

Dear AMS Community,

Well, this newsletter marks half-way through 2022 – I don't know about you, but I find this hard to believe! At AMS, we hope that your year has been going well so far, and that life is regaining some of the more normal rhythm. We have been excited over the past couple of months to see the mushroom fruiting season start out well on the East coast of Australia, and have been seeing many beautiful presentations both through virtual seminars and through in-person meetings. It is so nice to get together with friends and colleagues and catch up. We hope that you all have the opportunity to continue to connect with us using both means: through our monthly virtual seminars, and via our in-person meeting in November where we will be partnering with the NZ Microbiological Society to host a combined conference/symposium (details below in the Upcoming Events section).

Warm regards,

Jonathan Plett

Australasian Mycological Society Councillor

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

Facebook: [AMSstudents](#) and Twitter: [@ausmysoc](#)

2022 AMS Research Grants Awarded!

After an excellent round of applicants for 2022, we're so excited to announce the winners of the 2022 AMS Research Grants. This year we were able to award two grants worth AU\$3000 each. Although we had allocated one specifically to be awarded to an EMCR, all of our applicants were within this category and it was difficult to choose just two from all of the high quality of applications we received. After voting by all the members of the council without conflicts of interest, the two awardees (in alphabetical order) were:



Aaron Brace, PhD Student, Edith Cowan University. Aaron's project investigates how soil fungi in Banksia woodlands around Perth, WA respond to fire in the first 15 months following fires of varying severity and type. @AaronBrace

Allison Mertin, PhD Student, University of Melbourne. Allison's project is titled "Understanding the diversity, biology and biogeography of Native Australian Seed Fungi for improving restoration and ex-situ conservation outcomes". @AllisonMertin



Congratulations to Aaron and Allison on your awards. Both awardees have also been invited to present on their progress at the AMS Symposium in November in Wellington.

2022 New Zealand Microbiological Society Annual Conference and AMS Symposium

The New Zealand Microbiological Society will be holding their annual conference in Wellington New Zealand, in the last week of November. This year, we'd love to invite you to our upcoming 2022 AMS Symposium in November. It is to be held on the last day of the NZMS Conference at Victoria University Wellington, in New Zealand from 21-25 November 2022.

Registration and abstract submission have already opened so register now and get Member-discounts on the NZMS & AMS conference fee, or sign up for the AMS Symposium alone. We will be running an AMS field trip on the Thursday afternoon (24 November) and an AMS Dinner on the night of the 25th November. For more information, to register and to Submit your abstract under the AMS Symposium category, visit the conference website:

<https://www.microbiologyconference.org.nz/>



Microbes rule! NZ Microbiological Society Annual Conference

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

AMS Virtual Seminar Series June 2022



Continuing with our virtual seminar, we will be next meeting on Wednesday June 29th, 2022 at 12:00pm AEST.

This month we welcome Camille Truong a mycologist at the Royal Botanic Gardens Victoria. She has a PhD from the University of Geneva (Switzerland) and has been conducted research in temperate and tropical forests of the Americas, Africa and Australasia. Her expertise spans across taxonomy, molecular systematics, genomics and

microbial ecology. She is particularly interested in the evolution of plant-fungal interactions through time and space, as well as the role of fungal diversity for ecosystem functioning.

Talk Title: Ectomycorrhizal fungi and the nitrogen economy of *Nothofagus*

Nitrogen (N) is a primary factor limiting the productivity of temperate forests. Ectomycorrhizal (ECM) fungi provide essential N to their host plants, but research on plant symbioses and C/N pools is disproportionately focused on northern hemisphere regions. For example, conifer vegetation is the main plant functional type in boreal forests, while southern temperate forests are dominated by ECM angiosperms in the families Myrtaceae and Nothofagaceae. In this talk, I will discuss the role of ECM fungi for N availability in subantarctic forests of Patagonia and how diverse soil fungi contribute to shape the highly structured forests of Tierra del Fuego (Chile and Argentina).

To register your attendance directly via Zoom, follow:

<https://www.australasianmycologicalsociety.com/virtual-seminars-2022>

AMS Virtual Seminar Series July 2022

In July our Seminar is on Wednesday July 27th, 2022 at 12:00pm AEST. We will be welcoming a co-presentation by Drs Krista Plett and Sophia Callaghan (NSW Department of Primary Industries, Biosecurity and Food Safety). Krista is the Leader of Plant Pathology Research at NSW DPI's [Elizabeth Macarthur Agricultural Institute](#). Her group supports disease prevention and preparedness through research into diagnostics, surveillance and early detection of plant diseases in NSW, as well as management strategies to minimise their impacts. In addition to working with pathogenic fungi, Krista also has a strong background in beneficial microbes and their role in maintaining plant health and disease resistance. Sophia is a diagnostic plant pathologist at the NSW DPI Plant Health Diagnostic Service at the Elizabeth Macarthur Agricultural Institute. She has 9 years' experience in research and diagnostic capacities. Her research background is in soil-borne pathogens focusing particularly on *Fusarium*, *Phytophthora* and *Pythium* species.



Talk Title: Biosecurity Behind the Scenes

When many people hear the word “biosecurity” in Australia, images of airport checkpoints and customs clearance forms flash before their eyes. This represents only a tiny portion, however, of the effort being made on a daily basis to keep Australia free of exotic and potentially devastating pathogens. In this talk, Drs Plett and Callaghan will present a glimpse into the inner workings of the diagnostic and research laboratories supporting biosecurity in New South Wales. With an emphasis on fungal plant pathogens, they will consider the process and challenges of monitoring and diagnosing plant diseases, what happens when a pathogen is found that should not be present in Australia, and how research in diagnostics and surveillance is preparing us for the future by considering new high throughput and environmental screening techniques.

FUNNZ Foray 2022—Mycology Colloquium

The Mycology Colloquium has been a feature of the New Zealand Fungal Foray since 2002. In 2000 the foray hosted the AMS annual conference and we had a great day of talks in beautiful Te Anau. In organising the 2002 Okuru foray, we thought it would be a good idea to continue the day of talks and that was the first Mycology Colloquium. It is usually held on the middle day of the foray, and provides a nice break from collecting, and a wonderful mycological networking opportunity. The Colloquium has been held jointly with the AMS a few times, including in 2016 in Queenstown/Glenorchy. The Colloquium presentations range from talks by students and established scientists on fungal biology and classification, through to slideshows of fungi from New Zealand and beyond. The foray attracts international visitors, and over the years we've been treated to Colloquium talks by many prominent international mycologists, including Rytas Vilgalys, Tom Bruns, Emma Harrower, Roy Halling, Andy Miller, Teresa Lebel, Kentaro Hosaka, Brandon Matheny and many others.

The 2022 in-person foray in Rotorua was postponed this year till 2023 thanks to COVID-19, but it gave us the unique opportunity to hold the first-ever online Colloquium, and it was a great success! If you did not have the chance to attend the talks, or want a refresher, you can access the talks using the following link:

<https://www.youtube.com/playlist?list=PLxZzarIa8C83RtlbZ1-irgbl1mCOxVLkJ>

Launch of the *Australian Journal of Taxonomy*

Taxonomy Australia (<https://www.taxonomyaustralia.org.au/>) is a national collaboration of the Australian taxonomic community supported by the Australian Academy of Science. Taxonomy Australia aims to implement the recommendations of the Decadal Plan for Taxonomy and Biosystematics by increasing the profile and understanding of taxonomy and biosystematics in the community and with government and industry, and by helping facilitate a step change in the rate at which we discover and document Australia's biodiversity.

Taxonomy Australia has recently implemented a fully open-access on-line journal, the *Australian Journal of Taxonomy*, to facilitate rapid publication of novel taxa of Australian plants, animals and fungi, both living and fossil. The journal is ideal for the publication of single and miscellaneous new taxa, small taxonomic revisions, and papers dealing with nomenclatural and typification matters. The journal features an innovative, fully-online processing platform which enables all steps, including authoring, peer-review, typesetting and publication to occur on the *Australian Journal of Taxonomy* website.

Australian Journal of Taxonomy is now open for submissions
at <https://www.taxonomyaustralia.org.au/ajt/home>

Tom May represents the Australasian Mycological Society on the Taxonomy Australia Steering Committee and is a member of the Editorial Committee for *Australian Journal of Taxonomy*. Tom is happy to field any questions or suggestions related to new journal (tom.may@rbg.vic.gov.au).

AMS Fungi Portrait – *Phytophthora podocarpi*



Sporangia of *Phytophthora podocarpi* with one sporangium releasing zoospores. Image: from Dobbie et al. (2021) (used with permission).

Kiryn Dobbie and colleagues recently provided a formal name to a species of *Phytophthora* first isolated in 2011 from endemic New Zealand species of *Podocarpus* (such as *Podocarpus totara*) in association with tōtara needle blight. The new species, *Phytophthora podocarpi* K. Dobbie, R.L. McDougal & P.M. Scott, has non- to semi-papillate sporangia that are persistent or caducous, homothallic gametangia and paragynous antheridia. Molecular phylogenetic analysis shows that *Phytophthora podocarpi* is related to *Phytophthora* clade 5 but in fact the closest relatives are species of *Peronospora*. The new species from New Zealand adds a further branch to

the intriguing evolutionary tree of Peronosporaceae, in which *Phytophthora*, as currently circumscribed, is paraphyletic.

Dobbie K, Scott P, Taylor P, Panda P, Sen D, Dick M, McDougal R (2021) *Phytophthora podocarpi* sp. nov. from diseased needles and shoots of *Podocarpus* in New Zealand. *Forests* 13, 214: 1–13. <https://doi.org/10.3390/f13020214>

Upcoming Mycology Events – Announcements

International Conference on Mycorrhiza 11



Organisers: Chinese Society of Mycology and International Mycorrhiza Society
July 31-August 5, 2022 | [Website](#) | Beijing, China

At ICOM 11, we will cover a broad range of research topics in mycorrhizal research including: taxonomy, diversity, ecology, molecular biology, genomics and transcriptomic, restoration and applied technologies for mycorrhizae. Given the changing global instructions with regards to travel, this conference is likely to be a hybrid online/in-person event. Check website for updates.

Asian Mycology Congress AMC2021



August 3-5 2022 | [Website](#) | Pathum Thani, Thailand & Online

It has been more than a decade since the AMC was held in Thailand and we are delighted to host this conference in Pathum Thani. The theme of the congress is Asian Mycology in the 21st century: the new generation, and we will focus on the young generation of mycologists who will be at the forefront of Mycology in the future. The congress will cover a wide range of topics from basic science (taxonomy, ecology, pathology) to the applied aspects (biological control, biotechnology, genomics, metabolomics).

22nd World Congress of Soil Science 2022



Organisers: International Society for Microbial Ecology
31 July – 5 August, 2022 | [Website](#) | Glasgow, UK

At a time of global concern for our planet and its growing population, managing our soils sustainably has never been as important. 90% of our food comes from soil, as does all of our timber and other fibre. Soil, and the ecosystems it supports, have a huge role in mitigating against climate change, is a vast reservoir of biodiversity, plays a significant role in flood management and contains key evidence of past civilisations. Our understanding of the importance of these functions is developing rapidly and the Congress provides the ideal setting to discover the international state of the art in these critical global issues and an opportunity to connect across all who work with and rely on soils.

18th International Symposium on Microbial Ecology



Organisers: International Society for Microbial Ecology
14-19 August, 2022 | [Website](#) | Lausanne, Switzerland

ISME18 is the 18th edition of our non-profit symposium which takes place every two years. The conference is the front runner in the field of microbial ecology, with an average of around 1,750 international scientists that attend the conference.

2022 Joint Conference of the Ecological Society of Australia and the Society for Conservation Biology Oceania

ESA-SCBO 2022

28 November – 2 December 2022 | Wollongong NSW



ESA-SCBO 2022 will be an in-person conference (Visit [Website](#)), but a limited number of online options will be offered, including live-streamed plenaries, some live-streamed symposia and some of the presentations being made available online after the conference. The 2022 Conference theme is 'Reconnecting'. As the world begins to open again, many of us are embracing the opportunity to reconnect – with each other, with nature, and with efforts to restore connections within nature.

If you have anything you'd like to contribute to the next edition, or if you would like to have your research or event featured, please contact Johanna Wong (johanna.wong@dpi.nsw.gov.au) or Tracey Steinrucken (ausmycsoc.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 June 2022 edition of the AMS Newsletter.

Stay Safe and All the best,

Jonathan Plett
AMS Councilor