UNE. Eventually, the allocated space became a mountain bike trail.

Rebirth of the concept

The idea of a botanic garden had not dissipated but morphed into a more coherent and, in our minds at least, a more feasible and purposeful project that that fitted with and served UNE core activities and opportunities. The NERBG had to be at UNE. It could tie in with a "University-wide landscaping plan" that was in our minds (at least mine, Tim Collins' and Ian Telford's) linking teaching, research and outreach. It would also complement our growing push to recognise the value of and protect the on-campus snow gum and white gum grassy woodlands that were indeed threatened ecological communities.

In May 2016, I presented a proposal to our Head of School for a NERBG on campus and later included a pictorial pitch with my then self-imposed annual reporting on the Herbarium to the Vice-



Figure 1. A few of the Botany staff and students who assisted with the planting. Left to right Shelley Rowntree, Damien Andrew, Andrew Thornhill, Tareg Shaldoom, Ian Telford, Jeremy Bruhl.

Chancellor. By 2018, I was on a newly formed UNE Landscape Advisory Committee, which mostly dealt with at the time, it seemed, immediate, specific issues (a tree needing to be removed here, etc.). There was no Landscape Management Plan (LMP) but one had to be developed. I took the lead on preparation of the bits relating to landscape, plantings and plants and a team at Botany (Damien Andrew, Tim Collins, Ian Telford, Wal Whalley) reviewed and helped improve drafts. That LMP was accepted by UNE Estates and Built Environment (EBE) and was formally adopted by UNE Executive. Great; now we had a framework of dos and don'ts.

Pilot plantings

A small donation to UNE led EBE to ask us in Botany to plant out a few garden beds. The obvious beds were three in disrepair, in a high foot-traffic area near the administration building. This doubled as a chance to get rid of gazanias, a poorly standard flowering cherry and see the end of annual plant plantings of pansies and petunias. We used the pilot to highlight past and present research projects and, as far as possible, to use plants that were linked to vouchers in the [N.C.W. Beadle Herbarium](#) and that were from northern New South Wales. For instance, I had grown plants of *Phebalium stellatum* (S. Dema 354) and the gathering was used in Sangay Dema's recent PhD project. The same genotype that had been used for a reference genome as part of a Botany,



Figure 2. Ian Telford (left) and Jeremy Bruhl (right).

UNE collaboration in the recent [GAP project](#). Annotation of the reference genome is part of current PhD student Tareg Shalloom's studies in *Phebalium*. Some plants were purchased with the donated funds from Mole Station Native Nursery. One species used was a regional collection of *Boronia* (*Cyanothamnus*) *polygalifolia*. This gathering was not vouchered, but the co-owner of nursery, Sarah Caldwell, did know the property where the plant had come from, and by coincidence, I knew that person from a NPWS NSW committee on which we both serve. I have since visited the property and collected more cutting material and a voucher for NE from the very same population. Our 'local' and spectacular *Xerochrysum neoanglicum* had to be on the list and I had c. 30 plants already propagated at home!

Most of the ground preparation was done by EBE but I was to be seen in the days before planting, working ten bags of gypsum into the surprisingly heavy soil of the raised bed. On the day of our planting, a group of Botany staff, students and volunteers (Fig. 1) mucked in and [UNE media were there to capture images and stories](#). In the few months since planting, most plants have settled in well and are growing and some even flowering already.

On the back of that success and with another donation to hand, EBE has asked us to do similar things with another bed. While we welcome that opportunity, the main game is to see executive approval for the campus-wide botanic garden project. Of course a business case is required, and that is a challenge that I want to see completed this year. We will keep you posted.

Editors' note: Radio National's *Blueprint For Living* broadcast on 1 June 2024 featured an interview with Tim Entwisle on the System Garden at the University of Melbourne. The System Garden is used by teachers and students to learn about subclasses and families of plants. Created in 1856, it is one of the oldest gardens of its kind in Australia <https://www.abc.net.au/listen/programs/blueprintforliving/what-is-a-system-garden/103915036>

A fitting closure

Ruth Taylor, London, www.ruthtaylorauthor.uk

Friday 12th July 2024 was a normal summer's day in Matthew Flinders' home village of Donington, Lincolnshire. A high of 17°C, a low of 12°C, windy with rain showers. How I wished I'd brought those woollen gloves I put back in the drawer instead of the broad-brimmed sun hat. Notwithstanding, Donington was brightly dressed in flower boxes, bunting and displays in gardens and windows (Fig. 1). I was greeted by every passer-by. Hardly London.



Figure 1. Donington was decked out in bunting and flags for the event. Image: Ruth Taylor.

Events kicked off with a schools' service on Friday in the 12th century Church of St Mary and the Holy Rood, inside which Flinders' remains were to be buried the following day. Local junior and senior school children, including those from Thomas Cowley school, the original of which Flinders attended from age six to twelve (1780 – 1786), filled the 300-seater church. Thomas Cowley, the benefactor who set up the school, was buried in the church in 1721 aged 96, which must have been a record for the 18th century when average life expectancy was 34 years and even wealthy, educated adults were lucky to survive for 60 years.

The primary school children proudly recited: 'g'day mate' to welcome the Aussies in the audience and sang a song about Trim, Flinders' cat. The vicar's lesson emphasised Flinders' studiousness, enquiring mind, adventurous spirit and persistence.

Gillian Dooley, an Australian author, sang a song

written by Flinders for his wife, Ann, while he was imprisoned on Mauritius.

I read an excerpt from my book, *The Cat and the Captain*, about Flinders' and Trim's first meeting at sea. My furry replica of Trim sat in front of me on the pulpit listening. At the end of the service the children stroked Trim, showed me their drawings of him and told me about their pet cats at home.

The Big Day - Saturday 13th July: Flinders' reinterment. It had taken five years for eight local committee members of the Matthew Flinders Bring Him Home group to organise. Attendees included 100 of Flinders' descendants, 80 Australians from Adelaide, Tasmania and Sydney, 10 guests from Mauritius and others from the UK.

Fairground activities were set up in Donington High Street, accounting for the ear-splitting shrieks of over-excited six-year-olds on the helter-skelter. Stalls were laid out in the Market Square as well as in Matthew Flinders' Park and the fish and chips shop and Mr Whippy van did a roaring trade. The church bells rang and rang, the sound bouncing off rows of terraced houses.

Flinders' new coffin was built by Robert Hartle, one of the archaeologists who discovered Flinders' grave in the old burial ground under Euston Railway Station. He made a handsome replica with a studded metal pattern on dark wood. Brought into the village in a hearse, it was then carried by Royal Navy sailors and officers to the church (Fig. 2) where an eighteen-gun salute sounded. The Bishop of Lincoln introduced the service followed by a welcome from the Governor of South Australia.

All the following tributes: from Lord Stuart Rose (the former CEO of Marks and Spencer who has a special interest in Flinders), Rachel Flinders Lewis, the Vicar Mark Williams, and the Bishop of Lincoln, referred to their inspiration from Flinders' life, as a fearless explorer, meticulous cartographer, leader of men, someone dedicated to duty, to selflessness, and to humanity. Flinders



Figure 2. Flinders' coffin was carried into the church by Royal Navy sailors and officers. Image: The Spalding and South Holland Voice.

was assisted in his arduous endeavours not only by his crew but by a vital Aboriginal ambassador, Bungaree, who smoothed relations with coastal Aborigines; not to forget his beloved cat, Trim, a constant companion.

Once the coffin was set on trestles by the grave, a specially designed British-Australian flag was ceremonially folded and presented to Rachel Flinders Lewis, Flinders' three-times great-granddaughter. Sailors lowered the coffin into the deep grave accompanied by prayers and hymns.

Holy water was sprinkled on the coffin as a reminder of Flinders' baptism, followed by handfuls of earth from Australia, Mauritius, Donington and London, denoting his life's journey. A magnificent black ledger stone, designed locally by a husband and wife, lay next to the grave to be placed on top after it had been filled and levelled.

Welcome refreshments were served in the church grounds, networking was rampant, and presentations were made in the marquee to visiting dignitaries. Flinders' family loaned the original lead coffin breastplate to the South Australian representatives who will display it in

Adelaide.

Two descendants of Bungaree made it to the event. Bungaree's three-times great-grandson Laurie Bimson and four-times great-grandson Shad Tyler are Garigal people from North Sydney, as was Bungaree. Their mission was also to start negotiations with the Pitt Rivers Museum in Cambridge over the return of an original club of Bungaree's.

The final service on Sunday was held in Lincoln Cathedral, a magnificent building dating from 1072. Trim tried out the lectern for size and sat for a number of photos including one taken by a couple of cat-lovers who were descendants of Flinders' sister Susanna. A visiting choir from St Philips Church, Houston, Texas, sang the hymns gloriously. It was disappointing that it is not the custom to applaud. The Bishop's tribute echoed those on Saturday, Bungaree was commended, adding that Flinders should be much better known and recognised in the UK.

I took the Bishop at his word and introduced as many people as possible to my book – *The Cat and the Captain* – over the waist-expanding afternoon

tea reception. The salt-caramel chocolate cake could be highly recommended, although not for one's arteries.

A recording of the service (in three parts) may be seen at <https://www.youtube.com/@MatthewFlindersBringHimH-uu6gd>

Editors' note: Ruth Taylor is a friend of Alex George. She attended Flinders's reinterment and sent these notes on the ceremony to Alex. As a GP in London, she worked on cruise ships in

her holidays for twelve years. Researching the role of cats on ships in the National Maritime Museum in Greenwich for her book about her shipboard experiences, she came across Flinders' *Biographical Tribute to the memory of Trim*, his beloved cat. When Flinders' remains were uncovered in 2019 she was inspired to tell Trim's story in a book for children, *The Cat and the Captain*.

200 not out

John Clarkson, Topaz

Before the formation of ASBS, the voice of the plant taxonomic community in Australia was largely through the Systematic Botany Committee of ANZAAS (the Australian and New Zealand Association for the Advancement of Science). Following the Second World War, this Committee produced a newsletter, [Australasian Herbarium News](#) (Web ref. 1). Fourteen parts were issued from June 1947 until February 1954. The decision to cease publication was prompted by the difficulty of finding an editor and the problem of financing future numbers in view of rising costs (George 2009).

For the next two decades Australasian systematic botanists lacked a medium for the exchange of ideas and for comment on what was going on in the field of systematic botany. In the early 1970s, when the formation of a what became the Australian Systematic Botany Society was being discussed, one of the issues canvassed was whether the society should produce a newsletter. Nancy Burbidge addressed this in a questionnaire circulated to potential members in 1971 (Clarkson 2021a). If a newsletter was to be produced, she sought views on how often it should be produced and what topics should it cover. 78 replies were received. All supported the production of a newsletter though opinions on the frequency varied from quarterly to annually.

The Society was formed in April 1973 (Clarkson 2021a) and in March the following year the first newsletter, edited by Des Boyland (Fig.

1), a botanist on the staff of the Queensland Herbarium (BRI), was published. The first issue included introductory remarks by Selwyn Everist (Fig. 1), the Director of BRI. Selwyn's remarks were reproduced in the March 1991 issue of the newsletter and excerpts have been published from time to time, most recently by Katharina Nargar in her president's report in September 2023 but I think they warrant reproduction here in full (Fig. 2). Selwyn wished the new venture well and set out what he thought should and what should not be included in the newsletter. To this day, the newsletter has largely followed these suggestions. For the first 3 years, the newsletter appeared 3 times a year (March, July & November). Since then (#10), it has been



Figure 1. Des Boyland (left), the first editor of the Newsletter; Selwyn Everist (right), Director of the Queensland Herbarium, whose suggestions, published in the first newsletter, for what should and should not be included in the newsletter have largely been followed to this day

A.S.B.S. NEWSLETTER NO. 1.

MARCH, 1974.

So the systematic botanists of Australia have another Newsletter! Once again we have a medium for the exchange of ideas and for comment on what is going on in the field of systematic botany in Australia.

The establishment of an Australian Systematic Botany Society and the publication of a Newsletter are an indication that our Cinderella science has arrived at the ball and is dancing with the Prince. Let us hope that midnight does not strike too soon!

To the botanists of the older generation it is particularly heartening that the younger taxonomists are sufficiently aware of their importance and scientific standing to speak out. For many years we have been taken for granted by those in other disciplines who always beat a path to our doors when they want a plant identified but have been either apathetic or condescending when it comes to recognition of systematic botanists as scientists. The younger generation has taken the initiative in forming the ASBS and in producing this Newsletter and I wish them well.

We should, however, learn from previous experience. For many years we had the Australian Herbarium News produced under the auspices of the Systematic Botany Committee of A.N.Z.A.A.S. It flourished for a time then perished in the desert sands of apathy.

Whether or not this Newsletter meets the same melancholy fate is up to each of us. Unlike fairy godmothers, editors are unable to conjure up articles out of thin air, although sometimes they are forced to try. The value of this Newsletter will depend on whether those who have something to say (and most of us have) will take the trouble to put their thoughts on paper and send them to the Society or the Editor.

Right now, I would like to see a spate of letters, setting out the ideas of individuals or groups of individuals on what should and what should not be included in the Newsletter.

How's this for openers!

Basically, I believe the Newsletter should be for communication and comment by individuals, not by herbaria as such. It should be a medium for expressing ideas and opinions on such matters as

- 2 -

disciplines involved in making taxonomic judgements and for notification of and comments on published work.

I should also like to see ideas on the training of botanists, bearing in mind that the systematic botanist may be functioning in three allied but different fields

- (a) identification of plant specimens
- (b) writing of floras
- (c) research on taxonomic problems

Anecdotes and personal notes have a place so that botanists can get to know each other as people.

Comments and suggestions about needs for and methods of preparing Floras would be welcome, even if they are at variance with existing practices or official policies. In this respect, the Newsletter can serve as a useful medium whereby the Flora of Australia Committee of the Australian Academy of Science, the Systematic Botany Committee of A.N.Z.A.A.S. and directors of individual herbaria can let all systematic botanists know directly what they are doing, or propose to do, rather than let this information filter down through other channels.

There are a few things that seem to me should be excluded. Botanical papers, for example, should be published elsewhere and the ASBS Newsletter used for notification, comment or criticism on these papers. Individuals should not commit their employing institutions to any particular policy or course of action, although they should feel free to comment on and, if necessary, criticize institutional policies or projects.

I wish the venture well. In the long term, its success or failure is entirely in your hands.

Selwyn L. Everist
Director,
Queensland Herbarium.

Figure 2. Introductory remarks by Selwyn Everist that appeared in the first issue of the newsletter.

quarternary (March, June, September & December) although, occasionally, two issues have been combined (see Table 1). When he took over as editor in March 1991, David Morrison (1991) published a review of the newsletter's first 18 years (65 issues). Besides reviewing content and contributors, David traced the newsletter's format from its initial quarto format (#1–27), through a brief A4 format (#28–30), to its current B5 format. The now familiar two column format was introduced in September 1989 (#60). Since then, the format and size have basically remained unchanged except for various editor(s)'s choice of font and the layout of headings. There have been several changes in the cover illustrations, the history of which was discussed by Clarkson in 2021 as part of a series of articles tracing the history of the Society in the lead up to its 50th anniversary (Clarkson 2021b).

In 1983, when the Society conducted a review of its original rules, a number of the proposals put to members (West 1983) dealt specifically with the newsletter and the newsletter editor. These included:

- including a reference to the Newsletter as the official publication of the Society and stipulating that it be regularly and automatically distributed to all financial members (proposal 3)
- stipulating that between 50 and 75% of subscriptions be used for the production and distribution of the Society's official publications (proposal 4)
- determining whether the editor should be an elected member of Council (proposal 9), an ex-officio member of Council (proposal 10) or merely appointed by Council (proposal 11).

Proposal 3 was accepted and the words "The Australian Systematic Botany Society Newsletter is the official publication of the Society which is regularly and automatically distributed to all financial members" were included as Rule 6(a) in the 1983 version of the rules. The statement survived major changes to the rules triggered by incorporation in 1986 but, for some inexplicable reason, it was not included in the 1988 rules and has not been included in subsequent versions. Proposal 4 was rejected as were proposals 9 and

10. The editor of the newsletter remains a position appointed by Council and the editor is not part of the membership of Council unless independently elected to one of the designated positions on Council.

In the past 50 years, 26 members, either alone or in small teams, have volunteered to produce the newsletter (Table 1). Eleven of them have also served one or more terms on Council. It would be remiss not to acknowledge the incredible contribution of Bill and Robyn Barker who between them have produced 27% (54) of the past 200 issues.

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Table 1. Editors and editorial teams throughout the history of the Newsletter.

Editor(s)	Numbers	Dates	Issues	Base
Des Boyland	1–3	Mar 74–Nov 74	3	Brisbane
Rod Henderson	4–14	Feb 75–Mar 78	11	Brisbane
Alex George	15–25	May 78–Dec 80	11	Perth
Barry Conn	26–30	Mar 81–Feb 82	5	Adelaide
Gordon Guymer	31–45	Jun 82–Dec 85	15	Brisbane
Helen Hewson	46–53	Mar 86–Dec 87	8	Canberra
Barbara Barnsley & Alex George	54	Mar 88	1	Canberra
Barbara Barnsley & Mike Crisp	55–65	Jun 88–Dec 90	11	Canberra
Barbara Wiecek & David Morrison	66–80	Mar 91–Sep 94	15	Sydney
Greg Leach, Ian Cowie & Clyde Dunlop	81–87	Dec 94–Jun 96	7	Darwin
Clyde Dunlop, Greg Leach, Ian Cowie & Phil Short	88–93	Sep 96–Dec 97	6	Darwin
Bob Hill	94–107	Mar 98–Jun 01	14	Adelaide
Robyn & Bill Barker	108–134	Sep 01–Mar 08	26 ¹	Adelaide
Robyn & Bill Barker & Jenny Barker	135	Jun–08	1	Adelaide
Russell Barrett & Gael Campbell-Young	136	Sep–08	1	Perth/Adelaide
Russell Barrett, Gael Campbell-Young & Peter Jobson	137–141	Dec 08–Dec 09	5	Perth/Adelaide
Russell Barrett & Peter Jobson	142–152	Mar 10–Sep 12	9 ²	Perth
Bill Barker & Russell Barret	153	Dec 12	1	Adelaide/Perth
Bill Barker	154	Mar 13	1	Adelaide
Bill & Robyn Barker	155–181	Jun 13–Dec 19	25 ²	Adelaide
Lizzy Joyce & Alex George	182–187	Jun 20–Jun 21	5 ¹	Cairns
Lizzy Joyce	188–189	Sep 21–Dec 21	2	Cairns
Lizzy Joyce	190–198	Mar 22–Mar 24	7 ²	Munich
John Clarkson	199	Jun 24	1	Atherton
John Clarkson & Helen Kennedy	200	Sep 24	1	Atherton/ Canberra

¹ Includes one double issue; ² Includes two double issues

James Patrick Murray, from “a very superior practitioner” and plant collector to a “murdering mawworm”

Philip Short, Honorary, State Herbarium of South Australia

Early in July, with the upcoming meeting in Madrid of the International Botanical Congress, staff and honourees met at AD to discuss our voting for proposals to amend the *International Code of Nomenclature for algae, fungi, and plants* (ICN). In doing so, we touched on the proposal to reject culturally offensive and inappropriate names (Hammer & Thiele 2021). I mentioned the name James Patrick Murray. No one else had heard of him (or at least did not know he was a mass murderer), hence this article.

Warning: readers are likely to find some of this article disturbing.

Murray's botanical contribution

James Patrick Murray (1839–c. 1885) (Fig. 1) was an Irish-born surgeon who, after having been admitted as a Licentiate of the Royal College of Surgeons of Ireland, emigrated to Melbourne in 1860. For about a year, he worked as a surgeon at the Melbourne Hospital before joining an expedition, headed by Alfred Howitt, to bring back the remains of Burke and Wills from Cooper Creek for burial in Melbourne.¹ On this expedition – formally referred to as the “Victorian Exploring Party, 1862” (VEP-62) – Murray's duty was to act in the dual capacity of surgeon and plant collector. The party reached the Cooper Creek depot on 2nd March 1862, with – according to Willis – Murray placed in charge of the camp where, with the exception of an excursion with Howitt to the Diamantina River between 4th July and the 2nd August, he remained until 10th October 1862 when the party departed for Adelaide (Willis 1962). During his time at the Cooper's Creek depot (in Qld) Murray made an extensive collection of plants in that vicinity, with Willis (l.c.) recording that 96 species were gathered. To prevent scurvy, Murray also established a vegetable garden at the depot.

The Diamantina River trip, during which Howitt and Murray journeyed through Sturt's “Stony Desert”, yielded additional species, with Willis (l.c.) noting that, altogether, Murray's collection during the expedition (VEP-62) embraced about 130 species. It is important to note that at the time of collecting specimens associated with the Diamantina, this water course was referred to as “Wills's Creek”. Willis (l.c.) also noted that “a valuable collection” of wood specimens was brought back to Melbourne by Murray.

Howitt subsequently praised Murray stating that, “besides having always been zealous for the interests of the Expedition, has gained the perfect confidence of everyone by the skill and judgment



Figure 1. An artist's impression of James Patrick Murray in an 1872 edition of the *Weekly Times* and, below a Bendigo Advertiser editorial from 1872. Image: Courtesy of Trove.

he has show[n] in the treatment of such cases as came under his hands".²

In Melbourne, Ferdinand Mueller received Murray's plant collection in late January 1863³ and in his annual report of that year (dated by Mueller 15 April 1863) listed 114 species received from him (Mueller 1863). The listing included a brief description of a new taxon (*Eremophila macdonnellii* var. *parvifolia* F.Muell.) and five freshly named species published in March and April of that same year in Mueller's *Fragmenta* (Appendix 1).

Checking the Australian Virtual Herbarium on 24 July 2024, 131 specimens attributed to Murray were stated to be housed in the National Herbarium of Victoria (MEL). Of these, I note that at least 16 are type specimens (Appendix 1) and, significantly in the context of this article, two species⁴ were named after him:

Acacia murrayana F.Muell. ex Benth., *Fl. Austral.* 2: 370 (1864).

Ptilotus murrayi F.Muell., *Fragm.* 3: 145 (Mar. 1863).

Before moving to the non-botanical life of Murray, I note that Willis (1962) recorded that Howitt collected only 25 species between March and October 1862. I have not checked this statement but note that at least on two occasions Bentham, in his *Flora Australiensis*, simply referred specimens to the Howitt Expedition when it is clearly stated on original labels that Murray was the collector. The examples are:

Solanum chenopodium F.Muell.; Benth. *Fl. Austral.* 4: 454 (1868), "Cooper's Creek, Howitt's Expedition", specimen at (K), K001080506.

Solanum sturtianum F.Muell.; Benth. *Fl. Austral.* 4: 454 (1868), "Cooper's Creek, Howitt's Expedition", specimen at K (K001080590).

In both cases the original label on each specimen reads "Dr. Murray, Howitt Exped." and records it was received at K in 1868 (re JSTOR-GP, July 2024).

Neither of the *Solanum* specimens are types but they are of good quality. Having viewed (on AVH & JSTOR-GP) these and many of the taxa listed in

Appendix 1, I have formed the opinion that this is generally true for all of Murray's plant collections.

Activities after Howitt's expedition

After the Howitt expedition, Murray spent two years in New Zealand before returning to Melbourne and was soon to display an unpleasant side of his character when involved in yet another expedition organised by Ferdinand Mueller and the Ladies' Leichhardt Search Committee (LLSC). Leichhardt and his small party set out in 1848 to make an east-west crossing of Australia from Moreton Bay to the Swan River and disappeared. In 1864, supposed traces of the expedition were found in central Queensland. As a consequence, the LLSC organised an expedition under the leadership of Duncan McIntyre, with Murray joining the expedition as second-in-command and "Surgeon and Assistant Astronomer".⁵ When the party reached Cooper's Creek on 26 November 1865, McIntyre and another member of the party went ahead to search for water. Murray and others remained at the Cooper. In McIntyre's absence, Murray acted poorly, probably indulging in an alcoholic binge, and lost horses and equipment. For this behaviour, he was sent back to Melbourne and was denounced for his "cowardly desertion" of McIntyre (Pearn 2001; Lassig 2013).

Pearn (2001, p. 275) recorded that "Like all scoundrels, Surgeon Murray ... totally lacking in humility ... from the first week of his arrival [in Australia] ... established a pattern of self-promotion". This may partly explain why, despite the aforementioned blot on Murray's reputation, in 1867, Mueller referred to him as "a very superior practitioner",⁶ and, in 1869, some of Murray's medical colleagues in Melbourne elected him to the Committee of the Victorian Medical Association. In the same year, he was gazetted as Assistant Surgeon to the Brighton Royal Victorian Volunteer Artillery Corps. He married in 1866 and was to have three children. However, in early 1871 he had a major life change, indeed a self-inflicted, horrible sea change.

Blackbirding

Commencing in the 1860s tens of thousands of southern Pacific islanders were brought to

Australia as labourers. They were needed to assist in the development of agriculture, with sugarcane plantations being a major target. And come they did, often voluntarily, but others were obtained through kidnapping, or as it is often called, “blackbirding”, something with which Murray decided to be involved.⁷ Blackbirding was a potentially lucrative business and in April 1871 Murray purchased the brig *Carl* and sailed off in pursuit of a fortune. However, in doing so, he was to head “the greatest massacre of South Sea Islanders in the annals of the South Sea slave trade” (Elmslie 1979, p. 154). On the night of 14 September 1871, Murray led the crew in a bloody massacre of 70 natives held in the hold.

At least two other people were to die because of Murray’s actions during his blackbirding phase but I will give little more about him, the detailed accounts of his murderous actions are sickening. For the record, I note that I have read contemporary newspaper articles about him, plus Elmslie (1979) – which gives the most detailed account of Murray’s life – and accounts by Pearn (2001) and Lassig (2013).

In November 1872, the editor of *The Argus*⁸ was incensed that Murray was back practicing medicine. Murray had turned Queen’s evidence (i.e. he alerted authorities to the criminal activity, allowing him to remain a free man)⁹ and the editor mercilessly and rightly lambasted Murray in a long article. The following is his closing statement:

“If the Governments interested will not or cannot place this ruffian on his trial, let his name and his existence be forgotten. Let him as soon as possible cease to insult these communities by his presence, and in some out of the way part of the world, ask Heaven to grant him that repentance for his crimes which differs as widely from his present whining contrition as he does from an honest man. At all events, we hope that we shall not be nauseated by any more communications from this murdering Mawworm.”

A few weeks later (in January), Murray left for England, leaving his wife and children behind. In a letter published in *The Herald* in May 1873, his father also publicly disowned him, noting that if

any of the *Carl* murderers were to be sent to the gallows, his son should be the first among them (Lassig 2013).

I end this article with a note regarding the definition of a Mawworm (or Maw-worm). Following the greater *Oxford English Dictionary*, it is not a species-specific common name but one which is, or at least has been, applied generally to various species of nematodes (or roundworms) which may infest the intestines and stomach of mammals. In *The Penny Cyclopædia of the Society for the Diffusion of Useful Knowledge* (Long 1837) it was noted “*Ascaris vermicularis*, the maw-worm, thread-worm, or ascarides ... their abode is the intestine, particularly the rectum, and occasion great irritation”. Individual worms are just a few millimetres long, and that species is now referred to as the Pinworm, *Enterobius vermicularis* (Pearson 2013a). The name Maw-worm has also been applied to the Giant Roundworm, *Ascaris lumbricoides*, a worm which may grow to c. 30 cm long and potentially emerge from any orifice, including the corner of an eye, and in large numbers may obstruct the bowel (Pearson 2013b). I suspect the editor of the *Argus* was referring to the latter species.

Incidentally, when investigating the remains of the English King, Richard III (ruled 1483–1485), researchers found eggs indicating that he was suffering from an infection of *A. lumbricoides* when killed at Bosworth Field (Mitchell 2013).

Acknowledgements

Robyn Barker kindly advised me on aspects of this article.

Notes (including correspondence & newspaper articles)

1. Robert O’Hara Burke was the leader, and initially William John Wills the third in command, of the Victoria Exploring Expedition (aka the Burke & Wills Expedition). The expedition left Melbourne in August 1860, aiming to cross Australia from Melbourne to the Gulf of Carpentaria. The Gulf was reached, but seven participants, including Burke and Wills, were to perish during the journey. For more details of this expedition and associated relief expeditions see <https://>

www.burkeandwills.net.au/ or [Burke and Wills expedition - Wikipedia](#).

2. Letter from Howitt to Hon. John Macadam, Hon. Sec., Exploration Committee, Melbourne, sent from Blanchewater, SA, 22 October 1862. https://www.burkeandwills.net.au/Despatches/Howitt/Howitts_Despatch_1862_09.htm [accessed 16 July 2024].

Reminiscing about Murray's actions during the VEP-62, Howitt (1907) recorded that "I attributed the very satisfactory relations between the members of the party [at Cooper's Creek depot] when I was absent in great measure to the tact and discretion of Alexander Aitkin, whom I selected to hold authority during my absence. This was against the wish of Dr J.P. Murray, who had volunteered to accompany the expedition in his professional capacity. My experience of him on my way up caused me to select Aitkin in preference, and his subsequent action in the McIntyre Leichhardt Search Expedition, and after that in the notorious Carl "blackbirding" case, fully confirmed my opinion." [Personal Reminiscences of Central Australia, \(burkeandwills.net.au\)](#) [accessed 20 Aug. 2024].

3. Mueller to George Bentham, dated 24 Jan. 1863; published in Home et al, *Correspondence of Ferdinand von Mueller*, <https://vmcp.rbg.vic.gov.au/id/63-01-24> [accessed 4 July 2024].
4. *Panax murrayi* F.Muell. [= *Polyscias murrayi* (F.Muell.) Harms] was listed by Pearn (2001) and George (2009) as honouring him but it was named after "J. Patr. Murray, Esq., the Police Magistrate of Eden", Mueller acknowledging Murray for his aid in September 1860 when "elucidating the vegetation along the south-eastern frontiers of the colony, crossing the country from Twofold Bay to the Genoa" [Ferdinand von Mueller to Richard Heales, 1861-01-10. Home et al. (eds), *Correspondence of Ferdinand Mueller*, <https://vmcp.rbg.vic.gov.au/> [accessed 9 July 2024].
5. Mueller to Charles Darling concerning planning of the Ladies' Leichhardt Search Committee expedition, dated 21 July 1865; published in Home et al., vol. 2, pp. 309–315. Also, Home et al. (eds), *Correspondence of Ferdinand Mueller*, <https://vmcp.rbg.vic.gov.au/text/letters/1860-9/1865/65-07-21-final/> [accessed 16 July 2024].

6. Mueller, F. (1867). Letter to George Story dated "Easterday", 1867; published in Home et al, vol. 2, p. 412. Also, Home et al. (eds), *Correspondence of Ferdinand Mueller*, <https://vmcp.rbg.vic.gov.au/text/letters/1860-9/1867/67-04-21-final/> [accessed 16 July 2024].

7. For the sickening discrimination and injustices these South Sea Islanders experienced see <https://nma.gov.au/defining-moments/resources/islander-labourers> [accessed 18 July 2024]

8. *The Argus* (Melbourne), Monday 18 November 1872, p. 4. <https://trove.nla.gov.au/newspaper/article/5842644> [accessed 24 July 2024].

9. *Sydney Morning Herald*, "Central Criminal Court", Murder on the high seas" 21 Nov. 1872, p. 8 with the comment that "The principal evidence would be that of Dr. Murray, the part owner of the *Carl*, who was to all intents and purposes an accomplice. He was not placed upon his trial, because it was on his evidence alone that the crime had been discovered."

Warning: this SMH report includes horrendous details. <https://trove.nla.gov.au/newspaper/page/1451793> [accessed 24 July 2024].

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Appendix 1

Type specimens gathered by J.P. Murray

Note that in this list there are several examples where changes in typification are required but I believe they are best published elsewhere (and not by me).

Acacia murrayana F.Muell. ex Benth., *Fl.*

Australiensis 2: 370 (1864). Type: “Queensland. Open Forest, St. George’s Bridge on the Ballone, Mitchell. S. Australia. Cooper’s Creek, Murray, in Howitt’s Expedition.” Lectotype: Subtropical New Holland [St. George], 17 Nov. 1846, *Mitchell* ‘444’ (K). (Pedley 1980, *Austrobaileya* 1(3): 284–285 (1980). Remaining syntype: Cooper Creek, Murray (MEL47194), and fragment at DNA (A0074371) (re AVH, July 2024).

Acacia peuce F.Muell., *Fragm.* 3(23): 151 (Apr. 1863). Type: “In tractu sterilioretrans rivum Wills Creek, lat. 25° 30’, legerunt Howitt et Murray.” Holotype: MEL 0030632A (Pedley 1980, *Austrobaileya* 1(3): 242). Note that there is a fragmentary duplicate in AD (AD98126247, re JSTOR-GP, July 2024).

Acacia tetragonophylla F.Muell., *Fragm.* 4(24): 3 (Sept. 1863) “In planitiebus subsalinis virgultosis ad bases montium Flinders’s Range et Elder’s Range, F.M.; ad flumen Darling in deserto, nec non in vertice montis Murchison, Goodwin et Dallachy; in praeruptis montium Gaginga Mountains apud tractum Barrier Range, Dr. Beckler; in eremo juxta rivum Cooper’s Creek, Dr. J. Murray.” Lectotype: Goodwin & Dallachy (Maslin 1980, *J. Adelaide Bot. Gard.* 2: 319). Murray’s remaining syntype: K 000791391 (re JSTOR-GP, July 2024).

Calotis porphyroglossa F.Muell. ex Benth., *Fl. Australiensis* 3: 505 (1867); *Calotis plumuligera* var. *porphyroglossa* F.Muell., *Ann. Report Govt Botanist & Dir. Botanic Gdn* (1863), p. 17, *nomen nudum*. Type: “S. Australia. Cooper’s Creek, Murray.” Lectotype: MEL 2056703 (Davis 1952, *Proc. Linn. Soc. N.S.W.* 77: 183). Isolectotypes: K 000882241, PERTH 01043005 (re JSTOR-GP, July 2024).

Dysphania benthamiana Domin, *Biblio. Bot.* 22(89): 657 (1926). Type: “South Australia: flooded ground south of Wills Creek, HOWITTS Expedition (F.v.MUELL. 1896 misit).” “Type: “Flooded ground south of Wills Creek, Howitts Expedition”, *Dr Murray* (iso: MEL 19878).” (Wilson 1983, *Nuytsia* 4(2): 184. [= *D. glomulifera* subsp. *eremaea* Paul G.Wilson].

Elachopappus rudallii F.Muell., *Fragm.* 3(23): 157 (Apr. 1863). Type: “Ad rivum Cooper’s Creek legit sub expeditione Howittiana Dr. J. Murray.” Syntypes: Cooper’s Creek, Howitt’s Expedition,

s.dat. (K 000899274, MEL 542213) (Short, *Austral. Syst. Bot.* 13: 735 (2000). [= *Myriocephalus rudallii* (F.Muell.) Benth.].

Eremophila dalyana F.Muell., *Fragm.* 5(31): 22 (Apr. 1865). Type: "In vicinia montium Stokes's Range, Wheeler; ad rivi Barcoopartes occidentales, Howitt & Murray." Lectotype: between Coopers Creek and Stoke's Range, *Wheeler* (MEL 77642) (Chinnock 2007, *Eremophila* & allied genera, 441). Remaining syntypes: near Cooper's Creek, *Howitt & Murray* (MEL 77643, NSW137006).

Eremophila macdonnellii var. ***parvifolia*** F.Muell., *Ann. Report Govt Botanist & Dir. Botanic Gdn* 17 (1863). Type: "South of Wills Creek." Holotype: MEL 83177 (Chinnock 2007, *Eremophila* & allied genera, 406). [= *Eremophila macdonnellii* F.Muell., this var. not recognised.].

Eryngium supinum J.M.Black, *Trans. Proc. Roy. Soc. S.A.* 55: 140 (1931). Type: "S. Aust. – Diamantina River, coll. Dr. Morgan; near Innaminka, coll. R. Cockburn. Qld. – Wills Creek. Dr. Murray, of Howitt's Expedition." Syntype specimens attributed to Murray: MEL 725855, NSW 826486 (re JSTOR-GP, July 2024).

Hedyotis tillaeacea F.Muell., *Fragm.*, 4(25): 39 (Oct. 1863). Type: "In campis sabuloso-argillaceis ad flumina Dawson et Mackenzie River; F.M. Ad Dooroodoo inter flumen Darling et montes Barrier Range; Dr. Beckler. Ad rivos Willis's Creek et Cooper's Creel locis subinde inundatis; Dr. Murray." Lectotype: *Beckler* (MEL 61491) (Halford 1992, *Austrobaileya* 3(4): 709). Remaining Murray syntypes: MEL 61490, MEL 61492 (re JSTOR-GP, July 2024). [= *Synaptantha tillaeacea* (F.Muell.) Hook.f.].

Kochia villosa var. ***tenuifolia*** F.Muell. ex Benth., *Fl. Austral.* 5: 187 (1870). Type: "Darling Downs, Woolls, Curriwillighie, Dalton; Armadilla, Barton; Cooper's Creek, Murray; also in Leichhardt's collection." Lectotype: "Box forest before Canal, L. Leichhardt (MEL 48953)" (Wilson, *Nuytsia* 2(1): 46 (1975). Remaining Murray syntypes: MEL 48974, MEL 48974B (re JSTOR-GP, July 2024). [= *Maireana decalvans* (Gand.) Paul G.Wilson].

Marsilea howittiana A.Braun, *Monatsber. Deutsch. Akad. Wiss. Berlin* 734 (1870). Type: "...

das ich Hr. Wilhelmi verdanke, der es von Dr. Murray, dem Begleiter der Howitt'schen Expedition zur Aufsuchung Burke's (1861) mit der Bezeichnung: "Road to Coopers Creek" erhalten." Jones, *Fl. Australia* 48: 168 (1998) recorded "T. road to Cooper's Ck, [Qld], 1861. Dr. Murray (Howitt Expedition): holo: ?B, n.v." There are syntype specimens at Berlin(B) (B 20 0115862) and MEL (MEL52916) (re JSTOR-GP, July 2024). [= *Marsilea drummondii* A.Braun].

Ptilotus murrayi F.Muell., *Fragm.* 3(22): 145 (Mar. 1863). Type: "Ad rivum Cooper's Creek reperit cl. J. Murray, M.D., sub expeditione Howittii." Bean (2008, *Telopea* 12(2): 239–240) recorded "From the flooded tracts of Wills Creek beyond desert, 1861, J. Murray s.n.; holo MEL." Hammer (2018, *Swainsona* 31: 98) noted that there are five syntypes: BM 000895594, K 000357020, MEL 2235243, MEL 2235244, PERTH 01558226 [all viewed JSTOR-GP, July 2024].

Setaria refracta F.Muell., *Fragm.* 3(22): 147 (March 1863). Type: "Ad rivum Cooper's Creek legit sub expeditione Howittiana Dr. J. Murray." Single specimen "Cooper's Creek, Howitt's Exped." MEL213869, apparently the holotype (as verified by B.K. Simon re det. slip, 18 Dec. 2002. [= *Paractaenum refractum* (F.Muell.) R.D.Webster; per APC 2009].

Swainsona oroboides F.Muell. ex Benth., *Fl. Austral.* 2: 222 (1864). Type: "Queensland. Near Warwick, Beckler. N.S. Wales. In the interior, Howitt's Expedition, C. Moore; head of the Gwydir, Leichhardt; New England, C. Stuart." Lectotype: "New England (Clifton) N.S.W., C. Stuart 173; MEL" (Lee 1948, *Contr. New South Wales Herb.* 1(4): 195–196). The protologue indicates a C. Moore being with the Howitt Expedition. This is incorrect and it is evident that specimens K000216867 and MEL679199 (re JSTOR-GP, July 2024) are accepted as being remaining syntypes collected by Murray during Howitt's Expedition.

Zygophyllum howittii F.Muell., *Fragm.* 3 (23): 150 (Apr. 1863). Type: "In plagis arenosis ad rivum Wills Creek legit. Dr. J. Murray sub expeditione Howittiana." Lectotype: MEL95098 (Barker 1998, *J. Adelaide Bot. Gard.* 18: 66). [= *Roepera howittii* (F.Muell.) Beier & Thulin].

A half century of progress in naming the Australian flora

Alex George, 'Four Gables', Kardinya, WA

It is now 256 years since the first Australian plants named under the Linnaean binomial system were published.

The only completed flora of Australia, Bentham's *Flora Australiensis*, described about 8,120 species. In 1973, it was estimated that the vascular flora of Australia totalled some 17,000 species. By 2023, the figure had grown to well over 20,000.

Bear in mind that both ABRS and ASBS were formed in 1973, a great combination for stimulating research.

Here is a selection of new species described during the past 50 years, one per year, chosen to reflect the botanists, and the wide taxonomic and geographical range. The vascular flora dominates but there are representatives from the major cryptogamic groups as well as fungi. Besides these 50, many other such lists could be compiled from the species described during this period.

I am grateful to John Huisman (PERTH) for assisting in choosing marine algae.

1973 *Archidium stellatum* I.G.Stone, *Muelleria* 2: 192, published on 9 April, two days after the meeting when ASBS was formed

1974 *Acacia blakei* L.Pedley, *Contributions from the Queensland Herbarium* 15: 6, from a significant *Acacia* researcher, and named for a prominent Queensland botanist

1975 *Ricinocarpos gloria-medii* J.H.Willis, *Muelleria* 3: 95, a remarkable species from central Australia, described by Jim Willis who instigated the meeting that led to the formation of ASBS

1976 *Colobanthus nivicola* M.Gray, *Contributions from Herbarium Australiense* 26: 8, a characteristic cushion plant from Mt Kosciuszko

1977 *Eichlerago tysoniana* J.Carrick, *Journal of the Adelaide Botanic Gardens* 1: 115, in volume 1 of a new journal, and acknowledging the contribution to Australian botany by Hansjoerg Eichler

1978 *Dicrastylis petermannensis* A.A.Munir, *Brunonia* 1: 551, a rare species from Central Australia

1979 *Hibiscus arenicola* A.S.Mitchell, *Nuytsia* 2: 336, published in advance of the *Flora of Central Australia*

1980 *Ptilotus marduguru* G.Benl, *Nuytsia* 3: 157, a distinctive, localised species from the Great Sandy Desert (Fig. 1)

1981 *Crenidium spinescens* L.Haegi, *Telopea* 2: 179, for the first taxonomic volume of the *Flora of Australia*

1982 *Camptacra barbata* N.T.Burbidge, *Brunonia* 5: 15, from the late Nancy Burbidge's manuscript, edited by Max Gray

1983 *Cheilanthes austrotenuifolia* H.M.Quirk & T.C.Chambers, *Australian Journal of Botany* 31: 510, resolving the classification of a widespread fern

1984 *Prostanthera porcata* B.J.Conn, *Journal of the Adelaide Botanic Gardens* 6: 338, a newly discovered species



Figure 1. *Ptilotus marduguru*, Southesk Tablelands, 29 April 1979. Photo by A.S. George.

- 1985** *Monodia stipoides* S.W.L.Jacobs, *Kew Bulletin* 40: 659, a new genus and species finalised when the author was ABLO in 1983–84
- 1986** *Russula clelandii* O.K.Miller & R.N.Hilton, *Sydowia* 39: 128, a common species but not recognised previously as distinct
- 1987** *Quinqueremulus linearis* Paul G.Wilson, *Nuytsia* 6: 1, resolving the placement of a well-collected plant that had been variously identified
- 1988** *Vaucheria nanandra* T.Entwisle, *Australian Systematic Botany* 1: 22, the first new taxon in a new journal
- 1989** *Allocasuarina portuensis* L.A.S.Johnson, remarkably, 200 years after settlement, a new species from the shore of Sydney Harbour
- 1990** *Fimbristylis carolinii* P.Latz, *Nuytsia* 7: 164, acknowledging the second president of ASBS
- 1991** *Banksia kingii* G.J.Jordan & R.S.Hill, *Australian Systematic Botany* 4: 505, the only extinct plant species from the late Pleistocene known in Tasmania
- 1992** *Cycas silvestris* K.D.Hill, *Telopea* 7: 10, a rare species from Cape York Peninsula
- 1993** *Thelopogon australiensis* B.K.Simon, *Austrobaileya* 4: 105, a new generic record for Australia; the type was collected jointly by John Clarkson and John Neldner
- 1994** *Parsonsia howeana* J.B.Williams, *Flora of Australia* 49: 616, endemic on Lord Howe Island
- 1995** *Wollemia nobilis* W.G. Jones, K.D.Hill & J.M.Allen, *Telopea* 6: 174, a remarkable discovery
- 1996** *Mitrasacme oasena* C.R.Dunlop, *Flora of Australia* 28: 308, first collected in 1933, but naming awaited a revision of the genus
- 1997** *Daviesia sejugata* G.Chandler & M.D.Crisp, *Australian Systematic Botany* 10: 33, one of many new taxa described during extensive research on a major genus of legumes
- 1998** *Tyrbastes glaucescens* B.G.Briggs & L.A.S.Johnson, *Telopea* 7: 366, a monotypic genus
- 1999** *Drosera zigzagia* A.Lowrie, *Nuytsia* 13: 85, unorthodox etymology, but the epithet could almost refer also to the disjunct occurrence in W.A.
- 2000** *Champia stipitata* J.Huisman, *Marine Plants of Australia* 285, an epilithic marine alga from the coast of W.A. and N.T.
- 2001** *Verticordia mirabilis* E.A.George & A.S.George, *Nuytsia* 13: 465, a remarkable new species from the Gibson Desert
- 2002** *Banksia rosserae* P.Olde & N.Marriott, *Nuytsia* 15: 88, acknowledging one of the great botanical artists, Celia Rosser (Fig. 2)
- 2003** *Ranunculus amplus* N.G.Walsh & B.G.Briggs, *Muelleria* 17: 15, a Victorian endemic
- 2004** *Fuscidea elixii* G.Kantvilas, *Flora of Australia* 56A: 209, a species with unique thallus chemistry, and acknowledging John A. (Jack) Elix who has made outstanding contributions to lichenology
- 2005** *Micraira brevis* M.D.Barrett & R.L.Barrett, *Flora of Australia* 44B: 458, a rare, newly discovered species of these resurrection grasses
- 2006** *Rhizanthella omissa* D.L.Jones & M.A.Clements, *The Orchadian* 15 (3): 131, the third underground orchid found in Australia
- 2007** *Eremophila magnifica* R.J.Chinnock, *Eremophila and Allied Genera: A Monograph of the plant family Myoporaceae* 395, a spectacular plant in a genus with many colourful species
- 2008** *Huperzia tetrastichoides* A.R.Field & P.D.Bostock, *Austrobaileya* 7: 711, an uncommon epiphytic tassel fern from Queensland's Wet Tropics
- 2009** *Cribbea turbinispora* P. Catcheside & T. Lebel, *Australian Systematic Botany* 22: 48, just the third species of this truffle genus recorded for Australia
- 2010** *Sesbania burbridgei* C.L.Gross, *Australian Systematic Botany* 23: 403, acknowledging Nancy Burbidge's great contribution to Australian botany, including an earlier revision of the genus
- 2011** *Ecdeiocolea rigens* B.G.Briggs, *Telopea* 13: 70, just the second species recognised in the genus and the third in the family
- 2012** *Acacia mulganeura* B.R.Maslin & J.E.Reid, *Nuytsia* 22: 235, one of seven new species in the difficult but important group broadly known as Mulga throughout the dry regions
- 2013** *Entwisleia bella* F.J.Scott, G.W.Saunders & G.T.Kraft, *European Journal of Phycology* 48: 402, a new family and order in the Nemaliophycidae
- 2014** *Radula oreopsis* M.A.M.Renner, *Telopea*



Figure 2. Celia Rosser with *Banksia rosserae*, Kirkalocka Station, 24 June 2006. Photo by A.S. George.

17: 123, a bryophyte with unique ruminate ornamentation

2015 *Verrucaria alborimosa* P.M.McCarthy & G.Kantvilas, *Muelleria* 34: 55, just the 12th species in Australia of this genus, found on rocky seashores

2016 *Gnephosis newbeyi* P.S.Short, *Journal of the Adelaide Botanic Gardens* 29: 205, a tiny composite from salt lake margins

2017 *Austrokallymenia rebecca* G.W.Saunders & G.T.Kraft, *Cryptogamie Algologie* 38: 100, a discovery from Lord Howe Island

2018 *Viola serpentinicola* M.F.de Salas, *Muelleria* 36: 113, discovered in 2017 during a Bush Blitz survey

2019 *Scholtzia quindecim* Rye, *Nuytsia* 30: 73, one of many new taxa resolved by Barbara Rye in her research into the challenging small-flowered Myrtaceae tribe Chamelaucieae

2020 *Buellia bularmialensis* J.A.Elix & H.Mayrhofer, *Australasian Lichenology* 86: 63-64, one of a number of new species in this genus described in recent years

2021 *Boea resupinata* F.A.Zich & B.Gray, *Austrobaileya* 11: 57, a highly dessication-tolerant third Australian species

2022 *Megaloblastenia soledata* G.Kantvilas, *Muelleria* 41: 13, just the third species named in the genus, endemic in Tasmania

2023 *Styphelia anomala* M.Hislop, *Nuytsia* 34: 142, an unusual species recognised during ongoing research into Ericaceae

AK Herbarium news

Yumiko Baba and Dan Blanchon, Tāmaki Paenga Hira Auckland War Memorial Museum

The Tāmaki Paenga Hira Auckland War Memorial Museum herbarium (AK) is located on the landmark hilltop of Pukekawa/ Auckland Domain, Auckland, New Zealand. AK is one of the three largest herbaria in New Zealand, and is the only regional herbarium funded by the region's ratepayers via the Auckland Council. The other two, Te Papa (WELT) in Wellington and the Allen Herbarium (CHR) in Canterbury, are government-funded institutions. AK's collection encompasses native and exotic flora of wild origin, with a geographical focus given to Auckland, the northern regions of New Zealand, and the South Pacific. For a more detailed account of the AK herbarium, see "[Featured Herbarium](#)" (Cameron 2023).

Staff

AK went through a significant staff changeover in 2023–2024. Ewen Cameron, the curator for the last 30 years, retired with the grand send-off (Figs. 1–3) at the end of June and rejoined us as a research associate. Ewen has been instrumental in the development of the collection database and digitisation of AK's collection. He also led the research on the naturalised plants and offshore island flora in the Auckland region. He is one of the biggest contributors to our collection having collected in excess of 17,000 specimens over his career. In May 2023, we marked an exciting new era by welcoming the new curator, Dan Blanchon, a New Zealand lichen and vascular plant specialist. Straight into the role, Dan has been part of the

new natural science gallery renewal project, which is scheduled to open in 2025.

Wendy Nelson, New Zealand's leading phycologist and the 2020 Nancy Burbidge medallist, joined the team as a Research Fellow in June 2023. The position will be effective for two years. Wendy has been unofficially involved in the curation of AK's algal collection for a number of years. We are thrilled to gain her insights for future acquisitions and the research direction of our algal collection.

The museum's backlog cataloguing programme has been on a short hiatus since April 2024, while Frances Duff, the long-term cataloguing technician, is taking a break from the herbarium. In the meantime, we are now in an enormous debt of gratitude to our skilful volunteers, who continue supporting a range of curatorial activities, and therefore, our cataloguing and digitisation activities do not completely halt. Our team of volunteers consists of retirees, early-career botanists, and tertiary students.

John Braggins, our Research Associate and liverwort expert, was awarded the Auckland Museum Medal in June 2024 to recognise his long-term services and contribution to the museum. Congratulations John!

Our current Botany team consists of the following people (Fig. 2):

Curator: Dan Blanchon

Associate Curator: Yumiko Baba

Collection Manager: Dhahara Ranatunga

Assistant Collection Manager (part-time): Zara Skuse

Collection Technician (part-time): Darrel Jeffries (across the Natural Science departments), Frances Duff (on a short break)

Research Fellow: Wendy Nelson

Research Associates: John Braggins, Ewen Cameron, Rhys Gardner, Peter de Lange, Matt Renner and Mike Wilcox



Figure 1. Rebecca Bray, Manager of Natural Sciences, presents Ewen Cameron with a farewell gift, a high-resolution image of the Holotype of *Pittosporum rangitahua* E.K.Cameron et Sykes. MC, Tom Trnski, Head of Natural Sciences, looks on.



Figure 2. Herbarium staff present at Ewen's farewell include front row from left; 5th Yumiko Baba, 6th Frances Duff, 8th Dan Blanchon and back row from left; 3rd Zara Skuse, 7th Ewen Cameron and 8th Daryl Jeffery. Photo insert: Dhahara Ranatunga.



Figure 3. The Museum's best singers perform Waiata (Māori traditional song) in honour of Ewen's contribution to the Museum.

Volunteers: Currently, 16 active volunteers engage in various herbarium tasks, including imaging, mounting vascular plants and bryophyte-lichen packets, cataloguing, and filing

Summer students 2023–2024: Campbell James (AK Lichen Name Index and nomenclatural update) and Amanda McIvor (Museum's fibre specimens).

AK's involvement in GBIF and UNESCO projects

AK continues to contribute our data to the Global Biodiversity Information Facility and Australian Virtual Herbarium/Atlas of Living Australia. Our data is updated first on [the museum's Collections Online](#) website as new accessions are databased, and then periodically updated onto the above data aggregates. To date, 309,831 of our records have been published on GBIF and AVH/ALA. The specimen images for the newer accessions (post-2015) are readily available on our Collections Online website, and 9,364 specimen images are uploaded to GBIF.

AK and SUVA (Fiji) herbaria have collaborated to support SUVA's digitisation (cataloguing and imaging) programme since 2021, first funded

through GBIF between 2021 and 2023. We have recently been funded by UNESCO to continue our efforts to advance SUVA's digitisation efforts.

Research and fieldwork

AK, together with the museum's wider Natural Science team, co-hosted a BioBlitz event with Ngāti Kuri (a North Island Māori tribe) in Te Paki, North Island, New Zealand. This BioBlitz was carried out with the aim of biodiversity stocktaking in the relatively under-surveyed areas and training Ngāti Kuri rangers and the next generation of botanists in biodiversity collection activities (Fig.4).

Dan continues to work on an update to the New Zealand lichen checklist, revisions of the lichen genera *Chrysothrix*, *Cladia* and *Parmotrema* for New Zealand, developing mycoherbicides for the invasive plant species *Asparagus scandens* and *Selaginella kraussiana*, and researching the possibilities of using fungal biofilms to biodegrade asbestos.

Yumiko continues working with Fijian flora. She conducted fieldwork in Viti Levu in 2022, collecting some *Elaeocarpus* species and general flora in the scope of revising the taxonomy and conservation accounts of Fijian *Elaeocarpus*.



Figure 4. Dan Blanchon (left in both pictures) delivers training at a Bioblitz community day (left) and ranger training session (right).

NE Herbarium & Botany, UNE news

Andrew Thornhill

In February 2023, Andrew Thornhill began as the new Director of the N.C.W. Beadle Herbarium (NE) (Web ref 1). Andrew replaced Jeremy Bruhl who had been the Director of NE for 30 years (including two after he retired). Jeremy has not disappeared from the herbarium now and continues to come in frequently under his role as Emeritus Professor at UNE. Ian Telford continues on as the Honorary Curator of NE, a role that he has had since 2000. NE is supported by a band of volunteers including John Nevin, Penelope Sinclair, John Hosking, Phil Rose, and Colin Bale. Andrew has recruited student volunteer support with some great botany undergraduate students helping in the herbarium. Special mention should be made of Thaw Zaw who has become NE's deputy moulder to Penelope, and Anne Maples and Gabby Green have begun curating the bryophyte collection. On Saturday 24 August 2024, Botany celebrated the PhD graduation of Dr Sangay Dema and Dr Helen Kennedy who both

undertook plant systematics projects heavily reliant on our herbarium (Fig. 1). NE continues to have PhD students utilising the herbarium, under the principal supervision of UNE Botany convenor Rose Andrew. Shelley Rowntree is currently sampling any *Chrysocephalum* (Asteraceae) loans from around Australia, Peter Pemberton is utilising the *Cyanothamnus* (Rutaceae) collections, Tareg Shalloom has done imaging of whole and sectioned leaves across a good sample of the *Phebalium glandulosum* (Rutaceae) assemblage using a range of NE and Botany research equipment, while Rinchen Yangzom has photographed a number of loaned overseas specimens of *Pedicularis* (Orobanchaceae) using the high resolution camera kept in the herbarium.

Reference

Web Reference 1. N.C.W. Beadle Herbarium. <https://ncw-beadleherbarium.une.edu.au/#/>



Figure 1. PhD graduates, Helen Kennedy and Sangay Dema, with Jeremy Bruhl, Ian Telford and Rose Andrew.

I just had to buy it

Book review by John Clarkson, Topaz

How to be a Bad Botanist

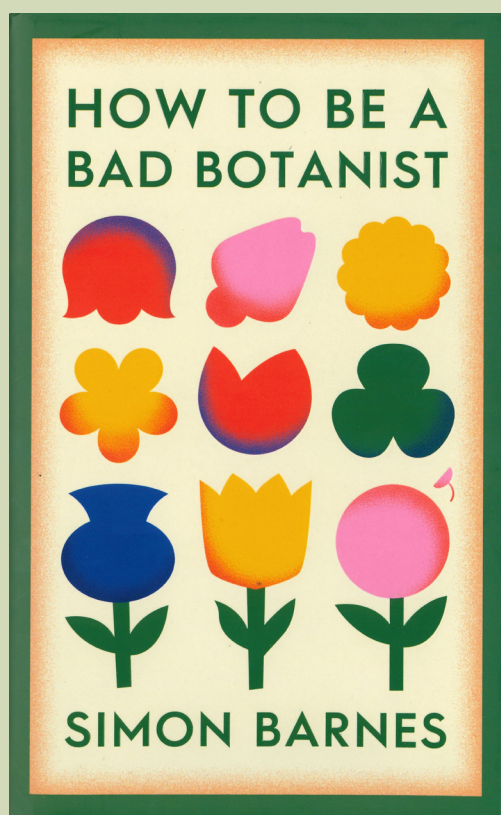
Simon Barnes

IISBN 978-1-3985-1891-9 (hardback), 13.5 x 21.6 cm

Simon & Schuster UK, 17 July 2024, pp.288

RRP AU\$32.99, NZ\$37.99

Also available as an ebook



When I came across *How to be a Bad Botanist* by British author Simon Barnes while browsing in a book shop in Canberra, I just had to buy it. Was I a bad botanist? Would any of my many botanical friends and colleagues, many of whom are ASBS members, fit the definition? What was a bad botanist in the first place? Was it someone who collected in national parks without the

appropriate permits; flicked through herbarium folders instead of placing them on a bench; pilfered bits of type specimens when visiting distant herbaria; or, perhaps, someone who used their knowledge of plants for some nefarious purpose?

It's none of the above. Rather, it is an attempt by Barnes to do for "would be botanists" what he did for novice birdwatchers when, 20 years ago, he published *How to be a Bad Birdwatcher*. This became a birdwatching classic and was republished this year as a 20th anniversary edition (Barnes 2024).

Before he began work on this book, the author claims to have known little about plants. His interest, he says, was sparked by a casual observation of a small colony of plants growing on a shingle beach on Orford Ness off the coast of Suffolk in the United Kingdom. This was perhaps somewhat self-deprecating given that two years earlier he had authored *The History of the World in 100 Plants* (Barnes 2022). He tells the reader that, using his notes and photographs, he worked out that the plants he saw growing at Orford Ness, in a place where most plants would curl up and die, were sea pea¹, sea kale² and yellow horned poppy³. Here we have one of the mildly annoying aspects of the book. Hardly any of the plants discussed are referred to by their scientific names.

The book is clearly aimed at encouraging readers who might think that they know little about plants to start observing those growing around them, and to do so often, so that they can come to appreciate the diversity that exists and the patterns that are driven by the seasons. The author does this, in part, by taking the reader, in a number of chapters, on a stroll along a laneway near his home in Norfolk. As he notes each plant he encounters, he tells a story about it, some quite humorous. For example, did you know that you should never eat blackberries⁴ after Michaelmas Day (September 29) because

on Michaelmas night the devil pisses on them; that you should never burn the wood of elder⁵ because if you do you will see the devil; that great hairy willowherb⁶ came by one of its common names, bombweed, because of its habit of colonising areas that had been devastated by the bombing of WWII; or that Roman soldiers put the leaves of mugwort⁷ in their sandals to soothe their feet on long marches? Many of the plants may be unfamiliar to ASBS members but the stories lose nothing because of this. I have always found that, when working with non-botanists, the best way of helping them remember plant names is to attach a story to each.

Interlaced with the chapters describing Barnes's ramblings along his "Enchanted Bank", are chapters introducing readers to the origin of plants, the importance of photosynthesis, flowers, pollination and seed dispersal. The final chapters cover parasitic plants (The Vampire Plants), toxic plants (The Garden of Death) and orchids (Sex and Passion). *How to be a Bad Botanist* is

a good introduction for those wanting to know more about plants. In the end, Barnes makes no distinction between good and bad botanists, the latter being those who enjoy plants without any pretension to expertise.

References

Barnes, S. (2022). *The History of the World in 100 Plants*, Simon & Schuster UK.

Barnes, S. (2024). *How to be a Bad Birdwatcher*, Simon & Schuster UK.

Scientific names for plants mentioned in the text:

¹*Lathyrus japonicus*

²*Crambe maritima*

³*Glaucium flavum*

⁴*Rubus* spp.

⁵*Sambucus* spp.

⁶*Chamerion angustifolium*

⁷*Artemisia vulgaris*

Adventure, intrigue and flowers

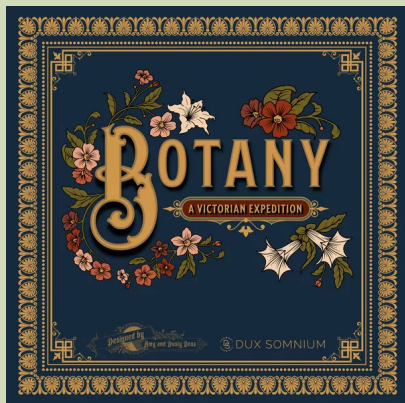
Book review by Helen Kennedy, Canberra

Botany: A Victorian Expedition

A board game by Dux Somnium, 2024

Box dimensions 305 x 305 x 80 \$87.45 to US\$59.99 from Dux Somnium
<https://duxsomnium.com/>

Available from several board game sellers in Australia



Overview

Described by Dux Somnium, the creators of *Botany* as "a strategy board game where you take on the role of a Victorian Era flower hunter as you explore the world in search of fortune, fame, and adventure," I felt both targeted and very excited by this offering, as a botanist and a boardgame lover. With a few play-throughs under my belt now, I'm starting to get a feel for the game. Visually delightful, the theme is great fun and the game easy to pick up. However, it's a bit light on strategy and interactions with other players are minimal. For me the elephant in the room with this game is the missed opportunity for education on historical theft of cultural intellectual property from First Nations people. The theme seems to cherry pick the fun parts of expedition and discovery while oblivious to the reality of colonialism that Victorian Era plant hunting took place in. If you're thinking about forking out the hundred or so that this boardgame retails for read on for my thoughts—and those of a few of my board gaming mates.

How to play

Goal: Players, or ‘plant hunters’ compete to earn points by traversing the board (a map of the world) collecting plant specimens as they go and depositing them in their estate garden back in England. The player with the most points at the end of the game is dubbed the Queen’s Botanist and wins!

Gameplay: Players take turns, starting with the first player and continuing clockwise. On their turn, each plant hunter, mounts their expedition (paying 1 coin to cover expedition expenses), they then move around the map collecting specimens from the countries they visit before returning to their estate to place specimens in their garden (Figs. 1–3). As you can usually only move three spaces per turn, an expedition usually takes several turns. Each player can also draw an ‘event card’ to try their luck and see what fortunes (e.g. discovering a rare cliff dwelling plant when the rope bridge you are crossing breaks, swinging you gently onto a nearby rock ledge) or misfortunes (e.g. your seed collections are devoured by the ship’s hungry mice) they encounter on their expedition with the chance to purchase various assets (e.g. a pet hunting dog) or upgrade equipment (e.g. a bug net) to assist them on their hunt (expedition cards). The end of the game is triggered when a player increases their *reputation points* through various deeds to a maximum of twelve. The *game points* are then tallied (based on the specimens in your estate garden) and the plant hunter with the most game points (best garden) wins.



Figure 1. An example partial board setup.

Theme

If you are a plant nerd (you are reading the ASBS newsletter so I’m going to assume you are) you will enjoy this theme. For me, the central appeal is its theme, so I had high expectations. *Botany* is a diverting take on Victorian plant hunting. It pokes fun at some of the bonkers (but not unrealistic) antics Victorian plant hunters got up to with event cards that have you slipping into volcanic craters or losing your precious specimens overboard on long voyages. At the same time, it presents a playful imagining of exploration, adventure and botanical discovery. If the idea of spending a few hours pretending to be a kooky Victorian character with a penchant for weird and wonderful plants appeals, this game is for you.

Aesthetics

This game is so pretty. The materials are luxurious and the artwork is varied and intricate. The makers took full advantage of the aesthetic potential of their subject matter. The game designers have a background in art history as well as horticulture, a history that is evident in the beautiful quality of the game.

A particular highlight are the specimen cards (Fig. 2). With hundreds of unique cards, there is no shortage. The artwork is diverse but stylistically cohesive and the subject matter well researched. I’ve enjoyed just leafing through the decks like a picture book.

Game play

I found there was some tension between the theme and the structure of the game play. The



Figure 2. A selection of specimen cards

idea of pretending to be a Victorian plant hunter traversing the globe, encountering adventure and returning triumphant with marigolds from Mexico and grevilleas from Australia is a fun idea but translating that into the rules of the game and the mechanics of play is where the real challenge lies and *Botany*, in my opinion, doesn't quite nail it.

For a strategy boardgame, *Botany* relies a little too much on luck. Every turn you draw two to three different types of cards and roll the dice at least once, the outcome of which seems to influence your success more than any strategy you can employ. That being said, how you traverse the board does matter with important decisions about expedition direction and length needing to be made and adjusted as play progresses. Perhaps, the most strategic decisions you can make are based on the interactions between your character's special abilities, event cards and expedition cards. So the intricacy of game play does improve with familiarity but it never really reaches a level one might call sophisticated.

The game has a startling tendency to foster a runaway leader, a move that my friends and I call 'a double falcon' in reference to the expedition card where you acquire a pet falcon. If you manage to secure two of this type of card you can bring the game to a close, by the rapid accumulation of reputation points, in just a few rounds.

Another complaint I have is that there is not a lot to do when it's not your turn and there is not as much encouragement or opportunity for player interaction as I would like. The choices made by any one player affect other players only



Figure 3. Example board set up.

minimally and while there are opportunities to sabotage other players (by planting poisonous plants in their garden) and the potential for trade this seems like an afterthought. Perhaps, with a few more playthroughs, I might make better use of the options for player interaction. The game also seems to run longer than it says on the box. Though with a vivid aesthetic, engaging subject matter and versatile replayability, this is hardly a bad thing.



Figure 4. From left: Dan, Zack, Ashara and Sean competing for the title of Queen's Botanist. Photos by Helen Kennedy.

Representation

When I first heard that a boardgame based on Victorian plant hunting was in production I immediately wondered how they would represent the 'dark reality' of plant hunting. As most modern botanists are aware, plant hunting and the historical context of colonialism it belongs to were highly exploitative of First Nations people. But this is a part of history I was not aware of as a child because the games I played, books I read and lessons I was taught represented a white-washed version of history that avoided hard truths. That's why I'm disappointed that the creators of *Botany* have chosen to continue in the tradition of white-washing colonial history in media products, forgoing the opportunity to represent a more inclusive and truthful history. Believe me, I get that this is a game, that it is just fiction and that it's meant to be fun. But I'd like it to be fun *and* accurate. In fairness, the game's fictional characters are diverse and interesting, but with zero mention of conflict and exploitation in the game or rule book (the rule book addresses

other thematic issues such as environmental regulations for plant collecting) this effort appears tokenistic.

Conclusion

If the highlight of this game is the superb aesthetics and the lowlight the creator's poor attempt at historical accuracy, then the middle ground would have to be the game play and strategy. I had a lot of fun playing this game with friends, family and

my partner (basically anyone I could rope into four hours of unsolicited plant facts) (Fig. 4) but it's not the next *Risk* or *Catan*. While the strategy is a bit light on, it's intuitive to play, easy to pick up and overflowing with fun detail. It could be more socially interactive but the empty space between turns did facilitate plenty of non-game related chit chat. The novelty of the theme and the quality of the artwork in this game reeled me in and I would encourage plant and board game enthusiasts alike to give it a go.

Paul Graham Wilson (1928–2024)

Bruce Maslin

It is with great sadness that I announce that my good friend and colleague of over 50 years, Paul Wilson, passed away on 29 July 2024, aged 96. Paul was a quiet, courteous man, the quintessential gentleman who was always respectful of others and willing to share his considerable botanical knowledge whenever asked. He had a very productive taxonomic career that spanned 64 years.



Figure 1. Paul Wilson at the Western Australian Herbarium, Dec 2003. Photo Bruce Maslin

Paul commenced his professional life at Kew Herbarium where he worked for five years (1953 – 1958) before taking up a Botanist position at the State Herbarium of South Australia in 1958. In 1965 Paul was appointed as Botanist at the Western Australian Herbarium, Perth, where he remained for the remainder of his working life. He officially retired from PERTH in 1993 but remained there for another 24 years as a Research Associate, finally departing in 2017.

Paul's taxonomic specialties included genera of Asteraceae, Chenopodiaceae and Rutaceae. He published at least 70 scientific articles, and his name is attached to more than 600 plant names (including both new taxa and new combinations); he is commemorated in having 21 taxa named in his honour. Apart from his purely taxonomic research, Paul engaged in a wide range of other botanical activities, including field studies, contributions to several floras and membership of national committees. He possessed a very good working knowledge of the *International Code of Nomenclature*, botanical Latin and had a great love and knowledge of botanical literature. Many PERTH staff and others benefitted significantly from his broad botanical knowledge and from the sound advice that he so generously and graciously provided.

Details of Paul's professional life, including his contribution to taxonomy, will be presented in the December issue of the ASBS Newsletter.

Pieter Baas (1944–2024)

David J. Mabberley, Wadham College, University of Oxford, South Parks Road, Oxford OX1 3PN, United Kingdom; School of Natural Sciences, Macquarie University, and Botanic Gardens of Sydney, Australia.



Figure 1. Pieter Baas at the 2015 International Association of Wood Anatomists (IAWA) meeting in Tervuren, Belgium. Photo courtesy of Elisabeth Wheeler.

On 29 April 2024, just one day after his eightieth birthday, Pieter Baas (Fig. 1), one of the most colourful and charismatic of contemporary botanists, bravely elected to end what had become a life made intolerably painful by two forms of cancer. With his death, Leiden colleagues lost a distinguished scientist and a dear friend (in this author's case, of some fifty years), while many throughout the world are mourning his passing.

Pieter Baas was born to a farm-labouring family in Wieringermeer, northern Holland, towards the end of World War II. In 1962, after high school in Alkmaar, he read biology at Leiden

University, which was to become his academic home for the rest of his life (see van Welzen *et al.* 2024 for further information). During work towards a Master of Science, Pieter concentrated on wood anatomy including, once armed with a scholarship from the British Council, systematic plant anatomy, under Charles Metcalfe (1904–91) at the Jodrell Laboratory, Royal Botanic Gardens Kew. This led to his second publication, his first to deal with an Australian genus, on the comparative leaf anatomy of *Hypolytrum* (Baas 1969).

In 1969, Professor C.G.G.J. (Cees) van Steenis (1901–86), founder of the Flora Malesiana

Project, appointed Pieter wood anatomist at the then Rijksherbarium in Leiden. Under Pieter's stewardship, the wood collection there grew to be the largest in the world. His PhD thesis, 'Comparative anatomy of *Ilex*, *Nemopanthus*, *Sphenostemon*, *Phelline* and *Oncotheca*' (Baas 1975), was completed when his regular scientific routine of preparing accounts of wood (and other) anatomy for plant families published in *Flora Malesiana* allowed. Much of this work is, of course, germane to Australian taxa.

In 1987, Pieter was appointed Extraordinary Professor of Systematic Plant Anatomy and, in 1991, not without considerable hesitation, he became scientific director of the Rijksherbarium and Professor of Systematic Botany at Leiden University. Among important achievements during his directorship, were the establishment of a molecular laboratory (with other partners in Leiden) and digitisation of the type collections, with the Rijksherbarium being one of the first organisations anywhere to make them available online. Subsequently, with the merging of all major Dutch natural history collections as Naturalis Biodiversity Center [*sic*] this project was extended to cover almost all of the 4,000,000 herbarium sheets held there.

Faced with financial stringency, the dean of the faculty, physicist Franz Saris (b. 1942), mooted cutting the Rijksherbarium funding by 50%, arguing that only teaching and teaching-related research should be covered by the university and that the management of the internationally significant collections should be a national, rather than a university responsibility – for which new funding would have to be sought. The herbarium, by then largely housed in the old university library, was moved to a new facility (a former IT company facility) aptly re-named the Van Steenis Building, while the elegant old library, almost inevitably (and not surprisingly in the light of the behaviour of the managerial classes in general - in their never-ending tussle with the intelligentsia worldwide), was to be occupied by university administrators.

In 1996, the Van Steenis Building was officially opened by the then Queen Beatrix of The Netherlands. It is said that her father, Prince

Bernhard, had encouraged Pieter to mention the financial plight of the herbarium to her and, indeed, it seems that the queen subsequently lobbied the Minister of Science, Culture and Education to provide relief. Such tactics, no doubt, scarcely endeared Pieter to the university authorities. The herbaria at both Utrecht and Wageningen universities were under similar financial pressure and the Ministry set in train a merged but decentralised National Herbarium of the Netherlands (NHN) with Pieter as its first director. Eventually all major Dutch natural history collections were brought together in what is now Naturalis, the links with the university sector being consequentially attenuated further – but now across The Netherlands as a whole.

Pieter, energetic, ambitious and greatly respectful of van Steenis, organised the first Flora Malesiana Symposium, which, due to its success, is generally held every three years, alternating between the region and Europe. The fifth was held in Sydney in 2001 (Everett & Wilson 2003) with Pieter present. He had first visited Australia for the International Botanical Congress in Sydney in 1981 and often returned, for example attending an ASBS meeting at Kuranda, Queensland, in 1994 (Morrison 1994). John Clarkson (in litt.) noted, "We really had him sing for his supper. He was the after-dinner speaker, delivered a summary address at the end of the conference (Baas 1994) and was the life of the post symposium field trip".

Pieter's anatomical work on Australasian plants which included a study of the peculiar wood structure of *Leptospermum* [= *Pericalymma*] *crassipes* (Baas 1977); the morphology and relationships of *Paracryphia* (Paracryphiaceae) (Dickison & Baas 1977); extended to wider issues, notably, with Kapellen and van Vuuren, a review and identification of key research issues of the effects of climate change on biodiversity (Kapellen, van Vuuren & Baas 1999), and, with Wiedenhoef, a paper on *wood science for promoting legal timber harvest* (Wiedenhoef & Baas 2011).

Pieter was elected a member of the Royal Netherlands Academy of Arts and Sciences in 2000. He was a winner of the Linnean Medal (2003) of the Linnean Society of London, always relishing visiting England and participating in many of the

Society's activities. Indeed, following his Kew experience as a student, he became a staunch Anglophile and had an amazing command of idiomatic English, allowing him to complete with ease cryptic crosswords in British newspapers. In 2005, following his valedictory lecture at his retirement, Pieter was made a Knight in the Order of the Netherlands Lion. Almost to the end of his life, he was a key figure in the International Association of Wood Anatomists (IAWA). He continued to be scientifically active and, in his later years, his work increasingly involved international collaboration, notably on fossil woods. He is commemorated in the fossil generic names, *Baasia* Estrada-Ruiz & al. (Celastraceae) and *Baasoxylon* Wheeler (Malvaceae).

Pieter had a fine bass voice and was a long-serving member of the Residence Bach Choir in The Hague and the Leiderdorp Chamber Choir. Travel, particularly internationally, was also important to him, but, during the catastrophic Sri Lankan tsunami of 2004, he narrowly escaped with his life, clambering on to the roof of an otherwise submerged building: a sobering experience, the painful memory of which never left him.

Pieter had the directness so characteristic of the Dutch and was sometimes somewhat difficult

to work with, but, at the same time, was very amiable and open, particularly enjoying being the focus of attention. Despite his extrovert, often almost theatrical, gregariousness, he was a confirmed bachelor and left no partner, but, instead, very many friends and colleagues all over the world, people grateful to have enjoyed his solidarity, encouragement, good humour and company – besides his science.

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2015 - Tervuren, IAWA Meeting

In the News

Solanum plastisexum

Photo: Ingo Oeland/Alamy/The Guardian

Online and in the media

Please send me anything that you think is of interest for the ASBS community, otherwise the news is just what I see on Twitter/X – Todd McLay
todd.mclay@gmail.com.

‘We need other logics for our approach to nature’: the woman uprooting colonialism in botany

Banu Subramaniam’s new book, *Botany of Empire*, critiques the lingering colonial influence in plant science, particularly in naming practices and taxonomy. The book calls for a decolonization of the field, urging a shift away from outdated perspectives.

Link to story: <https://www.theguardian.com/environment/article/2024/jun/02/european-colonialism-botany-of-empire-banu-subramaniam?>

My Garden Path | Professor Stephen Hopper

Join Stephen Hopper as he discusses his career and passion for the Western Australian flora.

Link to video: <https://www.abc.net.au/gardening/how-to/my-garden-path-professor-stephen-hopper/103614386>

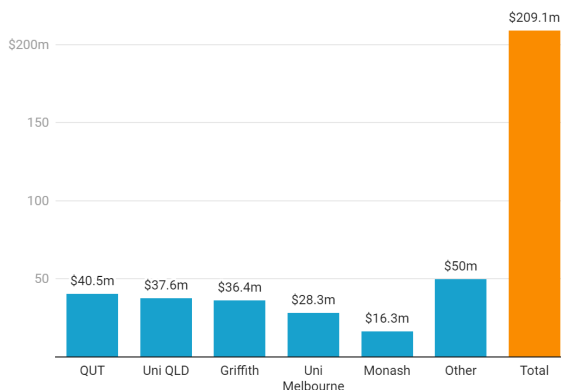
Australian public universities are now spending millions on consultants

As student debt rises, and government funding declines, Australian public universities spent over \$200 million on consultants in 2023, with Victorian and Queensland universities leading the charge. In light of other issues like wage theft, and the declining post-COVID student experience, there should be more concerns raised about the prioritisation of resources in higher education.

Link to story: <https://australiainstitute.org.au/post/australian-public-universities-are-now-spending-millions-on-consultants/>

Qld and Vic public universities alone spend over \$200m a year on consultants

2023 figures



Money spent on consultants

The state of academic publishing in 3 graphs, 6 trends, and 4 thoughts

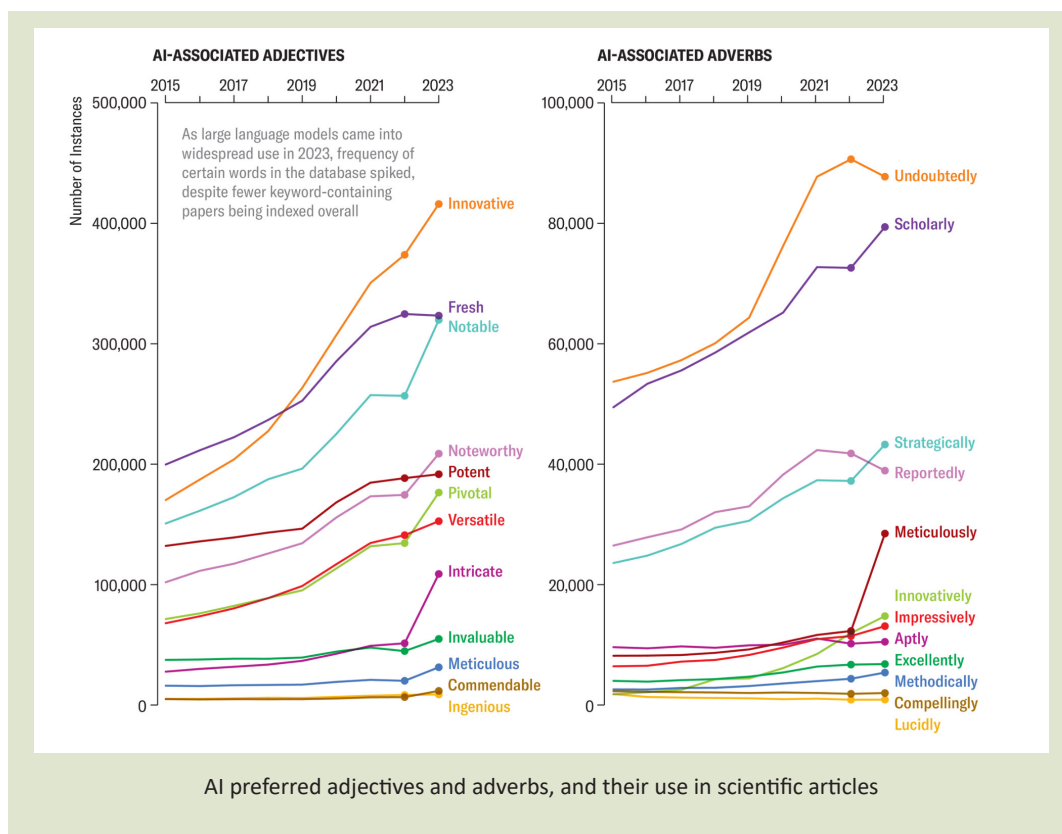
A very detailed article about scientific publishing growth, change, and impact over the last 10 or so years. Also, worth reading the comments for even more discussion, especially around the cost of Open Access.

Link to story: <https://dynamicecology.wordpress.com/2024/04/29/the-state-of-academic-publishing-in-3-graphs-5-trends-and-4-thoughts/>

AI Chatbots Have Thoroughly Infiltrated Scientific Publishing

AI-generated text is increasingly appearing in published papers, and particular language associated with Large Language Models can be used to detect their impact over the past couple of years. Recent estimates suggest that up to 17.5% of computer science papers may show signs of AI involvement.

Link to story: <https://www.scientificamerican.com/article/chatbots-have-thoroughly-infiltrated-scientific-publishing/>



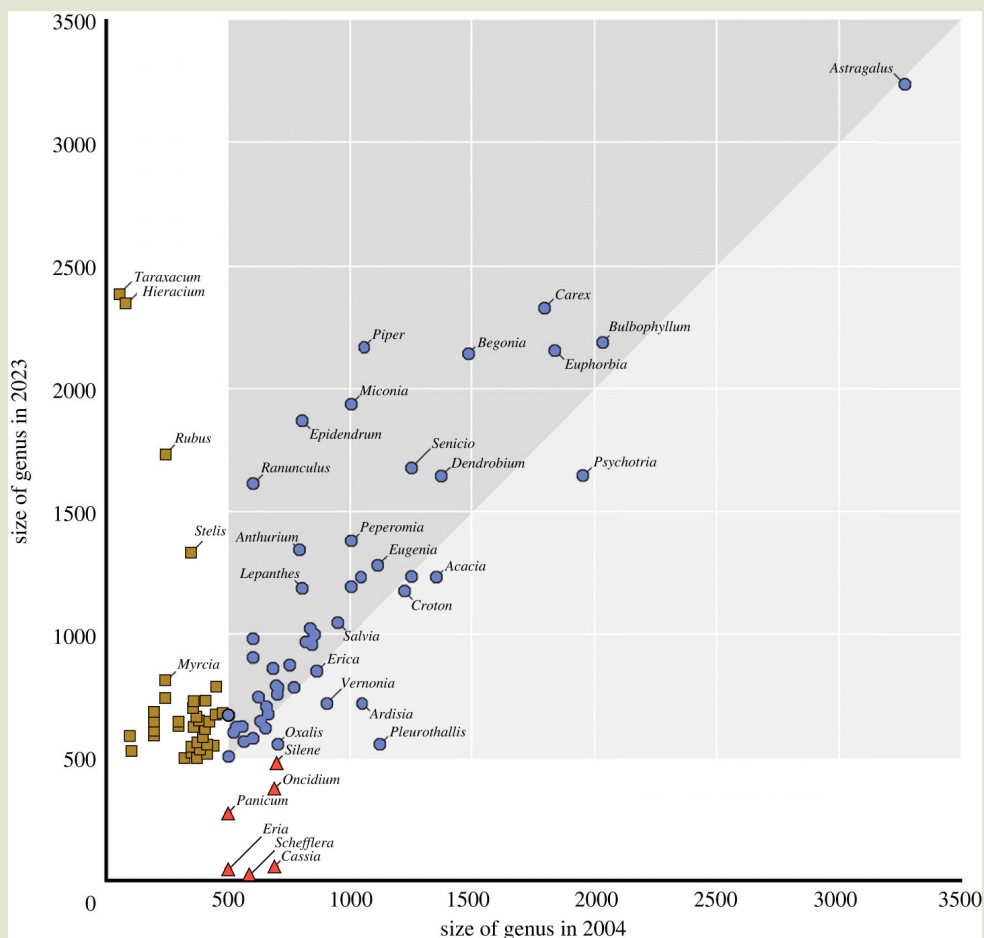
Papers and publications

Twenty years of big plant genera

Since Frodin's 2004 review of big plant genera, advances in phylogenetics and taxonomic bioinformatics have increased the number of big flowering plant genera from 57 to 86, with significant growth driven by new species descriptions. Despite this increase, big genera, which now include 14% of plant species in just 28

megadiverse genera, remain understudied and crucial for understanding global diversity patterns and plant evolution.

Read the paper: Twenty years of big plant genera; Moonlight *et al.* 2024; Proceedings of the Royal Society B <https://doi.org/10.1098/rspb.2024.0702>



Change in number of species for the largest plant genera in a 20 year period

Removal of the large inverted repeat from the plastid genome reveals gene dosage effects and leads to increased genome copy number

While the reputation of the inverted repeat as the scourge of plastid genome assemblies is well known, the function of the inverted repeat is not well-described. Here, using mutated tobacco plants with one copy of the inverted repeat knocked out, researchers discovered elevated copies of plastid genes and subsequent gene dosage effects, but no immediately obvious deleterious effects.

Read the paper: Removal of the large inverted repeat from the plastid genome reveals gene

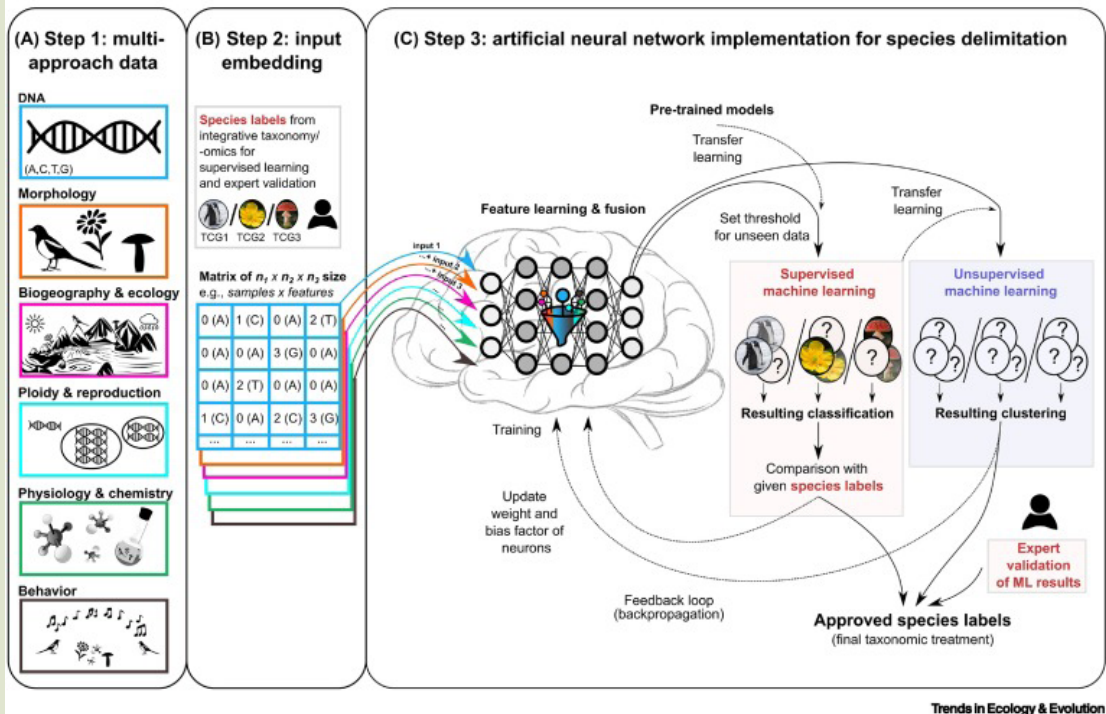
dosage effects and leads to increased genome copy number. Kramer *et al.* 2024; Nature Plants. <https://www.nature.com/articles/s41477-024-01709-9>

Species delimitation 4.0: integrative taxonomy meets artificial intelligence

How could we (not so much should we) use AI for species delimitation and taxonomy.

Read the paper: Karbstein *et al.* 2024; Trends in Ecology and Evolution. [https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347\(23\)00296-3?rss=yes&utm](https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347(23)00296-3?rss=yes&utm)

Species Delimitation 4.0



How to delimit a species, featuring machine learning

Invasive neo-species and how to name them

This paper outlines two possible taxonomic solutions to an interesting problem: what do we call invasive lineages in non-native regions that have speciated and are now distinct from the populations in the native range?

Read the paper: Montensinos 2023; Taxon 73:1.
<https://onlinelibrary.wiley.com/doi/10.1002/tax.12884>

Using machine learning to link climate, phylogeny and leaf area in eucalypts through a 50-fold expansion of leaf trait datasets

Nearly 40,000 NSW herbarium eucalypt images were used to obtain 36,599 leaf area measurements with a machine-learning workflow. Positive correlations with mean



Read the paper: A critique of Thompson and Ramírez-Barahona (2023) or: how I learned to stop worrying and love the fossil record. Hagen 2024; Biology Letters. <https://doi.org/10.1098/rsbl.2024.0039>

Read the paper: No phylogenetic evidence for angiosperm mass extinction at the Cretaceous–Palaeogene (K-Pg) bound. Thompson and Ramírez-Barahona (2023); Biology Letters. <https://doi.org/10.1098/rsbl.2023.0314>

Read the paper: Embracing uncertainty: The way forward in plant fossil phylogenetics. Coiro 2023; American Journal of Botany. <https://bsapubs.onlinelibrary.wiley.com/doi/pdfdirect/10.1002/ajb2.16282>

Advice for decreasing word counts in papers. As someone who struggles with brevity I found this quite a useful paper.

Read the paper: Tack *et al.* 2024; Ecology and Evolution. <https://onlinelibrary.wiley.com/doi/10.1002/ece3.11543>

Machine learning and phylogenetic modeling reveal that cactus diversification is influenced by five key environmental and biological factors, with moderate diurnal temperature range, soil sand content, and plant size being the most crucial. This suggests that moderate, rather than extreme, environmental conditions are optimal for cactus diversification, challenging conventional views on how these plants have adapted to and excelled in their habitats.

Read the paper: Thompson *et al.* 2024, Nature Communications. <https://www.nature.com/articles/s41467-024-51666-2>



The newsletter

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

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

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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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