IMC10: THE 10TH INTERNATIONAL MYCOLOGICAL CONGRESS

The journey to the IMC10 was long and very challenging, and so we are thankful to all of the participants who came to join this conference in Thailand and show their support and make this happen.

BIOTEC and the National Science and Technology Development Agency (NSTDA), in collaboration with the Thai Mycological Association, Kasetsart University, and the Ministry of Science and Technology, organized the 10th International Mycological Congress (IMC10) on 3–8 August 2014 at the Queen Sirikit National Convention Center in Bangkok.

IMC10 was the first IMC to be held in south-east Asia, and had a diverse programme including pre- and post-congress workshops, side meetings, symposia, a technical tour, and excursions. Nineteen pre- and post- congress workshops were offered, ranging from a half-day session to a 4-week fungal diversity survey.

Over 950 participants (921 registered full delegates and around 30 accompanying persons) from 53 different countries, representing all regions of the world attended the IMC10, including Brazil, Canada, Chile, China, Colombia, Germany, Iran, Japan, The Netherlands, South Africa, Spain, the UK, and USA; and 200 mycologists from Thailand.

The theme was "Fungal Biodiversity, Physiology and Ecology in a Changing Environment", encompassing topics such as cell biology; genetics, genomics and molecular biology; phylogenetics, evolution and systematics; diversity and conservation; environment, ecology and interactions; human, animal and plant pathogenesis and control; and biotechnology and applied aspects.

The main Congress consisted of one keynote lecture, eight plenary lectures, and nearly 200 invited papers. There were 186 oral presentations and 526 scientific posters. The keynote lecture was by Pedro W. Crous (The Netherlands) and entitled "Linking Life". The eight plenary speakers were: Morakot Tanticharoen (Thailand), Pier Luigi Nimis (Italy), Joseph W. Spatafora (USA), June Kwon-Chung (USA), Xingzhong Liu (China), Gregory Jedd (Singapore), Gerald Bills (USA), and Lynne Boddy (UK). In addition, Lene Lange (Denmark) gave a challenging address at the congress dinner on the Thursday evening[1]. Thai delight dishes were served at the dinner, and there was an elegant performance of Thai traditional dances and boxing.

During each of the five days of the congress, there was a keynote and plenary sessions, symposia, special interest group meetings, as well as poster presentations, exhibition, and a special Thailand Biodiversity Pavilion. On three of the days, there were two-hour Nomenclature Sessions at which possible improvements in the rules regulating the naming of fungi were presented and debated; all delegates were given a questionnaire so they could express their views on issues of concern[2].

At the General Assembly of the IMA, a part of the Closing Ceremony, the association's awards and medals were presented, the venue for the IMC11 wa announced (Puerto Rico), and two resolutions arising from the Nomenclature Sessions were approved, and the new officers and Executive Committee of the IMA to serve until 2018 were announced. Keith A. Seifert was inaugurated as the new President.

In tandem with the Congress, Thailand Biodiversity Pavilion was organized. On display were samples and information of various organisms studied in Thailand, ranging from filamentous fungi, mushrooms, and lichens, to a hornbill, millipede, and firefly. The exhibition also included displays on applications of fungi, including the restoration of mangrove forests, control of insect pests in cassava plantations and rice fields, as well as knowledge and technology transfer on mushroom cultivation for rural communities in Thailand. The Pavilion was visited by many congress participants, as well as over 500 members of the public and school children.

The congress programme achieved its aim of encouraging ongoing international exchange and regional networking, especially among countries in Asia, fostering exchange of expertise and learning through active participation, and stressing the relevance of mycology to current issues.

Additional congress photos can be downloaded at the IMC10 website http://www.imc10.com/2014/home.html.

Janet Jennifer Divinagracia Luangsa-ard
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[1]Lange L (2014) The importance of fungi and mycology for addressing major global challenges. *IMA Fungus* **5**: 463–472.

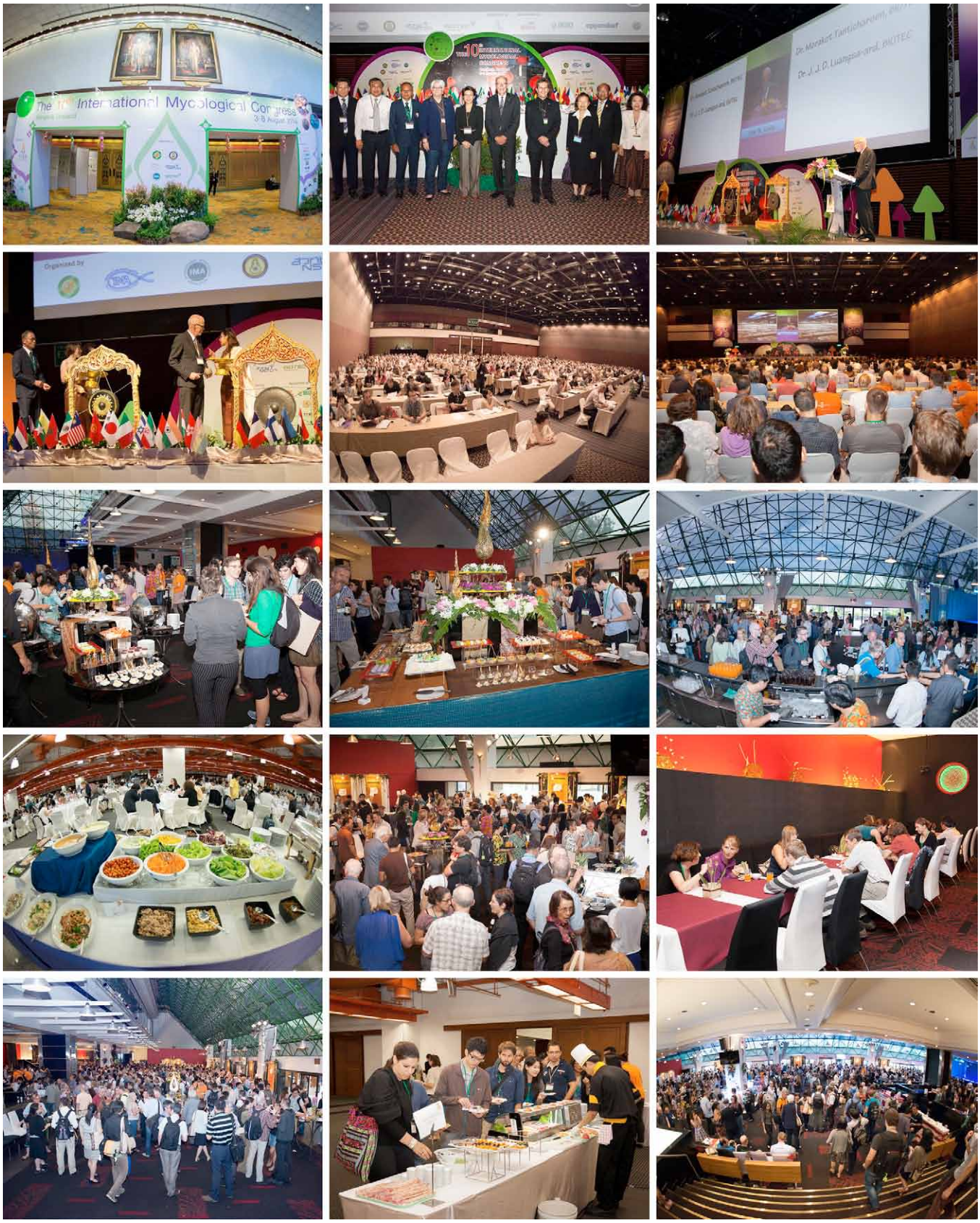
[2]Redhead SA, Demoulin V, Hawksworth DL, Seifert KA, Turland NJ (2014) Fungal nomenclature at IMC10: report of the Nomenclature Sessions. *IMA Fungus* 5: 449–462.

IMA EXECUTIVE COMMITTEE

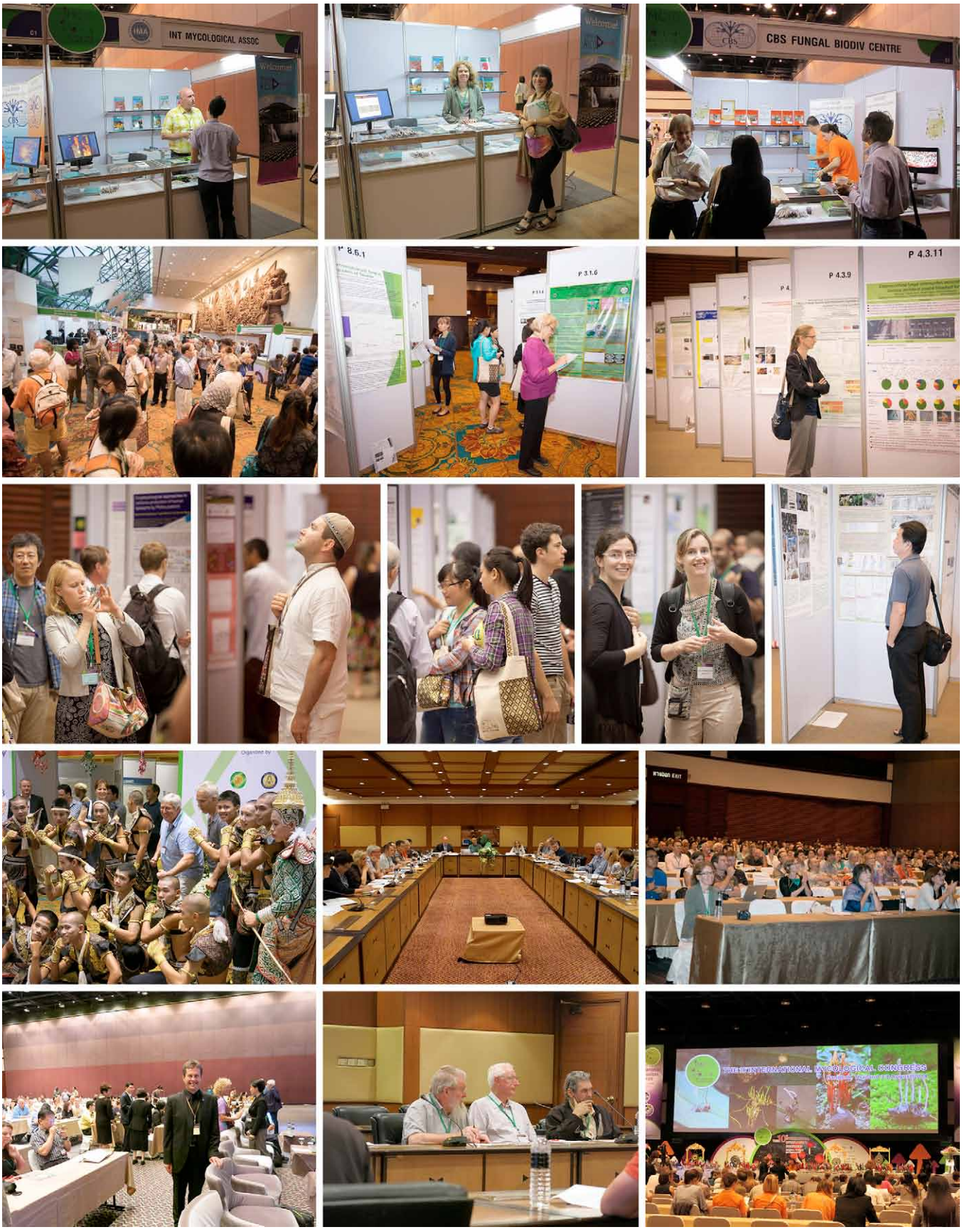
Outgoing IMA President John W. Taylor writes:

With my term as President of the IMA ending, I relish this opportunity to thank the many mycologists who have made my four years memorable. First and foremost is the team of Thai mycologists who made IMC10 a resounding success, led by Morakot Tanticharoen, Jennifer Luangsa-ard, and Pawinee Jaruwan, with the full support of Kanyawim Kirtikara (Director of BIOTEC). With just eleven months to work, these four mycologists presented a remarkable IMC, not only in terms of the programme, but also in terms of the memorable exhibit of Thai Fungal Biodiversity, the posters from Thai K-12 students, and IMC lunches that may never be equaled. Their efforts, and the support of the Thai Foundation, also let the IMA achieve a new level of financially stability.

Equally worthy of thanks are the officers who served the IMA from 2010–14, Treasurer Karen Hansen, Secretary-General Dominik Begerow, Vice-Presidents, Nick Read and Leka Manoch, and Past-President, Pedro Crous, who, along with Manon Verweij at CBS, set a high standard for future Past-Presidents. Two others deserve



Scenes from IMC10: 10th International Mycological Congress, held in the the Queen Sirikit National Convention Center in Bangkok on 3–8 August 2014.



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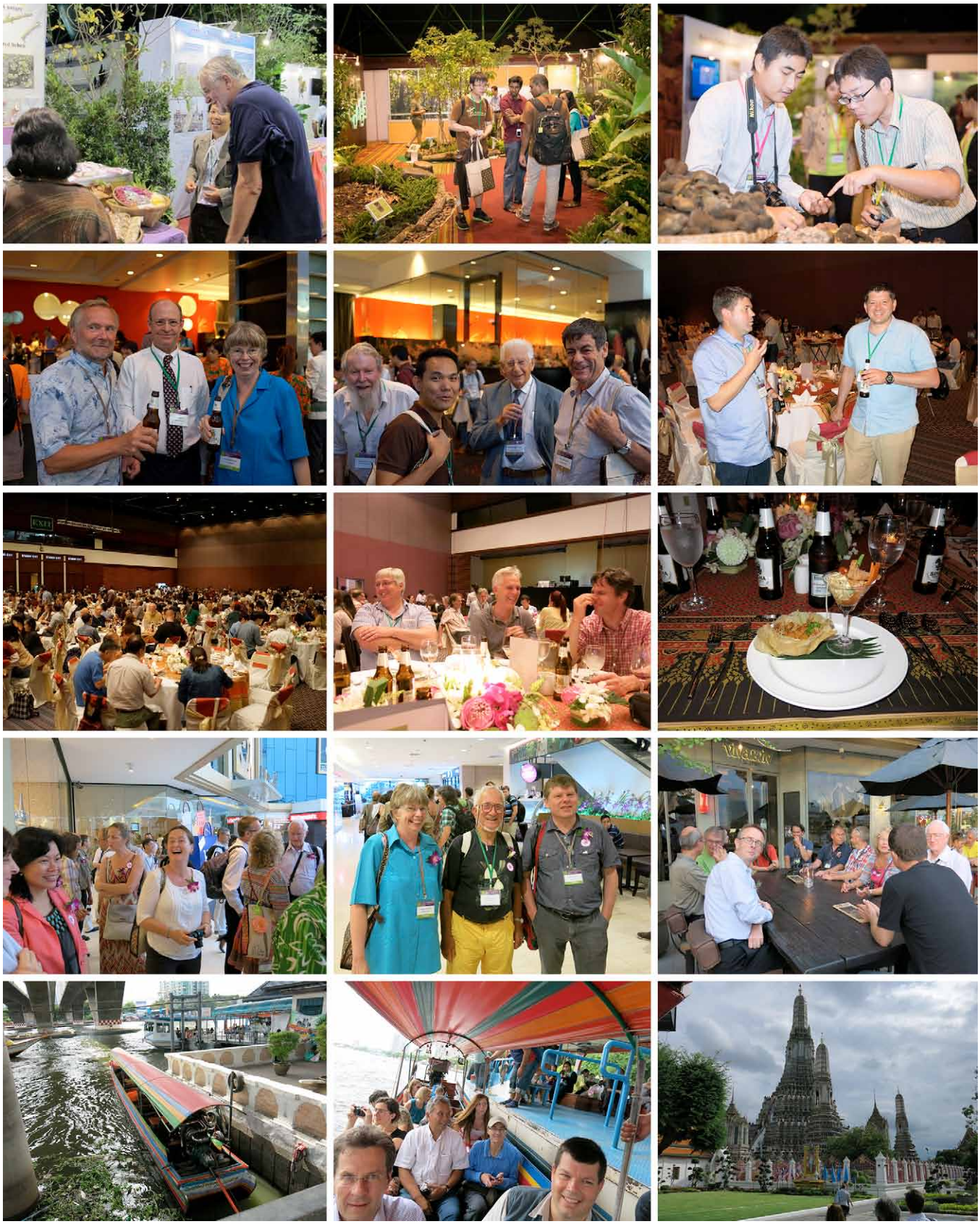

Scenes from IMC10: 10th International Mycological Congress, held in the the Queen Sirikit National Convention Center in Bangkok on 3–8 August 2014.

Kanyawin Kirtikara, John W. Taylor, Pedro W. Crous, and Morakot Tanticharoen (*left to right*).

The Thai IMC10 Team.

special recognition, David Hawksworth, who helped found *IMA Fungus* in 2010 and who now serves as its Editor-in-Chief, and Vincent Robert at CBS, who was key to the 2012 makeover of MycoBank and continues to make it function.

2010 to 2014 may be remembered as the period of IMA Awards, with the revival of the Ainsworth and de Bary Medals, the initiation of the IMA Young Mycologist Awards and the founding of the IMA Fellows. The recipients are featured on pp. (45)–(48) of this issue.

The IMA, like so many mycological organizations, is an all-volunteer operation. We are, once again, fortunate that so many talented mycologists agree to run for office and then donate their time. For 2014–18, the elected IMA officers and Executive Committee (EC) Members are:

President: Keith A. Seifert (Canada)
Vice-Presidents: Sharon Cantrell-Rodriguez (Puerto Rico)
Jennifer Luangsa-ard (Thailand)
Secretary-General: Pedro W. Crous (The Netherlands)
Treasurer: Karen Hansen (Sweden)
Elected Members: Tatiana Andrianova (Ukraine)*
Dominik Begerow (Germany)
Mary Berbee (Canada)
Paul Dyer (UK)*
Ana Esperanza (Colombia)*
David Hibbett (USA)
Xingzhong Liu (China)
Wieland Meyer (Australia)*
Chiharu Nakashima (Japan)
Meritxell Riquelme (Mexico)
Mike Wingfield (South Africa)*

Thanks are due to those departing EC members, each of whom has given at least eight years of service: Laura Guzmán-Davalos (Mexico), Jose Carmine Dianese (Brazil), Lene Lange (Denmark), Lorelei Norvell (USA), Gen Okada (Japan), and Wen-Ying Zhuang (China).

Attentive readers will note that the appointment of Sharon Cantrell-Rodriguez as IMA Vice-President signals congratulations to Puerto Rico for being selected as the venue for IMC11 in 2018.

– Nos vemos en San Juan, Puerto Rico en 2018.

John W. Taylor
Past- President, IMA
(jtaylor@berkeley.edu)

* = Members re-elected for a second term.

ICTF (INTERNATIONAL COMMISSION ON THE TAXONOMY OF FUNGI)

A general meeting of the ICTF was held on 6 August 2014 during IMC10 in Bangkok, Thailand. A review of the previous programme of work, initially tabled in Amsterdam in April 2011, was presented. Notable successes were the relocation and embellishment of the Commission website, and the approval of an official barcode for *Fungi,* as well as the completion of a number of lists of names to be proposed for protection by the various Subcommissions, Nomenclatural Working Groups, and affiliated Commissions. Changes to the Draft Statutes of the ICTF were proposed and discussed, which will result in some reworded changes to be discussed at the next meeting on 23 April 2015 at the CBS-KNAW Fungal Biodiversity Centre in Utrecht (The Netherlands). A number of new members were nominated, and current list of officers and members is:

Chair:	Conrad L. Schoch (USA)
Past-Chair:	Keith A. Seifert (Canada)
Secretary:	Andrew Miller (USA)
Members:	Cathie Aime (USA)
	Takayuki Aoki (Japan)
	Gaddam Bagyanarayana (India)
	Lei Cai (China)
	Priscila Chaverri (USA)
	Pedro W. Crous (The Netherlands)
	Wilhelm de Beer (South Africa)
	Irina Druzhinina (Austria)
	David Geiser (USA)
	Luis Fernando Pascholati Gusmao (Brazil)
	David L. Hawksworth (Spain and United Kingdom)
	Kevin D. Hyde (Thailand)
	Peter R. Johnston (New Zealand)
	Peter Letcher (USA)
	Robert Lücking (USA)
	Tom W. May (Australia)
	Scott A. Redhead (Canada)
	Amy Y. Rossman (USA)
	Robert A. Samson (The Netherlands)
	Marc Stadler (Germany)
	Marco Thines (Germany)
	Ning Zhang (USA)

The minutes on the meeting and other information about the commission and its activities may be found on the ICTF website (http://www.fungaltaxonomy.org/meetings).

Conrad L. Schoch
Chair, ICTF
(schoch2@ncbi.nlm.nih.gov)

ICTF Members present at IMC10 (*left to right*): Scott A. Redhead (Canada), Tom W. May (Australia), MayNing Zhang (USA), David L. Hawksworth (Spain and UK), Gaddam Bagyanarayana (India), Conrad L. Schoch (USA), Keith A. Seifert (Canada), Lei Cai (China), José C. Dianese (Brazil), and Takayuki Aoki (Japan).

VIII CLAM (CONGRESS OF LATIN-AMERICAN MYCOLOGISTS)

The Latin American Mycological Association (ALM), a Regional Member Mycological Organization of the IMA (Regional MMO), is responsible of hosting congresses for all Latin-American mycologists to facilitate sharing advances in this science. Countries with a long mycological tradition, such as Argentina, Cuba, and Mexico, have consolidated as regional leaders while Brazil, Colombia, Costa Rica, and Venezuela, and other countries have strengthened their investigative groups in various areas of mycology since its formation.

The ALM board for 2011-14 included Ana Esperanza Franco Molano (President), Silvia Restrepo (Vice-President), Aida Vasco (Secretary) and Tatiana Sanjuan (Secretary), and during the period redesigned the website, joined the International Society for the Conservation of Fungi (ISFC), and organized the VIII Latin- American Congress of Mycology (VIII CLAM). As a member of the IMA, ALM was responsible for selecting candidates for the IMA Young Mycologist Awards for 2010 and 2014 (see pp. (47)–(48) in this issue). The awards for both years were presented during IMC10 in Bangkok.

The main goal of this board was the organization of the VIII CLAM, where the emphasis was on the application of new technologies to classical mycology, and that was held in Medellín, Colombia, on 4–7 November 2014. This event, attended by 550 mycologists from 29 countries, included keynote speakers covering diverse thematic such as diversity, conservation, evolution, biotechnology, medical and forensic mycology: David L. Hawksworth, Francois Lutzoni, Wieland Meyer, David W. Minter, John W. Taylor, Joseph Spatafora, and Patricia E. J. Wiltshire. Twenty-nine symposia were organized, covering a wide range of mycological themes from systematics to new technologies, evolution, biotechnology, medical mycology to the various interactions between fungi and other organisms, 130 oral presentations, and 403 posters. Special guests at the congress included: Tim Baroni, Teun Boekhout, Roy Halling, David Hibbett, Paulo Lovato, Donald Pfister, Matthew Smith, Ewald Sieverding, and Leho Tendersoo.

Beside the conferences, five pre-congress workshops were organized and attended by nearly 100 participants, and these included undergraduate and graduate students, professionals, and researchers. Two workshops focused on clinical mycology: "Opportunistic pathogenic filamentous fungi: Identification and characterization", and "New tools to characterize medical importance yeasts". Two others had an emphasis on taxonomy: "*Basidiomycota* fungi" and "*Acomycota* not forming lichens". Furthermore, a new version of the workshop in ethnomycology, by the Mexican organization GIDEM, was realized. These workshops were facilitated by 27 instructors from Argentina, Australia, Colombia, Costa Rica, Cuba, Mexico, The Netherlands, Spain, Sweden, the USA, and Venezuela.

During the general meeting of the ALM on the last day of the congress, Maria Caridad Cepero de Garcia, a medical mycologist, and Pablo Emilio Buriticá, a phytopathologist, were accepted as honorary member of the association. Both researchers have provided substantial support to the development of mycological studies in Colombia and have trained many of the currently active mycologists in the country.

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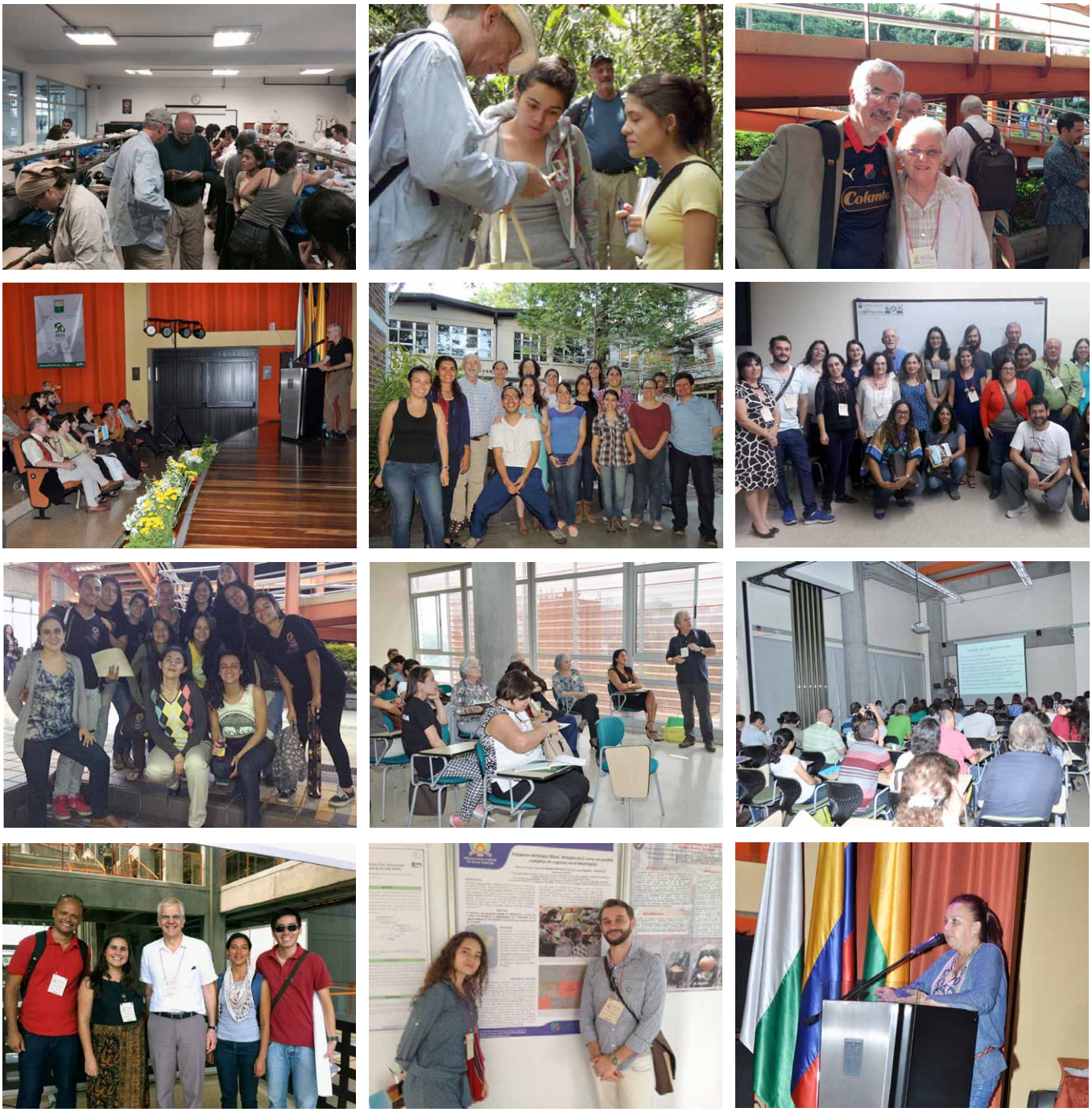
CURRENT ACTIVITIES IN AUSTRALIAN MYCOLOGICAL RESEARCH

The Scientific meeting of the Australasian Mycological Society (AMS) was held in Brisbane on 22–23 April 2014 in association with the scientific meeting of the Australian field mycology group, Fungimap. The AMS meeting at the Ecosciences Precinct in Brisbane brought together Australian and international mycologists from a diversity of subdisciplines. Not surprisingly, the conference programme covered a wide variety of mycological themes from infectious fungal diseases, molecular mycology and plant pathology to fungal ecology, systematics, and applied mycology. More than 65 scientists attended the meeting which was held earlier in the year than usual to accommodate the autumn macrofungal field season for the conference foray and the Fungimap workshops which were held immediately after the AMS conference.

Proceedings began with a keynote address "*Cryptococcus neoformans* – a designer fungus with serious intent" by Tania Sorrell (Marie Bashir Institute for Infectious Diseases and Biosecurity, University of Sydney). Tania delineated between *C. neoformans* and *C. gattii* in terms of ecological and host niches, biochemical pathways, and disease manifestations. She then outlined current understanding of disease pathogenesis in *C. neoformans,* including the importance of both urease and phospholipase B in allowing the pathogen to pass the blood brain barrier and the debate on whether infectious propagules crossed this region as free cryptococci or within macrophages. A vivid description was given of the formation and currently known roles of cryptococcal microvesicles which act as "virulence bags" by releasing pathogenic factors externally to host tissues. Continued research of this area will obviously be critical to the development of therapeutic strategies for *C. neoformans*.

The first symposial session, "Infectious Fungal Diseases", followed neatly on, thematically, from the first keynote address. Monica Slavin (Peter MacCallum Cancer Centre and Victorian Infectious Disease Service, Melbourne) discussed new approaches for guiding antifungal therapy and outlined galactomannan tests, PCR, and new imaging techniques such as PET scans for directing early treatment of invasive aspergillosis. It was illuminating to have building site earthworks highlighted



An impression of the VIII CLAM (Congress of Latin-American Mycologists, held in Medellin, Colombia on 4–7 November 2014.

as a major source of infectious fungal propagules in the nosocomial environment. Leona Campbell (School of Molecular Biosciences, University of Sydney) next outlined how virulence and the secretome are linked in *Cryptococcus* with virulent strains releasing a limited number of protein cohorts extracellularly (as opposed to hypovirulent strains) and thus better avoiding detection and destruction by the host. Ana Traven (Department of Biochemistry and Molecular Biology, Monash University) discussed how *Candida albicans* escapes the innate immune response by causing macrophage cell death. This is a two stage process that involves macrophage pyroptosis and subsequent mechanical destruction of cells by robust hyphal filaments. Asa Perez-Bercoff (John Curtin School of Medical Research, Australian National University) described genome sequencing, assembly and annotation of the emerging human pathogen, *Scedosporium aurantiacum*. This has been challenging as the next closest fungal species, *Trichoderma virens* was too distantly related to allow whole genome alignment. RNA sequencing of the WM 09.24 *S. aurantiacum* strain grown under different growth conditions has been pursued and has allowed the identification of genes that may be involved with virulence.

A diversity of fungal species and topics were featured in the following "Molecular Mycology" symposium. Julie Djordjevic (Centre for Infectious Diseases & Microbiology, Westmead Hospital) outlined signaling pathways during pathogenesis of *C. neoformans*. Fungal phospholipase C1 (PLC1) was shown to produce IP_3 from PIP_2 which was subsequently phosphorylated by an inositol

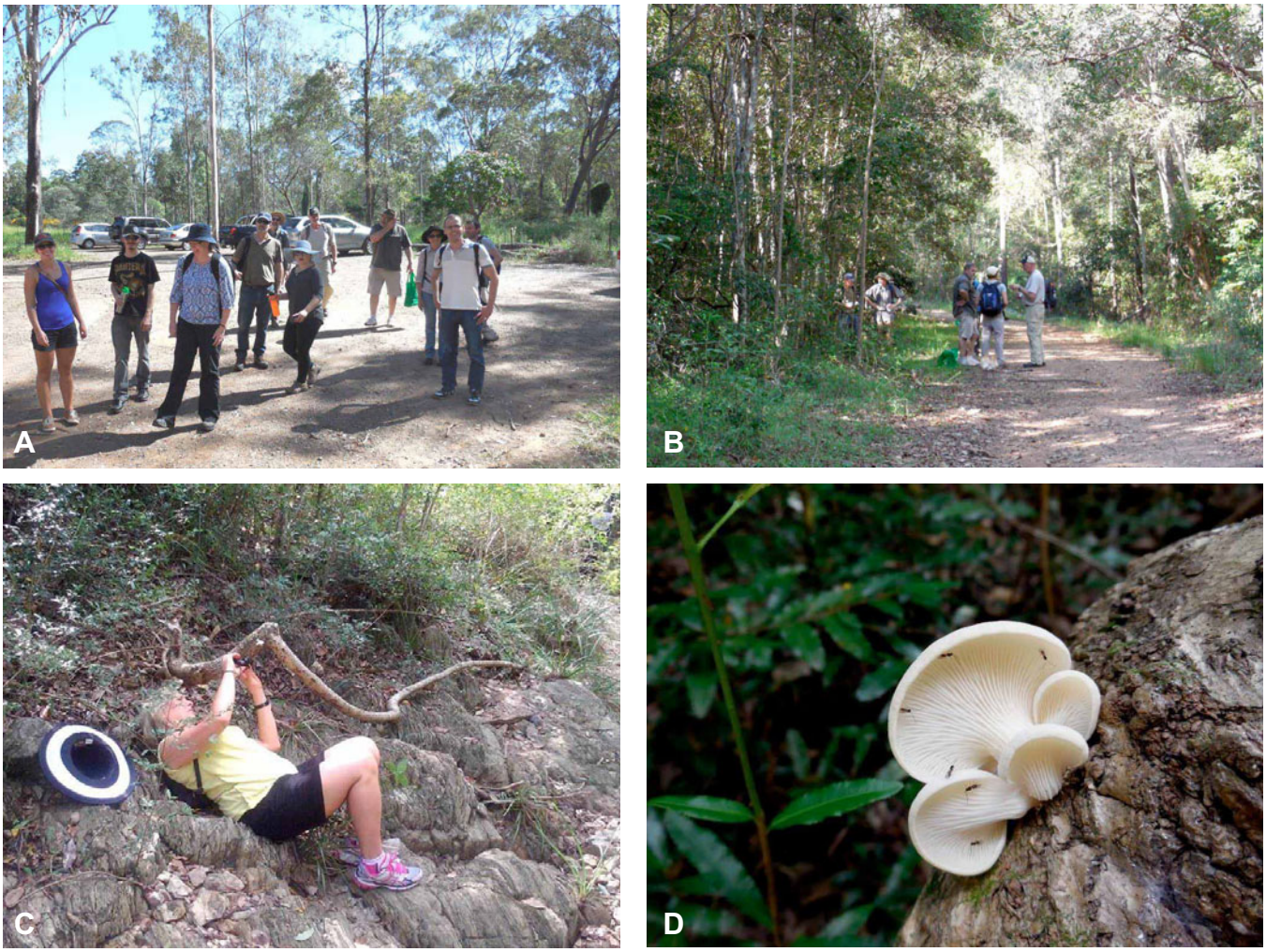


Fig. 1. A. The intrepid foray group set off into the forest (*left to right*: Katharina Schwabenbauer; Michael Thompson; Lesley Francis; John Dearnaley, Tom May (obscured); Jemima Wixted; Roy Halling; Nigel Fechner; Maree Elliot; Laslo Irinyi; and Matteo Gelardi (obscured). **B.** Mycologists in the forest where Roy Halling (*far left*) tells the others it is "all a load of old Boletes to him". **C.** The AMS president demonstrates how to take photos of *Pleurotus* while picking up a good dose of scrub itch from the forest floor. **D.** The photogenic *Pleurotus* basidiomes with insects (not the scrub itch culprits).

polyphosphate kinase called Arg1. This latter molecule was essential for virulence and could provide a useful antifungal drug target. Kylie Boyce (Department of Genetics, University of Melbourne) outlined studies of the pathogenicity genes of the dimorphic *Penicillium marneffei*. Tyrosine catabolism genes were shown to be involved in the release of N and C for fungal nutrition as well as the production of the brown pigment pyomelanin which could protect the pathogenic yeast cells against oxidative stress. Mark Wilkins (Systems Biology Initiative, University of New South Wales) described research into the surprisingly extensive protein methylation network of *Saccharomyces cerevisiae*. Evidence was presented that arginine methylation plays a hitherto unappreciated key role in facilitating protein-protein interactions in eukaryotes a finding that has major implications in terms of therapeutic interventions. As a change of pace, Anthony Borneman (Australian Wine Research Institute, Adelaide) described research into genomic characterisation of strains of *S. cerevisiae* and the common spoilage yeast *Dekkera bruxellensis*. Significant genetic diversity within both species was demonstrated *via* next generation sequencing and comparative genomics and it was hoped that this would assist with identifying the control of desirable and undesirable characteristics involved in industrial fermentation processes.

Plant pathogenesis is not usually the jurisdiction of the Australasian Mycological Society. but organizing a session on this topic proved an inspired and popular decision. The symposium opened with a talk by Don Gardiner (CSIRO Plant Industry, Brisbane) on the mechanisms *Fusarium* uses to combat the chemical defences of wheat. Specific examples discussed included a gene cluster encoded compound which detoxifies a common crop phytoalexin and an ABC transporter that exported an as yet unknown plant defence molecule. Not surprisingly, inactivation of these genes resulted in decreased pathogenesis. Liz Dann (Queensland Alliance for Agriculture and Food Innovation, University of Queensland) outlined the use of systemic acquired resistance in commercial crop protection programs. This can be triggered by chemical, physical and biological means and may confer resistance to fungal, bacterial, viral and nematode pathogens of crop species. Sue Thompson (Department of Agriculture, Fisheries and Forestry, Toowoomba) described twelve new species of *Diaporthe* from broad-acre, low tillage cropping systems. These important fungal

Fig. 2. A. John Dearnaley discusses the double ring on a rather nice *Amanita* basidiome with Tom May and Susan Nuske. **B.** A good fungal foray builds up the appetite. Post foray (*left to right*): Tom May; John Dearnaley; Michael Thompson; Roy Halling; and Laslo Irinyi. **C.** Monica Slavin beginning her presentation. **D.** Lunchtime discussions, foreground (*left to right*): Andrew Kettle; Peter Mcgee; John Dearnaley; and Diana Leemon.

pathogens, which cause damaging stem cankers in a number of crops, can persist in both stubble and herbicide-induced weed remnants. Celeste Linde (Research School of Biology, Australian National University) rounded out an excellent session with a description of how barley grass (*Hordeum leporinum*) provides a reservoir for the evolution of new pathogenic strains of *Rhynchosporium commune* (scald) that could impact on newly introduced resistant strains of barley.

Day two of the conference began with an amalgam of mycological topics in the "Proffered Papers" session. Susan Nuske (School of Marine and Tropical Biology, James Cook University) outlined the importance of mammals such as bettongs and potoroos in dispersing the spores of ectomycorrhizal fungi in Australian ecosystems. Tom May (Royal Botanic Gardens, Melbourne) described an analysis of the distribution patterns of 200 macrofungal species within Australia. Although broad patterns of occurrence were demonstrated for many taxa, specific climatic requirements and available habitat were strong drivers of distribution within specific zones. Celeste Linde (Research School of Biology, Australian National University) discussed investigations of the mycorrhizal fungal specificity of terrestrial Australian orchid genera. ITS sequencing was sufficient to accurately distinguish the fungal partners of *Chiloglottis*, *Drakaea*, *Paracaleana*, and *Arthrochilus*. The sharing of fungal partners within and between orchid genera indicated that mycorrhizal specificity was not a mechanism of speciation in orchids. Greg Bonito (Royal Botanic Gardens, Melbourne) presented results of an experiment whereby cuttings of multiple host plants and genotypes were grown in soils of different origins. Profiles provided by MiSeq of fungal ITS and 28s rDNA highlighted the importance of soil origin (and not plant host species or genotype) as the strongest determinant of the fungal community of plant roots. Katharina Schwabenbauer (Molecular Mycology Research Laboratory, Westmead Hospital) finished the session with a description of the genetic diversity of Australian and European isolates of *Scedosporium aurantiacum*. Combined sequence analysis of six genes revealed separate clustering of the Australian and European samples and a higher diversity in the former group suggested that *S. aurantiacum* may have originated in Australia and dispersed to other world regions.

Morwenna Boddington (Faculty of Health, Engineering and Sciences, University of Southern Queensland) opened the "Fungal Systematics" session with

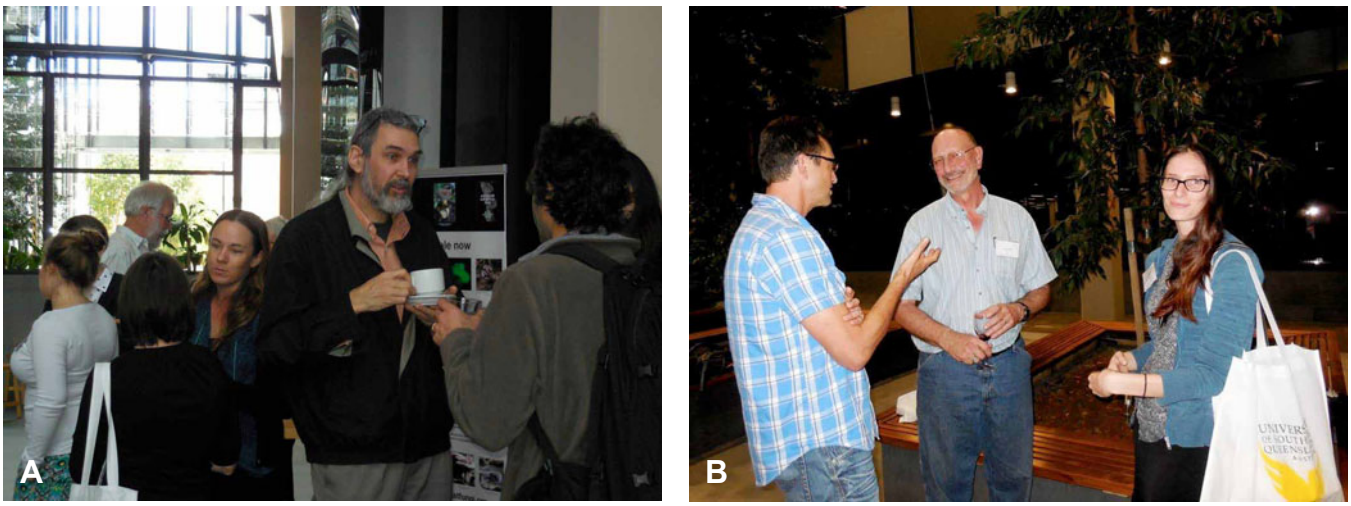


Fig. 3. A. Lunchtime discussions, Tom May with Greg Bonito (R foreground). **B.** At the networking reception Rich Robinson tells Roy Halling that mycology in Australia is not always a load of old Boletes, while Susan Nuske looks amused.

morphological and molecular descriptions of potential new species of epigeous *Russulaceae* in south-east Queensland. Rachel Mapperson (Faculty of Health, Engineering and Sciences, University of Southern Queensland) discussed a range of previously undocumented endophytic, macro-ascomycete taxa from dry rainforests in eastern Australia. Jeff Powell (Hawkesbury Institute for the Environment, University of Western Sydney) argued that the increasing use of next generation sequencing may have expanded the documentation of global fungal diversity but had diverted mycologists from understanding the ecological drivers of fungal diversity and its implications. He suggested that the broader mycological research community be encouraged to use physical and chemical fungal species characteristics (i.e. a trait-based approach) to more fully understand the interactions between fungi and natural and managed environments. Laszlo Irinyi (Molecular Mycology Research Laboratory, Westmead Hospital) concluded the session with an outline of the establishment of an online database of 2700 ITS sequences of 416 medically important fungi. This database may be expanded to include alternative genetic loci for a number of taxa.

A session on "Applied Mycology" outlined some of the significant roles fungi can have in industry, forestry and agriculture. Lisa-Marie Guilino (Department of Agriculture, Fisheries and Forestry, Queensland) began the symposium with a description of gut-inhabiting anaerobic fungi. These microbes have been recently molecularly characterised from the rumen of cattle and the fore stomach of kangaroos and are being investigated for their possible roles in fibre digestion for biofuel production. Lesley Francis (Department of Agriculture, Fisheries and Forestry, Queensland) outlined her research on the basis of natural decay resistance in forest and plantation timbers. Polyphenols may protect timber via their toxic effects on decay fungi. In addition, timber waxes may prevent the accumulation of the water that is necessary for the activity of fungal-derived lignocellulolytic enzymes. Vic Galea (School of Agriculture & Food Sciences, The University of Queensland) documented his research in using endophytic fungi to control two significant Australian weeds, Parkinsonia (*Parkinsonia aculeata*) and Prickly Acacia (*Acacia nilotica*). Field trials using endophytic inoculum inserted into weed stems are currently underway. Richie Robinson (Department of Parks & Wildlife, Western Australia) outlined his recent studies of *Cortinarius* diversity in the jarrah forests of South Western Australia; 118 morphospecies from field sites were further investigated by sequencing the ITS regions. This analysis showed a general lack of congruence between morphological and molecular approaches, identified many cryptic species and highlighted the need for continued investigation of this large and significant ectomycorrhizal genus.

The final symposium of the conference on "Fungi and Restoration" covered a diversity of topics. The first speaker, Jess Mowle (Hawkesbury Institute for the Environment, University of Western Sydney), described research on the fungal and microbial communities of the critically endangered Wollemi pine. The species appears to have its own unique community of mycorrhizal fungi and bacteria and this has implications for translocation procedures that are being used as a conservation strategy for the species. Cathal Daynes (Faculty of Agriculture, University of Sydney) demonstrated that compost and a diversity of arbuscular mycorrhizal fungi was necessary for the restoration of topsoil in mine spoil. Ash Martin (Microbiology Laboratories Australia, Adelaide) also highlighted the importance of mycorrhizal fungi in restored environments, but warned against poor quality inocula, incorrect application, and the pitfalls in monitoring procedures. Tendo Mukasa Mugerwa (School of Biological Sciences, University of Sydney) described research on the role of melanized root-associated fungi in positively influencing edaphic conditions. Pot trials showed that 20 of 24 melanized root-associated fungi isolated from native Australian plants increased carbon levels in an aggregated carbon rich agricultural soil. Such a response may have been mediated by the release of melanin from cell walls of these fungi. The final speaker in the session, Kate Newman (Centre for Sustainable Ecosystem Restoration, University of Newcastle), described the experimental inoculation of mine spoil with an array of soil microbes (rhizobia, mycorrhizal fungi, endophytes), and the addition of municipal waste compost and native plant seedlings. Although in its early stages, plant growth appeared to be enhanced with microbial inoculation alone but coal dust in the soil appears to be a confounding factor in interpreting experimental results.

The conference ended with a second keynote address by Roy Halling (Institute of Systematic Botany, New York Botanical Garden): "Location, Location, Location: input from boletography". He highlighted the evolution in approaches to fungal biogeography studies, from macro- and micro-morphological methods and mating strain compatibility tests, to more contemporary molecular procedures. Bolete mushrooms, pored members of *Agaricomycetes*, are obligate ectomycorrhizal fungi and essentially unculturable. Roy, who has studied this group worldwide, is intrigued by the apparent global occurrence of some taxa. How did some species come to be widely distributed? Was it by long distance spore dispersal, such as *Pisolithus* moving from Australia to New Zealand, or *via* anthropogenic means such as the introduction of *Amanita muscaria* and *Chalciporus piperatus* on *Pinus* seedlings to *Nothofagus*? Could the apparent wide distribution of bolete taxa be a remnant of a pre-Cretaceous land bridge migration? Modern molecular systematic work appears to be key to determining equivalence between widely dispersed bolete morphotypes.

In all, a successful conference with much interaction between the representatives of each of the mycological subdisciplines present. The social activities, which included a fungal foray, networking reception and conference dinner, were well attended and provided ideal opportunities for networking. It was wonderful to see a good number of enthusiastic students at the meeting with many presenting either talks or posters of a very high standard. The award for best oral presentation went to Sue Thompson for her passionate talk on the implications of her findings in the extensive research she has undertaken to track down the complex of *Diaporthe* species lurking in broad acre crops and weed residues. Andrew Kettle was awarded the student poster prize for his eye-catching synopsis of comprehensive research into a virulence strategy of plant pathogenic *Fusarium* infecting wheat that involves the degradation of the phytoalexin benzoxazolinones. During the conference Susan Nuske was announced as the winner of the inaugural annual AMS small competitive grant. Susan will use the grant to pursue her research into the significance of mammal dispersal of ectomycorrhizal spores in the rainforests of tropical North Queensland.....

We look forward to another enjoyable and valuable meeting during July 2015 in Canberra in association with the Australian Society for Microbiology; watch the society's website for further details (www.australasianmycologicalsoceity.com).

John Dearnaley
President, Australasian Mycological Society
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8TH AUSTRALASIAN SOIL-BORNE DISEASES SYMPOSIUM

The 8th Australasian Soilborne Diseases Symposium (8ASDS) was held in Hobart, Tasmania, from 10–13 November 2014 and brought together 85 delegates. The scientific programme encompassed topics including pesticides and soil amendments, integrated pest management, plant-pathogen interactions, biological control and disease suppression, resistance, pathogen ecology and epidemiology, and diagnostics and risk management. Keynote speakers included Krishna V. Subbarao (University of California Davis) who discussed how consumer demand (human activities) can alter soil-borne diseases, as illustrated with ongoing studies on *Sclerotinia sclerotiorum* and *Verticillium dahliae*. Alison Lees (James Hutton Institute, UK) discussed the successes and failures of real-time PCR diagnostic assays as both a research tool and as a predictive tool for soil-borne diseases of potato. Additionally there was an Invited Presentations session on "Management of Soil-borne Diseases of Cereals" dedicated to the memory of the late David Roget. Rapid-fire poster sessions and open forums provided opportunities for rigorous debate of important and relevant scientific issues. Quality student presentations were delivered with Natalia Cripps-Guazzone (Lincoln, NZ) being awarded the prize for best student presentation.

A welcome reception included a ferry ride to the world-acclaimed Museum of Old and New Art – MONA, and the conference dinner at the Henry Jones Art Hotel provided ample opportunity to meet both old and new friends. A nematode workshop was run by Graham Stirling immediately after the conference, and provided opportunities for hands-on experience with beneficial microbes and suppressive soils. This biennial niche conference, which brings together international and Australasian experts on soil-borne diseases is scheduled to next occur in Hamner Springs, NZ, most likely in November 2016.

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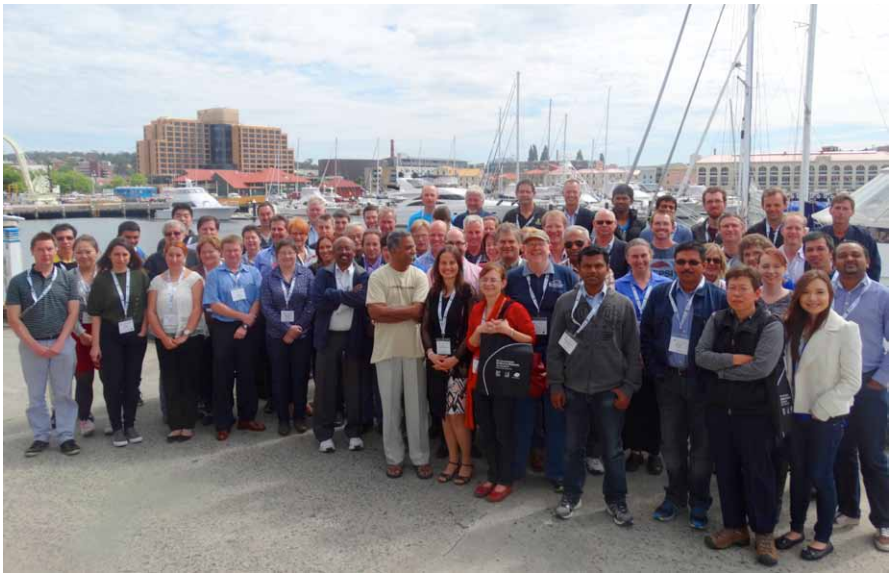

Participants of the 8th Australasian Soil-borne Diseases Symposium in Hobart, Tasmania.

FUNGAL DATABASES WORKSHOP

On 3–4 December 2014, a workshop was organized at the CBS-KNAW Fungal Biodiversity Centre, Utrecht to discuss a number of topics related to the integration of several fungal databases (the UNITE, MycoBank, Genbank/NCBI, CBS, and ISHAM ITS databases) as well as the implementation of some new tools for data analysis (University of Perugia, Italy; Field Museum, Chicago). Nineteen researchers representing the institutions involved presented their work and described their short, medium and long terms plans for their systems and databases. The idea was to find overlapping objectives and ideas between the groups and isolate their specific strengths in order to increase complimentarily. We also wanted to coordinate future efforts between the groups and agree on a number of joint objectives and projects. The ultimate goal of the workshop was to initiate the development of common and competitive grant proposals that would markedly increase the usefulness of our work for fungal and other end-users communities.

The participants (*left to right*): Pedro W. Crous, Bert van Zon, Kessy Abarenkov, Arthur de Cock, Duong Vu, Nathalie van de Wiele, Vincent Robert, Gianluigi Cardinali, Urmas Kõljalg, Laszlo Irinyi, Joost A. Stalpers, Henrik Larsson, Conrad Schoch, Carlo Brouwer.

The participants were: Kessy Abarenkov (UNITE, Estonia), Carlo Brouwer (CBS-KNAW), Gianluigi Cardinali (University Perugia, Italy), Arthur de Cock (CBS-KNAW, MycoBank), Pedro W. Crous (CBS-KNAW, MycoBank), Urmas Kõljalg (UNITE), Laszlo Irinyi (Medical database, Westmead Hospital, Sydney, Australia), Henrik Larsson (UNITE, Norway), Wieland Meyer (Medical database, University of Sydney, Australia), Henrik Nilsson (UNITE, Sweden), Vincent Robert (CBS-KNAW, MycoBank), Conrad Schoch (NIH/NLM/NCBI, Washington DC, USA), Joost A. Stalpers (CBS-KNAW, MycoBank), Szaniszlo Szoke (CBS-KNAW), Duong Vu (CBS-KNAW), Nathalie van de Wiele (CBS-KNAW, MycoBank), and Bert van Zon (CBS-KNAW). It is envisaged that additional participants will be invited to future workshops.

A report on the outcomes of the workshop is now being prepared, and a few project ideas have been discussed; it is anticipated that one or more projects will result from the workshop. Additional participants will be invited in the future.

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