

PULSE

Issue 7
June 2010

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

Forging Links

The Linnaeus Link project was inaugurated in 1999 with the aim of improving access to the works of Carl Linnaeus. The original Partners in this enterprise were the Linnean Society of London, the Natural History Museum Library and the British Library together with libraries in Uppsala and Stockholm and the Hunt Institute for Botanical Documentation in Pittsburgh. Given that nomenclature has its starting point in the publications of Linnaeus and that the *Species Plantarum* of 1753 and *Systema Naturae* of 1758 provide a base line for taxonomy, the publications of Linnaeus and those influenced by him are of great historical significance and of continuing scientific relevance to researchers worldwide. The Partners felt that there was a real need to make these key resources more accessible.

It was agreed that a comprehensive catalogue of publications by Linnaeus and his students was needed but first the most significant institutional holdings of Linnaean material had to be identified. One of the founding partners, the Hunt Institute, agreed to take on the task of sending out survey forms and as the most substantial holdings were identified, those institutions were approached and invited to become Partners in the venture.

In the early years of the project on-line library catalogues were beginning to be created but the complexity of Linnaeus' oeuvre meant that most natural history libraries were still waiting for the first brave institution to tackle the Linnaean material and provide a sound bibliographic pattern that could be copied. So in 2004 the Linnean Society of London agreed to fund a three-year post to catalogue the extensive Linnaean collections in the Natural History Museum, with the intention that these detailed records should form the core of a union catalogue.

While cataloguing was progressing, software specifications were produced for a system, using Z39.50 technology, to harvest records from individual libraries and build them into a union catalogue. Harvesting began in 2007 and the Linnaeus Link Union Catalogue was born. It is now available online with 1,680 separate bibliographic records on the system together with details of where copies of these works can be found in the Partner libraries.



Title page and frontispiece to *Materia Medica* (1749)

Future Linnaeus Link plans include the development of direct links to digitally available copies, through the Biodiversity Heritage Library and similar sources, as well as creating facilities for the downloading of data by any library wishing to enhance its Linnaean catalogue records and the uploading of lists of Linnaean holdings from libraries lacking Z39.50 access.

The initial vision seemed an impossible dream in the "low tech" days of 1999 when hand written card catalogues were often the only bibliographic source. Now the availability of web access to good catalogue records, to specific library locations and to digital copies of the works themselves has transformed research into Linnaean material. Linnaeus Link is now serving its intended purpose as a portal to Linnaean holdings in major European libraries and the harvesting of records from US Libraries will begin shortly.

Lynda Brooks FLS, Librarian

A list of current partners and more information about the project are available at www.linnean.org or contact Lynda: lynda@linnean.org +44 (0)20 7434 4479 ext. 23.

Message from the Executive Secretary

I'm writing this on what is apparently the hottest day of 2010 to date! The warm sunshine has brought everyone out and there are literally thousands of people in Piccadilly and no small number in the courtyard of Burlington House! Over the past 18 months it's been one of the real privileges of my role, to welcome groups visiting us from all over the world, before they are given a tour of the rooms and the collections by our Librarians, Lynda and Ben. Our Fellowship is now drawn from over 90 countries and our international links as a Society are of immense value to us, not least the extremely successful Linnaeus Link project (see the article on P1) which brings together institutions with major Linnaean holdings.

We also value our links with organizations and institutions closer to home of course! We have well established links with a number of groups, many of whom hire our rooms in Burlington House (see P3) and we have made many more links through our Taxonomy and Systematics Review (see the article on P4-5). We have recently been liaising with St Margaret's Church, Lowestoft, where the Society's Founder Sir James Edward Smith is buried and have organized the restoration of his memorial in the churchyard (this page). Our links with these groups and individuals result in a wonderful and extensive list of donations to our library (see P6), our staff also have links to different organizations (see P7 for more information on Janet's volunteering at the Natural History Museum) and we continue to celebrate the achievement of our Fellows as they receive awards from other Societies (see P8).

Please do let us know if there are ways in which you think we should be extending our network of links to further the Society's mission.

With best wishes for a good (and hopefully sunny!) summer.

Ruth Temple



© Leonie Berwick

President's Greeting

I hope you enjoy the summer edition of PuLSe. Unbelievably, a whole year has passed since I became President; at the Anniversary Meeting, new members were elected to Council to help direct the Society into the forthcoming year (May 2010-May 2011). I would like to thank all the retiring members of Council for their wisdom and support, and to warmly welcome new members. Furthermore, I would like to congratulate all the recipients of medals and awards.

The refurbishment of the Tower Rooms nears completion, and energies can now be directed into raising the necessary funds for the purchase and installation of a lift at Burlington House.

June will be a busy month with the field trip to the Brecon Beacons, and two meetings, namely the examination of techniques being used to generate molecular data from extinct and endangered species, and discussion on changes which should be made to minimise global loss of biodiversity. The *Conversazione* in Cardiff

on 17 July will be the last event before the summer break, and on 16 September we recommence the programme with the welcome return of Mohamed Noor, a Darwin-Wallace medal winner, who will speak on 'Genetic changes that make new species'.

I wish you all a rewarding summer, whatever your plans, and I look forward to seeing many of you whether it be in London or the Principality.

Vaughan Southgate



© Victoria Smith

Remembering Sir James Edward Smith

Following the celebration of the 250th birthday of the Society's Founder Sir James Edward Smith (1759-1828) in December 2009, the Society marked the anniversary of his death on 17 March 2010 by laying a wreath on Smith's recently-restored memorial in the churchyard at St Margaret's Church, Lowestoft. During their visit, Vaughan Southgate, President and John Edmondson, Editorial Secretary were pleased to meet with staff from the Church, to thank them for their assistance during the restoration of the memorial and to talk about the man whose vision and foresight led to the creation of the Society.



© John Edmondson

Room Hire at the Linnean Society of London

As a Fellow, you have probably attended a lecture or reception in the Society's Meeting Room or Library. You may not know, however, that these rooms, together with a further four meeting rooms are all available for hire and recent refurbishments have really enhanced the facilities on offer. The hiring out of the rooms is essential to the Society's work as it provides much needed income and we hope this brief article will remind Fellows of the types of rooms we have available and encourage bookings. If you, friends, colleagues or other groups might be interested in hiring one of our rooms please contact Tom Helps or look at the room hire section on our website for further information. The following rooms are available for hire.



The **Meeting Room** is an ideal setting for conferences or lectures with seating for up to 100 people. Located on the ground floor, this historic location combines a traditional feel with modern features which include a digital projector, retractable screens, Wifi and an audio loop for the hard of hearing.



The **Publications Room** and **Committee Room** are both ideal for small meetings of six to ten people respectively. The Publications Room has a traditional appearance with cabinets containing the Insch Tea Library and works on voyages of exploration. The Committee Room has portraits of notable plant collectors.

The **Council Room** is a popular choice for group meetings, the boardroom style seats up to 30 people and there is a small break out area where hot drinks and lunch can be enjoyed. Wifi and two retractable screens make presentations simple with an LCD projector available for hire on request.



Most Fellows are familiar with **The Library** as an area for study but it also provides an impressive location for conference and meeting refreshment breaks. Lunches, tea breaks and evening receptions for up to a hundred people can all be accommodated. The Library has also recently hosted a ceremony for a couple keen to renew their wedding vows in the historic setting of the Linnean Society.

In the last issue of PuLSe we described the refurbishment work in the **Tower Room** suite. Work has only recently been completed on the main room which is located over the arch at Burlington House. Access at the moment is up a single staircase to the third floor however we are working hard to raise funds for a lift! The Tower Room is available at a highly competitive rate, please contact us if you are considering using this room.

Victoria Smith

Contact Tom Helps on +44 (0)20 7434 4479 ext. 13 or at tom@linnean.org, or visit www.linnean.org for more information.



The Taxonomy and Systematics Review and Fellow's Interests

Over the last 9 months, we have spent much of our time on the top floor of the Society, talking with representatives of organisations interested in particular taxa, botanic gardens, zoos, larger and smaller museums with natural history collections, relevant government agencies, natural history data managers and relevant course providers. We've also been out and about for some of our meetings, including one in a giraffe house!

You may ask "Why?"! The answer requires us to turn the clock back to 1991 when the House of Lords Science and Technology Committee launched its first inquiry into systematic biology. Chaired by Lord Dainton, this inquiry was conducted in response to concerns from organisations (including the Linnean Society), particularly related to the funding of taxonomy and systematics and dwindling staff numbers. The inquiry resulted in the formation of

the UK Systematics Forum, and training and funding initiatives which enabled the development of the careers of many UK taxonomists and systematists at the cutting edge of their fields today. A decade later though, many of these initiatives had ended and a second inquiry was launched in 2001. One of the recommendations of this inquiry was that the systematics community needed to demonstrate the importance and relevance of its work and this resulted in the launch of the Annual Systematics Debate at the Linnean Society and the launch of a new funding scheme – CoSyst – supported by the Society, the Systematics Association and BBSRC. Mindful of the increased governmental focus on sustainability and the effects of climate change on biodiversity, the Select Committee launched a third inquiry in 2007, making a number of recommendations in their report published in 2008. The Linnean Society met with the committee and also provided a written submission.

systematics to our understanding of the natural world and the effectiveness of our response to broader environmental issues and meeting our statutory obligations and targets. He urged the taxonomy and systematics community to take action, and at this meeting, the Linnean Society launched a review with the aim of finding positive ways forward to ensure that taxonomy, systematics and the wider sphere of whole-organism biology have a future within the formal education framework, the voluntary sector and the career structure of biological sciences and allied disciplines.

And so began our series of meetings with representatives from other organisations concerned with taxonomy and systematics. Topics raised in discussions included the availability of training and career opportunities, the significant role of the voluntary sector, and our future ability in the UK to meet legislative commitments and implement government policy. Whilst, in each discussion, concerns were expressed, we were greatly encouraged by the suggestions for possible action and the strong desire within the community to find solutions to these concerns. The launch of the NERC/BBSRC review of Taxonomy and Systematics earlier this year was also extremely encouraging and we've been pleased to work in close collaboration with Geoff Boxshall and the team from the Natural History Museum who are co-ordinating this.

At a meeting of the Society in June 2009, the Earl of Selborne, who had sat on the Select Committee for all three inquiries, presented an overview of the inquiries and outcomes. He emphasised the fundamental importance of taxonomy and



Clownfish (*Amphiprion* sp.)

On 23 March we held a plenary meeting at which as many representatives as were able, shared their views. Our discussions centred on four areas – vulnerable groups, legislation, training, careers and resources, and collections and documentation; these resulted in a list of actions. Some actions can be taken forward relatively quickly, others are longer-term objectives. All will require the support of the whole community to be successfully implemented. Those present at the plenary meeting gave the Linnean Society of London the mandate to continue discussions and begin to progress the actions. We are delighted to take this forward; the maintenance and promotion of taxonomy and systematics are a core interest of the Society and our Strategic Plan incorporates our commitment to “Raise public and government awareness of issues in natural history” and “Link our Fellowship in common causes”.

This is an excellent opportunity for the UK taxonomy and systematics community to take the lead in an area of both national and international concern. To ensure the community effort is co-ordinated we will shortly be forming a working group of Fellows and representatives of the other key organisations. For practical reasons, we need to limit the size of this group but if you would be interested in being involved, or would be happy to advise/comment on any of the four main areas please contact us at the Society.

Last autumn, and in parallel with our review, we launched the Fellows Survey;

this was no coincidence as we felt that amongst the offers of support, some Fellows would wish to contribute to the further promotion of taxonomy and systematics. Very many thanks to all 122 Fellows who responded to the survey, and for the wide range of comments received; we would be very happy to receive input from any other Fellows who feel able to help; please send your response to Ruth at the Society.

Of our respondents, 48 (39%) volunteered to help co-ordinate a Society meeting; this included several of our Fellows overseas and we will be exploring how to develop regional and international meetings in the near future. Thirty-nine of our Fellows (32%) offered to give talks to a local natural history society or museum group. We will contact you shortly to ask permission to forward your details to your most local natural history society or local museum for them to pursue. We have received encouragement for our developing Education programme with 22 Fellows offering to give talks to school groups and these offers will be discussed at the next Education Working Group meeting in June.

Our contact with the media is extremely important; many thanks to the eighteen Fellows (15%) who offered to be on our “Database of Experts”. We would like to increase this number in order to provide a rapid response to enquiries from journalists and increase the profile of the Society in the media. We do not propose to publish

this list of experts, so Fellows would not be contacted by journalists directly; your name would be on a list so that the Society could act as a broker between you and the media and your details would not be forwarded without express agreement. Please consider if you could support the Society in this way.

In our 2009 Annual report, issued with the April edition of *PuLSe*, we reported a significant increase in membership during the year. It is essential that we maintain this momentum. Fourteen Fellows (11%) offered to act as a “point of contact” in their institution and 8 Fellows (7%) were happy to respond to enquiries about membership at the Society’s meetings. One of the Society’s aims is to recruit one thousand additional fellows over the next three years, without sacrificing the standard of our Fellowship. Thank you for all your efforts in encouraging others to join the Society’s growing Fellowship and please continue to do so! In the meantime, as plans develop, we will contact individual Fellows regarding their offers of support in all areas.

David Cutler and Ruth Temple

If you have any comments on the issues raised in this article or would like more information, please contact Ruth Temple on +44 (0)20 7434 4479 ext. 12 or at ruth@linnean.org.



Komodo dragon (*Varanus komodoensis*)

© Leonie Berwick



Lion (*Panthera leo*)

© Leonie Berwick

Some taxidermical enquiries- to a Linnaean connection

In preparation for a book I am writing about the history of taxidermy, I have tried to trace the oldest extant specimens. This has been interesting and good fun. The trail led all across Europe, including a visit to Stockholm to see a horse that belonged to King Adolphus II. Apparently Sweden waged a long war against the Holy Roman Empire and in 1632 the King unwisely became closely engaged in a battle, receiving fatal wounds. The horse accompanied the King's funeral procession to Sweden and died in the Spring of 1633. It is preserved in the Royal Armoury, but even earlier horses still exist elsewhere.

Whilst in Sweden it seemed logical to consider Linnaean specimens. These would date from the 18th century, but include wild species like his red squirrel I saw displayed there. However, it appears that Linnaeus did not use taxidermy methods, but pickled his animals in alcohol. Some were later dried and sealed in glass-fronted boxes to protect them from dust and insects. Maybe I should take my x-ray machine and examine the rest of his mammals to check preservation methods, but Linnaeus's wild mammals are beaten anyway by a red deer in Denmark



Bramblings by W. Harmer of Brighton

dating from about 1690. His fish were also not stuffed, but skinned and then pressed, just like his plant specimens. So, I'm afraid Linnaeus doesn't merit a big mention in my history of taxidermy. Nevertheless, it turns out that two British taxidermists had peculiar associations with his name.

There was a Cumbrian taxidermist called Linnaeus Eden Hope (1844-1944). Hope was his family name, Eden a local river and perhaps his parents had high ambitions for him in the field of natural history? A good pedigree name might help. To an extent, they were right, as he later became President of the prestigious local Natural History Society and director of the Carlisle Museum. There he set up the first local biological records centre in 1902. He also published one of the first analyses of bird stomachs, refuting claims by fishermen that gulls were a threat to their interests. He was more of a museum man than field biologist, but had some success as a commercial taxidermist, being awarded several prize medals for his work.



Corncrake by Linnaeus Hope 1893, collected from an area that is now a housing estate

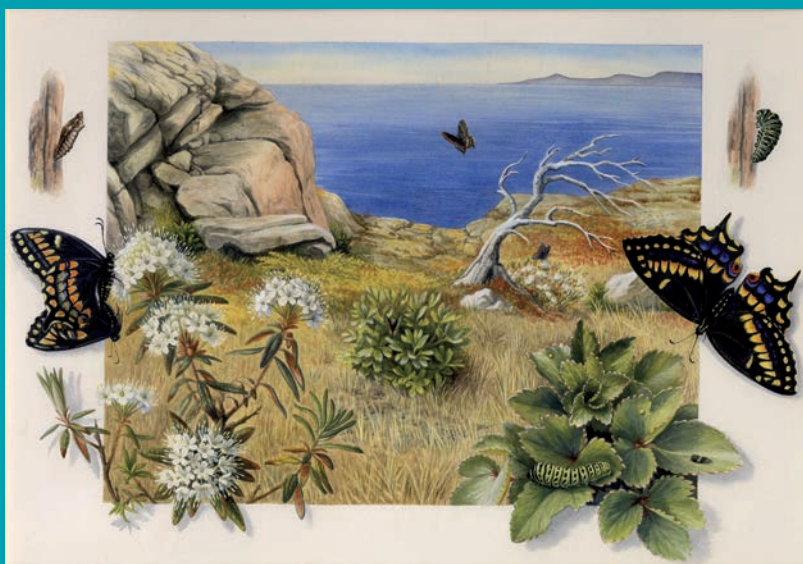
There was also a minor 19th century taxidermist in Brighton called W. Harmer. His trade label advised customers that specimens should be kept dry and they were "warranted" against attack by moth through his use of arsenic. The label also gratuitously added the names Bewick and "Linnaeus" as though mention of these magical words would somehow endorse his products and confer quality upon them. Actually his work was better than that of many of his contemporaries, so perhaps the strategy worked and a little of the magic stardust really did rub off. So maybe it's worth a try.....

Pat (Linnaeus) Morris FLS

Donation to the Library

This beautiful illustration 'The Life-cycle of the Short Tailed Swallowtail' was kindly donated to the Library by its artist, Valerie Baines. Valerie also donated a signed copy of the book in which the illustration can be found, *Mindful of Butterflies*, by Bernard Jackson and Valerie Baines. Valerie has been a Fellow of the Linnean Society since 1991, and was Founder member and past Vice President of the Society of Botanical Artists. Her illustrations have been exhibited at numerous institutions including the Royal Academy, Royal Society of Miniature Painters and the Royal Horticultural Society.

For more information about Valerie and her work, visit www.valeriebaines.com.



Collections Corner

Working on the Natural History Museum Eye Collection

In 1881 Richard Owen suggested to the trustees of the Natural History Departments of the British Museum that an Index Museum be set up for the purpose of demonstrating the comparative anatomy of species. The Natural History Museum's comparative anatomy collection of vertebrate eyes has its origin in that Index Museum.

What remained of the Eye collection was substantially enlarged during the 1960s when vertebrate eyes from a teaching collection used at The Royal Veterinary College were donated to the NHM. The collection was preserved in formalin and housed in Perspex cubes for ease of handling by students.

The present collection consists of approximately 300 sectioned eyes. All have been prepared as a transverse section. Some are stored in sealed glass jars. Mounting methods range from being sewn on glass or mica plates to being set in a gel on the side of the jar. The older specimens are stored in alcohol, some of which had dried out. Many of the later specimens are stored in Perspex containers and have very little preserving fluid left.

In 1999 I began a programme of conservation under the curator Mary Spencer-Jones, as part of my conservation course. The aim was to re-house the entire collection in glass jars, preserved in alcohol. Subsequently I have been able to continue this project, on a voluntary basis,



Janet Ashdown works on the collection



© Vicki Holmes, NHM

supported by the Linnean Society.

Conservation

Many of the original Index Museum specimens, which had become dehydrated, required re-hydration. The original glass containers and mounts were retained. When conserving a

collection it is always preferable to retain as much as possible of the original display material.

The later specimens from the RCV posed different problems. The Perspex containers were not air-tight, resulting in the partial evaporation of the formalin preserving fluid. Many specimens had come away from their mounts, and in some cases lenses had become detached. In addition, the NHM policy is to store all specimens in alcohol where possible.

The following program was instigated:

1. Glass containers were prized open. Perspex containers had to be cut open with a hacksaw.
2. Dehydrated spirit preserved eyes were re-

hydrated by soaking in a solution of Decon 90 (a wetting agent with good rinse properties). After thorough rinsing, buffered alcohol was then reintroduced starting at a concentration of 20% and gradually increased to 80%.

3. Formalin preserved eyes were rinsed for two hours under running water and then introduced to buffered alcohol, increasing in concentration from 20% to 80%, over a period of two weeks.

4. Specimens already in glass containers were placed back in the same jars with their original mount, usually consisting of a glass or mica sheet drilled with holes to allow the eye to be attached by thread to the plate.

5. Perspex containers were discarded and replaced by a variety of old and new glass containers.

Providing new mounts was a problem because the museum no longer had technicians available to create the traditional glass mounts. An attempt to cut and drill glass plate was quickly abandoned and an alternative sought. Melinex, a clear polyester film often used in paper conservation, was found to be stable and strong enough to support all but the largest specimens and thus an ideal substitute. The eyes were sewn to the sheet using clear polyester thread with a curved surgical needle. The polyester mount moulded itself to any shape of jar and, when alcohol was added to the container, the sheet with the eye attached sat neatly and invisibly on the container wall.

Conservation of this unique collection is nearly complete and it is permanently housed in the cold store of the NHMs Darwin Centre.

Janet Ashdown, Linnean Society Conservator

For more information concerning this collection contact Mary Spencer-Jones, Department of Zoology, Natural History Museum, Cromwell Rd, London SW7 5BD, m.spencer-jones@nhm.ac.uk



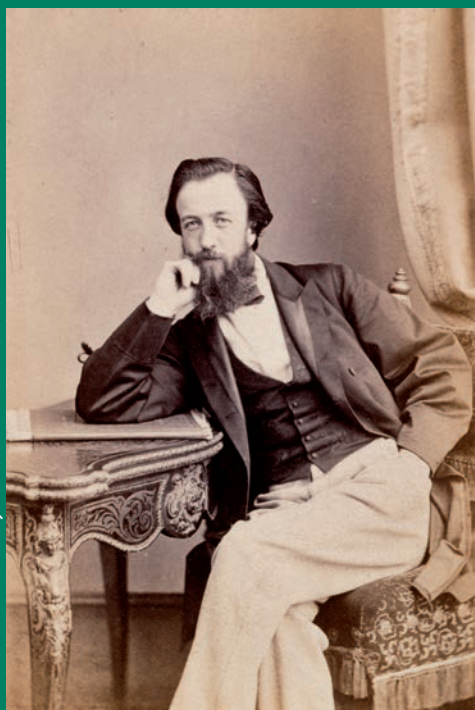
Cat (*Felis domesticus*) eyes in original glass jar

Did you know...?

Christopher Dresser is most widely known as the first independent industrial designer, selling his designs to a wide variety of different manufacturers. What is less well known is that he began his working life as a lecturer in Botany at London's Natural History Museum and was elected a Fellow of the Linnean Society in January 1861. His paper 'Contributions to Organographic Botany' was read to the Society in 1858, the manuscript including some delicate floral illustrations. His skills in draughtsmanship are discernable in these illustrations and in those of the botanical books he authored, including *Unity in Variety as Deduced from the Vegetable Kingdom* (1859) and *The Rudiments of Botany, Structural and Physiological* (1859).

An interesting legacy of his Fellowship is that the Society now holds one of the only known portraits of him as a young man. The portrait takes the form of a small *Carte de Visite* style albumen print and was given to the Society by Dresser himself. Being one of the only surviving prints the library regularly receives requests for the image to be reproduced in articles and books about Dresser and design generally.

Ben Sherwood, Deputy Librarian

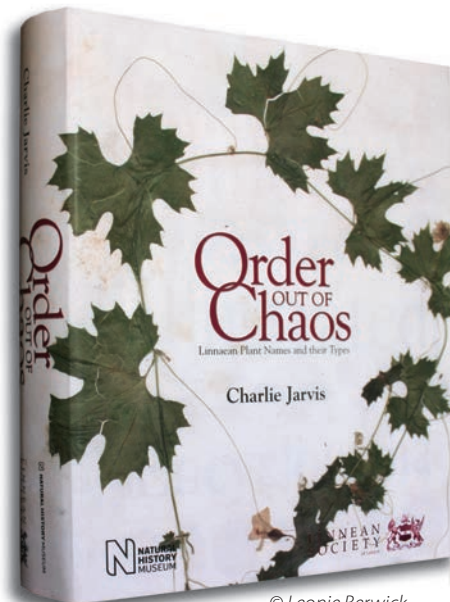


Order out of Chaos wins Thackray Medal

The Linnean Society offers its congratulations to Dr Charlie Jarvis HonFLS, whose groundbreaking work *Order out of Chaos: Linnaean Plant Names and their Types* (2007) has been awarded the 2009 Thackray Medal by the Society for the History of Natural History. The award, named after Librarian and Archivist John Thackray (1948–1999) of the Natural History Museum, London, is awarded yearly by SHNH for "a significant achievement in the history of those areas of interest to the Society".



Dr Charlie Jarvis HonFLS



© Leonie Berwick

Dr Jarvis adds the prestigious honour to the Stafleu Medal presented by the IAPT, the 2008 CBHL Botanical Literature Award and the CILIP Reference Award in which *Order out of Chaos* was Highly Commended in the Printed Category of the 2007 Besterman/McColvin Award for an Outstanding Work of Reference.

To order a copy of *Order out of Chaos* visit www.linnean.org or contact Victoria Smith on +44 (0)20 7434 4479 ext 13 or at victoria@linnean.org.

Forthcoming Events 2010

17th July, 2.00pm

Conversazione at National Museum Cardiff
Tickets available at a cost of £25, registration form available online at www.linnean.org

20th-22nd July

Early Events in Monocot Evolution
Joint meeting with the Royal Botanic Gardens, Kew
Paul Wilkin

16th September, 6.00pm

Genetic changes that make new species
Mohamed Noor

7th October, 6.00pm

Getting away from the urban laboratory – Professor Frances Oliver and 100 years of ecology at Blakeney Point, Norfolk
John Pearson

21st October 2010, 6.00pm

The NERC Taxonomy and Systematics Review
Geoff Boxshall

More information about these and all of the Linnean Society's events can be found at www.linnean.org or contact Claire Inman on +44 (0)20 7434 4479 ext. 11, email: claire@linnean.org

All articles welcome! Please submit your articles in electronic format to the Editor at pulseeditor@linnean.org. Images are also welcome in high resolution format with appropriate permission and copyright.