

# **Mycologist News**

## **Special Edition**



**The British Mycological Society 2010  
and Beyond:**

**An international  
mycological network**

**Editors**

**Dr Ian Singleton and Professor Lynne Boddy**

**Image:** Living hyphae of *Neurospora crassa* imaged by confocal microscopy. Membranes have been stained with FM4-64 and nuclei labelled with H1- GFP.  
Provided by Patrick C. Hickey and Nick D. Read.

## **BMS - One Aim – Three New Sections:**



**FBR**



promoting fungal science

**FEO**

**FMC**



**Fungal Biology Research (FBR)**  
**Field Mycology and Conservation (FMC)**  
**Fungal Education and Outreach (FEO)**

**Each section has its own objectives, budgets and activities**  
**Join and benefit from working together**

# Introduction by the President



*BMS President, Professor Lynne Boddy*

Over the last year or so the Society has had something of a “make-over”. We have reorganised the BMS to reflect the ever-changing field of fungal biology and research, to fulfil the needs of our diverse membership and to bring the fascinating world of fungi to as many people as possible. We have broadened our journal portfolio and *Mycological Research* has become *Fungal Biology* (page 19 ). Reflecting the growth of online publication, all of the Society’s journals are now available electronically including all archival material back to 1896. This special issue of *Mycologist News* provides an overview of the activities of the BMS. Hopefully current members will be inspired to participate even more in the Society’s activities, and non-members will be encouraged to join. We are a Society that embraces everyone with a keen interest in fungi, from academic research at the molecular level to identifying and recording fungi in the field, from educating primary school children through degree courses and graduate studies. Like mycelium we are a mycological network, exploring many different areas at the same time, communicating and interconnecting many different activities, and different regions supporting each other.

The changes we have implemented should help the Society encompass the recent expansion of new avenues of research including modern molecular, biochemical, modelling and imaging approaches. The BMS aims to nurture all branches of mycology and to provide a forum for all research related to fungal biology. One of the longest running activities of the BMS, the Autumn forays and field activities not only continue to flourish but have developed new relevance to current interests. Study of a long-term (since 1950) record dataset<sup>a</sup> has revealed evidence for dramatic changes in fungal phenology, resulting from climate change. In addition to academic research and field mycology a third major area of BMS concern is education and outreach, and this now extends well beyond university courses to the enlightenment of school children and the general public. For many years BMS has had an education roadshow and

promotes the importance of fungi at such events as horticultural shows and local festivals, and has frequently been amongst the medal winners in the continuing education sections of these events and the world famous Royal Horticultural Society Chelsea Flower Show (page 16). This year the Society has been involved with putting together a four month exhibition at the Royal Botanic Garden Edinburgh along with an accompanying book (page 17). With the new BMS website we will be attempting to reach a global audience.

Enjoy

Lynne Boddy  
Professor of Mycology  
Cardiff University

<sup>a</sup>Gange AC, Gange EG, Sparks TH & Boddy L.(2007) Rapid and recent changes in fungal fruiting patterns. *Science* 316, 71.

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# New structure of the British Mycological Society

Following wide consultation with the membership, the BMS has recently re-organised into three committees, covering the major areas of interest of the Society: Fungal Biology Research (FBR), Fungal Education and Outreach (FEO), and Field Mycology and Conservation (FMC). These constitutional changes were formally agreed at a special general meeting in February 2010. Each committee has a delegated budget, a broad set of objectives, and each will promote their own activities. Members join the BMS not a specific committee, and are entitled to take part in the activities organized by all committees. Council remains the overarching governing body. Budgets and objectives are agreed by this Council of trustees, and detailed results of the committees activities are reviewed each year by Council. This structure allows each committee to promote its specialised interests in an intense, focussed manner, enabling all constituencies within the Society to flourish and accomplish their objectives, and will hopefully be appealing to potential new members. However, the Society's tradition of promoting cross-disciplinary activities will be maintained, and cross-disciplinary activities, not least taxonomy, whole organism mycology and ecology, will be an important aspect of Council's consideration of each committee's on-going plans. In addition to these three committees, there continues to be a Publications Committee - to guide our 4 main journals and other publishing initiatives, which reports directly to Council.

## President

(serving a maximum of 2 years) selected from the whole membership as in the recent past;

## Treasurer

(serving a maximum of 5 years) selected from the membership as in the recent past;

## General Secretary

(serving a maximum of 5 years) selected from the membership as in the recent past;

## Publications Officer

(serving a maximum of 5 years) selected from the membership as in the recent past;

## International Initiatives Advisor

(serving a maximum of 5 years) selected from the membership as in the recent past (non-voting);

**Two members** from each of the three new **elected committees**;

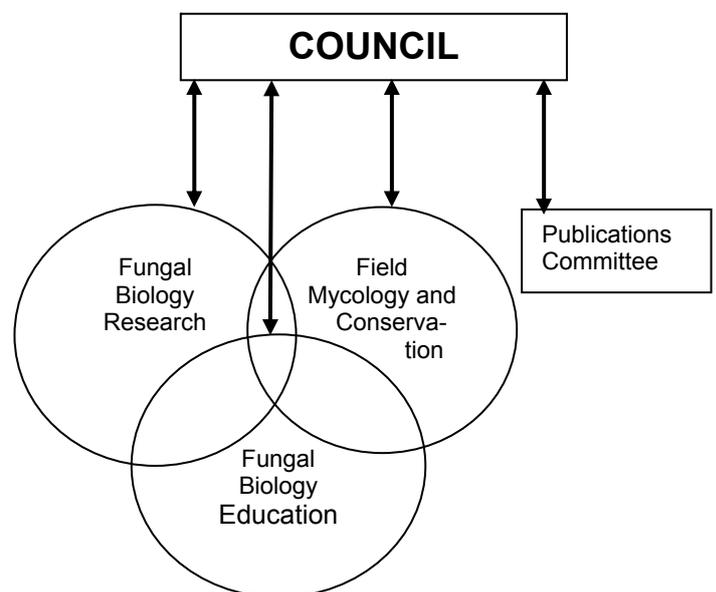
**President elect** (2 year) selected from the whole membership, as in the recent past;

One **Vice-president** (2 year) selected from a different constituency to the President elect (i.e. FBR or FMC).

A smaller Council does not mean that the interests of BMS communities will be less well represented. Indeed, since the three special committees will each have up to seven members, the new structure will provide a more effective method of communicating the wishes and needs of the membership to Council.

The Society membership categories remain Full Members, Associate, Undergraduate, Postgraduate, Life and Honorary Members and affiliated groups (page 25). The BMS remains a broad, inclusive Society, very happy to have a wide range of membership types, which suit the needs and desires of members according to their own circumstances.

Overseas members remain an important part of the Society, and we hope to encourage more to join and participate in the future. We are increasing our activities overseas, and have an International Initiatives Advisor on Council. Membership of the Society provides, those with a deep interest in fungal biology, the opportunity to find out more and to communicate knowledge of these amazing organisms with like-minded people and to help enlighten the broader public.



The new structure of the BMS.

# Council Biographies

**Prof Lynne Boddy** (BMS president) is Professor of Mycology at Cardiff University. She has been associated with the BMS for nearly 30 years, starting with local organizer of the symposium on Decomposer Basidiomycetes at Queen Mary College in 1979. Since then she has organised numerous meetings, edited three symposium volumes, served several stints on the editorial Board of *Mycological Research* and is now Senior Editor of the recently launched journal *Fungal Ecology*. She has served several times on Council and Programme Committee, and was the Ecology Committee Secretary for several years. She is also a keen proponent of the BMS Roadshow and the BMS stand at Chelsea. In 1989 she was the first recipient of the BMS Berkeley Award for contributions to the ecology of decomposer fungi in woodlands, and this was followed by the Society for General Microbiology's Fleming Award.



**Prof Geoffrey Michael Gadd** (BMS treasurer) is interested in cellular, physiological and physico-chemical mechanisms underlying microbial-metal-mineral transformations, and their environmental and biotechnological significance in biogeochemical cycles and in bioremediation of metal/radionuclide pollution. He was until recently Head of the Division of Molecular and Environmental Microbiology, College of Life Sciences, University of Dundee. Professor Gadd's research has been recognized through specific awards (e.g. the Berkeley Award of the British Mycological Society, the Charles Thom Award of the Society for Industrial Microbiology) and he is a Fellow of the Linnean Society, the Institute of Biology, the American Academy of Microbiology, and the Royal Society of Edinburgh. He has also received the Benefactor's Medal of the BMS and has served as BMS President (2004-7) and Symposium Series Editor (1994-2007).



**Prof Naresh Magan** (BMS President elect) has worked at Cranfield University for the past 20+ years and has a personal Chair in Applied Mycology. He completed his PhD at Reading University (external student, Rothamsted Research) in the 1980s. He has interests in Ecophysiology of spoilage and mycotoxigenic fungi including volatile fingerprints, biocontrol fungi and the use of fungi in bioremediation. Recent work has focused on relating the ecology of mycotoxigenic fungi to molecular gene expression of toxin gene clusters and modelling this to predict phenotypic toxin production using a "systems biology/mycology" approach. He has been a Council member for two periods of three years. He is committed to furthering mycological education and to encourage younger scientists to pursue interests in mycology. He is President-elect of the BMS for 2011-2012 and hopes to continue the excellent work done by Prof. Lynne Boddy in the past two years in evolving and ensuring that the BMS is an inclusive society in which all aspects can flourish.



**Dr Pieter van West** (BMS publications officer) is a Reader in Molecular Mycology at the University of Aberdeen in Scotland. He leads the Aberdeen Oomycete Laboratory which studies fundamental molecular processes in fish, algal and plant pathogenic oomycetes.



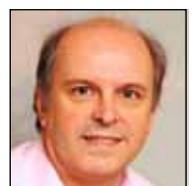
**Dr Simon Avery** (Chair of BMS Fungal Biology Research) is an academic at the University of Nottingham, and has served the BMS in various capacities over recent years (Council Member, Vice President, and Scientific Programme Officer). His research interests centre on elucidating the ways in which yeast and other microorganisms are affected by stressors. This is addressed through two main foci: (a) the mechanisms of action of stressors such as pro-oxidants and drugs in cells, and (b) the basis for heterogeneity of individual cell responses to these stressors. His research principally exploits the power of the yeast system to tackle these problems.



**Dr Paul Dyer** (Chair of BMS Fungal Education and Outreach) is a reader in fungal biology at the University of Nottingham, UK. He has research interests in the genetics and population biology of fungi, in particular investigating reasons for sexuality and asexuality in ascomycete fungi. Study organisms include *Aspergillus* and *Penicillium* species, plant pathogens and lichen-forming fungi. He chairs the BMS Fungal Education and Outreach group whose role is to promote fungal biology to schools, universities and the general public.



**Dr Stuart Skeates** (BMS Field Mycology Chair and joint BMS Vice-President), chairs the Field Mycology Committee which oversees field mycology events, conservation and the large database of fungal biodiversity records in Britain and Ireland. He has previously been the BMS Foray Manager and an elected member of Council. He is the group leader for the Hampshire Fungus recording Group which covers Hampshire including the species rich New Forest area. Although he started his career as a mathematician he has just retired from a career as a doctor in General Practice where he had particular interests in education and information management.



# Council Biographies



**Prof Tony Whalley** Emeritus Professor Liverpool John Moores University and visiting professor Chulalongkorn University, Thailand. Former Council Member, General Secretary, Honorary Treasurer and President of the British Mycological Society 1994. He is currently the Society's International Initiatives Advisor and has been forging links with the Far East particularly Thailand. Tony is a professor at John Moore's University, Liverpool and his research interests are mainly concerned with ascomycete fungi and endophytes involving taxonomic and ecological studies with special attention to their metabolites. He is also well known for his research on Xylariaceous ascomycetes



**Prof Stefan Buczacki** joined the Society in 1968 and has served it in many capacities, most notably as vice-president to Tony Whalley in 1994 and then as President in 1999-2000, the first Society president to serve for two years. Originally a plant pathologist, his mycological interests are catholic and, the author of nearly sixty books, he has just completed a new Field Guide to the Fungi of Britain and Ireland, perhaps the most comprehensive ever written. He holds the Society's Benefactor's Medal.



**Dr Peter Crittenden** grew up in Chorlton-cum-Hardy, Manchester and is a graduate of Westfield College London and Sheffield University. He is currently Reader in Plant and Microbial Ecology in the School of Biology at the University of Nottingham. He has a long standing interest in lichens which began at school and was then further nurtured by an expedition to Iceland while a postgraduate student followed by post-doctoral research on nitrogen fixation in lichen-dominated forests of northern Canada. Peter Crittenden is a former president of the British Lichen Society and is currently President of the International Association for Lichenology. He is the Senior Editor of *The Lichenologist* and is on the Editorial Board of *Fungal Ecology*



**Dr Fordyce Davidson** (BMS vice president) has research interests in the mathematical modeling of the growth and function of fungal mycelia. Key questions regarding nutrient utilisation and redistribution, explorative growth in nutrient-free environments, contact guidance and the development of functionally connected mycelial networks in spatially and nutritionally heterogeneous environments have been addressed. This work is being applied to further our understanding of fungi as biocontrol and bioremediation agents and the role they play in the degradation of rock and man-made building materials.



**Dr Matthew Fisher** is a Reader in the Department of Infectious Disease Epidemiology at Imperial College London. He leads a group that focuses on the molecular epidemiology of pathogenic fungi. His research uses an evolutionary framework to investigate the biological and environmental factors that are driving emerging fungal diseases in both human and wildlife species. This research currently focuses on the global emergence of amphibian chytridiomycosis, caused by the chytrid *Batrachochytrium dendrobatidis*, and his group coordinates the output of the global mapping project at [www.spatial-epidemiology.net/bd/](http://www.spatial-epidemiology.net/bd/)



**Prof Richard Fortey** studied Geology at the University of Cambridge and had a long career as a paleontologist at the Natural History Museum in London, researching trilobites. He has named numerous trilobite species and still continues his research despite having retired from the Museum. He is also involved in research on Ordovician graptolites, palaeogeography and arthropod evolution. His fungal interests centre around field mycology.



**Ms Dinah Griffin** After an early career as an advisory Plant Pathologist, Dinah Griffin is now a Field Mycologist with a general interest in the larger fungi and Myxomycetes.



**Ms Caroline Hobart** was a full time lecturer in Art and Design at the Sheffield College and now lectures part time at the University of Sheffield she is an active field mycologist and is particularly interested in Hypogeous fungi. Caroline developed her interest in mycology in the 1980's and in 1987-1993 attended numerous courses on Mushrooms and Toadstools at the University of Sheffield. She joined the British Mycological Society in 1992, and subsequently, she has attended and participated in numerous BMS Forays and workshops. In 2008 and 2009 she organised and designed the prizewinning BMS displays at the Chelsea Flower Show. She is on her second term as council member and is busy in her role as Foray Manager.

# Council Biographies



**Prof Bruce Ing** joined the Society in 1960 and has been a member of several committees, has been Foray Secretary, and is currently Conservation Adviser, for a second term. His interests centre on the ecology and taxonomy of myxomycetes but he is also actively studying the Erysiphales, Exobasidiales and Taphrinales. He was a Professor of Environmental Biology at the University of Chester and is recently retired.



**Dr Paul Kirk** has a PhD from the University of London, on fungal systematics and ultrastructure and during his career he has written more than 100 peer reviewed papers on fungal systematics. He is a specialist in databases for fungal records, names and bibliographic data and also specialises in mobilizing data for web delivery and as camera ready copy for printing. He is the Senior Editor and production manager of Dictionary of the Fungi, Index of Fungi and the Bibliography of Systematic Mycology, and is the Junior Editor for Fungal Families of the World - a recently updated CABI publication. He is also Manager of the Index Fungorum ([www.indexfungorum.org](http://www.indexfungorum.org)) database(s) and web site, FRDBI ([www.fieldmycology.net](http://www.fieldmycology.net)) database(s) and web site, Libri Fungorum ([www.librifungorum.org](http://www.librifungorum.org)) web site. He recently received the "First Founders' award of the EMA for outstanding contributions to mycology.



**Dr Eleanor Landy** is interested in all aspects education from primary school to higher education. She is currently a science teacher in a secondary school. Her main research interest lies in marine mycology and she has been a member of the BMS since 1996 when she first began her PhD on 'The Fungi of a Temperate Saltmarsh at North Bull Island, County Dublin' under the supervision of Nicholas Clipson at University College Dublin.



**Dr David Minter** (Elected Member of BMS Council, 2009-2012) joined BMS in mid-1970s. He was Foray Secretary 1983-1988, and helped initiate BMS Upland Forays and the computerisation of BMS foray records. His current interests include taxonomy of ascomycetes and their conidial states, fungal conservation, biodiversity recording using computerized databases, maintenance of websites which provide information for mycologists and others interested in fungi, particularly the Cybertruffle website ([www.cybertruffle.org.uk](http://www.cybertruffle.org.uk)), and fungi and climate change. He has been awarded six Darwin Initiative Awards since 1993, mainly in Cuba and Ukraine, and is one of four editors of the tenth edition of the *Dictionary of the Fungi* (2008). He is also President of the European Mycological Association, and a Corresponding Member of National Academy of Sciences of Cuba.



**Dr Julian Mitchell** is based at Portsmouth University. His research interests include Molecular systematics of marine fungi, molecular systematics of fungi pathogenic on insects and degradation of industrial toxic waste in gravel bed hydroponics systems. His teaching areas cover molecular biology in medicine, microbial genetics and environmental microbiology amongst many others. He is currently membership secretary within the BMS, a position he has held for the last few years.



**Dr Derek Schafer** is a retired company director who has been fascinated by mycology for more than 30 years. He joined the British Mycological Society in 1984 and was the Society's Foray Secretary from 2001 to 2004. He has a particular interest in the genera *Coprinellus*, *Coprinopsis*, *Parasola* and *Coprinus* (the "ink caps", previously known as *Coprinus*) and tutored a workshop on their taxonomy for the Society in 2006. Derek set up the Buckinghamshire Fungus Group in 1998 and has led the Group, as its Secretary, since then, working with local wildlife and conservation organisations to record the Buckinghamshire mycota and to promote an interest in mycology among the general



**Dr Ian Singleton** (Editor for BMS Mycology News) has a research background in applied and environmental microbiology. He is currently interested in novel methods to reduce fungal spoilage of fresh produce and rapid methods to detect microbes in environmental samples. During his career he has worked in University College Dublin, Adelaide University and since 2000 has been working in Newcastle University, School of Biology. His PhD was carried out in Sheffield University on fungal/metal interactions. He enjoys applying research in commercial situations and while in Newcastle has been involved in founding two 'spin out' companies. His hobbies include squash (well - running about wildly in a small enclosed area), fishing, examining mouldy fruit and talking fungi to anyone who will listen.

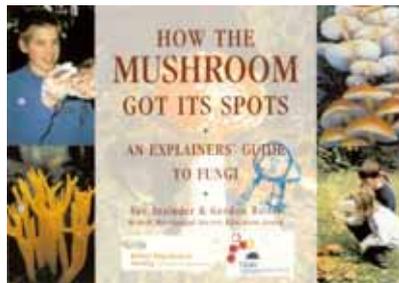
# Fungal Education and Outreach Committee (FEO)

The remit of the Fungal Education and Outreach (FEO) committee of the British Mycological Society is to promote knowledge of fungal biology to the public at all levels. This ranges from school children and students in junior schools, through to secondary schools and universities, and finally to adults in the general public. The aim is to convey an appreciation of the importance and fascinating diversity of fungi, and also inspire the 'next generation' of fungal biologists. The Fungal Education and Outreach committee has evolved from the previous BMS Education committee and aims to utilise existing BMS resources, whilst developing new education and outreach materials. Ideas for these new materials can come from the organising committee or from outside persons – your ideas are always welcome! Particular details of various areas where FEO are working are as follows.

## Primary and secondary schools:

The BMS, under the guiding hand of Dr David Moore has already established a website 'Fungi4Schools' (<http://www.fungi4schools.org/>), which contains an extensive array of teaching resources for use at primary and secondary schools linked to English and Welsh National

Curriculum, equivalent to ages of about 7-10, 11-13 and 14-15 years. In addition the BMS has produced the informative booklet 'How the Mushroom Got its Spots, an Explainers' Guide to Fungi' for use by anyone teaching about fungi to school groups, science clubs, local nature groups or any non-specialist audience.



*How the Mushroom Got its Spots*  
Sue Assinder and Gordon Rutter

The BMS is also a sponsor of 'MiSAC' (Microbiology in Schools Advisory Committee), which holds regular nationwide competitions in schools promoting teaching of microbiology. In the future the FEO will be developing a streamlined set of materials for school lessons, producing standard lessons and practical tips for primary and secondary schools (Fig. 1). We are also looking to develop novel materials such as fungal top trumps, mycelium in a box, and chocolate mushrooms – watch this space!

## Universities:

It is important to inspire an interest in fungal biology in future generations of undergraduate and postgraduate students. To do this the FEO will be making teaching resources, such as fungal images and lecture outlines,

available for university educators on the FEO section of the BMS website. Again, contributions from BMS members and beyond are very welcome.

## Outreach materials for the general public

We aim to 'spread the word' about the wonders of fungal biology to the general public in a number of ways:

- By providing information displays and models that can be loaned to BMS members for use at events such as garden shows, science festivals, local displays at museums etc. A series of models are already available for loan (Fig. 2), and pull-up display banners are being developed on a number of themes such as fungal plant and animal diseases, recycling the world, fungi as amazing chemists and fungal symbioses.
- By making displays on particular fungal themes at major public events such as the RHS Chelsea Flower show.
- By providing sample PowerPoint presentations and content for those invited to give talks to the general public.
- The FEO is providing the scientific content for the major exhibition 'From Another Kingdom: the Amazing World of Fungi', being hosted at the Royal Botanic Gardens Edinburgh during summer 2010 before travelling around the UK and beyond. A book to accompany this exhibition has also been produced (see later in this issue).

For all of these events input from BMS members and others interested in fungi would be much welcomed – we always need keen volunteers to speak and man the displays!

## Contact and how to get involved

The FEO committee comprises 7 members with particular responsibilities for several of the areas above. If you would like to become involved or have other questions/suggestions then please contact the FEO Chair, Paul S Dyer.

(E-mail: [Paul.Dyer@Nottingham.ac.uk](mailto:Paul.Dyer@Nottingham.ac.uk)).

# Fungal Education and Outreach Committee (FEO)

## Figures

Figure 1. Pictures from the 'larger than life' article by Eleanor Landy in Mycologist News 2009 (3) pp. 16-17.



Figure 2: Selection of the mushroom models housed at Manchester.



# BMS Roadshow - A Travelling Phenomenon

Back in 2003 the British Mycological Society's travelling 'Roadshow' took its first trip to the Royal Horticultural Society show at Tatton Park, Cheshire, following an 18 month development initiated by Dr David Moore of Manchester University.

Made up of three separate panels, backed by metal concertina frames, the background can be used as a single one panel unit, two or the full three panel set which is in fact made up of two curved screens and one flat screen, each with three separate and easy to erect magnetic panels. The set allows for many different uses, both in shape and size of exhibition space available.

The Roadshow is used regularly at both educational and promotional events throughout the country; from small school science fairs to major RHS events, winning several RHS Gold Medals at both Chelsea and Malvern shows over the years.

Attracting members of the public onto the stand to learn more is often a challenge but with bright well-designed graphics and easily read and understood information the public outreach work goes from strength to strength. A set of botanically correct resin models of fungi, can be used to explain to the visitor what many species of fungi look like, including underneath, being able to be handled without fear of breakage. The accompanying Diorama also shows all the different gill attachments and is again very user-friendly and sturdy.

The BMS Roadshow goes from strength to strength and is instrumental in 'taking mycology to the people'.

**Sheila & George Spence**



*Gold Medal winning Chelsea exhibit 2009*



*Close up of part of the graphics*



*Enthusing young mycologists of the future*



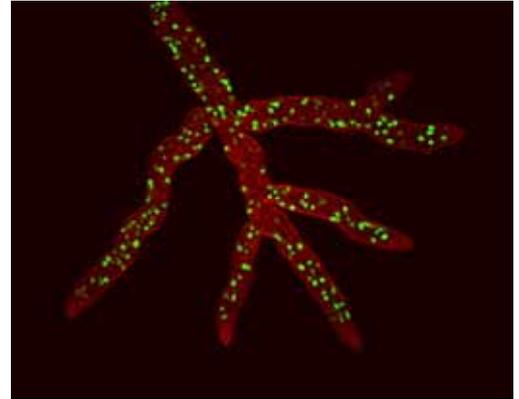
*Sept 2008 BMS Roadshow at Malvern Autumn Show*

# Fungal Biology Research Committee (FBR)

The Fungal Biology Research committee of the BMS is dedicated to the promotion of fungal biology, as it is studied at Universities and Research Institutions. Members have research interests spanning the breadth of fungal biology, including: cell biology, biochemistry and physiology; genomics, genetics and molecular biology; pathogenesis and disease control; evolution and systematics; environment and ecology; mutualistic relationships; systems biology; biotechnology.

Researchers in FBR have the opportunity to:

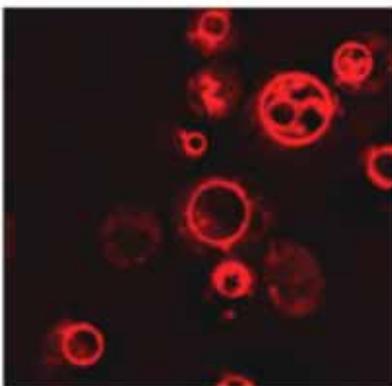
- Become part of a community of academic, industrial and other professional fungal biology researchers.
- Participate in lively annual scientific meetings that attract leading international speakers.
- Receive the foremost *Fungal Biology Reviews* journal, quarterly.
- Receive the foremost general *Fungal Biology* journal, monthly.
- Receive the foremost *Fungal Ecology* journal, quarterly.
- Benefit from conference travel grants, for PhD students, Postdocs and PIS.
- Tap into extensive resources and infrastructure through the broader British Mycological Society, including dedicated channels for publicity and media interfacing, fungal education resources, close ties with related societies, fungal databases.



The FBR committee also makes nominations to BMS Council for the prestigious Berkeley Award, awarded for an outstanding original contribution to mycology.

The Main Scientific Meeting is a flagship event organised by FBR annually, with a major portion of the FBR budget dedicated to its success. The meeting attracts academic fungal biologists and leading speakers from across the world. FBR also organises joint meetings with other societies.

Forthcoming and recent Main Scientific Meetings:



2012: Fungal Interactions, Alicante

2011: Fungal Development and Pathogenesis, Exeter

2010: IMC9 - The Biology of Fungi, Edinburgh

2009: The Fungal Cell, Dundee

2008: ECFG9 – joint meeting, Edinburgh

2007: Ecology of Fungal Communities, Manchester

2006: Stress in Yeasts & Filamentous Fungi, Birmingham

# Field Mycology & Conservation Committee (FMC)

## Background

The new BMS structure has reaffirmed the commitment of the Society to Field Mycology and Conservation.

Field Mycology might be defined as the study of fungi in their natural environment, i.e. individuals, populations and communities, and their interaction with each other and the rest of the biosphere. An understanding is needed of what species of fungi exist, how they have evolved, how they relate to and are separated from other species and thus how they may be classified. Of an estimated 1.5 million species worldwide only around 100,000 have yet been described. There is much to be done.

Conservation is necessarily a mixture of political activity and science. Protecting the diversity of fungi requires a deep scientific understanding of all aspects of their biological existence in the natural world and the Society is uniquely placed to promote both the vital underpinning science and the actions required to protect and conserve the fungal kingdom. The promotion of fungal conservation is arguably the most important challenge facing mycology today given the fundamental and all-pervasive part played by fungi in the life of the planet.

## Activities

The Field Mycology and Conservation Section of the BMS (now administered by the FMC Committee) run a programme of national and international forays, workshops and discussion meetings. It maintains and supports a network of affiliated local recording groups which provide vital local data on fungus distribution by means of programmes of one day forays.

Forays date back to the origins of the Society in the 19th Century. They provide an opportunity for anyone interested in mycology to study the fungi of different parts of Britain. They also play an important role in bringing mycologists together, sharing knowledge and providing encouragement to those embarking on an interest in the subject from whatever background. Identifying the fungi often involves microscopical and chemical investigations and contributes to the study of fungal taxonomy as well as providing information about the occurrence of species to assist in their conservation. The national forays are typically a week long; one is usually held in the spring, a main foray is held in the autumn with an international guest tutor and an upland foray is also held later in the year in one of the more outlying parts of Britain. The Society holds one foray each year outside Britain - an excellent way of strengthening international relationships among field mycologists.

Workshops provide a focussed period of study of some particular aspect of Field Mycology led by a

specialist tutor and are an ideal way of bringing new developments to the attention of a wider audience. They may cover recent taxonomic developments, new techniques, conservation or many other subjects and are typically held over a weekend.

The prime meeting in the Field Mycology and Conservation Section calendar is the open meeting traditionally held in November at the Royal Botanic Gardens Kew, the Natural History Museum and other venues. This has generally had a taxonomy or conservation theme and is now broadening its range to cover a wider area of mycological topics. It has provided an opportunity for mycologists to meet informally, with associated activities such as book sales and small exhibitions.

The Field Mycology and Conservation Section maintain the Fungal Records Database of Britain and Ireland (FRDBI), produce a British Fungal Red Data List and provide a representative to sit on the Fungus Conservation Forum. <http://www.plantlife.org.uk/>

## The Future

Looking forward, we plan to promote more liaisons with scientists whose understanding of the fungal organism can help our activities, such as DNA specialists, those who study the mycorrhizal interactions with trees and other plant species, and those who study the breeding and propagation of fungi in the natural environment. We also plan to support and develop activities that help the now quite extensive network of local recording groups and to encourage involvement of local group members in the Society's activities. We will look for opportunities to hold additional meetings on field mycology and conservation subjects.

As our activities provide opportunities to enlighten people about mycology and to explain the importance of the fungal kingdom to a broader audience, we will co-operate closely with the Society's new Education and Outreach Committee to promote those aims. Fungal biology research is developing in many new and exciting ways and we will also work closely with that Section of the Society in developing our future programme.



*Field Group Meeting*

# Benefactor's Medals and Honorary Membership

BMS Council established the Benefactor's Medal of the British Mycological Society in 1983 following the recommendation of the Forward Thinking Committee chaired by Dr Michael Madelin.

Council Minutes record that "Council, on behalf of the Society, will periodically award a Benefactor's Medal and a Book Prize to the value of Fifty Pounds to a Member, or Associate Member or non-member whose particular service to the cause of mycology it deems to be outstanding. The award will be accompanied by a citation specifying the nature of the service that is being recognized." Dr Stephen Hutchinson British Mycological Treasurer for twenty five years was the first recipient of the award.

The Benefactor's Medal is awarded each year by the British Mycological Society for outstanding support for mycology and especially for support of the Society. In 2010 Professor Nick Read is a recipient of the award. He has worked unstintingly over the last four years in the organisation of IMC9 – a feast of fungal science. Anyone who has ever organised a meeting will appreciate the huge amount of work that this involves. He has also been a prime mover in the "From Another Kingdom" exhibition at the Royal Botanic Garden, Edinburgh (page 17). Nick has served on BMS Council, been a Vice-president of the Society, and has just retired as the Society's chair of the publications



*Benefactors Medal Recipient in 2010  
Professor Nick Read*

committee. Another recipient from Edinburgh University was Professor Jim Deacon, for his research and contributions to education, including his very successful text books on Fungal Biology and his website. Again from Scotland (University of Dundee), Professor Geoff Gadd received the award for his services including editor of the series of symposium volumes.

Overseas members have also been honoured: in 2009, Benefactor's medals were awarded to associate

professors Drs Prakitsin Sihanonth (Chulalongkorn University, Bangkok, Thailand), and Ek Sangvichien (Ramkhamhaeng University, Bangkok, Thailand) for their contributions to teaching and research in mycology in Thailand, its promotion in Asia, and for support of the BMS and its members.



*Benefactors Medal  
Recipient in 2009  
Dr Prakitsin Sihanonth*



*Benefactors Medal  
Recipient in 2009  
Dr Ek Sangvichien*

The award has also been made to non-professional mycologists, for example, for promoting the importance of fungi to the general public at large horticultural shows and local events (George and Sheila Spence), and for organising the BMS library (Gill Butterfill).

Of course all of the many recipients have been worthy winners, those listed above were selected simply to illustrate some of the ways in which the Society has benefitted from the work of different Benefactor's Medal winners.

The Society also occasionally confers Honorary Life Membership on members who have served the BMS outstandingly for a long time. Dr. Juliet C Frankland was the awardee in 2010. She has been an outstanding fungal ecologist, and contributed greatly to the literature, since her earliest work on dune fungi (published as JC Brown) in the late 1950s. Much of her work has been on fungal community development in litter in terrestrial ecosystems. She was president of the BMS in 1995, and prior to that had been Vice-president and also Chair of the Fungal Ecology Special Interest Committee. To give recent news of two other honorary members: Professor Alistair Fitter (University of York) has recently been made a Commander of the British Empire and Dr Stan J Hughes (Canada) has been awarded the Order of Canada.



*Benefactors Medal  
Recipient in 2010  
Dr Juliet C Frankland*

# The British Mycological Society Presidency

As with other learned societies, the British Mycological Society is governed by a Council with, at its head, the President. For most mycologists in the United Kingdom, election to this office ranks as one of the highest honors their profession can bestow and certainly in recent times, the President has been nominated by Council for approval by the overall membership at the Annual General Meeting. The list of Society Presidents is studded with the names of some of the outstanding British mycologists of history - Rea, Buller, Ramsbottom, Wakefield, Chesters, Ingold, Garrett, Brian to name just a few.

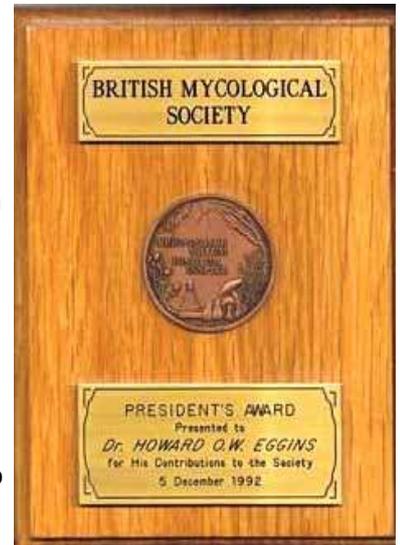
The Society's first President was George Massee and he served for one year from 1896-7, followed by George Plowright for two years (1897-9) and then H. Marshall Ward who also served for two years, largely it is suspected because the fledgling organisation had not thought up a formal means of bringing a Presidential term to an end. Thereafter, all Presidents normally served for one year only but in the 114 year history of the Society, there have been only 102 Presidents, the arithmetic differing from the number of years because a few individuals did serve for more than one session. Carleton Rea (1908 and 1921), Harold Wager (1910 and 1919 - when remarkably, he gave a Presidential Address entitled 'Significance of sex and nuclear fusions'), Gulielma Lister (1912 and 1932), John Ramsbottom (1924 and 1946), Terrence Ingold (1953 and 1970) and John Webster (1969 and 1996) all served two separate terms, while Stefan Buczacki (1999-2000) had two consecutive one year terms. Since 2001, all Presidents have served for two years, except Geoff M Gadd who served, almost certainly uniquely, for three. The Society's Constitution now allows Presidents to serve for up to two years.

The President chairs all meetings of Council and at the end of his or her term of office, delivers an Address on a subject close to their heart, expertise or experience. As well as Harold Wager's remarkably prescient address in 1919, others that stand out with modern resonances or that represent genuine mycological landmarks were E. W. Swanton's 'Education in Mycology' (1916), C.T. Ingold's 'Fungi and Water' (1953), William Brown's 'Mechanism of Disease Resistance in Plants' (1933) and P. W. Brian's perennially apposite 'The Future of Mycology' (1965). Many of these splendid lectures were delivered in the presence of the portrait of Darwin in the august lecture room of the Linnean Society in Burlington House, London, a venue that to the sadness of many older members, the Society no longer uses.

For some years, the President was guardian of a small sculpture depicting a group of *Cantharellus cibarius*, known affectionately as the Chanterelles of Office and these were passed on at the Annual General

Meeting. Largely because of their fragility, but to the regret of many, these were consigned to the Society archive and replaced by a handsome President's Medal in the 1990s. The original in silver is handed on from the outgoing to the incoming President, the departing President receiving a replica.

Perhaps the least known but in many respects one of the most important of the Society's distinctions is the President's Award. It originated in 1992 on Councils recommendation and was awarded by the then President Gareth Jones to its first recipient Howard Eggins but there appears to be no list of those who have awarded or been awarded it since. It is an honour in the gift of the serving President to someone whom he or she considers to have served the Society with singular and outstanding merit.



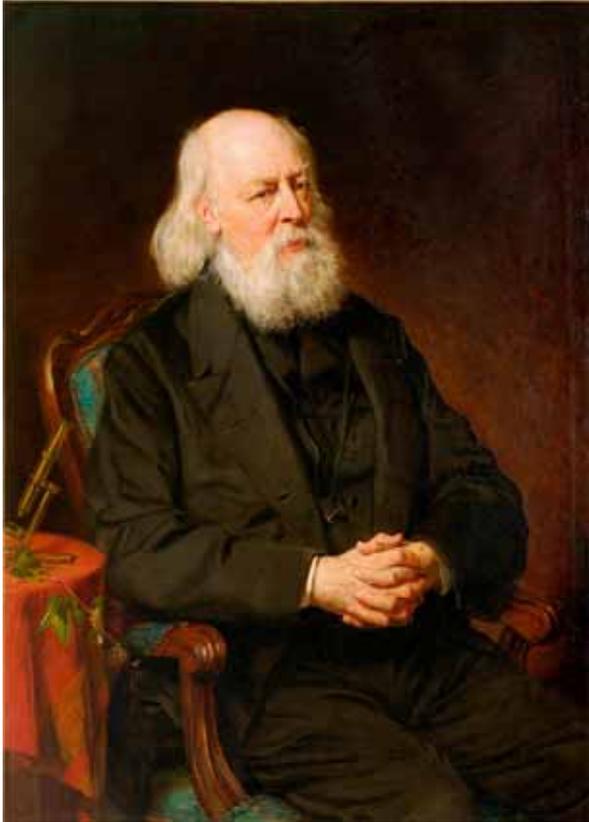
The award in the form of an inscribed plaque or scroll has been made only rarely in recent times, probably because most Presidents are unaware of its existence! The most recent award was by Stefan Buczacki who awarded it to his own mycological mentor, John Manners, another former President, and an outstanding teacher who served mycology and the British Mycological Society in numerous ways. The current President Lynne Boddy is reviving the custom.

## President's Award 2010 - Prof John Webster

There can surely be no member of the Society who has not heard of Professor John Webster. He is the author of "Introduction to Fungi" of which there have been several editions, and co-author of "Fungal Ecology", as well as producing educational CDs. He has been both an inspirational researcher and teacher, most recently at the University of Exeter where he was Professor of Biological Sciences between 1969 and 1990, and Professor Emeritus from 1990. His input to the BMS has been considerable, with two presidential stints as mentioned above. It is entirely appropriate then that the 2010 President's Award is made to Professor John Webster during a year when IMC9 is held in the UK, as IMC1 was held in Exeter and John had considerable input during the formation of the International Mycological Association.

**Stefan Buczacki**

# The Berkeley Award of the British Mycological Society



**Rev. Miles Berkeley**

Image © Linnean Society of London

The Rev. Miles Berkeley (1803 – 1889) is rightly regarded as the father of both British mycology and plant pathology. Although an accomplished and prolific systematist, he is perhaps most famous for his elucidation of the life cycle of the organism responsible for late blight of potato (*Phytophthora infestans*), the cause of the infamous famine in Ireland in 1845 and later. Ironically, the organism is no longer considered to be a fungus. The first President of the BMS, George Masee, in 1913 noted that "...when the history of Plant Pathology is elaborated, Berkeley's name will undoubtedly stand out more prominently than that of any other individual. In fact, it is not saying too much to pronounce Berkeley as the originator and founder of Plant Pathology."

It was my privilege to be President of the BMS in 1989, the centenary year of Berkeley's death. The BMS, in conjunction with The British Society for Plant Pathology and The Society of Irish Plant Pathologists, celebrated by holding a symposium on *Phytophthora* in Trinity College, Dublin (Lucas et al., 1991). In this volume and in his Presidential address, another of the Society's Presidents, Stefan Buczacki (2001) has recorded his extensive knowledge of Berkeley. He also gave an impromptu talk about Berkeley at a meeting in Kew later when the designated speaker

failed to appear because of a delayed flight! See also Taylor (1970). The Society also held a meeting in 2003 to celebrate the bicentenary of Berkeley's birth.

It was appropriate in that centenary year of 1989 that the BMS Council, at my suggestion, should establish an Award in Berkeley's name. Its conditions were modelled on awards for young scientists of accomplishment and promise in other scientific learned societies and, for the BMS, are now as follows:

"Candidates should be under 35 years of age on January 1<sup>st</sup> in the year of nomination and should be a member of the Society on receipt of the Award. The Award will be based on appropriate evidence of an outstanding original scientific contribution to mycology which may be supported by published papers, or typescripts accepted for publication. Candidates shall, with their approval, be proposed and seconded by two Members and the closing date for nominations is July 1<sup>st</sup> in any year. Full details of the Award and procedure for nomination are available from the Society's General Secretary."

It is particularly appropriate that the first recipient of the Award, Dr., now Professor, Lynne Boddy, is, twenty-one years later in the period of IMC 9, the current President of the Society. Other early recipients included Geoff M. Gadd and Neil Gow, both past presidents of the BMS, and Geoff Robson who is BMS president elect for 2013-2014. The most recent recipient of the award (2009) was Steve Bates from Exeter University.

**D. H. Lewis**

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Painting owned by the Linnean Society of London:  
[www.linnean.org](http://www.linnean.org)

# British Mycological Society Wins Medals at Chelsea Flower Show

BMS has regularly exhibited, and won medals of all colours, at Chelsea "The world's most famous flower show" which "is a celebration of the highest quality horticulture and is a feast for your imagination" and an exciting opportunity to promote fungi to the public (predominantly keen gardeners). Annual attendance is 157,000 visitors, with reams of celebrities, the royal family visit and media coverage that is second to none.



Our most recent exhibits were intended to increase understanding of the importance of fungi in ecosystems, by showing the mycorrhizal link between fungi and plant species as well as the importance of fungi and nutrient cycling. Working with Paul Fletcher the landscape manager of The University of Sheffield was integral to the success and types of display we presented in 2008 and 2009; together we tackled the brief set by the RHS "Gardening for Climate Change". In 2009, Carol Hobart designed and organised a wonderful small garden setting featuring as a centre piece a 20 yr old 4 metre high oak tree. A number of spectacular large logs acquired from the City of Sheffield saw mills enabled us to display real and model fungi. The theme was integrated into the exhibit by using simple messages, describing the fungi /Oak relationship, highlighting changing fruiting patterns and flagging up the increase of alien species and other southern European species now being found in Britain. Mycelia growing across trays of soil, provided by Lynne Boddy, were a real highlight and these

enabled the public to understand clearly that the toadstools displayed are only the fruit bodies of the organisms that penetrate the substrates.



The experience gained in 2008 meant that in 2009 we focussed on increasing media coverage. These efforts resulted in numerous interviews with the press, features on local radio and national television. The impact of a short slot on BBC 1 Chelsea coverage was immediate, and resulted in many visitors coming straight to our display to see features that Lynne Boddy had discussed on the TV the night before. Comments like, "I didn't realise fungi were so important". "I saw it on television aren't they interesting" demonstrated that we had certainly fulfilled our aims. The coverage given was excellent though the BBC had clear ideas what they wanted to show and we had little control over the content. The filming took 1.5 hours and was reduced to a 3.5 min broadcast slot! Both sets of displays have subsequently been used at various venues including the Malvern autumn show contributing to their Gold medals.



# From Another Kingdom - RBGE Exhibition & Tour

The BMS strives to bring the wonders and importance of fungi to the attention of the general public. Our most recent project is the exhibition "From Another Kingdom" at the Royal Botanic Gardens Edinburgh (RBGE), for which we have provided the scientific content. It is housed in the splendid new John Hope Gateway Exhibition Centre at the RBGE and runs through August to the end of November 2010, including the duration of IMC9. The exhibition is designed to appeal to a wide audience of adults and children and to provide insights into fungi in an exciting and appealing way. It takes place within an Alice in Wonderland space of giant mushrooms, and uses dramatic imagery, audio and film to illustrate a wide range of aspects of fungal biology. It is anticipated that several hundred thousand visitors will attend over the four months that the exhibition runs. Delegates from IMC9 are particularly welcome! As well as the exhibition itself there is a full programme of educational activities, talks, demonstrations, forays and other innovative events. Some of the events will take place at the Dawyck Botanic Gardens. From Edinburgh the exhibition will move to various venues in the UK and hopefully to continental Europe and beyond.

The BMS are putting on two afternoons of fun-filled fungus activities for families on 16 and 17 October 2010 at the RBGE. These will probably include investigating dung fungi, making fungus collages, exploring how fruit bodies erupt, a fungus treasure hunt, and a guided fungal walk around the gardens. Several BMS members are giving fungus talks/demonstrations in a full programme during the exhibition period.

A book aimed at the general public has been published to accompany the exhibition. As well as chapters covering the main aspects of the biology, ecology and role of fungi in the functioning of this planet, the book also considers fungi in art, literature and human lives, provides some recipes and a few personal accounts of specific fungi.

The chapters are:

**Introducing The Fungi** – *Nick Read and Lynne Boddy*

**The Hidden Kingdom** - *Roy Watling*

**Recycling the World** - *Lynne Boddy, Geoff Robson and Naresh Magan*

**Plant Pests and Perfect Partners** - *Lynne Boddy, Paul Dyer and Stefan Helfer*

**Animal Slayers, saviour and Socialists** - *Harry Evans and Lynne Boddy*

**Amazing Chemists** - *Milton Wainwright*

**Fungi and Humanity** – *Gorgon Rutter*

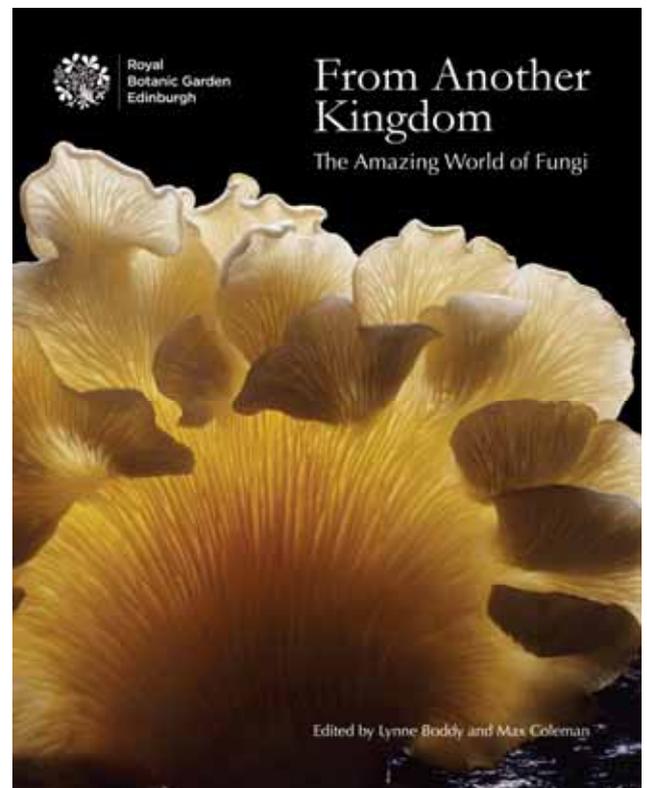
**Fungal Monsters in Science Fiction** - *Heather Kiernan*

**Growing edible Fungi** - *Patrick Hickey*

**The Fungal Forager** - *John Wright*

**Safeguarding the Future** - *David Minter*

Not only is the factual content excellent but also the colour images are wonderful. The book should delight readers ranging from those who have never heard of fungi, through keen field mycologists and students of biology, to the most eminent professors of mycology.



The book is priced at £20 and can be obtained from Royal Botanic Garden Edinburgh Publication Dept. pps@rbge.org.uk +44 (0)131 248 2819. Postage will be free to BMS members on orders sent to a UK address, if Mycologist News is quoted at the time of ordering.

ISBN:978-1-906129-67-5

# International Affairs 2009

It is very clear that as around 50% of BMS members are from overseas they are a significant and important part of the society. Since the British Mycological Society was founded in Yorkshire (may be by many seen as foreign!!) the Society has gathered and encouraged international collaboration and relations. Since the centennial meeting in Sheffield in 1996 this has gathered pace, and our interactions with overseas societies and mycologists have increased considerably. During 2009 the Society participated in the important Asian Mycological Symposium in Taipei where the President, Professor Lynne Boddy and Professor Geoffrey Gadd were major participants. Dr Paul Kirk and Dr Ek Sangvichien (Thailand) were also part of our involvement along with other BMS members with Professor Gareth Jones (BIOTEC, Thailand) Dr Gareth Griffith (Aberystwyth, UK) and Dr Kevin Hyde (Mah Fah Luang University, Thailand) leading symposia sessions. The presence of the BMS along with the Mycological Society of Japan (MSJ) in Taiwan has very much strengthened our Asian connections.

The British Mycological Society has also been active in Thailand and in late May 2009 Professors Tony Whalley and Geoffrey Gadd and Dr Geoff Robson gave seminars at Chulalongkorn University, Mae Jo University and at Phitsanulok Rajabhat Pibulsongkram University. We were encouraged and delighted with the interest in mycology shown by Thai students (if only in the UK!) and all the events were well attended and stimulated lively discussions. There was strong support for further collaboration especially with workshops and training, and this is now being explored. We also visited one of the Royal Project Sites near Chiang Mai with Dr Sureewan Makkamol and we are looking at ways in which BMS members might be able to provide expert advice, especially in plant pathology and soil fertility. We are also, planning a series of seminars and workshops around Thailand later in 2010. Thailand also recently submitted a bid to host the next international mycological congress (IMC10). We visited the proposed venue and discussed accommodation, transport, logistics and general suitability and in all aspects the proposal looks very exciting and promising. We have now learned that Thailand has succeeded with the bid for IMC10 and we look forward to supporting our Thai friends in their preparations.

Our future ventures could include symposia/workshops in China and Malaysia where we also have strong mycological links. Dr Geoffrey Robson was a keynote speaker at the Malaysian Microbiological Society Symposium in Penang in December 2009 and this has already resulted in a number of potential future collaborations. In China Professor Yi-jian Yao is very keen to promote a joint venture with the Chinese Academy of Sciences in Beijing, where he is professor of the Mycology Systematic Laboratory, and links with Chinese Universities are currently ongoing.

## Overseas field meetings

As well as UK field meetings, each year the BMS organises an overseas foray open to BMS members and non-members in liaison with a local group in the area visited. In May 2009 a group visited Interlaken, Switzerland with a particular aim of studying the Myxomycetes to be found near the melting snowline. Previous years has seen visits to Sardinia, Czech Republic, Finland, southern France, Spain and Italy.

This year's overseas foray is to Sampeyre, near Cuneo in Italy. This will be held jointly with the Mycological Association Bovesana and Alpi Cuneesi - Ugo Maria Cumino and will be tutored by Alfredo Vizzini from Turin University. In 2011 we plan to visit the Trudos Mountains in Cyprus, an island the Society has not previously visited, in conjunction with the Cyprus Mycological Society which was formed in 2007. A mycologist from the Royal Botanic Gardens, Kew often attends these meetings to collect specimens for the international collection at the Herbarium, Kew.

## Overseas scientific meetings

The main BMS annual scientific meeting is normally held in the UK, but in 2012 it will be in Alicante, Spain. This Alicante meeting will help to promote the BMS overseas. The main local organiser is Dr. Luis Vicente Lopez-Llorca at the University of Alicante. Dr. Lopez-Llorca has close research links with UK-based BMS members such as Professor Nick Read. The theme of the meeting is "Fungal Interactions". This topic should attract large numbers of mycologists as fungi interact not only with the environment but also with the organisms that live in it, and the outcomes of such interactions have interested mycologists for years. Some of these interactions result in important plant and animal diseases. However, fungi also sense stress and help other organisms to cope with it. This often results in tritrophic interactions in the case of fungal antagonists of pests or pathogens which have an endophytic phase in plants. Fungi also harbour viruses or bacteria that modify their activities or biological fitness. Many of such complex relationships are mediated by structures, metabolites and regulation of genes which are being unravelled by the new -omics technologies. Fungal interactions is a multidisciplinary topic which can bring together mycologists and other scientists interested in the role of fungi in several scenarios under a new evolutionary paradigm. As the scientific programme is finalised, a range of high-profile international speakers are currently being lined up for the meeting.

## Availability of Mycological literature world-wide

The British Mycological Society is delighted to announce that, as part of its strategy to promote mycology in developing countries, back issues of the historical series, *Transactions of the British Mycological Society*, will become openly available on the Internet through Cyberliber ([www.cybertruffle.org.uk/cyberliber](http://www.cybertruffle.org.uk/cyberliber)) and LibriFungorum ([www.librifungorum.org](http://www.librifungorum.org)), and will be integrated with IndexFungorum ([www.indexfungorum.org/names/names.asp](http://www.indexfungorum.org/names/names.asp)). Access will not be through high-quality PDF files, which are only available on-line to Members, but will be to images of individual pages in lower-resolution but readable JPG format. The Society's President will inaugurate the facility at IMC9 in Edinburgh in August 2010. David Minter and Paul Kirk have been instrumental in putting together this valuable resource.

**Prof A. J. Whalley, International Initiatives Advisor**

**Stuart Skeates, Chair of Field Mycology and Conservation Committee**

**Simon Avery, Chair of Fungal Biology Research Committee**

# BMS Journal: Fungal Biology



Fungal biological research is an ever-accelerating enterprise. The application of new technologies to fungal research is leading to new discoveries that are fundamental to biology in general. The ability to examine whole genomes opens the possibility for novel insights into the origin and evolution of fungal species. With the addition of meta-genomics, we are able to identify fungi that cannot be grown in the laboratory and to discover biochemical activities that will find application in industrial processes. It is changes like these that have stimulated the launch of *Fungal Biology*. The intent of the name change is to reposition the flagship journal of the British Mycological Society as a twenty-first century enterprise with a clear emphasis on modern aspects of fungal biology.

The past year saw a number of changes to *Mycological Research* in advance of its launch as *Fungal Biology*. David Hawksworth ended his lengthy term as executive editor of the journal. David was a superb steward of the journal and is owed a great deal of thanks for his efforts. In his place is a new slate of senior editors whose areas of expertise complement the new direction of the journal. Geoff Gadd (University of Dundee, Scotland, UK) has a particular interest in fungi in the environment, especially the geomycology of metal-mineral transformations and pollutant responses, and has other interests in fungal growth and morphogenesis, physiology and metabolism, and the ecology of fungal communities. Gregory May (The University of Texas M. D. Anderson Cancer Center, Houston, Texas) is a cell biologist and geneticist with interests in medical mycology and biotechnology. Nicholas Money (Miami University, Oxford, Ohio) is a specialist in the study of fungal biomechanics, but maintains broad interests in the cell biology, biochemistry, and physiology of filamentous fungi. Joey Spatafora (Oregon State University, Corvallis, Oregon) is a specialist in evolutionary biology of fungi with active research projects in systematics, phylogenomics and metagenomics. The

change in the journal's emphasis is also reflected in the addition of new associate editors.

Contemporary mycology is less of a cataloging process than it once was, so the editorial changes are a move to promote articles based on experimental approaches to fungal biology. We are eager to publish work that emphasizes molecular, cellular, developmental, and systematic approaches to fungal biological research. The next few years offer many opportunities for addressing crucial questions in fungal biology and we are committed to showcasing the strongest research from diverse areas of inquiry.

## Fungal Biology Senior Editors



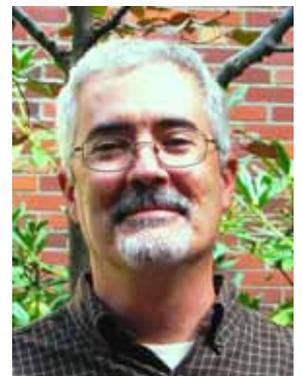
*Prof Geoff M. Gadd*  
Dundee University  
Scotland



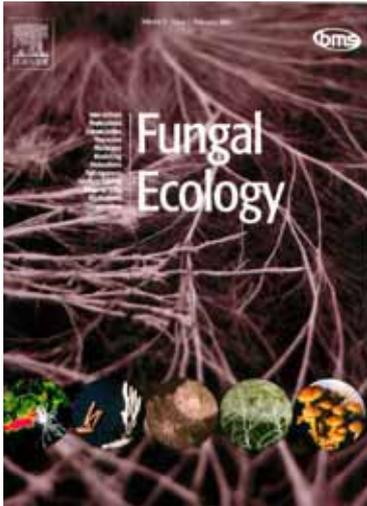
*Prof Nick Money*  
Miami University  
USA



*Prof Gregory S. May*  
University of Texas  
USA



*Associate Professor*  
*Joseph W. Spatafora*  
Oregon State University,  
Corvallis, Oregon USA



This is the first scientific journal to specialize in fungal ecology. The scope of the journal is broad, and publishes articles on all aspects of fungal ecology, including the following (not exclusive): population dynamics; adaptation; evolution; role in ecosystem functioning, nutrient cycling, decomposition, carbon allocation; ecophysiology; intra- and inter-specific mycelial interactions, fungus-plant (pathogens, mycorrhizas, lichens, endophytes), fungus-invertebrate and fungus-microbe interaction; genomics and (evolutionary) genetics; conservation and biodiversity; remote sensing; bioremediation and biodegradation; quantitative and computational aspects - modelling, indicators, complexity, informatics. The usual prerequisites for publication are originality, clarity, and significance as relevant to a better understanding of the ecology of fungi.

As well as the usual original research papers, *Fungal Ecology* publishes **Mini Reviews** (about 3500 words) and **Commentaries, Short Communications** (less than 1500 words) - not interim reports nor reports of new species or species lists, and **Methodological Advances** that describe the development of tools for studying fungal ecology. Such tools include microscopy, molecular, genetic and computational/modelling methods. All articles are peer reviewed. The first issue of the journal appeared in spring 2008, and after a slow start during the first year now receives plenty of high quality articles. The size of issues is now increasing (originally 50 pp.) to over 70 pages in issues 3 and 4 of 2010. There are currently 4 issues per year, but this is likely to increase to 6 in the near future.

The journal is abstracted in ISI Web of Knowledge and has just received its first **Impact Factor, 0.895**. This is really gratifying as it is unusual for a new journal to receive an IF so soon after its inception, and we hope to see a rapid increase in IF.

The success of any journal relies on the quality of its contributions, and therefore we invite you to submit your high quality manuscripts on any aspect of fungal ecology to the journal. There are no submission fees or page charges. Submission to this journal proceeds totally online. The journal has an international editorial board with a wide breadth of interests

Visit the homepage of this journal:  
[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/713919/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/713919/description#description)

As a taster, the top 5 Cited articles extracted from Scopus (on Tue Apr 6 04:24:53 BST 2010) are:

**Fungal entomopathogens: new insights on their ecology** *Vol 2, Issue 4, 2009, Pp 149-159*. Vega et al.

**Wood-inhabiting ligninolytic basidiomycetes in soils: Ecology and constraints for applicability in bioremediation** *Volume 1, Issue 1, 2008, Pp 4-12* Baldrian, P.

**Role of mycorrhizal networks and tree proximity in ectomycorrhizal colonization of planted seedlings** *Volume 2, Issue 1, 2009, Pp 21-30* Teste, F.P., Simard, S.W. & Durall, D.M.

**Leaf and powdery mildew colonization by glycolipid-producing *Pseudozyma* species** *Volume 1, Issue 2-3, 2008, Pp 69-77* Clément-Mathieu, G. et al.

**Leaf surface roughness influences colonization success of aquatic hyphomycete conidia** *Volume 1, Issue 1, 2008, Pp 13-18* Kearns, S.G. & Bärlocher, F.

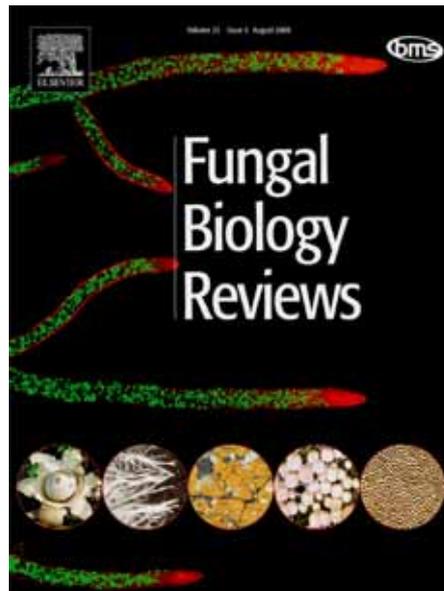


Senior Editor  
Prof Lynne Boddy

# BMS Journal: Fungal Biology Reviews



*Prof Nick Read  
Senior Editor*



*Dr Geoff Robson  
Senior Editor*

Fungal Biology Reviews was launched in 2007 as a replacement journal for the Mycologist and is the first journal to focus on high quality reviews in fungal biology. The journal, which is published quarterly, is run on a commission only policy, however, editors are always keen to consider high quality reviews from leading scientists in the field and informal enquiries are welcomed.

The journal aims to publish reviews from all fields of fungal biology, whether fundamental or applied, including fungal diversity, ecology, evolution, physiology and ecophysiology, biochemistry, genetics and molecular biology, cell biology, interactions (symbiosis, pathogenesis etc), environmental aspects, biotechnology and taxonomy. It covers all organisms that have either historically or recently been recognized as fungi, including lichen-fungi, microsporidia, oomycetes, slime moulds, straminipiles, and yeasts.

The journal publishes four types of review article;

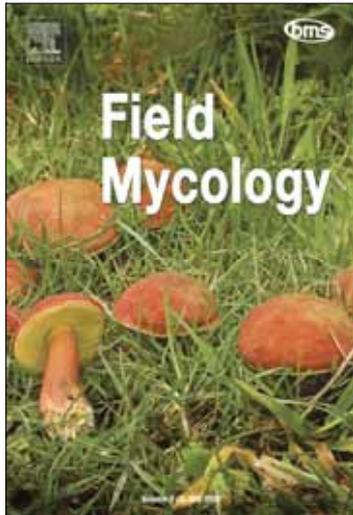
- **General review** articles (3-3500 words, max. 5000 words) to overview existing important areas of fungal biology,
- **Update/research focus** articles (1200-1500 words) to highlight new and emerging areas of fungal biology,
- **Opinion articles** (1500-2000 words) to give personal viewpoints to stimulate debate on controversial issues/areas of fungal biology and
- **Technical focus** articles (1000-2000 words) to highlight existing and emerging techniques suitable for fungal biology.

These may take cues from developments in other areas of biology.

Authors are encouraged to use material in a summative or figurative form wherever appropriate and articles are written in a style accessible to both young and established scientists.

Visit the homepage of this journal:

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/709540/description](http://www.elsevier.com/wps/find/journaldescription.cws_home/709540/description)



In the ten years that our journal Field Mycology has been produced, the editors have always striven to follow some basic guidelines which we set up right at the beginning of our first issue:

- to present articles that we would want to read ourselves
- to provide identification keys wherever possible
- to present photographs of less well-known or rarely illustrated species
- to maintain a high standard of photographic illustration
- to cover a wide range of fungal topics appealing to both the beginner and the more advanced reader
- to prepare special themed issues.

Navigating our way through the years, while trying to maintain these aspirations, hasn't always been easy but we believe that we have succeeded in producing one of the best and most informative field mycological journals on the market. We are fortunate to have on board some of the most widely respected mycologists who generously give of their time to help edit and



***Boletus radicans***

refine each issue, as well as providing content. It is particularly pleasing that we have been able to include articles from a wide range of authors and countries in addition to Britain, including such fascinating topics as the collection and use of *Cordyceps* in Tibet, the fungi of Cyprus, waxcaps in New Zealand, Morels in North America, the genus *Amanita* in Europe and many others

We are very aware that many of the journal's readers are just starting out on their studies of fungi and we make great efforts to include articles of particular interest to the beginner including, among others, articles on microscopical and preparation techniques, how to dry fungi for preservation, fungal dictionaries in French, German and Italian and preserving spore prints. Another major part of Field Mycology is keeping our readers abreast of the current literature by providing comprehensive book reviews of the latest field guides and more technical reference works.

We have been especially pleased to be able to present more comprehensive treatments of particular families or genera, often with keys to species. Previous treatments have included the British boletes, the genus *Scleroderma*, keys to *Hypoxylon*, *Psathyrella* species, keys to British *Leccinum* species, the genus *Chlorophyllum*, British *Clavaria* species and many more. Another area of great interest is that of fungi found in particular habitats, and we have covered such diverse topics as fungi in the extreme north of Scotland, fungi of Alder carr and fungi of dead beech wood.

This is something we will be producing more of in future issues, since habitat-based articles are of great interest to anyone trying to study the ecology of a particular site and where more focussed recording can be particularly useful.



***Stropharia thrausta***

The future presents many challenges, not least keeping up with the often great changes in the taxonomy of fungi following the explosion of interest and studies in their DNA. Field Mycology will continue to provide the latest viewpoints and advances in this most fascinating of sciences and we look forward to the next ten years with as much enthusiasm and excitement as the previous ten.



**Geoffrey Kibby**  
Senior Editor

# Fungal Conservation and the BMS



*Bruce Ing,  
Conservation Advisor*

The conservation of fungi has lagged behind that of most other organisms for a variety of reasons, including the lack of appreciation of the role of fungi in natural ecosystems by other naturalists, ecologists and conservationists, the fact that fungi are generally more difficult to identify than other groups, and that there are still major gaps in our knowledge of the distribution of fungi, past and present. Yet the threats to the survival of fungi are similar to those affecting other organisms, including loss of habitat, pollution and climate change. Large-scale collection of edible mushrooms, using vehicles in forests and, especially, excessive trampling is known to be damaging to mycelia.

To address these problems the Society appointed the present writer as Conservation Officer in 1985. Initially much time and effort was spent in discussion with other biological societies and conservation organisations, including government agencies and charitable societies. This activity, which was continued by the next two conservation officers, the late Maurice Rotheroe and Shelley Evans, helped towards the formation of the UK Fungus Conservation Forum.

During this same period many countries across Europe were producing Red Data Lists of threatened fungi in their territories, and the present writer prepared a provisional list for Britain and Ireland. The list was published to coincide with the Congress of European Mycologists held at Kew, which the Society hosted. In spite of its shortcomings the list formed a basis for recognising fungi of conservation importance, their inclusion in protection schedules of the Wildlife and Countryside Act, the preparation of Biodiversity Action Plans (BAP) at national and local level, and led to the concept of Priority Fungi. The list was geared towards species associated with endangered habitats, such as ancient woodland, grassland, sand dunes and wetlands. Species of *Hygrocybe*, declining rapidly across Europe especially *H. calyptriformis*, became the flagship species for fungal conservation. Maurice and Shelley developed the successful waxcap recording scheme. As a result, we now have a much better idea of what constitutes a good example of waxcap grassland, and several of the most important grasslands have been scheduled as Sites of Special Scientific Interest (SSSI).

Also highlighted in the original list were the tooth-fungi – *Bankera*, *Hydnellum*, *Phellodon* and *Sarcodon* – many of which are characteristic of the native pinewoods of the Scottish Highlands. These especially vulnerable groups are now the subject of regular monitoring, which is essential if we are to plot recovery or decline and to evaluate the impact of management. Other rare fungi

include old-forest polypores, e.g. *Piptoporus quercinus* on ancient oaks in wood pasture sites.

Another monitoring project, linked to a BAP, involves *Tulostoma niveum*, known from Finland, Sweden, and Norway and two areas in Scotland. It inhabits moss tufts on limestone boulders, was discovered at Inchnadamph in 1989. A second site was discovered later by Liz Holden near Braemar, 100 km south of the sites at Inchnadamph. Although it is probably a recent arrival in Scotland it is globally rare and therefore deserves attention.

Since 1992 the I.U.C.N. has changed its categories and criteria, making many of the entries in the original list invalid. This has now been addressed. However, the fact remains that many species which are not technically eligible to be included in a British list are themselves in dramatic decline in the rest of Europe. We have a duty to protect them as far as we can, so we include them in a separate category – that of European concern. This revised list is available on the Society's website ([http://www.britmycolsoc.org.uk/files/RDL\\_of\\_Threatened\\_British\\_Fungi\\_Version\\_1.0.pdf](http://www.britmycolsoc.org.uk/files/RDL_of_Threatened_British_Fungi_Version_1.0.pdf)). Red Lists cannot, and should not, be final and need updating every 5 years or so.

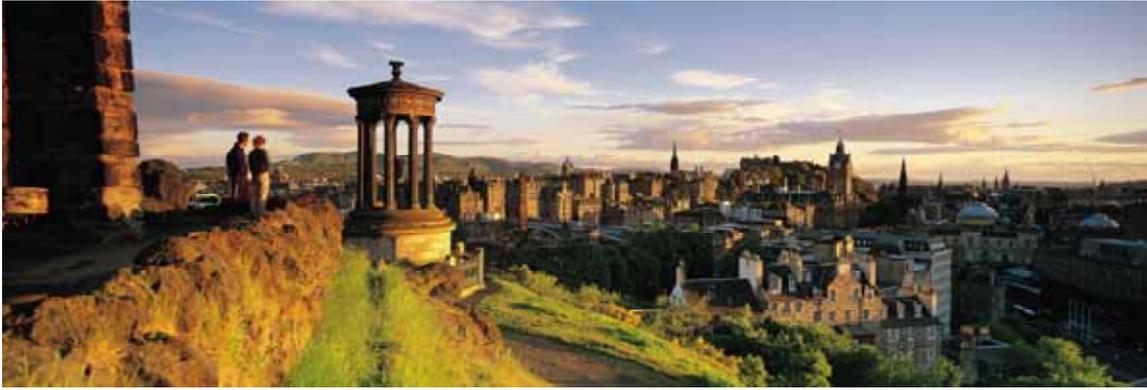
At international level the Society has been an active member of the European Council for the Conservation of Fungi and has taken an active role in lobbying the Berne Convention to include fungi in their protection categories. Both the present writer and Shelley have been members of the Fungal Committee of the Species Survival Commission of the I.U.C.N. and have attempted to influence the thinking behind the criteria for threat categories to make them more relevant to fungi.

On the positive side we now find fungi included in conservation management plans. For example, a local nature reserve has been established on a roadside in Suffolk where there is a thriving population of *Battarraea phalloides*. Several major sites, such as the New Forest, Sherwood Forest, Epping Forest and Wyre Forest, include the richness of the mycota in the reasons for their scheduling as SSSIs or nature reserves.

There is still one major hurdle to clear. It would help the cause of their conservation if fungi produced the same responses in the general public as orchids, butterflies, birds or red squirrels. We want to remove the 'ugh' factor and replace it with the 'ah' factor.

*Bruce Ing, Conservation Advisor*

# IMC9—The Biology of Fungi



We all know the importance of communication, interactions and networking, not only for mycelia but also for the progress of any scientific discipline, including mycology. The 9<sup>th</sup> International Congress (**IMC9: the Biology of Fungi**), like its predecessors, will provide a superb opportunity to do this. With well over 1600 participants, from over 80 countries, including all continents, the Congress promises to be even more outstanding than the first eight hugely successful global meetings.

The 45 symposia of the Congress fall under five broad, overlapping themes:

- Cell biology, biochemistry and physiology
- Genomics genetics and molecular biology
- Pathogenesis and disease control
- Evolution, diversity and systematics
- Environment, ecology and interactions

These broad subject areas were chosen to ensure that the whole of mycology is covered in a balanced way. The scientific organising committee received many suggestions for symposia and did its best to accommodate as many of these as possible, sometimes by combining ideas and, of course, by adding the varied Special Interest Group (SIG) programme on the Sunday before the main congress begins. As well as these parallel symposia, there is a Plenary Lecture each day (except Friday on which there are two), three Nomenclature sessions and ~ 1200 posters. There is something for everyone; in fact, we fear that the choice of high quality field-leading talks will pose difficult decisions of choice for many people. After a week of intense neural stimulation the conference will be rounded off with the traditional closing ceremony, followed by the conference party to end all conference parties!

As well as the scientific programme there will be time to enjoy some of the social, historic and artistic delights of the capital of Scotland, and even some of the beautiful countryside. The Royal Botanic Gardens of Edinburgh (RBGE) is one of the city's attractions and has beautiful grounds and panoramic views over parts of the city. A major reason for visiting the Botanic Gardens will be the exhibition "From Another Kingdom: the Amazing World of Fungi" that has been developed in conjunction with the BMS.

**Prof Nick Read**  
(Chairman of the IMC9 Organizing Committee)



# BMS Membership

## What do we do?

The Society organizes an annual programme of scientific meetings, workshops and forays, and is active in education and outreach. Non-members may attend all activities of the Society but there is a surcharge on registration fees for meetings. The Society publishes four journals and a newsletter, to keep members informed. It recognizes the contributions made to mycology by young scientists and other members with the award of prizes. It is frequently called upon for opinions by Government, and by other national and international bodies.

## How is it governed?

The Society has a Council, chaired by the President and made up of elected members and Honorary Officers (General Secretary, Treasurer and Membership Secretary). All members are invited to the Annual General Meeting. The President, who is an eminent mycologist, holds the office for a maximum of two years but also sits on Council as President-Elect to provide continuity. There is also a Vice-President. (See earlier in this issue).

## How is it funded?

The Society is a registered charity and is dependent on subscriptions, surplus from its publishing activities and investments. Sponsorship may be obtained for selected meetings, as are grants from, for example, the Federation of European Microbiological Societies and other bodies.

## The categories of membership

**Full members** have a major interest in fungi and can participate fully in the Society including voting in elections and at Society meetings. Many in this category are involved in fungal research, teaching fungal biology, or are professional mycologists involved in some other aspect of the discipline, including plant pathology, medicine and publishing. Equally, there are many field mycologists, who are expert in some aspect of fungal biology and are committed to the study of fungi.

**Associates members** enjoy all the benefits of full membership but are not allowed to vote in Society elections and at Society meetings. Many associate members are field mycologists.

**Postgraduate Student Members** must be registered for a higher degree and carrying out some form of research study on fungi.

**Undergraduate Student Members**, are persons in full- or part-time education on courses leading to a Bachelors degree or equivalent, but not registered for a higher degree.

**Life Membership** is available for those who have been in full membership for *at least 25 years upon a payment equal to 7 years subscription fees*.

**Honorary Members** are persons of pre-eminence in mycology. Honorary Members are nominated by Council at the Annual General Meeting of the Society.

## Membership Benefits

### Support

By joining the Society you are helping and participating in a leading fungal Charity whose aims are to promote the science of fungi as widely as possible. You will also be joining a community of mycologists who share your interest and will give you support in your pursuit whether a professional career or a passionate interest.

### Journals

The Society is able to offer a discount on the cost of its Journals to members of the Society.

### Meetings

A substantial discount is available to members who attend Society conferences, forays and meetings.

### Conservation

By joining the Society and participating in its activities you will be contributing to wealth of knowledge that provides valuable information to National and International Organisations concerned with the conservation of fungi.

### Library

The Society has a library of over 1000 books kept at the Royal Botanic Gardens, Kew which can be borrowed without charge by members of the Society.

### Grants

The Society awards small grants and bursaries to Society members to help them attend meetings, offset the cost of speakers at meetings and purchase small items of equipment for use in promoting mycology.

### Recording Groups

There is a network of Recording groups around the country who are able to give support and encouragement to those starting to explore the varied aspects of the fungal kingdom.

### Record database

Many of the records on the Fungal Records Database of Britain and Ireland (FRDBI) originated in Society forays and records from individual members. Although the database is visible on the internet leaders of affiliated groups have special access to help support maximise the benefit to be gained from these records.

### Education

The Society has a store of material that includes leaflets, posters, display panels which can be borrowed by Society members to help not only in traditional educational settings such as schools and universities but also in any public display or talks undertaken by Society members.

### How can I join?

Any person interested in mycology is welcome, subject to election to membership. Use the application form following this article, or download a form from the BMS website (<http://www.britmycolsoc.org.uk>), or contact the Membership Assistant at [membership@britmycolsoc.info](mailto:membership@britmycolsoc.info) or by post. Membership runs from 1st January annually, and applications received after 31st October will be processed to begin the following year. No payment is required with this initial application. All applications are considered by three senior BMS Officers. After your application has been ratified, you will be sent the Society's Constitution and Bye Laws, as well as a Subscription Payment Form to complete and return.



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\* Postgraduate and undergraduate students **must** include a letter from their Supervisor / University stating the start date of their studies.

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