

226th Anniversary Meeting of the Linnean Society

held at Burlington House, Piccadilly, London W1J 0BF

4.00pm, Friday 23 May 2014

Citations and Presentations of Medals and Awards

- a. The President presented the **2014 Linnean Medal in the field of Botany** to **Professor H Walter Lack**. The citation was read by *Scientific Secretary, Professor Simon Hiscock*:

“Professor H Walter Lack received his PhD from Vienna University in 1973. He joined the Botanic Garden and Botanical Museum Berlin-Dahlem in 1975, rising steadily to become one of the Directors. In 1997 he became Professor Extraordinary at the Freie Universitat Berlin and since 1994 he has held and holds many Visiting Professorships at other Universities, including the Universities of Palermo, Patras, Pisa and Coimbra. In 2002 he was a Visiting Fellow at Magdalen College Oxford. 2001 was an outstanding year for Professor Lack: he received the OPTIMA Medal in silver, The Engler Medal in silver from the International Association for Plant Taxonomy and the Sibthorp Medal from the University of Oxford. In 2009, he was awarded the Founder’s Medal by the Society of the History of Natural History. The Republic of Austria has recognised Walter’s outstanding research and publishing record by awarding him a series of honours culminating in the Order of Merit, First Class, in 2007. Walter has more than 340 diverse publications to date, which span his three main areas of interest, the history of taxonomy, his taxonomic research in the Asteraceae, in particular the Lactucaceae and Inulae, and all aspects of botanical illustration and exploration. This latter subject has resulted in the production of some outstanding wonderfully illustrated ‘popular’, but very scholarly, works. His current interests and research focus on the activities of the Bauer Brothers and their botanical paintings, and the Flora Brasiliensis Story. He is undoubtedly a most worthy candidate for the Linnean Medal in the field of botany.”

- b. The President presented the **2014 Linnean Medal in the field of Zoology** to **Professor Niels Christensen**. The citation was read by *Scientific Secretary, Dr Malcolm Scoble*:

“Until his retirement in March last year, Niels Kristensen was Professor of Systematic Entomology at the Natural History Museum of Denmark. Apart from long-term research visits abroad, he has spent his entire career at this august organisation and he continues an active research programme there as Professor Emeritus. Niels Kristensen has made outstanding contributions to two areas of research in systematic entomology. The first of these is his innovative work on Lepidoptera anatomy and systematics, which has expanded our knowledge of the basal evolutionary lineages of these insects and provided a foundation for phylogenetic studies of the Lepidoptera more widely. His second area of interest is on the phylogeny of higher insect taxa, both research areas being underpinned by in-depth anatomical examination of key taxa, including detailed investigations of various skeleto-muscular structures and soft anatomy systems (for example nervous, digestive and excretory), so illuminating the taxonomy and phylogeny of his target taxa. He has succeeded also in training a future generation of students in deep morphology, thus helping to keep alive skills that might well have been lost, which would have been to the great detriment of systematic zoology. Professor Kristensen has made a considerable contribution to the scientific community in numerous advisory and editorial roles, and he has received many academic honours, including ‘Foreign member’ of the Linnean Society. He is thus highly deserving of the Linnean Medal in the field of zoology for 2014.”

- c. The President presented the **2014 Darwin-Wallace Medal** to **Professor Dolph Schluter**. The citation was read by *Professor Mark Chase, the Editorial Secretary*:

“Professor Dolph Schluter has made outstanding contributions to the study of speciation and adaptive radiation, clarifying the role of environmental factors causing divergence that prevents newly formed species from breeding with each other and enables them to coexist. He has done this by developing a rigorous and testable theory of ecological speciation, establishing the three-spine stickleback as a model system for experimental

investigation. Dolph developed predictive models for the assembly of competitor species as determined by food supply, for the evolution of premating isolation on the basis of appearance and perception, for nonlinear selection gradients, and for the genetic control of evolutionary responses to selection. All of this is laid out in a path-breaking book on adaptive radiation, which remains the most authoritative and comprehensive statement on the subject 13 years after it was published. Dolph also has many editorial responsibilities and is currently President of the American Society of Naturalists. Dolph's extraordinarily productive research has led to a stream of important and influential papers from his group on morphological evolution, reproductive isolation, hybridisation, and ecological speciation. Together with David Kingsley, they have exploited the stickleback model for genetic mapping and for evolutionary and developmental biology (evodevo). This continuing work leads the field in linking identified genes and their function with selective pressures that are responsible for ecological divergence which culminates in speciation. Thus Dolph has carried the Darwin-Wallace program of scientific natural history research into a modern arena spanning field observation and quantitative description, theory, field experiments and molecular genetics. Having made these major advances in evolutionary biology, Professor Dolph Schluter is richly deserving of the Darwin-Wallace Medal".

- d. The President presented the **2014 Bicentenary Medal** to **Dr Bonnie Webster**. The citation was read by *The President, Professor Dianne Edwards*:

"Dr Bonnie Webster is a truly outstanding research scientist and one of the bright young stars in molecular systematics and parasitology. She has an excellent academic record and has had a close and successful association with the NHM, having conducted her PhD under the supervision of Dr Vaughan Southgate in collaboration with University College London. Bonnie is currently working jointly with Imperial College to study the population genetics of schistosome parasites subjected to different control regimes in different parts of Africa. She is highly skilled at working in a molecular laboratory and is hugely respected by her colleagues and international collaborators, being equally at home working in endemic areas of disease, often under difficult conditions, and much enjoys finding practical application for her research studies. Dr Webster has made significant contributions to the understanding of genetic diversity within both free-living and parasitic genera and developed and applied important new molecular methods of analysis. Her studies have allowed much greater insight into the evolution of various important human pathogens. She has a strong string of publications (over 40) primarily relating to the use of mitochondrial genomes to determine relationships between taxa and is currently making a major contribution to studies relating to the epidemiology of schistosomiasis and hybridization events that are leading to the evolution of new zoonoses in West Africa. Dr Webster has already made a significant contribution to the scientific community, actively supervising and teaching MSc and PhD students. Her expertise is sought by many scientific journals for review purposes. She thus is well deserving of the Bicentenary Medal in recognition of her excellent work as a biologist under the age of 40 years".

- e. The President presented the **2014 Trail Crisp Medal** to **Dr Silvia Pressel**. The citation was read by *Professor David Cutler, Past-President*:

"Since receiving the Irene Manton Prize in 2007, followed by a Leverhulme Early Career Fellowship and, from 2010, employed as a Researcher in Biodiversity (Bryophytes) at the Natural History Museum, Dr Silvia Pressel has now become a world authority on imaging of bryophytes. Her work centres on the theme of the evolution of the key innovations in land plants, combining light and electron microscopy and embracing mosses, liverworts and hornworts. It is marked not only by micrographs of the highest quality but also her technical innovations, particularly in the use of cryo-scanning SEM, to unravel hitherto intractable questions and provide a functional understanding of morphological features essential for future genomic studies. Her 40 publications include the demonstration that the cytological basis for vegetative desiccation tolerance depends on cytoskeletal dynamics, that the smooth and pegged rhizoids in complex thalloid liverworts have very different functions, a reinterpretation of explosive spore discharge in *Sphagnum*, and the finding that mucoromycete fungi have highly distinctive cytology. Perhaps most remarkable of all, her discovery that intercellular spaces in bryophytes differ in origin from those in tracheophytes adds new fuel to current debates on the origin and primeval function of stomata. Silvia has important editorial duties and is responsible for imaging in externally funded projects with Cambridge, Sheffield, Kew, Munich, Illinois and Ascension Island. She is also collaborating with

the Palaeontology Dept at the NHM on the reinterpretation of Devonian fossils, with a first publication under review in *New Phytologist*. Silvia thus richly deserves the Trail-Crisp Award for contributions to microscopy”.

- f. The President presented the **2014 Irene Manton Prize** to **Dr Simon Renny-Byfield**. The citation was read by **Professor Simon Hiscock, Scientific Secretary**:

“Dr Simon Renny-Byfield graduated with First Class Honours in Genetics from Queen Mary University of London in 2008, and stayed on there to do his PhD with Professor Andrew Leitch, his thesis being entitled “Evolution of repetitive DNA in angiosperms: examples from *Nicotiana* allopolyploids”. He is currently a post-doc researcher in the lab of Professor Jonathan Wendel, in the Department of Ecology, Evolution and Organismal Biology, at Iowa State University, USA. Simon’s PhD studies focused on the evolution of repetitive DNA in plant genomes, a fundamental process in plant evolution, using *Nicotiana* as a model. During his early research he used fluorescence *in situ* hybridization techniques to understand the chromosomal organisation of repetitive DNA, later moving on to advanced next-generation 454 and Illumina DNA sequencing technologies. The emergence of this technology has allowed the development of novel computational techniques for analysing repetitive DNA, including graph-based clustering methods. Simon used these analytical methods extensively in his thesis work producing a number of papers in high impact peer-reviewed journals. Simon’s PhD examiners (of which I was one) were impressed with his knowledge and critical evaluation of his data, especially his insightfully written conclusions. Simon is thus a most worthy recipient of the 2014 Irene Manton Prize”.

- g. The President presented the **2014 John C Marsden Medal** to **Dr Orly Razgour**. The citation was read by **The President, Professor Dianne Edwards**:

“Dr Orly Razgour did her PhD in the School of Biological Sciences at Bristol University, her thesis was entitled ‘From genes to landscapes: conservation biology of the grey long-eared bat, *Plecotus austriacus*, across spatio-temporal scales. Orly has been an outstanding student, already winning a number of awards. Orly has made substantial contributions to understanding the ecological requirements of one of Britain’s least known mammals, the grey long-eared bat, already publishing 3 papers, providing a vast amount of information that can be used to conserve this rarest of mammals. Orly has shown how to implement this new research for conservation action via a handbook that can be assimilated by a general audience including conservation practitioners, and which can be downloaded with open access. Orly currently holds a research fellowship at the University of Stirling where she is researching the effects of climate change on genomics, showing how ecological niche models can be applied to landscape genetics approaches to best understand barriers to gene flow. She is an exceptional all-round biologist with broad skills ranging from molecular ecology, fieldwork, statistics, and ecological modelling, always applying exceptional intellectual rigour to her applied conservation studies. Orly’s findings have broad applications—she has shown how genetic hotspots in Iberia and the Mediterranean are highly susceptible to climate change, and how edge-of-the range-populations in Britain can be important for spearheading range expansions under climate change. Dr Orly Razgour has more than demonstrated that she merits the award of the John C Marsden Medal for 2014”.

- h. The President presented the **2014 Jill Smythies Award** to **Esmée Somers Winkel**. The citation was read by **Professor Gren Lucas, the Treasurer**:

“Working in the newly-established Naturalis Biodiversity Center in Leiden, Esmée Somers Winkel is a young and very talented Dutch botanical artist, who combines technical skills and artistic qualities with a very keen eye for botanical observation—three ingredients for excellence in botanical illustration. Although she only completed her Masters in Scientific Illustration at Maastricht University and the Academy of Fine Arts and Design in 2013, she has already produced an impressive portfolio of published and “in press” scientific drawings in international journals and Flora instalments. Her artistic output in fact extends well beyond the botanical and encompasses wider natural history. Suffice it to say that all scientists working with Esmée are extremely impressed by the quality of her work, which has also been recognized by the Scotland Gardening Show (2012 Gold medal for pen drawings of new Orchid species) and the Royal Horticultural Society (Gold medal for drawings of SE Asian Legumes, 2013). Together with her colleagues and former mentors Anita Walsmit Sachs and Jan van Os (Jill

Smythies medalist 2007), Esmée Winkel is very active in promoting the art and craft of botanical illustration in the Netherlands and abroad. Indeed, she has brought some of her wonderful illustrations to the Society and you will be able to see them displayed in the library once we adjourn. Here are some remarks from the Jill Smythies Prize judges: ‘Outstanding work, beautifully drawn and shaded, and laid out on the page’, ‘rather exceptional plates!...her Euphorbiaceae work is quite stunning’, ‘Delightful’, ‘beautiful...well-balanced...very controlled stippling and nothing overemphasised’. Esmée Somers Winkel is undoubtedly a most worthy winner of the Jill Smythies Prize for published botanical art”.

- i. The President presented the **2014 HH Bloomer Award** to **Sir Christopher Lever**. The citation was read by **Dr John David, the Collections Secretary**:

“Since his first book on the subject, *The Naturalised Animals of Britain and Ireland* in 1977, Sir Christopher Lever has become recognised as the leading authority on the history, introduction, establishment, ecology and the economic and ecological impact of naturalised vertebrate species worldwide. Naturalised species (non-native species established in the wild) have, together with loss of habitat, become recognised as the principal cause of the decline and extinction of native species of flora and fauna throughout the world, so the significance of Christopher’s contribution to the science of natural history has been considerable. In 2011, at the age of 79, Christopher was awarded a PhD (not honorary) by the University of Cambridge, 54 years after graduating as a BA in recognition of his work on naturalised species, his collected works being accepted in lieu of a thesis. His PhD examiners, Christopher Perrins FRS from Oxford University and William J Sutherland from Cambridge commented in particular on Sir Christopher’s considerable contribution to scholarship. Sir Christopher has held numerous honorary positions in the world of natural history including chairing the National Centre for Ornithology Appeal 1987–92, and the African Fund for Endangered Wildlife 1987–90. He was variously chairman and president of the International Trust for Nature Conservation for 12 years from 1980 and continues to work with IUCN. He was a trustee and patron of the Rhino Rescue Trust for almost 20 years from 1985, and is currently a special scientific advisor to the Galapagos Conservation Trust. He has been a keynote speaker at many conferences. The breadth and depth of Sir Christopher’s contribution to natural history makes him a most worthy winner of the HH Bloomer award for an amateur naturalist”.



The 2014 Medal, Award and Prize Winners: (from left to right) Dr Sylvia Pressel (Trail Crisp Medal); Dr Simon Renny-Byfield (Irene Manton Prize); Professor Dolph Schluter (Darwin-Wallace Medal); Dr Orly Razgour (John C Marsden Medal); Dr Bonnie Webster (Bicentenary Medal); Esmée Somers Winkel (Jill Smythies Award); Professor Dianne Edwards PLS; Sir Christopher Lever (HH Bloomer Award); Professor Niels Christensen (Linnean Medal—Zoology) and Professor H Walter Lack (Linnean Medal—Botany)