17th May 2021

Dear AMS Member,

As I write we are at the glorious time of year for enthusiasts of mushrooms, the autumnal fruiting season is in full swing. I have recently returned from the week-long New Zealand fungal foray which this year was held in Stewart Island / Rakiura. The fungal foray is a great mix of professional and amateur mycologists who have a passion for fungi, but also provide support for mycology education and providing critical science backing Australasia's biosecurity and biodiversity knowledge. The stories in this newsletter highlight some of the more interesting finds at the foray.

For an audio-visual taste of the foray you can watch our story on the NZ national news here: https://www.tvnz.co.nz/one-news/new-zealand/and-fungi-experts-chasing-undiscovered-species-in-aotearoa or even better now that our travel bubble is open, join us next May in the North Island of New Zealand for the 2022 fungal foray https://www.funnz.org.nz .

Noho ora mai!

Dr Bevan Weir
Australasian Mycological Society Councillor
Website: https://www.australasianmycologicalsociety.com/
Facebook: AMSstudents and Twitter: @ausmycsoc

News from the AMS Council

2021 AMS MEETING – POSTPONED TO 2022

After several council meetings and discussions with organisers, we have unanimously decided that an in-person international (or Australasian) conference is unlikely to be well attended for several COVID-related and funding-related reasons. Many institutions and organisations are unlikely to provide funding for non-essential travel, particularly for students; and even with vaccinations progressing and travel bubbles opening up, travel plans are likely to be disrupted and travel policies probably won't change until next year at the earliest.

Instead, we are planning to continue with our virtual seminar series into the second half of the year, and there will also be an opportunity for mycology students to present their work in their own city via a poster session or speed talk. We will also begin planning for an in-person AMS2022.

Stay tuned for more information while our Conference Committee irons out the details.

MEMBERSHIP RENEWAL

We would like to remind everyone that annual membership fees are due at the start of the year.

Re-join at our memberships page.

Unsure if your membership is due? Drop our Treasurer Adam Frew an email (ausmycsoc.treasurer@gmail.com)

AMS Virtual Seminar Series

Our seminars occur on the last Wednesday of the month at 12:00pm AEST. Talks are 30 minutes long and are followed by 15 minutes of questions from the audience. To see upcoming seminars, and to register your attendance directly via Zoom, please visit our website https://www.australasianmycologicalsociety.com/virtual-seminars-2.

26TH MAY: *How fungi can change ecosystems*

Dr Sarah Sapsford
Animal and Plant Health Directorate | Biosecurity New Zealand

Fungi play distinct functional roles in ecosystems as pathogens, decomposers and mutualists and are thus important in shaping communities. I will present two case studies on how fungi can change ecosystems and how these fungi interact with other members of their community

29th June: *Topic TBA*
Professor Treena Burgess
Research Director at Institute, Research and Innovation, Murdoch University

Feature Research

The 2021 Stewart Island / Rakiura Fungal Foray – New Discoveries

Bevan Weir
Research Leader, Mycology & Bacteriology Systematics
ICMP Culture Collection Curator
Manaaki Whenua – Landcare Research
Auckland, New Zealand

The work below by professional mycologists from Manaaki Whenua – Landcare Research and Otago University highlight the diversity and new discoveries that can be made on our seasonal field trips (the fungal forays) that we share with the amateur mycological community. At the foray sites we involve local schools, community, and Māori iwi to share our knowledge and passion for fungi.

My focus over the past few forays has been on entomopathogenic fungi, mostly *Beauveria* and *Cordyceps*, to survey these fungi in the natural forest environments of New Zealand. As with many NZ fungi groups the species diversity, biogeography, and host associations are poorly known. The fungal forays provide a great way to collect specimens and cultures to help answer these questions.

A selection of specimens from the foray are dried and stored in the national fungarium of New Zealand (PDD) or the Otago Regional Herbarium (OTA). Cultures are stored in the national ICMP culture collection. ICMP and PDD specimens with associated metadata, images, and sequences are available at https://scd.landcareresearch.co.nz/ for anyone to use in their research.

Interesting finds by Otago University mycology group

David Orlovich, Anna Gehricke, David Lyttle, Josie McGovern and Andy Nilsen
Department of Botany
Otago University
Dunedin, New Zealand

On Tuesday 13 April, forayers visited Mamaku Point Conservation Reserve, a site 4 km north of Oban that contains both remnant and regenerating forest. The reserve is protected by a biosecurity fence to exclude predator mammals. Stands of *Leptospermum scoparium* (mānuka) are present in in some areas, and it was under one such area at the north-western corner of the reserve that our group made several collections of the elegant blue webcap *Cortinarius rotundisporus*. *Cortinarius rotundisporus* is an ectomycorrhizal fungus well known to Australasian mycologists as it occurs naturally in both NZ and Australia. Searching records of this species in the NZ Fungarium (PDD) and the Otago Regional Herbarium (OTA) returned no other Stewart Island collections, so we think these represent the southern-most collections of this species.

The species has had a chequered history. Cleland and Cheel described *C. rotundisporus* in 1918[1] based on collections from Mosman and Bradleys Head in harbourside Sydney. They described the similar *C. austroevernius* in the same publication from other Sydney sites: Lane Cove River, North Bridge and [Royal] National Park. In 1948, Cleland and Harris[2] described *C. oleaginus* from Waterfall Gully at the foothills of the Mt Lofty Ranges in South Australia. When Horak and Wood revised the myxacioid *Cortinarius* in 1990[3], they examined collections of all three species, including *C. rotundisporus* from New Zealand, and chose to recognise only *C. rotundisporus*, noting that it is a "very variable species" and that there is "no doubt that *C. austroevernius* and *C. oleaginus* are syntaxic with *C. rotundisporus*". Not to be discouraged, Cheryl Grgurinovic retained all three species in her 1997[4] book on South Australian fungi. Grgurinovic designated a lectotype for *C. austroevernius* (v.1917, AD 5270, Bradleys Head, Sydney, NSW) and neotypes for *C. oleaginus* (12.vi.1943, AD 4233, Mt Lofty, SA) and *C. rotundisporus* (15.vi.1919, AD 4283, Mosman, Sydney, NSW). In one of the first DNA barcoding papers on *Cortinarius*, Nicole Sawyer and colleagues (1999[5]) found three distinct genotypes of collections identified as *C. rotundisporus*, and they hypothesised that these may represent the three Cleland species retained by Grgurinovic. In summary, while *C. rotundisporus* is an easily recognised species, what the name actually represents has been the subject of much research.

With the generous support and assistance from Pam Catcheside, Teresa Lebel, the late Alec Wood and the late John Cairney, we have been studying Australian and New Zealand collections of *C. rotundisporus.* We will generate DNA sequences with the aid of Illumina MiSeq sequencing from the

---

[1] Cleland JB, Cheel E 1918. Australian fungi: Notes and descriptions No. 1. *Transactions and Proceedings of the Royal Society of South Australia* **42**, 88–138.

[2] Cleland J.B. & J.N. Harris (1948). Illustrations and descriptions of South Australian fungi 1. *Agaricus* and *Cortinarius* with special references to antibiotic species. *Records of the South Australian Museum* **9**, 43–55.

[3] Horak E, Wood AE 1990. *Cortinarius* Fr. (Agaricales) in Australasia. 1. Subgen. *Myxacium* and subgen. *Paramyxacium*. *Sydowia* 42, 88–168.

[4] Grgurinovic CA 1997. *Larger Fungi of South Australia*. Adelaide: The Botanic Gardens of Adelaide and State Herbarium, and The Flora and Fauna of South Australia Handbooks Committee.

[5] Sawyer NA, Chambers SM, Cairney JWG 1999. Molecular investigation of genet distribution and genetic variation of *Cortinarius rotundisporus* in eastern Australian sclerophyll forests. *New Phytologist* **142**, 561–568.

old type specimens from AD to determine the phylogenetic diversity of this species on both sides of the Tasman. Such a well-known species might not seem like a big foray highlight but having the southernmost *C. rotundisporus* adds a new extreme record for our study and will add to what is quite a complex taxonomic detective story about this species.

Figure 1: Cortinarius rotundisporus. NZ: Stewart Island, Mamaku Point. Leg. A. Gehricke FUNNZ2021/001, OTA72287 13 April 2021. https://inaturalist.nz/observations/73803143

Interesting ascomycete fungi from Stewart Island by Peter Johnston

Peter Johnston
Mycologist
Manaaki Whenua – Landcare Research
Lincoln, New Zealand

The very south of New Zealand has a somewhat unique fungal diversity, with several distinctive, common species apparently restricted to this area. These include several parasites of *Hebe* that are common on the subantarctic islands which have also been found on Stewart Island. These are discussed below, together with some notes on a *Chlorovibrissea albofusca* specimen collected during the Stewart Island foray, and *Xylaria apiculata*.

Orbiliopsis callistea*, a leaf pathogen of *Hebe elliptica

An immature collection of *Orbiliopsis callistea* was found during this year's Foray. First described from Central Otago (Lake Harris Track) on *Hebe subalpina* in the 1920's, a fungus from *Hebe elliptica* seems to match morphologically. The *Hebe elliptica* fungus is common in the subantarctic islands and is also found on Stewart Island. Morphologically the fungus seems to be *Rhytismatales*-like

(large hyaline ascospores with a thin gelatinous sheath and asci with an undifferentiated apex) but DNA sequences shows it to be phylogenetically isolated in *Leotiomycetes*, distinct from *Rhytismatales*. Whether the fungus first described from *Hebe subalpina* really is the same as the one from *H. elliptica* cannot be certain until a modern specimen is available from *H. subalpina* for DNA sequencing.

Figure 2: Orbiliopsis callistea from Hebe elliptica, PDD 97932. The orange blobs are the sexual state, an erumpent, subcuticular apothecium; the black streaks a spermatial asexual state.

Clypeostroma spilomeum, a leaf pathogen of _Hebe elliptica_ from Campbell Island, the Auckland Islands and Stewart Island

Two *Clypeostroma* species have been described from *Hebe*, *C. spilomeum* from *Hebe elliptica* and *C. hemisphaericum* from *Hebe odora*. In a paper published in 2002 I compared the morphology of these two species, concluding that they probably belonged in different genera (NZ Journal of Botany 40: 265–268, 2002). Later I was able to extract DNA from specimens from the subantarctic islands of both species and sequences from these specimens showed they belong in the same genus. *Clypeostroma* is a New Zealand endemic genus first named in 1914. Its position amongst *Ascomycota* was uncertain, but the recent sequencing showed it to be *Teratosphaeriaceae*. The family includes many leaf and stem-inhabiting plant pathogens, but it is interesting that it also includes so-called rock-inhabiting fungi, found in very harsh environments including Antarctica.

Figure 3: Clypeostroma hemisphaericum on Hebe odora, Auckland Islands, PDD 102868

Rhytidiella hebes, a stem pathogen of _Hebe elliptica_

First described from the Auckland Islands, a collection of this species was found during the Stewart Island foray, the first record from outside the subantarctic. It was found on a heavily infected plant (almost every branch and twig infected) at the start of the track along the shore from the end of the Lee Bay road. With many pathogens of native plants infection is extremely patchy, often the only sign of the disease being on a very small number of heavily infected plants. This was the case with the *Rhytidiella*, no other infection being seen on adjacent plants.

Figure 4: Rhytidiella hebes, FUNNZ2021/1236 (PDD 117678)

We managed to get DNA from the Lee Bay specimen, generating the first DNA sequences from the genus *Rhytidiella*. Currently placed in *Cucurbitariaceae*, our preliminary sequencing suggests this fungus is in fact *Leptosphaeriaceae*. We are working on confirming this with additional genes.

Chlorovibrissea albofusca **(FUNNZ2021/0520)**

A lovely collection of *Chlorovibrissea albofusca* found at the Stewart Island foray by Kent Jacobsen raises some questions about the morphological and phylogenetic limits of this species. Four New Zealand specimens now have ITS sequences available, showing them to be phylogenetically close to the Chilean species, *C. chilensis*. The Chilean species is morphologically distinct from the New Zealand fungus, having a shorter, green stipe and a paler head.

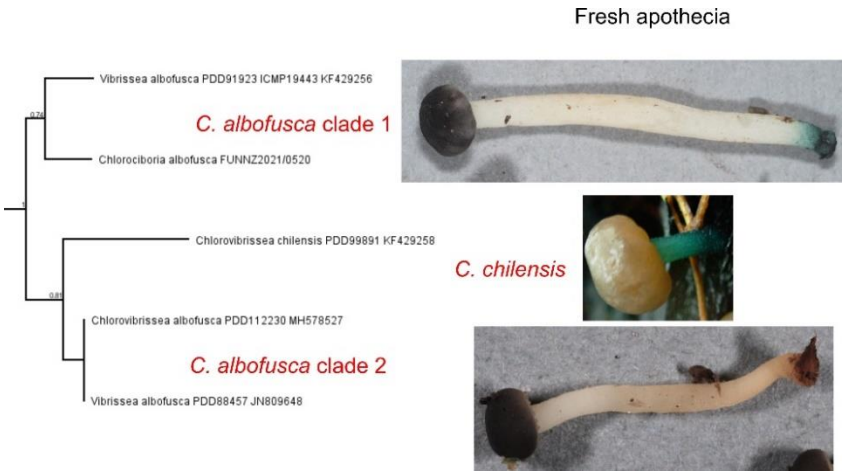

Figure 5: Chlorovibrissea albofusca ITS phylogeny, with macroscopic appearance of apothecia of specimens from the two New Zealand clades

The four New Zealand specimens that have been sequenced fall into two phylogenetically slightly different groups. One contains the specimen collected at the Stewart Island foray plus another collected by Tom May at the 1995 Catlins foray. Interestingly, both specimens had blue-green pigment at the base of the stipe when fresh – seen in the photograph of this year's specimen and commented on in notes prepared by Tom on the specimen he collected in 1995. The second phylogenetic group from New Zealand has one specimen clearly with orange rather than green pigment at the base of the stipe, but the photo of the second specimen in this group (with an identical ITS sequence) does not clearly show the base of the stipe.

Are there two *Chlorovibrissea albofusca*-like species in New Zealand – one with a blue-green base, the other with an orange base? The description of the type specimen does not mention colour at the base of the stipe. More detailed comparison of the existing specimens may reveal additional morphological differences between the groups. As more specimens are collected at forays in the years ahead, the taxonomic status of these specimens may be resolved.

Xylaria apiculata **(FUNNZ2021/1512)**

Xylaria apiculata was first named by Cooke in 1879 from a specimen collected in New Zealand at Maungaroa. In a paper in 1966 Stan Hughes concluded that Cooke's use of Maungaroa was a spelling error for Mangoroa, a locality in the Rimutaka Ranges, near Wellington (NZ Journal of Botany 4: 522–532, 1966). It is one of the most common *Xylaria* species we have, but a specimen collected by Adrienne Stanton at this year's foray is the first to have been sequenced. The name *Xylaria apiculata* has been used widely around the world for morphologically similar fungi, but no GenBank accessions using this name have ITS sequences that match the authentic New Zealand sequence from Adrienne's specimen. Based on the evidence available, this is an endemic New Zealand species.

Figure 6: *Xylaria apiculata*; the type specimen sheet in Kew on the left, FUNNZ2021/1512 (PDD 117682) on the right.

Interesting finds by Jerry Cooper

Jerry Cooper
Mycologist
Manaaki Whenua – Landcare Research
Lincoln, New Zealand

Phaeoclavulina zealandica

This was found by Stephanie da Silva on the Fern Gully Track. It is a highly distinct browning endemic species with bright rust coloured spores covered in plate-like warts. There are only three records of this species with the last in 1982 (the holotype). It was described by Ron Petersen in 1988 as *Ramaria pancaribbea* var. *zealandica*. It was moved to *Phaeoclavulina* by Giachini in 2011 in his PhD thesis publication. This genus was segregated from *Ramaria* and consists mostly of those species associated with woody debris and placed in *Ramaria* subgenus *Echinoramaria*, but not exclusively so. Most species transferred to *Phaeoclavulina* are saprophytes whereas as many true *Ramarias* are known to be ectomyorrhizal. Giachini obtained LSU from the type collection PDD 46655 from 1982. However ITS/LSU sequences for the Stewart Island collection do not agree with that sequence, which is not placed in the *Phaeoclavulina* clade. There can be no doubt this recent collection represents Petersen's taxon and is a good species of *Phaecoclavulina*. The same anomaly occurs for sequences of New Zealand *Gloeocantharellus* species sequenced at the same time. These sequence anomalies can only be addressed by repeated and more rigorous sequencing of the New Zealand type collections.

Figure 7: FUNNZ 2021_0778. S. da Silva

Sarcodon carbonarius

Found by Jo Pallente at Mamaku Point and top of the list of target species I wanted to find. A joint paper with Tom, May and James Douch at Melbourne RBG is near completion and it deals with some of the hydnaceous fungi (Bankeraceae) of Australia and New Zealand. In New Zealand sequence data confirms the usual picture that we several species known by incorrect northern hemisphere names and in addition there is cryptic diversity. The paper builds on the recent work by Larsson (2019) showing that *Sarcodon* is paraphyletic and several species in the genus, including New Zealand species are incorrectly placed. *Sarcodon carbonarius* was described by Cunningham in 1948 from Half Moon Bay, Stewart Island. In 1971 Maas Geesteranus reduced the name to synonymy under the northern hemisphere name *S. thwaitesii*. Modern sequence data tells us this kind of north/south distribution, especially for indigenous ectomycorrhizal species, simply does not happen. S*. carbonarius* should be recognised as an independent species. The problem is that under the misapplied name *S. thwaitesi* my review of PDD collections quickly showed we were dealing with multiple species and working out which was the real *S. carbonarius* became a problem. The foray collections of *Sarcodon carbonarius* provided an opportunity to identify the real version and confirm its phylogenetic position. The data show that *Sarcodon carbonarius* is not really a *Sarcodon*, but neither is it a *Hydnellum* where most misplaced species belong. It represents an undescribed genus. In addition, the Stewart Island collections confirmed there are two closely related species with very similar morphology (in addition to other species misidentified in PDD as *S. thwaitsii*). The ectomycorrhizal status of *'Sarcodon' carbonarius* remains uncertain. Several collection sites do not appear to be associated with ectomycorrhizal hosts, which is intriguing, but unfortunately nobody finding this species recently has searched sites thoroughly – me included.

Figure 8: FUNNZ 2021_0727 J. Pallante

***Gilophorus subheteromorphus* sensu Horak**

Gliophorus subheteromorphus is the name applied to a glutinous red species in New Zealand by Horak. The species was originally described as *Hygrocybe subheteromorpha* from Chile. Modern phylogenetic treatments show that *Gliophorus* contains a mix of genera. The yellow species were recognised under the new genus *Gloioxanthomyces* recently. The remaining true *Gliophorus* species show a range of colours but never bright red – except for *G. subheteromorphus*, which made me suspicious. Sequences of dried PDD collections identified as *G. subheteromorphus* demonstrated at least 3 different taxa, and none with a sequence in *Gliophorus*. However the accompanying collection notes and morphology were inadequate to confirm the identity of any of them as Horak's concept of this species. David Whyte

Figure 9: FUNNZ2021_1648 D. White

made a collection on the foray of a very glutinous red species conforming exactly to Horak's concept of New Zealand material provided an opportunity to examine the phylogenetic position. As suspected (Mycological notes 42) the sequence indicates it is not a *Gliophorus* and is a *Hygrocybe* species in the fuliginata clade containing just a few Australasian species. Whether the NZ taxon is the same as the original version from Chile remains to be confirmed. It is probably indigenous and undescribed. In the meantime, *Hygrocybe subheteromorpha* is a better name to apply in New Zealand.

Mycena roseoflava

Anna Chinn brought in her customary night-foray collections of bioluminescent fungi and I was astonished to find this well-known little species was among them. It starts yellow and turns pink and seem to glow quite brightly. This species was described by Greta Stevenson in 1964 and never suspected of bioluminescence in the intervening years. It is not part of the known bioluminescent groups of *Mycena* species.

Figure 10: PDD 113359 Noah Siegal

Upcoming Mycology Events – Announcements and Changes

Soil Ecology Society Biennial Meeting 2021 (Online)

Organisers: Soil Ecology Society (US) and local organizers.
27 May, 2021 | Website

The Soil Ecology Society (SES) is an internationally recognized professional organization dedicated to furthering the science and awareness of soil ecology and the importance of soils for human and environmental well-being. The SES biennial meetings address contemporary issues in the field of soil ecology, providing a forum for soil ecologists, soil scientists, teachers of soil ecology, and members of related disciplines to share original research, participate in meeting symposia and workshops, and identify priorities for future research and outreach. The meeting focuses on three integrated themes: Scaling from elements to ecosystems; diversity and inclusivity of soil domains; global community

Eurosoil 2021 (Online)

Organisers: European Confederation of Soil Science Societies and local organizers.
23 – 27 August, 2021 | Website

The objective of Eurosoil 2021 is to bring together, in a safe online space, leading research scientists working on soil related topics and stakeholders dealing with issues of public concern, such as soil degradation and consequences of climatic changes. The important bridging role of soil practitioners to translate scientific knowledge into practice will be emphasised during the virtual edition of Eurosoil 2021.

Australasian Plant Pathology Conference (Online)

Organisers: APPS
23 – 26 November, 2021 | Website

We welcome the Australasian plant pathology community to what will be both the 23rd Biennial Australasian Plant Pathology Society Conference and our 1st fully online conference! This event was originally planned to be held in Hobart, Tasmania, however, due to the potential for ongoing impacts from COVID-19, we have decided to hold a fully online conference.

16th Congress of the Federation of Asian and Oceanian Biochemists and Molecular Biologists

Organisers: FAOMB and NZMS online and In-person
22 – 25 November, 2021 | Website

Joint with the New Zealand Microbiology Society, session topics will include biotechnology; protein structure and function; molecular microbiology; industrial microbiology; gene regulation and signal transduction, genetics and genomics; the molecular basis of disease (including plant pathology); and plant biology, mycology and biochemistry. This could be a good chance for students to have an in person conference.

Asian Mycology Congress AMC 2021 (Online)

Organisers: The National Center for Genetic Engineering and Biotechnology (BIOTEC), together with the Faculty of Science, Prince of Songkla University, School of Science, Walailak University, Thailand Mycological Association, Thai Medical Mycology Forum, and Thailand Convention and Exhibition Bureau
15 – 17 December, 2021 | Website

AMC 2021 will be a virtual conference for speakers and presenters. It has been more than a decade since the AMC was held in Thailand. 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). The conference fee is only NZD $54 or AUD $ 50.

18th International Symposium on Microbial Ecology

Organisers: International Society for Microbial Ecology
21-26 August, 2022 | Website | Cape Town, South Africa

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.

ISME-20 will be held in Auckland in August 2026

IMC12

Given the alarming development of the pandemic in various regions of the world, and subsequent travel restrictions, the International Mycological Association has made the difficult decision to postpone the IMC12. The COVID-19 pandemic has had negative consequences for planning the upcoming IMC, and will still restrict international travel for some time to come. One of the main aims of IMC meetings is to engage the youth, facilitate face-to-face meetings, and hands-on workshops in mycology. To this end, we have decided to postpone IMC12 to July 2024. The IMC12 meeting has to occur before the International Botanical Congress, which has since also been postponed to later in July 2024, and relocated from Brazil to Madrid, Spain.

Other News and Interesting Finds

Fungi x Botanica Exhibition by Laszló Irinyi

Fungi x Botanica Exhibition organised by The Royal Botanic Garden Sydney between 24th of April and 9th of May was a fantastic journey in the world of Fungi by Art and Science.

I attended the exhibition on 29th of April. The day started by a fascinating talk of Edward Liew, Manager of the Plant Pathology at Botanic Gardens "The Good, The Bad, and The Delicious". An overview about universe of Fungi with stunning photos. Edward's presentation gave an overview of the diverse world of Fungi for the non-scientific audience. After the talk, there was complemented walk through the garden with expert guides presenting where and how fungi grow in the Royal Botanic Garden. The event ended with the 2021 Fungi X Botanica Exhibition, where brunch was served. In the exhibition, the artists captured the word of fungi with their diverse artwork using watercolour, acryl, ceramic, sculptors, and photographs. All artworks in the exhibition were for sale. The event was a great example how to join Science and Art and recommended for everyone interested.

What's in a name? *Fungal taxonomy and sequence-based nomenclature*

What's in a name? The importance of accurate fungal taxonomy Australasia's horticultural and agricultural economy relies on effective biosecurity. This requires keeping major pests and pathogens out, as well as detailed knowledge about what organisms are already present in our natural and productive ecosystems and whether they are 'good' or 'bad' for the health of those ecosystems.

However, biosecurity management decisions are possible only if organisms detected can be reliably identified and have accurate names. Fungi, for example, include many important crop pathogens, such as the *Puccinia graminis*-like cereal rusts. Individual species in this group of rusts are very difficult to tell apart, but it is important to do so because only some of them are present in Australasia.

And, as a new paper on the challenges of cataloguing fungal diversity just published in Nature Microbiology points out, we are currently in a discovery phase in the fungal kingdom: 150,000 species are currently known to science but 2.2 to 3.8 million are estimated to exist.

The rules that govern the naming of fungi, embedded in the International Code of Nomenclature for Algae, Fungi, and Plants, date back more than 150 years, but they are now having to be updated every four to six years to keep abreast with new scientific and technological developments. The novel approach of environmental DNA (eDNA) sequencing is revealing a large number of previously unknown fungi from soil, water, air and other sources, which are only known from their DNA and have no physical specimen or living culture.

Mycologists – scientists who study fungi – are at the forefront of this work, including Dr Peter Johnston of Manaaki Whenua - Landcare Research, who is a member of the International Commission on the Taxonomy of Fungi and a contributor to the above paper.

Mycologists face the challenge to quickly, yet properly catalogue the vast fungal diversity unveiled by these new approaches, and to provide a stable naming system that enables accurate and precise communication between taxonomic experts and a diverse user community. To achieve this, the authors of the new paper, representing global expertise in all areas of mycology, elaborate on how the naming of fungi is being adjusted to these new requirements, balancing the need for names as an effective currency for communication with the huge amount of exciting new findings that emerge every day from the latest studies on fungal biodiversity.

According to Dr Johnston, it's an exciting time to be a fungal taxonomist. "Basic presence/absence data, underpinned by accurate naming and identification, are central to the management of border biosecurity risks to New Zealand. Whereas in the past, fungi were identified in terms of shape and colour under the microscope, suddenly we have an almost unlimited ability to detect and separate one new species from another, and to validate what we already know.

"We are currently in a frontier discovery phase in mycology worldwide, and our paper proposes how to handle the naming and classification of this vast new diversity."

Lücking R, Aime MC, Robbertse B, Miller AN, Aoki T, Ariyawansa HA, Cardinali G, Crous PW, Druzhinina IS, Geiser DM, Hawksworth DL, Hyde KD, **Irinyi L**, Jeewon R, **Johnston PR**, Kirk PM, Malosso E, **May TW**, **Meyer W**, Nilsson HR, Öpik M, Robert V, Stadler M, Thines M, Vu D, Yurkov AM, Zhang N, Schoch CL. 2021. Fungal taxonomy and sequence-based nomenclature. Nature Microbiology 6: 540-548. https://doi.org/10.1038/s41564-021-00888-x

Full text shared link: https://rdcu.be/cjq8c

A related blog: https://naturemicrobiologycommunity.nature.com/posts/naming-the-fungal-universe-c6e3ed20-db69-454b-9cba-2d3286922591

We hope you enjoyed the May-June edition of the AMS Newsletter. 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 our Secretary Laszlo Irinyi (geza25@gmail.com) or our President Tracey Steinrucken (ausmycsoc.president@gmail.com).