

RELICTS OF ANCIENT FORESTS

Uncovering the Evolution of Hyperdiverse Staphylinini

After being awarded £1,000 from the Systematics Research Fund (SRF)—a fund that is jointly administered by the Systematics Association and the Linnean Society of London—the grant was used to partially finance a field expedition from 4–20 June, 2014 to the Mogok area of Mandalay Province, Myanmar. The Mogok area is of significant importance as it includes the historical 'Ruby Mines' type locality from older literature, where a great many beetle species were described from specimens collected by Alexander Fry in 1905.

A significant proportion of these species have not been collected since, including seven 'lost' species of the Solodovnikov lab's (Denmark) focal group, the mega-diverse rove beetle tribe Staphylinini. Two of these species represent isolated genera also known only from the Mogok area, and collected more than 100 years ago. The availability of key taxa for DNA-grade samples is a major limiting factor for our projects on the molecular phylogenetics of Staphylinini. Therefore, an expedition to the Mogok area was planned in collaboration with Dr Harald Schillhammer of the Natural History Museum of Vienna, Austria. Our objectives were to survey the area for intact forest habitat to collect DNA-grade samples of the abovementioned rove beetles and others for several ongoing phylogenetic projects. This region had only opened to foreigners in 2013, and we were



almost certainly the first entomologists to sample the area since historical times. As expected, the Mogok area was heavily impacted by gem mining and the removal of woody debris for firewood, but one small forest fragment was located on the northwest slope of Taung Mae. A variety of collecting methods were used including flight intercept traps, low-scale pyrethrum fogging and leaf litter sifting (combined with Berlese funnels). The final samples are being processed at the Natural History Museum of Denmark but can confirm that we have re-discovered at least three of the seven 'lost' Staphylinini rove beetles, including one of the 'lost' genera.

Some of these taxa have been included

ABOVE **Pyrethrum fogging for beetles**
© Harald Schillhammer,
Natural History Museum
of Vienna

LEFT **Tuang Mae forest relic in Mogok, Myanmar**
© Harald Schillhammer,
Natural History Museum
of Vienna

in a molecular phylogeny paper currently in publication. In this paper, we present a well-supported phylogeny of Staphylinini and propose a radical reclassification of the more pleisomorphy-rich groups that previously constituted the greatest challenge to Staphylinini systematics. Other taxa collected in Mogok, including several 'lost' species, are currently being sequenced for an additional molecular phylogeny project that aims to uncover the evolution and revise the systematics of the most speciose lineage of Staphylinini that was not explored in the previous paper. In addition to the phylogenetic projects, several taxonomic papers are submitted or planned that will re-describe the 'lost' Staphylinini that were rediscovered, and describe the approximately 15 new species in our focal group. Other colleagues at the Natural History Museum of Denmark with expertise in millipedes and arachnids are already studying the substantial amount of non-target material collected from this critical area, and we expect many exciting discoveries.

Adam Brunke
Natural History Museum of Vienna



International Women's Day Tour

Women in Focus: Inspirational Women of the Learned Societies
Tuesday 8 March 2016



Join a tour of the Learned Societies of Burlington House to celebrate International Women's Day 2016, and discover the female pioneers that blazed a trail for women in arts and science.

This special behind-the-scenes tour of the Burlington House Learned Societies and the Royal Academy of Arts will introduce you to some truly outstanding women. Learn about the female founding members of the Royal Academy of Arts, the first female Fellows of The Society of Antiquaries, the pioneers who battled for women to join The Geological Society, the first female Fellows of The Royal Astronomical Society and the women being celebrated in the Royal Society of Chemistry's upcoming 175th anniversary. Meet some of the Linnean Society heroines: focusing on their achievements and pioneering contributions, material from our archives will be on display.

Booking is via the Royal Academy of Arts. The times are still to be confirmed—keep an eye on their website for more information: <https://www.royalacademy.org.uk/exhibitions-and-events>

ABOVE The first female Fellows were admitted to the Linnean Society in 1905

© The Linnean Society of London

AdoptLINN

Join us in our role as custodians of this internationally important collection by adopting some of the most influential and beautiful works in the History of Science, often with a unique provenance.

AdoptLINN aims to support the preservation and use of these outstanding collections in research and outreach, with a view to inspiring and delighting people of all ages.

With Christmas approaching, adopting on behalf of, or in memory of, a special person is a wonderful way to celebrate their passion for natural history. There are three levels of adoption: Essential, Highlight and Treasure. Each adoptee will receive a certificate, their name permanently associated with their item and an acknowledgement on www.linnean.org and in *The Linnean*, and, depending on adoption level, a private Treasures Tour and conservation demonstration. Each fee reflects not only importance or rarity, but also the conservation needs of an item.

To find out more about AdoptLINN, email Elaine Charwat at library@linnean.org



AdoptLINN

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Patron's Lunch 2016

On Sunday 12 June 2016, The Mall in St James's Park, London, will be transformed for its largest ever street party to celebrate The Queen's patronage of over 600 charities and organisations on the occasion of her 90th birthday. The Linnean Society of London is one of these organisations; we'll be sharing our own memories of the Queen's patronage, but if any Fellows have any thoughts, messages or memories they'd like to share please email us at info@linnean.org and they'll be hosted on The Patron's Lunch website. Keep an eye on the event website (www.thepatrons-lunch.com) for more activities.



LEFT Patron Queen Elizabeth II visits the Society in 1988

© The Linnean Society of London

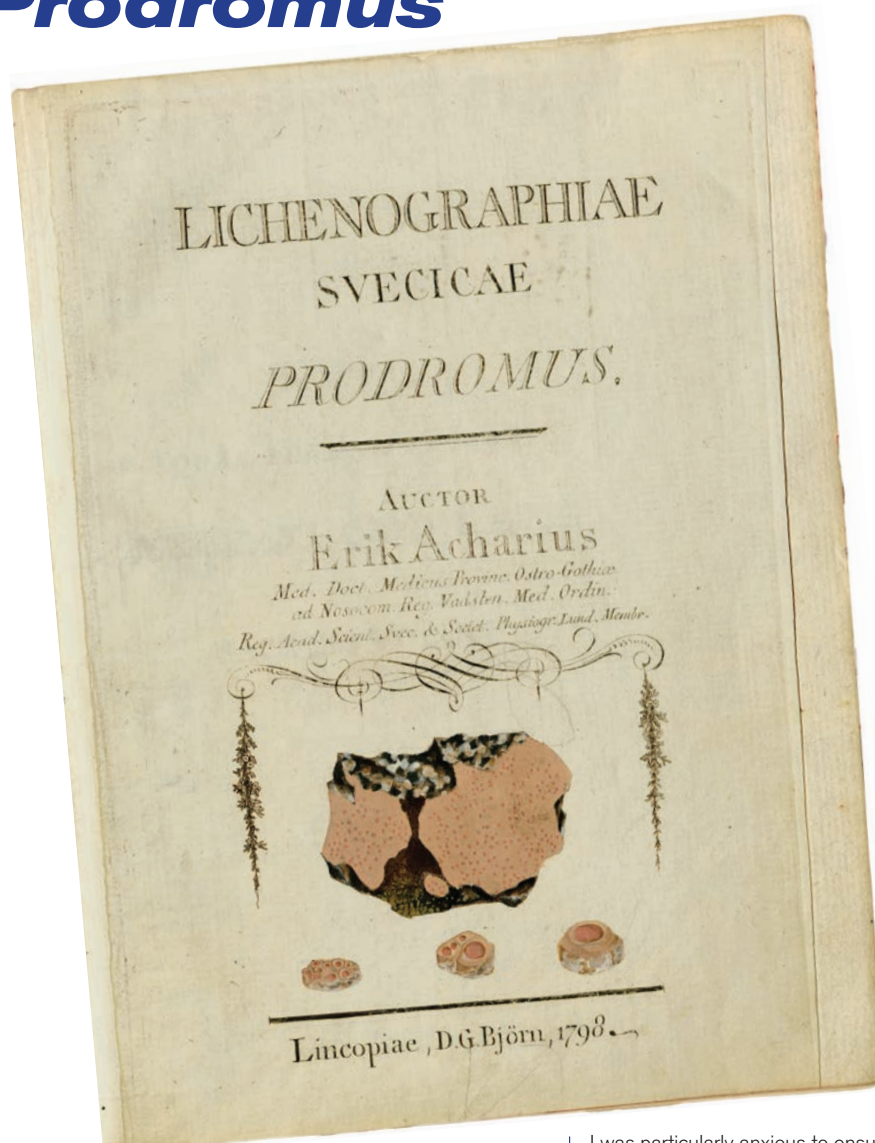
Digitising Acharius's personal copy of *Lichenographiae suecicae Prodromus*

The following proposal for the digitisation of Erik Acharius's *Lichenographiae suecicae Prodromus* (1799) was made by David Galloway prior to death in 2014: "Erik Acharius (1757–1819), Linnaeus's last student and the founder of modern systematic lichenology, was a doctor in the country town of Vadstena, where he produced four books on lichenology. The first of these appeared early in 1799 (the title page gives 1798) and was an introduction to the lichens of Sweden, being a distillation of several lichenological papers published between 1794 and 1797. Acharius sent James Edward Smith a copy of the *Prodromus* for the Linnean Society Library in July 1799, and for this gift Smith proposed Acharius as a Foreign Member of the Society. Acharius also dedicated the *Prodromus* to the Linnean Society and later sent the Society a set of named lichens mentioned in his ground-breaking volume, the *Methodus* of 1803; this important lichen collection is now in the Natural History Museum, London (NHM).

In 1992, a memorial plaque to Acharius (designed and cast by the renowned Swedish sculptor Liss Eriksson) was affixed to the end wall of the Acharius House in Vadstena under the auspices of the International Association for Lichenology. This memorial had as its major supporters the Linnean Society of London, the Swedish Linnaeus Society and the British Lichen Society, complemented by donations from the international lichenological community.

In August 2013, while researching the Acharius Archive in the Manuscripts Department of Carolina Rediviva (the University Library) in Uppsala, I came across Acharius's personal, interleaved copy of the *Prodromus*, a handsome volume with a particularly luscious hand-painted frontispiece plate (drawn and coloured by Acharius himself) and with a text replete with many hand-written changes and additions, and lists of generic, species and variety names. Clearly this was Acharius's working model for the *Methodus* of 1803, and as such a volume of considerable historical and taxonomic interest. The copy that Acharius sent to J.E. Smith for the Linnean Library has the frontispiece drawing completely blackened by age, whereas Acharius's copy is as clean and fresh as the day it was painted."

The initiative to digitise this very important work by the famous Swedish lichenologist



ABOVE **Acharius' own copy of *Lichenographiae suecicae Prodromus* (1799), interfoliated and with numerous handwritten notes by the hand of the author. The book belongs to a manuscript collection (D 122 in the D-collection) in Uppsala University Library. By kind permission of Uppsala University Library**

Erik Acharius was due entirely to David Galloway, but sadly he passed away on 6 December 2014 before this could be undertaken. David, a graduate and doctorate of the University of Otago, New Zealand, worked at the Natural History Museum, London from 1973 to 1994, becoming Senior Research Fellow in 1982, and promoted to Principal Scientific Officer and Head of the Lichen Division in 1987, before returning to New Zealand where he obtained a research position at Landcare Research in Dunedin. He was President of the International Association of Lichenology (1987–92) and received its highest honour, the Acharius Medal, in 2001. Although he will be mainly remembered for his monumental *Flora of New Zealand: Lichens*, first published in 1985, his taxonomic expertise and encyclopaedic knowledge of the history of lichenology, particularly of 18th- and 19th-century lichenologists, were frequently called upon.

I was particularly anxious to ensure that David Galloway's proposal to issue an electronic version of Acharius's personal interleaved copy of *Lichenographiae suecicae Prodromus* should come to fruition; to this end the Uppsala University Library, as well as generously providing a major source of funding, also provided the expertise for the digitisation and production of this internationally important work which can be viewed at:

<http://www.ub.uu.se/samlingar/verk-och-samlingar-i-urval/acharius/?languageId=1>

Other major sources of funding for this project were provided by the British Lichen Society and the Linnean Society of London.

This impressive and most valuable resource is a fitting tribute not only to Erik Acharius but also to David Galloway, one of his distinguished successors.

Mark Seaward FLS

ANNOTATING WALLACE'S MALAY ARCHIPELAGO

Alfred Russel Wallace's *Malay Archipelago* (1869) is a classic of scientific travel. Beloved by readers since it was published 146 years ago, it is widely available in a dizzying array of modern reprints. Yet this familiarity has led to an unfortunate paradox—while the book is rightly famous, and new reprints often include an appreciative introduction, its actual content has remained untouched. Instead the text is reproduced again and again without comment. Yet there is a great deal to reveal about Wallace's great work.

For starters, many of the main 'facts' about the book turn out to be misleading or wrong. For example, it is often repeated that 'Malay Archipelago' was the name for Southeast Asia at that time, as if were just a case of 1:1 translation, when in fact it was one of several English names. The most commonly used, in order of frequency, were: East Indies, Indian Archipelago, Eastern Archipelago, Malay Archipelago and East Indian Archipelago. Wallace used the terms Eastern Archipelago and Indian Archipelago until 1860, when for some reason, he mostly switched to Malay or Malayan Archipelago.

It is very often claimed that Wallace's book has never been out of print but Macmillan (Wallace's publisher) stopped printing the book after 1922. It was next reprinted in 1962, and with very sporadic reprints for years thereafter. It is also widely believed that the book went through ten editions in Wallace's lifetime. This derives from counting some unrevised reprints as new editions. In fact, the final edition of 1890 was the fourth.

The new edition published by NUS Press reveals Wallace's *Malay Archipelago* like never before. It begins with a 10,000 word introduction based on the most in-depth historical research programme ever undertaken on Wallace's expedition.¹ Wallace was not a modern field biologist, but a Victorian naturalist, and can only be properly understood and interpreted in the light of his original context. The introduction therefore provides a contextualised account of Wallace's life, his 1854–62 voyage and a survey of the surviving textual sources. Wallace's 250,000 word book was based on his 100,000 word voyage *Journal*, now carefully preserved in the



Library of the Linnean Society, as well as at least a dozen of his published articles and correspondence. His surviving letters were recently edited and published by Oxford University Press with a preface by Sir David Attenborough.² The historian John Bastin, in his excellent introduction to the 1986 reprint of *Malay Archipelago*, identified eight works Wallace consulted to enrich his account. The present edition identifies a further eight.

Wallace illustrated his book with 52 unique woodcuts and ten maps. It has been overlooked that the well-known frontispiece 'Orang Utan attacked by Dyaks', as well as 'Remarkable beetles' and

'Moluccan Beetles', were engraved by J. D. Cooper who was nowhere mentioned by Wallace. Cooper's name is however listed in Wallace's private address book, now housed in the Wallace Archive at the Natural History Museum, London (NHM). The handsome colour fold-out map at the front the book turns out to be rather curious. Not only is it extremely cluttered with place names irrelevant to Wallace's travels, there are even details left over from earlier publication. For example, in the middle of Borneo, where Wallace never trod, it reads: "Dutch steamer reached here in March." This is nowhere mentioned by Wallace. The map was recycled by Stanford's Geological Establishment

ABOVE Wallace praised "the shining blue *Papilio ulysses*, one of the princes of the tribe". (Donovan, E. 1800. *An Epitome of the Natural History of the Insects of India*. London.)



from the plate used to print the 'Asiatic Archipelago' in *The family atlas* (1865). Wallace's map is included as a colour fold-out in the new edition.

Wallace's 'Physical Map' repeats elements of the first map while adding lines of 'volcanic belts' and two lines which merge northeast of Celebes, including the famous 'Wallace Line'. An original map appeared in the 1870 Dutch edition by the eminent scholar of the region, P. J. Veth, which combined the features of both maps with only the minimum amount of place names. It is the clearest map in any edition. It is also reproduced in colour in the new edition.

In all, the new edition provides over 50 colour illustrations including a 16-page colour plate section with animals, plants, peoples and places that Wallace described as particularly striking. All but one of the illustrations are from 19th-century artists or photographers which helps give a sense of the period in which Wallace was writing and collecting.

The text of the new edition is annotated with more than 850 footnotes. These explain terms or topics unclear to modern readers or supply information not included

by Wallace, correct errors in the text, and provide references. Wallace usually did not give the names of the people he met or mentioned. In many cases it has been possible to identify them. Every publication and quotation in the text has also been identified. The points in the narrative where Wallace used substantial text from his manuscript *Journal* and other notebooks are noted. Wallace's presentation lists are provided as well as Darwin's private comments on the text. Veth's edition contained a wealth of corrections and clarifications that was never incorporated into English editions. Veth's information that remains relevant has been incorporated in the new edition.

Wallace referred to most plants and animals with the scientific name then current. These are meaningless to most modern readers and in many cases have been superseded by current names. Each has been annotated with the current common name, if there is one, and the modern scientific name. Several zoologists and botanists kindly offered their expert assistance to modernise the nomenclature.

The *Malay Archipelago* contains a considerable number of small inaccuracies—especially dates. Some

ABOVE The Sulawesi Dwarf Cuscus, discovered by Wallace near Macassar. It marked "the furthest westward extension of this genus and of the Marsupial order". (*Proceedings of the Zoological Society of London* 1858: 100–5.)

RIGHT Wallace described a "council-house" at Dorey "supported on larger posts, each of which is grossly carved to represent a naked male or female human figure, and other carvings still more revolting are placed upon the platform before the entrance". (Dumont d'Urville, J. *Voyage*. 1841–54)

memorable stories also turn out to be mistaken. Examples include the dramatic claim that tigers "kill on an average a Chinaman every day" in Singapore and that the Dutch Governor General committed suicide by leaping from a waterfall on Celebes. In fact the man who died, in 1855, was C. M. Visser, a former governor of the Moluccas who apparently died by accident. Similarly, Wallace's chapter XII 'Lombok—how the Rajah took the census' was sub-titled 'a folktale' in Veth's edition. These have unfortunately been cited as facts in many works about Wallace and the region.

The Preface and footnotes added by Wallace to the 1890 edition are included as well as places where errors in the first edition were corrected or not. The new edition also includes a fully revised itinerary for Wallace and another for his assistant Charles Allen. That of Wallace's Malay assistant, Ali, has recently been published elsewhere.³

In all, 34,000 words of editorial information have been added to the new edition. The *Malay Archipelago* has inspired generations of explorers and biologists to study and appreciate the diversity and complexity of this fascinating region of the world. This new edition is intended to help readers get the most out of Wallace's great work.

Dr John van Wyhe
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Historian of Science

Parts of this article are adapted from the introduction to *The Annotated Malay Archipelago* by Alfred Russel Wallace. Edited by John van Wyhe. NUS Press, 2015. With thanks to Elaine Charwat and Leonie Berwick.



¹ John van Wyhe, *Dispelling the Darkness: Voyage in the Malay Archipelago and the discovery of evolution by Wallace and Darwin*. WSP, 2013.

² John van Wyhe and Kees Rookmaaker eds., *Alfred Russel Wallace: Letters from the Malay Archipelago* OUP, 2013. Beautiful scans of the original letters can be seen on G. Beccaloni ed., Wallace letters online (<http://www.rhmc.ac.uk/research-curation/scientific-resources/collections/library-collections/wallace-letters-online/database.html>)

³ John van Wyhe & Gerrell M. Drawhorn, "I am Ali Wallace": The Malay assistant of Alfred Russel Wallace. *Journal of the Malaysian Branch of the Royal Society* vol. 88, Part 1, No. 308 (June 2015): 3–31. On Charles Allen see Kees Rookmaaker & John van Wyhe, In Alfred Russel Wallace's Shadow: His forgotten assistant, Charles Allen (1839–1892). *Journal of the Malaysian Branch of the Royal Asiatic Society* 85, part 2, no. 303 (2012): 17–54.



A SOCIAL EVOLUTION

Social Media and Science

Over the last 15 years, social media has taken off in an unprecedented way. Networking sites have become a fast and effective way for scientists to share and evaluate papers, ideas and even data. Essentially, science is already a social network of sorts, and communication via online platforms is simply a natural progression. Major scientific institutions and funding agencies also insist on public communication of science and technology (PCST) elements in their funded research (Rodder, 2009).

While there are trends in which platform to use, the numbers for the most successful sites are staggering. As of July 2015, 316 million daily active users are on Twitter; the next largest in size is Instagram with 400 million daily active users (September 2015). But both are dwarfed by Facebook, with over 1.49 billion daily active users (July 2015).

It is also necessary to recognise the interconnectedness between different social network platforms—a cross-pollination of information. A presence on each platform allows users to choose how they wish to interact with content, engaging with the social media that they prefer. For example, 90% of Instagram users are under 35. Conversely, in the US alone 31% of senior citizens use Facebook.

How Has Social Media Impacted on Science?

Social media can advance the dissemination of science at three different levels: it offers connectivity amongst peers, boosting collaboration and scientific debate; it can support the dissemination of research findings, services and events to the general public; and

finally, help reach policy-makers. According to Xuan Liang *et al* (2014):

...if a scientist's work is tweeted by prominent science reporters (such as Andrew Revkin, who has more than 50,000 followers on Twitter), scientists (such as Neil deGrasse Tyson with more than 1.5 million followers on Twitter), or science media outlets (such as Science Friday with over 446,000 followers on Twitter), it is likely to attract more attention and have a larger impact even within academic circles, than a study that was only published in a peer-reviewed academic outlet (even for elite outlets, such as Nature and Science).

"LAST NIGHT I WALKED INTO BURLINGTON HOUSE AS A VISITOR AND LEFT A STUDENT AFFILIATE MEMBER OF THE @LINNEANSOCIETY."

This can now be measured through altmetrics, an alternative way to identify a scientific paper's impact. Now becoming a more prominent tool, an altmetrics 'badge' on a scientific paper can give an indication of its popularity—and the difference is that it is not citation-based, but social media-based. Authors can even help improve their altmetrics score through their own social media. And publishers like PLoS One provide the possibility of linking the articles on Reddit, Google+, Facebook, LinkedIn, CiteULike, Mendeley, Twitter, etc. Equally, research results from the Warner College of Natural Resources, Colorado State University suggest that Twitter can also be used to

effectively communicate conservation science from a professional conference to diverse audiences who don't necessarily read academic journals (Bombaci *et al*, 2015).

A survey by *Nature* in the summer of 2014 quizzed a group of scholars on their social media habits. The results showed that the scholars used social media to comment on papers, discover peers and follow discussions using Twitter, Facebook and the career networking site LinkedIn. The survey found that the standout site used was ResearchGate, a social networking/information sharing site specifically for academics. From its establishment in 2008 to 2014, the site has received around \$35million in investments, and of the academic networking sites (e.g. Academia.edu or Mendeley) ResearchGate has been found to have the most active users. However its total of 6 million users (as of January 2015) is rather diminutive compared to sites like Twitter and Facebook.

Of course, communicating science through social networks has its drawbacks, especially concerning authority (Kelly, 2009, p. 4), accuracy, Twitter's ability to reach target audiences, the actual challenge of communicating science in Twitter's limit of 140 characters (Bombaci *et al*, 2015), data ownership and copyright laws (Summers, 2010). It's also true that there is a danger of 'online fatigue'; ResearchGate has been criticised for its marketing tactics, with unsolicited emails sent to co-authors of scholars who use the system.

Yet there are success stories. As cited in *Science* in May 2014, one researcher in Hawaii posted a message on ResearchGate asking

for advice on how to trap an invasive species, Jackson's chameleon (*Trioceros jacksonii xantholophus*), in the wild. Responses ranged from the effectiveness of night-hunting with a focused light source, to sterilisation of the males, to debates on the usefulness of sticky traps with regard to arboreal lizards. One avenue that was brainstormed was the idea of training monkeys to seek out the invaders, and as a result the U.S. Fish and Wildlife Service has been approached to seek funding for a trial with capuchin monkeys. What is clear is that connecting with scientists globally, especially those at the start of their careers where communicating through social media is the norm, can provide useful advice and, on occasion, surprising lines of investigation.

The Society on Social Media

Not all audiences have easy access to their favoured institutions. Through online means the Society's Fellows, especially those living overseas, can access videocasts of our lectures and follow live-Tweets as well. As of November 2015, the Society has 1,855 page likes on Facebook and 4,076 followers on Twitter (@LinneanSociety), presently gaining around three new followers per day. (We hope to share statistics for LinkedIn and Instagram in the future.)

These online platforms enable the Society to publicise events and collections and build a more personal connection—a Twitter post about the launch of the Linnaean Annotated Library online had 113 Retweets (shares) and a potential audience of 16,220. Posts that showcase the Society's collections connect well, especially when they coincide with events like #StPatricksDay, #ChocolateWeek or #Halloween—the latter of which was Retweeted 153 times. In addition, visitors to Burlington House often share their experiences on social media, enhancing the Society's accessibility. These platforms also allow us to build bridges with the education community and to engage with younger audiences who aren't part of the Fellowship. According to Jim Richardson's blog 'Museum Marketing', remaining relevant through social media platforms is essential for cultural institutions to successfully engage visitors; one recent Tweet stated "Last night I walked into Burlington House as a visitor and left a student affiliate member of the @LinneanSociety".

Facebook Insights can offer limited demographic information about users, such as gender, language and country of origin. These metrics can aid organisations in setting a tailor-made social media strategy (Spiliopoulou *et al.* 2014). The Society's followers on both Twitter and Facebook follow the same trend: 55% male versus 45% female. According to Twitter analytics, 60% of our followers live in the UK, 13% in the USA, followed by Spain, Australia and Canada (2%), and Italy, Mexico, Ireland, Brazil and Sweden (1%). Similarly, most of our Facebook followers live in the UK (600), United States (227), Brazil (87), Italy (57), India (53), Mexico (50), Australia (44), Colombia

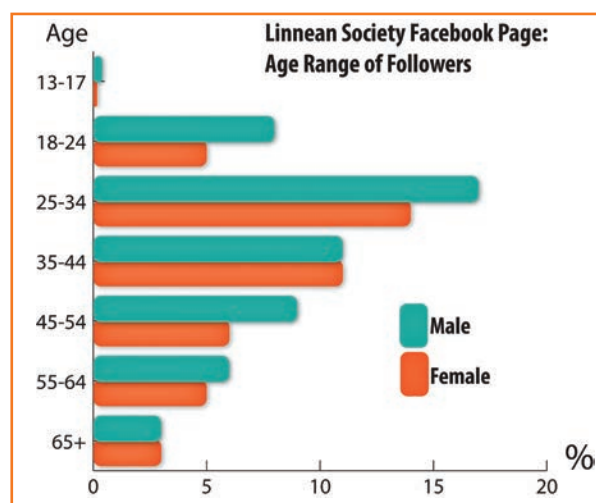
LEFT **Capuchin monkey: social media can lead to unusual lines of investigation**
© Wikimedia Commons/ Geoff Gallice

BELOW **One popular Tweet linked our collections to #ChocolateWeek**

(33), Canada (33), Spain (31), Sweden (31), Germany (30), with others in Turkey, Taiwan, Pakistan, France, Portugal, Argentina, Egypt, Peru and Saudi Arabia.

Social media can play a major role in "advancing visitor involvement and in forging engagement for potential visitors and society at large. Equally, these services offer their users new means of interaction, participation and networking" (Haustein, 2014). Anyone can get involved; by sending us relevant research findings or by sharing our posts, Fellows can help the Society increase visibility at both a national and international level. These platforms have had a proven impact on the way science is communicated. When used strategically, they not only build a connection with the public, but also help to further fortify the Society's relationship with the scientific community of the future.

Leonie Berwick, Special Publications Manager & Alicia Fernandez, Events and Communications Manager
(leonie@linnean.org/alicia@linnean.org)



REFERENCES

Bombaci, S. P., Farr, C. M., H. Gallo, T., Mangan, A. M., Stinson, L. T., Kaushik, M. & Pejchar, L. 2015. Using Twitter to communicate conservation science from a professional conference. *Conservation Biology*.

Haustein, S., Peters, I., Sugimoto, C. R., Thelwall, M., and Larivière, V. 2014. Tweeting biomedicine: An analysis of tweets and citations in the biomedical literature. *Journal of the Association for Information Science and Technology*. 65(4), pp. 656–669.

Kelly, L. 2009. *The Impact of Social Media on Museum practice*, Taipei: National Palace Museum.

Liang, X., Su, L. Y.-F., Yeo, S. K., Scheufele, D. A., Brossard, D., Xenos, M., Nealey, P. & Corley, E. A. 2014. Building buzz: (Scientists) communicating science in new media environments. *Journalism & Mass Communication Quarterly*, 91(4), 772–791.

Rodder, S. 2009. Reassessing the concept of a medialization of science: a story from the "book of life". *Public Understanding of Science*, 18(4).

Spiliopoulou, A., Mahony, S., Routis, V. & Kamposiori, C. 2014. Cultural institutions in the digital age: British Museum's use of Facebook Insights. *UCL Centre for Digital Humanities, UK. Participations, Journal of Audience and Reception Studies*. 11(1).

Summers, C. 2010. *Social Media and Scientific Journals: A Snapshot*. *Science Editor*. 33(3).

WEB

Richardson, J. 'Twitter for Museums.' <http://www.museummarketing.co.uk/twitter-for-museums/>

Oxford Aspire Museums. 'Social Media.' <http://www.oxfordaspiremuseums.org/social-media>

ResearchGate. http://www.researchgate.net/post/We_are_interested_in_trapping_invasive_Jacksons_chameleons_in_the_wild_any_ideas?_tpectx=profile_questions

Nature. 'Online Collaboration: Scientists and the social network' <http://www.nature.com/news/online-collaboration-scientists-and-the-social-network-1.15711>

Science. 'Is ResearchGate Facebook for science?' http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2014_08_25/caredita1400214

Open Research Exeter. 'Review of ResearchGate: Pros and cons and recommendations.' <http://blogs.exeter.ac.uk/openresearchexeter/2013/11/06/74/>

American Press Institute. 'How Millennials use and control social media.' <http://www.americanpressinstitute.org/publications/reports/survey-research/millennials-social-media/>

<http://expandedramblings.com/index.php/by-the-numbers-17-amazing-facebook-stats/2/>



Happy Holidays

We'd like to wish all of our Fellows a very Merry Christmas and a Happy New Year, and we look forward to seeing you in 2016. Thank you for all of your support.

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FORTHCOMING EVENTS 2016

12 Jan

Partner Event
18.30–19.30

New Radiocarbon Evidence and Megafaunal Extinctions

Speaker: **Prof Adrian Lister FLS, NHM, London**
This meeting is taking place at **Wallace Lecture Theatre, Cardiff University** No registration required

21 Jan

Evening Meeting
18.00–19.00

Evolution of Vertebrate Reproduction: Reproductive structures and embryos in placoderms

Speaker: **Dr Zerina Johanson FLS, Natural History Museum, London** No registration required

3 Feb

Lunchtime Lecture
12.30–13.00

The 19th-Century Pioneers of Nepalese Biodiversity: Hooker, Hodgson, Wallich and Buchanan-Hamilton

Speaker: **Dr Mark Watson FLS, Royal Botanic Garden Edinburgh** No registration required

Various dates

Partner Event
18.30–20.00

Red Data Book Species and Conservation lecture series

Organiser: **Ecology and Conservation Studies Society, with the Linnean Society**

This series is taking place at **Birkbeck, University of London**: 5, 12, 19, 26 Feb and 4, 11 March

18 Feb

Evening Meeting
18.00–19.00

Ancient Oaks in the English Landscape

Speaker: **Dr Aljos Farjon FLS, Royal Botanic Gardens, Kew** No registration required

2 March

Lunchtime Lecture
12.30–13.00

What's Happening to our Hedgehogs?

Speaker: **Dr Pat Morris FLS**
No registration required

9 March

Regional Lecture
Time tbc

Cuckoo: Cheating by nature

Speaker: **Prof Nick Davies, University of Cambridge**
This meeting is taking place at **Plymouth University**

Please check our website for other events not listed here

Welcome to Alicia Fernandez

Alicia Fernandez joined the Linnean Society team in late September as the new Events and Communications Manager, and has increased our social media presence in just a few short months. Before joining the Linnean Society, Alicia spent six years working on the development and implementation of science outreach programmes at Botanic Gardens Conservation International, the Royal Botanic Garden Juan Carlos I, University of Alcalá in Spain, and at the British Science Association, where she supported the delivery of the National Science + Engineering Competition. Alicia's background in Environmental Science with a postgraduate diploma in Communication and Dissemination of Science and Technology will be a great asset.

Alicia says: "I am particularly interested in botany, plant conservation, social inclusion and international cooperation. Carl Linnaeus' work has been an inspiration to me since I was a student and I'm honoured to be part of the Linnean Society of London. My goal is to reach new audiences by helping to develop events and increase awareness of the Society via social media, appealing to people of all ages and backgrounds."



Alicia Fernandez
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Education: Fundraising

Jenny Grundy FLS has been tirelessly raising money for many charities and institutions, the Linnean Society amongst them. At Royal Botanic Gardens, Kew's (RBG Kew) Wakehurst Place, Jenny and her husband Peter helped to restore part of the garden and a pond was added for pond dipping, which now forms part of the school visit programme to the site. She has designed cards which have raised money for RBG Kew and Wakehurst, and has now done the same for the Linnean Society.

Her latest series of cards will raise money for Linnean Learning, the Society's education programme. Jenny says: "Together we can make a difference. Please support this venture—we might raise a botanist or two!" To purchase Jenny's cards please contact the office on info@linnean.org for more information.



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