

# PULSE

Issue 2  
June 2009

News from the Linnean Society of London – A living forum for biology

**O**n 30 April the Linnean Society hosted the Great Ape Debate in partnership with the World Land Trust. In a WLT and Linnean Society “first” this event was also web-streamed for live viewing, which proved a great success.

Along with John Burton, FLS, CEO of WLT the panel of speakers comprised: Prof David Chivers, FLS, University Reader in Primate Biology and Conservation; Dr Marc Ancrenaz, Director of Kinabatangan Orangutan Conservation Project; Ashley Leiman, OBE, Founder and Director of Orangutan Foundation (UK) and Ian Redmond, OBE, GRASP – UNEP/UNESCO Great Ape Survival Project. Chairing the debate was the Earl of Cranbrook, FLS, whose expert input added great perspective to the evening.

As Lord Cranbrook clarified, the Great Ape Debate was not intended to define a “winning argument” but instead to discuss a question: *“is the rehabilitation and reintroduction of rescued orangutans a viable way of conserving them or would resources be better spent on the purchase, protection and recreation of their natural habitats?”*.

During the discussions the perceived risks of reintroductions were introduced as well as the financial implications and welfare challenges of this practice. Burton discussed the disease, behavioural and genetic pollution risks that releasing semi-wild animals could potentially cause, with Chivers responding that these animals are released in areas currently devoid of wild orangutans meaning that transfer of diseases is not a concern.

Both Burton and Leiman were concerned by the welfare standards in rehabilitation centres that are often hugely oversubscribed. Burton insisted that “there are undoubtedly very important welfare issues, and these do need to be addressed, but they should not be allowed to undermine conservation”. Chivers also noted the welfare issues but pointed out that these centres should not be dismissed out of turn: “Efforts must be accelerated to rehabilitate these orphans and return them to the wild where they can make a significant contribution to the survival of the orangutan.”

All the speakers agreed on the importance of habitat conservation. As Leiman said, *“The future of orangutans depends on us stopping habitat conversion; forests to non-forests. If we achieve that, not only will we save orangutans but everything else which lives in the rainforest.”* This was strongly emphasised by Redmond who likened the orangutan to a “shaggy red cog” in the mechanism of the rainforest stressing that conserving wild orangutans is key in order to maintain the natural function of standing forests.

## The Great Ape Debate



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Ancrenaz brought a significant field perspective to the debate saying that the international community must accept that orangutans have adapted to live in degraded, secondary forest. He clarified that it is of utmost importance to conserve logged forests and begin to address the conservation of the 65–75% of Borneo’s orangutans that are living outside of protected areas. He insisted that the oil palm problem is not going to go away and that, increasingly, orangutans are using these landscapes. He called for a “paradigm shift, integrating biodiversity conservation with economic development”.

Mary Tibbet, World Land Trust

A recorded version of the debate can be viewed at: [www.worldlandtrust.org/videos/great-ape-debate.htm](http://www.worldlandtrust.org/videos/great-ape-debate.htm)

## Message from the Executive Secretary

Huge thanks to everyone who has responded to the request for feedback on PuLSe, our new Society publication—the response has been overwhelmingly positive. Please continue to send Leonie Berwick your comments and ideas for future issues (Leonie@linnean.org).

In May the Society celebrated the 302nd birthday of Linnaeus at the Anniversary Meeting. This was a splendid occasion and an opportunity to also celebrate the significant achievement of those receiving the Society's medals and awards for 2009 (see pp. 4–5). I am sure that you will join me in congratulating them again.

Our meetings programme continues to attract large audiences. We were delighted to be able to welcome a “virtual” audience to the Great Ape Debate, hosted jointly with the World Land Trust in April. This event (summarised on the front page) was web streamed with encouraging results; it is certainly a facility that we hope to be able to offer for future meetings. We were also delighted to welcome Lord Selborne in June to discuss the House of Lords Report on Taxonomy and Systematics. Geoff Boxshall and Sandra Knapp were both involved in addressing the House of Lords Committee prior to this report and have kindly contributed their thoughts on p. 6.

The Society welcomes a number of volunteers on a regular basis who undertake a variety of tasks. Wende Guastamachio has been working with Janet Ashdown, our Conservator and has contributed the article on preservation, conservation and restoration (p. 7). Conservation in another form is addressed on p. 3 in an article from Laura D'Arcy, FLS which highlights critical issues in reforestation.

I do hope that you find this issue of PuLSe both interesting and informative.

Best wishes

Ruth Temple



Leonie Berwick

## A Farewell . . .

During the past three years the Society has seen many changes; I hope most have been for the better! Our activities have certainly kept Officers, Council, staff and me occupied. Of course, the success of the Society depends on a whole range of dedicated folk, with their wide range of talents. It has been a real pleasure and privilege to work with the team as President. I have also enjoyed conversations with so many of our Fellows and guests, our volunteers, speakers and medallists. Council have given me a small job to do in my ‘retirement’, in steering the Strategic Plan through its next stages. I look forward to continuing to enjoy the warm fellowship of a splendid Society that is championing Natural History in its broadest sense. In handing over to Vaughan, I have every confidence that we shall go from strength to strength.

David Cutler



Linnean Society of London

## . . . and a Greeting

It is a great honour to be elected President of the Society and I look forward to working with Officers, Council and staff at an exciting time with the proposed developments in Burlington House, the evolution of the Strategic Plan and reaching out to our Fellows throughout the world.

As an introduction to my background, after studies at the Universities of Wales and Cambridge my career was based at the Natural History Museum, London where I specialised in research on the parasitic disease, schistosomiasis, and carried out field studies in the tropics. I am currently a Research Associate of the Natural History Museum.

As Zoological Secretary and Chairman of the Programmes Committee of the Society I have enjoyed working with David during his tenure as President; he has been an exemplary leader over the last three years and I owe much to him for his help, advice and friendship.

Vaughan Southgate



The Linnean Society of London



# Regeneration in the Tropics

**T**easing apart the complexity of an ecosystem always presents an ecologist with an enticing challenge. Establishing the nature of each component of the ecosystem is essential before facing the Herculean task of re-assembling the pieces, hopefully creating a system replicating the one deconstructed.



Cooperation in Sustainable Management of Tropical Peatland (CIMTROP) began to try to protect and restore the area.

Peatland deposition occurs in unique climatic conditions so preventing degradation was necessary. The hydrology of the area was managed by blocking canals to retain wet season water, thus facilitating plant re-growth. Identifying suitable pioneer species to assist regeneration required research into natural regeneration



A canal in 2005 (left) and regrowth in 2008 (right)

British ecologists such as J. Philip Grime pioneered studies of temperate ecosystems and successful regeneration, particularly after the ravages of industry. However, due to climate change and the demands of man, the time to establish key elements within ecosystems is running out. For tropical ecologists studying regeneration time is precious when establishing successional patterns before the climax community, or state of equilibrium, is altered irrevocably.

Peatlands grew in the last interglacial period and tropical peatlands were considered depauperate compared to other tropical types. However, Kalimantan's Sebangau forest in Borneo was different—first carbon dating aged it to over 17,000 years old. The forest was subsequently found to be crucial to the hydrology of Southern Borneo, with a high level of biodiversity and a capacity for solid carbon storage ten times greater than other vegetation. It also provides forms of sustainable income from the harvesting of rattan and latex. Yet, the forest was being selectively and illegally logged and canals were dug within the peat causing draining and deep peat fires which released over 2.57 Gt of carbon, leaving the peat dome structure unstable. This is where my work with the Orangutan Tropical Peatlands Project and a team of scientists from the Center for International

capabilities, such as primary and secondary seed dispersal and relative growth rates. Initial results show peatswamp species are highly adapted to their environment, therefore unsuitable for management models used on other forests.

With so few pristine forest areas left and increased pressure on those remaining, it is now imperative to establish the value of any ecologically key areas to fund and facilitate regeneration programmes. Short of selling often common owned land, the alternatives are complex fiscal schemes such as carbon credits and incentives from Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD). REDD credits make money available to governments for regeneration schemes, making it more favourable than carbon credits. However, peatlands are not included in REDD, though they would benefit from the scheme greatly.



Planting seedlings

Negatively, however, in addition to the initial economic gain from logging and agriculture, governments may then consider funding obtained through REDD for regeneration schemes for any remaining secondary forests.

It is tentatively projected that tropical hardwood forest cannot regenerate to optimum levels or 'carrying capacity' for more than 500 years, or 150 years even when regeneration is assisted. Should regeneration be determined by the ability of niche animals and plants to adapt to their environment, and therefore measured in life cycles? If this is the case is regeneration triage rather than treatment? Or in the short term, perhaps it is the only cost effective option available to most.



Exchanging ideas with local groups



## The Linnean Medal

*Established in 1888 to celebrate the Linnean Society's Centenary, the Linnean Medal is awarded every year to a Botanist or Zoologist (sometimes both) in recognition of their services to science.*



### Professor Michael Akam (Linnean Medal–Zoology)

Professor Michael Akam is the Director of the University Museum of Zoology at the University of Cambridge. A developmental geneticist with a particular interest in the generation of morphological diversity, much of his work concerns the role of the 'Hox' family of developmental regulatory genes, in particular how their regulation and expression leads to the range of different segment morphologies in *Drosophila* and how changes in the role of Hox genes may be related to the pattern of segment diversity in other insects, in crustaceans and in myriapods. Professor Akam and his team also study the diversity of segmentation and other patterning mechanisms in arthropods. Their work involves the use of a range of genetic and embryological techniques, including transgenesis, the analysis of cell lineage and descriptive molecular embryology. DNA sequences and genomic organisation play an increasingly important role, providing the phylogenetic framework against which to test hypotheses of evolutionary mechanisms.

### Professor Peter Ashton (Linnean Medal–Botany)

Formerly Charles Bullard Research Professor of Forestry and Director of the Arnold Arboretum at Harvard University, Professor Peter Ashton has made a seminal contribution to the study of the flora of tropical Asian forests. The author of six books and many papers, Professor Ashton's

studies of the family Dipterocarpaceae were internationally significant as the first studies to demonstrate species-wise niche specificity and predominant outbreeding among trees in hyperdiverse communities.

A Fellow of the American Academy of Arts and Sciences, and the Royal Society of Edinburgh, Professor Ashton is also a co-founder of the Center for Tropical Forest Science (a joint venture of the Arnold Arboretum and the Smithsonian Tropical Research Institute). It is now the only global network of forest plots in which a standard protocol is used, enabling comparative dynamics research and monitoring of the effects of climate change.

### The Bicentenary Medal

*The Bicentenary Medal was first awarded in 1978 in commemoration of 200 years since the death of Linnaeus and denotes the Society's recognition of work undertaken by a biologist under the age of 40.*

### Professor Michael Engel

Professor Michael Engel is Professor of Ecology and Evolutionary Biology and Senior Curator at the Natural History Museum, University of Kansas. From his initial interest in Apoidea (bees), Professor Engel has extended his work to other insect families, giving him a diverse knowledge which he applies to the broad issues of insect distribution, speciation and evolutionary divergence. His research spans both living and fossil insects and has led to the discovery of many new species and new diagnostic characters. In recent years, much of his work has focused on determining the phylogeny and evolutionary history of the Isoptera (termites)—a particularly difficult group of insects—work for which he received the prestigious Guggenheim Award. An accomplished entomologist,



with an international reputation, his entomological and paleontological research has taken him to numerous countries, resulting in more than 275 scientific papers and monographs, and co-authorship of two major books, all before reaching the age of 40!

# Medals and 20

### The H. H. Bloomer Award

*Presented annually, this award is named after the amateur naturalist Harry Howard Bloomer who left the Society a legacy of £500. The award was initiated in 1963 in order to commend amateur naturalists who have made important contributions to biological science.*

### Mr Markku Häkkinen

Mr Markku Anton Häkkinen is a self-taught botanist and natural historian. His career as a sea captain and consequent travelling took him to remote lands, stimulating his interest in natural history, botany and wild bananas in particular. His work on *Musa* based on field observations from China and South East Asia and herbarium literature from across the world has resulted in 55 publications and the identification and description of many new species within this confusing taxonomic group.



Although he has no formal taxonomic training, he is now considered to be one of the world's leading authorities on the taxonomy of *Musa*. His standing within the scientific community is now recognised by the collaboration he receives from research organisations in Finland and many other countries. Most recently, he has embarked on research collaborations with molecular scientists which will enable him to further develop and test his ideas and hypotheses.

### The Irene Manton Prize

*This prize is named after Professor Irene Manton, respected botanist and first female President of the Linnean Society (1973–76). It is awarded for the best thesis in botany examined for a doctorate of philosophy during a single academic year (September to August) whilst registered at a UK institution.*



# nd Awards 09

## Dr Chris Yesson

Dr Chris Yesson is a former management consultant who gave up a successful career in order to retrain as a biologist. He began retraining by spending six months doing voluntary field work in Vietnamese forests, before gaining a Masters in Taxonomy and Biodiversity at Imperial College and the Natural History Museum. Chris studied for his PhD at the University of Reading, under the supervision of Dr Alastair Culham. Chris integrated ecological niche models and phylogenetic reconstruction to investigate the impact of historic climate change on the evolutionary history of plants from Mediterranean climates. His studies focused on *Cyclamen* (Primulaceae, though sometimes Myrsinaceae) and *Drosera* (Droseraceae), and found that climatic niches are heritable and most lineages have probably persisted for millions of years in their present locations. However, many of these species may be at threat from the predicted future climate change. This project has produced four papers, one of which won a prize at the 2006 BioMed Central Biology Awards.

After finishing his PhD he worked on a Darwin-funded project to produce DNA barcodes for Mexican Cacti. From June he will start working at the Zoological Society of London for the EU funded Coralfish project.



Dr Chris Yesson

## The Jill Smythies Award

*Florence Mary Smythies ("Jill") was a gifted botanical artist until her career was cut short by an accident to her right hand. Established with a legacy to the Society from her husband Mr B.E. Smythies, FLS, the Jill Smythies Award goes annually to a botanical artist in recognition of excellence in their published illustrations with emphasis on botanical accuracy in aid of plant recognition.*

## Dr Halina Bednarek-Ochyra

Dr Halina Bednarek-Ochyra is an Assistant Professor in the Institute of Botany of the Polish Academy of Sciences. An accomplished botanist, Halina's main research interests are the taxonomy and phytogeography of bryophytes, and she counts 158 research papers and 12 monographs and books amongst her publications. The Jill Smythies Award, however, recognises Halina's exceptional talent as a botanical illustrator, in particular the illustrations within *The Illustrated Moss Flora of Antarctica*, published by Cambridge University

Press in November 2008. The first modern Flora of mosses of this continent in the Southern Hemisphere, this publication is greatly enhanced by the full page, detailed clear line drawings including the habit, stem cross-sections, leaves and leaf structures which accompany each taxon.



Dr Halina Bednarek-Ochyra

## *Niphotrichum ericoides* (Brid.) Bednarek-Ochyra & Ochyra

1: perigonium;  
2-6: outer perigonial bracts; 7: inner perigonial bract with antheridia; 8-9: inner perigonial bracts; 10-11: deoperculate capsules, dry; 12: deoperculate capsule, wet; 13: operculum; 14: calyptra; 15-16: outer perichaetial leaves; 17-18: inner perichaetial leaves; 19: upper cells of inner perichaetial leaf; 20: basal cells of inner perichaetial leaf; 21-22: transverse section of calyptra; 23: transverse section of seta; 24: epidermal cells of seta; 25: epidermal cells of yaginula; 26: peristome teeth, spores and exothelial cells at the orifice; 27: exothelial cells in the middle of capsule; 28: lower exothelial cells and stomata [All drawn from Wlnekmann s.n., 07.1891 (KRAM-B)]. Scale bars: a - 100 µm (26); b - 1 mm (10-18); c - 100 µm (19-25, 27-28); d - 1 mm (1-9).





# April Fools

April Fools' Day has always offered the media a chance to have a bit of fun with the public. On 1 April this year, BBC Radio 4 broadcast a piece on their 'Today' programme about the dominant female gorilla at London Zoo, Zaire, whose behaviour has led a group of scientists to

claim that the distinctions between *Homo sapiens* and *Pan troglodytes* are "effectively meaningless" and their classification needs to be reassessed. A senior keeper at the zoo explained that security beams in a particular area were consistently being broken, and upon further investigation a group of squirrel monkeys looking for food were the culprits. To their surprise, the squirrel monkeys were pilfering doughnuts and delivering them to the female gorilla Zaire as an act of subordination. Tom Feilden, science correspondent for the BBC, reported that "it's Zaire's apparent ability to dominate and manipulate another species of primate in this way that has forced scientists to reassess their models of great ape behaviour and intelligence". Dr Filippo Aureli, Professor of Animal Behaviour at Liverpool's John Moores University, added "we may need to consider reclassification of the species". A meeting to discuss reassessing hominid groupings was to be held at the Linnean Society of London towards the end of the month, the report claimed. Dr Sandra Knapp of the Natural History Museum, London and the Linnean Society reiterated that it is "a big step to take and I think it's important that it be discussed very widely in the scientific and also the public community".



Squirrel Monkey pair



Zaire at London Zoo

There were some who were fooled—we fielded several calls from scientists and science journalists alike—and even some of our own staff members were drawn in! To read Tom Feilden's blog go to: [www.bbc.co.uk/blogs/today/tomfeilden/2009/04/april\\_fooled.html](http://www.bbc.co.uk/blogs/today/tomfeilden/2009/04/april_fooled.html)

## Debate on the report of the House of Lords' Science and Technology Select Committee inquiry on Systematics and Taxonomy

On 25 March 2009 in the Moses Room of the Houses of Parliament, the report of the Lords' Select Committee on Science and Technology concerning the state of systematics and taxonomy and the Government response to this report were debated. The report and Government Response can be found online at: [http://www.parliament.uk/parliamentary\\_committees/lords\\_s\\_t\\_select/systematics.cfm](http://www.parliament.uk/parliamentary_committees/lords_s_t_select/systematics.cfm)

Although many such reports are debated on the floor of the Lords itself, having the debate in the smaller Moses Room allowed a more focused discussion and seemed on a more human scale, like the science being debated. All of the members of the Select Committee spoke, as did the Government Minister for Innovation Universities and Skills Lord Drayson, and the Shadow Minister, Lord De Mausey. As is fitting, given his interests, Charles Darwin was mentioned by several of the speakers—beginning with Lord Sutherland (Chair of the Committee) who, in alluding to Darwin's work on domesticated

pigeons, mentioned Andy Capp as well, probably for the first time in those elegant halls! Lord May mentioned the Linnean Society's new publication *Pulse*, citing the fact that natural history, including taxonomy, was the central integrative science of Darwin's day, and the fundamental importance of taxonomy and systematics to all of biology was said again and again. Lord Drayson indicated that the Government is listening to the Committee's recommendations and that action will be taken—a forthcoming review of the state of

taxonomy and systematics to be undertaken by NERC will be important for Fellows to participate in. All of the Committee members spoke eloquently and passionately on the subject of taxonomy and its decline; as taxonomists, it was wonderful to hear one's own subject being praised in such glowing terms. But this is not a time for complacency—it is indeed up to Fellows and other practicing taxonomists to pick up the gauntlet and take the recommendations of the Report forward. Lord Krebs summed up the importance of taxonomy wonderfully in quoting from

Thomas Mann's *The Magic Mountain*—"You ask what is the use of classification, arrangement, systematization. I answer you: order and simplification are the first steps towards mastery of a subject—the actual enemy is the unknown." Linnaeus would certainly have agreed.

Sandra Knapp FLS and Geoff Boxshall FRS FLS

The complete text of the House of Lords (Grand Committee) debate can be found in Hansard online: <http://www.publications.parliament.uk/pa/ld200809/ldhansrd/text/90325-gc0002.htm#09032555000151>



# Conservation Corner

## A Continuum of Care

As a conservator of paper and books, I have noticed that occasionally the terms 'preservation', 'conservation' and 'restoration' are used interchangeably. However, these terms have different meanings for professionals involved in the care of cultural heritage.

**Preservation:**  
to protect an object  
from deterioration or  
loss but not  
necessarily to improve  
its condition.

**Conservation:**  
also includes  
treatment to improve  
the condition and  
function of an object.

**Restoration:**  
treatment with the  
goal of returning an  
object to its original  
state, often using  
non-original materials.

In order to understand the differences in approach, imagine a once beautifully bound book which is now damaged—the red leather spine has faded to brown and the front cover has come loose.

**Preservation** would prevent further damage by storing the book in an archival quality box, under optimal environmental conditions. Implementation of handling and access policies, possibly including digitisation, will protect the book from future harm.

**Conservation** treatment would be kept to a minimum, so as to preserve as much historical and cultural information about the book as possible. The extent of conservation would depend on the intended use of the book; less work would be done on an item destined only for display than on a volume which is part of a circulating library. Depending upon the extent of any damage, the book may need 'rebacking', which involves replacing the leather of the old spine. Ideally, the conservator would place the old leather spine on top of the new one to retain the original title and decorative elements of the cover. All repairs should be reversible and detectable.

**Restoration** of the book would not only return it to full functionality, but also address aesthetic issues. In order to make the book appear undamaged, restoration would involve more extensive repair and perhaps even replacement of the damaged elements, so that the book looks unspoiled but aged appropriately for the time it was originally bound. Depending upon the owner's preferences, the book may even be completely rebound so as to appear new. The restoration may involve the use of new materials without regard to whether the work could be reversed in the future.

Though I refer to books here, these definitions are also true of paintings, ceramics, furniture or indeed any treasured item. The course of action taken will depend on the owner's requirements, in conjunction with the professional's advice. Best practice from a conservator's point of view is to subject an object to minimal treatment, with any treatment being sympathetic to the original techniques and materials used in

order to retain as much of its historic and cultural information as possible.

Wende W.  
Guastamachio,  
Conservator



Preservation: a bespoke box halts further deterioration



Conservation: a new spine includes portions of the original

## Conservation at Kew

Conservation often benefits from a multi-institutional approach to professional development, with conservators exchanging specialist knowledge from current projects. In April staff from the Linnean Society visited the conservation department at the Royal Botanic Gardens, Kew to learn about the Marianne North Gallery conservation project. North was a 19th-century English naturalist with a particular talent for painting.

Over 832 of Marianne North's oil on paper paintings have been housed at RBG Kew for more than 127 years in a purpose built gallery. The restoration project aims to address the unstable environmental conditions of the gallery and repair any damage this has caused the paintings including blanching, cracking of the paint, losses and cockling, as well as the removal of the acidic mount board. The work is being carried out in a purpose built studio in the herbarium where staff aim to get half the paintings back in the gallery for Kew's 250th birthday. The remainder, requiring more complex treatments, are due for completion by October 2010. Currently around 150 of the paintings have been conserved.

The project was enabled by £1.86 million in funding donated by the Heritage Lottery Fund, a figure which needs to be matched by Kew. Fundraising projects include the 'Sponsor a painting' scheme which has proved a success, in part due to the connections donors can make with the paintings. The accurate style in which North painted allows visitors to recognise in detail landscapes, flora and fauna.

The preservation of our heritage relies on shared knowledge and skills, and reciprocal visits between institutions enable us to care for our collections as effectively as possible for future consultation.

Lucy Gosnay, Conservator



Lucy Gosnay looks at the Marianne North paintings



## Smith's grave

The founder of the Linnean Society, Sir James Edward Smith, was born on 2 December 1759 and died in 1828. He was buried in his wife's family tomb in the graveyard at St Margaret's Church, Lowestoft, Suffolk. Lady Pleasance joined him there in 1877 at the great age of 103.

As the 250th anniversary of Smith's birth approached, it was thought appropriate that the Society check on his final resting place to see whether any renovations were needed. When we finally received photographs, we saw that the tomb was extremely overgrown and none of the inscriptions were even visible.



Smith's grave before clearance

A team of Society stalwarts set a date this spring to go up to Lowestoft and start to clear the ivy. Fortunately, before the appointed date, a group of young people started work on general clearance of St Margaret's churchyard. Unfortunately, they experimented with burning off the worst of the greenery and, in the case of Smith's tomb, they scorched the two end-panels quite badly, including Smith's inscription.



J.E. Smith's inscription: before

The Society team arrived in Lowestoft and spent the afternoon working hard at removing as much of the scorching and the ivy residues as possible and giving the stonework a gentle wash and brush up.

We are pleased to report that the tomb is generally in very sound condition and the inscriptions still well-defined. The Society's next step is to consult with a stonemason on how to tackle the remaining marks and on whether to re-instate the black paint with which the inscriptions had been picked out.

Lynda Brooks FLS, Librarian



Inscription: after



## Celebrating the Life of John Marsden MBE HonFLS

3rd July 2009, 4.00pm

All Society members are invited to join the President, Officers and members of John's family for this meeting in his honour.

Admission: Fellows plus one guest

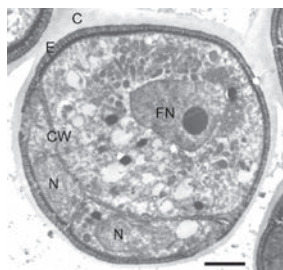
More information at [www.linnean.org](http://www.linnean.org)



## Palaeobotany and Palynology Specialist Groups

The meetings of the Linnean Society Palaeobotany and Palynology Specialist Groups will take place at Burlington House on 28th and 29th October 2009

See [www.linnean.org](http://www.linnean.org) (Upcoming Events) for more information



## Forthcoming Events

**25th–26th June,  
Two day event**

Biodiversity, Infection and Global Health: Future trends and policy relevance

*David Molyneux and  
Vaughan Southgate PLS*

**3rd July, 4.00pm**

Celebrating the Life of John Marsden MBE HonFLS

**9th July, 3.00pm**

Conversazione

Registration for all of these events is essential.

More information can be found at [www.linnean.org](http://www.linnean.org) or contact Kate Longhurst on +44 (0)20 7434 4479 Ext. 11, email: [kate@linnean.org](mailto:kate@linnean.org)

Reminder for Fellows:  
Membership payments fell due on 24th May 2009.

All articles welcome! Please submit your articles in electronic format to Leonie Berwick at [leonie@linnean.org](mailto:leonie@linnean.org). Images are also welcome in high resolution format with appropriate permission and copyright.