18th Congress of European Mycologists

WARSAW-BIAŁOWIEŻA
POLAND 16-21.09.2019

Programme Book

Fungi in Nature and Culture

Edited by Alicja Okrasińska, Julia Pawłowska, Marta Wrzosek, David Minter

ISBN 978-83-940504-4-3 Polish Mycological Society, Warsaw

ORGANIZERS

European Mycological Association

POLISH MYCOLOGICAL SOCIETY

UNIVERSITY OF WARSAW

FACULTY OF BIOLOGY · UNIVERSITY OF WARSAW

HORTUS BOTANICUS UNIVERSITATIS VARSOVIENSIS A.D. MDCCCXVIII

FACULTY OF BIOLOGY AND ENVIRONMENTAL PROTECTION
University of Lodz

IBL
Instytut Badawczy Leśnictwa

BIAŁOWIESKI PARK NARODOWY

INSTITUTE OF AGROPHYSICS PAS

Institute for Agricultural and Forest Environment Polish Academy of Sciences

FACULTY OF FORESTRY IN HAJNÓWKA · BIALYSTOK UNIVERSITY OF TECHNOLOGY · ZWL

WARSAW CONVENTION BUREAU

warsaw tourism

PATRONAGES

Ministry of Science and Higher Education
Republic of Poland

dr Jarosław Gowin

Minister of Science and Higher Education

The conference is co-financed by the Polish Ministry of Science and Higher Education under the task dedicated to the dissemination of science Organization of XVIII Congress of European Mycologists (contract no. 964/P-DUN/2018).

Adam Struzik

Marshal of the Mazowieckie Voivodeship

Podlaskie

Artur Kosicki

Marshal of the Podlaskie Voivodeship

PREZYDENT MIASTA STOŁECZNEGO WARSZAWY

dr Rafał Trzaskowski

Mayor of Warsaw

LASY PAŃSTWOWE

dr Andrzej Konieczny

General Director of the State Forests

BIAŁOWIESKI PARK NARODOWY

dr Michał Krzysiak

Director of the Białowieża National Park

PAN
POLSKA AKADEMIA NAUK

Prof. dr hab. Jerzy Duszyński

President of the Polish Academy of Sciences

UNIVERSITY OF WARSAW

dr hab. Marcin Pałys

Rector of the University of Warsaw

SPONSORS

MEDIA PARTNERS

16th September 2019

Dear Participants, Delegates and Guests of the XVIII Congress of European Mycologists,

On behalf of the European Mycological Association and the host organization the Polish Mycological Society, we welcome you to the XVIII Congress of European Mycologists. Fungi are incredibly important. Plants produce and animals consume, but fungi recycle. Without them, life on this planet could not exist. That's why we study them. That's why we have meetings to communicate our discoveries and discuss what they mean. The Congress of European Mycologists is the world's oldest continuously running series of international meetings about fungi. The first was in 1956 and, up to now, every subsequent Congress has been in a different and new country. This one – the eighteenth – is different. With it, we return to a country which has already hosted the event in 1966. That country is Poland. Our Congress includes two venues. The first is Warsaw. In the historic old town and academic environment of its ancient university we will consider, debate and review the current state of fungal science in Europe and beyond. The second is Białowieża. There, in Europe's greatest and most famous primaeval forest, the emphasis will be on fungi in their natural environment.

It is no mere chance that Poland is the first country to welcome a return of our Congress. The Polish Mycological Society is young and vibrant. Its members are passionate about fungi and ardent in studying these remarkable organisms. The Local Organizing Committee, led by chair Marta Wrzosek and co-chair Julia Pawłowska, has made enormous efforts to organize the congress, and we owe them tremendous thanks for this. The Scientific Committee has worked intensively to assemble an interesting scientific programme. We are very appreciative of this Committee for their great commitment. The European Mycological Association and the Polish Mycological Society are extremely grateful to all who dedicated time and energy to organizing this Congress, and that includes media partners, sponsors, patrons, and everyone contributing to the success of the meeting.

We expect the Congress to build on its predecessors. It includes up-to-date keynote presentations, talks and posters on fungal conservation, diversity, evolution, genomics, metabolomics, and phytopathology. In Warsaw we will have the possibility to enjoy a Chopin concert and visit an exhibition of fungal pictures taken by both amateur and professional Polish photographers. During this Congress Warsaw will become a great showcase for the study of mycology. A special open lecture about forensic mycology will be presented in the Nicolaus Copernicus Center – the biggest educational centre in Warsaw. The conference dinner will take place in Białowieża. The Institute of Forestry Research, which will be our host, will offer us famous local food and special drinks. We hope you will enjoy the scientific programme and social events equally.

Finally, we thank all participants with an interest in these beautiful and fascinating organisms, not just in Europe, but throughout the world, for the enthusiastic response and contributions to the programme. Like the mycelium they study, mycologists form an invisible but complex and effective network: by your participation in this Congress you help to form the fruitbody of our science from which the spores of learning are dispersed.

Now we consider the XVIII Congress of European Mycologists to be open and we wish you interesting presentations, fascinating discussions, fruitful cooperation and success.

David Minter

President, European Mycological Association

Magdalena Frąc

President, Polish Mycological Society

CONGRESS COMMITTEES

Honorary Committee


Maria Ławrynowicz


Anna Bujakiewicz


Maria Lisiewska


Tomasz Majewski

All members of Honorary Committee were involved in the organization of the Congress of European Mycologists in Warsaw in 1966.

EMA Steering Committee:

David Minter
Susana C. Gonçalves
Izabela Kałucka

Local Organizing Committee:

Magdalena Frąc
Dorota Hilszczańska
Katarzyna Kreft
Julia Pawłowska
Sylwia Różalska
Małgorzata Ruszkiewicz- Michalska
Marta Wrzosek
Ewa Zapora

Scientific Committee:

Carrie Andrew
Martin Bidartondo
Anders Dahlberg
Susana C. Gonçalves
Jos Houbraken
Michaela Lackner
David Minter
Giovanni Pacioni
Dmitry Schigel
Ekaterina Shelest
Katarzyna Turnau

Supporting committee:

Anna Kujawa
Wiesław Mułenko
Piotr Mleczko
Marek Wołkowycki

PLENARY SPEAKERS

Duur K. Aanen

Duur Aanen is an associate professor in Evolutionary Genetics at Wageningen University, the Netherlands. After finishing his PhD on speciation of fungi at Wageningen university in 1999, he became a postdoc and later assistant professor at the University of Copenhagen and returned to Wageningen in 2006. Duur Aanen specializes in the origin and evolution of cooperation, and uses fungi and the symbiosis between termites and Termitomyces fungi as his main model systems.

The Evolutionary Origin and Stability of Cultivation of Termitomyces by Termites
Old Library – main assembly hall – ground floor
Tuesday 17th September 09.45-10.30

Marc-André Selosse

Marc-André Selosse is professor at Muséum national d'Histoire naturelle (Paris) and University of Gdansk (Department of Plant Taxonomy and Nature Conservation, Poland). The research of his two teams focuses on the ecology and evolution of mycorrhizas. His works track: first, the genetic structure of populations of mycorrhizal fungi (mainly in the genera Laccaria, Lactarius and Tuber) to understand gene flow at various scales (including allopatric speciation), local adaptation and mating systems; Second, the assembly of communities of mycorrhizal fungi, from the local scale (e.g. after disturbances or with current environmental changes) to larger and even global scales, where he analyze interactions networks linking plants and fungi; Third, mycorrhizal networks, i.e. the inter-plant links created by fungi simultaneously colonizing two plants of the same or different species. These links allow carbon flow between plants in some instance, and some plants use mycorrhizal network to get carbon from their fungi. They include achlorophyllous plants fully relying on this for their nutrition, but also some green forest plants which also partially rely on this carbon source (mixotrophic plants). His models and empirical research cover temperate and tropical ecosystems. He also has a general interest for symbiosis and publishes opinion and review papers on the evolution of symbioses.

Time to re-think fungal ecological niches? Endophytic abilities in ectomycorrhizal taxa.
Old Library – main assembly hall – ground floor
Wednesday 18th September 09.45-10.30

Annegret Kohler

Annegret Kohler is a researcher in the tree-microbe interactions department at INRA Grand-Est Nancy in France. Her research is focused on the biology of trees and the associated forest fungi and their role in forest ecosystems. She is particularly interested in mycorrhizal symbiosis and in characterizing the molecular mechanisms established during development and functioning of this mutualistic interaction, as well as to understand the evolution of symbiotic fungi from saprotrophic ancestors. During the last 10 years she was involved in many genomic projects and in particular in charge of the transcriptomic analyses within these projects. She has published over 50 scientific papers related to transcriptomics, genomics and tree-microbe interactions.

The evolution of mycorrhizal genomes and transcriptomes
Old Library – main assembly hall – ground floor
Monday 16th September 09.45-10.30

David Hawksworth

David Hawksworth is a mycologist, applying knowledge of fungi (especially microfungi and lichens) to various aspects of applied and environmental sciences, including conservation, ecology, forensic science, medical mycology, palaeoecology, plant pathology, and pollution monitoring. For many years he was the Director of the International Mycological Institute, He was visiting Professor for Geography and the Environment at the University of Southampton. He has obtained many medals and awards - among others the Bicentenary Medal of the Linnean Society, 1978; the Acharius Medal of the International Association for Lichenology, 2002; the Josef Adolf von Arx Award, Royal Dutch Academy of Sciences, 2011; the Ainsworth Medal of the International Mycological Association, 2014. He is excellent taxonomist and recognized world authority on the diversity, systematics, and ecology of fungi, especially microfungi and lichens. He is particularly known for studies and surveys of fungal diversity, and the bioindication of air pollution. Other interests include the biodiversity and conservation and naming systems of all groups of organisms. Since 2007 he develops research in the field of forensic science. He has been President of many scientific societies, among others, of the International Mycological Association and British Mycological Society.

Discovering the extent of fungal diversity
Old Library – main assembly hall – ground floor
Monday 16th September 10.30-11.15

Lynne Boddy

Lynne Boddy is a fungal ecologist, who has investigated the ecology of wood decomposition, and wood decay fungi, for over 40 years. Her favourite areas of research are into the ways in which fungi fight each other, interact with bacteria and invertebrates, and form communities in decaying wood. Other favourites are the ways in which fungi search the forest floor for food resources and respond to their finds, and how global change is affecting fungi. Lynne is Professor of Mycology, and teaches and researches into fungal ecology at Cardiff University UK. She is a prolific author having co-authored or edited seven books, written well over 250 scientific papers, and is chief editor of the journal Fungal Ecology. She is also an ardent communicator of the mysteries and importance of the amazing hidden Kingdom of Fungi to the general public on TV, radio, popular talks, articles and exhibitions. Lynne was president of the British Mycological Society (2009–2010). She has received many awards including the Berkeley Award (1989), the Fleming Award (1991), European Mycological Association outstanding achievement award (2015), the Marsh Award (2016) and the Frances Hoggan Medal (2018). She is a Fellow of the Learned Society of Wales and of the Royal Society of Biology.

Trees ancient and young: a veritable feast for wood decay fungi
Białowieża National Park – main hall – ground floor
Friday 20th September 14.00-14.45

Dominik Begerow

Dominik Begerow is a dean of Faculty of Biology and Biotechnology Ruhr-University Bochum. His main interest is evolution and biodiversity of plants and interactions in complex ecosystems. He uses the integrative approach to the phylogenetics of basidiomycetes and smut fungi. Currently he analyses different plant-fungus interactions and combines phylogenetic methods with infection studies to support the hypotheses of cospeciation and host jumps.

Comparative Genomics of Smut Fungi to Bridge the Gap between Sytematics, Ecology and Function
Old Library – main assembly hall – ground floor
Wednesday 18th September 09.00-09.45

Geoffrey Gadd

Geoffrey Gadd is a geomicrobiologist and mycologist with over 30 years direct research experience of metal-mineral-microbe interactions in the contexts of environmental significance for metal mobility, and applications in metal biorecovery and recycling, bioremediation, mineral formation and/or dissolution. He holds the Boyd Baxter Chair of Biology and leads the Geomicrobiology Group in the School of Life Sciences, University of Dundee, and is a former Deputy Research Director, Head of the Division of Environmental and Applied Biology, and founding Head of the Division of Molecular Microbiology in the College of Life Sciences. He has published over 250 refereed papers, and many co-edited books, invited chapters and reviews, and contributed to 5 patents. He has delivered >120 invited lectures in >20 countries. He has made particularly notable contributions relating to fungal metal-mineral transformations, and the establishment of "geomycology" as a recognised research area. He is a former President of the British Mycological Society (2004-2007), and has served on several Society for General Microbiology (SGM) (now Microbiology Society) committees including being the former chair of the SGM Environmental Microbiology Group, and the first Chair of the SGM Eukaryotic Microbiology Group. He has received several research awards, including the 2004 Charles Thom Award, Society for Industrial Microbiology (USA) , 2009 Colworth Prize of the SGM, the 2012 Sir James Black Medal of the Royal Society of Edinburgh, and the Berkeley Award (1990) and the President's Medal (2012) of the BMS.

Geomycology: metals and minerals, bioremediation and biorecovery
Old Library – main assembly hall – ground floor
Tuesday 17th September 09.00-09.45

Bogdan Jaroszewicz

Bogdan Jaroszewicz is a botanist. His research activities focus on plant-animal and recently plant-fungal interactions, especially in forest ecosystems. That covers inter alia: influence of large herbivores on vegetation, frugivory, zoochoric seed dispersal, pollination, ecology of soil seed banks, processes of tree decay etc. He is involved in research on how climate change influences range limits and distribution of species and how plant-animal interactions interplay in the process of plant migrations and resulting shifts in their range limits. For many years he was vice-director of Białowieża National Park. Currently he is head of Białowieża Geobotanical Station, University of Warsaw.

Białowieża Forest: yesterday, today, tomorrow…
Białowieża National – main assembly hall – ground floor
Thursday 19th September 09.00-10.00

SESSIONS LEADERS

Carrie Andrew

Carrie Andrew has over 17 years' experience specializing in terrestrial ecology, global change biology and mycology, across over nine research and teaching institutions in Europe and the USA. With an organismal background in mycology and botany, it is the ecology of those organisms and their interactions, from ecosystem to community levels, that is of research priority to her. Investigating the spatiotemporal dynamics of fungi at the macroecological scale, data science has been a primary tool (along with molecular methodologies) that Dr. Andrew has utilized while working with citizen science and museum (fungarium) collections data.
Her vision is to lead scientific research pertaining to the ecological understanding and conservation of fungi and plants – within the context of global change. It is important to educate the general public, across demographics, as well as scientists and policy-makers, on contemporary scientific research knowledge – as well as the gaps – and the implications to ecology. By communicating science, Dr. Andrew strives to help shift public awareness towards understanding how integral fungi and plants, and their interactions, are for natural systems and societies.

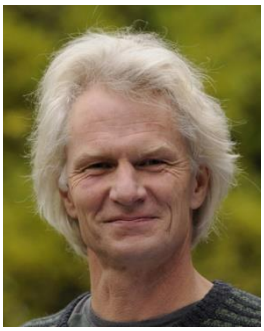
Session: Fungal diversity

Martin Bidartondo

Martin Bidartondo works on the ecology and evolution of mycorrhizas, one of the dominant symbioses of terrestrial ecosystems. The systems that he studied include arbuscular, ectomycorrhizal, monotropoid and orchid mycorrhizas, and mycorrhiza-like associations of bryophytes. Following his ground-breaking research on the evolutionary ecology of the diverse plants that cheat mycorrhizal mutualisms, his team has investigated:
1) the mycorrhizal ecology of heathlands, first revealing the mechanisms of tree invasions and then uncovering nutritional links among vascular plants, fungi and non-vascular plants;
2) the environmental drivers of forest mycorrhizas at large scales, revealing the impacts of nitrogen pollution across European forests in collaboration with ICP Forests; and
3) the ecology and evolution of their newly discovered, yet ancient and globally-widespread, symbioses between lineages of plants and fungi.

Session: Fungal interactions

Anders Dahlberg



Anders Dahlberg works as a Professor at the Department of Forest Mycology and Plant Pathology, Division of Forest Pathology in University of Upsalla. He is a fungal conservation expert at the Swedish Species Information Centre, in charge of fungal red-listing in Sweden, and is active in issues of international fungal conservation. His research interests include fungal population biology with its patterns, processes and genetics, fungal conservation biology and fungal community ecology with functional impacts on ecosystem processes.

Session: Fungi in primaeval forests and other natural habitats

Susana C. Gonçalves

Susana Gonçalves is a researcher at the Centre for Functional Ecology, University of Coimbra, Portugal, and member of the Pringle Lab at Wisconsin University, USA. She is broadly interested in the ecology and evolution of ectomycorrhizal fungi, focusing on the invasion biology of two notorious species: *Amanita phalloides* (death cap) and *Amanita muscaria* (fly agaric). Susana is also much involved in fungal conservation and keep an active outreach programme aiming to bring fungi to the people. As of Autumn 2015, she has served as co-chair of the European Council for Fungal Conservation (ECCF) and conservation officer of the European Mycological Association.

Session: Fungal conservation

Jos Houbraken

Jos Houbraken is a group leader of the Department of Applied and Industrial Mycology at the Westerdijk Fungal Biodiversity Institute in the Netherlands. The mission of his group is to generate and apply knowledge of fungi in relation to food, indoor environment and industry. His main interest is the biodiversity and taxonomy of the species and genera occurring in food and feed (incl. mycotoxigenic fungi) and the built environment, with a focus on Penicillium, Aspergillus and related genera. His research group furthermore study the effect of various stresses (e.g. temperature, wateractivity, preservatives) on food- and indoor fungi at a fundamental and applied level, with the aim to find novel solutions for prevention of food spoilage and fungal growth in the harsh indoor environment.

Session: Taxonomy and systematics

Michaela Lackner

Michaela Lackner is an Associate Professor at the Division of Hygiene and Medical Microbiology (HMM) at the Medical University of Innsbruck (MUI), Innsbruck. Austria. Since 2017, she has been head of the Mycological Research Group at the HMM. She completed her masters in natural sciences and her PhD with excellence at the University of Innsbruck (LFU) in 2007 and 2010, respectively. Since 2007, she has had a strong interest in fungal pathogens, particularly in the development of novel diagnostic tools, taxonomy of fungal pathogens and in understanding antifungal resistance mechanisms. She is the convener of the ECMM-ISHAM working group on Pseudallescheria/Scedosporium infections and the ISHAM working group of ISHAM Working Group Nomenclature of Clinical Fungi. She has authored more than 60 publications in peer reviewed articles and is involved in the training of medical and science graduates and undergraduates in Social Medicine, Hygiene and Medical Microbiology. In 2016 she completed her habilitation in Hygiene and Medical Microbiology at the MUI.

Session: Medical mycology

Giovanni Pacioni

Giovanni Pacioni is a Full Professor of Applied and Environmental Plant Biology at University of L'Aquila, Italy. Since 1972 he has conducted research in the field of biology of the higher fungi, first at the ISS (Higher Institute for Health) of Rome, and then at the University of L'Aquila, dedicating himself mostly to the mycorrhizal fungi. He has enjoyed two NATO semiannual scholarships at the INRA of Paris (the 1978-79) and University of Michigan (1983). He has been responsible for the research units of the National Council for Research grants, engaged in the field of the mycorrhizal symbioses and their biotechnological applications. He organized the CRAMF (Center for Research and Application of the Forest Mycorrhizae) of L'Aquila, funded by European grants. He is an author of patents for "Procedure for the production of truffle plants", "An edible film made for preserving the vitality and characteristics of fresh truffles" and "Use of cold and pesticides for enhancing the mycorrhization of truffle plants". He has been a FAO consultant in the field of "Mushrooms and No-Woody Forestry Products" 1987-1996, as well as a reviewer of several international journals, proposal projects and university positions. In 1992, he organized the International Conference on Truffles in L'Aquila. In the period 1975-2018 he has published, as author and co-author, 199 original full papers, including the truffle genome master paper in Nature (2010), and 30 books, handbooks and review articles.

Session: Hypogeous mycorrhizal fungi

Dmitry Schigel

Dmitry Schigel is Docent/Adjunct Professor of Mycology at the University of Helsinki, Finland and Scientific officer at the Secretariat of the Global Biodiversity Information Facility. His work and research interests include biodiversity informatics, dead wood, species interactions, molecular ecology, metabarcoding, host selection and fungivory, wood-decaying fungi, databases, nature conservation, boreal and montane ecosystems, and successions. Dmitry's field based and conservation related studies have been carried out in the boreal and temperate forest in Nordic countries, Russia, and also in Białowieża, Poland. Dmitry coordinates communities and organizes international teaching on fungi, dead wood ecology and biodiversity data.

Session: Data session

Ekaterina Shelest

Ekaterina Shelest is head of the Bioinformatics Unit in the German Centre for Integrative Biodiversity Research in Leipzig, Germany. Her main scientific interests include mechanisms of transcription regulation and methods for their modelling, evolution and adaptation of transcription regulation systems, epigenetic regulation, eukaryotic (fungal) secondary metabolism, gene clustering in eukaryotic genomes, comparative genomics and evolution of fungal protein families.

Session: From genome to function

Katarzyna Turnau

Katarzyna Turnau works as a Professor at the Department of Environmental Sciences of the Jagiellonian University in Kraków, Poland. She focuses on multiple aspects of the biology and ecology of microorganisms including especially mycorrhizal and endophytic fungi. An important field of her scientific interests is phytostabilisation of industrial wastes, phytoextraction of metals and metal distribution in plants associated with microbes.

Session: Fungi in biotechnology

OPEN LECTURER

Professor **Patricia E.J. Wiltshire**
BSc. (hons), PhD, DSc (hc), FCSFS, FRSB, FLS

Professor Patricia Wiltshire was a lecturer and researcher, for a total of 34 years, at the University of London, firstly at King's College, and later at University College. She is an ecologist, with special interests in palynology and microbiology. While at UCL, she was engaged in palaeoenvironmental reconstruction in archaeology, and realised that it was a short step from reconstructing ancient environmental scenarios to modern forensic ones. Over the last 25 years, she has concentrated on developing and establishing the disciplines of forensic ecology, botany, and palynology. In the last 10 years, she has established forensic mycology with her mycologist husband. Mycology has proved to provide robust probative evidence on many occasions.

Patricia has particular skills in locating clandestine graves, establishing the provenance of unknown materials, and post mortem interval, as well as linking objects, people, and places through botanical and mycological trace evidence. She has worked on approaching 300 criminal cases, both for the prosecution and defence of suspects, and many of these have been very high profile in the UK. She is an experienced expert witness. She has worked with every police force in the UK and Ireland, and lectures worldwide on the disciplines she has developed.

Patricia is on the editorial board of Forensic Science International, and is Editor-in-Chief for a special edition of the journal on Forensic Ecology. She has a large publication record, and continues to research, teach, and publish her work. In 2016, she received a Simons Fellowship at Cambridge University, at the Isaac Newton Institute for Mathematics.

Mycology: a recent weapon in the forensic armoury
Copernicus Science Centre (Wybrzeże Kościuszkowskie 20, Warsaw)
Tuesday 17th September 18.00-20.00

CONGRESS RELATED MYCOLOGICAL EXHIBITIONS AND EVENTS

Ligularion duo concert

A concert of Ligularion Duo ensemble. Ligularion Duo was launched in 2013. It consists of two musicians, Mark Kudriashov and Norbert Satora, who have played numerous concerts and have participated in festivals, master classes and competitions (separately and in duet). Many years of musical exploration have led the artists through unrelated musical instruments (saxophone, organ, classical guitar) to the world of ligularion music. Ligularion, a unique plucked instrument, was created by Mark Kudriashov in January 2013 in Warsaw. Initially it was supposed to be a small instrument for exercise, resembling a kalimba. After construction, however, it surprised all with a new and interesting sound, which encouraged further exploration and refinement of the structure. So far only 5 of these instruments have been made. Ligularion needed a lot of materials with unique properties (extremely dense or light, spring materials, very corrosion-resistant so noble metals are there as well). Mark used his music and chemistry knowledge to choose and sometimes recreate newest alloys to achieve best possible quality of sound. Some of the parts were created and produced by himself in the laboratory. A few casted parts were a massive challenge and it took a few months to cast each. Bass ligularion took 6 years to built.

Mark Kudriashov - instrument builder, musician, dancer, composer, chemist. Born in 1988, he began learning music at the age of three, initially in his hometown of Pinsk (Belarus), and then continued in Warsaw. He graduated from the F. Chopin State Secondary Music School in Warsaw twice: first a saxophone class, then an organ; and the Faculty of Chemistry of the University of Warsaw (BA). He also studied Biology (University of Warsaw) and Church Music (FCUM), but eventually decided to give up continuing his studies and devoted himself to the passion of instruments building. He took part in numerous competitions and festivals, won, among others, 2nd place in the "Fourth Musical Instrument of Wind Instruments" competition, 1st place in the Prague Chemical Competition in 2006 and 2007, 5th place in the Organ Competition of Marian Sawa 2011. Since 2018 he has been a student of tha Circus School (PSSC) in Julinek.

Norbert Satora - musician, sociologist, born in 1989. He is a graduate of the F. Chopin State Secondary Music School in Warsaw in the organ class and the University of Warsaw at the Faculty of Sociology. Currently, he works as a keyboard instructor at the Municipal Cultural Center in Lesznowola and an accompanist at the 1st degree Private Music School in Góra Kalwaria. He actively participates in various artistic projects.

Educational Center, Botanical Garden of Warsaw University, Ujazdowskie 4, Warsaw
Monday 16th September, at 18.30, free with Congress badges

Fungi – master sculptures of nature

The exhibition was organized as part of the "Diversity - the power of life" campaign by the Silesian Botanical Garden in Mikołów and co-financed by the Provincial Fund for Environmental Protection and Water Management in Katowice. The set of 30 color plates showing amazing fungal fruit bodies have been constantly displayed in the open air of the botanical garden since September 2016; however, it has been also presented in various places throughout Poland. The authors of photographs and comments are amateur mycologists and mushroom lovers gathered in the Polish Mycological Society and around Bio-Forum (www.bio-forum.pl). The mission of the Silesian Botanical Garden is to promote biodiversity protection by cultivating rare and endangered plant species in the area of the Garden and transferring them to their respective habitats, preserving valuable and disappearing field and meadow crops and old varieties of fruit trees. Conducting environmental and ecological education among children, youth and adults is also very important. The Garden's mission is being implemented, among others, by creating space that protects Silesian biodiversity and biodiversity of the temperate climate zone, presentation of a plant collection that includes protected species, conducting scientific research, active participation in shaping the pro-ecological attitude among the inhabitants of the region and propagating information on ways to preserve biodiversity.

Photo exhibition of Silesian Botanical Garden and Polish Mycological Society
Fence of the Botanical Garden of University of Warsaw, Ujazdowskie 4, Warsaw
Until the end of September, 24/24h, free

Dystopia – spatial composition by Hélène Soulier and Ewa Rudnicka

The installation *Dystopia* designed by Hélène Soulier and Ewa Rudnicka, composed of black plants, is a disturbing vision of a dying planet. *Dystopia* is an ambient water garden, buried under plastic. It is a modern cabinet of curiosities, as hinted at by the 'bubbles' floating on the water – these contain an inventory of human-generated fossils, water pollution and fungi (*Ganoderma lucidum*), the organisms that are quickest to adapt to climate change. 'We are the encyclopedists of yet another century, taking an inventory of surrounding reality in order to understand it. These things do exist and tell the story of the water in our world, the water of our body, living water and dead water, the remnants of civilizations that let water through,' the architects add. *Dystopia* is a space that is both highly functional and, paradoxically, inspires pleasant leisure time in the park. Developed during the workshops in 2016, this is another prototype for the development of *U–jazdowski's* surroundings, putting into play the attractiveness of water features in public spaces. Hélène Soulié is a DPLG landscapist, graduate from the Ecole nationale supérieure du paysage de Versailles (Higher National School of Landscaping of Versailles) with a doctorate in architecture from 2006 on the theme of urban wastelands. As senior lecturer at the Ecole nationale supérieure d'architecture et paysage de Bordeaux, she teaches design. Ewa Rudnicka, architect, graduate of the Ecole Nationale Supérieure d'Architecture Paris la Villette investigating the impact of architectural and artistic activities on creating online communities by implementing Active Architecture methodology.

Photo exhibition of Silesian Botanical Garden and Polish Mycological Society
Area in front of Ujazdowski Palace, Jazdów 2, Warsaw
Until the end of September 24/24h

What do we know about mushrooms?

The Museum of Hunting and Horsemanship, established in 1983, has operated as a branch of the Royal Łazienki Museum since 2018. Due to its subject matter - a combination of hunting and horsemanship - related themes, the Museum is unique not only on the national, but also on the European scale. Every autumn, Warsaw citizens and other visitors have the possibility to familiarize with models of common fungi and participate in many educational events.

The Museum of Hunting and Horsemanship, Agrykola 1, Warsaw
17.09 - 20.09 – free access with congress badges

With knowledge about mushrooms – you will avoid poisoning

The Provincial Sanitary Inspection in Warsaw has a collection of over 60 mushroom models, which has been presented at mushroom exhibitions for over 30 years. Since 2016, it has been visited by over 4,000 people. The purpose of the exhibition is to prevent mushroom poisoning by familiarizing the public with the main characters of the most important edible and poisonous mushrooms. The exhibition presents models of edible, inedible and poisonous fungi, grouped in terms of their morphological similarity. During the exhibition you would have a chance to see an the works of the winners of the photo competition entitled "Forest inspirations".

Mushroom Exhibition in Provincial Sanitary Station SANEPID
The building of State Sanitary Inspectorate, ul. Żelazna 79, 00-875 Warsaw
17.09 - 20.09 – free access with congress badges

Anomalium – *graphics of Agnieszka Zdziabek*

Aga Zdziabek studied photography and design at the University of Arts in Poznań and illustration at the HAW in Hamburg. She deals with graphics and photography. Her interests include art books, photographic archives and illustrations. She has participated in several exhibitions in Poland and abroad.

The "Anomalium" series of illustrations presents a collection of unusual, interspecies creatures, mushroom-birds. All the illustrations are based on the Polish pun where folk mushroom names and bird's names are homonyms. The project was created in 2017 as an original idea, then it was continued by the author during her illustration studies at HAW, Hamburg. The collection includes species of mushrooms popular in Poland, such as Parasol Mushroom, popularly known as "the Owl", Chanterelle, known as the "Little Hen" or a black chanterelle aka "Crow's Ears". The author's dream is to publish in the future a picture book about unusual creatures inspired by folk names. These and other works can be seen on the Instagram @agazdziabek.

Old library, University of Warsaw, Krakowskie Przedmieście, 26/28, Warsaw
16th-21st September, 10-18, free

Broken links – performance of Maria Subczyńska

Maria Subczyńska is graduate of the Faculty of Media Arts at the University of Arts in Poznań. Her Bachelor's diploma is titled "An attempt to capture the process of changing consciousness, under the influence of acquired knowledge about the forest as a well-connected environment." Poznań 2017. Master's diploma "Broken Links" Poznań 2019 was prepared in Studio of Film and Performative Activities under supervision of prof. dr hab. Izabella Gustowska. It is a word play pertaining to the broken connection between man and Nature, broken links with the forest internet (Wood Wide Web), as well as those broken with oneself. The aim of the exhibition is an attempt at re-establishing a relationship between humans and The Heart of Nature. The guides on this journey of renewal are Fungi. A forest is a wonderfully communicated environment – when we open ourselves to the discovery of the interrelationships among the actors of the web, we find great wealth and biodiversity. We also learn about the topics of life, death and rebirth from the Fungi themselves – they are alike to an interface between the beginning and the end. They are responsible for closing the cycle, matter circulation, they are the organism in-between. Fungi teach us to let go of that which has to leave in order to make room for novelty. They teach us to accept what has been rejected by our culture: death, senility, rot, disease. They teach us about border and transition states, simultaneously healing that which has been neglected, building space for new relations with the difficult areas of our reality, revealing their sense and widening our spectrum of recognising them.

More at: https://mariasubczynska.wixsite.com/

The Botanic Garden, Warsaw University, Al. Ujazdowskie 4, Warsaw
16th September, 18:30, free with congress badges

Roadside picnic, video 18'; mixed material environment, 2019

Katarzyna Górna is an artist who creates large-format, mostly black and white photographs, which she usually turns into three-dimensional installations and films. She was born in 1968 in Warsaw. Between 1989 and 1994, Górna studied sculpture at the Fine Arts Academy in Warsaw in Professor Grzegorz Kowalski's atelier. She lives and works in Warsaw. The video displayed in an organic environment, refers to the aesthetics of post- apocalyptic cinema. The work depicts a picnic of several humanoid creatures (played as usual by artist's friends) who live in symbiosis with other organisms. Apocalyptic visions that fill contemporary pop culture in fact represent wishful thinking: a sudden catastrophe would be more convenient than a slow death march of civilization. In the films that usually portray the world after the catastrophe, the popular motive is seeking a hidden land where purity and harmony still prevail. In Górna's work it is different - there is no other, better world. However, that does not make the film pessimistic. After the apocalypse, the characters simply spend time together instead of fighting for resources or seeking salvation. A picnic of interspecific queers on the ruins of civilization is a never-ending social situation, based not on rivalry, but on being together. The characters of the film, just like mushrooms that grow in the gallery space, are organisms that hold a special place in the natural world. Their status among other species is not clear, and they illustrate the eccentricities of nature. Mushrooms grow on the margins of the modern world, areas that were not integrated into a hygienic and standardized space. Similarly, the symbiotes in the film live on the outskirts of a devastated system and can only develop in a parasitic relationship with other organisms.

Centrum Sztuki Współczesnej Kronika, Rynek 26, Bytom
14.07.2019 – 13.09.2019

MYKO

Marek Głogowski a BA graduate of the Academy of Fine Arts in Warsaw, is currently a student of Design Academy Eindhoven. He is a designer with strong curiosity of design and the world around us. For me design is an art of connecting diverse fields like science, craft, biology, business, human behaviour and lifestyle. The idea of sitting on rotting fungus may not appeal to everyone, but a Polish designer has come up with a novel way of making eco-friendly furniture - out of mushrooms. The fungus lampshades and chairs look and smell like they've come out a forest but, says Marek Głogowski the man behind the creation, they are surprisingly durable. Using fungus spores bought in local shops, the 25-year-old moulds them into the shape he wants using wood chips before putting them in a hermetically sealed, heated tank. During the two week process the pieces are fused together creating a dense network of connections and when complete the mushroom is dried to stop it growing more. The Warsaw Academy of Fine Arts graduate told: "The mushroom composite has many advantages, but the way to obtain it is quite difficult. Working with this kind of material requires a lot of precision and delicacy.".

Jazdów Warsaw
July – August 2017

The Last Supper

Karolina Żyniewicz - an artist and researcher, (karolinazyniewicz.com), a graduate of the Academy of Fine Arts in Łódź, is currently PhD student in the programme Nature-Culture on the Faculty of Artes Liberales University of Warsaw. Żyniewicz performs activities generally labelled as bio-art and others widely defined as visual experiments The artist set a research laboratory where she works with organic matter using natural processes of decay and atrophy.

Her art is based on contrasts between pleasure and disgust and between what is socially acceptable and the sphere of taboo and exclusion. Żyniewicz is interested in the relations between the world of nature and culture and technology. She has collaborated on her projects with scientists, thus creating an interdisciplinary platform for exchange of knowledge and experiences. Carrying out artistic projects in biological laboratories, she also conducts ethnographic / aotoetnographic observations, which form the basis for her reflection on the role of non-human actors, liminal entities, biofacts, and transgenic organisms in the creation of bio culture. The project "Last Supper" is designed in the laboratory and performed with technics of biotechnology. Miracles might occur in various forms. Their perception depends on the point of view. Sometimes they seem quite ordinary; others seem supernatural and disturbing at the same time. A miracle, in its definition, has no rational explanation. And what escapes reason is difficult to grasp. Therefore, miracles can result from ignorance. Science rationalizes the world, explaining as much as it is possible. However, not everyone is a scientist. The vast majority of society uses merely extracts of knowledge to understand the world, which results in a distortion of information. Due to this superficial processing, it does not take a rocket scientist to surprise someone with a miracle. It is commonly assumed that a miracle is something positive, but is it sure? Why are people afraid of in vitro or GMO? There must be something wondrous about them. The Last Supper project juxtaposes the different meanings of a miracle. Yeasts genetically modified with the use of my gene served to produce beer and bread, which had been served during a symbolic supper (13.07.2018). The association with a well-known miracle is deliberate. It is a reference to one of the most common motifs in the history of art, the Biblical event in Christian tradition and The Last Supper mural painting by Leonardo da Vinci. However, in this case it is a miracle in a rather mundane sense.

Will the food produced by the organisms that have acquired my gene have anything to do with me? Is GMO really an unacceptable miracle? The laboratory in which the project was carried out is specializing in evolutionary changes of mitochondrial DNA in yeast. It is headed by Prof. Paweł Golik (Institute of Genetics and Biotechnology, Faculty of Biology, University of Warsaw). Chief Scientific Supervisor: Jakub Piątkowski, PhD. Due to the lack of official consent of the Chief Sanitary Inspector for the bring the GMO product outside the laboratory, the supper had to take place at the Institute.

Institute of Genetics and Biotechnology, Faculty of Biology, University of Warsaw
March 2016 - July 2018

GENERAL INFORMATION

The Congress of European Mycologists is the world's oldest continuously running series of international meetings about fungi. Since 1956, it has been organized in different countries within Europe on a regular basis, usually every 4 years. This year, for the first time it will return to a country which has already hosted it – to Poland. Consistent with all Congresses since 2003, the XVIIICEM will be organized under the auspices of the European Mycological Association, and hosted by the Polish Mycological Society.

CONGRESS VENUE

- **Warsaw, September 15-18, 2019**
  The first part of the Congress will be held in the lecture rooms of the Old Library of the University of Warsaw (ul. Krakowskie Przedmieście 26/28, Warsaw).
- **Białowieża, September 18-21, 2019**
  The Congress will continue at the convention centre of the Białowieża National Park (Park Pałacowy 11, Białowieża).

IMPORTANT LOCATIONS

A map with exact location of all Congress events is available at: https://xviiicem.pl/congress_venue

REGISTRATION DESK

The registration desk will be staffed during congress hours to assist and provide information to all participants and will be located:

- In Warsaw (September 15-18, 2019) in the main foyer on the ground floor of the Old Library of the University of Warsaw
- In Białowieża (September 19-21, 2019) main foyer on the ground floor of the Białowieża National Park building

EMA DESK

The EMA desk will be open during congress hours in Warsaw (16-18 September 2019) and will be located near the main Congress registration desk. It will be possible to join the Association and to pay membership fees.

BADGES

All delegates must wear their congress badges in a visible place throughout the entire congress.

SECURITY

In the Białowieża Forest and other Polish forests, ticks that carry Lyme disease and which may cause tick-borne encephalitis are very common. If you are planning a trip to the forest, we encourage you to take appropriate measures (repellents, vaccination, etc.). Repellents against mosquitos are also highly recommended.

Białowieża is located very close to the border with Belarus (= EU border) and cell phones very often respond to Belarussian networks. Use of these Belarusian networks incurs very high costs, therefore we recommend switching phones to manual network selection.

Białowieża Forest is really large and it is easy to get lost. Those who go on trips to the forest should have a GPS or a mobile phone application (eg., Locus Free Map) enabling them to locate themselves in the forest if necessary.
Białowieża village is also large and there is no public transport. We recommend you plan your walks carefully.
In case of any troubles or problems don't hesitate to contact Organizers.
The general emergency number for mobile phones in Poland is 112.

LANGUAGE

The language of the Congress is English.
In Poland official language is Polish. Most of people is able to communicate in English or Russian.

INTERNET

Free Wi-Fi is available in the Old Library of the University of Warsaw. For details please contact registration desk.

LUNCHES

Lunches will be located in the main foyer on the ground floor of the Old Library of the University of Warsaw. In Białowieża it will be served in the "Parkowa" restaurant in the main building of Białowieża National Park. All attendees must present their Congress badges.

COFFEE BREAKS

Coffee breaks will be located in foyer on 1st floor in the Old Library of the University of Warsaw. In Białowieża it will be served in the "Parkowa" restaurant in the main building of Białowieża National Park.

ORAL CONGRESS SESSIONS

The congress will provide PC computers with Power Point. Please load your presentation at least 15 minutes prior to your session. If you use MAC, please make sure that your presentation has loaded correctly. There are different presentation schedules in different sessions. Please consult the detailed programme to check the expected length of your presentation.

POSTER SESSIONS

Poster sessions will be located in rooms 105-109 on 1st floor in the Old Library of the University of Warsaw. Poster size is 120 cm high x 100 cm wide (portrait) (47,24 x 39,37 inches). The organizers will supply material to attach posters to panels. All poster boards will be numbered, please make sure that you place your poster in the correct location. The assigned numbers of posters are given in programme book. All posters should be mounted at latest on Monday 16 before 12.00 am and removed at latest on Wednesday 18 before 10.45 am. Presenters are expected to be at their posters and ready to discuss them during the coffee break/posters manned session.

CERTIFICATES OF ATTENDANCE AND PRESENTATION

Certificates of Attendance and Presentation will be available upon request to the Registration Desk or at polskietowarzystwomykologiczne@gmail.com.

EXHIBITORS

Exhibitors will be located on 1st floor in the Old Library of the University of Warsaw in front of rooms 111-112 and 115-116.

WELCOME RECEPTION: MONDAY 16TH SEPTEMBER AT 18.00

The Welcome Reception will be at the Univeristy of Warsaw Botanical Garden (Al. Ujazdowskie 4). It will comprise a cocktail party and a concert by the Ligularion Duo ensemble. *Ligularion Duo* was launched in 2013. It consists of two musicians, Mark Kudriashov and Norbert Satora, who have played numerous concerts and have participated in festivals, master classes and competitions (separately and in duet). Many years of musical exploration have led the artists through unrelated musical instruments (saxophone, organ, classical guitar) to the world of ligularion music. Ligularion, a unique plucked string instrument, was created by Mark Kudriashov in January 2013 in Warsaw. During the welcome reception, a short event in memory of professor Alina Skirgiełło will be held.

IN MEMORIAM

Professor **Alina Skirgiełło** was born in Klince, Ukraine, on 3rd November 1911. In 1931, she entered University of Warsaw to study natural sciences. She obtained the diploma for her mycological dissertation on Polish terrestrial tube fungi. During the Second World War, as a member of the Polish Home Army, she was active in the resistance movement. It was largely through her efforts that the valuable book collection and herbaria of the Department were saved from annihilation by the Nazis. In 1945 Alina Skirgiełło returned to the Department of Systematics and Plant Geography, as a senior lecturer, and remained affiliated with it until her retirement in 1982. She was the founder and editor of Acta Mycologica, the head of the Department of Plant Systematics and Geography, served as Dean of the Faculty of Biology and Director of the Institute of Botany at University of Warsaw. She passed away on 10th October 2007.

CONGRESS GALA DINNER: THURSDAY 19TH SEPTEMBER AT 18.00

The Congress Dinner will be in the "Białowieski Hotel" in Białowieża (ul. Stoczek 218b). During dinner, participants will have the opportunity to try regional dishes while listening to music. A cultural evening is planned between 18.00-21.00 - staging of the performance and the concert of the folk band.

The hotel is located ca 2.5 km from the main Congress venue. Transport will be offered for those who need it from the Białowieża National Park main building.

SPECIAL CONGRESS EVENTS

EMA General Assembly – Warsaw, Wednesday 17th September at 16.30

A meeting for members of the European Mycological Association and for all interested in its activities. During this meeting, in line with the Association's constitution, elections of a new Governing Committee will take place as well as presentations of proposals for the next Congress venue and voting. The Assembly will be held at 16.00 at the Congress venue.

Open lecture – Warsaw, Wednesday 17th September at 18.00

An open lecture for Congress participants and the general public on forensic mycology by Prof. Patricia E.J. Wiltshire will be held at 18.30 in the **Copernicus Science Centre**, 10 min walking distance from the Congress venue.

ECCF Open Discussion Forum – Białowieża, Saturday 21st September at 11.15

There will be an open meeting of the ECCF Board, country representatives and all Congress participants interested in discussion and co-operation in the field of fungal conservation in Europe. It will be held at 11.15 in Białowieża National Park at the Congress venue.

Workshop 1. Global fungal red listing, David Minter, Friday 20th September 17.00-19.30 (reservation required)

This workshop will provide an introduction to red-listing fungi, with an emphasis on non-lichen-forming ascomycetes and their conidial states. In the first half hour, I will describe and demonstrate the information resources needed, and the tools available for conservation status evaluations. I will focus on problems in applying IUCN criteria to these fungi (particularly in terms of defining individuals, generation times, and population sizes), and difficulties in identifying and dealing with duplicate records. In the second half hour, I will evaluate a single species as a demonstration of those resources, tools and problems. In the remaining time, participants will have the opportunity to evaluate a species of their choice using the same techniques. The workshop will end with a brief discussion aimed at strengthening the resources and tools, and seeking solutions to the problems.

Workshop 2. Biology of Polypores, Dimitry Schigel, Saturday 21st September 11.00-12.30 (reservation required)

A compact workshop will be comprised of lectures on polypore biology, introduction to polyporeinteractions with other organisms, including relationships of polypores with each other, withtrees, and with insects, and a slide show on the key polypore species of Białowieża.Attendees with familiarize themselves or refresh their knowledge of the key aspects of thepolypore biology and the main species groups of this charismatic group of wood-inhabitingBasidiomycetes of Central Europe. Participants are encouraged to focus on polypores duringthe congress excursions and in the fungal exhibition.

EXCURSIONS

Strict Protection Area of Białowieża National Park, Thursday 19th and Friday 20th September, prior reservation required (7 euro)

This is the oldest section of the Białowieża National Park bordered to the north and west by the marshy Hwoźna and Narewka Rivers, and to the east by the Belovezhskaya Pushcha National Park in Belarus. This part of the park can only be entered in the company of an official guide. Ancient trees there reach spectacular sizes rarely seen elsewhere. Some of the oak trees are more than 500 years old. The forest is home to a variety of large mammals, about 120 species of birds and many fungi including including rare oldgrowth forests relics.

Mosquitoes can be a problem throughout the summer in this area, so be sure to cover your arms and legs and bring along your repellent. Please note that mushroom collecting in Strict Protection Area is strictly forbidden.

Excursions to the Strict Protection Area of Białowieża National Park will be organized throughout Thursday 19 and Friday 20 in groups of 12 pers, prior reservation required (7 euro). Subscriptions for specific hours will be kept at the reception desk.

European Bison Show Reserve, Białowieża, Thursday 19th and Friday 20th September, prior reservation required (5 euro)

In the first half of the 19th century, Białowieża Forest was the exclusive natural refuge of the lowland bison. In 1919, the last bison in the Białowieża Forest died. The first step towards restitution of the bison in Poland in a free roaming state was the creation of an reserve for these animals in 1929. On the 19th of September 1929, two first bisons were transported to Białowieża from Germany and Denmark. Breeding the Białowieża (lowland) line of bison was possible only in 1936, when a 3 year old bull Plisch from Pszczyna was added to the local population. The existing European bison Show Reserve was established in 1937.

The visits in European Bison Show Reserve will be organized throughout Thursday 19 and Friday 20 September, prior reservation required (5 euro). Reservations for specific times can be made at the reception desk.

Nature and Forest Museum, Białowieża National Park, Thursday 19th September 14.00-16.00 (free)

The Nature and Forest Museum is the oldest museum in Poland's national parks. Its collection include many precious scientific collections and rare specimens. A permanent exposition presents the most characteristic forest communities of the forest as the culture related section devoted to presentation of the types of historic use of the forest. The Museum also has an area permanently dedicated to temporary exhibitions a sightseeing tower and a kiosk with souvenirs.

Museum visits are organised in groups of 15 people with groups entering every 10 minutes starting from 14.00. The visit lasts about 1 hour. The entrance to the Museum is near the main lecture room in Białowieża National Park building.

Narrow-gauge railway trip Hajnówka – Topiło (campfire) 17.00-22.00 (free)

Within Bialowieża Forest, there is a narrow-gauge railways built during the World War I to exploit the forest. It was used till the end of the 1980s for transporting of wood out of the forest. About 17 km of track is still in use. It is one of the most interesting attractions of the region, an original and comfortable form of getting to know wild nature. Our narrow-gauge trip to Topiło will finish with a special celebratory Congress campfire dinner featuring bonfire sausages. After dinner, the train will take us back. Participants of workshop 1 will be transfered by bus to Topiło for the campfire dinner, but will join the rest of us for the return trip by rail.

Mushroom hunting in forests near Białowieża, Browsk and Hajnówka, Friday 20th September 9.00-13.00 (free)

Some parts of Białowieża Forests are open for fungi collection. The number of fungal species in the Forest is estimated at 3-4 thousand. Everybody can find here members of their favourite taxa. There are many mushrooms, as well as brackets and lichens. The abundant wood of various ages and dimensions lying on the forest floor provides a habitat for hundreds of small ascomycetes and slime moulds. Many taxa rare elsewhere are quite common in here. A good example is Fomitopsis rosea occurring on old spruce logs. An excursion to this part of Białowieża Forest to collect fungi will surely be a wonderful experience for every mycologist, and not just those interested in macromycetes, but please remember that collecting fungal species protected by law is strictly forbidden in Poland.

Several excursions are proposed for those interested in collecting fungi in this part of Białowieża forest: a) parasitic micromycetes (limit: 2 groups of 12 persons), b) polypores (limit 50 persons), c) macromycetes (limit 50 persons), d) various (limit 50 persons). All excursions will take place on Friday 20, September from 9.00-13.00 and will start in front of the Białowieża National Park building. Reservations for specific times can be made at the reception desk.

How to travel in Warsaw?

The official web page of Warsaw Tourist Information is: warsawtour.pl/en/main-page/

During the Congress in Warsaw a special stand of the **Warsaw Convention Bureau** will be organized in the foyer on the ground floor of Old Library of the University of Warsaw building to facilitate your exploration of the city.

Information about public transport timetables is available at: www.ztm.waw.pl

Information about travelling by public transport is also available at: www.jakdojade.pl/warszawa app.

Tickets:

- 75 minute ticket – 4,40 PLN, discount – 2,20 PLN
- One-day ticket (valid 24h): standard – 15,00 PLN, discount – 7,50 PLN
- Three-day ticket: standard – 36,00 PLN, discount – 18,00 PLN

Tickets must be validated immediately after boarding a bus or tram, or at the gates leading to metro platforms.

Validated tickets entitle the holder to an unlimited number of journeys within the time indicated on the ticket from the moment of validation or until arrival by public transport to the last stop or station on the route.

All public transportation tickets can be purchased at ZTM points, in some newspaper kiosks and **at ticket machines** located in the metro stations or inside buses, where tickets can be purchased with either cash or debit cards. Tickets can also be purchased using a mobile phone app.

Luggage and animals can be taken on public transport free of charge.

People over 70 (based on a photo-document containing the date of birth) are entitled to free travel.

Students of foreign schools holding an ISIC (International Student Identity Card) until they turn 26 are entitled to half-fare travel if they have a photo-document confirming their date of birth.

Public bikes

In Warsaw public bikes, called Veturilo are available around the clock. With the Veturilo bike sharing system, bikes don't have to be returned to the point from where they were hired. **The first 20 minutes are free!** For the next 40 minutes you pay 1 PLN, for the second hour 3 PLN, the third 5 PLN, and for the fourth and all following hours you pay 7 PLN. Bikes can be hired for a maximum 12 hours at a time.

Veturilo bikes can be hired in three ways, either by registering on the website en.veturilo.waw.pl and paying an initial fee of 10 PLN via the site, or by registering by credit card at the terminal located at every bike station. The third way is to use the **Nextbike smartphone app**. In order for the account to be active, it must contain at least 10 PLN.

More information: en.veturilo.waw.pl

TRANSFER TO BIAŁOWIEŻA

Transfer to Białowieża will be organized for all participants free of charge. Buses will depart from the Univeristy of Warsaw (Krakowskie Przedmieście 26/28) on Wednesday 18, September at 14.30. Please take your luggage with you on Wednesday morning. There will be a special cloakroom where you can leave it for the morning. In Białowieża the buses will stop at the public parking (ul. Kolejowa 17) and from there you will be expected to reach your accommodation on your own. The return trip from Białowieża to Warsaw will similarly be provided on Saturday 21 September. The first bus will deoart from Białowieża at 13.00 and is estimated to arrive in Warsaw at ca 17. Subsequent buses will depart between 13.00 and 14.00. Abusell buses will stop at Warsaw Chopin airport and Warsaw Central Railway Station. Reservations for

particular buses can be made at reception desk. Please make sure you reserve a bus that allows you to be on time for your further connections.

PROGRAMME

Any last-minute change to the programme will be announced by the organizers.

FURTHER INFORMATION

For further information about XVIIICEM, please visit the Congress website: https://xviiicem.pl

You can contact us at: polskietowarzystwomykologiczne@gmail.com, zuzanna.jedrych@conventionplus.pl or +48 22 552 67 27.

DETAILED PROGRAMME

Sunday, September 15, 2019 – Warsaw		
15.00-20.00	Registration	**Old Library** foyer; ground floor
Monday, September 16, 2019 – Warsaw		
07.00-09.00	Registration	**Old Library** foyer; ground floor
09.00-09.45	Congress Opening	**Old Library** main assembly hall; ground floor
09.45-10.30	**Keynote lecture: The evolution of mycorrhizal genomes and transcriptomes** Annegret Kohler, Eniko Kiss, Emmanuelle Morin, Shingo Miyauchi, Laszlo G Nagy, Igor Grigoriev, Francis Martin, Mycorrhizal Genome Initiative	**Old Library** main assembly hall; ground floor
10.30-11.15	**Keynote lecture: Discovering the extent of fungal diversity** David L Hawksworth	**Old Library** main assembly hall; ground floor
11.15-11.40	Discussion	**Old Library** main assembly hall; ground floor
11.40-12.00	Coffee break	**Old Library** foyer; 1st floor
12.00-13.30	**Parallel Sessions**	
	Offered Presentations Session 1	**Old Library** main assembly hall; ground floor
12.00-12.15	**Fungal alkaline proteases and enzymes with activity of blood proteins** Alexander Kurakov, Alexander Osmolovskyi, Anna Bobrovskaya, Yulia Pokrovskaya, Yakov Dunaevsky	
12.15-12.30	**Effective usage of edible mushrooms extract for treatment of Hela Cells** Inesa Avagyan, Siranush Nanagulyan, Liya Minasbekyan	

12.30-12.45	**Filamentous fungi and yeast associates of phoretic mites on *Ips typographus* in Eastern Finland** Riikka Linnakoski, Ilmeini Lasarov, Pyry Veteli, Olli-Pekka Tikkanen, Risto Kasanen, Heli Viiri, Tuula Jyske, Tuan A. Duong, Michael J. Wingfield
12.45-13.00	**Ectomycorrhiza of *Tricholoma vaccinum*-spruce: Interactions and metal tolerance** Katrin Krause, Katharina Wagner, Wilhelm Boland, Erika Kothe
13.00-13.15	**Mycobiota of the soil contaminated by copper molybdenum mining** Ruzanna Matevosyan, Vahagn Gevorgyan, Tigran Yesayan
13.15-13.30	**Contents of ergothioneine in fruiting-body of wild strain Lentinula edodes collected in Korea** Rhim Ryoo, Hyo-rim Lee, Yeun Sug Jeong, Yeongseon Jang, Kang-Hyeon Ka

12.00-13.30	**Poster Session 1**	**Old Library** rooms 105-109; 1st floor

Theme: From genome to function

P1	**Identification of Antibacterial Agents from East African Basidiomycota** Tian Cheng, Clara Chepkirui, Cony Decock, Josphat Clement Matasyoh, Marc Stadler
P2	**Diversity and pathogenicity of the *Alternaria* species complex involved in apple leaf blotch and fruit spots in France.** Kévin Fontaine, Céline Fourrier-Jeandel, Manuela Dagba, Anne-Laure Boutigny, Valérie Caffier, Jason Shiller, Bruno Le Cam, Renaud Ioos, Jaime Aguayo
P3	**Waste wood bioconversion under oxygen depletion by *Phlebia radiata* - Towards sustaianable bioethanol** Hans Mattila, Mari Mäkinen, Eero Kiviniemi, Taina Lundell
P4	**Special membrane domains of *Schizophyllum commune*, similar to lipid rafts?** Jessica Pötschner, Erika Kothe
P5	**Unique wood-decay strategies and fruiting body development in the Schizophyllaceae** Neha Sahu
P6	**Evolutionary history of a common fungal endophyte of Norway Spruce** Marie Leys, Sundy Maurice, Marie Louise Davey
P7	**Revision of A1 family of aspartic proteinases in basal fungi** Malgorzata Zielinska, Anna Muszewska
P8	**Effects of abiotic stresses on ketoisovalerate reductase (KIVR) gene expression and cyclodepsipeptides production by fungi from Hypocreales order** Monika Urbaniak, Grzegorz Koczyk, Agnieszka Waśkiewicz, Zuzanna Dutkiewicz, Łukasz Stępień

P9 **Patterns of cytogenomic variability across fungi and the occurrence of very large genomes in the Pucciniales**
Mariana Reis, Rita Carvalho, Tatiana Valada, Ana Paula Ramos, Pedro Talhinhas

P10 **Genetic diversity of fungal community in soil amendment with mineral fertilizers enriched with microorganisms**
Agata Gryta, Magdalena Frąc, Karolina Oszust, Mateusz Mącik, Giorgia Pertile

Theme: Taxonomy and systematics

P11 **Two new African siblings of *Pulveroboletus ravenelii* (Boletaceae)**
Akotchayé Sylvestre Badou, André De Kesel, Olivier Raspé, Martin K. Ryberg

P12 **Six new species in *Aspergillus* section *Nidulantes***
František Sklenář, Željko Jurjević, Stephen Peterson, Miroslav Kolařík, Alena Nováková, Alena Kubátová, Vít Hubka

P13 **New record of *Hyphoderma etruriae* (Fungi, Basidiomycota) in Portugal and its combination in *Lawrynomyces***
Ireneia Melo, Isabel Salcedo, Ibai Olariaga

P14 **Using variable rate models to study the evolution of ectomycorrhizal fungi through time**
Sanea Sheikh, Faheema Kalsoom, Muhammad Bahram, Martin Ryberg

P15 **Disentangling the identity of the genus *Biatorellina***
Jiří Kout, James Mitchell, Adam Polhorský, Donald Pfister, Luis Quijada

P16 **What do we know about *Grovesiella*?**
Jiří Kout, Eugene Popov, Adam Polhorský, Joey Tanney, Peter R. Johnston, Donald Pfister

P17 **First worldwide report of *Colletotrichum tamarilloi* causing anthracnose in strawberry.**
Lincoln Vicente Araújo do Bizerra, Fernanda Lara dos Santos, Danilo Batista Pinho, Ailton Reis, Adalberto Corrêa Café-Filho

P18 ***Phytophthora abietivora*, a new species isolated from diseased Christmas trees in Connecticut, USA**
De-Wei Li, Neil P. Schultes, James A. LaMondia, Richard S. Cowles

P19 **Diversity and phylogeny of the compactoid *Russula***
Ruben De Lange, Annemieke Verbeken

P20 **Barcoding approach as an effective tool for revealing *Astraeus* species in the Republic of North Macedonia**
Katerina Rusevska, Mitko Karadelev, María P. Martín

P21 **Systematic revision of the genera *Holwaya* and *Patinella* (Ascomycota) based on phylogenetic traits**
Luis Quijada, Neven Matočec, Ivana Kušan, Peter R. Johnston, Armin Mešić, Hans-Otto Baral, Donald Pfister

P22 **Species diagnostics of European oak powdery mildews**
Katarína Pastirčáková, Miroslav Caboň, Petra Mikušová, Katarína Adamčíková, Kamila Bacigálová, Martin Pastirčák, Slavomír Adamčík

P23 **New interesting records of the genus *Entoloma* from southern and insular Greece**
Elias Polemis, Vassiliki Fryssouli, Machiel E. Noordeloos, Bálint Dima, Michael Gkilas, Linos Kottis, Georgios I. Zervakis

P24 **Recent progress in species delimitation in *Subulicystidium* (Trechisporales, Basidiomycota)**
Alexander Ordynets, Karl-Henrik Larsson, Alessandro Saitta, Sergey Volobuev, Sergey Bolshakov, Bart Buyck, Anton Savchenko, Ewald Langer

P25 **Morphology standards for description of *Russula* species**
Soňa Jančovičová, Miroslav Caboň, Slavomír Adamčík

P26 **The expanded diversity of Trichomeriaceae: *Knufia* and *Trichomerium***
Magdalena Owczarek-Kościelniak, Paweł Czachura, Marcin Piątek

P27 **The genus *Rachicladosporium*: introducing two new species from sooty mould communities**
Marcin Piątek, Paweł Czachura, Magdalena Owczarek-Kościelniak

P28 ***Ganoderma lucidum* (Curtis) P. Karst. *sensu stricto*: host tree and habitat range in Finland**
Pyry Veteli, Marta Cortina-Escribano, Henri Vanhanen, Riikka Linnakoski

P29 **Living at the extremes: novel lineages in the Myriangiales**
Paweł Czachura, Magdalena Owczarek-Kościelniak, Marcin Piątek

P30 **Cryptic diversity within the smut fungal species *Anthracoidea sempervirentis***
Martin Kemler, Anja Feige, Teodor T. Denchev, Cvetomir M. Denchev, Dominik Begerow

P31 **The genus *Ravenelia* in South Africa – Diversity, Phylogeny and population structures**
Malte Ebinghaus, Martin Kemler, Andreas Brachmann, Michael Wingfield, Wolfgang Maier, Domink Begerow

P32 **A post-harvest disease of vanilla caused by two new *Moniliella* species**
Wolfgang Maier, Andrey Yurkov, Samad Ashrafi

P33 **Evolution of ascospore morphology in Bryophilous Pezizales**
Lukáš Janošík

P34 **Species diversity of myxomycetes as a challenge for modern molecular technics**
Anna Tereba, Aleksandra Rosa-Gruszecka, Kateryna Fyałkowska

P35 **Multilocus phylogeny of Laboulbeniomycetes (Ascomycota) with special emphasis on Pyxidiophorales**
Michał Gorczak, Kamil Kisło, Marta Wrzosek

Theme: Fungi in Biotechnology

P36 **Characterization of minerals, elicitors in spent mushroom substrate extract and effects on growth, yield and the management of *Cassava* mosaic diseases**
Samuel Okere, Anthony Ataga

P37 **Development of suitable substrate for *Sparassis latifolia* using beet pulp and corn flour**
Heemin Gwon, Yunhae Lee, Deahoon Jeon, Jongin Choi, Youngsoon Lee

P38 **The effect of different lignocellulosic substrates on the incubation and yield of Oyster mushroom**
Dušanka Bugarski, Jelica Gvozdanović-Varga, Mirjana Vasić, Janko Červenski, Slobodan Vlajić

P39 **Biologically active compounds in lichenized fungi**
Marina Temina, Valery Dembitsky

P40 **Wood-decay fungi studied under fermentative and oxygen-stress conditions**
Eero Kiviniemi, Hans Mattila, Taina Lundell

P41 **CIRM-CF, a french Biological Resource Center dedicated to filamentous fungi for lignocellulosic biomass valorization**
Delphine Chaduli, David Navarro, Sabine Taussac, Laurence Lesage-Meessen, Chantal Parodi-Negri, Sabine Genet, Anne Favel

P42 **Breeding and characteristics of new oak mushroom (*Lentinula edodes*) variety**
Jeonghan Kim, Ilsun Baek, Bokeum Shin, Yunhae Lee, Youngsoon Lee

P43 **The role of osmolytes and membrane lipids in the adaptation of extremophilic fungi to heat, cold and osmotic shocks**
Vera Tereshina, Elena Ianutsevich, Sofiya Bondarenko, Olga Danilova, Elena Bilanenko

P44 **Structure of the microbiome associated to commercial button mushroom cultivation**
Jaime Carrasco, Maria Luisa Tello, Rebeca Lavega, Maria de Toro, Carlos Garcia-Delgado, M. Sonia Rodriguez, M. Jesus Sanchez

P45 **Prebiotic activity of hydrolysis product of (1→3)-α-D-glucans from fruiting bodies of *Laetiporus sulphurous***
Paulina Adamczyk, Adam Waśko, Małgorzata Pleszczyńska, Katarzyna Próchniak, Szczodrak Janusz, Adrian Wiater

P46 **Effect of pyrethroids on the phospholipid profile of *Beauveria bassiana***
Anna Litwin, Przemysław Bernat, Cezary Tkaczuk, Sylwia Różalska

P47 **Degradation of *Fusarium* mycotoxin Zearalenone by *Isaria* sp.**
Monika Nowak, Adrian Soboń, Cezary Tkaczuk, Sylwia Różalska

P48 ***In vitro* testing of potential growth inhibitors of *Hymenoscyphus fraxineus***
Miriam Kádasi Horáková, Marek Kobza, Jozef Pažitný, Radovan Ostrovský, Marek Barta, Emília Ondrušková, Katarína Pastirčáková

P49 **Mechanical properties of thin films based on *Hericium erinaceus* mycelium**
Maiia Ziangirova, Nailya Almyasheva, Alexander Golyshkin, Larisa Krasnopolskaya, Andrey Teplykh, Boris Zaitsev, Irina Borodina, Alexander Semyonov, Vladimir Kolesov, Iren Kuznetsova

P50 **Evaluation of different *Trichoderma* species in their ability of degrading engine oil**
Chiara Daccò, Marta Elisabetta Eleonora Temporiti, Lidia Nicola, Barbara Mannucci, Federica Corana, Solveig Tosi

P51 **Management of *Fusarium* wilt by endophytic *Fusarium chlamydosporum***
Vineet Meshram, Meirav Elazar, Stanley Freeman

P52 **Rhizo-bioremediation of DDT-contaminated soils**
Eligio Malusà, Małgorzata Tartanus, Artur Miszczak, Fabiana Russo, Andrea Ceci, Veronica Spinelli, Oriana Maggi, Ewa Furmańczyk, Anna Maria Persiani

P53 **Potential in mycoremediation of soil saprotrophic fungi: arsenic uptake and tolerance in different nutritional conditions**
Andrea Ceci, Veronica Spinelli, Lorenzo Massimi, Silvia Canepari, Anna Maria Persiani

P54 **Fruiting-body formation of *Gymnopilus junonius* by Sawdust Cultivation**
Hyo-rim Lee, Rhim Ryoo, Yeun Sug Jeong, Yeongseon Jang, Kang-Hyeon Ka

P55 **Draft genome sequence and annotation of *Trichoderma hamatum* FBL 587 (Sordariomycetes): insights into the mycoremediation of contaminated soil**
Domenico Davolos, Fabiana Russo, Andrea Ceci, Loredana Canfora, Eligio Malusà, Małgorzata Tartanus, Oriana Maggi, Anna Maria Persiani

P56 **Multiplex qPCR method for detection of *Verticillium* sp. and *Phytophthora* sp.**
Jacek Panek, Dominika Malarczyk, Magdalena Frąc

P57 **Chemicals released by fungi to overcome wood preservatives**
Aitor Barbero López, Antti Haapala, Gry Alfredsen

P58 **Detection of *Fusarium* species producers of fumonisins in maize grains in Portugal**
Daniela Simões, Eugénia Andrade, Carla Brites, Eugénio Diogo

P59 **Mycelium growth of xylotrophic basidiomycetes on chemically modified lignocellulosic substrates**
Alexandr Golyshkin, Nailya Almyasheva, Maria Yarina, Larissa Krasnopolskaya

P60 **The comparative study of phenolic metabolites produced by *Hericium erinaceus* and *Agrocybe aegerita* in vegetative and generative stages**
Nailya Almyasheva, Alexandr Golyshkin, Eugene Rogozhin, Larissa Krasnopolskaya

P61 **Cultivation of *Ganoderma lucidum* using residues from forest industries**
Marta Cortina-Escribano, Pyry Veteli, Riikka Linnakoski, Henri Vanhanen

P62 **Ascomycota composition based on next generation sequencing in soil amended with spent mushroom substrate**
Magdalena Frąc, Karolina Oszust, Jerzy Lipiec, Bogusław Usowicz

P63 ***Fusarium temperatum* – the important producer of beauvericin and enniatins**
Marcin Wit, Piotr Ochodzki, Roman Warzecha, Jacek Olchowik, Monika Żurek, Emilia Jabłońska, Ewa Mirzwa-Mróz, Józef Adamczyk, Janusz Rogacki, Krzysztof Wójcik, Wojciech Wakuliński

Theme: Fungal interactions

P64 **Monitoring without touching: can biocalorimetry reveal different fungal life history strategies and fungal interactions on solid substrates?**
Hieu Linh Duong, Sven Paufler, Thomas Maskow, Dietmar Schlosser

P65 **Biodegradation of single use plastics by white-rot fungi**
Denise Hassinger, John Dighton

P66 **The effect of abiotic factors on growth of ophisotomatal fungi- Factors shaping microbial communities of ecologically important bark beetles**
Karel Švec

P67 **Mycorrhizal fungi modulate nitrate inhibitory effect on *Dactylorhiza majalis* seed germination**
Tomáš Figura, Jan Ponert

P68 **Role of the microbial symbionts in the bark beetle holobiont**
Tereza Veselská, Karel Švec, Martin Kostovčík, Miroslav Kolařík, Paula García Fraile

P69 **Metagenomic analysis of fungi and bacteria in rhizosphere soils around four basidiomycete mushrooms in Jeju Island in Korea**
Dong Hyeung Lee, Hyung Jin Noh, Kang Hyo Lee, Seong Hwan Kim

P70 **Interactions in contaminated environment: Investigation of *Schizophyllum commune* in Chernobyl soil**
Lea Traxler, Erika Kothe

P71 **Evaluation of the secondary metabolism of the genus *Laccaria* (Agaricomycetes, Hydnangiaceae)**
Hedda Schrey, Peter Spiteller

P72 **Combinatorial impact of different shocks on the composition of membrane lipids and osmolytes in *Aspergillus niger***
Elena Ianutsevich, Olga Danilova, Vera Tereshina

P73 **Genetic determinants and cellular processess involved in the interactions of ectomycorrhizal fungi with toxic metal species**
Tereza Leonhardt, Jan Sácký, Jan Borovička, Vojtěch Beneš, Pavel Kotrba

P74 **The importance of inoculum volume for the competitive outcome and wood decay ability of brown- and white-rot basidiomycetes**
Yu Fukasawa, Emma Gilmartin, Melanie Savoury, Lynne Boddy

P75 **Bacterial endosymbionts of Mucoromycota representatives**
Alicja Okrasińska, Aleksandra Miłobędzka, Aleksandra Bokus, Aleksandra Gęsiorska, Blanka Sokołowska, Marta Wrzosek, Julia Pawłowska

P76 **The impact of fourteen tree species on arbuscular mycorrhizal fungi abundance, species richness and composition in soils of the Siemianice Experimental Forest**
Katarzyna Rożek, Kaja Rola, Janusz Błaszkowski, Tomasz Leski, Szymon Zubek

P77 **Rhizosphere and endophyte microcommunities of *Trifolium repens* from Zn-Pb waste heap (S. Poland)**
Ewa Oleńska, Wanda Małek, Jaco Vangronsveld, Sofie Thijs

P78 **Ectomycorrhizal community composition changes along to silver fir (*Abies alba* Mill.) phenological stages in Slovenia**
Tina Unuk Nahberger, Rok Damjanić, Hojka Kraigher, Tine Grebenc

P79 **Biological control potential of ectomycorrhizal fungi against *F. circinatum* on *Pinus patula* seedlings**
Veronique Chartier-FitzGerald, Joanna Dames, Greer Hawley

P80 **Do dark septate endophytes parasitize plant parasitic nematodes?**
Samad Ashrafi, Abdelfattah A. Dababat, Marc Stadler, Soleiman Helaly, Maria R. Finckh, Wolfgang Maier

P81 **Stem rust infection in Novosibirsk region: life cycle and origin**
Vasiliy Kelbin, Ekaterina Skolotneva, Sretenka Vidich, Elena Salina

P82 **How do mycorrhizal fungi cope with metal stress?**
Olga Bogdanova, Anna Bonrath, Katrin Krause, Erika Kothe

P83 **Molecular, physiological and anatomical changes in common wheat (*Triticum aestivum* L.) seedlings during interaction with *Trichoderma* fungi**
Aneta Basińska – Barczak, Jan Homa, Lidia Błaszczyk, Michał Dziurka, Anna Janeczko

P84 **Deciphering casing microbiome: effect of fungal infection and pesticide treatment in button mushroom crops**
M. Luisa Tello, Rebeca Lavega, Rosa Fernandez, Margarita Pérez, Gail Preston, Jaime Carrasco

P85 **Identification and characterization of a new wasting disease affecting commercial exploitations of *Pleurotus ostreatus***
Marcos Vilariño, M. Luisa Tello, Alfredo Martínez, Margarita Pérez-Clavijo

P86 **Characterization of extracellular laccases and decolorization of synthetic dyes from mycelium of *Lentinula edodes* (shiitake)**
Yeun Sug Jeong, Hyo-rim Lee, Yeongseon Jang, Kang-Hyeon Ka, Rhim Ryoo

P87 **Spread of *Heterobasidion* root rot infection in Norway spruce stands on former agricultural land after thinning**
Darta Klavina, Lauma Bruna, Natalija Burnevica, Talis Gaitnieks

P88 **Ecophysiology and virulence of *Pseudogymnoascus destructans***
Miroslav Kolařík, Hana Banďouchová, Jan Černý, Adéla Čmoková, Miroslav Flieger, Paula García Fraile, Veronika Kováčová, Alena Kubátová, Natália Martínková, Alena Nováková, Eva Stodůlková, Jiří Pikula

P89 **Effects of season and bedrock on ectomycorrhizal community composition in Submediterranean oak secondary forest**
Tanja Mrak, Nataša Šibanc, Ines Štraus, Jožica Gričar, Hojka Kraigher

P90 **Isolation and characterisation of metallothioneins from Cd-accumulating *Cystoderma carcharias***
Tereza Leonhardt, Jan Sácký, Jiří Černý, Jan Borovička, Pavel Kotrba

P91 **Novel aluminium-binding compound from *Oidiodendron* sp.**
Svetlana Baiandina, Tereza Leonhardt, Antonín Kaňa

P92 **Arsenic accumulation and speciation in *Russula pumila***
Gabriela Pelešková, Jan Sácký, Jan Borovička, Simone Braeuer, Walter Goessler, Pavel Kotrba

P93 **Fungal microbiota of caterpillars and phylloplane – how much do they differ?**
Denisa Višňovská, Petr Pyszko, Martin Šigut, Martin Kostovčík, Nela Kotásková, Ondřej Dorňák, Pavel Drozd, Miroslav Kolařík

P94 **Aclinic method of trap culture for arbuscular mycorrhizal fungi**
Anna Drazhnikova, Tetiana Andrianova

P95	**Can species belonging to *Mortierella lignicola* clade be associated with temperate forest ant species?** Igor Siedlecki, Sylwia Różalska, Przemysław Bernat, Maciej Kopczyński, Marta Wrzosek
P96	**Metagenomic analysis of rhizosphere soil around *Amanita caesarea*, *A. verna*, *Cortinarius violaceus*, *Laccaria vinaceoavellanea* in Jeju island in Korea** Dong Hyeung Lee, Hyung Jin Noh, Kang Hyo Lee, Seong Hwan Kim
P97	***Puccinia brachypodii* a rare rust fungus with low genetic diversity** Ewa Moliszewska, Magorzata Nabrdalik, Ewa Makowicz, Jacek Lipok
P98	**Fungi accompanying the protist *Plasmodiophora brassicae* in the soil** Noor Ramzi, Joanna Kaczmarek, Katarzyna Marzec-Schmidt, Tomasz Cłapa, Dorota Narożna, Małgorzata Jędryczka

13.30-14.30	Lunch	**Old Library** foyer; ground floor
14.30-17.00	**Parallel Sessions**	
	From genome to function Leader: Ekaterina Shelest	**Old Library** main assembly hall; ground floor
14.30-14.50	**Selective deconstruction of plant biomass : fungal enzymes active at the onset of solid state fermentation.** Marie-Noëlle Rosso, Shingo Miyauchi, Laurence Lesage-Meessen, Anne Favel, Elodie Drula, Simeng Zhou, Sacha Grisel, Igor V. Grigoriev, Robert Riley, Isabelle Herpoël-Gimbert, Sana Raouche	
14.50-15.10	**Waste wood bioconversion under oxygen depletion by *Phlebia radiata* - Towards sustainable bioethanol** Hans Mattila, Mari Mäkinen, Eero Kiviniemi, Taina Lundell	
15.10-15.30	**Bioinformatics approaches to understanding regulation of secondary metabolism in non-model fungi** Ekaterina Shelest	
15.30-15.50	**Fungal macrolactone toolkit: a phylogenomic atlas reveals usual suspects and unusual configurations in biosynthesis of ancient aromatic polyketides** Grzegorz Koczyk, Michał Kawaliło, Zuzanna Dutkiewicz, Monika Urbaniak, Delfina Popiel	
15.50-16.10	**Comparative genomics, evolution and adaptation of Antarctic cryptoendolithic Black Fungi** Claudia Coleine, Jason Stajich, Sawyer Masonjiones, Laura Zucconi, Silvano Onofri, Laura Selbmann	
16.10-16.30	**Transposable elements in fungal genomes** Anna Muszewska, Kamil Steczkiewicz, Marta Stepniewska-Dziubinska, Krzysztof Ginalski	

16.30-16.50	**Cytogenomic analyses reveal nuclear content variation along the life cycles of the Pucciniales fungi and enable the distinction of heterokaryotic nuclei** Rita Carvalho, Helena Azinheira, Marta Monteiro, João Loureiro, Leonor Morais-Cecílio, Pedro Talhinhas	
16.50-17.00	Discussion	
	Taxonomy and systematics Leader: Jos Houbraken	**Old Library** rooms 111-112; 1st floor
14.30-14.50	**Recent developments in the (infrageneric) classification of *Aspergillus* and *Penicillium*** Jos Houbraken, Robert A. Samson, Jens C. Frisvad	
14.50-15.10	**Anybody seen root galls on graminoid plants? First steps towards understanding the evolution of inconspicuous *Entorrhiza* and its relatives** Kai Riess, Max E. Schoen, Rebekka Ziegler, Matthias Lutz, Roger G. Shivas, Marcin Piątek, Sigisfredo Garnica	
15.10-15.30	***Chalara* revival – how to treat chalara-like fungi?** Ondřej Koukol	
15.30-15.50	**Polythetic taxonomy of Iranian Hypoxylaceae and Xylariaceae of the Xylariales** Mohammad Javad Pourmoghaddam, Christopher Lambert, Frank Surup, Kathrin Wittstein, Marc Stadler, Seyed Akbar Khodaparast, Irmgard-Krisai Greilhuber	
15.50-16.10	**Phylogenetic revision of the basal Dacrymycetes (Basidiomycota): Cerinomycetaceae family** Anton Savchenko	
16.10-16.30	**Patterns of speciation in thallus-forming Laboulbeniomycetes** Danny Haelewaters	
16.30-16.50	**New taxa of Antarctic cryptoendolithic black fungi by multi locus phylogeny** Laura Selbmann, Federica Mostardi, Claudia Coleine, Laura Zucconi, Silvano Onofri	
16.50-17.00	Discussion	
18.00-20.00	Welcome, Cultural Event	Botanical Garden

Tuesday, September 17, 2019 – Warsaw		
09.00-09.45	**Keynote lecture: Geomycology: metals and minerals, bioremediation and biorecovery** Geoffrey Michael Gadd	**Old Library** main assembly hall; ground floor
9.45-10.30	**Keynote lecture: The Evolutionary Origin and Stability of Cultivation of Termitomyces by Termites** Duur Aanen	**Old Library** main assembly hall; ground floor
10.30-10.45	Discussion	**Old Library** main assembly hall; ground floor
10.45-11.00	Coffee break	**Old Library** foyer 1st floor
11.00-13.30	**Parallel Sessions**	
	Fungi in Biotechnology Leader: Katarzyna Turnau	**Old Library** rooms 111-112; 1st floor
11.00-11.20	**Symbiotic fungi as an efficient tool in biotechnology** Katarzyna Turnau	
11.20-11.40	**Inositol signaling in *Schizophyllum commune*** Erika Kothe	
11.40-12.00	**Development of a biotechnology tool for tree stress mitigation under urban context** Miguel A. Ramos, Cindy Serafim, Tugce Yilmaz, Kang Yu, Maarten Van Geel, Ben Somers, Thierry Ameglio, Olivier Honnay, Paula M.L. Castro	
12.00-12.20	**Screening of strains from wood decay species for advancement of mycelium-based materials technology** Carolina Girometta, Stefano Babbini, Rebecca Michela Baiguera, Diego Savio Branciforti, Marco Cartabia, Daniele Dondi, Anna Maria Picco, Elena Savino	
12.20-12.40	**Taming the monster or how to control fungal morphology in the submerged cultures** Marcin Bizukojć	
12.40-13.00	**The genome of the pathogenic white rot fungus *Armillaria ostoyae* encodes a distinctive genetic potential to degrade aromatic compounds** B. Indic, M. Münsterkötter, L. Kredics, Gyoergy Sipos	
13.00-13.20	**Lignicolous fungi – natural sources of** AChE **enzymes inhibitors** Maja Karaman	

13.20-13.30	**Endophytic fungi improve Ni accumulation of hyperaccumulating plants** Rafał Ważny, Piotr Rozpądek, Agnieszka Domka, Roman J. Jędrzejczyk, Katarzyna Turnau	
	Fungal interactions Leader: Martin Bidartondo	**Old Library** main assembly hall; ground floor
11.00-11.20	**Interactions of polyporoid fungi affect enzyme activities, release of volatile organic compounds and wood decomposition pattern** Tuulia Mali, Mari Mäki, Hans Mattila, Heidi Hellén, Jussi Heinonsalo, Jaana Bäck, Taina Lundell	
11.20-11.40	**Compositional shift in communities of bacteria and fungi following tree species change from natural birch to planted spruce forests** Sunil Mundra, Luis Morgado, Håvard Kauserud, O. Janne Kjønaas	
11.40-12.00	**Biology, epidemiology and host range of the downy mildew of sage (*Peronospora salviae-officinalis*)** Mascha Hoffmeister, Wolfgang Maier, Marco Thines	
12.00-12.20	**Competitive interactions between the plant pathogen *Armillaria mellea* and root endophytic *Trichoderma* spp. or the opportunist *A. gallica*** Jassy Drakulic, Helen Rees, Matthew Cromey	
12.20-12.40	**Large-scale controls of ectomycorrhizal fungi** Martin Bidartondo	
12.40-13.00	**The impact of Southern Pine bark beetle on the decomposition and fungal success of pitch pine wood in the NJ pine barrens** John Dighton, Ning Zhang, Emily Walsh	
13.00-13.30	Discussion	
13.30-14.30	Lunch	**Old Library** foyer; ground floor
14.30-16.00	**Parallel Sessions**	
	Offered Presentations Session 2	**Old Library** main assembly hall; ground floor
14.30-14.40	**Forest management's alteration of the underground fungal biodiversity in Mediterranean coniferous forest** Segula Masaphy	
14.40-14.50	**Space for time: Soil fungal communities and biomass across a boreal forest age gradient** Luis Morgado, Sunil Mundra, Ella Thoen, O. Janne Kjønaas, Yngvild Ransedokken, Line Nybakken, Erik Stange, Olav Skarpaas, Björn Nordén, Håvard Kauserud	

14.50-15.00	**Biodiversity and news records of genus *Chaetomium* in Egypt** Ahmed Abdel-Azeem, Vijai Gupta, Robert Blanchette, Benjamin Held
15.00-15.10	**New data on phytopathogenic Ascomycota of Ukrainian *Polissya*** Tetiana Andrianova
15.10-15.20	**Confusion in the taxonomy of genus *Phellinus*** Anuradha Kumari, Nirmal S. K. Harsh, Manoj Kumar
15.20-15.30	**A molecular phylogenetic assessment of the genus *Scutellinia* (Pezizales: Pyronemataceae)** Paola Angelini, Andrea Arcangeli, Giancarlo Bistocchi, Roberto Venanzoni, Andrea Rubini
15.30-16.00	Discussion

14.30-16.00	**Poster Session 2**	**Old Library** rooms 105-109; poster area; 1st floor

Theme: Medical mycology

P99	**Mycelial cultures of *Lentinula edodes* enriched with bioelements as a potential anti-inflammatory material** Katarzyna Kała, Joanna Gdula-Argasińska, Anna Zając, Katarzyna Sroczyńska, Agata Krakowska, Bożena Muszyńska
P100	**Role of dephosphorylation of dolichyl diphosphate in protein glycosylation and morphological transitions in *Candida albicans*** Anna Janik, Monika Niewiadomska, Karolina Skorupińska-Tudek, Urszula Perlińska-Lenart, Jacek Lenart, Damian Kołakowski, Ewa Świeżewska, Joanna Kruszewska, Grażyna Palamarczyk
P101	**Dermatophytes isolated from wild rodents** Stepanka Zarova, Lucie Novakova, Tereza Matejkova, Pavel Stopka, Jakub Kreisinger, Martin Kostovcik, Tomas Vetrovsky, Miroslav Kolarik, Adela Cmokova
P102	***Cryptococcus* species complex stands out among yeast-like fungi by the ability to form Titan cells *in vitro*** Mariusz Dyląg, Rodney Colon-Reyes, Lukasz Kozubowski
P103	**Antitumor effect of the nigerooligosaccharides obtained by acid-hydrolysis of α-(1→3)-glucans from fruiting bodies of *Fomitopsis betulina*** Arkadiusz Czerwonka, Adrian Wiater, Iwona Komaniecka, Paulina Adamczyk, Wojciech Rzeski, Małgorzata Pleszczyńska
P104	**Potential of *Aspergillus* proteases usage in biomedicine** Svetlana Timorshina, Anna Rakova, Aleksandra Ochneva, Daria Bednenko, Alexander Osmolovskiy

P105 **Effectiveness of mycostats and disinfectants on yeast strains isolated from tap water**
Anna Biedunkiewicz, Tomasz Bałabański, Kamila Kulesza, Natalia Lipka

P106 **Mold fungi isolated from the sports locker room**
Tomasz Bałabański, Anna Biedunkiewicz

P107 **Two poorly defined populations revealed by microsatellite analysis of *Trichophyton rubrum* complex**
Adela Cmokova, Miroslav Kolarik, Vit Hubka

P108 **Differential gene expression of species from *T. benhamiae* clade**
Lenka Machova, Martin Kostovcik, Miroslav Kolarik, Adela Cmokova

P109 **Characterization of bioactive compounds and antioxidant activity of some medicinal macromycetes harvested from different regions of Armenia**
Vahagn Gevorgyan, Torgom Seferyan, Lusine Margaryan, Siranush Nanagulyan

P110 **Elucidating species boundaries between agents of superficial mycoses *Trichophyton interdigitale* and *T. mentagrophytes***
Michaela Švarcová, Vít Hubka

P111 **Contents of heavy metals, macro- and microelements in selected species of edible mushrooms in NW Poland**
Małgorzata Stasińska, Zofia Sotek, Bogumiła Pilarczyk, Patrycja Radke, Ryszard Malinowski, Agnieszka Tomza-Marciniak, Małgorzata Bąkowska, Mateusz Bocian

P112 **Yeast *Saccharomyces cerevisiae* as an eukaryotic model to study genotoxicity of potential drugs**
Magdalena Cal, Irwin Matyjaszczyk, Ireneusz Litwin, Daria Augustyniak, Grażyna Majkowska-Skrobek, Rafał Ogórek, Young Ko, Peter Pedersen, Stanisław Ułaszewski

P113 **Chloroquine & Primaquine Diphosphate as Possible Alternative Drugs for the Treatment of Cryptococcal Infection**
Lynda Madu, Carolina Pohl, Olihile Sebolai

Theme: Fungal diversity

P114 **Distribution of microfungi through soil profiles at the Hallamish dunefield, Negev Desert, Israel**
Isabella Grishkan, Giora Kidron

P115 **Taxonomic composition of microfungal communities in organic layer under Japanese knotweed**
Karolina Oszust, , Magdalena Frąc, Anna M. Stefanowicz

P116 **Changes of fungal diversity in soils amended with biofertilizers**
Giorgia Pertile, Agata Gryta, Mateusz Mącik, Magdalena Frąc

P117 **Cladoniicolous fungi in the Carpathian Basin**
Nóra Varga, László Lőkös, Edit Farkas

P118 **The diversity of fungi associated with *Quercus rubra* L.: the case of 100-year-old alley in the city center**
Mikołaj Matela, Natalia Stokłosa, Anna Frymark-Szymkowiak, Magdalena Kulczyk-Skrzeszewska, Barbara Kieliszewska-Rokicka

P119 **Data collecting on distribution of fungi in Latvia by communication with general public**
Inita Daniele, Diana Meiere

P120 **Macrofungi of Shar Planina the largest mountain range in the Central Balkan**
Katerina Rusevska, Slavica Tofilovska, Mitko Karadelev

P121 **Fungi colonizing different parts of tomato plant (*Solanum lycopersicum*) in Slovakia**
Martin Pastirčák, Katarína Pastirčáková

P122 **Soil contamination as a key factor influencing fungal diversity**
Julia Pawłowska, Przemysław Decewicz, Alicja Okrasińska, Łukasz Dziewit, Marta Wrzosek, Somayeh Dolatabadi

P123 **Fungal endophytes in common wheat (*Triticum aestivum* L.) cultivated in Poland**
Sylwia Salamon, Katarzyna Mikołajczak, Lidia Błaszczyk

P124 **Hidden from sight - mycorrhizal fungal diversity in South African soils**
Joanna Dames

P125 **Microfungi (incl. larger Ascomycota) of the Białowieża Forest – synthesis result after 130 years of investigations**
Wiesław Mułenko, Monika Kozłowska, Marek Wołkowycki, Marcin Anusiewicz

P126 **ITS diversity of the soil mycobiota in a Mediterranean forest ecosystem**
Paulo Oliveira, Beatriz Lourenço, Teresa Freire, Marco Guerreiro, Derek Peršoh

P127 **Macrofungi Diversity in the Middle East: Survey and Identification of Wild Mushrooms in Lebanon**
Nadine Modad

P128 **A widely applicable approach to fungal communities succession**
Paulo Oliveira, Cláudia Lopes, Gonçalo Isidoro, Rodrigo Teles, Carlos Vila-Viçosa

P129 **Fungal diversity of Jagiellonian tapestries**
Łukasz Istel, Magdalena Dyda, Paulina Drabik, Magdalena Ozga, Jerzy Holc, Karolina Szlęk

P130 **Fungal richness in Acute Oak Decline infected *Quercus robur* L. in Latvia**
Lauma Brūna, Natālija Burņeviča, Tālis Gaitnieks

P131 **Innovative silvicultural treatments to enhance soil biodiversity in artificial black pine stands: effect on macrofungal diversity.**
Claudia Perini, Debora Barbato, Elena Salerni

P132 **MycoIndoor: citizen science to unravel the mycobiomes of Norwegian houses**
Pedro M. Martin-Sanchez, Eva Lena F. Estensmo, Maria Nunez, Johan Mattsson, Ingeborg B. Engh, Inger Skrede, Håvard Kauserud

P133 **Xylotrophic pathogens in orchards of the Middle Russian Upland: new hosts and new localities**
Sergey Volobuev

P134 **Letters (on fungi) from small islands - comparisons from around the world**
Howard Fox, Maria Cullen

P135 **Do tourists matter?**
Magdalena Dyda, Łukasz Istel, Paulina Drabik, Sławomir Korzeniowski, Piotr Jarek, Maria Kisiel-Jarek

P136 **Characterizing fungal microbiota of Romaine lettuce using Sanger and next-generation sequencing platforms**
Danny Haelewaters, Samira Fatemi, Makenna L. Houston, M. Catherine Aime

P137 **Rhizosphere of wild raspberries as a source of beneficial fungi**
Michał Pylak, Karolina Oszust, Magdalena Frąc

P138 **Fungi as alien as their host? Microfungi associated with northern red oak (*Quercus rubra* L.) in Poland**
Małgorzata Ruszkiewicz-Michalska, Beata Woziwoda, Małgorzata Stasińska, Sebstian Piskorski, Zuzanna W. Botew

P139 ***Dothistroma septosporum* mating types observed in Slovakia**
Emília Ondrušková

Theme: Fungi in primeval forests and other natural habitats

P140 **Pathogenic fungi on *Prunus serotina* in selected localizations of north and south Poland - case study**
Katarzyna Patejuk, Wojciech Pusz

P141 **Spatial distribution of mycelial individuals in populations of two saprothrophic basidiomycetes *Mycetinis alliaceus* and *Gymnopus androsaceus***
Eleonora Bošković, Vladislava Galović, Maja Karaman

P142 **Relationship between environmental factors and macrofungal communities of different forest stands**
Milana Rakić, Miroslav Marković, Zoran Galić, Srđan Grušanović, Josipa Grušanović, Maja Karaman

P143 **Macrofungi on fallen oak trunks in the Białowieża Virgin Forest – ecological role of trunk parameters and surrounding vegetation**
Jan Holec, Jan Běťák, Daniel Dvořák, Martin Kříž, Miriam Kuchaříková, Renata Krzyściak-Kosińska, Tomáš Kučera

P144 **Microscopic fungi colonizing *Ursus spelaeus* bones and their susceptibility to commercially available antifungal preparations**
Ogórek Rafał, Agata Piecuch, Mariusz Dyląg, Katarzyna Niedźwiecka, Magdalena Cal, Artur Sawicki

P145 **Comparative metagenomic analysis of fungi inhabiting roots of *Deschampsia antarctica* and *Poa annua*, two grass species collected in Antarctica**
Sebastian Piłsyk, Urszula Perlińska-Lenart, Jakub Grzesiak, Anna Znój, Katarzyna Chwedorzewska, Marta Ajchler-Adamska, Kamil Glizia, Joanna S. Kruszewska

P146 **Aphyllophoroid fungi of the Bialowieza Forest (Belarus)**
Tatiana Shabashova, Eugene Yurchenko, Darya Belomesyatseva

P147 **Macrofungi in birch bog forests on anthropogenically transformed raised bogs (NW Poland)**
Małgorzata Stasińska, Zofia Sotek, Ryszard Malinowski, Renata Gamrat, Małgorzata Gałczyńska

P148 **Effect of deadwood on ectomycorrhizal colonisation of old - growth oak forests**
Jacek Olchowik, Dorota Hilszczańska, Roman Mariusz Bzdyk, Marcin Studnicki, Tadeusz Malewski, Zbigniew Borowski

P149 **Diverse endophytic fungi colonize indigenous grasses in the Hyrcanian Forest of Iran**
Sara Yazdani-Khameneh, Alireza Golnaraghi, Stephen J. Wylie

P150 **A new ecosystem and its fungal community: exploratory study of a pristine climacic forest patch in Southern Portugal**
Carlos Vila-Viçosa, Paulo Oliveira

P151 **Fungal Diversity in Sacred Groves vs. Managed Forests of Epirus, NW Greece**
Stephanos Diamandis, Helen Topalidou

P152 **The soil microfungi of the Colombian ecosystems**
Ángela Yaneth Landínez-Torres, Solveig Tosi

Theme: Hypogeous mycorrhizal fungi

P153 **Community composition of root-associated fungi in a productive *Tuber aestivum* Vittad. Orchard**
Hanna Szmidla, Dorota Hilszczańska

P154 **The neglected hypogeous ectomycorrhizal fungi of Artikutza (Northern Navarre, Spain)**
Isabel Salcedo, Julio Cabero, Asun Rodriguez, David Moreno

P155 **Biogeography and ecology of *Tuber aestivum* in Croatia**
Magdalena Jambrek Fuellhart, Ana Pošta, Željko Zgrablić, Dino Buršić, Ivana Kušan, Neven Matočec, Zdenko Tkalčec, Armin Mešić

P156 **Diversity of fungi inhabiting resin tapping wounds of Scots pine in Latvia: preliminary results**
Astra Zaluma, Talis Gaitnieks, Natalija Burnevica, Rimvys Vasaitis

P157 **Diversity and distribution of genus *Tuber* in the Republic of North Macedonia**
Slavica Tofilovska, Katerina Rusevska, Mitko Karadelev, Tine Grebenc

P158 **Hypogeous fungal diversity in Serbia**
Boris Ivančević, Miroljub Milenković

P159 **Morphological and DNA characterization of *Tuber panniferum* ectomycorrhizae**
Giorgio Marozzi, Leonardo Baciarelli Falini, Domizia Donnini

P160 **Microbiome of fruiting bodies of Burgundy truffle (*Tuber aestivum* Vittad.)**
Urszula Perlińska-Lenart, Sebastian Piłsyk, Elżbieta Gryz, Jadwiga Turło, Dorota Hilszczańska, Joanna S. Kruszewska

P161 **Evaluational approach to the Red List of hypogeous fungi in Poland**
Maria Ławrynowicz, Piotr Mleczko, Dominika Ślusarczyk

P162 **TRUE – the revived TAUESG. Truffle Research Union of Europe for a new European truffle perspective**
Žaklina Marjanović, G. Chevalier, Christina Wedén

Theme: Fungal conservation

P163 **Comparative study of wood decaying fungi over a time line from Chakrata in northwest Himalaya in India**
Manoj Kumar, Nirmal S. K. Harsh, Anuradha Kumari

P164 **Evolution of the populations of ten macromycetes in Belgium since 1940**
André Fraiture

P165 **Morphologically similar, cryptic taxa of macrolichens of conservation importance in the Carpathian Basin**
Edit Farkas, László Lőkös, Mónika Sinigla, Nóra Varga, Katalin Veres

P166	**Fungi in the Red Book of Belarus** Darya Belomesyatseva, Tatiana Shabashova, Olga Gapienko, Yadviga Shaporova, Eugene Yurchenko
P167	**Inoculation for conservation – developing protocols for inoculating wood-decay fungi into living trees for targeted conservation outcomes** Matthew Wainhouse, Emma Gilmartin, Lynne Boddy
P168	**An annotated checklist of rust fungi (Pucciniales) occurring in Portugal reveals endangered species, invasion routes and speciation hotspots** Rita Carvalho, Rui Figueira, Ana Paula Ramos, Pedro Talhinhas
P169	**Mycology in Ireland - postcards from the edge** Maria Cullen, Howard Fox
P170	**Diversity of macrofungi in the old growth spruce forest of the Stołowe Mts National Park, Poland** Izabela Kałucka, Andrzej Jagodziński
P171	**Red list of the andorran fungi** Manel Niell
P172	**Preliminary analysis of the first year of data on the study of the diversity and production of mushrooms in black pine forests (*Pinus uncinata*)** Manel Niell

Offered posters

P173	**Oral candidiasis in HIV infected patients and its antifungal susceptibility pattern by disc diffusion method** Pankaj Chaudhary, Samridhi Basnet, Anu Khadgi, Manisha Chaulagain, Samana Biswokarma
P174	**Evaluation of Three Mushroom Species Ethanol Extracts in the Treatment of Prostate Cancer in Wister Albino Rats and Phytochemical Analysis of the Fungi in Nigeria** Elizabeth Olawumi Oyebanji, Adedotun Adeyinka Adekunle
P175	**Improvement of bottle cultivation method for automated shiitake(Leninula edodes) cultivation.** Yeun Sug Jeong, Rhim Ryoo, Kang-Hyeon Ka, Hyo-rim Lee, Youngae Park, Yeongseon Jang

16.00-16.30	Coffee break	**Old Library** foyer; 1st floor
16.30-17.30	EMA General Assembly	**Old Library** main assembly hall; ground floor
18.00-20.00	**Open lecture: Mycology: a recent weapon in the forensic armoury** Patricia E.J. Wiltshire	**Copernicus Science Centre** Wybrzeże Kościuszkowskie 20

Wednesday, September 18, 2019 – Warsaw, Białowieża		
09.00-09.45	**Keynote lecture: Comparative Genomics of Smut Fungi to Bridge the Gap between Systematics, Ecology and Function** Dominik Begerow	**Old Library** main assembly hall; ground floor
9.45-10.30	**Keynote lecture: Time to re-think fungal ecological niches? Endophytic abilities in ectomycorrhizal taxa.** Marc-André Selosse, Laure Schneider-Maunoury, Florent Martos, Julita Minasiewicz	**Old Library** main assembly hall; ground floor
10.30-10.45	Discussion	**Old Library** main assembly hall; ground floor
10.45-11.00	Coffee break	**Old Library** foyer; 1st floor
11.00-13.30	**Parallel Sessions**	
	Medical mycology Leader: Michaela Lackner	**Old Library** rooms 111-112, 1st floor
11.00-11.20	**Alternative models to study antifungal susceptibility and virulence of pathogenic molds** Ulrike Binder	
11.20-11.40	**Sterol composition of clinically relevant Mucorales and changes resulting from posaconazole treatment** Christoph Müller, Cornelia Lass-Flörl, Ulrike Binder, Franz Bracher	
11.40-12.00	**Unravelling antibiotically active natural products of fungal endophytes from *Leontopodium nivale* subsp. *alpinum*** Martina Oberhofer, Havva Isikoglu, Claudia Haager, Nadine Haubenwallner, Judith Wackerlig, Ernst Urban, Martin Zehl, Christoph Wawrosch, Sergey B. Zotchev	
12.00-12.20	**Genetic manipulation in *Mucor circinelloides*, a model organism for mucormycosis** Francisco Esteban Nicolas Molina, Maria Isabel Navarro Mendoza, Carlos Perez Arquez, Laura Murcia Flores, Carlos Lax, Pablo Martinez Garcia, Eusebio Navarro, Jose Canovas Marquez, Jose Perez Ruiz, Victoriano Garre	

12.20-12.40	**Use of a yeast model to improve azole drugs** Brian Monk, Alia Sagatova, Rajni Wilson, Joel Tyndall, Michaela Lackner, Yasmeen Ruma, Parham Hosseini, Mikhail Keniya	
12.40-13.00	**Bioactive compounds of Basidiomycota from Northeastern Thailand** Pathompong Paomephan, Benjarong Thongbai, Kevin Becker, Chuenchit Boonchird, Marc Stadler	
13.00-13.20	**Intrinsic short-tailed azole resistance in mucormycetes** Michaela Lackner, Mikhail V Keniya, Brian C Monk	
13.20-13.30	Discussion	
	Fungal diversity Leader: Carrie Andrew	**Old Library** main assembly hall; ground floor
11.00-11.20	**Keeping an eye on what we, literally, mostly cannot see: fungal diversity and the identification of "bellwethers" of global change** Carrie Andrew	
11.20-11.40	**DNA-barcoding of fungi in Austria - state of the art of the HSRM project at the University of Vienna** Irmgard Krisai-Greilhuber	
11.40-12.00	**Folk knowledge and observations as new sources of information about the ecology of macrofungi and changes in local mycobiota** Marcin Kotowski, Łukasz Łuczaj	
12.00-12.20	**Soil fungal communities in industrial pollution gradients: good models for testing community assembly hypotheses** Vladimir Mikryukov, Olesya Dulya	
12.20-12.40	**How to estimate fungal diversity in bogs?** Martina Vašutová, Martin Jiroušek, Michal Hájek	
12.40-13.00	**Effects of macroclimate and resource on the diversity of tropical wood-inhabiting fungi** Boris A. Olou, Nourou S. Yorou, Manuel Striegel, Claus Bässler, Franz-Sebastian Krah	
13.00-13.20	**Current climate change and distribution patterns of clavarioid fungi (Agaricomycetes) diversity in the Eurasian Arctic** Anton Shiryaev	
13.20-13.30	Discussion	
13.30-14.30	Lunch	**Old Library** foyer; ground floor

14.30-18.00	bus transfer to Białowieża	departure of buses from University of Warsaw (Krakowskie Przedmieście 26/28) arrival of buses to Białowieża (PTTK parking – ul. Kolejowa 17)
18.00-20.00	Dinner	Białowieża National Park (Park Pałacowy 11, Białowieża)

Thursday, September 19, 2019 – Białowieża

Excursions to BNP Strict Reserve (in groups of 12 pers.) and to Bison Reserve (3 km from Białowieża) will be organized throughout Thursday and Friday; subscriptions for specific hours will be kept at the reception desk.

9.00-10.00	**Keynote lecture: Białowieża Forest: yesterday, today, tomorrow …** Bogdan Jaroszewicz	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
10.00-10.15	Discussion	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
10.15-10.30	Coffee break	**Białowieża National Park** (Park Pałacowy 11, Białowieża) restaurant; ground floor
10.30-13.00	**Fungi in primeval forests and other natural habitats** Leader: Anders Dahlberg	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
10.30-10.50	**Plot-based macrofungi monitoring in taiga zone of West Siberia and sampling event data publishing** Nina Filippova	
10.50-11.10	**The occurrence and pathogenicity of *Geosmithia* spp. associated with two cypress bark beetle *Phloeosinus* spp. in planted forests in Israel** Vineet Meshram, Meirav Elazar, Stanley Freeman	
11.10-11.30	**Combined meta'omics reveal links among fungal community composition, gene expression, and chemical changes in decomposing leaf litter** Marco Alexandre Guerreiro, Stephan Kambach, Raphael Stoll, Andreas Brachmann, Dominik Begerow, Derek Peršoh	
11.30-11.50	**Climate structures belowground fungal communities in semi-natural grasslands** Ella Thoen, Synnøve S. Botnen, Leticia Pérez-Izquierdo, Line Nybakken, Aud H. Halbritter Rechsteiner, Einar Heegaard, Vigdis Vandvik, Karina E. Clemmensen, Håvard Kauserud, Unni Vik	

11.50-12.10	**Inside Oak – fungal community structure in the heartwood of oak trunks** Matthew Wainhouse, Hilary Rogers, Lynne Boddy	
12.10-12.30	**Low fungal host specificity of epiphytic orchids in a Neotropical canopy** Christoffer Bugge Harder	
12.30-12.50	**Diversity in buried wood - each running metre matters?** Marta Wrzosek, Julia Pawłowska, Brunon Malicki, Przemysław Decewicz, Ewa Chećko, Olga Cholewińska, Bogdan Jaroszewicz	
12.50-13.00	Discussion	
13.00-14.00	Lunch	**Białowieża National Park** (Park Pałacowy 11, Białowieża) restaurant, ground floor
14.00-16.00	Visit in Nature and Forest Museum, BNP (in groups 20 pers.; entry each 10 min.; visit 55 min.)	**Białowieża National Park** (Park Pałacowy 11, Białowieża)
18.00-23.00	Congress Dinner	**"Białowieski" Hotel** (Stoczek 218b, Białowieża)

Friday, September 20, 2019 – Białowieża		
9.00-13.00	Excursion to Białowieża forest with collecting fungi: 1) and 2) parasitic micromycetes (limit 2x 12 pers.), 3) Polypores (limit 50 pers.), 4) macromycetes (limit 50 pers.), 5) miscellaneous (limit 50 pers.)	
13.00-14.00	Lunch	**Białowieża National Park** **(Park Pałacowy 11, Białowieża)** restaurant; ground floor
14.00-14.45	**Keynote lecture: Trees ancient and young: a veritable feast for wood decay fungi** Lynne Boddy	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
15.00-16.30	**Parallel sessions**	
	Hypogeous mycorrhizal fungi Leader: Giovanni Pacioni	**Forest Research Institute** (Park Dyrekcyjny 6, Białowieża) first floor
15.00-15.15	**Competitive dynamics in *Tuber* genus: what do we know?** Mirco Iotti, Francesca Ori, Marco Leonardi, Pamela Leonardi, Claude Murat, Alessandra Zambonelli, Giovanni Pacioni	

15.15-15.30	**The Algerian desert truffles: taxonomy, distribution and mycorrhizal ecology** Fatima El-Houaria Zitouni-Haouar, Zohra Fortas, Hanane Zitouni	
15.30-15.45	**Hypogeous fungi in the Republic of North Macedonia – what we know and what can we expect** Slavica Tofilovska, Katerina Rusevska, Mitko Karadelev, Tine Grebenc	
15.45-16.00	**Shedding light on the *Tuber mesentericum* complex** Marco Leonardi, Mirco Iotti, Gian Luigi Rana, Aurelia Paz-Conde, Daniele Salvi, Giovanni Pacioni	
16.00-16.15	**Insects inhabiting fruiting bodies of Burgundy truffle (*Tuber aestivum* Vittad.)** Aleksandra Rosa-Gruszecka, Dorota Hilszczańska	
16.15-16.30	**Small mammals as dispersal agents of hypogeous fungi in the Pieniny Mountains, Western Carpathians** Patryk Komur, Piotr Chachuła, Joanna Kapusta, Izabela Wierzbowska, Paweł Olejniczak, Kaja Rola, Piotr Mleczko	
	Data session Leader: Dmitry Schigel	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
15.00-15.20	**The formal and informal sources of data on protected and redlisted species in Poland** Małgorzata Ruszkiewicz-Michalska, Julia Pawłowska, Anna Kujawa	
15.20-15.40	**PacBio sequences from material samples are incorporated into UNITE Species Hypotheses datasets** Urmas Kõljalg	
15.40-16.00	**Establishing GBIF infrastructure in Poland: opportunities and challenges** Piotr Tykarski	
16.00-16.20	**Fungi, sequences, and global biodiversity: boosting the impact of mycology through primary data** Dmitry Schigel	
16.20-16.30	Discussion	
16.30-17.00	Coffee break	**Białowieża National Park** (Park Pałacowy 11, Białowieża) restaurant, ground floor
17.00-19.30	**Workshop 1: Global Fungal Red-listing** Leader: David Minter	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall, ground floor
	bus transfer to Topiło (campfire) will be organized for participants of workshop 1 and they could join return trip by narrow-gauge railway	

17.00-22.00	narrow-gauge railway trip Hajnówka - Topiło (campfire)	**Hajnówka-Topiło**

Saturday, September 21, 2019 – Białowieża, Warsaw		
09.00-11.00	**Fungal conservation** Leader: Susana C. Gonçalves	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall, ground floor
09.00-09.20	**Advancing Fungal Conservation** Gregory Mueller	
09.20-09.40	**Fungal conservation in practice – 40 years' experiences from the Nordic countries** Anders Dahlberg	
09.40-10.00	**Deployment of NextGen sequencing in fungal conservation** Gareth Griffith	
10.00-10.20	**Medicinal properties of macromycetes in Shikahogh State Reserve of Armenia** Lusine Margaryan, Vahagn Gevorgyan, Yeva Hovhannisyan, Siranush Nanagulyan	
10.20-10.40	**What do Polish students know about fungi? A study on mycological education in primary school and nature education centers** Igor Siedlecki, Michał Kochanowski, Alicja Okrasińska, Julia Pawłowska, Marta Wrzosek	
10.40-11.00	**Celebrating the Fungi to fight fungal blindness and boost conservation** Susana C. Gonçalves, Miguel Ferreira, Joana Cabral-Oliveira, António C. Gouveia, Helena Freitas, M. Teresa Gonçalves, Rita Campos	
11.00-11.15	Coffee break	**Białowieża National Park** (Park Pałacowy 11, Białowieża) restaurant; ground floor
11.15-12.30	ECCF Open Discussion Forum	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall, ground floor
11.00-12.30	**Workshop 2: Biology of Polypores** Leader: Dmitry Schigel	**Białowieża Geobotanical Station** (Sportowa 19, Białowieża)
12.30-13.00	Closing Ceremony	**Białowieża National Park** (Park Pałacowy 11, Białowieża) main hall; ground floor
13.00-14.00	Lunch	**Białowieża National Park** (Park Pałacowy 11, Białowieża) restaurant; ground floor

13.00-17.00, 18.00	Transfer to Warsaw (arrival of first buses to Warsaw ca. 17.00; buses will stop at Warsaw Chopin airport and Warsaw Central Railway Station)	**departure from Białowieża National Park** (PTTK parking – Kolejowa 17, Białowieża)

ABSTRACTS OF PLENARY SPEAKERS' TALKS

The evolution of mycorrhizal genomes and transcriptomes

Annegret Kohler[1], Eniko Kiss[2], Emmanuelle Morin[1], Shingo Miyauchi[1], Laszlo G Nagy[2], Igor Grigoriev[3], Francis Martin[1], Mycorrhizal Genome Initiative

[1] Institut national de la recherche agronomique (INRA), Unité Mixte de Recherche 1136 INRAUniversité de Lorraine, Interactions Arbres/Microorganismes, Centre INRA-Grand Est-Nancy, Champenoux, France.
[2] Synthetic and Systems Biology Unit, Biological Research Center, Hungarian Academy of Sciences, Szeged, Hungary
[3] US Department of Energy, Joint Genome Institute (JGI), Walnut Creek, California, USA

In boreal and temperate forests, trees rely on ectomycorrhizal symbiosis to acquire the limited nutrients in the soil, but the establishment of this mutualistic association leads to dramatic morphogenetic changes in both symbiotic partners. To elucidate the genetic basis and the evolution of the mycorrhizal lifestyle we took advantage of the large fungal genome sequencing programs ongoing at the Joint Genome Institute.
The comparison of 112 genomes from mycorrhizal fungi, wood decayers and litter decomposers revealed several independent lifestyle transitions from saprotrophism to mutualism. A general trend within ectomycorrhizal genomes, but not in ericoid and orchid mycorrhizal genomes, is the reduction of genes coding for plant cell wall degrading enzymes. However, ectomycorrhizal species seem to have retained diverse sets of enzymes depending on their ecological niches. The availability of mycorrhizal genomes enables us as well to compare mycorrhizal transcriptomes and to identify symbiosis-related genes.
We could show that both conserved and clade-specific genes, as for example effector-like mycorrhizainduced small secreted proteins (MiSSPs), are used by *Laccaria bicolor* to establish symbiosis with the roots of the host tree *Populus*. Using a phylostratigraphy approach we compared the « symbiosistoolbox » of 15 mycorrhizal interactions. Again the age distribution of mycorrhiza-induced genes showed two peaks corresponding to ancestral genes made of conserved gene families and speciesspecific orphan genes.
About 45% of the mycorrhiza-induced genes predate the origin of mycorrhiza, suggesting gene cooption as a major mode of recruiting genes for symbiosis. Conserved mycorrhiza-induced genes showed little overlaps across species, suggesting that independently evolved mycorrhizal lineages have co-opted different genes. Interestingly, induced genes are coding for the same functions but without orthology, like small-secreted proteins, transporters or carbohydrate active enzymes

Discovering the extent of fungal diversity

Professor **David L Hawksworth** CBE
Hon. President, International Mycological Association
(The Natural History Museum, London, UK; Royal Botanic Gardens, Kew, UK)

The extent of species diversity amongst the fungi only started to be fully recognized the last decades. The pattern of species description has been accelerating over the last decade with the advent of molecular approaches (and despite the ending of the naming of separate morphs of the same fungus in 2011). There is no indication of numbers discovered falling, and the number of mycologists is the key factor limiting the numbers. But how many species remain to be discovered to achieve a complete global inventory? Prior to the molecular techniques, the focus was on ratios extrapolated from comparisons of the number of plants and the number of fungi from all habitats collected or isolated in a site. A ratio of around 5-6:1 was derived from two particularly well-studied areas in the UK, supplemented by several other independent data sets, and seems to hold also for the tropics. Now, molecular data provide a new dimension to morphospecies-based estimates, in terms of the numbers of cryptic species within long-recognized morphospecies, and environmental sequences. Notwithstanding issues in the interpretation of environmental sequence data, the conclusion that estimates based on visible fungi are far too low is inescapable. Recent work on one soil sample from one well-studied UK wood leads the ratio being increased to 22:1 – and yielded evidence of 132 genera not detected in field surveys. It now emerges that there are probably 2.2-3.8 million species of fungi, suggesting that as many as 97% of the species remain undescribed. How to name species from sequences alone is a challenge we cannot avoid and must resolve at IMC12 in Amsterdam in 2022.

Geomycology: metals and minerals, bioremediation and biorecovery

Geoffrey Michael Gadd
Geomicrobiology Group, School of Life Sciences, University of Dundee, Dundee, DD1 5EH, Scotland, UK

"Geomycology" is an important part of "geomicrobiology" and can be defined as the impact of fungi on geological processes, including bioweathering of rocks and minerals, metal and metalloid transformations, and element and nutrient cycling. Fungi are important geoactive agents in soil, rock and mineral surface layers, whether free-living or in symbioses with phototrophs, and also significant biodeteriogens in the built environment. Many geomycological processes, dependent on hyphal growth form and chemoorganotrophy, are of relevance to pollutant fate in the environment altering metal mobility through such processes as mineral dissolution, metal accumulation and biomineralization. This presentation will emphasize some important activities of fungal systems in the transformation of metal(loid)s such as Se, Te, Pb, U, Mn, Ca and Co where the formation of elemental forms, or insoluble phosphate, oxide, carbonate or oxalate minerals can provide a means of metal immobilization, not only relevant to bioremediation but also to the biorecovery of valuable elements. Some biometal(loid)s/biominerals are formed at the micro- and nanoscale providing further interest for the development of useful products, including novel electrochemical biomaterials. Finally, mention will be made of the biodeteriorative properties of fungi regarding the destruction of cultural heritage and mineral-based building materials, including concrete, which may have consequences for nuclear decommissioning and radionuclide containment.

The Evolutionary Origin and Stability of Cultivation of Termitomyces by Termites

Duur Aanen
Institution: Laboratory of Genetics, Plant Sciences Group, Wageningen University, Wageningen, the Netherlands

The fungus-growing termites cultivate fungi of the basidiomycete genus Termitomyces. The symbiotic fungi descend from a single domestication some 30 million years ago in central tropical Africa. The symbiosis is ecologically highly successful and has allowed the colonisation of savannas and several out-of-Africa migrations to Asia. In my talk I will first discuss our current understanding of the evolutionary history of the symbiosis, including links with non-domesticated fungi and their characteristics. Next, I will discuss experimental work on the stability of fungus cultivation. Within a colony, the termites propagate their fungi in large-scale monoculture, via asexual spores inoculated in their faeces. I will discuss in vitro experiments showing the benefits of monoculture cultivation and how monocultures originate from initial mixed cultures when a colony starts. Finally, I will discuss the risks of monoculture cultivation.

Comparative Genomics of Smut Fungi to Bridge the Gap between Sytematics, Ecology and Function

Dominik Begerow
AG Geobotanik, Ruhr-Universität Bochum, Universitätsstraße 150, 44780 Bochum, Germany

Smut fungi evolved in two lineages of Basidiomycota and their systematics is based on ultrastructure of the parasite-host interface and molecular phylogenetic data. Both lineages are dimorphic with parasitic and saprobic stages, host specific and co-evolved with their hosts. Their joint evolution is often characterized by lineage tracking resulting in host specificity and one-to-one relationships, like in other fungal parasitic groups. Therefore, adaptation and specialization to the host plant seems to be crucial and should involve genes or regulatory pathways governing host specificity. To identify genes relevant for host specificity comparative genomics is becoming a relevant method as more and more genomes of fungi are available. Examples from both lineages will be introduced.
In the model system of *Microbotryum* species, we produced artificial hybrids between the two host-specific species *M. lychnidis-dioicae* and *M. silenes-acaulis* and applied strong experimental selection on different host plants to identify genes necessary for successful infections. Genome comparison of the two species revealed that most gene families are shared and the majority of genes are conserved, indicating very similar biological features of both species, including host adaptation and infection processes. Lower nucleotide identity of genes encoding for secreted proteins might indicate their importance for host specific interaction, as it is known from other plant pathogens. Moreover, we identified 211 candidate genes that occur in each hybrid and backcross genome that were posed under host-driven selection and might therefore play a crucial role in host specialization.
In contrast, a broader perspective in Ustilaginomycota allows to identify core genes relevant for general aspects of infection, without any signs of host-specificity. Therefore, the comparison of the two independent smut lineages allows to understand ecological and evolutionary constraints of smut fungi.

Time to re-think fungal ecological niches? Endophytic abilities in ectomycorrhizal taxa.

Marc-André Selosse[1,2], Laure Schneider-Maunoury[1], Florent Martos[1], Julita Minasiewicz[2]

[1]Institut de Systématique, Evolution, Biodiversité, Muséum national d'Histoire naturelle, Paris, France; e-mail: ma.selosse@wanadoo.fr
[2] Faculty of Biology, University of Gdansk

When we talk about fungal ecology, we think of disciplines that investigate the distinct ecological roles of fungi. Phytopathologists look for parasitic fungi. Research on mycorrhizae reveals the diversity of root-associated fungi. Plant physiologists unravel fungi hidden in plant tissues without obvious symptoms, lesions or symbiotic organs (e.g. root colonisation without mycorrhiza): these so-called endophytic fungi can influence plant physiology positively or negatively. Finally, dead organic matter reveals saprotrophic fungi. But what do fungal facts, especially in the metabarcoding area, tell us about this?

An accumulating number of independent studies report fungi of 'known' ecological niche in bizarre, unexpected situations. Among these, many ectomycorrhizal fungi or ericoid/orchid mycorrhizal fungi are found as endophytes in roots of various, mostly herbaceous plants. Based on our recent research, we will provide direct and indirect evidence, both morphological and functional, for endophytism in diverse fungi, including *Tuber* spp., but also Sebacinales or Russulales.

Finally, we propose an evolutionary interpretation of the ectomycorrhizal-endophytic niche : the evolution of the mycorrhizal habit through a pathway known as the 'waiting room' hypothesis (Selosse *et al.*, 2009). Root endophytism may act as a symbiotic 'waiting room', where biotrophic coexistence predisposes evolution towards a tighter mutualism with a more complex mycorrhizal morphogenesis. Some fungal taxa, now mycorrhizal, also retain the ancestral endophytic habit. The latter evolutionary pathway seems relevant for fungi mycorrhizal in ericoids and orchids, but also for some ectomycorrhizal taxa.

Białowieża Forest: yesterday, today, tomorrow...

Bogdan Jaroszewicz
Białowieża Geobotanical Station, Faculty of Biology, University of Warsaw, Białowieża, Poland

Only some small isolated patches of forests with a high degree of naturalness survived till recently in Europe. Białowieża Forest is the last temperate forest of the European lowlands, where substantial fragments of well-preserved old growth have survived. With its continuous forest cover, documented by palynological studies, for close to 12,000 years, the forest is a very unique site in the continental and the world scale. Due to long lasting protection, started at the turn of 14th and 15th century, large portion of the forest is still composed of stands originating from the pre-silviculture period. The commercial logging started there as late as the beginning of the 20th century. In effect, ecosystems of Białowieża Forest are characterized by low level of anthropogenic conversion, the dominance of uneven age stands, great amount of deadwood, and high biodiversity. The patches of stands with high naturalness, still scattered throughout the commercial forest, guarantee that surrounding, culturally modified stands will recover soon after leaving them intact. As the stability of forest dynamics is scale-dependent, the expansion of a non-intervention approach is needed to increase the stability of the entire ecosystem and enhance the chances for its successful adaptation to changing environmental conditions. The non-intervention approach is of paramount importance, as natural forest once logged and artificially replanted, is gone forever or at least takes centuries to recover. Such forests are irreplaceable: they protect the diversity of specialized organisms and processes and provide valuable ecosystem services. They are priceless outdoor labs for ecological and evolutionary sciences, the benchmarks for conservation science and modern forestry.

Trees ancient and young: a veritable feast for wood decay fungi

Lynne Boddy
Cardiff University, UK

A tree is never just a tree. It is always a tree plus a myriad of micro-organisms – especially fungi - operating together. The tree mycobiome comprises mycorrhizal fungi associated with roots; endophytes in all tree tissues – leaves, twigs, branches, trunks and roots; pathogens of leaves, above ground woody parts, and roots; and saprotophs of all plant tissues. I will consider those fungi that decay wood, including saprotrophs, endophytes and pathogens. Wood is a very hostile environment, yet eventually every tree will be colonised by wood decay fungi. These fungi have adopted five main ways for colonising wood in standing trees, but these are not mutually exclusive: (1) heart rot; (2) wound colonizers; (3) active pathogenesis (i.e. killing living cells); (4) endophytes already present hidden within sapwood (latency); and (5) colonizers that come after other fungi (secondary colonizers). Research began in the mid 1800s, and centred around heart-rot, but more or less stopped 50 years ago, having made little progress. After early emphasis on heart rot, focus changed to decay following wounding in the 1960's and 70's, then in the 1980's to natural establishment in branches and trunks by fungi latently present in sapwood. Research has now come a full circle, with interest in heart-rot again. Pathogenesis has always been a priority, although people's perceptions of what are pathogens are often confused. I will talk about these complementary roles of fungi, and their different patterns of colonisation, in broadleaved trees. This will include our most recent findings on heart-rot in beech (*Fagus sylvatica*) and latent fungi, revealed by DNA analysis, and our approach to causing hollowing of younger trees to provide habitat for other organisms.

ABSTRACT OF AN OPEN LECTURE

Mycology: a recent weapon in the forensic armoury

Professor **Patricia E.J. Wiltshire**
BSc. (hons), PhD, DSc (hc), FCSFS, FRSB, FLS

In the past, mycology has contributed to forensic investigation only occasionally, and has been involved mostly in cases of poisoning. In recent years, however, it has been pivotally important in investigating a large number of both civil and criminal cases. When combined with palynology, it is particularly valuable for linking places, objects, and people by providing trace evidence. Mycology can also give information on *post mortem* interval (time since death), and the timing of other events, as well as providing intelligence in the location of clandestine graves and missing persons.
An outline will be given on the ways in which fungi have been used in forensic investigation, and this will be exemplified by case histories showing how fungi have helped in crimes that have resulted in confession and/or conviction.

LIST OF PARTICIPANTS AND CONTACT INFORMATION

Family name	First name	Country	e-mail
Aanen	Duur K.	The Netherlands	duur.aanen@wur.nl
Abdel-Azeem	Ahmed	Egypt	zemo3000@yahoo.com
Abi Ali	Ranim	Lebanon	ra325@aub.edu.lb
Adamczyk	Paulina	Poland	paulinapolak2501@gmail.com
Adjei	Linda	Ghana	lindaadjei@aol.com
Andrew	Carrie	Sweden	carrie.j.andrew@gmail.com
Andrianova	Tetiana	Ukraine	tand@darwin.relc.com
Angelini	Paola	Italy	paola.angelini@unipg.it
Araújo dos Santos Bizerra	Lincoln Vicente	Brazil	lincoln.agro@gmail.com
Ashrafi	Samad	Germany	samad.ashrafi@julius-kuehn.de
Avagyan	Inesa	Armenia	inavag@rocketmail.com
Badou	Akotchayé Sylvestre	Benin	sbadou@ymail.com
Baiandina	Svetlana	Czech Republic	roulinsou@list.ru
Bałabański	Tomasz	Poland	tomasz.balabanski@uwm.edu.pl
Barbero Lopez	Aitor	Finland	aitorb@uef.fi
Basińska-Barczak	Aneta	Poland	abas@igr.poznan.pl
Begerow	Dominik	Germany	dominik.begerow@rub.de
Belamesiatseva	Darya	Bielarus	belomesyatseva@gmail.com
Bidartondo	Martin	United Kingdom	m.bidartondo@imperial.ac.uk
Binder	Ulrike	Austria	ulrike.binder@i-med.ac.at
Biyik	Hacı Halil	Turkey	hbiyik@adu.edu.tr
Bizukojć	Marcin	Poland	marcin.bizukojc@p.lodz.pl
Błaszczyk	Lidia	Poland	lgol@igr.poznan.pl
Boddy	Lynne	United Kingdom	BoddyL@cardiff.ac.uk
Bogdanova	Olga	Germany	olga.bogdanova@uni-jena.de
Boros	Enikő	Finland	b.eniko.10.12@gmail.com
Bošković	Eleonora	Serbia	eleonora.boskovic@dbe.uns.ac.rs
Brūna	Lauma	Latvia	lauma.bruna@silava.lv
Cal	Magdalena	Poland	magdalena.cal@uwr.edu.pl
Carrasco Carrasco	Jaime	Spain	microbiologia@ctich.com
Carvalho	Rita	Portugal	ritamdc.32@gmail.com
Ceci	Andrea	Italy	andrea.ceci@uniroma1.it
Chaduli	Delphine	France	delphine.chaduli@inra.fr
Chartier FitzGerald	Veronique	South Africa	veroniquefitz@gmail.com
Cheng	Tian	Germany	tch16@helmholtz-hzi.de
Cmokova	Adela	Czech Republic	cmokova@gmail.com
Coleine	Claudia	Italy	coleine@unitus.it
Cortina Escribano	Marta	Finland	marta.cortina.escribano@luke.fi
Cullen	Maria	Ireland	earthlyng@gmail.com
Czachura	Paweł	Poland	p.czachura@botany.pl
Daccò	Chiara	Italy	chiara.dacco01@universitadipavia.it
Dahlberg	Anders	Sweden	anders.dahlberg@slu.se
Dames	Joanna	South Africa	j.dames@ru.ac.za
Daniele	Inita	Latvia	daniele.inita@gmail.com

De Lange	Ruben	Belgium	ruben.delange@ugent.be
Diamandis	Stephanos	Greece	stephdiamandis2@gmail.com
Dighton	John	United States	dighton@njaes.rutgers.edu
Donnini	Domizia	Italy	domizia.donnini@unipg.it
Drakulic	Jassy	United Kingdom	jassydrak@gmail.com
Duong	Hieu Linh	Germany	hieu-linh.duong@ufz.de
Dyląg	Mariusz	Poland	mariusz.dylag@uwr.edu.pl
Ebinghaus	Malte	Germany	malte.ebinghaus@gmx.de
Farkas	Edit	Hungary	farkas.edit@okologia.mta.hu
Figura	Tomáš	Slovakia	figura.tomas@gmail.com
Filippova	Nina	Russia	filippova.courlee.nina@gmail.com
Fontaine	Kévin	France	kevin.fontaine@anses.fr
Fraga Diogo	Eugénio Luís	Portugal	eugenio.diogo@iniav.pt
Fraiture	André	Belgium	andre.fraiture@botanicgardenmeise.be
Frąc	Magdalena	Poland	m.frac@ipan.lublin.pl
Fukasawa	Yu	Japan	fukasawayuu@gmail.com
Futyma	Malgorzata	Denmark	malgorzata.futyma@gmail.com
Gadd	Geoffrey	United Kingdom	g.m.gadd@dundee.ac.uk
Girometta	Carolina	Italy	carolina.girometta01@universitadipavia.it
Gonçalves	Susana C.	Portugal	scgoncal@uc.pt
Gonçalves	Maria Teresa	Portugal	mtgoncal@bot.uc.pt
Gorczak	Michał	Poland	gorczak@biol.uw.edu.pl
Grebenc	Tine	Slovenia	tine.grebenc@gozdis.si
Greilhuber	Irmgard	Austria	irmgard.greilhuber@univie.ac.at
Griffith	Gareth	United Kingdom	gwg@aber.ac.uk
Grishkan	Isabella	Israel	bella@evo.haifa.ac.il
Gryta	Agata	Poland	a.gryta@ipan.lublin.pl
Guerreiro	Marco Alexandre	Germany	marco.guerreiro@rub.de
Gwon	Heemin	South Korea	vitamin89@gg.go.kr
Haelewaters	Danny	United States	dhaelewa@purdue.edu
Harder	Christoffer	Sweden	chribhar@ibv.uio.no
Harsh	Nirmal	India	nirmalharsh57@gmail.com
Hawksworth	David	United Kingdom	d.hawksworth@nhm.ac.uk
Hilszczańska	Dorota	Poland	D.Hilszczanska@ibles.waw.pl
Hoffmeister	Mascha	Germany	mascha.hoffmeister@julius-kuehn.de
Holec	Jan	Czech Republic	jan_holec@nm.cz
Houbraken	Jos	The Netherlands	j.houbraken@wi.knaw.nl
Ianutsevich	Elena	Russia	e.a.ianutsevich@gmail.com
Iotti	Mirco	Italy	mirco.iotti@univaq.it
Istel	Łukasz	Poland	lukasz.istel@gmail.com
Ivančević	Boris	Serbia	i.boris@beotel.net
Jančovičová	Soňa	Slovakia	sona.jancovicova@uniba.sk
Janik	Anna	Poland	annaj@ibb.waw.pl
Janošík	Lukáš	Czech Republic	luk.janosik@gmail.com
Jaroszewicz	Bogdan	Poland	b.jaroszewicz@uw.edu.pl
Jasinski	Wojciech	Poland	graceirene1@gmail.com
Jedryczka	Malgorzata	Poland	malgosia_jedryczka@poczta.onet.pl

Kádasi Horáková	Miriam	Slovakia	mirka.kadasihorakova@gmail.com
Kała	Katarzyna	Poland	kasia.lisowska@doctoral.uj.edu.pl
Kałucka	Izabela	Poland	izabela.kalucka@biol.uni.lodz.pl
Karadelev	Mitko	Macedonia	mitkok@pmf.ukim.mk
Karaman	Maja	Serbia	maja.karaman@dbe.uns.ac.rs
Kariman	Khalil	Australia	khalil.kariman@uwa.edu.au
Kelbin	Vasilii	Russia	kelbin.biolog@gmail.com
Kieliszewska-Rokicka	Barbara	Poland	b.kielrok@op.pl
Kim	Seong Hwan	South Korea	piceae@dankook.ac.kr
Kim	Jeonghan	South Korea	kjh75@gg.go.kr
Kiviniemi	Eero	Finland	eero.a.kiviniemi@helsinki.fi
Klavina	Darta	Latvia	darta.klavina@silava.lv
Kłoszewski	Tomasz	Poland	aleksandra.lucja.rosa@gmail.com
Koczyk	Grzegorz	Poland	gkoc@igr.poznan.pl
Kohler	Annegret	France	annegret.kohler@inra.fr
Kolarik	Miroslav	Czech Republic	mkolarik@biomed.cas.cz
Kõljalg	Urmas	Estonia	urmas.koljalg@ut.ee
Kothe	Erika	Germany	erika.kothe@uni-jena.de
Kotowski	Marcin	Poland	marcin.andrzej.kotowski@gmail.com
Kotrba	Pavel	Czech Republic	pavel.kotrba@vscht.cz
Koukol	Ondřej	Czech Republic	ondrej.koukol@natur.cuni.cz
Kout	Jiri	Czech Republic	martial@seznam.cz
Kozubowski	Lukasz	United States	lkozubo@clemson.edu
Krause	Katrin	Germany	katrin.krause@uni-jena.de
Kreft	Katarzyna	Poland	K.Kreft@ibles.waw.pl
Kujawa	Anna	Poland	annakujawa@poczta.onet.pl
Kurakov	Alexander	Russia	kurakov57@mail.ru
Kwofie	Maxwell Kingsley	Ghana	kmaxwellkingsley@gmail.com
Lackner	Michaela	Austria	michaela.lackner@i-med.ac.at
Lambert	Christopher	Germany	christopher.lambert@helmholtz-hzi.de
Landínez Torres	Angela Yaneth	Columbia	bioangel19@yahoo.com
Lee	Mi Kyeong	South Korea	mklee@chungbuk.ac.kr
Leonhardt	Tereza	Czech Republic	pikalovt@vscht.cz
Leys	Marie	Norway	marie.leys@ibv.uio.no
Li	De-wei	United States	DeWei.Li@ct.gov
Linnakoski	Riikka	Finland	riikka.linnakoski@luke.fi
Lisiewska	Maria	Poland	
Lundell	Taina	Finland	taina.lundell@helsinki.fi
Ławrynowicz	Maria	Poland	maria.lawrynowicz@biol.uni.lodz.pl
Machová	Lenka	Czech Republic	lenka.machovka@seznam.cz
Maier	Wolfgang	Germany	wolfgang.maier@julius-kuehn.de
Majewski	Tomasz	Poland	tomasz_majewski@sggw.pl
Malarczyk	Dominika	Poland	d.malarczyk@ipan.lublin.pl
Marco	Leonardi	Italy	marco.leonardi@cc.univaq.it
Martin-Sanchez	Pedro Maria	Norway	p.m.martin-sanchez@ibv.uio.no
Masaphy	Segula	Israel	segula@netvision.net.il
Matela	Mikołaj	Poland	bkiel@ukw.edu.pl

Matevosyan	Ruzanna	Armenia	matevosyanruzanna@ysu.am
Mattila	Hans	Finland	hans.mattila@helsinki.fi
Meiere	Diana	Latvia	diana.meiere@ldm.gov.lv
Melo	Ireneia	Portugal	mimelo@fc.ul.pt
Meshram	Vineet	Israel	vinitmeshramtiet@gmail.com
Mešić	Armin	Croatia	amesic@irb.hr
Mikryukov	Vladimir	Russia	vmikryukov@gmail.com
Mikušová	Petra	Slovakia	petra.mikusova@savba.sk
Minter	David	United Kingdom	d.minter@cabi.org
Mleczko	Piotr	Poland	piotr.mleczko@uj.edu.pl
Modad	Nadine	Lebanon	nm54@aub.edu.lb
Mohammed	Saman	Iraq	saman.mohammed@univsul.edu.iq
Moliszewska	Ewa	Poland	ewamoli@uni.opole.pl
Monk	Brian	New Zeland	brian.monk@otago.ac.nz
Morgado	Luis	Norway	l.n.morgado@ibv.uio.no
Mrak	Tanja	Slovenia	tanja.mrak@gozdis.si
Mueller	Gregory	United States	gmueller@chicagobotanic.org
Müller	Christoph	Germany	christoph.mueller@cup.uni-muenchen.de
Mułenko	Wiesław	Poland	wieslaw.mulenko@poczta.umcs.lublin.pl
Muszewska	Anna	Poland	musze@ibb.waw.pl
Nabrdalik	Małgorzata	Poland	mnabrdalik@uni.opole.pl
Nicolas Molina	Francisco Esteban	Spain	fnicolas@um.es
Niell Barrachina	Manuel	Andorra	manelniell@gmail.com
Nowak	Monika	Poland	monika.nowak@unilodz.eu
Oberhofer	Martina	Austria	martina.oberhofer@univie.ac.at
Okrasińska	Alicja	Poland	alis.okrasinska@gmail.com
Olchowik	Jacek	Poland	olchowik.jacek@gmail.com
Oleńska	Ewa	Poland	chwelat@uwb.edu.pl
Olesya	Dulya	Russia	lesyadulya@gmail.com
Oliveira	Paulo	Portugal	oliveira@uevora.pt
Olou	Boris Armel	Benin	borisolou@yahoo.fr
Ondrušková	Emilia	Slovakia	ondruskova.e@gmail.com
Ordynets	Oleksandr	Germany	a.ordynets@uni-kassel.de
Osmolovskiy	Alexander	Russia	aosmol@mail.ru
Oszust	Karolina	Poland	koszust@ipan.lublin.pl
Ottosson	Elisabet	Sweden	elisabet.ottosson@slu.se
Owczarek-Kościelniak	Magdalena	Poland	m.owczarek@botany.pl
Oyebanji	Elizabeth	Nigeria	olawumioyebanji@gmail.com
Ozinga	Wim	The Netherlands	wim.ozinga@wur.nl
Pacioni	Giovanni	Italy	giovanni.pacioni@univaq.it
Paomephan	Pathompong	Germany	p.paomephan@gmail.com
Pastircakova	Katarina	Slovakia	uefezima@hotmail.com
Patejuk	Katarzyna	Poland	katarzyna.patejuk@upwr.edu.pl
Pawłowska	Julia	Poland	jzpawlowska@gmail.com
Peleskova	Gabriela	Czech Republic	gabi.peleskova@gmail.com
Perini	Claudia	Italy	claudia.perini@unisi.it
Persiani	Anna Maria	Italy	annamaria.persiani@uniroma1.it

Pertile	Giorgia	Poland	g.pertile@ipan.lublin.pl
Piątek	Marcin	Poland	m.piatek@botany.pl
Pietras	Marcin	Poland	mpietras@man.poznan.pl
Piłsyk	Sebastian	Poland	seba@ibb.waw.pl
Pinster	Kees	The Netherlands	jesse.pinster@gmail.com
Polemis	Elias	Greece	eliasp@ath.forthnet.gr
Pötschner	Jessica	Germany	jessica.poetschner@uni-jena.de
Poyrazoglu	Esin	Turkey	epoyrazoglu@adu.edu.tr
Pusz	Wojciech	Poland	wojciech.pusz@upwr.edu.pl
Pylak	Michał	Poland	m.pylak@ipan.lublin.pl
Rahimlou	Saleh	Estonia	saleh.rahimlou@ut.ee
Rakić	Milana	Serbia	milana.novakovic@dbe.uns.ac.rs
Ramos	Miguel	Portugal	mmramos@porto.ucp.pt
Riess	Kai	Germany	riess@uni-landau.de
Rintoul	Tara	Canada	tara.rintoul@canada.ca
Ronold	Eivind Kverme	Norway	eivind.kverme.ronold@gmail.com
Rosa-Gruszecka	Aleksandra	Poland	aleksandra.lucja.rosa@gmail.com
Rosso	Marie-noëlle	France	marie-noelle.rosso@inra.fr
Rożek	Katarzyna	Poland	katarzyna.rozek@doctoral.uj.edu.pl
Różalska	Sylwia	Poland	sylwia.rozalska@biol.uni.lodz.pl
Rusevska	Katerina	Macedonia	krusevska@pmf.ukim.mk
Russell	Grace	United States	graceirene1@gmail.com
Ruszkiewicz-Michalska	Malgorzata	Poland	malgorzata.ruszkiewicz@isrl.poznan.pl
Ryberg	Martin	Sweden	martin.ryberg@ebc.uu.se
Ryoo	Rhim	South Korea	rryoo@korea.kr
Sahu	Neha	Hungary	nehasahu486@gmail.com
Salamon	Sylwia	Poland	ssal@igr.poznan.pl
Salcedo	Isabel	Spain	isabel.salcedo@ehu.eus
Savchenko	Anton	Estonia	savchenko.anton.kh@gmail.com
Schigel	Dmitry	Denmark	dschigel@gbif.org
Schrey	Hedda	Germany	hedda.schrey@helmholtz-hzi.de
Selbmann	Laura	Italy	selbmann@unitus.it
Selosse	Marc-André	France	ma.selosse@wanadoo.fr
Senn-Irlet	Beatrice	Switzerland	beatrice.senn@wsl.ch
Shabashova	Tatiana	Bielarus	tiniti@inbox.ru
Sheikh	Sanea	Sweden	sanea.sheikh@ebc.uu.se
Shelest	Ekaterina	Germany	ekaterina.shelest@idiv.de
Shiryaev	Anton	Russia	anton.g.shiryaev@gmail.com
Siedlecki	Igor	Poland	igorze.sie@gmail.com
Sipos	György	Hungary	gyoergy.sipos@wsl.ch
Sklenář	František	Czech Republic	frantisek.sklenar@natur.cuni.cz
Spinelli	Veronica	Italy	veronica.spinelli@uniroma1.it
Stasińska	Małgorzata	Poland	stasinsk@univ.szczecin.pl
Strack	Betty	United States	bstrack@fieldmuseum.org
Švarcová	Michaela	Czech Republic	svarcova.michaela92@gmail.com
Švec	Karel	Czech Republic	karel.svec@biomed.cas.cz
Tello Martin	Maria Luisa	Spain	biotecnologia@ctich.com

Temina	Marina	Israel	marina@evo.haifa.ac.il
Temporiti	Marta Elisabetta Eleonora	Italy	martaelisabett.temporiti01@universitadipavia.it
Tereshina	Vera	Russia	v.m.tereshina@inbox.ru
Thoen	Ella	Norway	ella.thoen@ibv.uio.no
Tofilovska	Slavica	Macedonia	stofilovska@pmf.ukim.mk
Torrent	Angel	Spain	alsina@comg.cat
Tosi	Solveig	Italy	solveig.tosi@unipv.it
Traxler	Lea	Germany	lea.traxler@uni-jena.de
Tugai	Tatyana	Ukraine	tatyanatugay2@gmail.com
Tugai	Andrii	Ukraine	andre.07111982@gmail.com
Turnau	Katarzyna	Poland	katarzyna.turnau@uj.edu.pl
Tykarski	Piotr	Poland	ptyk@biol.uw.edu.pl
Unuk Nahberger	Tina	Slovenia	tina.unuk@gozdis.si
Ur Rehman	Atta	Pakistan	spinkhan97@gmail.com
Urbaniak	Monika	Poland	murb@igr.poznan.pl
Valada	Tatiana	Portugal	tvalada@isa.ulisboa.pt
Vasutova	Martina	Czech Republic	mvasutova@prf.jcu.cz
Vega	Marcel	Germany	marcel@tomprodukt.de
Veselská	Tereza	Czech Republic	veselska.tereza@gmail.com
Veteli	Pyry	Finland	pyry.veteli@luke.fi
Višňovská	Denisa	Czech Republic	visnovska.denisa@seznam.cz
Volobuev	Sergey	Russia	sergvolobuev@mail.ru
Von Longo-Liebenstein	Lorin	Finland	lorin@agrometsa.fi
Wainhouse	Matthew	United Kingdom	mattwainhouse@gmail.com
Ważny	Rafał	Poland	rafal.wazny@uj.edu.pl
Wedén	Christina	Sweden	christina.weden@ilk.uu.se
Wiater	Adrian	Poland	adrianw2@poczta.umcs.lublin.pl
Wilgan	Robin	Poland	robinwilgan@interia.pl
Wiltshire	Patricia	United Kingdom	patricia.wiltshire1@btinternet.com
Wołkowycki	Marek	Poland	wolkm@poczta.onet.pl
Wrzosek	Marta	Poland	martawrzosek@gmail.com
YazdaniKhameneh	Sara	Iran	sarada7771@yahoo.com
Zaluma	Astra	Latvia	astra.zaluma@silava.lv
Zapora	Ewa	Poland	e.zapora@pb.edu.pl
Zarova	Stepanka	Czech Republic	stepanka.zarova@natur.cuni.cz
Zehnalek	Petr	Czech Republic	petr.zehnalek@natur.cuni.cz
Ziangirova	Maiia	Russia	ziangirova.m@gmail.com
Zielińska	Małgorzata	Poland	zielinskamga@gmail.com
Zitouni-Haouar	Fatima El-Houaria	Algeria	fzitouni84@yahoo.fr
Zrary	Taha	Iraq	taha.jalal@koyauniversity.org