

PULSE

Issue 11
August 2011

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

Miss Emilia Noel - One of the first female Fellows

Emilia Frances Noel (1868–1950), grand-daughter of the 1st Earl of Gainsborough, was elected in 1905 as one of the first female Fellows of the Society. Her proposers (all male) were E.G. & J.G. Baker, D. Brandis, C.B. Clarke, J.F. Duthie and O. Stapf. A few other women had been admitted the previous year including the lichenologist Annie Lorrain Smith and the antiquary Nina Frances Layard. Though not a Fellow, Emilia's cousin the 3rd Earl of Gainsborough was co-author of the *Flora of Leicestershire and Rutland* (with A.R. Horwood, an Assistant at Kew Herbarium from 1924–37).

Emilia was a keen field botanist and traveller, and merited a one-page obituary in the Society's *Proceedings* [session 162, 3 March 1951]. She attended Somerville College from 1895 to 1898, but was unable to graduate, as women were not granted degrees at Oxford until 1921. After leaving Oxford she visited India and explored Kashmir in the summer of 1901. Some of the plants she collected there are now preserved in the herbarium of World Museum Liverpool; the labels indicate that her itinerary extended far from the tourist track, and she ascended to an altitude of at least 15,000 ft. Muriel Whiting's obituary records that she later visited some 27 other countries. She published two books: the first was an account of her botanical travels in Kashmir, 'Some Wild Flowers of Kashmir', in 1903; and the second was a history of the Noel family.

She was a member of the Royal Geographical Society, and 57 sketchbooks and travel journals are preserved in their archives; these donations cover a wide range of years, and of travels,

between 1892 and 1937. Also included in this collection are notebooks containing specimens of seaweeds and bryophytes. She was also a member of the Moss Exchange Club (founded in 1896 and fore-runner of the British Bryological Society) from 1921 when living in London. She is reported to have donated a back scratcher in the form of an ivory hand on a long wooden handle to the Pitt Rivers Museum, Oxford, to whom she also sold a variety of items in 1945 and 1946.

Emilia Noel in 1887, aged 19



Noel's sketch of *Gentiana kurroo* Royle from 'Wild Flowers of Kashmir' (1937)

The Linnean Society owns a series of watercolour illustrations in several notebooks, which she donated to the library in 1948. They include 'Wayside and Hillside flowers seen in South Africa' (1923–24), 'South African Wild Flowers' (1924), 'Wild Flowers of Western Australia' (1929), 'Some weeds of West Indies and Spanish Main' (1935), 'Wild Flowers of Kashmir' (1937) and 'Coloured drawings of some English fungi' (various dates from 1918 to 1927).

Dr John Edmondson FLS

Message from the Treasurer

I am sure that immediately you read the heading of this piece you will assume that I am going to talk about money. I seem to have that effect on conversations with Fellows but you would be wrong in this instance. I am writing this introductory paragraph or two in place of Ruth's usual piece, as sadly she has decided that although she loved and enjoyed her job as Executive Secretary very much she has been called to take up an entirely different task in life, and candidate for the Methodist Ministry. I am sure I speak for all the Officers, Council and Staff when I say we will all miss her leadership and commitment in so many ways but particularly in the Society's drive to build up its Educational capacity.

As I write, the Society has recently advertised the vacancy for this most important post of Executive Secretary. In the meantime the staff team have drawn together to ensure the momentum of all the different elements which make the Society the dynamic and forward looking organisation that it is.

Talking of forward-looking, the Officers and Council are preparing to meet at Winchester School in September to review the 2008–12 Strategic Plan and to prepare for the next 5 year plan (2012–17). So if you have any thoughts or suggestions for improving and developing any element of the Society's activities do not hesitate to send an email or snail mail note to Victoria (victoria@linnean.org) who will be coordinating all the paper work for this meeting.

Whilst paperwork is in my thoughts I am reminded that this is the first digital edition of *PuLSe* where the majority of Fellows will be reading this text from their screens. Of the 2,372 Fellows the Society holds 1,846 email addresses and so this will be a major test to see how current they all are. This leaves the 526 Fellows without email and 135 others that have requested the hard copy edition. Do let Leonie know (pulseeditor@linnean.org) what you think of this new arrangement and how easy or hard it was to access the digital *PuLSe* as well as any ideas for articles for future issues.

Gren Lucas

Greetings from the President

I would like to welcome you to this issue of *PuLSe*, the first to be available as a digital edition. Being able to make the news of the Linnean Society easily accessible to all of our Fellows is of great importance. We are also hoping to involve Fellows in planning events outside of Burlington House, as you will see in Malcolm Scoble's article about the development of regional meetings (p. 3). Please do email us with your suggestions. This issue encompasses a variety of topics, including the successes and frustrations of conservation and release programmes of gibbons in Vietnam (pp. 4–5), an interesting find in our archives (p. 7) and some fascinating information about one of the first female Fellows admitted to the Society (p. 1).



I believe we have a very exciting meetings programme for the remainder of the year and I looking forward to meeting many of you in Burlington House, the Royal Society of Medicine, Royal Botanic Gardens, Kew, the Yorkshire Society of Biology and the joint Sherborn meeting at the Natural History Museum, London.

© Victoria Smith

I would also like to take this opportunity to wish our departing Deputy Librarian Ben Sherwood all the best for his future and warmly welcome his replacement, Elaine Charwat.

Vaughan Southgate

The Linnean Society Christmas Card

This year the Society is looking to its talented Fellows for a suitable image to use for our 2011 Christmas card. Please send in your entries to claire@linnean.org by 30 September 2011.

One entry per person; please note that late entries will not be accepted. Please ensure you send your image or photo as a high resolution JPEG (it should be at least 1–2Mb in size) and that the image does not breach copyright.

We look forward to receiving your entries!



© Leonie Berwick

Regional Meetings: a call to the Fellowship for proposals

The Linnean Society values enormously its central London rooms, which provide a location allowing Fellows, both UK and foreign, and visitors access to the heart of the Society. While the quality of the Society's programme of lectures and meetings undoubtedly explains the many full houses experienced by audiences and participants, the access provided by Burlington House is assuredly a key factor in underpinning the vibrancy of the events. Furthermore, many other societies make use of the Society's rooms either for events jointly organised with the Linnean or for holding meetings of their own.

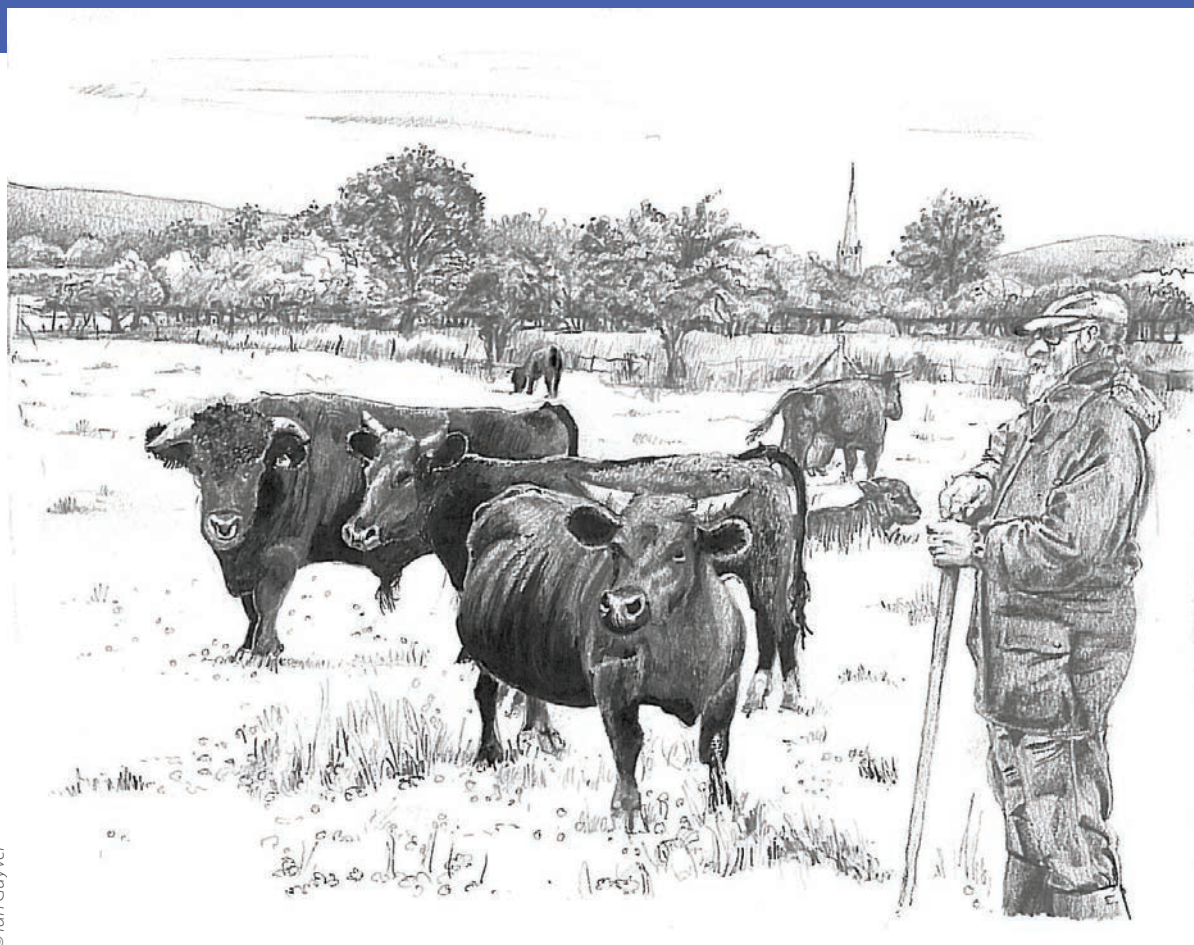
Yet the Fellowship of the Society is highly distributed. The introduction of podcasts of lectures on the Society's website has certainly enabled a wider availability to the content of meetings by those unable to attend in person. But it was proposed by Council recently, and specifically by our President elect, that holding regional lectures and gatherings would be advantageous for all concerned. Such a move would be valuable for those Fellows and others who

live outside London, and who have a regional enthusiasm, and helpful in extending the reach, impact and, we hope, membership, of the Linnean Society itself. The proposal fits well with the Society's strategy, which emphasises its outward looking and inclusive approach.

The Programme Committee, the body that plans the Society's meetings, accepted Council's proposal with alacrity and readily agreed to a small component of the Programmes Committee's budget being allocated to this initiative on a yearly basis to cover costs (travel for a speaker for example). We intend, at least initially, to hold one of these regional events each year.

Fellows interested in proposing a regional meeting are asked in the first instance to contact Claire Inman (claire@linnean.org) to discuss their suggestions.

Malcolm Scoble
Zoological Secretary



© Ian Guyver

Fellows' Field Trip

On 24–26 June 2011, Fellows of the Linnean Society enjoyed a three-day field trip, organised by Pat Morris FLS, to Cheddar Gorge including a visit to the Somerset Levels. The field trip explored contrasting landforms around Cheddar and examined their special wildlife. Fellows first visited a farm owned by Andrew Sheppy FLS to experience practical conservation management first hand, then went on to visit Cheddar Gorge and limestone sites, including woodland where key dormouse research was initiated 30 years ago. The final day of the field trip included a visit to the Somerset Levels to see wet grazing land habitats and peat workings. Shown here is an image by Ian Guyver, who took part in the trip.



Fig. 2. Lee Lee

In 2001, Monkey World Ape Rescue UK and Pingtung Wildlife Rescue centre Taiwan, approached the Vietnamese authorities in order to set up an in situ project that would make a difference in stopping illegal trade in Endangered Primates and support wild primate conservation in South Vietnam.

After years of effort from all sides, the Dao Tien Endangered Primate Species Centre, located in Cat Tien National Park (CTNP) in southern Vietnam, was opened in 2008 (Fig. 1). All parties agreed that only threatened species of primates belonging to this region would be brought to the Centre and that the Vietnamese Forestry Protection Department (FPD) would work with Dao Tien and CTNP to confiscate any such primate that was discovered illegally, with the development of Government guidelines facilitating healthy individuals to be rehabilitated and returned to the wild. All the parties involved (the Ministry of Agriculture and Rural Development, the FPD, CTNP, Monkey World and Pingtung) agreed on this strategy. The four primate species consisted of golden-cheeked gibbons (*Nomascus gabriellae*), black-shanked douc (*Pygathrix nigripes*), silvered langur (*Trachypithecus margarita*) and pygmy loris (*Nycitebus pygmaeus*). The Endangered Asian Species Trust Charity (EAST: Charity No 1115350, founded in 2007 by Monkey World Ape Rescue UK)

oversees the long-term support for the centre.

One of the first confiscated gibbons arriving at Dao Tien was a 20-year-old male called Lee Lee (Fig. 2). The remaining wild populations, estimated at less than 6,000 in Vietnam, are threatened by habitat destruction—expanding cashew, coffee and rubber plantations and a non-sustainable level of hunting for meat, traditional medicine and the pet trade. Lee Lee was kept as a tourist attraction, at a petrol station, in a small cage on his own (Fig. 3), unsettled by chickens running below him and the boom of a generator, for over 18 years. When confiscated and brought to Dao Tien in August 2008, surprisingly he was in good physical condition, not suffering from malnutrition like so many others, but it soon became clear that Lee Lee's weakness was the absence of any essential gibbon social skills.

Gibbons generally live in small monogamous family units—male, female and offspring. Young gibbons leave home at around 6–8 years of age to find a mate who they can stay with for life, with life spans as long as 35 years recorded in the wild. Lee Lee, illegally taken from the wild as an infant, was deprived of any social interaction with his family. The best option for Lee Lee was a female gibbon to pair with and educate him in natural gibbon behaviour. Trang Bom, a healthy six-year-old female was selected. It was positive at first with grooming through the mesh; Lee Lee appeared as if he knew what to do. The slide was opened and the two quietly swung around each other, making happy contact calls. Then when they approached, with neither gibbon knowing what to do, it escalated into a nervous scuffle. Sadly after a few weeks of introductions both were losing confidence, something that is fundamental to the successful rehabilitation of any primate, and the two were permanently separated.

On Christmas Day 2008 we rescued Merry, a female gibbon estimated to be nine years of age. After being confiscated on the road heading to the markets of Ho

Primate Release

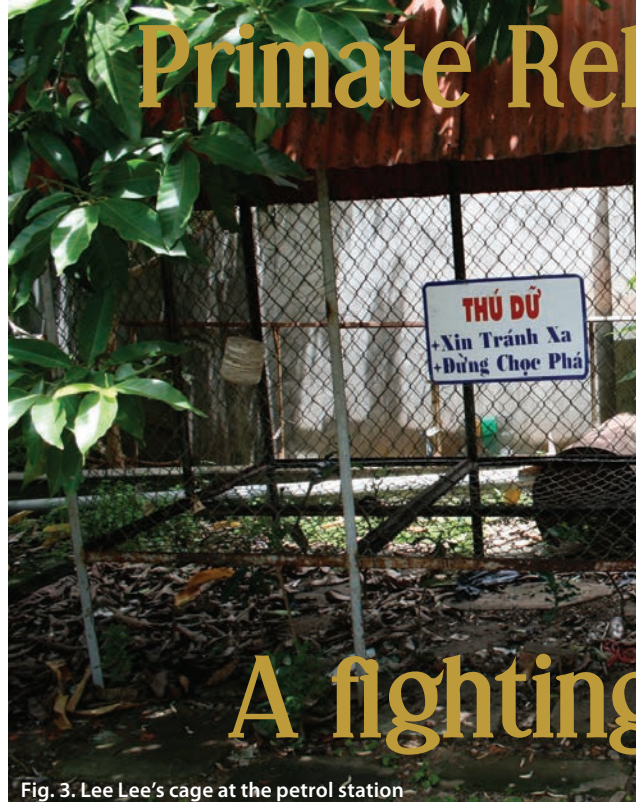


Fig. 3. Lee Lee's cage at the petrol station

A fighting

Chi Minh City, being transported in a canvas bag, she was in extreme shock and curled up on the floor of the cage. We quickly constructed a bamboo wall on the side of her cage, to provide more cover, and she immediately climbed to the top of the cage, feeling more secure. We noticed Merry was not using one leg. After veterinary examination, it appeared no bone was broken just nerve paralysis, possibly from the fall when being hunted or during her traumatic journey. As Merry settled into her new environment the use in her leg returned and gradually she showed herself to be a strong female displaying normal gibbon behaviour and an excellent potential candidate for release.

Merry passed all health and DNA checks and so was selected to pair with Lee Lee. Merry's behaviour towards Lee Lee was in contrast to Trang Bom's; she would approach Lee Lee soliciting his attentions. At first Lee Lee would keep moving away, then, when it became too much for him, he would lash out like he had done with Trang Bom. This is where Merry came into her own; instead of retreating, Merry would chase him and 'scold' him for behaving badly and Lee Lee would pull back. Soon afterwards

Fig. 1. Map of the island of Dao Tien



Fig. 4. Phase one introduction cage



Rehabilitation:

g chance?



All images courtesy Marina Kenyon and Dao Tien Endangered Primate Species Centre

will be collared and transferred to the release site, a beautiful area of secondary forest historically known to hold gibbons but where now there are none. From gibbon surveys and a PhD study on the ecology of the golden-cheeked gibbon, it is clear that the gibbons can be highly adaptable and survive in poor forest with little closed canopy—a trait that creates the potential for a more positive future for this gibbon species. In time, rehabilitated gibbons will, we hope, establish new populations in areas of forest that historically used to hold them, but at present do not.

Primate rehabilitation, however, is not easy and is notoriously expensive, can be time consum-

ing with limited success, and thus is often considered of little benefit to true conservation. However, when law enforcement and confiscation are looked at in detail, it is an unavoidable necessary limb of primate conservation that cannot be dismissed or abandoned if first results are not successful.

Merry would approach him again being 'friendly'. This was the procedure for the first few days. It was clear that both animals were well-suited, but Lee Lee needed to be coaxed into the role of a gibbon (Fig. 4). On day three, Lee Lee mated with her; this is vital for the development of a strong pair bond.

By March 2010 the pair were strong, both in health and bonding, and on track for release. They were both radio collared (Fig. 5) (the first gibbons ever to be fitted with such collars) and placed in a 20ha semi-forested enclosure for forest training. The viability of collaring gibbons was assessed over a one-year period, vital if any post-release data was going to be gained to help develop release guidelines. No problems were found, which was excellent, but unfortunately using radio signals in a secondary forest proved problematic; a signal estimated to travel 7km struggled to reach 700m. GPS collars would be required if any serious post-release data was going to be possible, and with the advent of new technology this is now a viable option.

In May 2011 we had confirmation of the pair bond between Merry and Lee Lee, when Merry gave birth to a baby. (Family is paramount in Asia and the Vietnamese primate care staff all smiled, saying, "How good, after 18 years on your own, that you can still be a father.") The infant was named Noel.

Now in July 2011 we are ready with GPS collars for the final test. Over the next few months the family of three



Fig. 5. Merry fitted with radio collar

For strong enforcement of wildlife legislation and protection of the wild populations, confiscated primates (Fig. 6) need a place to go. Rescue centres have limited capacity and when full are unable to support the law enforcement authorities with animal placement, sadly resulting in one of the following:

1. on payment of a fine, the animal is returned to the perpetrator
2. rescue centres are forced to accept animals and house them in unsatisfactory conditions
3. primates are released into the nearest forest whether suitable or not, with no health checks or post-release monitoring

For the sustainable management of rescue centres, and for them to continue working with law enforcement bodies, successful guidelines for rehabilitation are needed (including those for release), freeing up space for continued law enforcement and confiscation. The guidelines requested by the Vietnamese Government will help regulate the present trend for unmanaged releases and reduce the disease risk for wild populations.

The Dao Tien Endangered Primate Species Centre has successfully released black-shanked douc to the wild and has accumulated data from releases of pygmy loris over a three-year period, revealing that, at present, most pygmy loris released back to the forest do not survive. This highlights the need for more research into successful rehabilitation before this small nocturnal primate becomes extinct. Valuable post-release data from two families of golden-cheeked gibbons should be available next year. Lee Lee's family is expected to be one of these, marking the end of a long journey for Lee Lee from the wild, through a very unpleasant life at a petrol station, rehabilitation at Dao Tien under the guidance of his new partner Merry and finally back to the forest.

For more information and updates, progress of our rescued primates and how you can help support our work, please go to www.go-east.org.

Dr Marina Kenyon
Co-director Dao Tien Endangered Primate Species Centre, South Vietnam



Fig. 6. Forestry Protection Department working with Dao Tien

The genus *Sarracenia*—Linnaeus had stated that the idea of a carnivorous plant was “against the order of nature as willed by God”.

From the Archives

"I'll let him know his place in nature"

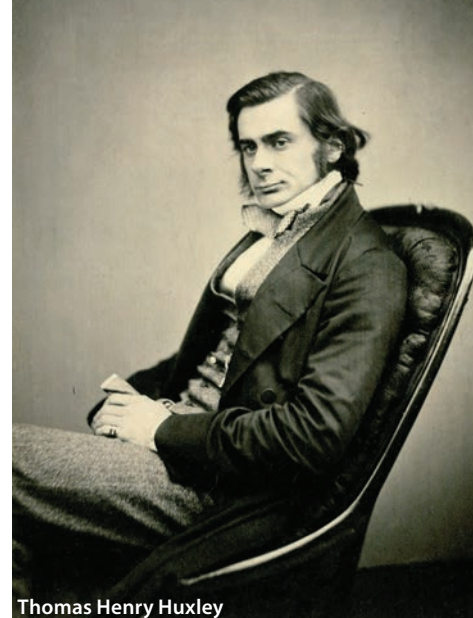
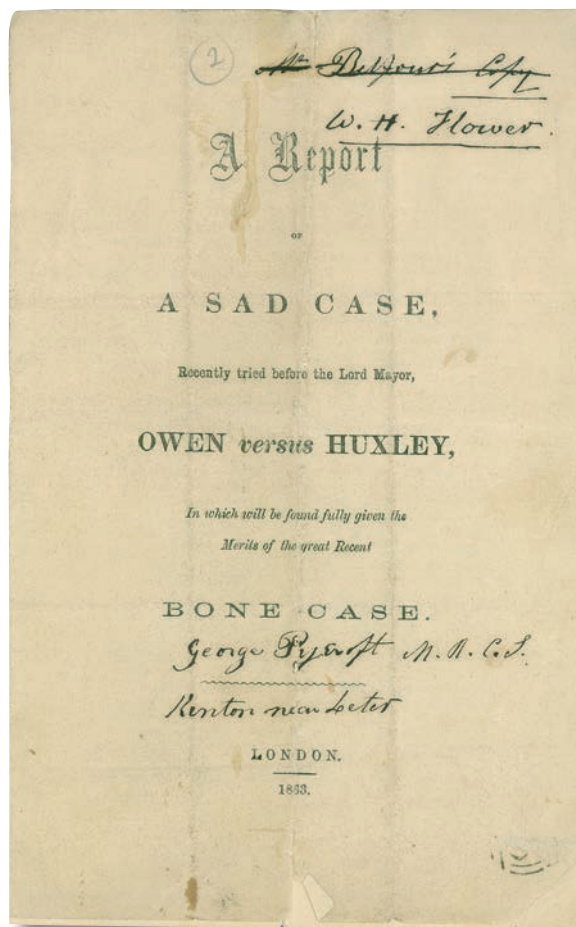
Whilst sorting through some archive materials, Linnean Society volunteer Alan Brafield found a short document dated 1863 entitled 'A report of a sad case, recently tried before the Lord Mayor, Owen versus Huxley'. Upon reading the article Alan realised that the document, authored (though published anonymously) by George Pycroft, was a tongue-in-cheek account of a fictional court case between Richard Owen and Thomas Henry Huxley. Devised as a short play, the piece was intended to highlight the perceived vulgarity of Owen and Huxley's very public clashes.

Owen and Huxley clashed continually over their theories, the most famous being Huxley's debate with Bishop Samuel Wilberforce (who had been coached by Owen) regarding Charles Darwin's theory of evolution by natural selection in June 1860, and what became known, in parody form at least, as the Great Hippocampus Question. In 1857, Owen presented a paper to the Linnean Society stating that his anatomical studies of the primate brain showed, in his authoritative view, that humans were separate and distinct from all other primates and mammalia. Though Owen admitted that there were many similarities between man and ape, he supported his theory by asserting that the human brain was the only one to have a hippocampus minor (a ridge in the floor of the posterior horn of the lateral ventricle). Huxley, perhaps now regarded as the superior anatomist, took issue with Owen's findings and set out to prove him wrong with the results of his own dissections.

The following year, with his paper entitled *On the Theory of the Vertebrate Skull*, Huxley publicly rejected and disproved Owen's theory with a number of demonstrations (including one by William Henry Flower FLS), with Owen eventually acknowledging that there was evidence of the hippocampus minor on display in a primate brain.

The Pycroft parody 'A report of a sad case...' casts both Owen and Huxley as two crass costermongers (Dick Owen and Tom Huxley) who have been arrested for "causing a disturbance in the streets". The arresting policeman (Policeman X) reports

hearing Huxley call Owen "a lying Orthognathous Brachycephalic Bimanous Pithecus; and Owen told him he was nothing else but a thorough Archen-cephalic Primate". Huxley even sets a live monkey on Owen's heels, saying "'twas his grandfather". Owen moves to tell the Lord Mayor that he has been attacked, both literally and figuratively, by Huxley's "lower set"



Thomas Henry Huxley

in which he includes one of Huxley's "new pals, Charlie Darwin, the pigeon fancier". Huxley, in defense, explains: "Me and Dick are in the same line—old bones, bird skins, offal, and what not." When pressed he states that all was "comfortable as long as Dick Owen was top sawyer [and could continue to] throw his dust down in my eyes". Huxley expands:

...we both cut up monkeys, and I finds something in the brains of 'em. Hallo! says I, there's a hippocampus. No, there ain't, says Owen. Look here, says I. I can't see it, says he, and he sets to werriting and haggling about it, and goes and tells everybody, as what I finds ain't there, and what he finds is, and that's what no tradesman will stand.

The Lord Mayor decides not to mete out any punishment, except to remind Owen that it would be better to prove his dissimilarity to

an ape by acting with "gentleness, forbearance and humility". To Huxley he questions whether he is in search of scientific fact or if he is, in part, simply keen to shame his rival. He asks them to "be friends" and Policeman X asks if "Huxley's monkey was to be restored to him". And yet, directly after being released from court, both Owen and Huxley end up in yet another altercation, with Huxley vilifying Owen with a sign showing primate skeletons "beginning with the gibbon, and ending with man" and saying "I'll let him know his place in nature".

What is interesting to note is that one former owner of this document may have been William Henry Flower himself, a supporter of Huxley and the eventual successor to Richard Owen as Director of the British Museum of Natural History. According to his obituary in the *Proceedings of the Linnean Society of London*, Flower re-organised the layout of the Museum, 'rejecting the scheme of Owen', creating the 'ideal Index-Collection' which became the 'prototype of other collections of like order'.



Richard Owen

A Goodbye . . .

After four and a half years with the Linnean Society, first as Assistant Librarian and, since 2009, as Deputy Librarian, Ben Sherwood will be leaving us at the end of August. Following the birth of their baby daughter in January, Ben and his wife will be moving to Harrogate, North Yorkshire, in September to be close to her family. Initially, Ben will be a full-time dad which he is looking forward to, albeit with a little trepidation!

Ben has always been a very valuable and supportive colleague, dealing ably with the whole range of general library queries and with the increasingly complex IT demands of the Society's digitised collections and the Linnaeus Link Union Catalogue. We know that many Fellows will be sad to see him go; the whole Linnean Society team is going to miss his professionalism and his cheerful presence.



. . . and a Welcome

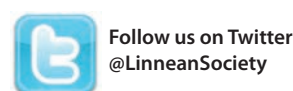
However, we have been very fortunate in finding an excellent Deputy Librarian to follow in Ben's footsteps. Elaine Charwat joined us at the end of June, having previously worked at Leeds University Library and, more recently, at University College Cork. At Leeds she worked in various research support posts and as a cataloguer specialising in foreign language and rare books cataloguing. She then took up the post of Special Collections Librarian in Cork and had in her care some outstanding Natural History collections, some of which were exhibited as part of the Darwin Bicentennial Exhibition in 2009. Elaine writes: "I have always been keen to combine my professional training in Library and Information Studies with my love for Biology and Natural History. Working for the Linnean Society Library is the culmination of this journey, and I am immensely proud to be part of this distinguished and buzzing Society."



Forthcoming Events 2011

15th Sept, 6.00pm	The new biology of ageing <i>Dame Prof Linda Partridge</i>	12th Nov Day meeting (in Yorkshire)	DNA – some modern perspectives and applications (Registration required) <i>Organised by Nigel Musset</i>
20th Oct, 6.00pm	Understanding and exploiting plant immunity to disease <i>Jonathan Jones</i>	17th Nov, 6.00pm	Linnean Society Annual Debate <i>Organised by Andrew Sheppy FLS</i>
27th Oct Day meeting	Insect conservation and biological pest control (Registration required) <i>Organised by Prof Helmut van Emden FLS and Prof Jeremy Thomas</i>	24th Nov Day meeting	The Chagos archipelago: the world's largest Marine Protected Area (Registration required) <i>Organised by Charles Sheppard FLS</i>
28th Oct Day meeting (at the NHM)	Anchoring biodiversity information (Registration required) <i>Organised by Gina Douglas HonFLS</i>	2nd Dec, 6.00pm (Book sale)	Smashing species: Joseph Hooker and Victorian Science <i>Dr Jim Endersby</i>
2nd Nov, 6.30pm (at the Royal Society Of Medicine)	Alfred Russel Wallace and the Birds of Paradise (Registration required) <i>Sir David Attenborough HonFLS</i>	9th Dec Day meeting (at RGB Kew)	Sir Joseph Dalton Hooker: A Centenary Celebration (Register www.kew.org/jdhooker)
		12th Dec, 6.00pm	Christmas Lecture (TBC)

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



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