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NEWS FROM THE LINNEAN SOCIETY OF LONDON – A FORUM FOR NATURAL HISTORY

PHA TAD KE BOTANICAL GARDEN

Laos' First Botanical Garden

The opening of a new botanical garden is always something to celebrate, but when it is the first one ever in a country, that celebration should be all the more fervent. For those unfamiliar with South East Asia, Laos is an inland, developing state sandwiched between Thailand and Vietnam. With many other priorities to consider, a botanical garden might not be at the top of the Laos government's agenda, but thanks to the initiative of a private philanthropist, the first garden of its kind in the state has just opened to the public after eight years in development. Pha Tad Ke Botanical Garden (PTK) is set attractively alongside the Mekong River on the bank opposite the beautiful and popular UNESCO World Heritage site of Luang Prabang **(http://www.pha-tad-ke.com/)**. Reached by a short boat ride from the town, visitors can appreciate the verdant hills that back the watercourse. Steep steps lead from a landing stage to the attractive ten hectares of gardens, set around an artificial lake with gentle slopes beyond. The perimeter of the garden is defined by steep, limestone bluffs; a specialised lime-loving flora flourishes there that can be visited by special arrangement.

The inspiration for the garden came from Dutch art dealer Rik Gadella, a specialist in photography and tribal art, who leased land that was originally part of a royal hunting estate. Since 2008 the landscaping and infrastructure have been established, a considerable enterprise by any measure, and the exhibition areas were considered ready for visitors at an official opening on 7 November 2016. I was taken around by the resident botanist, New Zealander Bryony Smart, who came to the Laos garden by way of the Royal Botanic Garden Edinburgh (RBGE) and the Royal Botanic Gardens, Kew (RBGK). Bryony drew attention to bedded areas around the lake and restaurant that were planted with 'ornamentals' like *Heliconia* – species that were not naturally Laotian—but emphasised that 80% of the species in the garden were native plants.

There are a number of focused collections. Gingers have their own special garden; despite the general similarity of their leaves the Zingiberaceae have spectacularly varied flowers. An accompanying monograph by Mark Newman and Jana Leong-Skornickova lists the local taxa (Singapore Botanical Garden and RBGE 2015). Other planted areas feature fine collections of bamboos and an equally impressive palm garden displays many species of Indochinese endemics belonging to genera such as *Caryota*, all of them attractive, and many hardly known in cultivation.

A unique aspect of PTK is the ethnobotanical collection—a display partly achieved by crowd funding and curated with help from Dr Biba Vilayleck, the garden's Resident Ethnobotanist. Plants are very important in traditional Lao culture, and a series of planted circular beds explain exactly why. Local medication was nearly all plant based, and some of the species involved are now 'hot items' for investigations of biologically active chemicals. The Lao people are also much concerned with the spirit world, and to reflect this there are plants displayed which encourage the good denizens of the 'supernatural' realm. Forest peoples collect an astonishing variety of wild foods: leaves, fruits and seeds. The staple diets of 'advanced' cultures may overlook nourishing alternatives, some of which are growing vigorously. There is a range of plants for natural fibres or thatching. Some plants have interesting poisons: a relative of our familiar *Buddleja* is toxic —and provides a technique for stunning fish when it is placed into streams. Some 'teething problems' with this display have included the labels curling up in the hot sunshine; small concerns in such a new venture.

ABOVE: A spirit house in Pha Tad Ke Botanical Garden
© Paul Wager

LEFT: The ethnobotanical garden at PTK
© Paul Wager

PHA TAD KE BOTANICAL GARDEN (Continued)

There is much to be done in Laos. Bryony estimates that only about 30% of Laotian plant species have been properly catalogued, and there are assuredly new species to discover, especially in the limestone forests of the highlands. Orchids have a particular allure for collectors, and here the garden will develop a role in protecting rare and vulnerable species. Cycads and orchids in the garden already include around a dozen species that are IUCN red listed. Collaboration with other botanists around the world, particularly in Edinburgh, Singapore and Chiang Mai (Thailand), helps to maintain an international perspective.

Now that the garden in open to the public, its long-term survival depends on attracting sponsorship. The garden's website lists various ways to do this, ranging from 'adopting' a tree or bench for a few hundred dollars to financing a major plant collecting expedition for $6,000. The scientific profile of the garden needs to be raised by sponsoring students and improving the research facilities and herbarium on site. Plans are afoot to build a 'mist house' to display ferns and other plants that require continuous high humidity and shade. PTK will become the main centre in Laos for inspiring future generations to appreciate and conserve their botanical heritage. The country is developing fast and it is to be hoped that it will follow the Costa Rican model in making its wealth of biodiversity a sustainable resource for securing the ecotourism dollar. Support this forward-thinking initiative—and Laos in general—with either a visit to its website, or to the garden itself.

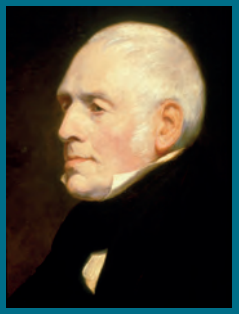
Richard Fortey FRS FLS

BELOW LEFT: The entrance to the limestone habitat © Paul Wager
BELOW RIGHT: Platycerium fern species in a tree © Paul Wager

Archibald Menzies Memorial Appeal

The famous portrait by Eddis of the great explorer and plant collector Archibald Menzies (1754–1842) hangs in Burlington House, and despite the fact that he published little during his life time, his legacy is forever commemorated in the names of the many plant species he discovered. Gardeners and garden lovers everywhere owe a great debt to Menzies. A Fellow of the Linnean Society from 1790 and something of a Grand Old Man among botanists in his later days, his home in Ladbroke Terrace was a meeting place for those who sought discussion and advice. He died at the age of 88 and was buried in All Souls Cemetery, Kensal Green, in London.

His grave now lies unmarked in an overgrown area, beneath the shattered fragments of what was once his headstone and ledger. This year sees the 175th anniversary of his death, and an appeal has been launched to raise the £5,000 needed to restore the grave of this remarkable man. There are plans to replace his broken headstone with a natural granite boulder from his native Highland Perthshire; the grave will be surrounded with some of the plants he discovered, and a plaque detailing a brief account of his life. The appeal is supported by the Menzies Clan Society [MCS-UK], and donations can be made via the 'Donate' button on the Clan's website: **http://www.menzies.org/society/index.htm** (please email **luke.menzies@gmail.com** to state that the donation is for the Archibald Menzies Memorial Appeal). Alternatively cheques made out to The Menzies Clan Society, with a covering note, can be sent to: The Treasurer, The Menzies Clan Society, Castle Menzies, Weem, Aberfeldy, Perthshire, PH15 2JD, UK.



Frances Gillespie FLS

LEFT: Menzies' grave site is unmarked and overgrown © Frances Gillespie
RIGHT: Archibald Menzies by EU Eddis © The Linnean Society of London

ANDREW SHEPPY FLS (1949-2017)

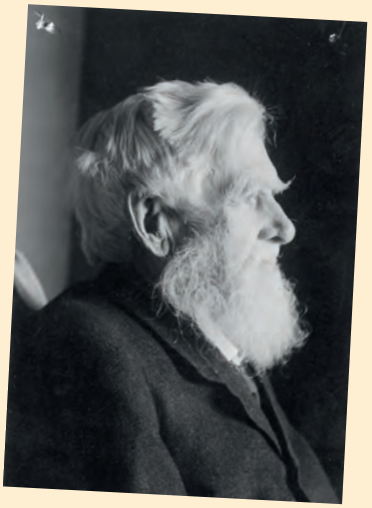
It was with great sadness that we learned of the death of Andrew Sheppy FLS in May. Andrew became a Fellow of the Society in 1979, serving on our Programmes Committee for over 21 years. We will remember his lectures with great fondness, particularly on selective breeding for colour at our conference 'Colour and Design' in 2007, where he spoke humorously about the 'designer chicken'.

One of the UK's leading livestock conservationists, Andrew was Director of The Cobthorn Trust in Somerset. His expertise in the conservation of man's commensal and food species, and their related wild species, was unparalleled, and Andrew mentored many young conservation biologists. He was one of the founders of the Rare Breeds Survival Trust (RBST), serving as a Trustee for many years. Among his many plaudits he was an honorary lecturer at Bristol Vet College, winner of the Marsh Christian Trust Award for Conservation Genetic Bio-Diversity and founder and President of the Rare Poultry Society.

WALLACE AND COLOURATION

Alfred Russel Wallace's Great Contribution

Alfred Russell Wallace (1823–1913), the father of the field of animal colouration, organized external appearances of animals and plants into a series of important functional categories. In so doing, he wanted to demonstrate the utility of colours and patterns for their bearers, not as creations to please humans or as artifacts resulting from exposure to heat or light as Victorians imagined. He placed the appearances of animals and plants into six categories.



ABOVE:
Alfred Russel Wallace towards the end of his life
© The Linnean Society of London

1. Protective colours

Wallace believed protective colours were extremely prevalent in nature, and gave numerous examples such as white animals living in the arctic, and transparency in oceans (now called background matching). Other mechanisms by which animals avoid detection were being unearthed during Wallace's lifetime. Dark dorsal pigmentation but light ventral pigmentation to reduce self-shadow was being investigated by Abbott Thayer (1849–1921), an American artist who used simple wooden models to convince biologists of the difficulty of seeing such objects compared to a model of uniform colour. Wallace knew of this demonstration, and he discussed it briefly in the second edition of *Darwinism* although never elaborated on it. Additionally, he never recognized the importance of disruptive colouration that breaks up an animal's outline hindering its detection, even though Thayer was writing about this during Wallace's lifetime.

BELOW:
A leopard (*Panthera pardus*) intently watching an ambling African porcupine (*Atherurus africanus*) in Katavi National Park, Tanzania are examples of Wallace's categories of crypsis (protective colours) and warning colours respectively © Tim Caro

2a. Warning colours of creatures specifically protected

Prompted by a question from Charles Darwin asking why insect larvae were so conspicuous, given that as non-reproductives they could not fit into Darwin's theory of sexual selection, Wallace linked conspicuousness to advertising toxicity in caterpillars. This idea was developed and renamed aposematism by evolutionary biologist Edward Poulton (1856–1943). Wallace described aposematism in detail, especially in the Heliconidae and Danaidae butterflies, but only loosely addressed the difficulty in explaining its evolutionary origin. Novel, conspicuous prey will be easily discovered, and their rarity will make it difficult for predators to learn to avoid the colour signal. There are several solutions to this conundrum: grouped conspicuous prey can educate predators; there may be a gradual evolutionary change from cryptic to conspicuous colouration rather than a sudden appearance; an emergence from sexually selected signals; aposematic prey may survive attack; or dietary conservatism and neophobia in predators provide a window through which conspicuous prey can evolve.

2b. Warning colours of defenseless creatures mimicking (2a)

Wallace ascribed mimicry to defenseless animals resembling protected (defended) species (subsequently named Batesian mimicry, after his expedition companion, Henry Walter Bates) and Wallace advanced three laws: i) animals that resemble each other inhabit the same area, ii) resemblances are limited to certain groups (models) that are abundant and have special protection, and iii) species that mimic these dominant groups are less abundant. The first two have been confirmed and the third holds true in general.

Wallace initially accounted for the similarity of mimics and models, when both are protected, as a local adaptation to a similar environment, but quickly determined that there was another explanation having read Fritz Müller's account. He understood that the costs of educating predators could be reduced if inedible species resembled each other, especially when viewed from a distance, and that rarer species would benefit disproportionately. Remarkably, Wallace recognized that there is a continuum of mimic distastefulness, presaging modern debates about quasi-Batesian and various forms of Müllerian mimicry.

3. Sexual colours

RIGHT:
Male sooty grouse *(Dendragapus fuliginosus)* in Olympic National Park, Washington State, USA, shows its yellow throat air sac used in displays when competing for females. Wallace thought that such yellow colouration resulted from colouration of underlying fatty tissue and stressed the need to explain its absence in the dowdy colouration of females acting through natural selection. We now know that such male colouration is driven by sexual selection
© Tim Caro

Wallace and Darwin sparred over the importance of sexual selection especially in regard to sexual dichromatism in birds. Wallace thought that colours were produced by microstructures and pigments (correct), that external colouration follows internal musculature and nerves (partially correct), and that males are coloured because of internal chemical properties like blood being red or fat being yellow (incorrect). Darwin sought to explain bright ornamentation in males from a functional perspective by means of both intrasexual conflict and female choice. Wallace's focus was on how predator-prone females avoid attack either through Batesian mimicry, or by being cryptic as in many birds. Historically, Wallace's legacy was tarnished from taking an extreme natural selectionist stance on this issue but he did agree that females may choose their mates (although not on the basis of differential ornamentation) and that heightened colour in males was associated with health and vigour.

4. Typical colours

RIGHT:
Thomson's gazelles *(Eudorcas thomsonii)* grazing on the Serengeti Plains of Tanzania. Both sexes have black side stripes, falling under Wallace's category of "typical colours". Black side stripes in artiodactyls are found in species that 'stott', a bouncing display that informs potential predators of the prey's ability to outpace and out-manoeuvre them in flight © Tim Caro

Wallace interpreted conspicuous or typical colouration in both sexes as interspecific signals either preventing hybridization, as conspicuous body parts used to deflect predatory attack, or as aspects of intraspecific communication.

To this day, the relative import of interspecific and intraspecific communication driving colour patch evolution is poorly understood. Outside of sexual selection, research on colour signals has made some progress in loosely related areas: colour change in ectotherms, colour signaling age in birds, signal amplification, pursuit deterrent signaling, and flushing prey.

5. Attractive colours

RIGHT:
Wallace thought that different colours of flowers attracted particular pollinators (as illustrated by this butterfly from Costa Rica) but we now think flower colouration can be attractive to a wider range of pollinator groups. Wallace was also at pains to debunk the idea that birds and butterflies are more brightly coloured in the tropics than in temperate regions
© Tim Caro

Remarking that British flowers (including those of trees) were predominantly white and yellow, whereas fruits were usually red, blue or black, Wallace suggested these were tapping into different visual systems of mutualists. He noted that flower size was important for attracting insects, that showy flowers lack odour but fragrant flowers are dull, that white flowers are fertilized by nocturnal moths, red flowers are attractive to butterflies, blue to bees, brown or yellow to flies, and purple flowers to wasps. Wallace's pollination syndrome is now regarded as limited because many angiosperms have generalized pollinators, with some red flowers attracting nectarivorous birds, and night-scented flowers with long narrow corolla tubes attracting moths.

Aside from brown nuts that seem selected for crypsis, Wallace observed that fruits fell into two syndromes: yellow, brown or green large smelly fruits with a protective husk that are dispersed by mammals, and red, black, blue or white small fruits lacking a husk and having no odour that are dispersed by birds. These have been broadly confirmed ecologically as well as in colour space analyses.

OUTSTANDING QUESTIONS LEFT BY WALLACE

Wallace's work on the evolutionary drivers of colouration, despite being out of step with modern sexual selection theory, was staggering. Even now there are still a string of unanswered questions arising from Wallace's intriguing works.

Protective colouration

Can we predict the ecological circumstances under which the colour, lightness and pattern of external appearances match several (compromise) or, instead, one (specialist) background type? And can we follow up on some of his many beguiling exemplars: do orange-coloured spots on sloths resemble the end of a broken branch, for instance? Is dorsal pigmentary darkening, so common in many taxa, driven principally by countershading in terrestrial groups, but by background matching from above and below in aquatic groups, as Wallace surmised?

Aposematism

Wallace also wrote about several species of aposematic caterpillar that either fully or partly avoided predation but we have yet to investigate how a suite of different predators learn about warning colouration of one prey species, the circumstances in which they eat or avoid them in the wild, and the extent to which signal honesty is recognized by different predators.

Mimicry

Nowadays, mimicry is viewed mainly in relation to toxicity, but many of Wallace's models include species with hard exoskeletons or heightened aggression, overlooked by contemporary biologists. Though he focused on mimicry in insects he was aware that Batesian mimicry occurred in birds, suggesting models were pugnacious (e.g., *Tropidorhynchus* sp.) rather than toxic, but there has been very little follow-up work.

Sexual selection

While Wallace noted that in bird species that nest in exposed places (e.g. manikins), females are drab, whereas in those that occupy concealed nests (e.g. kingfishers), females are conspicuous; he additionally provided alternative explanations for species that do not conform to this rule (e.g. king crows, sunbirds). These behavioural explanations, such as vociferous nest defense, have yet to be investigated properly. If we start viewing crypsis as being driven by intense predation risk, we will be led to questions concerning which predators are involved, predator visual systems, nest site choice, and conflict over sexual dichromatism in species with biparental care.

Separately, Wallace remarked on butterflies, birds and mammals living in the same locality resembling each other: hares, marmots and squirrels in Europe are red with black feet, but in Central Asia are yellow with black heads. No one has attempted to explain this.

Interspecific signaling

Diverse forms of interspecific signaling include antipredator signaling, food acquisition, thwarting parasites, acquiring hosts, agonistic signaling, and reproduction. At present there is no predictive framework as to which ecologies will favour these forms of communication in nature.

Plants

Wallace knew the colour of green leaves was due to chlorophyll but dismissed the colours of decaying leaves as having any use. Contemporary biologists see autumnal colours of deciduous trees requiring explanation and have pitted conventional photo-protection hypotheses against aposematic signaling to insect herbivores. Wallace recognized that some leaves mimic stones, some sympatric flowers resemble each other to attract common pollinators, and some fungi and plants may be Batesian mimics. Most of these observations have yet to be investigated systematically.

Despite skyrocketing advances in the field of colouration, Wallace's specific examples and generalizations about colouration patterns are still sufficiently provocative to demand continued investigation more than a century later. There is work to do!

Professor Tim Caro, Department of Wildlife, Fish and Conservation Biology and Center for Population Biology University of California.
Read the full paper '*Wallace on Coloration*', published in *Trends in Ecology and Evolution*.
http://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347(16)30178-1

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Lampblack and Lead

DISCOVERING NATURE PRINTING

> "A fresh leaf is rubbed with verdigris and carbon; soaked in the right amount of colour it is printed on one of two large sheets of paper, so that an almost life-like image remains."
>
> **Girolamo Cardano, *De Subtilitate*, Book XIII (1550)**

To the uninitiated, nature printing may seem like an extension of the 'potato-printing' many of us tried at school. Yet the medium has played a major role in the development of natural history texts since the Late Middle Ages.

One thing that hundreds of years of experimentation have shown is that there are no strict rules, and many degrees of complexity are possible, whether you are trying to create a taxonomically useful image or creating an artwork that utilises natural textures. Prints from pressed and inked botanical specimens usually show an amazing amount of detail; reconciling the right amount of ink to pressure on the page comes with practice—too little and the print is unclear, overload it and the print will lose detail. There is a voyage of discovery to be made into this world of fascinating printing techniques.

The Evolution of Nature Printing

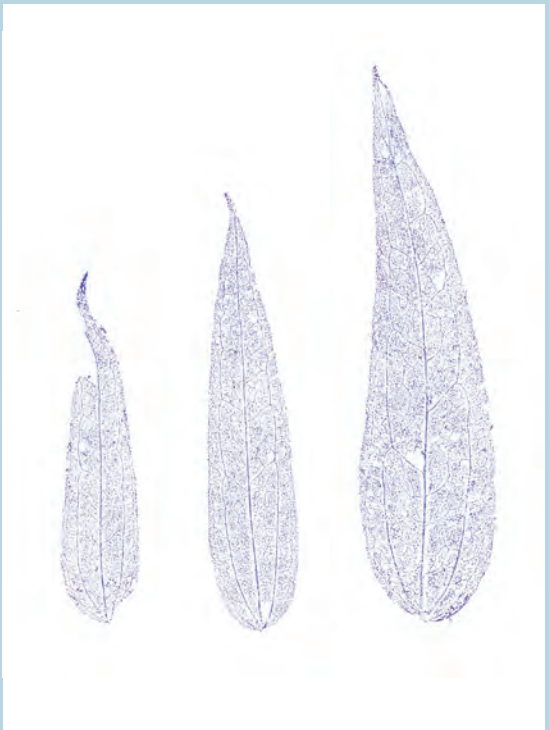
Perhaps the best reference work for the history and function of nature printing is Roderick Cave's *Impressions of nature: a history of nature printing* (2010). Works that used printed specimens for identification can be traced back as far as physician Conrad von Butzbach's *Codex Auratus* in 1425. Von Butzbach coated paper with oil and used soot from a candle flame to create an impression of the plant specimen. The Late Middle Ages saw a growing interest in plants used for their medicinal properties, as well as the establishment of several botanic gardens (e.g. Pisa in 1543, Padua and Florence in 1545), and the rise of the *Herbal.* An accurate print could help physicians identify the correct species for their medicinal blends.

A similar attempt at nature printing was made by Leonardo da Vinci (1452–1519) who inked plants with lampblack and pressed them by hand onto the paper—his work *Codex Atlanticus*, produced between 1478–1519 and now housed in Milan's *Biblioteca Ambrosiana*, shows a sage leaf print reproduced this way. By the late 1600s, the methods and means by which to create a nature print had spread across Europe, and by the 1700s works like *Botanica in Originali* (1733) by Johann Hieronymus Kniphof (1704–63) were being produced, where additional colours were being hand painted onto the original print.

The 19th century, however, witnessed several leaps forward in nature printing techniques. One of the earlier successes was the work of English botanist Anna Atkins (1799–1871), regarded by some as having produced the first photographic book. She had grown up around science (her father was a chemist and zoologist), and was inspired by polymath Sir John Herschel's work with cyanotypes. Her work entitled *Photographs of the British algae: cyanotype impressions* (1843) used the cyanotype process, whereby a specimen is arranged on paper treated with potassium cyanide and ferric ammonium citrate, and placed in direct sunlight. The paper reacts, turning blue, but stays white where the specimen was placed, creating a print of the species. Only ca. 13 copies of this work exist, one of them being in the library at the Linnean Society.

Another fascinating technique is the Japanese art of *gyo-taku* (fish-impression), which dates back to the mid-1800s. Fishermen would rub the fish with non-toxic sumi-e ink and then 'print' them by pressing rice paper on top. (More recently, an indirect method has been developed: the paper is first pasted on the fish using rice paste, then a cotton ball covered in silk is used to spread ink on the paper, and the detail of the fish scales will emerge.)

While nature printing had already produced some incredible works, previous methods had proved generally unsatisfactory because of problems achieving uniform impressions, and the problem of wear on the plants, which greatly limited the number of prints possible from any one specimen. The Holy Grail for printers was to find a 'commercial' means of nature printing—being able to take a large number of reproducible prints from one specimen (rather than 'monoprinting'). It was not until the mid-1800s that the indirect method of nature printing was invented by Alois Auer (1813–69) and Andreas Worring (ca. 1806–unknown) at the Imperial Printing Office in Vienna in 1852, and improved by Henry Bradbury (1831–60). Auer's method was to press a plant specimen onto a softened lead sheet, leaving an impression that could then be 'lifted' onto an electrotype copperplate. This plate could then be used repeatedly, and



RIGHT:
A nature print of skeletonised *Clematis* leaves

different colours could be added pre-press. Bradbury had studied Auer's discovery whilst in Vienna and patented his own version in London, unfortunately without acknowledging that the idea had originated with Auer. The controversy that followed is captured in *The nature-printer: a tale of industrial espionage, ferns and roofing lead* by Simon Prett and Pia Östlund (2016), and the dispute is said to have been a factor in Bradbury's suicide at 29. Bradbury's stunning books, *The ferns of Great Britain and Ireland* (1855) and *The nature-printed British sea-weeds* (1859–60) were published shortly before his death in 1860. *The nature-printer…* also explores Östlund's quest to re-create Bradbury's complex printing technique, a rare fusion of science, art and industry, which effectively disappeared a century and a half ago. The Society holds a beautiful limited edition copy of this title.

While nature-printed works enjoyed considerable success (even Erasmus Darwin owned a nature-printed plant guide: **https://exhibitions.lib.cam.ac.uk/curatorforaday/artifacts/erasmus-darwins-field-guide/)**, they were mainly limited to subjects that were almost two dimensional in nature, and so fell out of favour as a commercial process.

Nature Printing at Home

The door to the fine art of nature printing was opened for me by the Linnean Society's recently-elected Foreign Member, Dr Frederick (Eric) Hochberg. Eric, a cephalopod specialist, also founded the Nature Printing Society in the USA in 1976 **(http://www.natureprintingsociety.org/)**. The Nature Printing Society's Guidebook, *The Art of Printing from Nature*, provides an excellent overview.

I had been tinkering with some collagraph printing using pressed leaves. This led to some experimentation with production of skeletonised leaves—particularly prized in the heyday of nature printing as they showed the amazingly intricate filigree venation of the leaf—using the supposedly fool-proof method of boiling leaves in caustic soda for 2–3 hours. Apart from ruining a few saucepans and filling the kitchen with fumes, this has proved only partially successful. The narrow lanceolate evergreen leaflets of *Clematis armandii* are fairly tractable, as are the compound leaves of *Nandina domestica* (heavenly bamboo), but tender herbaceous plants such as *Alchemilla mollis* disintegrate to a pulp. It is a good way to appreciate the skill and experimentation of the nature printing pioneers.

When printing, once you have achieved your initial results with a single tone, the next challenge is introducing different colours, to generate an image that looks like a watercolour. Beautiful images of simple leaves can be produced relatively easily, but there are endless possibilities with colour and arrangement. There's no doubt that a quick course is a good place to start, and Pia Östlund herself will be running courses in Letchworth Garden City, Cambridge, and London's Chelsea Physic Garden in summer/autumn 2017.

Elizabeth Rollinson, Executive Secretary
elizabeth@linnean.org

Recommended reading

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Gyotaku images: http://www.odditycentral.com/pics/gyotaku-the-traditional-japanese-art-of-painting-fish-with-actual-fish.html

TOP:
The brown algae *Cystoseira granulat* from Anna Atkins' *Photographs of British algae: cyanotype impressions* (1843) © The Linnean Society of London

MIDDLE:
Alois Auer's method of plate-making revolutionised nature printing, which Henry Bradbury refined for his book *The nature-printed British sea-weeds (1859-60)* © The Linnean Society of London

BOTTOM:
Plate 16, the male fern or *Lastrea filix-mas* from Henry Bradbury's incredible *The ferns of Great Britain and Ireland (1855).* © The Linnean Society of London

FORTHCOMING EVENTS 2017

30 June **Day Meeting** **9:45–19:00**	**Sir Joseph Dalton Hooker – The Making of Modern Botany: A Bicentenary Celebration** Speakers include: Dr Jim Endersby, *University of Sussex,* Dr Nina Schuback, *Curtin University, Western Australia,* Cam Sharp Jones, *Royal Botanic Gardens, Kew* and Dr Mark Carine, *Natural History Museum, London* Venue: Jodrell Building, Royal Botanic Gardens, Kew, Richmond **Registration is essential: http://bit.ly/2knzDG2**
8 July **Fellows' Event** **12:30–17:30**	**Conversazione 2017** Speaker: Professor Simon Hiscock, *University of Oxford Botanic Garden* Venue: University of Oxford Botanic Garden **Registration is essential: www.linnean.org/Conversazione-2017**
11 August **Special Event** **18:00–21:00**	**Burlington House Courtyard Summer Late - Colours of Burlington House** Displays and activities relating to colour Registration for some activities required; see website for details
7 Sep **Day Meeting** **Time TBC**	**Plenary Meeting of the Taxonomy and Systematics Committee of the Linnean Society of London** **Registration essential: www.linnean.org/events**
14 Sep **Evening Meeting** **18.00–19.00**	**Modelling and projecting global land-use impacts on local terrestrial biodiversity: the PREDICTS project** Speaker: Andy Purvis, *Natural History Museum, London* **Registration essential: www.linnean.org/events**
16 Sep **Lunchtime Lecture** **10.00–17.00**	**Open House London 2017** The Linnean Society opens its doors to the public No registration required
28 Sep **Day Meeting** **Time TBC**	**British Society for Parasitology Autumn Symposium 2017** Organisers: Prof Russell Stothard, *Liverpool School of Tropical Medicine* and Dr Bonnie Webster, *Natural History Museum, London* **Registration essential: bsp.uk.net/2016/10/04/bsp-autumn-symposium-2017/**

Please check our website for other events not listed here

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Are you interested in becoming a book reviewer for one of our in-house publications? Short book reviews will be published in either *The Linnean* or *PuLSe*. Guidelines for reviewers are online—if you would like to volunteer your expertise please contact Gina Douglas (Archivist Emerita and Editor of *The Linnean*) at **gina@linnean.org**

Burlington House Courtyard Summer Late 2017

Colours of Burlington House

11th August 2017 18:00-21:00

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See the Burlington House Courtyard like never before and discover the six learned societies that reside here. Their aim is to further the study of art, history and science, and share it with audiences around the world.

Join us for our second annual Courtyard Summer Late. From talks to hands on experiments, each society will have a unique programme for audiences of all ages revolving around colour. Visit the Linnean Society to see some of our stunning colourful collections and try your hand at making your own natural paints and dyes. (Some activities will require booking.)

Visit our website for more details.

Farewell to Victoria Smith

Buildings and Office Manager

© Leonie Berwick

In May, after 11 years, the team at the Linnean Society said a sad but fond farewell to our intrepid Buildings and Office Manager, Victoria Smith. Victoria has played an integral part in the running and operation of the Society, often taking on many extra responsibilities during changeovers in senior staff. After joining the Society in 2006, she oversaw the refurbishment of our historic Meeting Room. Subsequently she worked with the Society's then Treasurer, Prof Gren Lucas, on the refurbishment of the Library and Tower Rooms, and helped to manage the installation of the lift, making the building much more accessible.

Victoria has also been vital in keeping Burlington House in working order; after several floods due to persistent rain, she was tenacious in persuading the building's landlord to install overflows on the roof. She is also a regular face at Society meetings where she has consistently provided support, for the Tercentenary year in particular.

Not only integral to the Society, she has provided administrative support to the Chair of the Courtyard Societies Group and in doing so became friends with many of the Courtyard Society staff.

Prior to her role at the Society, Victoria volunteered at several ape sanctuaries and completed an MSc in Primate Conservation, which included four months of research in the Sabangau forests of Central Kalimantan, Borneo. She went on to become a Primate Keeper at Monkey World Ape Rescue Centre in Dorset, UK, and as a Project Co-ordinator for the Orangutan Foundation UK. She occasionally volunteers at the Center for Great Apes in Florida **(http://www.centerforgreatapes.org/)** and is a Trustee for the Borneo Nature Trust, a charity which supports the work of the Borneo Nature Foundation **(http://www.borneonaturefoundation.org/en/)**.

Victoria will be relocating to Poole in Dorset to be closer to her family but will be providing some ongoing support for the Society remotely. Her replacement will be announced in the coming months, but in the meantime, please join us in wishing Victoria all the very best for her future, and to thank her for all of her hard work and dedication.

The LINNEAN SOCIETY of London

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PULSE

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