

Dear AMS Community,

It's the time of year that everyone is chasing their tails and trying to do everything at once: finish up on projects, do the Christmas shopping, plan a holiday, and be ready for whatever 2023 will bring. This edition of the AMS newsletter is an abbreviated one. It includes news, some highlights from the year, a summary of the AMS Symposium in Wellington by our VP Bevan Weir and Student Eloise Martin; and we talk about a few plans for next year.

Enjoy!

Warm regards,

Dr Tracey Steinrucken
Australasian Mycological Society President

Website: <https://www.australasianmycologicalsociety.com>

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News and Callouts

Design the 2023 AMS Members Pin!

This was the first year in which our members have received an AMS pin for signing up with the society. The 2022 pin (below) was designed by Dr Jordan Bailey using the AMS logo and sent out to all members.

For 2023, we're calling out for anyone with some creative aspirations, to put together a mycology themed design for the 2023 AMS Members pin.

Things to remember:

- Use a simple line drawing
- The badge will be approx. 2.5-2.0cm
- Only use black and white
- Include "AMS 2023"

To enter, submit your design to Johanna, ausmycsoc@gmail.com by 31st January

2022 Science New Zealand Awards

The Mycology and Bacteriology group of Manaaki Whenua – Landcare Research from Auckland, New Zealand recently won a 'team' award at the 2022 Science New Zealand Awards in Wellington.

This research group has been operating in some form since the 1930's and primarily focuses on taxonomic research and maintaining the national fungarium (PDD) and national culture collection (ICMP).

In addition to this, it was the groups applied work on matters of national Biosecurity and Biodiversity on plant diseases and endemic fungi that were recognised with this award.



Pictured L to R: James Stevenson-Wallace (CEO), Mahajabeen Padamsee (Mycologist), Peter Johnston (Mycologist), Bevan Weir (group leader), Eric McKenzie (Mycologist), Ayesha Verrall (NZ Science and Innovation Minister), Peter Buchanan (Mycologist), Megan Petterson (Senior technician), Colin Dawson (Chair of Manaaki Whenua Board)

A message from theyeasts.org

The last printed edition of *The Yeasts, a Taxonomic Study* was published in 2011. Since that time, we (Shuhui Tan, Marizeth Groenewald, Heide-Marie Daniel, Andrey Yurkov, Feng-Yan Bai, Vincent Robert and Teun Boekhout) have been working on the digital format, theyeasts.org. Until recently, this was regularly updated with species descriptions from the many publications on yeast diversity and taxonomy that followed 2011. The system is now ready for **your help** on the various taxa, especially genera and species of the respective genera to be updated by members of the yeast diversity and taxonomy communities.

We are looking for long term commitments, and by junior and senior researchers from all over the globe to make this a truly international project, very much like *The Yeasts, a Taxonomic Study* has been. Senior scientists, please forward this to any young and motivated students/scientists.

Early in 2023 we plan on having several presentations on where we are presently with theyeasts.org, and likely this will be two timeslots to make it possible for people from various time zones to participate.

We also would like to update the introductory chapters on various aspects of yeast biology. If you are not a yeast taxonomist, but rather an expert on some aspect of yeast biology [e.g., ecology, food, biotech, medical, etc.] and wish to contribute to this online resource, you are most welcome.

If you are interested in contributing to the biodiversity and taxonomy part or the introductory topics, please send an email to t.boekhout@wi.knaw.nl, and cc Marizeth m.groenewald@wi.knaw.nl, with subject "theyeasts.org" and your preferred genus or topic.

We hope to get many emails! These will be most helpful in organizing the 2023 online meetings. You will then receive an invitation for the online meeting by Zoom or another platform, to be held early 2023. Hope you want to contribute to this yeast biodiversity platform. Let us make theyeast.org a successful project!

Sincerely,

Teun Boekhout

Marizeth Groenewald

Highlights of the 2022 NZMS / AMS Joint Conference

By Dr Bevan Weir, AMS Vice President

This year the AMS scientific meeting was held in conjunction with the New Zealand Microbiological Society as a one-day symposium in Wellington, New Zealand. The capital city is known for its throngs of government civil servants, cafe culture, and blustery winds. Conference attendees were certainly treated to the latter on arrival at the airport.

The conference had seven fantastic plenary speakers: Petra Louis, Teresa Bergholz, Naresh Magan, Marcus Claesson, Madeleine van Oppen, Michael Travisano, and Ryan Wick. They spoke on topics such as human health and our microbiome, food pathogens and the pending threat of climate change,

microbial evolution, and obtaining the 'perfect' genome. An important first for the conference this year was an excellent presentation by Charles Royal explaining Mātauranga Māori, and its interaction with science.

The science sessions covered the breadth of microbiological research, from the latest advances in 'omics and molecular biology to food microbiology and antimicrobials.



Microbes rule!
NZ Microbiological Society
Annual Conference

MONDAY 21 - THURSDAY 24 NOVEMBER 2022
AMS SYMPOSIUM - FRIDAY 25 NOVEMBER
— VICTORIA UNIVERSITY OF WELLINGTON —

The NZMS conference has always been well attended by university postgraduate students. This year was important as the first chance in several years to get back into in-person networking, generating novel science ideas, and seeking new opportunities.

The field trip to Zealandia was a major highlight for delegates of both NZMS and AMS. We had guided tours of the incredible site and saw unique birds, reptiles and vegetation with guides who were knowledgeable about the ecology, conservation, indigenous and colonial history of the region, as well as the long term future plans for regenerating the native landscape.

Overall, the conference was a great success, and for many a welcome return to normality



Pictured above: Forests at Zealandia

AMS Symposium snapshot: mycological madness in Wellington

By Eloise Martin: student and conference presenter

For the fungi fanatic, the experts and novices alike, the Australasian Mycological Society Symposium held last November in Wellington, New Zealand, was a rewarding, invigorating and enthralling experience. After a busy few days at the New Zealand Microbiology Conference, learning about our bacterial, viral and other microbial friends, we were treated to the grand fungal finale, a chance to delve into the world of mycology; from phylogeny to molecular work, plant pathology to animal diseases and even into fungal folklore, culture and history!

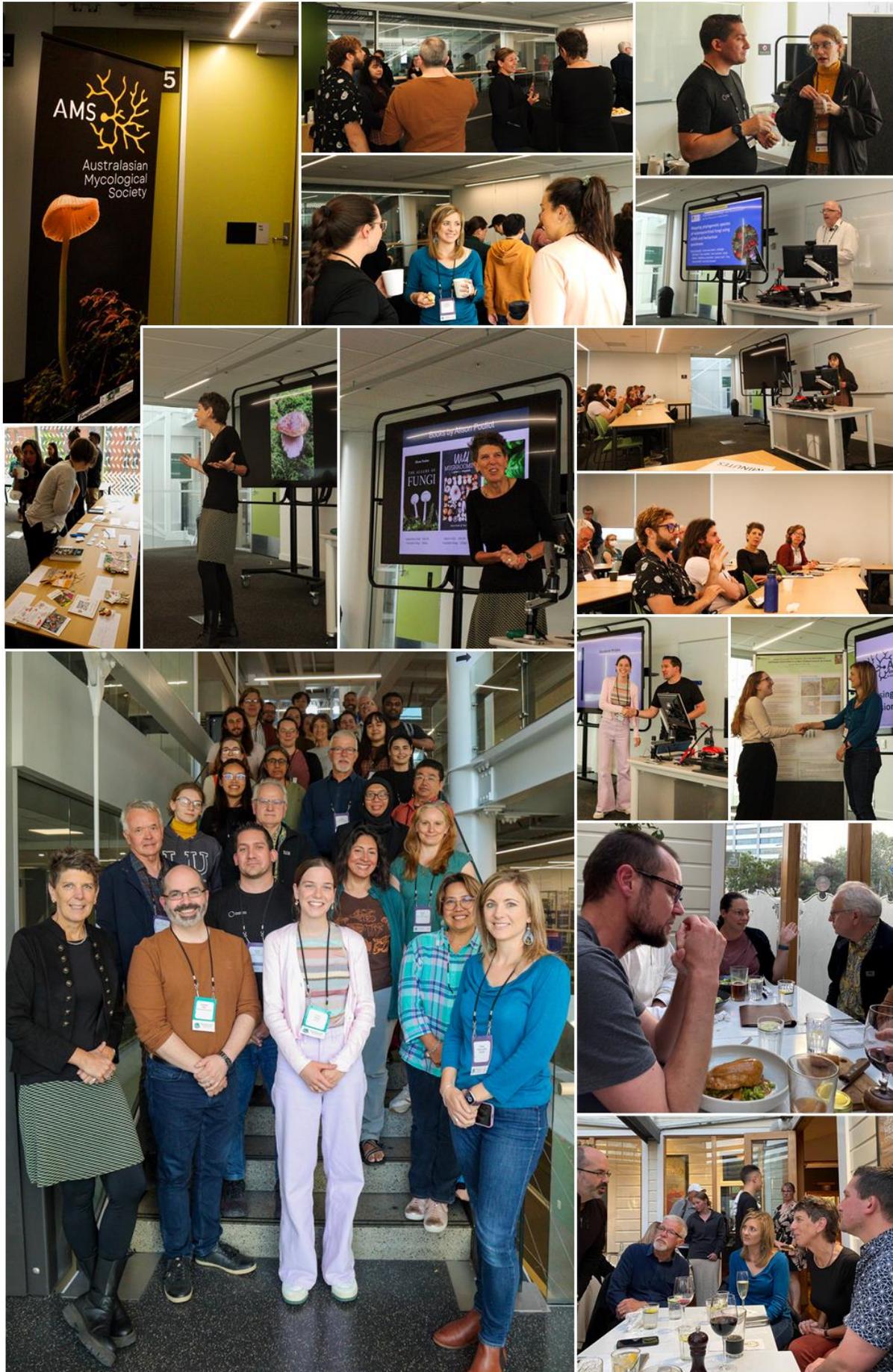
The opening address was enthusiastically delivered by Allison Pouliot, a travelling fungal photographer who offered a fresh perspective into the allure of fungi, articulating the presence and emergence of the fungal 'aesthetic' and how it converges with science. Her background in science satisfyingly complements her fungal fanaticism, which has led her to the furthest reaches of our planet, in an effort to understand how cultures perceive,

understand and treat fungi, and to capture the diverse beauty and overall allure of fungi. She offered an in-depth exploration of the nexus between aesthetic and science, the role of popular science and where scientists such as ourselves fit into the picture.

Following this we heard from a selection of keen mycologists, each with unique insights and specialities. The molecular session walked us through concepts of parallel evolution, non-coding RNA genes, quantitative systems and fungal diseases in New Zealand's beloved kakapo, followed by a discussion on plant-fungi associations, including allelopathy, biocontrol and the role of fungi in improving soil carbon availability.

Following this we learnt about various plant pathogens and the phylogeny of ectomycorrhizal species, as well as soil fungi in tussock grasses during the poster session.

Running throughout the day was also the 'silent auction' which successfully raised substantial funds for our society whilst also

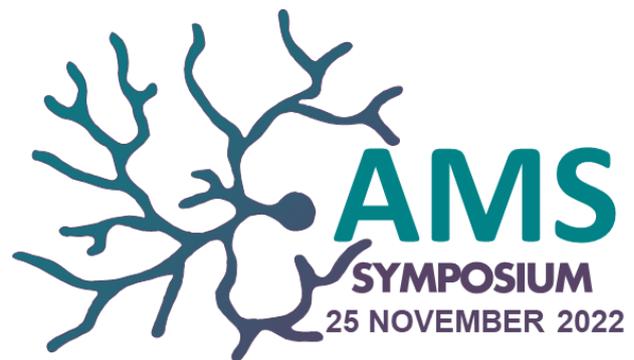


supporting local creators and writers who donated prizes. The student prizes were then awarded, where I was extremely lucky to earn the Jack Warcup memorial prize, with Charlotte Pedly being awarded the American Society of Microbiology Prize, which includes a 2023 membership to the society!

To cap of a wonderful day the team enjoyed a dinner at Wellington's Thistle Inn, where we shared in many more enthusiastic discussions, accompanied by some delicious bites and some cheeky drinks (courtesy of our fungal friends).

As a student preparing to embark on my future in mycology, research and science, I found the symposium to be incredibly valuable, both for learning, associating with experts and likeminded thinkers and gaining a passion for the field and my work. The symposium provided an opportunity to delve into the diversity, breadth, and depth of mycology. I eagerly await the field's future and am utterly inspired by our community

and our fascinating work in all aspects, crevices and niches of mycology. I also extend sincere thanks to the society for supporting my attendance at the conference, through the student travel grant, which was also awarded to students Aindreeya Alcova and Weixia Wang from the University of Melbourne. Encouraging enthusiasm and participation from students early-on is integral to building the future of science and research, and it is fantastic to receive such support from the society.



The 2022 AMS Symposium was a fully in-person event, but we were able to record Dr Alison Pouliot's Plenary talk.

You can access this recording on our YouTube Channel via this link: <https://youtu.be/k3-HmhetWKY>

Thank-you to everyone who contributed to the silent auction, and those who bid on items. We raised \$260.00 to go towards the society's activities in 2023.

Thanks also to all our delegates, to the NZMS to the Conference Organisers our AMS organising committee and our incredible speakers.

- Tracey Steinrucken



Pictured (L-R) AMS Symposium organising committee: Dr Tracey Steinrucken, Dr Bevan Weir and Dr. Jonathan Plett. Absent: Dr Anna Hopkins

Virtual Seminar Series 2023

For the past two years we've been hosting a very successful monthly [Virtual Seminar Series](#) on the back of the COVID pandemic. This has become so popular (up to 60 people attending each month) that we've decided to continue organizing the series and have already confirmed some speakers for 2023.

Seminars are almost always on the last Wednesday of the month at 12pm AEST. Here's the 2023 line-up so far:

25 January - Dr Carlos A. Aguilar-Trigueros

Hawkesbury Institute for the Environment, Western Sydney University and Department of Biological and Environmental Science, University of Jyväskylä (Finland).

Functional groups shape the size and function of spores across the fungal kingdom

Theory predicts that spore size influences how successful fungi are at dispersing to and colonizing new habitats, yet a synthesis of empirical data testing this prediction across the fungal kingdom has not been done. Here we performed such a synthesis by assembling a database of fungal offspring morphology covering over 25,000 species and combining these data to databases of fungal functional groups (including pathogenic and mutualistic fungi of plant and animals), worldwide distribution fungal species and phylogeny. We tested a) whether spore size differs between distinct taxonomic and functional groups; and b) whether spore size influences the worldwide distribution of species and whether that influence varies among functional groups. We found that functional groups drive variation in spore size, but this effect was stronger on plant pathogenic fungi in the Ascomycota compared to other fungal groups. We also found that species with smaller spore sizes tend to have larger distribution, but this trend is only observed among free-living functional groups (i.e., saprotrophs) and not in host-associated fungi. Our findings suggest that evolutionary shifts have influenced spore size and its function differently according to functional lifestyles.



Save the Date for our other upcoming 2023 Seminars and check our [website](#) for updates.:



22 February – Dr Kylie Ireland

Department of Primary Industries and Regional Development, WA
Polyphagous Shot-Hole Borer (Title TBC)

29 March – Dr Ian Dickie

Te Whare Wānanga o Waitaha (University of Canterbury)
Topic/Title TBC

26 April – Prof Bernard Slippers

University of Pretoria, FABI, and Innovation Africa
Topic/Title TBC

31 May – Dr Anna Hopkins

Edith Cowan University
Topic/Title TBC

Upcoming Events

The 3rd Global Soil Biodiversity Conference

13 – 15 March 2023 | [Website](#) | Dublin

The 3rd Global Soil Biodiversity Conference to be held in Dublin (Ireland) in 2023 will expand on previous GSBI conferences and convene the world's leading experts in this interdisciplinary field of soil biodiversity science to present and discuss recent advances addressing the urgency of meeting global challenges which link to human, animal and plant health and a more sustainable world.

Moorabool Mushroom Festival

15-16 April 2023 | [Website](#) | Ballan, Victoria

Join FungiMap for a celebration of all things fungi in Ballan in April 2023, for what we hope will be our first annual Moorabool Mushroom Festival!

This 2-day festival will be looking at all aspects of fungi including: ecology, citizen-science, cultivation, foraging, food, medicine, mycoremediation and mycomaterials. As part of this we will have talks, workshops, nature walks, art, a social event, and a market.

Confirmed speakers for the event are **Alison Pouliot**, ecologist, photographer and author-extraordinaire; Ecologist **Sapphire McMullan-Fisher** who has special interest in the conservation of

biodiversity, particularly the macrofungi and mosses; **Margaret Ross**, a consultant clinical psychologist and the clinical lead in Australia's first ever psychedelic clinical trial; **Sophie Green**, the coordinator of FungiMap and keen citizen scientist; and **Amanda Morgan** who leads the Research and Development of Fungi Cultures to tackle challenges of waste management and ecosystem rehabilitation

For more information and details about how to get on the mailing list, visit the MYCommunity Website:

<https://myco.org.au/fungi-festival/>

12th International Congress of Plant Pathology

20-25 Aug 2023 | [Website](#) | Lyon, France

Plant pathologists and plant health researchers from around the world will meet to discuss their latest research as well as current and future issues facing plant health experts. The theme for the congress is, "One Health for all plants, crops and trees" and will consider the integral nature of plant health with human, animal and environmental health. In addition to an excellent program of keynote talks, concurrent sessions, poster presentations, and networking opportunities, there will be several satellite events before the meeting dates to provide opportunities for deeper discussions into several topics.

We are calling for illustration and photograph submissions for the AMS merch store!



Do you have some awesome illustration that you would like to share? Or maybe an incredible photograph of a mysterious mushroom? We want you to contribute your 'fungi art' to our shop!

All proceeds of our shop will contribute to research grants and networking activities for mycological researchers in Aus & NZ.

You can already get T-shirts, jumpers, stickers, pins, or tote bags like this from our shop featuring Jordan Bailey's "Mushroom basket".

Submit your artwork to: ausmysoc@gmail.com

To support our society, check out our products here at the RedBubble [AusMycSocShop](#)

Council Updates

AMS Mycology Education Subcommittee

We are looking for someone to Chair the AMS Education Subcommittee. The subcommittee has done a fantastic job countering the decline in mycological education in schools and universities across Australasia. The Subcommittee [webpage](#) includes several resources to which we often direct enquiries from members of the public looking to study mycology. It is essential we keep this useful resource updated and that we include new opportunities.

Previous members of the subcommittee included: Susan Nuske (Chair; Swedish University of Agricultural Sciences), Dee Carter (University of Sydney), John Dearnaley (University of Southern Queensland), Jeff Powell (Western Sydney University), Sapphire McMullan Fisher (Fungimap), Catherine Marciniak (ABC Documentary maker), Steve Axford (Photographer) and Leonie McGlashan (School Teacher) and Peter Wenzel (Fungi Co Australia)

We believe someone with a role in Academia (including ECRs and PhD students) would be well suited to this position, as they'd have a unique insight into the tertiary education system in Australia and/or New Zealand and networking opportunities to match. If you're interested, **please get in touch**.

If you have anything you'd like to contribute to the next edition of the AMS Newsletter, or if you would like to have your research or event featured, please contact our Secretary Johanna (ausmysoc@gmail.com) or myself (ausmysoc.president@gmail.com). We're after content highlighting your latest research, profiles on mycologists from your network, mycological events and news, career and scholarship opportunities, and photos or artwork of new or interesting fungal species.

We hope you enjoyed the final AMS Newsletter for 2022 and that you have a safe and relaxing summer break.

Dr Tracey Steinrucken

AMS President, on behalf of the AMS Council

New Council Member!

The AMS Council has a new recruit! PhD student Fionnuala Bulman will be joining the council as our New Zealand Student Representative.

Here's more about Finn:

Finn started her academic journey with a Bachelor in Biomedical Sciences at Otago University and then moved to Germany to earn a Masters in Molecular Medicine. Her fascination with fungi began during her master's thesis project working with *Candida albicans* in the Fungal Septomics lab at the University of Jena.

After deciding to align her academic direction more closely with her love of the natural world, she is now pursuing a PhD in soil microbial ecology at Lincoln University, studying the role of mycorrhizal fungi in resilient soil ecosystems. The aspect of the project she enjoys most is spending time sampling on the beautiful East Cape of New Zealand, where she hopes to add to local knowledge around the biological component of these soils and best land management practices in the face of our changing climate.



Pictured: petri dish fungal snowman created at the J. Craig Venter Institute