



**IMC12**  
MAASTRICHT

11-15 August 2024



International  
Mycological  
Association

**newsletter**

Issue 1 – September 2023

We are pleased to announce that we have extended the deadline for the submission of symposium and workshop proposals to 22 September!

<https://imc12.org/symposium-proposal-submission-and-guidelines/>

**DEADLINE EXTENDED TO 22 SEPTEMBER**

Hosted by the Netherlands Mycological Society and the Westerdijk Fungal Biodiversity Institute



WESTERDIJK  
FUNGALBIO  
DIVERSITY  
INSTITUTE

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**IMC12**

**12<sup>TH</sup> INTERNATIONAL  
MYCOLOGICAL  
CONGRESS**

**IMA Fungus**  
THE GLOBAL MYCOLOGICAL JOURNAL

**MycoBank**  
[www.mycobank.org](http://www.mycobank.org)

## WELCOME MESSAGE

The International Mycological Congress (IMC12) in Maastricht is less than a year away (11–15 August 2024)! The meeting will bring together mycologists from all around the globe to discuss their latest research and current developments in fungal research.

We are being hosted by the Netherlands Mycological Society and the Westerdijk Fungal Biodiversity Institute, who have set up an international scientific committee to develop a programme to incorporate all fields of mycology around the theme “Fungal Biology and Applications”. The IMC12 scientific programme, satellite meetings, and workshops will be rich with talks, posters and opportunities for discussions with links to all aspects of mycology.

Maastricht is one of Europe’s most impressive cities with a rich history. This four-day meeting will include keynote lectures by scientific leaders, bridging sessions and workshops in seven themes: Cell biology, biochemistry and physiology; Environment, ecology and interactions; Evolution, biodiversity and systematics; Fungal pathogenesis and disease control; Genomics, genetics and molecular biology; Applied Mycology and Nomenclature.

*We are pleased to announce that the call is open for the submission of symposium and workshop proposals!*  
<https://imc12.org/symposium-proposal-submission-and-guidelines/>

We look forward to welcoming you in Maastricht in person!

Pedro W. Crous  
Chair, IMC12



## INTERESTING MYCOLOGICAL BITS

August 2023: The deaths of three Australians after a Saturday lunch in the small town of Leongatha sent shock waves through the community, but also shone the spotlight on one of the most poisonous organisms on earth. The death cap mushroom, *Amanita phalloides* kills somewhere between 10 and 30 per cent of those who ingest it.

While just one mushroom can kill an adult, death caps are said to taste pleasant and look similar to edible mushrooms used in cooking. Once ingested, symptoms can arise anywhere from 6–24 h after eating the mushroom. Read more about this interesting case here <https://www.abc.net.au/news/2023-08-10/death-cap-mushroom-poisoning-death-toxicology/102707792>

Fungi provide ecological and environmental services to humans, as well as health and nutritional benefits, and are vital to numerous industries. Fermented food and beverage products from fungi are circulating in the market, generating billions of USD. However, the highest potential monetary value of fungi is their role in blue carbon trading because of their ability to sequester large amounts of carbon in the soil. There are no conclusive estimates available on the global monetary value of fungi, primarily because there are limited data for extrapolation. This study outlines the contribution of fungi to the global economy and provides a first attempt at quantifying the global monetary value of fungi. Our estimate of **USD 54.57 trillion** provides a starting point that can be analysed and improved, highlighting the significance of fungi and providing an appreciation of their value. Read more about this here <https://link.springer.com/article/10.1007/s13225-023-00520-9>

## MYCOLOGICAL NEWS

### Wieland Meyer is the new director of the Westerdijk Institute

Medical mycologist Prof Wieland Meyer is the new director of the Westerdijk Fungal Biodiversity Institute, Utrecht, The Netherlands, an Institute of the Royal Netherlands Academy of Arts and Sciences. Originally from Germany, Prof Meyer was a Dean of Research at the Faculty of Health Sciences at Curtin University, Perth, Western Australia, Professor of Molecular Medical Mycology at Curtin Medical School at the same university and at Sydney Medical School at the University of Sydney, Australia.

Prof Meyer is an internationally recognised scientist with a long record of accomplishment of over 35 years of research and over 20 years of teaching experience. His research places him at the intersection of medical

and environmental mycology – the study of fungi. He studies how fungi can make people and animals sick on a molecular level, but at the same time conducts research into the evolution, genetic properties and epidemiology of fungi.

In his new role, Prof Meyer will work to strengthen the national and international reputation of the Westerdijk Fungal Biodiversity Institute as the authority in all fields of mycology. For example, he wants to manifest the institute as a global centre for biological resources. He sees a leading role for the Westerdijk in determining reference genomes for all fungal species currently stored in the world-renowned collection of the institute to form the basis for phylogenetic studies of the fungal kingdom, clinical diagnosis, understanding pathogenicity and antifungal resistance, product discovery and applications in industry. He also wishes to continue the innovative work underway in the field of database and software development, in order to bundle all possible scientific data associated with the fungal strain stored in the collection and make them available to the widest possible audience. He wants to start collaborations in the field of outreach and education with universities and museums.



After obtaining his PhD at the Humboldt University in Berlin, Germany, Prof Meyer worked as a researcher in Germany, the United States, Australia, France, and Brazil, where he is still a visiting professor at the Fundação Oswaldo Cruz (FIOCRUZ) in Rio de Janeiro. He held various leading positions in Sydney and currently oversees the research of the Faculty of Health Sciences at Curtin University in Perth. He also leads the global mycological community as the president of the International Mycological Association (IMA).

His research group studies yeasts species within the *Cryptococcus neoformans/Cryptococcus gattii* species complex, which can cause lung and brain infections in humans and animals. He also heads an antifungal resistance survey of *Aspergillus fumigatus* strains in twelve Latin American countries. Prof Meyer already collaborates with researchers from the Westerdijk Institute on projects involving DNA barcoding, a technique that identifies species based on short DNA fragments, for which he set up a global reference database within the International Society of Human and Animal Mycology (ISHAM). These reference sequences form an integral part of the Atlas of Medical Fungi and are used globally as references for molecular clinical diagnosis of mycoses.

## WESTERDIJK SPRING SYMPOSIUM: FUNGAL EVOLUTION

For 2023 the theme of the Westerdijk symposium was “Fungal Evolution” (17–18 April 2023), which was held at Trippenhuis, the headquarters of the Royal Dutch Academy of Arts and Sciences in Amsterdam. The meeting was attended by 128 participants from 29 nationalities.

On Monday morning, the first session “Do you believe in taxa” (Cathie Aime, Michael Seidl, Sybren de Hoog, Marco Thines) focussed on genome dynamics and evolutionary trends in populations, species and genera, and potential pitfalls in analysing these data. The second session “Intra- and interspecific variation of food and indoor fungi” (Monika Coton, Inger Skrede, Jens Frisvad, Cobus Visagie) focussed on the species boundaries in food and indoor fungi, and their functional diversity. After a light lunch, the third session “Microbiota preserved for the future” (Tanja Kostic, Isabelle van Thiel, Vincent Robert) took a detailed look at biobanking, databanks, tools and resources. Vincent Robert, who was a special speaker, reflected on his past 30 years at the Westerdijk Institute, and future prospects for those working in mycology. This was followed by the final session of the day, “International Commission for the Taxonomy of Fungi: von Arx’s dream revisited”, where David Hawksworth and Andrey Yurkov presented their views on implementing the use of cultures as types. The session was rounded off by a panel discussion on the topic, drinks, further discussions, poster awards, and a speaker’s dinner.

Tuesday started with the announcement of the Johanna Westerdijk Award made to **Andrey Yurkov**, and the Josef Adolf von Arx Award to **Cathie Aime** (see below). The first scientific symposium on “Fungal evolution and chemical diversity” (Russell Cox, Theo Llewellyn, Xing Zhang, Olga Genilloud) focussed on metagenomics and secondary metabolites, followed by “Fungal genomics and applications” (Scott Baker, Irina Druzhinina, Jiajia Li, Wilco Meijer), who addressed biotechnology and mycoproteins. The first session after lunch, “Mycobiomics” (Yasmina Marin-Felix, Miroslav Kolarik, Josphat Matasyoh, Neriman Yilmaz, Jennifer Luangsa-ard, Markus Gorfer) focussed on secondary metabolites in fungi, and their potential applications. The final session of the day “Human health: fungi on the move” (Eveline Snelders, Vit Hubka, Grit Walther, Auke de Jong) discussed emerging fungal pathogens, azole resistance, and the evolution of pathogenic species complexes. The symposium was concluded with a discussion and drinks.









## Johanna Westerdijk Award: Andrey Yurkov

*Awarded on special occasions to an individual who has made an outstanding contribution to the culture collection of the CBS Fungal Biodiversity Centre, marking a distinguished career in mycology. Nominees for the award will be evaluated on the basis of quality, originality, and quantity of their contributions to the collection, and on the basis of associated mycological research in general.*

Dr Yurkov is one of the World's leading authorities in yeast taxonomy with particular expertise on the systematics, biodiversity, and evolution of yeasts. He is a sought-after speaker and organizer and is actively involved as a reviewer for numerous journals, and serves on committees in the WFCC, the IMA, the Yeast Foundation and the yeasts.org. He is recognized as a special recipient of the Westerdijk Award today, however, as he has deposited a huge collection of yeasts in the culture collection, thereby ensuring that these fungi remain available for research by future generations. These cultures were collected by him and his team over many years, and as such represent a major investment of time and resources. As mycological community, we thus thank him for this incredible foundation, and trust that students in years to come will continue to build on this wonderful platform.



## Josef Adolf von Arx Award: Mary Catherine (Cathie) Aime

*Awarded on special occasions to an individual who has made an outstanding contribution to taxonomic research of fungal biodiversity, marking a distinguished career in mycology. Nominees for the award will be evaluated on the basis of quality, originality, and quantity of their contributions in the field of fungal taxonomy.*

Prof Cathie Aime obtained her PhD at the Virginia Polytechnic Institute and State University in 2001. She has been Curator of the U.S. National Fungus Collections in



Beltsville, a Professor at Louisiana State University, and is presently Professor at the Department Botany & Plant Pathology, Purdue University, where she is also Director of the Arthur & Kriebel Herbaria. Throughout her career she has received numerous awards, and is also a Fellow of the Mycological Society of America, and the Linnean Society of London. Cathie's research emphasis has focussed on two areas, the rust fungi Pucciniomycotina and biodiversity. Cathie has published extensively in a wide range of journals, and her papers are extremely well cited, appreciated, and used by the community. It thus gives us great pleasure to award Cathie Aime with the Josef Adolf von Arx award for fungal systematic research.

Pedro W. Crous

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## SOCIEDADE BRASILEIRA DE MICOLOGIA'S NEWSLETTER/BULLETIN: MYCOBIOTA BULLETIN

The Brazilian Society of Mycology (SBMic) began its activities in 1990. Its first congress occurred in 1995. Its focal point has mostly been its congresses. These have occurred at 3-year intervals, except for the X Congress, which has been delayed because of the covid pandemic. It will now take place in February 2024 (<https://cbmic2024.com.br/>) in Belo Horizonte (state of Minas Gerais).

Recent year's developments in SBMic have been, among others, the preparation of a website (<https://sbmic.org/>) and a newsletter (Boletim Micobiota).

The bulletin first appeared in 2021. So far, it has been regularly published quarterly.

The themes explored in the bulletin are related to all Mycology aspects. It intends to communicate not only with the Society members, but also with the Portuguese-speaking public with an interest in fungi as a whole. Therefore, a simple and direct language, combined predominantly with scientific-based information and attractive images, are preferred over the usual scientific format.

Over the last editions, a range of subject have appeared as front-cover:

- Repatriation of an iconic mushroom fossil (*Gondwanagaricites magnificus*) smuggled out of Brazil
- Below-zero mycology – on the activities of Brazilian mycologists surveying for fungi in Antartida
- Connection between the armadillo and systemic mycoses – on the seminal research/detective work performed by the late Bodo Wanke (SBMic founder) and other Brazilian medical mycologists in the Brazilian northeast

- Bioluminescent fungi in the Amazon forest
- Discovery of edible truffles in Brazil
- Mycologists of the past (thoughts on their legacies and institutions)
- Zombie ant-fungi: facts and fiction

Mycobiota Bulletin is open access. All numbers and editions can be found at

<https://sbmic.org/micobotaboletim>

Even the non-Portuguese speaking public is welcome and may find it interesting to browse through the themes and images covered in Micobiota.

Eduardo Guatimosim

Editor-in-chief

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## British Mycological Society at IMC12

Each year, the British Mycological Society organises an Annual Scientific Meeting, hosted at various locations across the UK. However, in 2024, the BMS will instead participate in IMC12, providing opportunity for its members and the wider UK mycology community to join international colleagues at this long-awaited event! The BMS is planning to host a reception for members and invited guests at the congress venue. Additionally, a special BMS travel grant will be made available to support BMS members who secure a role as a speaker, poster-presenter or chair at IMC12.



Participants of the British Mycological Society's 125th Anniversary Conference, Cranfield University, April 2022

## International Symposium for UK Fungus Day

The British Mycological Society is holding a one-day symposium of international speakers as part of this year's UK Fungus Day celebrations. Chaired by Prof Lynne Boddy (Professor of Fungal Ecology at Cardiff University UK), the meeting takes place online on Sunday 8th October, is free to attend and open to all. Twelve renowned

mycologists are presenting across three sessions covering world time zones; attendees can book for one, two or all three! See the programme and book a place [here](#)

**UK FUNGUS DAY 2023**

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# International symposium





**ONLINE EVENT**  
**Sunday, 8th**  
**October 2023**  
 3 sessions to cover world time zones - attend one or all sessions!

[ukfungusday.co.uk](http://ukfungusday.co.uk)

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## XI LATIN AMERICA CONGRESS OF MYCOLOGY

7-10 August 2023, Panama City, Panama

<https://congresolatinoamericanodemycologia.com/>

The congress was preceded by two days of workshops: 1) Introduction of bioinformatic and biostatistics methods for the analysis of fungal communities; 2) The challenge of teaching mycology; 3) Methods to study endophytic and symbiotic fungi; 4) Ectoparasitic fungi associated to insects; 5) Taxonomy, diversity and culturing of entomopathogenic fungi in tropical America, with emphasis on the genus *Cordyceps* s.l.; 6) Promoting conservation of neotropical fungi through the training of specialists and the extinction rate evaluation of threatened fungi.

The congress was attended by 326 participants from 35 countries. We had 8 Keynote speakers, 10 symposia, and a total of 318 presentations (oral and posters).

Luis Mejia  
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## SOUTH AFRICAN SOIL SURVEY: 'SASSY'

South Africa is biologically one of the most diverse countries in the world but remains underexplored for soil fungi. A newly funded project, the 'South African Soil Survey' or 'SASSY' aims to close this knowledge gap by characterising fungal communities from soils collected from 100 South African nature reserves using both culture-dependent and independent methods. Collection sites were selected to best represent the nine biomes and 36 bioregions of South Africa.

The first collections were made from 9–16 March by Prof Cobus M Visagie, Dr Anne Pringle, Mr David Johnson and Ms Nicole van Vuuren. They collected soils from 11 nature reserves, including Anysberg, De Mond, Gamkaberg, Gondwana Private Reserve, Goukamma, Gourikwa, Grootvadersbos, Keurbooms River, Marloth, Outeniqua and Robberg. The second field trip was completed from 5–8 April by Prof Cobus M Visagie, Dr Neriman Yilmaz, Dr Anne Pringle and Mr David Johnson, and soil was collected from several reserves ranging from Hermanus to Wellington to Yzerfontein.

Isolations have resulted in more than 1000 strains isolated with preliminary identifications indicating an immensely diverse community. These strains will also be genome sequenced and accessioned into the culture collections housed at the Forestry and Agricultural Biotechnology Institute (FABI) at the University of Pretoria, helping to capture and preserve the unique fungal diversity in South Africa.

Cobus Visagie  
([cobus.visagie@up.ac.za](mailto:cobus.visagie@up.ac.za))



## 2023 ANNUAL MEETING OF THE MYCOLOGICAL SOCIETY OF CHINA (MSC)

The Mycological Society of China (MSC) recently held its annual meeting in Guiyang, Guizhou Province from 18-20 August 2023. The event was a tremendous success, attracting over 1200 delegates and commemorating the society's 30th anniversary since its establishment. During the opening ceremony, Prof Guo Liangdong, the current president of MSC, provided a historical overview of the society and shared insights into its future development. Keynote lectures were given by Prof Xing-Zhong Liu, Prof Cheng Gao, and Prof Wen-Bing Ying, followed by a plenary by Prof Kevin D Hyde.

Over the next two days, the meeting featured 290 oral presentations across 11 parallel sections, as well as 42 poster presentations. The event culminated with two plenary lectures delivered by Prof Zheng-Guang Zhang and Prof You-Cai Hu. Additionally, 13 students were recognized and awarded for their outstanding presentations.

The meeting not only highlighted the significant progress made by China in various aspects of mycology but also provided opportunities for networking and enjoyable evenings filled with dinners and the indulgence of Chinese liquor and beers. Overall, it was one of the most successful mycological meetings we have ever attended.



## Microfungi collection trip in Thailand

A field expedition took place in southern Narathiwat (from Pa Phru to Daeng) spanning from August 3rd to August 7th, 2023. Situated approximately 1,150 kilometers to the south of Bangkok, Narathiwat stands as Thailand's southernmost province, sharing a border with Malaysia alongside four other provinces. During this expedition, one postdoctoral and four doctoral students, and Professor Kevin Hyde from the Center of Excellence in Fungal Research at Mae Fah Luang University, accompanied by Dr Saithong Kaewchai from Princess of Narathiwat University, conducted a comprehensive field study with the aim of collecting aquatic microfungi, microfungi associated with palms, and wild mushrooms. The waterlogged and nutrient-deficient environment in Narathiwat sustains a distinctive biodiversity that remains largely unexplored. Thus, the collection efforts encompassed diverse ecosystems such as peat swamps, coastal areas, and adjacent forests, housing a variety of host plants including *Licuala*, *Calamus*, *Pinanga*, *Eloidaxa*, *Nypa*, *Areca*, *Metroxylon*, *Cyrtostachys*, *Nenga*, and more. The expedition, spanning three days, commenced at the Princess Sirindhora Wildlife Sanctuary—an excellently preserved expanse dominated by palm trees, hosting a unique and diverse fungal community. The following day involved surveying local roadsides and collecting specimens in Tak Bai, the southernmost point of Siam and the lowest elevation in Thailand. The final day of the trip was spent exploring the shores of the picturesque Ao Manao in the Khao Tanyong National Park. Subsequently, a visit was arranged to the Plant Pathology Laboratory at Princess of Narathiwat University. Notably, Dr Saithong, a professor and former student of Professor Hyde, extended warm hospitality during the visit. The success of this trip owes much to Professor Hyde's expertise and guidance in revisiting Narathiwat. Of course, a special mention must be made of the delightful experience of savoring delicious coconut ice cream and the local food. The survey expedition yielded remarkable results, thanks to the diligent efforts of everyone.





## AWARDS

### The Future is Fungi Award

applications open on September 5th <https://www.futureisfungi.org>



Fungi hold the solutions to many of our environmental challenges. Still, we are in the very beginning of seizing its potential.

With this award, we hope to support and highlight new, frontier, cutting-edge scientific ideas and research on how to harness the intelligence of nature and fungi, to help us move toward a more regenerative future. The biotech revolution holds the promise of delivering a great array of sustainable innovations across industries. Fungi will play an important role in this.

**A EUR prize** will be given to the most innovative scientific idea or research in the field of fungi.

The award specifically targets solutions in **agriculture and nature restoration, as well as biodiversity.**

Jury members include representatives from finance, science, the corporate landscape, sustainability pioneers, and key fungi ecosystem representatives.

We have the ambition to let the winning idea be featured on the World Economic Forum's UpLink platform. We are looking for FRONTIER and CUTTING-EDGE research and innovation on NEW ways to use fungi for the environmental solutions that the world needs.

There are two award categories:

- **Research:** The research category is about celebrating the most frontier idea or research for how to harness the power of fungi for environmental solutions.
- **Start-up:** The start-up category is about rewarding the start-up with the best solution for how to utilize fungi for environmental solutions.

The winner gets:

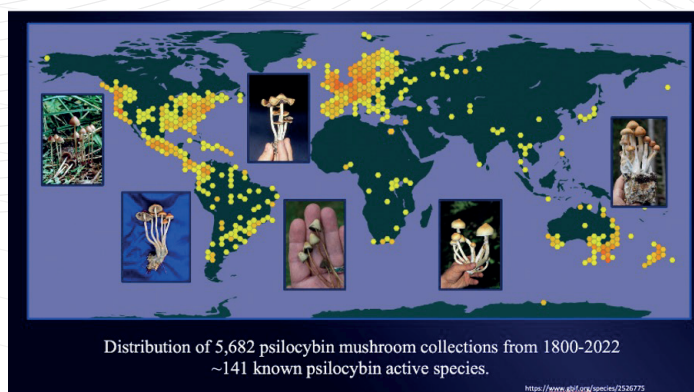
- EUR 10 000
- Mentorship
- Access to network and visibility

### Abdel-Azeem and Stamets' Award for recording bluing *Psilocybe* in Africa

Arab Society for Fungal Conservation (ASFC) and African Mycological Association (AfriMA) honored to announce Abdel-Azeem and Stamets' Award for recording psilocybin-active *Psilocybe* species in Africa-2023.

More than 140 species of mushrooms are known to be psilocybin active, with likely more to be discovered, especially in Africa. *Psilocybe* is the best-known genus for psilocybin containing mushrooms. *Psilocybe* are regularly found in substrates such as soil, dung, wood, and mosses. Mushrooms are described as little brown mushrooms (LBMs) or little white mushrooms (LWMs) with a viscid cap when moist, dark to purplish black colored spores and a dark purple-brown spore print.

Some species feature a separable gelatinous pellicle, fringed whitish gill edges, and typically collyboid or mycenoid aspects. The caps and stems of some species may bruise a greenish-blue, when the mushroom is damaged, aged or drying, indicating the presence of psychedelic compounds.



Psilocybin-active *Psilocybes* are under-reported in Africa despite the likelihood that *Psilocybe cubensis*, the species most commonly cultivated and used throughout the world, originated on this continent. In particular, *Psilocybe* species are thought to have once been native to the Nile River regions, in southern

Algeria, and elsewhere in Africa, before desertification created adverse conditions. Hence, the goal of this award is to record and collect these now rare species.

To date, studies have shown that psilocybin therapy is beneficial in relieving symptoms of treatment-resistant depression, obsessive compulsive disorder, and other mental health disorders. Psilocybin has also shown effectiveness at easing fear and anxiety in people with terminal cancer.

### **Aim of the Award**

To document and update the information related to the biodiversity and conservation of this genus in Africa.

### **General Award Requirements (Applicable only where legal)**

- The competition started from the first of August 2023 till end of July 2024. Any mycologist or amateur mycologist in Africa interested in recording bluing *Psilocybe* (including GPS, field photos, spore prints and living culture) can contribute.
- The Award is 500\$ for first position, 300\$ for the second and 200\$ for the third.
- Please send all recorded data (GPS, Photos of the field, spore prints, pure culture, etc.) to [award@fungiofegypt.com](mailto:award@fungiofegypt.com)
- Delivery of living cultures will be arranged through the above email.

ahmed Ismail  
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### **UPCOMING EVENTS**

- The 14th conference of the World Mycotoxin Forum will be held in Antwerp, Belgium on 9-11 October 2023  
<https://worldmycotoxinforum.org>
- Asian Mycological Congress 2023 in Busan, Republic of Korea on 10-13 October 2023  
<https://www.amc-2023.org>

