

The Linnean

NEWSLETTER AND PROCEEDINGS OF THE LINNEAN SOCIETY OF LONDON



Orchids:

19th-century paintings from India

NBN at 20:

Celebrating the National Biodiversity Network

J. E. Harting FLS:

Crustacean annotations

AND MORE...

Communicating nature since 1788

The Linnean Society of London

Burlington House, Piccadilly, London W1J OBF UK

Toynbee House, 92–94 Toynbee Road, Wimbledon SW20 8SL UK (by appointment only)

***** +44 (0)20 7434 4479

info@linnean.org

www.linnean.org

@LinneanSociety

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The Linnean is published twice a year, in spring and autumn. All contributions are welcome, but please contact the Editor or see the Guidelines for Contributors document on our website before writing and submitting articles (www.linnean.org/thelinnean).

Articles should be emailed to the Editor in MS Word format. Images should be sent as JPEGs or TIFFs at no less than 300dpi. Correct copyright information should accompany the images.

Cover image: Cattleya dowiana, courtesy of the Trustees of the British Museum

Editor

Gina Douglas gina@linnean.org

Production Editor

Leonie Berwick leonie@linnean.org

The Linnean Steering Group

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The Linnean

Newsletter and Proceedings of the Linnean Society of London

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Editorial

Anniversary Meeting 2020: Minutes

looking back at the Society's recent past, it is positive to note just how much diversity there has been in our activities and our involvements. However there is much to be done to improve upon it.

We are working towards this. Our 'Collections' (specimens, books, manuscripts, correspondence) are now increasingly accessible and reflect worldwide interests, a snapshot of the wide network of past and present Fellowship links. Diversity in the natural world is reflected in our Charter, with all branches of natural history falling within our remit; the Society embraces everything from palaeobotany to parasitology. Our current journals continue to communicate science at an international level, with special access for low income countries through EIFL and Research4Life. Our educational resources are available to all, helping to achieve a wider understanding of the natural world.

The egalitarian nature of our Fellowship means that both amateur and professional meet as equals. Our Officers and staff have had global representation over the years, from the Swedish Jonas Dryander to Eve Williams, a subject of this issue's 'In Memoriam'.

Yet work is progressing behind the scenes to further increase the diversity of our Fellowship, events, opportunities and resources. The record number of Fellows attending this year's virtual Anniversary Meeting has showed that opening up our meetings online can enable a fuller discussion.

Gina Douglas, Editor gina@linnean.org

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he Society is rising to the challenges of the COVID-19 pandemic by increasing our outreach to the global Fellowship—as exemplified by the virtual Anniversary Meeting/AGM in May. Many Fellows have been joining our live-streamed events, including talks on island species diversity, nature printing, flies, and bryophytes. In the immediate future we anticipate continuing to live-stream most of our events, providing the Fellowship and wider public with an increasingly diverse programme of events.

New Trustees, plus a refreshed Vision & Mission

We are fortunate to have five new Trustees with a wealth of diverse expertise (www. linnean.org/trustees), as our refreshed Society seeks to achieve our vision of a world where nature is understood, valued and protected, through our mission to inform, involve and inspire people of all ages and backgrounds about nature and its wider interactions through our collections, programmes and publications (www.linnean.org/vision).

Supporting young researchers in Taxonomy & Systematics

The Society is delighted to have almost doubled its funding contribution under the Systematics Research Fund (SRF) which is administered in collaboration with the Systematics Association. 2020 sees 55 projects across a diverse range of habitats and species on all continents, including sub-Antarctic tardigrades, extinct hippos on Madagascar, cyanobacteria, hyper-parasitic fungi in bats, coralline algae, wild tulip conservation, and cycads and their obligate pollination mutualists. The SRF is being rebranded as the LinnéSys Fund for the 2020/2021 round, which will open in December.

Equality, Diversity, Inclusion

We welcomed Events and Communications Manager Padmaparna Ghosh in mid-June, who has since worked on the Society's response to equality, diversity and inclusion (EDI), which was brought into sharp focus by the Black Lives Matter movement. Padma organised a panel event in September in order to explore how the Society could make a difference for under-represented communities in the study of natural history. Of the initiatives proposed—providing bursaries and grants to widen participation in nature, leveraging the Society's BioMedia Meltdown science-meets-art project in underprivileged areas in London, and setting up a mentoring system—the panel agreed that all were good ways forward but particularly felt that mentoring would have a beneficial impact on individuals.

Similarly, we were delighted with the response to our Linnean Learning call to Fellows to engage in an inspirational week-long collaboration with *Stemettes*, for which we had 13 Linnean role models interacting online with around 150 participants keen to learn more about working in nature.

In another initiative, Council resolved in May to use the unique platform of the Society to highlight, communicate, and facilitate action addressing the impacts of the planetary emergency on our natural world. Look out for dedicated pages on the website to learn how the Society is contributing to efforts to achieve this aim.









Educating & engaging online

Our Linnean Learning team has been busy, with the BioMedia Meltdown competition (9–13-year-olds) being judged virtually on Instagram by the public; BMM Project Manager Daryl Stenvoll-Wells was interviewed for Forbes magazine about her fresh take on the competition. On Instagram we published a series of animated videos about viruses, highlighting the useful ecological role of these fascinating entities (they are not all bad!). A three-part online beginners' guide to drawing animals proved a family favourite, while Nature Weeks' comprised four week-long projects for 12–16-year-olds, to engage with young role models through science and the arts, themed across four habitats: under the ground, in the water, on the land and out in space. We announced the winners of the Linnaeus Portrait Competition, which this year was to create an image of Linnaeus' pet raccoon Sjupp (see above). And keep visiting the website to enjoy our newly-released podcasts and animations.

L: 50 & 2020 Christmas cards

Finally, we are proud to announce the upcoming publication of *L: 50 Objects, Stories & Discoveries from The Linnean Society of London.* The brainchild of Head of Collections Isabelle Charmantier and Special Publications Manager Leonie Berwick, this beautiful paperback chronologically encompasses 50 items and stories from the Society's collections. With wonderful contributions from Fellows, staff, curators and researchers, we even picked up a few new facts about our collections along the way. Please do show your support for the Society and purchase your copy (www.linnean.org/L50).

50 Objects, Stories
& Discoveries from

Linnean
Society
Society

Also available are this year's Christmas card packs, utilising images from our collections, with 2020's line up including a stunning arctic fox and some gorgeous puffins (www.linnean.org/christmascards).

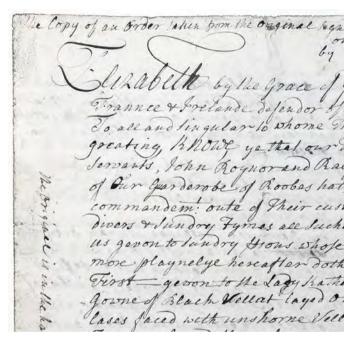
Dr Elizabeth Rollinson, Executive Secretary elizabeth@linnean.org

Then the Linnean Society closed its doors to visitors on 17 March, we had no idea when we would be back. Before we left, all the displays were put away, the blinds drawn, and the lights turned off. We were able to resume postal loans in June, but it was with a certain amount of trepidation and joy that we took careful steps to reopen the Library on 5 August, initially one day a week, then two days a week, until it closed again on 5 November. The building has been given a professional deep clean, and steps have been put in place to keep readers and staff safe. We hope to reopen when restrictions ease. For more information, please visit our website where information is regularly updated (www.linnean.org/research).

Keeping in touch

Throughout lockdown, our Senior Management Team visited the premises once a week, which enabled us to check the building, answer enquiries, photograph archives and send books to enquirers, albeit with some delay. We thank all Fellows and readers for their patience and understanding.

The team endeavoured to keep promoting our collections through blogs on our website, 'Adventurous Fellows', the Linnean Society during World War II, and newly-catalogued collections, such as the Peter Collinson commonplace book and papers of the Society for the Preservation of Natural History. We collaborated with other Courtyard Societies and the British Library to take part in the ongoing #collectionsunited Twitter campaign.



An extract from Peter Collinson's copy of a handwritten order made by Queen Elizabeth I

Moving ahead in lockdown

With all staff working from home, we have been able to undertake an enormous amount of 'behind the scenes' work: Archivists Liz McGow and Luke Thorne carried out an update of the online archives catalogue at the end of May and are actively cataloguing collections which have been previously unlisted; Librarian Will Beharrell is cleaning up the Library catalogue keyword index, and is improving the Library catalogue records for the Linnaean annotated library books (using the Online Collections images); Digital Assets Manager Andrea Deneau has been doing an audit and clean-up of the Linnaean correspondence online, as well as



A map of the St Vincent Botanic Gardens, showing the huts of enslaved peoples on the right.

uploading new Francis Buchanan-Hamilton watercolours to our Online Collections; Conservator Janet Ashdown was able to conserve several of founder James Edward Smith's offprints from home (known as *opuscula* in our Library; see our blog www. linnean.org/opuscula), as well as assisting Head of Collections Isabelle Charmantier and Office and Buildings Manager Helen Shaw to rewrite the Disaster Plan.

Two of our volunteers were able to continue their invaluable work from home: David Pescod, who has continued to summarise and extract information from the historical Presents books (from photographs), and Sheila Meredith, who is helping Will with the Library catalogue index keywords. We have also been able to hire a freelance cataloguer, Lucy Kelsall, to catalogue the remainder of the John Cloudsley-Thompson collection of books.

Black Lives Matter

The Black Lives Matter movement in July made us think a little harder about our collections and the Linnaean inheritance. Isabelle has written a few texts for the website to reflect on what the movement means for the Linnaean Society collections: a blog on Black Lives Matter in our Collections (www.linnean.org/BLMcollections), a recent post on enslaved albino girl Amelia Newsham (www.linnean.org/amelianewsham) and a piece on Linnaeus and Race (www.linnean.org/Linnaeusrace) which addresses the legacy of Linnaeus' work that has been connected to scientific racism.

AdoptLINN

We are grateful for the incredibly generous donations we have had for AdoptLINN in the last few months. Five books were adopted since June—four of them in August alone. Thank you to the donors, who have donated £2,600. The list of books and manuscripts up for adoption is on our website (www.linnean.org/AdoptLINNitems) and is revised twice a year, for Founder's Day (December) and the Anniversary Meeting (May).

Dr Isabelle Charmantier, *Head of Colllections* isabelle@linnean.org

Jenny Grundy

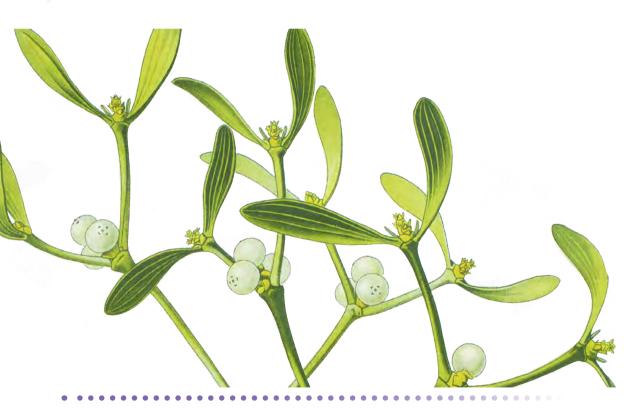
The following people have made book donations to the Library of the Linnean Society of London. These books will now be in the process of being added to the Society's online catalogue, accompanied by the appropriate donor information.



THANK YOU TO ALL THOSE WHO HAVE DONATED TO THE SOCIETY:

Caroline Baker	Alan Hamilton	Per Kristian Skulberg
Will Beharrell	Mark James	Anke Timmermann
Raymond J. C. Cannon	Keith Kirby	John Whitehead
Gina Douglas	Tim P. Milsom	

Annika Windahl Pontén



The full list of donations is also accessible as a PDF with the online version of this issue of *The Linnean* at www.linnean.org/thelinnean.

A printed copy of the list can be sent upon request—please contact the Library staff at library@linnean.org.

Two Elephants in the Room?

t was a pleasure, thanks to Linnean News, to experience Alistair's Currie's talk 'Human Population Diversity: Red herring or Elephant in the Room'. He showed clearly the problems and crises facing the natural environment, pointing to the dominant part played by human population increase as the factor creating them. Consideration of the population question shows that increase in standard of living is the only ethical and practical way to reduce birth rate. The relationship is striking (Fig 1: see over the page).

Currie then reviewed the work of bodies dedicated to reducing species loss and damage to the environment. These measures are admirable, but it is an unfortunate consequence of the way society is organised that they are likely to have little ultimate impact. The initiatives usually come from countries with democratic systems of government and involve international cooperation. Experience shows that democracy is fragile. More commonly nations find themselves with oligarchic or dictatorial governments of the right or left. There may be a biological basis for this—look at social history over the last 10,000 years. Contrived national identities and short-term goals are more attractive than international cooperation. Given the present political organisation of the world there is no chance of winning, so far as conservation is concerned.

However, there is a force that leads to international action, namely business and venture globalisation—anywhere rather than somewhere, as David Goodhart put it. It is environmentally destructive but it can increase living standards. Since birth rate is at the heart of the problem, we appear to have the prospect of watching globalisation destroy the planet, while hoping that its beneficial side effect will cut in before we arrive at total desolation.

Laurence Cook



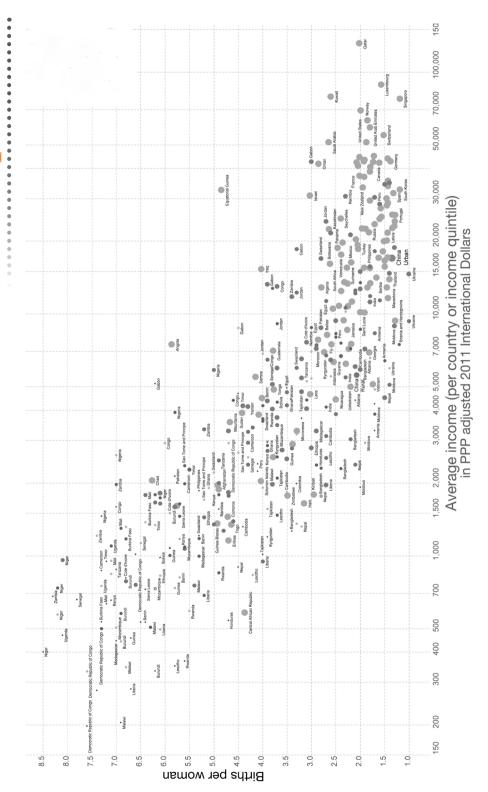


Fig 1. Births per woman by income level, 2013. From Max Roser, 2017: Fertility rate. Published online at OurWorldInData.org. Retrieved from https://www. ourworldindata.org/fertility-rate. This illustrates the trend; more detail is present on the original diagram and much further information at source.

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National Biodiversity Network at 20: Past, Present and Future



Mandy Henshall

NBN Trust, Unit F, 13–14 St Mary's Gate, Nottingham NG1 1LP e: m.henshall@nbn.org.uk

he National Biodiversity Network (NBN) will be known to many of the Linnean Society's Fellows. Now, in its 20th year we look back to its beginnings and where we are today.

The origins of the NBN go back more than 300 years to individual naturalists such as John Ray and Gilbert White. Over time volunteer recorders and species experts joined together to form local and national natural history societies and many of these societies collated and published lists of species and notable records, such as species new to Britain and 'first county records'. Many journals also developed from these societies and it was through these that most biological records were made more widely available. Interestingly, despite all this recording effort, there has never been a statutory requirement for one organisation to collect biological records on a long-term basis.

Wildlife data collected and shared openly by the Network are central to the UK's learning and understanding of its biodiversity and are critical to all decisionmaking about nature and the environment.

NBN Trust Vision

The first significant attempt to coordinate recording was the formation of a Central Committee for the Study of British Vegetation in 1904. Although this was led by academics, Sir Arthur Tansley, writing in 1904, recognised the potential role of amateurs 'scores of men [sic!] whose hobby is botany and whose acquaintance with their local floras is absolutely unequalled'. Although the Central Committee led to the formation of the British Ecological Society in 1913, the 1914–18 War intervened and Tansley's prescient comments were not taken any further for nearly 40 years.

The need to map the distribution of species was identified by Captain Cyril Diver in 1938, in the context of proposals for a national atlas, but this project fell victim to the 1939–45 War.

In post-war Britain, the establishment of the Nature Conservancy in 1949 was to prove fundamental to the development of biological recording and, 50 years later, to the creation of the National Biodiversity Network. Tansley, the Nature Conservancy's first Chairman, and Director General Diver (Fig. 1) considered some of the earlier ideas and sought the support of the Botanical Society of the British Isles (BSBI) in helping the Conservancy fulfil its duties in surveying. Importantly, after the War, the Ordnance Survey began to publish maps showing the national grid (essential for documenting exact localities); and in 1950 the Atlas of the distribution of vascular plants in northwest Europe was published in Sweden providing a model for a national distribution 'atlas'.

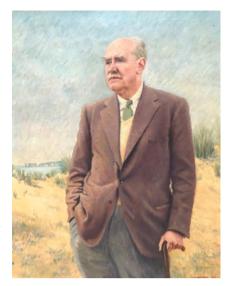


Fig. 1 Cyril Diver, Director General of the Nature Conservancy

The Biological Records Centre (BRC) was set up in 1964 to collate data, particularly from voluntary recording schemes, to make information available to conservation bodies and to publish the results. However, the lack of co-ordinated resources to work with local and national recorders resulted in no single organisation being able to see the whole picture. As pressures to report on the environment increased so did the urgency to improve the situation.

The early 1980s saw increasing frustration between Local Record Centres (LRCs), national societies and schemes and the BRC because of their overlapping roles. The demand for mobility of data was growing at all levels as information technology was becoming more widely available.

A seminar hosted by the Biology Curator's Group (BCG) in Leicester in September 1984, explored the state and lack of co-ordination of biological recording in the UK. Three important initiatives gradually developed from it.

1. A small ad hoc group convened by Paul Harding, then Head of BRC, organised the Biological Recording Forum in London in April 1985 under the auspices of BCG and BRC. Innovative approaches recorded in the proceedings of the Forum included examination of the potential scope of a 'biological record', professional approaches to the validation of data, networking recorders, data storage and management, and computing requirements and resources. The National Federation for Biological Recording (NFBR) was established as an immediate result of the Forum creating a more united voice for biological recording in the UK.

- 2. An informal demonstration by Stuart Ball of his personal species data management system, gained the attention of delegates from Nature Conservancy Council and several LRCs. By April 1987, a specification for a new database was agreed and this was further developed to what would become Recorder, a tool for those entering, collating and exchanging records of species and habitats.
- 3. Two members of the Linnean Society that had attended the BCG seminar. Eric Greenwood, Chairman of BCG, and Trevor James, the manager of a LRC in Hertfordshire, approached the Linnean Society through its President, Professor R.J. (Sam) Berry seeking the Society's support. They wanted to bring the problems highlighted at the seminar to the attention of those better placed to influence changes in policies and funding. To this end, Greenwood produced a discussion paper for the Linnean Society and Berry initiated a working party. The working party, chaired by Berry and eventually with representatives from 15 organisations, first met in May 1986 and published its report, Biological Survey: Need and Network in 1988 (Fig. 2).

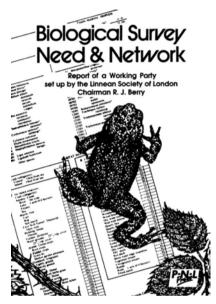


Fig. 2 The published report, Biological Survey: Need and Network

Thanks to the 'Berry report' providing important impetus, a high-level meeting was convened by Natural Environment Research Council (NERC) at the Royal Society in



Fig. 3 Sir John Burnett, Chairman of the Co-ordinating Commission for Biological Recording

February 1989. The meeting examined the main recommendations of the report and, as a result, proposed the establishment of The Co-ordinating Commission for Biological Recording (CCBR).

At the end of 1989, Sir John Burnett, a former Principal of Edinburgh University, accepted the role of Chairman of the CCBR (Fig. 3). This resulted in CCBR's Programme for the establishment of a national system for the co-ordination of biological recording in October 1990, including the proposal for an organisation to ensure its continued, effective maintenance.

It took some time for CCBR to secure funding to conduct an in-depth study of biological recording in the UK, but an exhaustive questionnaire was sent to 600 organisations in the autumn of 1992. Around 200 returns were completed and the scale of biological recording in the UK was quantified for the first time.

In June 1992 the UK signed the Convention on Biological Diversity in Rio de Janeiro. The UK governmental response to the Rio Convention, Biodiversity—UK Action Plan, was published in January 1994. It drew on an advanced draft of the CCBR report in several chapters, especially in identifying priorities in data and information regarding UK biodiversity.

The final CCBR report, compiled by Sir John Burnett, Charles Copp and Paul Harding, was published by the Department of the Environment in October 1995. The recommendations of the report covered seven main areas and centred on the need to establish a co-ordinated approach to biological recording in the UK.

Summary of the CCBR report recommendations:

- 1. Review statutory requirements for biological records
- **2.** Establish biological recording in a formalised framework
- 3. Establish a biological record data standard
- **4.** Establish methods to control the quality of data
- Establish protocols for the compilation and content of databases
- **6.** Establish a dispersed national system for biological recording
- **7.** Establish a management mechanism for a national system for biological recording

The CCBR Report is seen by many as being the start of the NBN and in April 1996, CCBR convened a workshop, hosted by the Linnean Society, on Future Prospects for Biological Recording in the UK. This examined the recommendations of the CCBR report and opportunities for the future.

Later in 1996 a consortium of Joint Nature Conservation Committee, NERC, the Natural History Museum and subsequently the Wildlife Trusts, developed a bid to the Millennium Commission for the creation of a National Biodiversity Network. This bid was rejected by the Commission in January 1997, but in preparing the bid the early structure of a National Biodiversity Network had begun to develop. Representatives of these four organisations met in March 1997 to reaffirm their enthusiasm and support for the NBN project and in 1999 the NBN Partnership was confirmed. Sir John Burnett became Chairman designate for, what was to become, the NBN Trust and a Programme Director, Dr Jim Munford, and Company Secretary, Jo Purdy, were

Fig. 4 The first NBN
Trust Board Meeting:
(L TO R, BACK ROW)—Dr
James Munford, Deryck
Steer, Mark Avery, Andy
Brown, Trevor James,
Mike Roberts, John
Seager; (L TO R, FRONT
ROW)—Joanne Purdy,
Sir John Burnett, Sara
Hawkswell, Dr Johannes
Vogel



appointed. In April 2000, the NBN Trust¹ was formed as a public limited company and in August as a charitable company limited by guarantee (Fig. 4).

The early years saw the development of projects and activities to drive the work of the NBN forward and to meet the demands of the Network. Some of the main activities were:

- The development of a common set of data exchange principles
- Convening an annual Conference to share information and provide an unparalleled opportunity for networking across the partnership
- Development of the NBN Gateway, the original data sharing web portal. In February 2000 there was a 'celebratory launch' at the Linnean Society, where mark one of the NBN Gateway was revealed to an expectant audience that included the then Minister, Michael Meacher.
- Development of the Species Dictionary in 2003² and a Habitats Dictionary to enable data to be indexed and searched.
- Producing guidance covering data management, data exchange and help on issues related to confidentiality, personal or sensitive data and intellectual

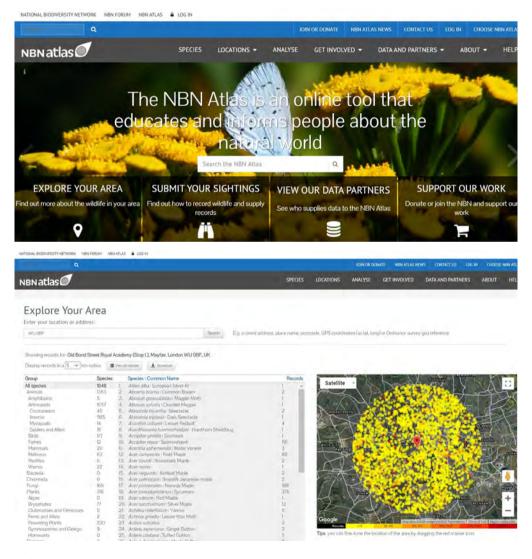
The founding organisations were: Joint Nature Conservation Committee, English Nature, Natural History Museum, Natural Environment Research Council (through its Centre for Ecology and Hydrology, home of the Biological Records Centre), Royal Society for the Protection of Birds, The Wildlife Trusts, National Federation for Biological Recording. These were joined by the Countryside Council for Wales, Scottish Natural Heritage, Environment Agency, Marine Biological Association

² Species Dictionary, now called the UK Species Inventory. Taxon names and classification on the NBN Atlas comes from the UK Species Inventory, which is managed by the Natural History Museum in London. https://nbn.org.uk/tools-and-resources/nbn-toolbox/species-habitat-dictionaries/

property rights, so that constraints on data use would be minimised.

- Digitising the 812 Watsonian Vice Counties
- Producing OS Map Tiles to help with recording

Work continued in a similar vein until 2015, when a major change was proposed. The case was drawn up for a complete overhaul of the NBN's data sharing infrastructure. The NBN Gateway would be decommissioned and replaced with a platform based on the Atlas for Living Australia in order to ensure a technologically robust system that was able to cope with the increasing amount of data being shared.



Figs. 5 & 6 NBN Atlas was launched in 2017, and as of November 2020 holds over 197 million records across more than 46,000 species.

To that end, the NBN Atlas launched in April 2017. It is the largest UK-wide aggregation of multiple sources of information about species and habitats and as of November 2020, held over 197 million records across more than 46,000 species. In the three years since launch, over 172 million records have been downloaded to help with conservation work (Figs 5 & 6).

The many, divergent NBN Atlas data providers, of whom there are over 150, and data users require a platform where the availability and quality of the records is clear and understandable. Records are stored in the NBN Atlas following the internationally accepted Darwin Core standard. This not only aids sharing of records with other organisations, such as the Global Biodiversity Information Facility (GBIF), but also ensures efficient and effective filtering of standardised records, based on the requirements of the individual user.

Data from the NBN Atlas have been used in numerous reports, papers and publications including: 'Species distribution model transferability and model grain size—finer may not always be better' (https://www.nature.com/articles/s41598-018-25437-1) and 'A weighting method to improve habitat association analysis: tested on British carabids' (https://onlinelibrary.wiley.com/doi/full/10.1111/ecog.04295).

In addition to the parent NBN Atlas, there are country-specific versions—the NBN Atlas Scotland, the NBN Atlas Wales, the NBN Atlas Northern Ireland and the NBN Atlas Isle of Man. The latest website to use the NBN Atlas infrastructure is the Caring for God's Acre, Beautiful Burial Ground Portal, which focuses solely on records known to be from within burial grounds. The possibilities for other such websites, which use the NBN Atlas as their base, are endless.

Much has changed across the Network over the last 20 years and the pace of its development is such that it is easy to forget that many of the concepts, which we now regard as standard, are actually very recent. The National Biodiversity Network would have been inconceivable only 30 years ago. Even its name would have been almost unintelligible because key words were not in use. What we now refer to as biodiversity data had been known since the 1950s as biological records.

Times change and we must continue to adapt our ways of working to keep up with new developments. The NBN Atlas is continually being improved as we respond to user feedback and as we endeavour to provide a data sharing platform that is both useful and used well into the future.

The increased use of technology is also starting to help with the gathering of more data. This is improving the standardisation of data collection, especially through online recording both in the UK, through iSpot³ and iRecord,⁴ and globally through iNaturalist.⁵

³ ispotnature.org is a website aimed at helping anyone identify anything in nature. People upload their observations of wildlife, help each other identify it, and share and discuss what they've seen.

⁴ https://www.brc.ac.uk/irecord/ is a site for managing and sharing wildlife records.

⁵ iNaturalist.org is a citizen science project and online social network of naturalists, citizen scientists, and biologists built on the concept of mapping and sharing observations of biodiversity across the globe.

Twenty years ago, we hadn't heard of social media, let alone realised the impact it would have on the world, including in relation to recording. Facebook groups and Twitter encourage people to upload their photos, making it easier for people to get involved in wildlife recording. Not just the 'scores of men' from Tansley's era, but people of all walks of life and at all levels of experience and expertise. In addition, no longer is wildlife data just from human observation and submission of the record by dedicated volunteers, new technology is really helping in this area too with the use of drones, camera traps and remote sensing.

Despite the changes over the years, one thing that has remained constant throughout is the people who make the wildlife records and those who share the information. Without a willing group of data providers, the Network wouldn't exist. Without the people who are making the records, often volunteers, there wouldn't be data to share and there wouldn't be an NBN Atlas.

That's why the NBN Trust developed the NBN Awards for Wildlife Recording in 2015 to help acknowledge the hard work of the people who collect wildlife data and recognise how their contributions improve our understanding of the natural world.

These annual Awards were created in conjunction with the BRC and the NFBR, reinforcing the links between these three organisations.

Who knows where technology, climate change and other challenges will take us in the coming years, but the need for high quality data, that can be accessed easily, will undoubtedly remain vital for the protection of wildlife in the UK. This, in turn, should ensure the future of the NBN Trust and the NBN, for at least the next 20 years.



Acknowledgements

Thanks to Paul Harding MBE for providing the historical context and information up to the year 2000.

Notes

The NBN Trust is a charity, relying on membership and donations to fund its work and the ongoing development of the NBN Atlas. You can find out more about its work on the NBN website **www.nbn.org.uk** and you can search the 236 million species records on the NBN Atlas **nbnatlas.org**.

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An Album of Trichinopoly Orchid Paintings



H. J. Noltie FLS

Royal Botanic Garden Edinburgh, 20a Inverleith Row, Edinburgh EH3 5LR UK e: HNoltie@rbge.org.uk

In 2002, an album of orchid paintings was purchased at auction by the British Museum, catalogued as an 'Album of twenty-five paintings of orchids on mica, Southern India, Trichinopoly, circa 1860' (Anon, 2002: 73). The narrow portrait format of these strikingly exuberant and unusual images, and their much greater accuracy than those of more familiar botanical mica paintings, suggested that the images had been copied from a printed source such as the *Botanical Magazine*. The compositions, with severed inflorescences placed as though growing from, or (in the case of some of the epiphytic species) hovering above, a 'scorched earth' landscape accounted for the suggestion of a Trichinopoly origin for the paintings. Such foregrounds occur in the numerous sets of paintings of men and women representing different trades and castes attributed to painters from that South Indian town, now Tiruchirappalli, who also worked in nearby towns and cities.

Another unusual aspect of the paintings is the large size of the mica sheets $(248-290 \times 193-219 \, \text{mm})$ that bear the paintings, though this has not been without consequences. Other than for ephemeral purposes, mica is a very unsuitable support medium for gouache: the larger the sheet the greater the possibilities for flexing and therefore of paint loss, of which there has been a significant amount in this collection.

In her catalogue of the British Museum's South Indian paintings, Anna Dallapiccola discussed these works, and illustrated three of them (Dallapiccola, 2010: 216–7). This account included information supplied by myself in 2007, but I have long wanted to try to take their story a little further.

The paintings did turn out to have been copied from a printed source rather than drawn from life. Not, however, from an horticultural periodical, but from the little-known book *Orchids:* and *How To Grow Them in Indian and Other Tropical Climates* by Samuel Jennings. The order of the paintings in the album is the same as in the quarto-format book, though not all the published images have been copied. The book was issued in 12 parts in London in 1874 and 1875 by Lovell Reeve & Co. The fact that it is not included in Stafleu & Cowan's standard *Taxonomic Literature* suggests that it is fairly uncommon but a copy in original parts is in the library of the Royal Botanic Gardens, Kew. The 48 hand-coloured plates were drawn and lithographed by the horticulturist, horticultural writer-editor, plant collector and botanical artist, Frederick William Burbidge (1847–1905), who at this point in his career was on the staff of the popular horticultural journal *The Garden*.

The enigma of Samuel Jennings

Very little is known of the book's author, Samuel Jennings (fl. 1863–1910), who is not listed in Desmond's *Dictionary of British and Irish Botanists and Horticulturists*, or any other standard reference work. By profession he proves to have been an accountant, who is first recorded in Calcutta in 1863 and spent the next ten years in India where his various appointments can be followed in the annual volumes of *Thacker's Bengal Directory*. He started as assistant to the merchant firm of Pickford, Mathewson and Co. (1863–7), became an independent broker in 1868, and from 1869 to 1872 worked in government service as an assistant in the department of the Accountant General at Allahabad (where he was also involved in the public gardens). Jennings's final year in India found him back in Calcutta as manager of the firm Percival J. Waite & Co. In 1863 he had become a member of the Agricultural and Horticultural Society of India of which, in the following year, he served as Vice President; in 1864 he was treasurer of the Bengal Photographic Society. Jennings's horticultural interests were clearly serious and in Calcutta he published papers on orchid cultivation (Jennings 1867, 1869) that would later be developed into his handsomely illustrated book.

Two letters to Joseph Hooker in the Director's Correspondence at the Royal Botanic Gardens, Kew. from June 1868 and November 1872 (KDC 153 ff 350-2: 356), show that Jennings exchanged plants with Kew from India. These also show his interest in aroids in addition to orchids. In May 1867 an aroid that he sent to the British nursery firm of Veitch won a silver medal at the Royal Horticultural Society. In an editorial on exciting new plants in the Gardeners' Chronicle of 11 January 1868, presumably written by Maxwell T. Masters, the leaves of Alocasia jenningsi were described as 'marked between the ... [veins] with dark chocolate brown, almost black, wedgeshaped sections, the effect of the contrast being entirely novel, and very pleasing'. This plant is now considered to be a variety of Colocasia affinis.

...the leaves of Alocasia jenningsii 'marked ... with chocolate brown, almost black, wedgeshaped sections, the effect of the contrast being entirely novel, and very pleasing'.

Jennings appears to have returned to Britain in 1873. Nothing is known of his professional life there in the 1870s, but his accountancy and managerial skills clearly took a new direction, as revealed by his publication in 1881 of a book entitled *My Visit to the Goldfields in the South-East Wynaad* (the area concerned being in the western part of the Nilgiri Hills in the present-day Indian state of Tamil Nadu). The book's titlepage reveals not only that he was secretary of two gold-mining companies, the South Indian Gold Mining Co. and the Indian Glenrock Gold Mining Company (Limited), but that he had been elected to the Fellowship of two of London's learned societies—the Linnean Society and the Royal Geographical Society. His Linnean Society election took place on 15 January 1874 and his proposers reflect his Indian background and botanical interests: Joseph Hooker, George Bentham, J. Anderson (presumably the Director of the Calcutta Museum who must have been on home leave to sign the certificate) and Hugh Cleghorn. But two of them are not well-known in botanical

circles: W. Gull, presumably Sir William Gull, Royal Physician and Arthur Grote, a retired Bengal civil servant. In October 1909, Jennings had to offer his resignation to the Society on the grounds of ill health, which was effected at the Anniversary Meeting the following year, after which Jennings disappears from the historical record. His election to the Royal Geographical Society took place in March 1875 and his resignation in December 1898. While still in India, in 1868, Jennings had been elected a Fellow of the (later Royal) Horticultural Society and it was in this society that he appears to have been most active. He acted as its Assistant Secretary from 1878 to 1880, during which period he edited the fifth volume of the Society's *Journal* and was secretary of its Scientific Committee. The date of Jennings's Indian visit, rather curiously, is not recorded in his book, but given his RHS commitments, is likely to have been in late 1880 or early 1881. Jennings also travelled to the New World and at a meeting of the Linnean Society in November 1891 he exhibited plants collected on a 'recent tour through the Rocky Mountains, California and Mexico' (Anon, 1891).

Biographically, Jennings has proved elusive. An experienced genealogist, after considerable work, has been unable to establish the dates and places either of his birth or death. The places of residence—Blackheath (1874 and 1880), Denmark Hill (1885) and Camberwell (1898)—given in the records of the three British societies to which he belonged have proved unhelpful. From census records of the closest dates, the Blackheath address appears to have been rented accommodation in multiple

occupancy. From which one assumes that (at least by this time) he had no wife, and that if he was ever married and had children that by the time of his British stay they cannot have been living with him. That there might have been relations is suggested by the name of the wood-engraver of the illustrations in the Wynaad book, Edward Jennings could this have been a son, a brother, or merely a coincidence? From the British Library catalogue it is found that late in life, in 1908, Jennings published (in Edinburgh) a book on the Captivity of the Jews, which suggests a religious aspect to his interests.

Though no information about Jennings's birth or death has been discovered, and very unusually for such an obscure figure, his appearance is known. The Linnean Society has two photographic portraits: a *carte de visite* (Fig. 1) and a cabinet photograph, both taken by



Fig. 1 Carte de visite of Samuel Jennings

Maull & Fox at 187a Piccadilly, an address to which the firm moved in 1879. In these Jennings appears as a dapper man, with a full head of white hair and grey beard—he looks to be between 45 and 60 years old, suggesting a date of birth between 1820 and 1835.

The orchid paintings

As noted earlier the artist of the orchid paintings was probably of the Trichinopoly school, but where and when were they made? One intriguing possibility is that Jennings took a copy of his book on his gold-mining trip to SW India. On his way to Glenrock in Wynaad he passed through Madras and Ootacamund, and at either of these places (the Presidency Town, and its chief Hill Station) he could easily have found an artist to make the copies. Unfortunately, the album is completely devoid of any ownership marks, and it is equally possible that an unknown orchid enthusiast in South India had obtained a copy of the book and was the commissioner. The source from which the images are taken suggests, however, that the paintings are most unlikely to have been made before 1875, and just possibly in 1880/1.

Like the Linnean Society's album of bird paintings commissioned by John Shortt (Noltie, 2018) this is another example of the copying of hand-coloured lithographs in gouache onto the unusual support medium of mica. Both are rather late examples of two distinct genres—painting on mica, and the copying of book illustrations by hand (at a time when photography was starting to come into use for such purposes).

There is no obvious pattern as to which orchids Jennings chose to have illustrated or why—while some are native to India and Burma, others are South American. At the time of publication of the book some had only recently been discovered and/or brought into cultivation.

Catalogue of drawings

The names as given on the album page. Some of these were misspelt (presumably by the non-botanical, Indian artist) and have been corrected here to avoid confusion.

The drawings for species with names given in [square brackets] have at some stage been removed from the album. Currently accepted names are given in bold where these differ from the captions on the album pages. Dimensions of the mica sheets are all 248–290 x 193–219 mm. The British Museum accession number is given in (round brackets).

- 1. Angraecum sesquipedale. Jennings plate 3. (Asia 2003, 0222, 0.1).
- 2. Cypripedium Sedeni. Jennings plate 4. [= *Phragmipedium* x *sedeni*] (Asia 2003, 0222, 0.2).
- 3. Sophronitis grandiflora. Jennings plate 5 [= *Cattleya coccinea*]. (Asia 2003, 0222, 0.3).

- 4. Laelia anceps & Laelia anceps var. Dawsoni. Jennings plate 6 [= Laelia anceps and L. anceps subsp. dawsonii]. (Asia 2003, 0222, 0.4).
- 5. Saccolabium giganteum. Jennings plate 8 [= *Rhynchostylis gigantea*]. (Asia 2003, 0222, 0.5).
- [6. Lycaste Skinneri—caption only, drawing missing. Jennings plate 9 [= L. virginalis].
- [7. Vanda Cathcartii—caption only, drawing missing. Jennings plate 10 [= **Esmeralda** cathcartii].
- [8. Oncidium papilio pictum—caption only, drawing missing. Jennings plate 11].
- 9. Cypripedium Stonei. Jennings plate 12 [= *Paphiopedilum stonei*]. (Asia 2003, 0222, 0.6).
- 10. Masdevallia Lindeni. Jennings plate 17 [= M. coccinea]. (Asia 2003, 0222, 0.7).
- [11. Cattleya gigas—caption only, drawing missing. Jennings plate 18].
- 12. Dendrobium Boxalii. Jennings plate 19 [= *D. gratiosissimum*]. (Asia 2003, 0222, 0.8).



Fig. 2 Dendrobium farmeri (Jennings plate 24)

- [13. Aerides Fieldingii—caption only, drawing missing. Jennings plate 20].
- 14. Epidendrum bicornutum. Jennings plate 21 [= *Caularthron bicornutum*]. (Asia 2003, 0222, 0.9).
- 15. Laelia purpurata. Jennings plate 22 [= *Cattleya purpurata*]. (Asia 2003, 0222, 0.10).
- 16. Vanda suavis. Jennings plate 23 [= *Vanda tricolor* var. *suavis*]. (Asia 2003, 0222, 0.11).
- 17. *Dendrobium farmeri*. Jennings plate 24. (Asia 2003, 0222, 0.12). (Fig.2)
- [18. Cattleya Aclandiae marschelliana (sic, recte Schilleriana)—caption only, drawing missing. Jennings plate 25].
- 19. Odontoglossum Alexandrae. Jennings plate 26 [= *Oncidium alexandrae*]. (Asia 2003, 0222, 0.13).
- 20. Cypripedium niveum. Jennings plate 28 [= *Paphiopedilum niveum*]. (Asia 2003, 0222, 0.14).



Fig. 3 Cattleya dowiana (Jennings plate 33)

- 21. Oncidium varicosum var. Rogersii. Jennings plate 29 [= *Gomesa varicosa* var. *rogersii*]. (Asia 2003, 0222, 0.15).
- 22. *Aerides quinquevulnera*. Jennings plate 30. (Asia 2003, 0222, 0.16).
- 23. Cattleya dowiana. Jennings plate
- 33. (Asia 2003, 0222, 0.17). (Fig. 3)
- 24. *Vanda coerulea* . Jennings plate 34. (Asia 2003, 0222, 0.18).
- 25. *Thunia bensoniae*. Jennings plate
- 35. (Asia 2003, 0222, 0.19). (Fig. 4)
- 26. Odontoglossum vexillarium. Jennings plate 36 [= *Miltoniopsis vexillaria*]. (Asia 2003, 0222, 0.20). (Fig. 5)
- 27. *Miltonia morelliana*. Jennings plate 37. (Asia 2003, 0222, 0.21).
- 28. *Dendrobium parishii*. Jennings plate 39. (Asia 2003, 0222, 0.22).
- 29. Laelia majalis. Jennings plate 41 [= *L. speciosa*]. (Asia 2003, 0222, 0.23).
- 30. Oncidium macranthum. Jennings plate 42 [= *Cyrtochilum macranthum*]. (Asia 2003, 0222, 0.24).
- 31. *Peristeria elata*. Jennings plate 44. (Asia 2003, 0222, 0.25).
- [32. Pleione x lagenaria + P. Wallichiana—captions only, drawing missing. Jennings plate 47].
- [33. Calanthe x Veitchii—caption only, drawing missing. Jennings plate 48].

Acknowledgements

I would like to thank Richard Blurton, formerly of the British Museum Department of Asia, for informing me about the drawings, and the Trustees



Fig. 4 Thunia bensoniae (Jennings plate 35)



Fig. 5 *Odontogloss vexillarium* (Jennings plate 36)

of the British Museum for permission to reproduce them; the album's acquisition was funded by the Brooke Sewell Permanent Fund. Margaret Frood for her valiant

attempts to discover biographical information about Jennings. Ben Sherwood (Linnean Society); Katie Radford (Royal Horticultural Society); Julie Carrington (Royal Geographical Society) for information on Jennings's membership of their respective societies.

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Anna Louisa Lane and Her Portrait of James Edward Smith



Graham Rowe FLS

Environmental Sciences, University of Derby, Derby DE22 1GB UK e: g.rowe@derby.ac.uk

r Francis Pierrepont Barnard (1854–1931) died 9 October 1931, having made a material bequest to the Linnean Society of London. His widow, Mrs Isabella Smith Barnard (1864–1934), forwarded the items to the Linnean Society (recorded in Council Minutes, 4 February 1932) and detailed by then President, Professor F. E. Weiss, at the 18 February 1932 General Meeting (Weiss, 1933). The material was of especial interest as Francis had family connections with James Edward Smith, one of the founders and first President of the Society. Dr Barnard was the grandson of Frances Catherine Barnard (née Smith), the daughter of Francis Smith (1764–1815), the younger brother of James.

The bequest included five engraved portraits and an etching of James Edward Smith and a small (17 x 12.6 cm) 'original drawing in chalks by Mrs. A. L. Lane, the wife of William Lane, a well-known portrait-painter and draughtsman'; the latter acquisition seen as 'a valuable addition to the portraits possessed by the Society' (Weiss, 1933). The Linnean Society Library Catalogue (Ref. No. C32621) noted this portrait (Fig. 1) by Anna Louisa Lane was drawn in 'pencil and red crayon on cream paper' and showed Smith 'aged about 30'. Anna Louisa Lane's name appears in some surviving Smith correspondence, confirming both her personal connection and abilities as an artist. On 4 February 1793, Smith wrote from London to then Suffolk-based botanist Thomas Jenkinson Woodward (1745-1820) informing him that, 'My picture is drawing for the Exhibition... I am to have a frond of Woodwardia radicans in my hand'; having earlier named fern genus Woodwardia in his honour (Smith, 1793: 411). Responding to Smith from Bungay, 8 February 1793, Woodward wrote: 'The exhibition will probably open whilst I am in Town, so I may see your portrait; I suppose it is by Miss Lane, as you say drawing, not painting. Her picture of your eldest Sister is an admirable one.'2 Lane's portrait of Frances (Smith's eldest sister) suggests the two families had broader (perhaps also Norwich) connections. James's 33rd birthday was 2 December 1792, suggesting Lane's portrait of him ('aged about 30') was drawn about the same time as that of his eldest sister. The painting for display was by John Rising (1753-1817) and hung in the Anti-room at the 1793 (25th) exhibition of the Royal Academy: Number 264, 'Portrait of an eminent botanist' (Fig. 2: see p. 28). Smith wrote to his father (27 June 1793):



Fig. 1 Portrait of James Edward Smith (aged about 30) by Anna Louisa Lane (unknown date, 1788–93). Original in the Linnean Society collections.

'I have been sitting twice to Mr. Rising, [and] he has improved my picture wonderfully, to the great satisfaction of my sister [and] Miss Lane, as well as of Sir A. Hume.'

Anna Louisa Lane was first recorded listed as 'Honorary Exhibitor' under the name 'Miss Lane' when she first exhibited 'Portrait of a gentleman in oil' and 'Portrait

of a lady' at the 1769 exhibition of the Society of Artists. Some later confusion resulted by varied name use: including, 'Anna Louisa Lane', 'Anne Louisa Lane', 'Louisa Lane', 'Miss Lane', 'Mrs A. L. Lane', etc. Lost through time, Anna Louisa Lane was once a well-known painter of miniatures. often incorporating human hair; indeed, a notice in the Morning Post 29 April 1778 (repeated a few days later) advertised: 'HAIR embroidered and drawn in Portraits, Figures, Landscapes for Pictures and Trinkets, By MARY and LOUISA LANE.' This short-lived attempt at advertising may have been a tentative foray towards professional recognition, with Anna Louisa Lane working alongside her sister Mary (see later). Indeed, these advertisements may have brought them to the attention of actor and playwright David Garrick (1717–79) who, in the months leading up to his death on 20 January 1779, commissioned several hair portraits from 'Miss Lane', including apparently two of

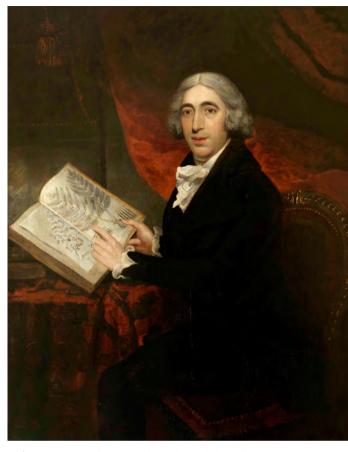


Fig. 2 Portrait of James Edward Smith by John Rising (painted and exhibited 1793). Original in the Linnean Society collections.

himself; one of Lane's original miniature portraits of Garrick is now owned by the Garrick Club, London. Signing the letter 'Anne Louisa Lane', she wrote to Garrick after visiting his house in preparation for the work, only to be told he was 'too ill to see anyone'; she thanks Garrick for his 'intention to employ us' (implying involvement of her sister Mary), describing herself as 'a little artizan who depends so greatly on your patronage' (Whitley, 1928: vol. 1, p. 230–31).

Anna Louisa and Mary exhibited work publicly and independently, both artists described in exhibition catalogues simply as 'Miss Lane', adding further confusion. Of the 39 Society of Artists exhibits by the two sisters, Graves (1907: p. 143–4) attributed nine to 'Miss Anne Louisa Lane, miniature painter' between 1769–76 and 30 to 'Miss Mary Lane, worker in hair' between 1770–77; between 1778–82 'Anna Louisa Lane' also exhibited three times at the Royal Academy (Graves, 1906: vol. 4, p. 375). Gem engraver and artist William Lane was a close relative of Anna Louisa and Mary; at

different times they are recorded at the same addresses. Between 1778–89, William the 'Gem Engraver' had 18 exhibits at the Royal Academy (Graves, 1906: vol. 4, p. 381); in 1785 he exhibited a portrait in 'crayons' of actress Mrs Siddons (1755–1831)⁴ and 'became known as a portraitist in that style of execution' (James, 1897: vol. 3, p. 67). Between 1798–1815, William the 'Miniature Painter' exhibited a further 44 portraits at the Royal Academy (Graves, 1906: vol. 4, p. 381–82). Information (now lost) presumably accompanying the Barnard bequest, led Weiss (1933) to state Anna Louisa was 'the wife of William Lane', but no confirmatory evidence can be found; indeed, the short entry in the *Dictionary of National Biography* stating 'she was Lane's wife of sister' (O'Donoghue, 1892: vol 32, p. 81) was updated to the broader 'Miss Anna Louisa Lane...was related to [William] Lane' (O'Donoghue & Springall, 2004: vol. 32, p. 442).⁵

Vital clues to Anna Louisa's family relationships came from text added to an 1819 engraving of one of her Garrick portraits.⁶ Abridged text: 'The...admirable likeness of the inimitable DAVID GARRICK, is engraved by JAMES HEATH, Esqr from a miniature painted by the once celebrated LOUISA LANE... Since her death the Portrait...[has] been in the possession of her brother the late REVD. THEOPHILUS LANE, Rector of St Michael's Crooked Lane, and on his death...devolved to a near relative of the family.' Anna Louisa Lane's father was therefore the Rev. William Lane (1699-1752) who married Joy Hearne (1705–??) at Hereford Cathedral in 1732; the couple are recorded as having six children. Anna Louisa's birth was not recorded under that name; she was presumably the 'Ann Lane' born in June 1745. Her sister Mary, the 'hair work' artist (born May 1737), was therefore eight years older than Anna Louisa. Elizabeth Lane (born June 1735), the first-born child and eldest of the sisters, married Lieutenant Edward Howorth in November 1765, at Vowchurch, Herefordshire; it was one of their daughters, Anna Louisa Howorth (1768-1827), who would also become an 'Anna Louisa Lane' (Anne Louisa Lane; Mrs Louisa Lane) after her marriage in August 1792 to John Lane.

Elizabeth Howorth (née Lane) is the same 'Mrs Howorth' who was a close friend and regular correspondent with James Edward Smith. Unfortunately, Smith's wife Pleasance is known to have destroyed virtually all his more personal correspondence after his death. Three letters written by James to Mrs Howorth (whilst on his 1786—87 European tour) survived the cull, with edited versions printed in volume one of Pleasance's biography of James (Smith, 1832). Unedited originals of all three letters can be found in the Linnean Society collections and reveal a close relationship between James and Anna Louisa a decade before his 1796 marriage to Pleasance Reeve.

Smith mentioned Anna Louisa Lane's interest in hair (possibly a reference to Mary?) in the letter he wrote to their sister (Mrs Howorth) from Leyden, dated 15 July 1786: 'This morning I finished academical business, to my great joy. Well has Miss Lane imagined that the great wigs must have a formidable appearance; there were near 20 of them assembled; some to bait me, & others to watch my behaviour.' Later in the same letter (edited from the published version) Smith wrote: 'Be so good as to thank Miss L.

Lane in my name for her very kind & acceptable letter; I'll answer it soon.' Also edited from the published version of Smith's Parisian letter (24 September 1786) to Mrs Howorth: 'I hope to hear from you soon. Has Miss Louisa Lane forgot me? Remember me affect[ionate]ly to all...'.8 The most revealing and personal information appeared in material edited from the published version of the letter Smith sent to Howorth from Genoa, dated 7 July 1787: 'Nothing in your letters interests me so much as what relates to my much loved friend Miss Louisa Lane; I fell for her varied anxieties most sincerely, & wish she could console herself with the brighter side of events instead of giving way too much to disagreeable circumstances. One great source of her former unhappiness is now I trust arranged to her mind & indeed as it ought to be; I heartily congratulate you all upon it, because I think the happiness of all is concerned, & could not have been accomplished any other way." One may speculate at the events; the further details of which were presumably lost in Pleasance's cull of Smith's letters. Smith had ended his 15 July 1786 letter to Mrs Howorth: '...remember me in a very particular manner to all the dear dog-holians.' 'Dog-hole' being a possible reference to a particular London Unitarian chapel. A poem Smith wrote (about 1786) called 'The Dog-holiad'10 shows Anna Louisa Lane in a happier light; the poem ends:

And ev'n the muse is oft a welcome guest:
Whether invisible the goddess comes,
Or gentle Jessy's favorite form assumes. [Jessy = Mrs Howorth]
But scarce compleat the social circle seems,
Unless Louisa's eye complacence beams
On the blest group, & darts its influence sound,
Wakes the bright thought & prompts the tuneful sound.
Tuneful Louisa! in whose pensive mind,
By friendship's softest purest fires refined,
Two sister muse's rival pow'rs are joined.

The last recorded public displays of Anna Louisa Lane's work appear to be the 'Portrait of a child' and the 'Portrait of a lady' exhibited at the Royal Academy in 1781 and 1782, respectively, although she may have continued to work privately. At this time, Anna Louisa was recorded as living with William Lane at 130 Pall Mall, London; from this address in 1785, William Lane exhibited his crayon portrait of Mrs Siddons, an artistic medium for which he became well known. Other than Anna Louisa's portrait of Smith (Fig. 1), she has not been recorded as working in chalks or crayons, the medium associated with William Lane; moreover, the 'pencil and red crayon on cream paper' combination also mirrors William Lane's recorded portraiture although may reflect their shared use of materials. Although Anna Louisa Lane was clearly a capable artist (at least some of her few recorded works are known copies) there is a possibility that the portrait of Smith (Fig. 1) is attributable to William Lane; its attribution to 'Mrs A.L. Lane' came from the original acquisition (Weiss 1933);

moreover, William Lane is known to have exhibited a different portrait of Smith (aged about 50) at the 1810 exhibition of the Royal Academy.

Garrick's thank-you note to 'Anne Louisa Lane' written shortly before his death was reproduced in his collected 'Letters' (Little & Kahrl, 1963: vol. 3, p. 1,261–62) and a footnote stated that she died in 1789, with a baffling reference to the *Gentleman's Magazine* (vol. 59, December 1789, p. 1,149); while the citation is internally con-

sistent, there is no mention of Anna Louisa Lane on this page or elsewhere. Moreover, Lane signed an engraved copy of a picture 'in the collection of the late Sir Joshua Reynolds' (who died in 1792), and the Smith correspondence auoted from 1793 implies she was still alive at that time. Records suggest that Anna Louisa Lane died 14 April 1817 and was buried at the church of St Stephen in the City of Norwich, being 70 years of age and living in the same parish. The assumed birth date of June 1745 would have made her 71 years of age at her death (a close but not identical match). The Norfolk Chronicle 19 April 1817 reported that 'Mrs. Anna Louisa Lane' died in Surrey Street, Norwich, going on to state that she was the 'daughter of the Rev. Theophilus Lane, formerly a Canon Residentiary of Hereford'. Surrey Street, Norwich, was an area of respectable businesses and middle-class residences, the homes

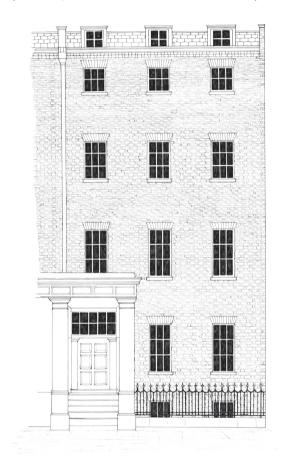


Fig. 3 James Edward Smith's home at 29 Surrey Street, Norwich. (Illustration by Helen Cowdy.)

of businessmen, physicians, and magistrates, etc., and where William Stevenson (proprietor of the *Norfolk Chronicle* for more than 35 years) himself lived. Moreover, following his marriage to Pleasance Reeve in 1796, James Edward Smith went on to live at 29 Surrey Street (Fig.3); indeed, he died at his house there on 17 March 1828, aged 68. Given their known earlier attachment, the co-occurrence of Anna Louisa Lane on Surrey Street, Norwich, at the time of her death seems unlikely to be chance.

The records of Anna Louisa Lane's death contain significant errors, suggesting a lack of familiarity. Even taken on 'face value' (a death in April 1817 'aged 70' places her birth about 1746-47) it is impossible that she was the 'daughter of the Rev. Theophilus Lane, formerly a Canon Residentiary of Hereford' as this 'Rev. Theophilus Lane', although a prebendary of Hereford Cathedral, was never 'Canon Residentiary'; moreover, he was born in 1762-63, 15 or more years after Anna Louisa Lane's apparent birth date! 11 However, Anna Louisa Lane's father, the 'Rev. William Lane', was Canon Residentiary at Hereford Cathedral from April 1749 until his death in 1752; moreover, her brother was a different Theophilus Lane (born September 1740); this confusion resulted from the conflation of facts due to a lack of familiarity and only partial knowledge. Confusion surrounding her family background suggests Anna Louisa Lane was a little-known, private person at the time of her death in 1817. Now, 200 years later, a few glints reveal that as a younger woman, Anna Louisa Lane exhibited her portraits at exhibitions such as those of the Royal Academy and the Society of Artists, and that she associated with the likes of David Garrick, Sir Joshua Reynolds, and Sir James Edward Smith.

Acknowledgements

Liz M^cGow (Linnean Society) for helpful comments and checking archival materials.

Notes

- 1. Smith to Woodward, 4 February 1793 GB-110/JES/COR/18/67
- 2. Woodward to Smith, 8 February 1793 GB-110/JES/COR/18/68
- 3. Smith to Smith, 27 June 1793 GB-110/JES/SM/5
- **4.** Printed in error as 'Mr Siddons, crayons' in the 1785 Royal Academy exhibition catalogue.
- 5. A discussion on Anna Louisa Lane's familial relationship with William Lane will be published separately.
- **6.** Available online: http://collections.vam.ac.uk/item/O1154647/print-collection-portrait-lane-louisa
- 7. Smith to Howorth, 15 July 1786 GB-110/JES/COR/19/33
- 8. Smith to Howorth, 24 September 1786 GB-110/JES/COR/19/38
- 9. Smith to Howorth, 7 July 1787 GB-110/JES/COR/19/59
- 10. Smith's Poem: The Dogholiad (1786) GB-110/JES/COR/19/34
- 11. The 'Rev. Theophilus Lane' (1762/3–1814) mentioned in the *Norfolk Chronicle* announcement was a member of Anna Louisa Lane's extended family (grandson of her father's brother).

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All images courtesy R. B. Williams

J. E. Harting FLS: His Annotated Copy of Thomas Bell's *British Stalk-Eyed Crustacea*



R. B. Williams FLS

e: raybw66@gmail.com

ames Edmund Harting FLS FZS MBOU (1841-1928) (Fig. 1)1 was one of the most highly-published ate 19th- and early 20th-century British naturalists. He attended Downside College, a Benedictine school at Radstock, Somerset, from 1854 to 1860 and many of his books, manuscripts and paintings were donated after his death to the Downside Abbey library (Bridson et al., 1980: 15). His papers there (accession nos 24139-24165) include an annotated run of *The Zoologist* for when he was editor (1877-96). The Linnean Society of London, the Royal Scottish Museum (Edinburgh), the Balfour and Newton Libraries (University of Cambridge Department of Zoology) and the Natural History Museum (London) also hold relevant materials.

After graduating from the University of London, Harting practised as a solicitor from 1868 to 1878, which he disliked and so gradually withdrew to study and write about natural history and



Fig. 1 James Edmund Harting

falconry. He was elected FLS in 1868, nominated by G.R. Gray, J. Gould, A. Newton, O. Salvin, S. Stevens, and W.M. Buckton, but resigned in 1903. He was editor of *The*

This signed photograph, numbered 4983 on the back, is in my copy of Harting's *The Birds of Middlesex* (London, 1866). Comparing it with photographs of Harting in other archives, it is the same as one of the 14 held by Downside Abbey Archives, but is different from the two held by the Balfour and Newton Libraries (University of Cambridge Department of Zoology) and the one held by the Linnean Society.

Zoologist for 1877–96; and edited the Naturalist Department of *The Field* from 1871, and later, the Shooting Department as well, continuing for some 50 years. In 1882 he was appointed to organize the Zoology Library of the newly opened British Museum (Natural History) at South Kensington. He later became Librarian (1888) then Assistant Secretary (1897) of the Linnean Society, from which he retired in 1902 (Evans, 1928). An Original Member in 1894 of the Royal Societies Club, he served on its main Committee and also on its Library Committee (Anon., 1897).

Some years ago I acquired, from an American bookseller, Harting's copy, containing copious annotations and insertions of letters and printed excerpts, of Thomas Bell's *A History of the British Stalk-Eyed Crustacea* (1853) in original publisher's cloth. However, in the Downside Abbey archive, the lists of box contents do not include anything obviously relating to Crustacea; in fact, the extremely wide range of Harting's writings embraces mostly birds, falconry and other field-sports. Hence, this book is of particular importance, revealing Harting's more than passing interest in the Crustacea, apparently initiated by his editorship of *The Field*.

It was apparently sold by auction, following Harting's death, on 26–27 April 1928, by Messrs. Hodgson & Co. of London, listed under lot no. 245 in the sale catalogue held by Downside Abbey Library (but not recorded in *Natural History Auctions 1700–1972* (Chalmers-Hunt, 1976)). A later bookseller's label² and other marks of ownership are present in the book. Details of its personalisation by Harting are provided here for future guidance.³

A label on the front paste-down endpaper gives Harting's address as 'Edgewood, Weybridge'. Above it is another label bearing the monogram ABC or perhaps some other combination of those letters; its significance has not been ascertained. On the recto

of the front free endpaper is Harting's signature (Fig. 2).⁴ On the verso, in his hand, is a list of 'Works of reference on Crustacea' by ten authors, some of which are included among cuttings inserted in the book. On the recto of the half-title, he referred to *The*



Fig. 2 Harting's signature, found in his own copy of Thomas Bell's *A History of British Stalk-Eyed Crustacea*

Zoologist (1881, p. 141) for a glossary of terms relating to Crustacea. The pencilled note '3. iv. 85 ROEZ Ledlie' on the half-title may be by the book's purchaser from Ledlie in 1985.

² Patricia Ledlie, Buckfield, Maine, USA, who cannot furnish further information.

³ This book, retaining the inserted materials in original order, is now in the Linnean Society Archives.

This signature is identical with that on the photograph in Fig. 1. Harting habitually signed himself 'J. E. Harting', though some sources give his full name as James Edmund Fotheringham Harting. Fotheringham was his mother's maiden name.

The title-page bears the embossed ownership stamp of 'HUBERT AND MABLE FRINGS'. Hubert W. (1914–2008) and Mable S. (1912–98) Frings were American husband-and-wife animal physiologists and behaviourists, best known for their work on auditory communication in insects and birds. One cannot be sure of when they owned this book, but the possible purchaser's half-title note may be theirs. It is not ascertainable how the book made its way to America.

Throughout the book, many printed or manuscript scraps are loosely inserted, some of which have been identified (see below); they include edited galley-proofs for *The Field*:

- A1) P. xxxv, one leaf headed 'Crustacea—exuviation of'; manuscript notes (65 lines) on both sides with examples and bibliographical references.
- A2) P. xxxix, one leaf with manuscript notes (19 lines) on one side about the crustacean nauplius larva with a drawing and bibliographical references (Fig. 3).
- A3) P. lxv, a five-line manuscript note on a specimen of *Scyllarus arctus* trawled off Plymouth and sent to Spence Bate, referring to J. Gatcombe's report in *The Zoologist* (third series, vol. 2 (1878), p. 107).
- A4) P. 77, galley-proofs of articles by J. T. Cunningham in *The Field*; one on 'Land crabs' (24 October 1903, p. 722), the other on 'Metamorphosis in land crabs' (7 August 1909, p. 287).
 - A5) P. 173, a newspaper clipping entitled 'The hermit crab', by 'J.G.C.'
- A6) P. 213, a three-line manuscript headed 'Loss of limbs in Crustacea' referring to reports in *The Zoologist* (third series, vol. 9 (1885) by Edward Lovett (pp. 100–106) and H. W. Hadfield (pp. 191–192).
- A7) P. 237, a four-line manuscript note referring to 'Crayfish culture in England' in *The Field* (4 November 1911, p. 981 [by 'J.M.']), and 'Capture and transport of [crayfish]' (purportedly 7 May 1898, but untraceable in that issue).
- A8) Also at p. 237, a letter (2 pp.) dated 3 November 1911 from J. H. Owen,⁵ apparently to 'Mr Frohawk' originally and passed to Harting, concerning a crayfish captured from a stream near Felsted School, Essex.
- A9) P. 243, a 19-line manuscript note headed 'A white lobster. Ventnor' (reported by L. H. Cox in *The Field* of 30 April 1910, p. 780), referring to similar previous records.

John H. Owen, mathematics and science master at Felsted School, Essex from 1907 to 1937 (URL: http://archives.felsted.essex.sch.uk/of/ofd.php, accessed 24 December 2019); widely knowledgeable as a naturalist, particularly in ornithology (Glegg, 1937).

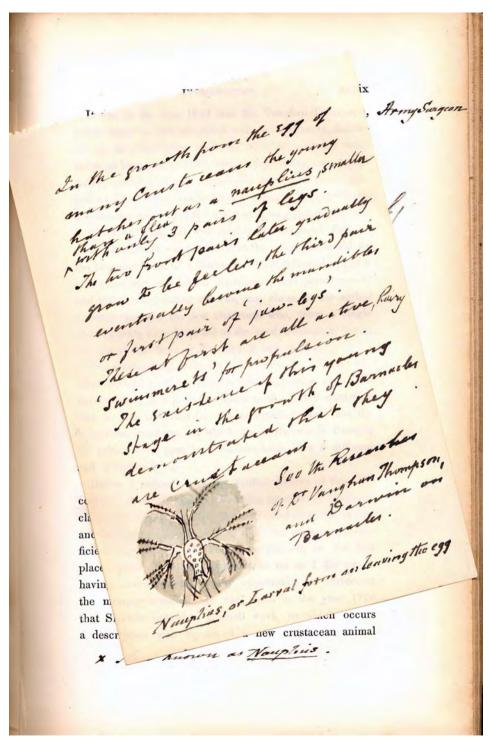


Fig. 3 Harting's annotations include manuscript notes about nauplius larva, alongside his own illustration.

- A10) Also at p. 243, a photograph of the white Ventnor lobster by G. Digweed, reproduced as a postcard.
- A11) P. 245, a newspaper clipping: 'Lobster fishing on the coast of Kerry' (source unidentified, annotated in manuscript at the end 'R E Hodson 23.9.11').
- A12) Also at p. 245, a newspaper clipping: 'Mesmerising lobsters' (reprinted 15 November 1911 in an unidentified north-east England newspaper from the 1910–11 report of the Northumberland Sea Fisheries Committee in *The Field* of 11 November 1911, p. 1081).
- A13) Also at p. 245, a newspaper clipping: 'Lobsters as travellers' (movements of tagged lobsters on the American east coast), reprinted from the *Kennebec Journal* in another American newspaper, annotated 'Boston E.T. 20.7.10'.
- A14) P. 249, a leaf (pp. 657/658) of 'The fresh- and brackish-water Crustacea of east Norfolk' by Robert Gurney (1904, volume 7 (part 5) of *Transactions of the Norfolk and Norwich Naturalists' Society*, pp. 637–660).
- A15) P. 253, one leaf headed 'Nephrops, Leach'; manuscript notes on the 'Norway Lobster' N. norvegicus on both sides with drawings of a claw and limbs.
- A16) P. 257, an unidentified clipping about *Crangon vulgaris*, with illustration and notes on its description and habitat.
- A manuscript note reiterates Bell's discovery of the prawn Nika (= Processa) in a dish of Palaemon prawns served for his breakfast at Bognor.
- A17) P. 277, a manuscript note reiterating information on the same page of the book about Bell's discovery of the prawn *Nika* (= *Processa*) in a dish of *Palaemon* prawns served for his breakfast at Bognor in 1842.
- A18) P. 341, a 19-line manuscript note headed 'Fairy Shrimp *Mysis* or *Chirocephalus diaphanus*', with dated localities and bibliographical references.

Between the front end-papers are loosely inserted items, in the following order:

- B1) A letter (2 pp.) dated 15 June 1908 to Harting from Henry Scherren (1843–1911), sometime Assistant Natural History Editor of *The Field*, about why lobsters turn red when boiled.
- B2) Edited galley proof of an article entitled 'Red lobster at Bognor' by J. O. Coussmaker (Hamstall Rectory, Staffs.), published in *The Field* (20 June 1908, p. 1030).
- B3) A leaf with eight lines of key points from an article entitled 'Red lobster caught off Shanklin' published in *The Field* (23 April 1898, p. 601).
- B4) An undated letter (1 p.) 'To the Editor of the Field, Naturalist Department' from A. D. Laurie on black-edged notepaper of the Junior Carlton Club. Although 'P.T.O.' appears twice, nothing is on the reverse but the original letter clearly comprised a fold of two leaves, one of

which has been removed. The interesting references in this letter to identifiable persons and to Laurie's article in *The Field* (30 May 1908, p. 927), merit a full transcription:

Red Lobster, Caught off Bognor.

The following <u>further</u> particulars of the red lobster mentioned in last week's Field may interest your readers. The lobster was caught fully six miles out on the Rough.

It was most beautifully set out as a specimen by M^r Gurmonprèz [sic] of Dalkeith Albert Road, Bognor to whom the Hellyers had given it.⁶

I bought it from the Hellyers for 4£, and took it to M^r Rowland Ward, of the Jungle, Piccadilly, to be preserved as a specimen.

M^r Ward's manager informed me that M^r Gurmonprèz [sic] had done his work so <u>splendidly</u> that he could do nothing more to it; and that no further work on the specimen was necessary [P.T.O.] or desirable.

I then took it to M^r Pickup, the Secretary of the British Sea-Anglers Society, 4 Fetter Lane, Fleet Street E.C. and presented it to the Secretary. The red lobster is there now. [P. T. O.]

Yours truly, A. D. Laurie.

- B5) Notes in an unknown hand on two pieces of paper pasted together, regarding possible mechanisms of colour changes in plants and animals. The following letter (B6) is folded inside this item.
- B6) Letter (2 pp.) dated 22 July 1908 to Harting from Allan Gordon Cameron about his son's enquiring from 'M'. Thomas, who is natural science master at <u>St Paul's'</u>, why lobsters turn red when boiled. 'Thomas asked the boy <u>who</u> suggested the question to him? He replied: 'M'. Harting suggested it to my father.' Thomas said: 'Harting must surely ought to know as much as I do.'

Between the rear endpapers are some printed articles excised from journals, most of them lacking bibliographical details, which are therefore provided here:

- C1) English, T. M. Savage. 1913. 'Some notes from a West Indian coral island'. *Royal Botanic Gardens, Kew. Bulletin of Miscellaneous Information* No. 10: 367–372. [Paragraphs on crabs (pp. 370–371) are bracketed in blue pencil.]
- C2) Popple, E. 1914. 'The Crustacea of West Herts'. *Transactions of the Hertfordshire Natural History Society* 15(3): 127–136.
- C3) Patterson, A. H. 1906. 'Some crustacean gossip from Great Yarmouth'. *The Zoologist* (series 4) 10: 331–334.
- C4) Gosse, P. H. 1859. 'On the transfer of *Adamsia palliata* from shell to shell'. *The Zoologist* 17: 6580–6584.

⁶ Henry Leopold Foster Guermonprez (1858–1924), a naturalist living in Brighton for over 30 years. His collections included Lepidoptera, taxidermy, plants, shells and fossils from around Bognor Regis and East and West Sussex (Crane, 1974). The Hellyers were a family of local fishermen.

- C5) Bate, C. Spence. 1859. 'The crab and its allies (to be continued)'. The Zoologist 17: 6567-6578.
 - C6) Bate, C. Spence. 1859. 'The crab and its allies (continued)'. The Zoologist 17: 6622-6630.
- C7) Bate, C. Spence. 1859. 'The crab and its allies (continued)'. The Zoologist 17: 6676-6691. [Stated to be continued but Bate apparently never completed this series.]
- C8) ?Author. ?Date. 'Crustacea'. Extract from unidentified encyclopaedia, printed in double columns numbered 217-235.

Acknowledgements

I am grateful to Mrs Dianne Brunning (Downside Abbey Library), Liz McGow (Linnean Society of London) and Jane Acred (Balfour and Newton Libraries, Department of Zoology, University of Cambridge) for helpful information.

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During such an unusual year, we are terribly saddened to have said goodbye to some Fellows and previous staff over recent months with close links to the Society.

Professor Dame Georgina MACE DBE FRS (1953–2020): The Council, staff and Fellowship of the Linnean Society are deeply saddened by the passing of Prof Dame Georgina Mace DBE FRS, whose contributions to the Society both as a Fellow and as a member of Council were characterised by their integrity, insightfulness and inspiration. She was a hugely influential and innovative conservation biologist and did more than anyone to link science and policy to address today's environmental challenges; she truly changed the way in which we think about our relationship with nature. Her kindness and generosity with her time and advice will be much missed, we have truly lost a great friend.



https://www.ucl.ac.uk/biosciences/news/2020/sep/professor-dame-georgina-mace-cbe



ROBERT (BOB) McCredie May (1936–2020): Robert McCredie May, Baron May of Oxford OM AC FRS FLS FAA FTSE FRSN HonFAIB, died on 28 April 2020 age 84. With numerous obituary notices available on line (see links below) it is sufficient to say that his theoretical ecological approach to populations and ecosystems and their application to unravel complex relationships beyond the field of ecology led to his appointment in high profile positions in Government and as President of the Royal Society.

He was always approachable, a frequent attendee at Society meetings and, during any discussion, his comments would focus directly on the issue in question.

https://royalsociety.org/people/robert-may-11914/

https://www.thetimes.co.uk/edition/register/professor-lord-may-of-oxford-om-obituary-9f6vfw66p

https://en.wikipedia.org/wiki/Robert_May,_Baron_May_of_Oxford

Eve WILLIAMS (1925–2020): Eve worked as a Society clerk from 1979 to 1983, when the Society still only had one electric typewriter and an elaborate array of mechanical devices for addressing and mailing information to Fellows. She was definitely 'unwilling' to retire, returning to the Society as a volunteer in the 1990s following the death of her husband, to type record cards, election and admission dates for Fellows and organising Fellowship files. She was a definite 'Linnean fixture', well known for a sharp wit, distinctive laugh and unique sartorial style, and for popping across the road into Fortnum and Mason's on a Friday to pick up a cake or two to have with afternoon tea.



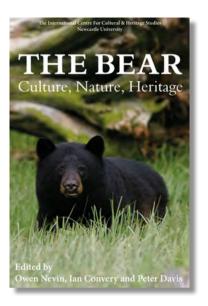
Born in Guyana, of French and Amerindian ancestry, Eve travelled to London in 1954 where she married her fiancé, the artist Aubrey Williams (see https://www.tate.org.uk/art/artists/aubrey-williams-2314), working as a shorthand typist for various charities, both before and after her time with the Society. (Their daughter, Maridowa, was also student volunteer.) An avid supporter of Aubrey's career, Eve donated some of his bird series paintings to the Society. She was a keen collector, especially of books—mainly natural history, art and cookery. A full life that ended peacefully, her ashes made their way from the Thames at Kingston, to the Channel and Atlantic, following the footsteps of her heritage and life.

The Bear: Culture, Nature, Heritage

Owen Nevin, Ian Convery & Peter Davis (Editors)

xiv+254pp,The Boydell Press, 2019, hardback Mono illustr. £60.00 ISBN 9781783274604

his fascinating book is no. 22 in a series entitled 'Heritage Matters'. The series, published by Newcastle University's Centre of Research Excellence in Heritage, comprises edited and authored volumes that address a range of issues that impinge on the heritage sector. The eclectic range of subjects (or parts of the range) will appeal to a varied readership, most of whom will 'dip' into it rather than read it as a one-time effort.



The usual front material includes a Foreword followed by an Introduction. Three main themes follow. The first is 'Bear-People Interactions', comprising seven chapters including ones on teddy bears, bears in children's literature and the use of bear parts in Cambodia and Laos. Part Two of five chapters is 'Bears in the Public Gaze' covering captive bears, bears in museums, bears and climate change, and the social and cultural history of bears in Iceland and the North Atlantic (Greenland, Scandinavia, United Kingdom). The third part, possibly more relevant to the Linnean Society than the others, is 'Bear Biology, Management and Conservation'. Six chapters include chemical signalling, uncertainties in management, citizen science, local folklore and conservation and reduction of human impact in the Andes. The reflections of a biologist who studied black bears primarily in Minnesota for some 50 years (including references mainly by the author) yield a final chapter entitled 'Afterword'.

With so many chapters and so many authors it is not surprising there is no set template. Many authors have English as their mother tongue which will have facilitated the editing (this reviewer has considerable experience of editing multi-author works and is fully aware of the many pitfalls to be encountered). Most chapters are very readable, all having in common a Bibliography and References section (so no overall reference section): a list of website addresses, sites of exhibitions and other pertinent facts. The Index covers the whole book in a single listing. The many charts, diagrams and photographs are in black and white only. The plethora of subjects will prove useful to both heritage professionals and a broader range of readers. Whether they would be willing to pay the book's full cost to reap the benefit of one or a few chapters is another matter.

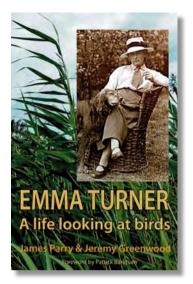
Trevor Wilson FLS

EMMA TURNER: A LIFE LOOKING AT BIRDS

James Perry & Jeremy Greenwood

88pp, Norfolk & Norwich Naturalists' Society, 2020, paperback. Col. illustr. £9.50 ISBN 9381916253711

he back cover of this new biography summarises the content admirably: 'Emma Louisa Turner (1867–1940) was a pioneering bird photographer and ornithologist in what was largely a man's world ... with neither formal qualifications nor relevant family background she became one of the leading natural history writers of her day.'



The Introduction to this slim but informative publication outlines the fortuitous contacts which resulted in the archives of Emma Turner, a hitherto somewhat unknown figure, being presented to the British Trust for Ornithology. The availability of this collection of correspondence, photographs, journals and pocket diaries has made possible a much fuller account of her background, achievements and networks including her role an early adopter of bird ringing.

'ELT', as she is referred to throughout, was also one of the group of 'first female Fellows' to be elected to the Linnean Society of London in 1904, and this biography reveals continuing contacts she maintained with some the others in that group, something that needs to be explored further.

A short chapter on her early years and family is followed by a longer account of her life and work in Hickling and the Broads, with vivid accounts of her floating home, moored to what is still known as 'Miss Turner's island'. This covers the time when she was making photographic records of nesting birds, including the bittern, and becoming part of what is described as the 'Norfolk community of naturalists'. It is followed by a shorter account of her role as first warden of the Scolt Head reserve, an exceptional role for a woman to undertake, living in a hut with few amenities and required to patrol the reserve to protect it from unwanted visitors. A further chapter explores her travels beyond Norfolk, including references to staying with the Duchess of Bedford (another of that first cohort of female Fellows) in Perthshire, with the Balfours in Shapinsay, in Lindisfarne Castle—owned by the publisher of *Country Life*, which published much of her work—and with Ethel Sargent in Girton, Cambridge, before finding her own accommodation there.

The final chapter summarises her legacy, including her ability to communicate natural history to a wide-ranging public. An appendix lists her publications, a second

lists References and an Index is included. The images include rediscovered and new photographs by Turner, and portraits.

The availability of her archive should result in future research work to reveal more of her life, but this readable and engaging account has fleshed out what was a shadowy figure.

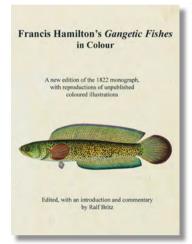
Gina Douglas FLS

Francis Hamilton's Gangetic Fishes in Colour: A new edition of the 1822 monograph

Ralf Britz (Ed., plus introduction & commentary)

406pp, London: The Ray Society, 2019, hardback. £150.00 (Discount for Ray Society members) ISBN 9780903874526

here has been a recent bout of publications concerning the scientific ethnographic, artistic and historical legacy of the British East India Company and this volume is a heavyweight contender



in its scope and indeed mass (4 Kg.). The book is volume 181 in the magnificent series of Natural History monographs published by the Ray Society and it is a fitting addition to that society's endeavour to publish or republish great illustrated monographs and make them available to a modern audience. Although it is valuable to have available a reprinting of Hamilton's seminal work of 1822, this is in some ways, the least part of the present book. Ralf Britz's scholarship and dedication in recovering, from multiple sources, a set of the truly magnificent colour illustrations for this work, published here for the first time, makes this a ground-breaking reference work as well as a collection of visually beautiful depictions of tropical fishes. It is published by The Ray Society in association with the British Library, The Linnean Society of London, the Zoological Society of London, and the Natural History Museum. Five hundred unnumbered copies of the book have been produced in Germany by Verlag Dr Friedrich Pfeil.

This volume boasts not one but three forewords by Rajeev Raghavan, Rohan Pethiyagoda and Sven Kullander, based in India, Australia and Sweden respectively. All are practising ichthyologists with a specialist interest in Asian freshwater fish faunas, and each brings his own highly individual viewpoint to bear on the scientific significance of Hamilton's original monograph and of this new work. They, as well as the editor Ralf Britz in his preface, describe their first encounters with the original

work and how it came to loom large in their lives. Apparent in all these accounts is a sense of frustration occasioned by shortcomings of the 1820 published work. Ralf Britz describes poignantly how having sacrificed a month's salary to buy a copy of *Gangetic Fishes*, the thrill of owning a copy at last, was marred by the fact that the plates not only depicted a fraction of the fishes described in the work, but that they were printed in black ink only. This diminished the scientific value of the work given that the markings on these fishes are important in their accurate identification. Additional difficulties were caused by a problematic lack of clarity in the information provided by Hamilton regarding the localities from which the specimens were collected. What this new book achieves is nothing short of an augmented restoration of the whole, with a full set of plates in glorious colour and accurate notes on localities, making available for the first time a full compilation of Hamilton's work on the Gangetic fish fauna. This was achieved by Britz's dedicated and persistent work over many years, and he gives a short guide to ten sources of manuscripts and artworks, their locations and identification codes, used in his study.

A biographical account of Hamilton is given including details of his travels and postings and the story of his disappointments in his attempts to get his ichthyological work published in full.¹ A section entitled 'Ichthyology in Hamilton's Times' places his work in its historical and scientific contexts and details sources available to and used by Hamilton.

In 'Hamilton's Working Method', detailed information is provided on the significance of his innovative approach to illustrations. Hamilton explicitly had the drawings made from live or freshly dead specimens so that live coloration was recorded as well as fine morphological detail in lateral views of the specimens. He also included dorsal views thus recording sufficient information for the reader to get a better impression of the whole fish in the round. This set a new standard for illustrating fishes. Also covered in this section is a discussion of how Britz was able to deduce, from Hamilton's manuscript field notes, preserved in The British Library, the missing locality data for the illustrated specimens. Rohan Pethiyagoda in his foreword predicts that this new book 'will spawn a flurry of publications as scientists working on Indian fishes digest the wealth of information and insight it presents'. It has already acted as a catalyst for the British Library making available a digital copy of Hamilton's Field notes (http:// www.bl.uk/manuscripts/FullDisplay.aspx?ref=Mss_Eur_E70_A and http://www.bl.uk/ manuscripts/FullDisplay.aspx?ref=Mss Eur E70 B), again making further rich resources widely available for the first time. In the new book there is also a note on Hamilton's choice of scientific names including his habit of incorporating into them the local names used by the people living with and catching these fishes.

In 'Significance of Hamilton's *Gangetic Fishes'*, the monumental and pioneering nature of the work is outlined noting, for example, that 'at least 180 (or c. 70%) of the species described by Hamilton are currently considered valid 'and that 'this number may well rise as Ichthyologists, with the help of the colour images reproduced here, start to

¹ see Noltie (2020) in *The Linnean* 36(1) pp. 14–22

scrutinize previous synonymy decisions'. It is worth noting that *Gangetic Fishes* is not a neglected or forgotten work. It is regularly consulted by ichthyologists today, who rack their brains in an attempt to reach certainty over the identity of Hamilton's species.

The section 'The Different Sources of Hamilton illustrations and Notes on their History' describes the various collections of drawings that it was necessary to consult, held in The Linnean Society of London, the British Library, The Zoological Society of London and The Natural History Museum, London, Also discussed are some drawings published elsewhere than in Gangetic Fishes. It is a mark of both the generosity of the parent institutions, and their willingness to share and disseminate their collections, that all the relevant drawings were loaned to the Natural History Museum's specialist photographic unit where photographer Kevin Webb was able to work his magic in producing the basis for these beautiful reproductions.

There follow a two page map of Hamilton's travels with collecting localities marked, reproductions of pages from Hamilton's field notes, a list of references cited and a 10-page chart listing all the illustrated species, the sources of the drawings chosen for reproduction and their plate numbers in the present volume.

The facsimile of *Gangetic Fishes* (1822) forms the middle section of the book. Hamilton's species descriptions make interesting reading, not just for their ichthyological value but for their lucidity and style. Written in plain English they reveal the intense curiosity with which Hamilton observed his fishes, noting their habits and whether or not they are favoured for food by local people, but also feeling in their mouths for the distribution and form of their teeth. It is fascinating for any reader to compare Hamilton's descriptions with the newly available coloured illustrations. For example, in the description of the puffer fishes of the genus *Tetraodon*, we learn that 'the fishes of this genus are eaten by the poor, but are considered as indifferent food', and of *Tetraodon fluviatilis*, illustrated on plate 3 (see Fig. 1, overleaf), that 'the back [is] dusky-green, divided by yellow lines, into angular spaces like the plots in a garden' and:

this fish, as to form, when it inflates itself, has a moderately projecting belly, somewhat shaped like an egg, and tapering gradually to the tail. On the head back and belly it is armed with small individual prickles, which the animal can retract into some large pores in its skin. With respect to colour, the sides have large round spots, the lower parts are white. The fins are dusky, with two dark transverse bars across that of the tail. The eyes are yellow.

It is easy now to see why Hamilton strove so hard to keep the illustrations together with the word portraits (and why he was so disappointed not to be able to do so). There is also a short diagnostic section at the back of the book with more technical information in Latin. The last section of the new book consists of the 228 plates of wonderful coloured plates expertly presented by Pfeil.

It is a highly attractive volume whose scientific, artistic and historical aspects will appeal to a wide audience, and to turn the pages is to understand why this monumental work



Fig. 1 Original illustration of the puffer fish *Tetraodon fluviatilis*; Tetraodon were 'eaten by the poor' and are 'considered as indifferent food'.

was worth publishing as a physical book in an age when so much of our information is stored as evanescent digital media.

To compile the book it was necessary to have an in-depth knowledge of the fish species treated in the monograph, an understanding of the history and whereabouts of widely scattered archives of letters, manuscripts, field notes and sets of drawings held in various institutions, as well as the drive to research and distil the information from all of them into the fullest and best set available. Having accompanied Ralf Britz on many of the library sessions and meetings required to engineer this multicollaborative project, I have witnessed his dogged persistence, as well as the palpable awe which perusing the coloured drawings themselves inspires. In many hours of discussions and draft reviews I have also witnessed his thoroughness and attention to the minutest detail that has made this volume the success that it is. I had the privilege of seeing Bengali draughtsman Haludar's marvellously executed fish drawings, and to turn the pages of the hand written field notes. The editorial project was a labour of love and skill by the one person who could do it and it is natural to reflect how pleased and proud Hamilton would be if he were alive to see his great work properly finished after 200 years.

Ollie Crimmen FLS

232nd Anniversary Meeting of the Linnean Society

Online (via Zoom)

4.00 pm, Friday 22 May 2020

1. The President, Dr Sandy Knapp took the chair and warmly welcomed 169 [Fellows and guests] into the 'room' for this first part of the virtual Anniversary Meeting (AGM), and said it was her privilege to be the current President of the Society.

The first part of the meeting (the AGM) was recorded for the Society's archives and the second part (annual highlights and the President's lecture), for publication on YouTube. Voting took place between the two halves of the meeting, and questions could be asked in the 'Chat' function of Zoom.

Part I - AGM

- 2. **Apologies** had been received from 3 Fellows, namely Jenny Grundy, Christopher Gardener-Thorpe and Ann Miller McAndrew.
- 3. Admission of Fellows was not possible.
- 4. The Minutes of 27 February 2020 were approved and signed.
- 5. President's Report

a. General Matters

The President expressed her sincere gratitude to all the Fellows for their support over the last year and for all their wishes for her recovery. Special thanks were due to her Vice-Presidents over the last year and a half for chairing evening meetings and generally standing in when she couldn't be at the Society herself. She was very excited to actually be at this year's Anniversary Meeting in person—albeit virtually.

The President gave a huge vote of thanks to all the staff of the Society, whose dedication and professionalism meant that when London went into lockdown we were able to close the building, secure the Collections and enable staff to carry on with their work from home. Moving from physical access to digital access is not easy, but the team had done this with aplomb, and she urged those present to look at the online resources created by staff and to watch the website for the virtual resumption of Society meetings. The Society is extremely fortunate to have such a fantastic team of staff and volunteers.

b. Governance Review Update

As indicated in the President's introduction to the Annual Review, the Governance Review of the Society's workings was delivered in 2019, and Council has been assessing the 16 recommendations and building a plan for implementation. We have already begun to look at our nominations procedure

with a new Committee, appointed Human Resources support for Society staff, and are reviewing our policies and procedures to align with current best practice for charitable bodies. We have looked hard at our public benefit—as Fellows, we all are aware of the value of our charitable activities to advance scientific knowledge, safeguard our collections and engage the public. In a key development over the last 18 months, Professor Paul Henderson led a working group to re-imagine our vision and mission as a Society, the results of which you will see in the *Annual Review*.

Conversation with one of our dedicated Fellows led to the President realising that we are not doing a good job of communicating with Fellows and the wider public about the work we are doing to highlight biodiversity loss and climate change—what London's Natural History Museum has called the 'planetary emergency'.



As a Society we are doing quite a bit in this regard, but on a practical level we are significantly reducing plastic waste at our events at Burlington House (BH), and the purchase of a new boiler last year resulted in significant savings in terms of CO_2 emissions (1/3 less per month to date; figures will be reported on our website in the future).

In line with our new vision and mission and as we embark on a new cycle of strategic planning, Council has thought it useful to bring our own thinking to you, as Fellows, for endorsement with the following resolution:

Council Resolution for endorsement: The perfect storm of the planetary emergency of climate change and biodiversity loss, coupled with the unpredictability of disease emergence, has profoundly changed our lives. To better contribute to transformative global solutions, and to further our vision of a world where nature is understood, valued and protected, Council resolves to use the unique platform of the Society to highlight, communicate, and facilitate action addressing the impacts of the planetary emergency on our natural world.

The President commended this resolution to the Fellows for endorsement, and invited them all to participate in the realisation of the *Society's vision of a world where nature is understood, valued and protected.*

Finally, the President thanked all of the Council members who would be stepping down this year as their terms come to an end: Dr Colin Clubbe, Dr Blanca Huertas and the late Professor Dame Georgina Mace (who sadly passed away in September). Special thanks were given to Dr Malcolm Scoble who has served as a Scientific Secretary for 11 productive years, and to Dr Mark Watson, who stepped in as an interim Treasurer in 2018 but kindly stayed on to steady the ship.

It is the staff, Council and the Fellows that make being the President of this Society such fun, and it has been a great honour for her to hold this office. She then passed the floor to Mark Watson, the Society's Treasurer, to tell us about the past year.

6. Treasurer's Report

The Treasurer, Dr Mark Watson, said the main purpose of his Report was to present the 2019 Annual Accounts to the Fellowship, for acceptance, but before doing that he gave an update on some of the financial governance activities that the Society has been undertaking.

The first is on **Budgeting & Delegation of Authority:** following recommendations from the *Governance Review* the Treasurer had been working with the Senior Management Team (SMT) and other Staff to remodel the way that budgets are set and expenditure is made against these budgets. The budgeting process has been brought into line with usual practice, and Council regularly review the management accounts in order to confer on budgeting decisions.

This has changed the duties of the Treasurer, and reshaped it into a more strategic role with operational matters being dealt with by Staff. One of the tasks from the AGM last year was to recruit his successor, and this reshaping of the role has helped greatly with this.

LSL Ethical Investment Policy: during the year, the Society had been working with our Investment Manager at Tilney to revise of our investment policy to take account of Environmental, Social and Governance issues, in alignment with the Society's

purpose and charitable objectives. Council believes that we should be investing in companies that have a positive impact on the environment and the communities among which they work, whilst maintaining a strong focus on appropriate governance. In particular, the Society will not knowingly invest in companies whose core business involves armaments, tobacco or gambling. At the moment we are looking into ways of assessing our investments against these criteria using indices which take account of Environmental, Societal and Governance issues. In the coming months we will be finalising our Ethical Investment Policy, but in the meantime our Investment Manager is making adjustments to our investment portfolio to reduce exposure to companies which may give us concern.

Annual Accounts for year ending 31 December 2019: these are the statutory accounts of the Society and form part of the Trustees Annual Report and Accounts which is required by the Charity Commission, and for which Members of Council are collectively responsible. The Accounts have been put together by Financial Controller Priya Nithianandan, working with our external auditors, Knox Cropper. The accounts are then passed through two levels of scrutiny and revision before they are seen and approved by Council. The first review is undertaken by our Finance Committee and Officers, and the second by the Audit Review Committee. The Audit Review Committee is an important step as it involves non-Officer members of Council and ordinary members working on behalf the Fellowship. This year the ordinary members were Professor Susan Evans and Philip Sadler, and the Treasurer thanked them for their time in scrutinising the accounts so effectively, and indeed all those responsible for preparing and reviewing these accounts. The last level of scrutiny is by the whole of Council, who gave their approval in March, and the accounts were signed on behalf of Council by the President and the Treasurer. These full accounts have been available for download on the Society's website, and these are the Accounts which would be proposed for acceptance by the Fellowship later that day.

The Treasurer then used the summary from the *Annual Review 2019* to give an overview of the finances of the Society at the end of 2019. The *Annual Review 2019* is also available for download on the Society's website, and copies have been posted to Fellows. The accounts are presented using a Statement of Financial Activities (SOFA) format, as required by the Charity Commission. The *Annual Review* includes a summarised SOFA, and it was suggested that Fellows should look at the full *Annual Report* to see the details which underpin these figures.

Summarised Accounts

INCOME

Although the total income of £2.10M is slightly down on the 2018 figure of £2.14M, most areas of activity have seen an increase in income, and it is just the reduction

in grants received for building works which has brought the overall total down by £40K. The Society's largest income stream is from our charitable activities in Advancing Scientific Knowledge & Understanding, which is largely driven by our scientific journals published by Oxford University Press (OUP). Our journals are performing well, and this income rose by 1.4% in 2019 to £1.75M. We enjoy strong and loyal support from our membership of 2,921 Fellows, which is 50 more than last year. This provides our second largest income stream of £152K, and he was delighted to say that when we contacted Fellows who pay by Direct Debit offering the option to delay payment this year due to the impact of the coronavirus situation, we were pleased by the response. Less than 20 Fellows chose to take up the option to defer, and many replied voicing their support for the important work of the Society: some generously offered to pay the subscriptions for Fellows in financial difficulty. Our third largest source of funding comes from income from our investments. This rose to £109K which is 3.9% above the 2018 total. This was supported by a 3.8% yield on our investments in 2019. We are delighted when Fellows and other supporters make donations or remember the Society in their wills. The Treasurer was pleased to acknowledge that in 2019 the Society received beguests of £5,542 from the estate of Robert Thompson and £2,000 from the estate of Dr Stanley John Hughes. The Society's successful AdoptLINN programme supporting conserving the collections received £3,250, and activities such as tours of the collections, reprographics, merchandising and educational courses are also generating significant income. Fellows would hear more of these later on from the Executive Secretary after the break. The Treasurer stressed that the additional income from bequests, grants and donations plays a crucial role in helping extend the Society's public engagement and other charitable activities, and he urged Fellows to think about remembering the Society in their wills—it makes a big difference.

EXPENDITURE

Almost all of the Society's £1.58M expenditure was used in support of our charitable activities:

- Safeguarding and Promoting our Heritage Collections
- Advancing Scientific Knowledge and Understanding
- Engaging the Public & Educational Outreach

The Executive Secretary would be reporting on the Society' achievements in all of these areas, and details of their costs are given in the Annual Accounts, and so the Treasurer did not propose to say more on this here, but he did want to mention two areas of major expenditure that cut across all of these activities.

Firstly rent for our buildings: the long-running uncertainty over the back rent to 2013 was resolved during the year, with arrears of £373K being paid from provisions made in previous years. Uncertainty remains over future rental costs, and this is reflected in our Reserves policy. The second area of expenditure is salary costs of £613K, which represents 39% of total expenditure for the year. This is an increase of £44K on 2018, reflecting salary costs the Society has taken on to continue the BioMedia Meltdown project, which was previously funded by John Lyon's Charity.

For the year under review, Council reports a healthy surplus of £525K of income over expenditure. Added to this in the SOFA is the net gain in book value of investments of £461K, compared with an unrealised loss in 2018 of £356K, giving a total surplus for the year of £985K.

BALANCE SHEET

The overall picture presented in the Balance Sheet shows that the Society's finances are in a healthy state with an increase of just under £1M in total funds on 31 December 2019. However, it should be pointed out that about half of this increase is due to the market value of our investments on that day, and could easily go up or down with the changes in the stock market, as we have seen in recent months. Nevertheless, Council is pleased to report a significant surplus in 2019 which has been moved into the Society's unrestricted reserve funds. Within the unrestricted reserve funds, £1.8M has been set aside as Designated Funds to cover future expenditure associated with the Society's buildings, and other financial liabilities, including the lease at BH. The Treasurer was pleased to report that the General Reserve Fund stands at £2.7M compared to £2.2M in 2018. The Trustees consider the level of reserves reasonable in the context of budgeted costs and the uncertainty over continued occupation of BH.

Financial Impact of the Coronavirus Situation: The Treasurer anticipated the effects of the COVID-19 pandemic on the Society's finances: For the current financial year we predict a reduction in income of about £85K—largely due to reductions in income from investments (which we estimate to be halved by £45K)—room hire cancellations, cancellations of tours of the collections and educational courses. However, it is estimated that this will be offset by savings made from not running physical events, the cancellation of other activities at the Society, and reductions in expenditure on building works at BH. Longer term, we anticipate that income on investments will be reduced from pre-COVID-19 levels, but will recover by the end of 2021. Journal publication is our single largest income source, and this is monitored closely in partnership with OUP. We anticipate some reduction in income from publications in 2021, but will have a better idea at the end of the summer, after subscriptions are renewed. The financial situation will be reviewed at the October meetings of the Finance Committee and Council.

MOTIONS

Motion to Accept Accounts for 2019:

The Treasurer called upon Philip Sadler FLS (on the Audit Review Committee), to report to the Fellowship and propose a motion to accept the accounts for 2019.

Philip Sadler read the following statement:

'In accordance with Bye-Law 12.6, the Annual Statement of Accounts for 2019, and the report of the professional auditors, were carefully examined by the Audit Review Committee of Fellows on 9 March 2020. On behalf of the Committee, of which I was a member, I am pleased to report to the Anniversary Meeting that we concluded that the Accounts give a true and fair view of the Society's finances as at 31 December 2019. I therefore move that they be accepted.'

Appointment of Auditors for 2020 and Banking Arrangements:

Council had intended to tender for external auditors during the year, but given the changes being implemented in the governance review it was thought prudent not to take this on at the same time. Furthermore, with the changeover of Treasurer, it was thought best that the new Treasurer be involved with this process as, going forward, they would be working with the appointed auditors. Nevertheless, Council had been pleased with the professional service from both our auditors and bankers, and the Treasurer therefore moved that the firm of Knox Cropper LLP Chartered Accountants, of 65 Leadenhall Street, London, EC3A 2AD, be reappointed as auditors in accordance with Bye-Law 12.5. The Treasurer also moved that Barclays PLC, PO Box 13555, Acorn House, 36–38 Park Royal Road, London, NW10 7WJ, be reappointed as the Society's bankers.

There were no questions from the 'room'.

CONCLUDING REMARKS

The Treasurer concluded his presentation with a few words of thanks, as he steps down and hands over to his successor. Firstly, thank you to Sandy Knapp and fellow members of Council for their encouragement and support over the last 18 months. Equally, he greatly appreciated the support of the SMT and the rest of the Staff at the Society for putting the new financial arrangements in place, for their efforts towards income generation, and their careful expenditure of our resources. Lastly, he wanted to personally thank the Society's Financial Controller, Priya, for his help and wise council. Personally, he had gained a great deal of satisfaction in helping the Society change its financial governance model, and he was pleased that the new role of Treasurer could be taken on by someone working full-time in the financial sector. He was delighted that Ed Banks had agreed to be nominated as his successor, as he could not imagine a better person to take the financial helm of the

Society. He felt happy that the Society's finances and financial arrangements were in good shape, and that the Society is in a good position to face future challenges.

7. Virtual Voting Procedure

The Fellows adjourned to vote in the Fellows' Area of the website. The biographies of all standing for election had been posted out and were also available in the voting area.

Appointment of scrutineers: Staff members Joe Burton and Ross Ziegelmeier acted as scrutineers for the online ballot and would report the results during the second half of the meeting.

Fellows would be voting for:

- New members of Council (n=5)
- All Officers (n=6)
- The slate of Fellows for election (n=53)
- To accept the Accounts for 2019, appoint the Auditors and Banking arrangements for 2020
- Endorsement of Council resolution

The President thanked everyone for coming to this very first virtual AGM for the Society, and reminded Fellows to be sure to add feedback on the AGM and the voting process in the voting form.

Part II - Highlights & President's Lecture

The President welcomed everyone back to the Anniversary Meeting, and welcomed those who were joining for the first time that evening.

The President thanked all the Linnean Staff whose hard work had made this first virtual Anniversary Meeting possible. Dr Elizabeth Rollinson, the Executive Secretary of the Society, was then introduced to speak about some of the Society's many achievements over the last year.

8. Overview of Society Achievements in 2019

The Executive Secretary referred to the recently published Annual Review 2019, and highlighted how the unstinting commitment and innovative approaches of the staff team, duly supported by the dedicated editors, volunteers, curators, Trustees and Fellows ensure that the Society fulfils its charitable objectives. In February 2019, the Society's public benefit was estimated at £8.2m annually—impressively, over five times annual expenditure. In parallel with the governance review, the Vision Group had refreshed the Society's strapline, vision and mission:

Communicating nature since 1788; A world where nature is understood, valued and protected; To inform, involve and inspire people of all ages about nature and its significance through our collections, programmes and publications. This work will be followed by a full strategic review which will be informed by the recently endorsed Council Resolution: To better contribute to transformative global solutions, and to further our vision of a world where nature is understood, valued and protected, Council resolves to use the unique platform of the Society to highlight, communicate, and facilitate action addressing the impacts of the planetary emergency on our natural world.

Thanks to the committed efforts of our stalwart editors, and new publishing partner OUP, the Society's three academic research journals continue to underpin revenues [>80%], while various in-house initiatives such as AdoptLINN, bookshelf sales, tours and workshops had generated around £8K. The Society provided around 40 small research grants (£500–£3,000), largely in collaboration with the Systematics Association, with grants awarded to projects across global geographies, plant, fungal and animal species. The Collections attracted researchers (+41% in 2019), and over 1,100 people had toured the Collections in BH, while all visitors had enjoyed the wonderful displays in the Library and Discovery Room. Diligent cataloguing work means the Society reaches far beyond BH; LinnaeusLink now has 22 international partners, and there have been nearly 150K views of this online union catalogue. The Society's social media statistics show notable increases on Facebook, Twitter and Instagram. Forty events were held onsite in 2019 (c. 4,000 par-

ticipants), with over 70K views of our lectures on YouTube. Diversity is a priority and the 'Diversity in Natural History' day meeting was certainly successful, as were lectures on human population & biodiversity loss. Collaborative events with the other Courtyard Societies showed record-breaking visitor numbers at Open House and the Courtyard Late. Merchandising efforts yielded almost £3k: £500 from the Society's newly-designed Christmas cards and £350 through



sales of Jenny Grundy's cards. The Discovery Room was launched in November with speeches by Professor Dawn Sanders and Randall Keynes, the great-grandson of Charles Darwin. We held 35 workshops for teachers, university students, schoolchildren and the general public. In the autumn we launched *Linnaeus at Home*, an educational guide to help parents explore nature with their children,

and the fifth Discovery Kit (on Evolution), for Primary Schools. There have been almost 24,000 downloads of the Society's online educational resources, and there were seven new podcasts and nine animations. The BioMedia Meltdown (BMM) project delivered 100 workshops in various venues, with 300 of the 1,000 entries posted on Instagram for all to enjoy. February saw the launch of the Society's first ever Student Conference which was preceded by workshops targeting writing and communicating skills.

Special acknowledgements were made to the Trustees: we are delighted to have our President Sandra Knapp back in BH after her gruelling cancer treatment. Mark Watson is standing down as Treasurer, and the Society is truly indebted to him. Also standing down after 11 years as one of our Scientific Secretaries is Malcolm Scoble, who has also fastidiously chaired the Programmes Committee, and is thanked for his unstinting commitment to the Society. Also to be thanked is former President and Strategic Planning Officer David Cutler; David has made an extraordinary contribution across the Society over many years and we are sincerely grateful for his erudite counsel. Importantly, we hugely value all that the Fellowship does for the Society, from acting as Trustees, assisting with our education and public engagement programme, reviewing grant applications, and of course paying annual contributions, which add up to the not insubstantial sum of £152k (our second most important revenue source). Unlike many membership organisations which are shrinking, the Society slowly continues to grow in number and diversity, with a rapidly increasing number of student members. We are looking forward to welcoming everyone back to BH in the future.

The President thanked the Executive Secretary and said that the Fellows of the Society should be proud of what has been achieved, and that those who are not Fellows are welcome and encouraged to join.

9. Medals & Awards

Medals and Awards are usually presented at our Anniversary Meeting, but this year due to the pandemic these will be postponed until later in the year. However, the President wanted to announce and congratulate the winners now, with the Fellowship. (Citations taken from the nominations will be made available on the Society's website in due course.)

- Linnean Medal: Professor Juliet Brodie, NHM, UK
- Linnean Medal: Professor Ben Sheldon, Univ Oxford
- Darwin-Wallace Medal: Professor Spencer Barrett, Univ Toronto, Canada
- Bicentenary Medal: Professor Kayla King, Univ Oxford, UK
- Irene Manton Prize: Dr James Clark, Univ Oxford, UK
- John C. Marsden Medal: Dr Patrick Kennedy, Univ Bristol, UK
- H. H. Bloomer Award: Hans de Blauwe, Belgium

- Jill Smythies Award: Alice Tangerini, Washington, USA
- David Attenborough Fieldwork Award: Dr Veronica Urgiles, Univ Central Florida, USA

10. Presidential Lecture: Diversity and Distribution in the Solanaceae

Dr Sandra Knapp gave an overview of the family Solanaceae, a medium-sized family with 90 genera and 3,000–4,000 species, and with great variation in habit, morphology and ecology, ranging from trees or shrubs to vines, lianas, epiphytes, and annual herbs. Found worldwide on all continents except Antarctica, the majority of species diversity occurs in Central and South America, while other areas of diversity include Australia and Africa. Solanaceae have multiple uses: food (e.g. tomato, potato, aubergine/eggplant and chilli pepper); horticulture (common ornamental plants include *Petunia, Schizanthus, Salpiglossis, Browallia* and floripondio); medicinal, poisonous, or psychotropic effects (famed for their alkaloid content and used throughout history, deadly nightshade, jimson weed, tobacco, henbane and belladonna are sources of drugs such as atropine, hyoscine, nicotine and other

alkaloids); biological study (model experimental ganisms such as tobacco, petunia, tomato and potato are used in examining fundamental biological questions in cell, molecular and genetic studies). Dr Knapp focused on her collaborative work to produce a molecular phylogeny for the whole of Solanaceae. The phylogeny includes 1,075 of the total c. 2,700 species of Solanaceae, and all except two monotypic genera Darcyanthus and Capsicophysalis for which samples are sparse.



Vote of Thanks: Professor Mark Chase FRS thanked Sandy for both her fascinating lecture and the way that she had shepherded the Society through the governance review.

11. Result of Ballots

- Number of votes cast: 113
- Council members all duly elected: Ed Banks, Kevin Coutinho, Dr Charlotte Grezo, Angus McCullough QC and Elaine Shaughnessy

- Officers all duly elected: Dr Knapp will continue as President for another year, Ed Banks will serve as Treasurer, Professor Simon Hiscock and Emeritus Professor Alan Hildrew as Scientific Secretaries, Professor Mark Chase FRS as Editorial Secretary and Dr John David as Collections Secretary
- Slate of Fellows all duly elected (n=53)
- Motions to accept the 2019 Accounts, and appoint auditors (Knox Cropper) and banking arrangements (Barclays) for 2020, were all approved
- Council resolution regarding the planetary emergency duly endorsed

12. Names of Vice Presidents

The President then announced the Council members who had all kindly agreed to act as her Vice-Presidents over the next year:

Professor Anjali Goswami, Dr Olwen Grace, Professor Simon Hiscock, Professor Max Telford

13. Conclusion & Thanks

The President thanked all those who had attended—it was great to see so many of our Fellows and prospective Fellows together. Dr Knapp then encouraged everyone to continue to check our website for events and resources, and to subscribe to Linnean News (for Fellows and non-Fellows alike). And as soon as it is safe to do so, we will meet again in our rooms in BH.

Usually the President would invite everyone to a wine reception in the Library—but instead suggested that everyone should lift a 'self-isolated glass' to a very successful year, and to a future full of activity and promise.

THE NEXT ANNIVERSARY MEETING WILL BE ON MONDAY 24 MAY 2021.

FELLOWS ELECTED APRIL—OCT 2020

Balasubramanian

Dr Marleen Baling

Prof. Charles Clark

Ms Maureen Clark

Miss Sophie Cook

Dr Alex Dehgan

Dr Eleanor Devenish-

Dr Amanda Duffus

Ms Lucy Carson-Taylor

Dr Somnath Chakraborty

Mrs Joanna Craig-McFeely

Dr Nafeesh Ahamed **Mrs Lvnn Evans** Mr Jonathan Ledgard

Mr Steven Allain Dr Nicholas Evans Dr Anette Loeffler

Prof. Per Alström Dr Anne-Claire Fabre Mr Jack Lunz

Prof. Mohammad Anis Dr Katie Field Mr Richard Mair

Dr Naser Anium Dr Lauren Gardiner Dr Jose Martin-Duran

Dr Patrick Matthews Dr Kate Armstrong Mr Julien Godfrev

Mr Nicholas Aubin Mr Paúl Gonzáles **Dr Peter Moonlight**

Dr José F. González-Mava **Mr Roger Morris** Mr Graham Avery

Prof. Ramesh Mr Chris Goostrey Mr David Morrison

Dr Brendan Hafferty Prof. Alok Nandi

Dr Christopher Hamerton Mr Andres Orejuela

Mr Kristopher Harper **Prof. Faith Oviasogie**

Dr Colin Hendrie Mr Daniel George Peterich

Dr Janet Higgins Dr Simon Piggott

Dr Manik Pradhan Mr Neal Houghton

Dr John Howard Dr Tikam Rana

Mr Matthew Rees Dr Beckley Ikhajiagbe

Dr Pruthvi Kalyandurg Prof. Thomas Revdon

Dr Theophanis Dr Jov Sarkar Nelson

Karamplianis Dr Tiina Sarkinen

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The Linnean Society of London Programme of Events December 2020

9 Dec Challenges & Opportunities for Caribbean Endemic Bird

12.30–13.00 Conservation

Dr Ellie Devenish-Nelson, University of Edinburgh & Dr Howard Nelson,

University of Cambridge

11 Dec Medal & Award Winners 2020

18.00–19.00 Due to the COVID-19 pandemic we were unable to celebrate with our

medal and award winners at our Anniversary Meeting. Help us end the

year with a bang as we honour our winners over Zoom.

16 Dec Christmas Lecture 2020

18.00–19.00 Learning from the Past: How Can Environmental Archives &

Historical Baselines Help Conservation?

Professor Samuel Turvey, Zoological Society of London

All meetings are being held via Zoom.

REGISTRATION REQUIRED FOR ALL EVENTS

To register, and for other events, visit www.linnean.org/events

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