THE LINNEAN

Newsletter and Proceedings of
THE LINNEAN SOCIETY OF LONDON
Burlington House, Piccadilly, London W1J 0BF

VOLUME 20 • NUMBER 2 • APRIL 2004

THE LINNEAN SOCIETY OF LONDON

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Newsletter and Proceedings
of the Linnean Society of London

Edited by B. G. Gardiner

ANNIVERSARY MEETING
MONDAY, 24TH MAY 2004 AT 4PM§
AGENDA

1. Welcome to members and guests
2. Admission of Fellows
3. Apologies for absence
4. Minutes of meeting held on 22/23 April 2004, which have been posted in the Society's Rooms
5. Third Reading of Certificates of Recommendation for 3 Fellows *Honoris causa*
6. Appointment of three scrutineers
7. Ballots
   (a) Ballot for Members of Council (blue) *Names and details on separate paper*
   (b) Ballot for 3 Fellows *Honoris causa* (*Elis Wyn Knight-Jones FLS, Alan James Southward FLS* & *Clive Anthony Stace FLS* : pink)
   (c) Ballot for Officers (yellow) *New Collections Secretary, Mrs. Susan Gove, otherwise no change to current Officers list.*
   (d) Ballot for Fellows and Associates (white)
8. Citations and Presentations of Medals and Awards
   Linnean Medal for Botany *John Dransfield* FLS
   Linnean Medal for Zoology *Geoffrey Allan Boxshall FLS FRS*
   HH Bloomer Award *Lady Ro FitzGerald*
   Bicentenary Medal for a botanist under 40 *John Russell Stothard FLS*
   Jill Smythies Prize for botanical illustration *Lucy Therese Smith*
9. Treasurer's Report
10. Motion to Accept Accounts for 2003
11. Appointment of Auditors for 2004
12. Contributions 2005
13. Presidential Address
14. Vote of Thanks
15. The Future of the Society§
16. Result of Ballots and any casting votes
    (a) Council (b) Fellows *Honoris causa*
    (c) Officers i President
    ii Treasurer
    iii Zoological Secretary
    iv Botanical Secretary
    v Editorial Secretary
    vi Collections Secretary
    (d) Fellows and Associates
17. Names of Vice-Presidents
18. Any other valid business
19. Close

§ Members will be aware that the Society, with four others, are at the time of writing involved in establishing the terms of their occupancy of Burlington House in the High Court. This item will provide an opportunity to report on any High Court decision and its implications for the Linnean Society. Until the Court has completed its work, all matters relating to the terms of its occupancy of Burlington House are *sub judice*.

John Marsden
February 2004.

Nominations for Council 2004.

[note: the Charter specifies that at least five persons must be nominated. In October 2003, Keith Maybury was elected and is the fifth person.]

Louise Allcock (2003) studied marine biology at Liverpool University and was inspired'by the final year spent at Port Erin Marine Laboratory. She graduated in 1992 with first class honours. Already fascinated by cephalopods, she headed for Aberdeen, working on soft money in Peter Boyle's laboratory gaining as much experience as possible. By the next year funding had materialised for Louise to undertake a Pill on Antarctic octopuses (supervised by John Thorpe FLS and Paul Rodhouse FLS). Although the focus of the Pill wasn't meant to be taxonomy, Louise soon realised this needed to be sorted out before any other work could be done. Drawn in to the world of taxonomy, after graduating from her Pill, Louise accepted the post of Curator of Molluscs at the National Museums of Scotland. She spent 4 happy years in Scotland, before accepting a lectureship at Queen's University Belfast, which meant she could stop commuting at weekends and finally live with her husband. Louise is an elected member of the Cephalopod International Advisory Council.

John Richard Barnett (1996) is currently Professor of Structural Botany in the School of Plant Sciences at the University of Reading. He was Head of the Department of Botany from 1996-2001 and Head of School from 2001-2003.He is President of the International Academy of Wood Science and an Honorary Research Fellow of the Natural History Museum. Professor Barnett is a member of the editorial boards of *Annals of Botany, Holzforschung* and *Chinese Forestry Science and Technology* and a member of the management committee of EC COST Action E20 (fibre walls). His research interests include the vascular cambium, wood formation processes and their effect on wood properties, cell wall formation, systematic wood anatomy and woody graft union formation.

Janet Browne (2003) is a historian of biology and professor at the Wellcome Trust Centre for the History of Medicine at University College London. Previously she was an associate editor of the Darwin Correspondence Project in Cambridge. She has published a study on the history of biogeography, *The Secular Ark,* in 1983, and more recently a two volume biography of Darwin called *Charles Darwin; Voyaging* (Cape 1995) and *Charles Darwin: The Power of Place* (Cape 2002). Her current research includes a historical study of the gorilla in fact and fiction and a possible biography of John Lindley.

Susan Gove (1992) is the former Librarian and Director of Information Services at St.. George's Hospital Medical School. She is also the former Director of the London Metropolitan Network, which managed the computing network for Universities and Colleges of Further Education within the M25. After graduating in zoology and a spell at the Centre for Overseas Pest Research, Mrs. Gove became a subject specialist in the Natural Sciences and Medical Libraries at University College London. She is currently chair of the Society's integrated Collections Committees and the taskforce on Computer Access to the Records of the Linnean Society.

Editorial

This issue contains a paper dealing with the research commitment to Botany in the Scottish Universities at the turn of the century. It also looks at the relationship between teaching and research, pointing out that in the case of the latter, the researcher should always keep an eye on the wider issues and look out for generalisations. F.O. Bower (Glasgow 1855–1925) for example, considered it "absolutely essential" that all members of his staff had ample opportunity for research. This he considered would ensure their continuing enthusiasm for their subject, which would be reflected in their teaching. Of course, he expected that his staff would use their vacations for active research ! In this manner he was able to keep complete control of both the teaching and research commitments, but with no set hours of class contact being stipulated he maintained that voluntary effort was essential to the working of any university department.

The article concludes with the observation that by the 1880's the English universities, in particular Cambridge and London, were dedicated promotors of the "New Botany" and were already introducing topics such as plant physiology, genetics, ecology and biochemistry. This so called "Botanical Renaissance" had its origins in the Science Schools Building (later Imperial College)* with the teaching of Thistleton-Dyer in the 1870s under the tutelage of T.H. Huxley.

The Science Schools Building

*Eventually called the Huxley Building but now an annexe to the Victoria and Albert Museum. Our picture shows the top floor with its ornate terracotta arcades with figures illustrating Man's evolution.

Sadly, this paper with it evocative title, "Glasgow 1913: a defence of the Research Commitment of a University Botany Department", looks back to a time of departmental freedom which is long gone.

BRIAN GARDINER

Society News

The Society's gratitude is due to the Lisbet Rausing Trust for a donation of £1000.

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Litigation, Litigation and Litigation.

At the time of writing, the Society finds itself, with others, in the High Court, seeking to establish the terms of its occupancy since 1874 of (new) Burlington House, this having been challenged by Her Majesty's Government. The public hearing, due to start on Monday, 19th January 2004, began on Tuesday, so that the Judge could read the (4000) papers dealing with the case. The Societies' case was adjourned briefly when our counsel's glasses fell apart and needed repair. We were ensconced in Court No. 62, ten floors up in an 80s miniskyscraper; its main defect then became apparent – all the toilets, café and other facilities are on the first and second floors. Vision restored, our counsel continued to put our case for propriety estoppel (more-or-less, custom and practice); on the Wednesday, the Judge, Mr. Justice Peter Smith, thought the Societies might succeed better with a plea of a charitable gift from HMG in the very dim and far distant past. The Societies' counsel, Mr. Patrick Talbot QC, sought an adjournment to examine this question.

Legal formalities these days preclude springing *any* surprises à la Perry Mason in court, disintegrating spectacles apart; so by the time that we (instructors of our counsel), the other side and the Judge had received our counsel's wisdom – our learned friend did not agree with My Lord – we were not back in court until the following Thursday, when a strike of civil servants led to long queues in the Strand to pass the security checks, and the Judge's Clerk serving as Court Clerk and Usher combined. Surmounting these obstacles, we heard the Government's case, then, on the Friday, HMG's counsel, Mr. John Gaunt QC, himself sprang a surprise, taking us back to the reign of good Queen Anne ("the Statute of Anne"). Anne was apparently given to rewarding her cronies with Crown land and property, when the rights and property of Sovereign and Parliament were intertwined. Parliament intervened to put a stop to Anne's profligacy in 1702, and somehow this was mingled with Burlington House in 2004. Well, you can't do that sort of thing – go back to the beginning of this paragraph – and an adjournment was called again at lunchtime on the Friday. The two counsel in the case were asked to seek instructions on the issue within a week and bring those instructions to the Judge, who adjourned the court and ordered that the parties (the Societies and HMG) seek mediation within 28 days, a new process in the legal world, which we are now embarked upon. Having sat though the first morning in Court, and decided that the Sahara Desert might

be a good deal wetter, it must be admitted that things certainly became damper on subsequent days. One comes to realise that it is not just scientists who need to seek Public Understanding. In law, they, too, speak a different language! But one thing even this legal ignoramus gathered for sure, the present arrangement, whereby the Societies occupy Burlington House rent-free in perpetuity, and have the external fabric maintained by HMG – a "superfreehold" according to the Judge – will come to an end. By the time this issue of *The Linnean* appears we ought to know the outcome of the legal proceedings. As a result, the Anniversary Meeting has been brought forward to 4pm, to allow the future of the Society, post-judgement/mediation, to be divined.

Other things rather pale by comparison – a nine-month outage of the air-conditioning in the Linnaean Collections Room (again); problems in the gents' loo (again) – life does go on in the Society and numbers turning up at meetings is showing a healthy trend with our first two evening meetings (on 22nd January and 12th February) of the year having audiences of 70 and 60 respectively.

* * * * *

Fellows may be interested to know that some of the Rooms in old Burlington House, that we used between July 1856 and October 1873, are accessible. They form part of the Royal Academy "Fine Rooms" and are open to access without charge all day on Saturday and Sunday, whenever the Royal Academy is open, and on Tuesdays to Fridays from 13.00–16.30. They are closed on Mondays. The window at the Northern end of the Reynolds Toom has a gilded plaque beneath it commemorating the reading of the papers by Darwin and Wallace on 1 July 1858.

* * * * *

IT and the Linnean Society of London

IT Manager notes that the Society has hitherto used information technology in a minor role. For the Society to move forward and promote the Collections on-line by 2007, it will have to adapt and take onboard new computer technology and become aware of how IT will impact on the day-to-day running of the Linnean Society.

Technical aspects: The Collections of the Society will be digitally scanned and stored in electronic format along with the full annotated details and associated records (metadata). This information will become part of the core database. The information will then be linked and indexed via an Image Management System (IMS) and published on the Society's website in the form of a fully searchable page.

For this to be achieved, the Society will need a suitable computerised platform and media to hold the data. This will require a significant investment in IT over the next few years and also a hierarchical understanding of how the IT is implemented and managed within the Society. The safety and security of the data will be taken on board and access to the core database and its associated equipment will need to be restricted to provide continuity. The data will be stored in a custom-made storage facility and maintained off

and onsite by appropriately skilled persons. A remote backup will also be made available.

The IT Manager will clearly have his work cut out to handle all this and prepare a feasibility study during the next several months. Due to compatibility issues and an increase in the cost of server and desktop software, alternatives to the ubiquitous Microsoft software will be looked at, and the Society more generally will need to raise the necessary funds.

The House of Commons Select Committee on Science and Technology is to conduct an inquiry into scientific publications.

The Committee will be looking at access to journals within the scientific community, with particular reference to price and availability. It will be asking what measures are being taken in government, the publishing industry and academic institutions to ensure that researchers. teachers and students have access to the publications they need in order to carry out their work effectively. The inquiry will also examine the impact that the current trend towards e-publishing may have on the integrity of journals and the scientific process.

The Committee invited written evidence by Thursday 12 February 2003. on the following points:

* What impact do publishers' current policies on pricing and provision of scientific journals, particularly "big deal schemes", have on libraries and the teaching and research communities they serve?
* What action should Government, academic institutions and publishers be taking to promote a competitive market in scientific publications?
* What are the consequences of increasing numbers of open-access journals, for example for the operation of the Research Assessment Exercise and other selection processes? Should the Government support such a trend and, if so, how?
* How effectively are the Legal Deposit Libraries making available non-print scientific publications to the research community, and what steps should they be taking in this respect?
* What impact will trends in academic journal publishing have on the risks of scientific fraud and malpractice?

In announcing the inquiry, the Chairman of the Committee, Ian Gibson MP, said "Journals are at the heart of the scientific process. Researchers, teachers and students must have easy access to scientific publications at a fair price. Scientific journals need to maintain their credibility and integrity as they move into the age of e-publication. The Committee will have some very tough questions for publishers, libraries and government on these issues."

The Society's response is given below. The Society was able to preview submissions by commercial publishers and the Association of Learned and Professional Society Publishers (ALPSP) and has consequently confined its comments to issues of particular concern to the Society.

Evidence submitted by the Linnean Society of London to the Inquiry into Scientific Publications.

1. The Linnean Society, a charitable learned society, publishes three international scientific journals, fully peer-reviewed, the *Biological, Botanical and Zoological Journals of the Linnean Society* and a variety of occasional publications, including the *Synopses of British Fauna*, which are scientific field guides for students and others. Its Journals are used *inter alia* for the dissemination of data on new species. Income from the scientific journals is used in part to support less financially viable publications.

2. Publishing is part of the Society's charitable purpose. Its first Journal was published in 1791, but it is only in the past 40 years that publishing has provided the Society with a significant part of its income. Electronic (Internet) publishing of the Society's Journals dates back only to 1993. The income generated has allowed the Society to extend its programme of scientific meetings, support research projects at the Natural History Museum and elsewhere, and to catalogue, conserve, and increase accessibility to its unique collections of plants and animals assembled by Linnaeus and Smith (the Society's founder) during the 18th century.

3. The Society collaborates and competes effectively with commercial publishers. If changes to the free market in scientific publishing are made by Government to the detriment of authors and/or publishers, then not-for-profit UK organizations should at least be compensated for the loss of vital income.

4. The Society is aware that attempts are being made, notably in the USA, to provide open access to scientific journals to both the public and the scientific community. This is to be achieved (i) by charging authors to publish, something which has not hitherto been a feature of UK scientific publishing; and (ii) by collating and distributing copy electronically. It is claimed that this will make the results of scientific enquiry more globally accessible.

5. Electronic scientific publishing has advantages, notably in added features such as ease of access and distribution, electronic cross-referencing, and storage. Electronic licensing can improve the financial position of hard-pressed libraries. Currently, the Linnean Society contributes to making its Journals available free-on-line to selected eastern European, Asian and African users and hopes that such open access can be extended in future to making much of its published output available free-on-line after an appropriate interval from its first appearance.

6. It is important to recognize that some kinds of scientific publication have a much slower "burn rate" than others, that is to say, they are referred to regularly over many years. That is certainly the position of some of this Society's publications in taxonomy and evolutionary biology. The costs of maintaining both paper and electronic publications of this kind in print need to be recognized and paid for.

7. Open access publishing has other disadvantages. Firstly, the cost to authors is not

The Tercentenary Wedgwood Medallion

As announced at the last Anniversary Meeting (and in *The Linnean* **19**(4): 5) a limited edition of 500 Wedgwood Medallions have been produced especially for the Society to celebrate Linneanus' birth in 2007.

The portrait medallion of Linnaeus is one of several variants of the famous Wedgwood profile. It was originally made in 1775 by the English sculptor John Flaxman (1775–1826), and derives from one of the wax portraits of 1773 by C.F. Inlander. It shows Linnaeus in profile to the right, with full wig, warts on cheek and nose, and a prominent spray of Linnaea borealis. He wears the order of the Polar Star.

(Reilly and Savage, Wedgwood, the portrait medallions, text prepared by Margot Walker FLS.)

Fellows may purchase a medallion for the special price of

£55.00

including VAT.

They will be available at the Anniversary Meeting in May or may be ordered by contacting the Executive Secretary at the Society offices.

cheap – several hundred US$ per paper. There remain significant areas of the world where such costs cannot readily be met. Such areas may also lack a reliable infrastructure for communication thus making electronic scientific literature *less* accessible[§]. Yet such areas are commonly of extreme importance for their biological diversity, for biologists and for the planet more generally. To make it more difficult to characterize and monitor biological diversity seems perverse at the present time.

8. Other disadvantages include the lack of any agreed electronic archiving system and limitations on photographic and print quality in electronic publications. Authors' and publishers' rights are by no means legally clear for purely electronic publishing. VAT is charged on electronic communication, but not on paper copy.

On behalf of the Linnean Society
JOHN MARSDEN

[§] See *Down to Earth*: Geographic Information for Sustainable Development in Africa, National Research Council of the National Academies. The National Academic Press, Washington DC, 2002.

Library

During the period from ealry October to the end of the year the Library was open for 60 days during which 160 visitors (80 FLS) were recorded. This gives a slightly higher visitor/day figure of 2.66 as compared to the previous figure of 2.25, the percentage of Fellows using the library being 50% as before. Loans during this period were 57 and the new usage slip records tell us that during the October – December period 27 readers consulted 65 books and 42 journals. These are records for items not borrowed but consulted in the Reading Room. Users of manuscripts numbered 8. The records of E-mail enquiries for the year, together with the records of incoming telephone call enquiries are summarised in the Library section of the Annual Report.

General Library use included displays for both the Conversazione and the Humboldt meeting as well as for the *Long term Databases* meeting in late October, the *Brogdale lecture*, the joint meeting on *Colour*, the *Bats and Plants* meetings in November and the *Humboldt* meeting and Conversazione in December. Visiting groups included two parties brought by the Swedish Cultural Attache (one group of Swedish Higher Education delegates, one of Embassy staff), and The Friends of the British Library. The Historic Libraries Forum met in the Society's Rooms on 14 November with an extremely useful meeting on Lottery and funding applications. The Librarian attended the London Learned Societies group meeting in Senate House in November.

The documentation for the Burlington House court case has taken up a considerable amount of time over recent months and there was also a visit to inspect the premises by the Treasury solicitor and his team, together with our Solicitor.

Donations from November 2003 to February 2004 are listed below. Totals for

donations and purchases to the end of December were:

Donations	29
Purchases	57
TOTAL	86

Acquisitions purchased using the Special Fund include the most recent volume of the *Flora del Paisos Catalans.* Lynn has continued to work through the accumulated material for cataloguing and both she and Cathy Broad have checked existing converted records for the Linnaean materials and have completed those held in the Library Annexe.

There has been a steady stream of enquiries for use of images, some of which have resulted in payment of fees. Fee-paying users include BBC TV "Gardens in time" and a Channel 4 programme on "Great Scientists". Most other use should result in donations of eventual publications. The portrait of Christopher Dresser is being used for an exhibition at the Cooper Hewitt National Design Museum, New York, opening in March 2004.

Cathy Broad, started her new job, as Linnaeus Link core cataloguer at the Natural History Museum Library, on 5th January. Lynn has taken over responsibility from Cathy for the electronic catalogue and has been training Matthew Derrick, our new part time Assistant who began January 2004. He works in the Library on Tuesday, Wednesday and Thursday and has now familiarised himself with mysteries of cataloguing using the Heritage software and is discovering what is where in the Library, Manuscripts and Archives collections.

Alan Brafield is still assisting with preliminary cataloguing. Both Jeanne Pingree and Enid Slatter continue to visit most weeks. Jeanne Pingree has just finished sorting and listing papers and archives (mostly a collection of diaries) from E. Barton Worthington FLS. Enid Slatter has been listing materials requested for loan including the John Stair nature print albums, and the Anna Atkins cyanotype albums. She has recently completed a detailed listing of the Alexander Anderson collection of watercolour drawings of plants of St Vincent, another collection in which there is particular interest at present. Edna Clifford and Val Vivekananda also help with sorting and filing tasks.

Donations

Apart from all those whose individual donations are listed below, we should also acknowledge those who present us regularly with journals, adding significantly to our holdings. Recent journal donors include Dr J.A. Gibson, who has just kept us up to date with holdings of *The Scottish Naturalist* Vol. 114 and 115, 2002 and 2003, Prof. Mark Seaward for various publications of the Yorkshire Naturalists Union, Mr M. J.A. Thompson for *Imprint, Yorkshire mammal group newsletter* and Paul Cowan for a number of gap-filling donations. We would also like to thank all those institutions and individuals who keep us on their mailing lists for receipt of publications.

GINA DOUGLAS

Akademie verlag, Berlin — Popp, K-G. ed. *Goerg Forsters Werke.. Scriften zur Naturkunde*. 2 vols., 1786 pp., col. frontisp. in each vol., Berlin, Akademie Verlag, 2003. ISBN 3-05-002262-0.

British Museum — Sloane, Kim & Burnett Andrew, Eds., *Enlightenment, discovering the world in the eighteenth century.* 304 pp., illustr. some col., London, British Museum Press, 2003, ISBN 0 7141 2765 5.

Reid, D.M. *The Lower Amazon, the diary of D.M. Reid 1930-1931*. (bound typescript) unpublished memoir, 111pp., illustr., map.

John A.Burton — Casas, Creu (and others) *Cartografia de Briòfits Peninsula Iberica.*..Fasc IV, 151-200, maps, Barcelona, Inst/. D'Estudis Catalans, 1996, ISBN 84-7283-346-1.

Mech, L. David & Botani. L. Eds. *Wolves, behaviour, ecology and conservation.* 405 pp., illustr., maps, Chicago, Univ. Chicago press, 2003, ISBN 0 226 51696-2.

Thienpont, D., Rochette F & Vanparijs O.F.J. *Diagnosing helminthiasis by coprological examination.* 205 pp., col. illustr., Beerse, Jannsen Research Foundation 1986, No ISBN.

G.C.Dickson — Dickson, Gordon and Leonard Ann., Eds., *Fungi of the New Forest, A Mycota* 201 pp., col. illustr., British Mycological Society 1996, ISBN 0 9527704 1 5.

Edward Duyker — Scheibnerova, Viera, *Cretaceous Foraminifera of the Great Australian Basin.* (Memoirs Geol. Survey of N.S.W. Paleontology No. 17) 265 pp. illustr., Dept. Mines, New South Wales, n.d (Manuscript dated June 1974) ISBN 0 7240 0615 X.

Dr Henry Gee — Gee, henry, Jacob's Ladder, the history of the human genome. 272 pp., London, Fourth Estate, 2004. ISBN 1-84115-734-1.

B.H. & A Harley — Riley, Adrian M & Prior, Gaston *British and Irish pug moths, a guide to their identification and biology.* 264 pp., illustr. some col., maps, Colchester, Harley Books, 2003, ISBN 0 946589 51 8.

Prof. Gareth Jones — Hyde, Kevin D. Ed., *Fungi in Marine Environments (festschrift for E.B.G.Jones)* 397 pp., illustr. some col., Thailand, Centre for research in Fungal Diversity, 2002, ISBN 962-85677-0-0.

Dr Sandra Knapp — Knapp, Sandra, *Potted histories, an artistic voyage through plant exploration*. 336 pp., col. illustr. London, Scriptum editions, 2003, ISBN 1-902686-28-4.

Sven Koeltz — Nicholson, Dan H. & Fosberg, F. Ray, *The Forsters and the botany of the Second Cook Expedition (1772–1775)*. 760 pp., map on endpapers, Ruggell, Liechtenstein, A.R.G. Gantner. 2003, ISBN 3-906166-02-3 (Regnum Vegetabile Vol. 139).

Richter, Hermann, *Codex Botanicus Linnaeanus* Vol. 1 (with biographical sketch by H,Walter Lack, a translation by Sten Hedberg and edited by John Edmondson) 1102 pp., Vol. II Alphabetical

	Index… by Wilhelm Ludwig Petermann. 202 pp., Ruggell, Liechtenstein, A.R.G. Gantner, 2003, ISBN 3-906166-03-13 (Regnum Vegetabile Vol. 140).
Marine Biol. Assn. of Hong Kong	Shin, P.K.S. ed., *Turning the tides, a Festschrift in honour of Professor Brian Morton.* 383 pp., illustr. some col., maps, Hong Kong, Marine Biol. Association of Hong Kong, 2003.
John Marsden	Campbell, John, *In Darwin's wake, revisiting Beagle's South American anchorages.* 271 p., illustr. some col., Shrewsbury, Waterline Books, 1997, ISBN 1-85310 755 7.
Prof. B.S. Morton	Shin, P.K.S. ed., *Turning the tides, a Festschrift in honour of Professor Brian Morton.* 383 pp. illustr. some col., maps, Hong Kong, Marine Biol. Association of Hong Kong, 2003.
Nat.Mus. & Galleries of Wales	Lazarus, Maureen & Pardoe, Heather S. eds. *Catalogue of Botanical Prints and Drawings at the National Museums & Galleries of Wales.* 319 pp., illustr., some col., Cardiff, National Museums & Galleries of Wales, 2003 ISBN 0 7200 0525 6.
H.Pearson	Mader, Detlef *Paleoecology of the Flora in Buntsandstein and Keuper in the Triassic of Middle Europe Vol. 1 Buntsandstein.* 936 pp. illustr. Some col., maps., Stuttgart, Gustav Fischer Verlag, 1990, ISBN 3-437-30650-2.
S.Raphael	Redouté, Pierre-Joseph *Les Roses,* Paris 1817–1824: CD-ROM edition with commentary by Sandra Raphael, published by Octavo Editions, Oakland, CA., ISBN 1-891788 –28-0.
Royal Bot. Gardens, Kew	Klitgaard, B.B. & Bruneau, A. Eds., *Advances in legume systematics part 10, Higher level systematics.* 422 pp., illustr., Kew, Royal Botanic Gardens, 2003, ISBN 1 84246054 4.
Ruth Schneebeli-Graf	Schneebeli-Graf, Ruth [translator and editor] *Botanisieren mit Jean-Jacques Rousseau, die lehrbriefe für Madeleine das herbar für Julie.*158 pp., illustr. some col., Thun, Ott Verlag, 2003, ISBN 3-7225-6777-7.
Dr F.A. Skinner	Withering, William A botanical arrangement of British Plants .... Vols. 1 & 2, 1151 pp., 2 pl., Birmingham, 1787.
Dr E Vitek FLS	Adler, Wolfgang & Mrkvicka, Alexander Ch., *Die Flora Wiens, gestern und heute.* 831 pp., maps, Vienna, Naturhistorishen Museum Wien, 2003.
	Zuschin, Martin & P. Graham Oliver, *Bivalves and bivalve habitats in the northern Red Sea…VI Bivalvia.* 304 pp., illustr. some col., maps., Vienna, Naturhistorishen Museum Wien, 2003, ISBN 3-902-421-00-2.

Correspondence

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18 August 2003

Dear Brian

In view of your editorial on page one in the July 2003 issue of *The Linnean* 19(3), in regard to my article in that same issue (Somma, 2003a), it should be noted that parental behaviour in non-archosaurian reptiles is not strictly limited to "oviparous" species as you stated. In point of fact more than 58 species of viviparous squamate reptiles exhibit some form of parental behaviour toward their neonates or juveniles (Greene *et al*., 2002; Somma, 2003b, c). Moreover, the anonymous reviewer whom you cite states that "implicit in Somma's argument is the suggestion that parental behaviour in Anapsida and Squamata is on a level with that in crocodiles and birds". It should be noted I state that "parental behaviour does not appear to be a dominant form of reproductive behaviour" in non-archosaurians and "the level of sophistication of behaviours found in turtles and lepidosaurs normally does not quite compare to crocodilians… and other amniotes"(Somma, 2003a). Of course these taxa are truly "secretive", "enigmatic creatures" (Somma, 2003a), and more work needs to be done in order to fully document these behaviours and give us a more complete understanding of the evolution of parenting in birds and mammals (Rosenblatt, 2003).

Cordially yours
LOUIS A. SOMMA

GREENE, H.W., MAY, P.G., HARDY, D.L., Sr., SCITURRO, J.M. & FARRELL, T.M. 2002. Parental behavior by vipers. pp. 179-202. In: Schuett, G., Höggren, M., Douglas, M.E & Greene, H.W., eds. *Biology of the vipers*. Eagle Mountain, Utah: Eagle Mountain Publishing, LC.

ROSENBLATT, J.S. 2003. Outline of the evolution of behavioral and nonbehavioral patterns of parental care among the vertebrates: critical characteristics of mammalian and avian parental behavior. *Scandinavian Journal of Psychology*, 44: 265-271.

SOMMA, L.A. 2003a. Reptilian parental behavior. *The Linnean*, 19(3): 42-46.

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SOMMA, L.A. 2003c. Parental behavior in lepidosaurs and turtles: source addendum. *Bulletin of the Chicago Herpetological Society*, 38: 65-76.

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66 Tivoli Cresent, Brighton NB1 5ND

9 November 2003

Dear Brian

It is with pleasure that I read the letter by Gordon Howes, F.L.S. in reply to my article on Ascalaphids in *The Linnean*, Number 2, April 2003.

A response indicates that there are other entomologists interested in the subject.

I have written to Gordon Howes and enclose a copy of my letter to him. Whether you wish to continue with the points in my article or not, I do not know. If so, you may like to publish all, or parts, of the enclosed. The photographs help to identify the points raised.

A body of a female Ascalaphid has been sent to Mr Howes but I do not think you require one.

Yours sincerely
M.J.DAWSON F.L.S.

Dear Mr Howes

Your article in the latest Linnean Newsletter concerning Ascalaphids is most interesting. My article on these insects was not a guess as to their identification in the Egyptian Hieroglyphics but was after very careful study and comparison with other insects, particularly bees and hornets.

We both agree that the carvings are extremely accurate and that identification is almost sure. The following points illustrate your observations:

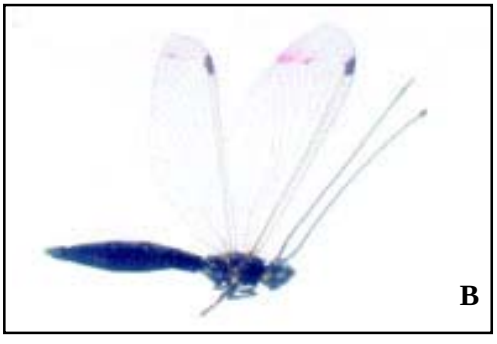
You are not sure that the hieroglyphic is an Ascalaphid, as the body is always shown bulbous rather than elongate. While the make Ascalaphid bodies are rather elongate, the females are always bulbous, especially just before egg-laying. See photographs A and B.

If the carvings are absolutely correct, then it is the modern interpreters who make mistakes. In a recent book on Hieroglyphics (I cannot remember the names of the two authors) there is a drawing of an insect which is described as a Dipteran species of fly. Three wings are clearly shown, the fourth being behind the abdomen. I sent a copy of this to Brian Gardiner. Hardly a dipteran (two-winged)! Possibly the authors were not conversant with Latin/Greek.

The abdomen does curve downward, especially in females. Possibly due to the weight of the mass of eggs. After laying, the body does become thinner (as in humans).

I doubt if the Egyptians would have mistaken the length of the antennae, thereby depicting a bee with long appendages. Enclosed is a photgraph of a queen Hornet showing the extremely short antennae. The bee's antennae are very similar – photograph C.


A


B

Also, the wings of the Hornet are comparatively short, compared with Ascalaphids.

Ascalaphids do not have ovipositors nor stings. The males usually (but not always) have a pair of claspers with which to hold the female, as do dragonflies.

Ascalaphids have three pairs of legs. The rear pair are usually shown across the lower half of the abdomen.

C

It is only the upper part of Egypt where Ascalaphids may be less numerous than five thousand years ago, due to the drying out of the Nile basin. In the rest of Africa (apart from the deserts) they are relatively common; in parts very numerous (*The Ascalaphidae of the Afrotropical Region* by Tjeder and Hansson shows maps of these areas and the distribution thereof).

Also enclosed, in a tube, a body of a female Ascalaphid (*Ascalaphus basticus*) for examination. It is semi-bulbous and is rather flattened laterally. They become ever more bulbous as the eggs develop. This specimen has, of course, dried somewhat.

I would therefore suggest that the Egyptian Hieroglyphics of this species are extremely accurate and do not represent a bee or a hornet. Having no learnings of ancient Egyptian nor Hieroglyphics I cannot comment on the etymology thereof.

The above may be of some interest to you

Yours sincerely

MICHAEL DAWSON

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11 November 2003 Eton College, Windsor SL4 6DW

Dear Professor Gardiner

Joseph Banks and Friends

I read with interest the article by Sir David Smith *(The Linnean,* 19(4): 31–41). His excellent article cited Constantine Phipps (later 2nd Baron Mulgrave: 1744–1792; FRS, 1771) as ‘an Oxford friend’ but it might be fairer to say that he was one of a number of botanising friends and acquaintances that Banks made at Eton. This was the subject of our exhibition of 1997 – “Joseph Banks and Friends: Plant Hunting at Eton and Beyond”, and readers of *The Linnean* may be interested to know that our Natural History Museum now features a variety of material on both Banks and Phipps, including a full-size mock-up of Banks’ cabin on the *Endeavour.* Nearby we have recently planted a small garden devoted to species collected by Banks. As Sir David Smith’s article remarks, Banks was

" ... not much addicted to posthumous fame" and we hope that he would forgive his old school for planting this living memorial. Banks was a boy at Eton from 1756–1760. Eton's decade under its Head Master, Dr Barnard (HM 1755–1765), was remarkably successful: the number of boys in the school rose from 367 to 552. Also noteworthy is that two other contemporaries (Phipps, and Woodward) were sufficiently active as botanists to have merited having species named after them, and for many others natural history became an important part of their lives: to what extent Banks catalysed this flowering of interest remains a matter of speculation.

Banks spent his early years at home on the edge of the Lincolnshire fens. There 'fresh air, the open fields and plentiful play laid the foundations of a remarkably tough constitution, and private tutoring gave him sufficient education to take him to Harrow in April 1752, aged 9. Thence, either to get the best of both worlds, or because of invincible opposition to learning in the Harrovian atmosphere – for to quote his later friend, Henry Brougham, 'Joe cared mighty little for his book' – he was in September 1756 removed to Eton.'[1]

Banks' boarding house at Eton, Jourdelays, under the care of his Dame, Frances Yonge, seems to have provided a suitable environment for the germination of botanical interests. Of the twenty or so boys in his house, there were two others who went on to be Fellows of the Royal Society. Benjamin Way (1740–1808; FRS, 1771), according to his certificate of election, was 'well vers'd in natural history', whilst William Perrin (1743–1820; FRS, 1772) was a close friend of Banks at Eton and Christ Church, and subsequently became a frequent correspondent, and wrote to him in 1766 of 'the fire of botany burning in my soul'. When Perrin was elected to the Royal Society, his proposers included Banks and Way.

A third contemporary of Banks in Frances Yonge's House, Thomas Jenkinson Woodward FLS (1745–1820), who was described by Sir James Edward Smith, founder and first President of the Linnean Society, as 'one of the best English botanists, whose skill and accuracy are only equalled by his liberality and zeal in the service of science.' Smith named the fern *Woodwardia* after him.

In the spring of 1760, Banks was sent home for inoculation against smallpox. By the time he had recovered, it was too late to return to school and he went up to Christ Church, Oxford as a Gentleman-Commoner. The rest, as they say, is history!

Yours sincerely
GEORGE FUSSEY FLS

1. BEAGLEHOLE, J.C. (Ed.) 1962) *The Endeavour Journal of Joseph Banks 1768-1771*. 2 vols, Angus and Robertson, Sydney.

17 King Edwards Grove
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4 November 2003

Dear Brian

The subject of your picture quiz in the October issue of *The Linnean* 19(4) p.26, is Mungo Park, born 1771 near Selkirk, died 1806 at Bussa, Nigeria. In 1793 he travelled to Sumatra on board the *Worcester*, and honed his skills as a naturalist by producing watercolours of some twenty species of fish. In May 1795 he set out from Portsmouth on the first of his voyages to West Africa. I have looked for the site of his death, but it now lies under the waters of the Niger behind Kainji Dam.

Best wishes
JIM GREEN

Royal Botanic Gardens Sydney
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17 November 2003

Dear Brian

This looks awfully like Mungo Park, whom Sir Joseph Banks had intended sending here at the end of the eighteenth century to make an expedition to the interior, using a small(ish) boat under the comand of Matthew Flinders.

In the event, Park declined, ostensibly because he would get only ten or twelve shillings a day for his pains, though Banks was told that there was 'some private connection, a love affair in Scotland but no money in it (what a pity it is men should be such fools that might be of use to their country) that is the cause of it'. Indeed Park married on 2 August 1799 and the proposed expedition became transformed into the first circumnavigation of our continent – by Flinders on the Investigator –1. George and Henry Jenner, sons of Edward's second brother, variolated 309 persons in Berkeley in 1759 with apparently no fatalities. Henry had been trained as a surgeon, but his bother was a clergyman!

Banks's 'second choice' for naturalist was Robert Brown, who was later to become perhaps the Society's most illustrious Secretary (before modern times, of course!). And Brown's scientific team included as Natural History painter, Ferdinand Bauer, another of Banks's second choices, while the landscape painter, William Westall was a third choice candidate! Despite this 'second-best' air, the team produced tremendous results.

Park, who had been a student friend of Brown in Scotland, had been in Africa before the New South Wales proposal, and was to go there again, rather than to Australia – and the rest (as they say) is (of course) history!

All the best
DAVID MABBERLEY

P.S. The all pervading benign influence of Banks was splendidly dealt with in the outgoing President's piece in the same issue, though I confess I wish David had had room to mention out work at the Joseph Banks Archive based in The Natural History Museum under the auspices of both that organisation and the Royal Society (www.nhm.ac.uk/hosted_sites/banks/index1.htm).

Picture Quiz

Edward Jenner (1749–1823)

Edward Jenner was born May 17th 1749 in the vicarage at Berkeley, Gloucestershire. The vicarage was situated on a hill in the shade of the castle, in which Edward II was foully and brutally murdered in 1327. This castle is said to be one of the most perfect remaining in England. The barony has been borne since 1295 and at one time the Earl owned valuable property in London, including Berkeley Square (of nightingale fame). Today the Vale of Berkeley is famous for its cheeses and for the Berkeley Hunt. Edward, the eighth child, was initially educated at home, however, on reaching the age of eight (1757), he was sent to Wotton-under-Edge Grammar School where he boarded with the headmaster. Following an outbreak of smallpox in the town, he was inoculated by a local surgeon who injected him with some pus from a smallpox vesicle of a healthy person. Edward subsequently had a mild exhibition of the disease[1].

The following year (1758), Edward's parents transferred him to Cirencester Grammar School where again he boarded. Then, at the age of thirteen, he was accepted as an apprentice to the surgeon teacher: Mr John Ludlow of Chipping Sodbury, with whom he remained for six years. It is unclear who suggested the idea of a medical career, perhaps his brother Stephen or, more likely, one of the surgeons in Berkeley who were his parents' friends. Whatever, the move proved to be highly propitious. John Ludlow's son and partner, David Ludlow, had studied in London with John Hunter, the greatest surgeon of his time. Thus, at the conclusion of his apprenticeship with the Ludlows, it seemed a natural progression for Edward to join John Hunter in London where he not only boarded with the great man himself, but also accepted his tutelage, which fortunately his private

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1. George and Henry Jenner, sons of Edward's second brother, variolated 309 persons in Berkley in 1759 with apparently no fatalities. Henry had been trained as a surgeon, but his brother was a clergyman!

Edward Jenner.
Reproduced by permission of the
President and Council of the Royal College of Surgeons of England.

income allowed him to partake[2]. He eventually completed a six year apprenticeship with Hunter. A certificate signed by Hunter on 15 May 1772 states "Mr Edward Jenner, Surgeon, hath diligently attended Four Courses of my Anatomical and Chirurgical Lectures".

John Hunter was also chief surgeon at St. George's Hospital, where Edward formally enrolled as a student in 1770. According to the old Admission Book in the Dean's office, Edward Jenner was one of the first few students of the new medical school attached to St. George's Hospital. At about this time Edward conveyed his knowledge, which he had

2. His income for the years 1770–1773 came to £335. A top up loan of £98-6-6 came from brother Stephen.

been aware of from his childhood (reinforced by a report he had read whilst with the Ludlows), that dairymaids who had cowpox did not contract smallpox. Furthermore, he drew for Hunter a typical vesicle caused by cowpox on the finger of a milker. During his second year at St. George's a smallpox epidemic broke out. In a letter to his brother Stephen, he wrote "I have decided no matter what trials and tribulations lie before me, to dedicate the whole of my life to ridding the world of smallpox". Also in 1771 Edward Jenner undertook his first scientific task, when on Hunter's recommendation he engaged in the technical preparation of the zoological specimens brought back by Banks from Cook's first voyage of discovery.

At a much later date (1780) Jenner undertook for Banks a series of experiments in which he tested the value of human blood as manure. By this time Jenner had long since left London and had returned to Berkeley, where he settled in 1785 with the purchase of Chauntry Cottage, next to the churchyard, for his new bride. Sometime later the Reverend Robert Ferryman designed and built a folly for Jenner in the south-west corner of the garden of Chauntry Cottage. It was in this folly, which he called the Temple of Vaccinia, that Jenner, aged 47, performed the first person to person vaccination when he vaccinated James Phipps with lymph from Sarah Nelmes who at that time was suffering from cox pox. Eventually vaccination became commonplace and so successful that Parliament voted Jenner £10,000 in 1802 and a further £20,000 in 1806. Soon vaccination had become a permanent part of the medical armoury throughout the world and Jenner was fêted by the King, Prime Minister and London Society. Vaccination proved so effective that in 1980 WHO was able to declare that smallpox had been eradicated. Today there are two WHO approved sites where the variola virus is stored: Atlanta, Georgia in the USA and at Novosibirsk, Russia.

The Temple of Vaccinia

In the final analysis did Edward Jenner leave any other tangible assets and, if so, what or where is his legacy?

An undoubted contender is the Temple of Vaccinia which stands in Chauntry Cottage garden and in which for many years hung the hide of the cow, Blossom, from whence Sarah Nelmes, the milkmaid contracted cowpox. The cow itself, after serving a beneficial service, was turned out to end its days at Broadstone, a farm near Berkeley. Eventually the hide was given by Jenner's son, Colonel Robert Jenner, to St. George's medical school, inititally at Hyde Park Corner but relocated in the 1970s to Tooting[3]. It is said to

The hide of Blossom the cow.

be on record that the original horns were absent when the hide was received at the hospital. According to Susan Grove, custodian of Jenner's cow hide, the original horns were sold by an impecunious descendant of Jenner's, to an American University in the 1930's; however, in the *Worcester Journal* for Saturday May 24th 1924, it states, "attached to that hide are horns made of wood".

This brings us to the case of the missing horns. Apparently the horns had been sold by Stephen Jenner, the grandnephew of Edward Jenner to Mr G.A. Turner, a well known pharmacist and owner of Anderson and Virgo. One of the horns had an inscription inside in Stephen Jenner's handwriting "The horns of the cow from which the matter was first taken for vaccination. – Stepn. Jenner".

Mr Turner had them mounted on a mahogany shield and put them in his shop window in Worcester. One remaining difficulty is the presence of a third horn in the possession of the Royal College of Physicians in London, which bears on a silver plate the following inscription: "The horn of a cow given by the benefactor of man, Dr Jenner to his friend Sir John Fisher and presented to this institution in 1813". One further complication was a report in the *Daily Express* (27 September 1924) that a Dr C. Howard Jackman of Hepworth Green, York, maintained that the pair of horns were in his possession, and that they had been given to his great-grandmother whose children the great physician had vaccinated. All this evidence suggests that several cows from the Berkeley herd were used by Edward Jenner. The Royal College of Surgeons possesses a small silver box inscribed in the lid Edwd. Jenner Surgeon Berkeley, which could have held squares of glass on which he preserved vaccine matter. Indeed, it is said to have been used "for vaccination purposes".

The Hunterian Museum contains three preparations made by Jenner to demonstrate the alterations in size of the testicles of cuckoos. It also contains Jenner's dissection of the female cuckoo. In the posthumous work on the migration of birds (1824) Jenner

3. The hide originally hung on the north wall of the library at Hyde Park Corner. In the 1950's and 60's most of the medical students recorded their sojourn at St. George's by adding their signatures into the inside of the hide!

Clue: Translated Ehrenberg's papers into English:
introduced into the Linnean Society by Thomas Bell

corrects Erasmus Darwin's statement that cuckoos feed their nestlings "the birds were shrikes not cuckoos!"

Finally, the Wellcome Museum possesses several anatomical specimens prepared by Jenner. Jenner was elected a member of the Linnean Society on 17th July 1798. The signatures on his certificate included those of four Vice-Presidents: Drysander, Lambert, Martyn and Shaw.

BRIAN G. GARDINER

Postscript

Wallace was introduced to the anti-vaccinator's fold by Herbert Spencer's writings. Spencer noted that the first compulsory Vaccination Act of 1853 had led to an increase of small-pox in the population. Wallace purused the Reports of the Registrar General for that period, extracting information and producing graphs in which he compared small-pox mortality with that for other contagious diseases. Not only did he find that there was no special protective effect of vaccination but also that the first compulsory Vaccination Act of 1885 had lead to a marked increase in small-pox. Wallace then produced two

pamphlets in support of his case: firstly, *Forty-five Years of Registration Proving Vaccination to be both Useless and Dangerous* (1885); secondly, *Vaccination, a Delusion: its Penal Enforcement a Crime, proved by the Official Evidence in the Reports of the Royal Commission 1898*. Both pamphlets he sent to all the 670 MPs who were voting on the 1898 Vaccination Act and, later on the 1907 Vaccination Act. The House, however, sided with the views of its medical practitioners against Wallace. Nevertheless, Wallace's views were noted and his opposition to vaccination resulted in parents being allowed exemption from having their offspring vaccinated if objection was made on conscientious grounds. Accordingly, my maternal grandmother stood up in the local magistrates court at Stonehouse (5 miles from Berkeley) and claimed exemption for her daughters (see *The Linnean* 11(3), 1995:8).

References

FISHER R.B., 1991. *Edward Jenner 1749-1823*. London: André Deutsch.
LE FANU W.R., 1951. *A bio-bibliography of Edward Jenner 1749–1823*. London: Harvey & Blyth.

Acknowledgements

For information on the hide and for the photograph, I am most grateful to Susan Grove, Archivist, St. George's Hospital.

The idiosyncratic numbering of *The Linnean* and the Society's annual reports (1984–2001)

Recently for a biographical article on Agnes Arber (1879–1960), the Cambridge plant morphologist, botanical historian, botanical bibliographer, philosopher of biology, and metaphysicist, I perused over a period of several weeks all the back issues of *The Linnean*, starting with its first issue of January 1984 and edited most ably since then by Brian G. Gardiner.

I had difficulty in keeping my unbound issues in what was the proper, chronological order. In response to an inquiry, John Marsden emailed me (4 July 2001): "As to numbering of issues, here's my standard text for dealing with the problem:"

> In the relatively distant past, three issues of *The Linnean* were produced every year. In 1993 and 1994 we produced our first Annual Reports (now a legal requirement in the UK), which were mailed as free-standing documents to Members and the very small number of other subscribers in the April of the year following the year to which they applied (our year runs from 1st Jan – 31st December), so the 1995, 1996 and 1997 Annual Reports appeared in April 1996, 1997 and 1998 respectively. These three Annual Reports formed Issues 1 of Volumes 12, 13 and 14 respectively. The numbering of issues at this time led to Issue No. 4 appearing in the following January, which was not terribly sensible. We're not all rocket scientists. The 1998 Annual Report and subsequent ones were again free-standing

and *The Linnean* moved in 1999 to four substantive issues a year starting in January (Issue 1, Volume 15) and ending with Issue 4 in October. Which leaves us with 1998. In 1998, the 1997 Annual Report was Issue 1 of Volume 14, 1998. There were only two other Issues in 1998, in July and October (Issues 2 & 3). Got it? Good!

This is all well and good. I get it. Yet my unbound issues were difficult to get and keep in sequence. Thus I invested a couple of hours (well, actually more than a couple) to compile the accompanying table with an unofficial sequential numbering of the issues. Ever since I numbered my issues of *The Linnean*, my bibliographic life has been greatly simplified. Why, I even sleep better and have regained a couple of minutes from all those hours I invested in concocting the table.

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SEQUENTIAL ISSUE NUMBER: VOLUME, ISSUE (DATE)	***COVER DESIGN[1]***
1-3: vol. 1, #1-3 (Jan.,***** Mar., Aug.***** 1984)[2]	Linnaeus and Society's coat of arms, funereal edging
4-6: vol. 1, #4-6 (Jan.,***** Apr., Aug. 1985)	"
7-9: vol. 2, #1-3 (Jan.,***** Apr., Aug. 1986)	"
10-12: vol. 3, #1-3 (Jan.,***** Mar., Aug. 1987)[2]	Linnaeus and Society's coat of arms, non-funereal edging
13-15: vol. 4, #1-3 (Jan.,***** Mar., Aug. 1988)	Society's coat of arms and bicentenary logo
16-18: vol. 5, #1-3 (Jan.,***** Mar., Aug. 1989)	" (the logo not on 5/3)
19-21: vol. 6, #1-3 (Jan.,***** Mar., Aug. 1990)	Society's coat of arms only
22-24: vol. 7, #1-3 (Jan.,***** Mar., Aug. 1991)	"
25-27: vol. 8, #1-3 (Jan.,***** Mar., Aug. 1992)	"
28-30: vol. 9, #1-3 (Jan.,***** Mar., Aug.***** 1993)[2]	Society's coat of arms with border images of critters (first issues computerized)
31: unnumbered, 1993 annual report****** [Apr. 1994]	Society's coat of arms only (first annual report)
32-34: vol. 10, #1-3 (Jan., July,***** Oct. 1994)[2]	Society's coat of arms with border images of critters
35: unnumbered, 1994 annual report [Apr. 1995]	Society's coat of arms only (first issue on glossy paper)
36-39: vol. 11, #1-4 (Jan., July,***** Oct. 1995, Jan. 1996)[2]	Society's coat of arms with border images of critters
40: vol. 12, #1, 1995 annual report [Apr. 1996][2]	Society's coat of arms only
41-43: vol. 12, #2-4 (July, Oct.***** 1996, Jan. 1997)	Society's coat of arms with border images of critters
44: vol. 13, #1, 1996 annual report [Apr. 1997][2]	Society's coat of arms only
45-47: vol. 13, #2-4 (July, Oct.***** 1997, Jan. 1998)	Society's coat of arms with border images of critters
48: vol. 14, #1, 1997 annual report [Apr. 1998][2]	Society's coat of arms only
49-50: vol. 14, #2-3 (July, Oct. 1998)	Society's coat of arms with border images of critters (14/2 first issue with color)
51: unnumbered, 1998 annual report [Apr. 1999]*****	Society's coat of arms only
52-55: vol. 15, #1-4 (Jan., Apr., July, Oct. 1999)[2]	Society's coat of arms with border images of critters
56: unnumbered, 1999 annual report [Apr. 2000]*****	Society's coat of arms only
57-60: vol. 16, #1-4 (Jan., Apr., July, Oct. 2000)	Society's coat of arms with border images of critters
61: unnumbered, 2000 annual report [Apr. 2001]*****	Society's coat of arms only
62-65: vol. 17, #1-4 (Jan., Apr., July, Oct. 2001)	Society's coat of arms with border images of critters

Indices:

vols. 1-3 (1984-87): J. T. C. Sellick (1988) in *The Linnean* 4(#3):53-56
vols. 4-6 (1988-90): J. T. C. Sellick (1992) in *The Linnean* 8(#1):63-68
vols. 1-10 (1984-94): J. T. C. Sellick (1996), issued separately
vols. 11-14 (1995-98): J. T. C. Sellick (1999), issued separately

Special issues:

#1 (1998), Christian Gottfried Ehrenburg (1795-1876): The man and his legacy
#2 (2000), Colin Patterson (1933-1998): A celebration of his life
#3 (2001), Wheat taxonomy: The legacy of John Percival

Lists of deaths (not obituaries or occasional notings of deaths):[3]

[#3] 1/3:23-24 (1984), in the proceedings
[#4] 1/4:35-36 (1985), "
[#7] 2/1:29-30 (1986), "
[#10] 3/1:43 (1987), "
[#13] 4/1:45-46 (1988), "
[#16] 5/1:64 (1989), "
[#19] 6/1:36-37 (1990), "
[#23] 7/2:29 (1991), a separate list, *not* in the proceedings

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[1]Issues are given unofficial sequential numbers to keep unbound issues in proper order and to facilitate retrieval if the issues are numbered (preferably in red ink) in the upper left-hand corner (e.g., #47 is quicker to find than the equivalent vol. 13, #4, Jan. 1998). The annual reports are unnumbered except those for 1995, 1996, and 1997, which were issues #1 of, respectively, vols. 12, 13, and 14. The annual reports are issued each April but their covers do not bear issue dates (hence the month-year information is noted in brackets). *Key to symbols:*

***** = issue with the Society's proceedings. In vol. 1 (1984-85) the Jan. and Aug. 1984 issues had the proceedings for 1982-83. In vol. 9 (1993) the Jan. issue had the proceedings for 1991-92, whereas the Aug. issue had them for 1992-93. The proceedings were last published in *The Linnean* in the Oct. 1997 issue and then appeared in the annual reports for 1998 onward.

****** = By law from 1993 on all charities in the U.K. had to issue annual reports.

[2]The following citations in *The Linnean* relate about its publication history:
Vol. 1(#1), p. 1: origins of *The Linnean.*
Vol. 3(#1), p. ii: change from 6 to 3 numbers per volume.
Vol. 9(#1), p. 3: first issue computerized.
Vol. 9(#3), pp. 1-3: coat of arms.
Vol. 10(#2), p. 1: annual report to be published each April, regular issues to be published in July, Oct., Jan.
Vol. 11(#4), p. ii: first issue of vol. 12 = 1995 annual report to be published in Apr. 1996.
Vol. 12(#1), p. ii: 1995 annual report = vol. 12, #1.
Vol. 13(#1), p. ii: 1996 annual report = vol. 13, #1.
Vol. 14(#1), p. ii: 1997 annual report = vol. 14, #1.
Vol. 15(#1), p. ii, 15(#2), p. ii: issues 1-4 = resp., Jan., Apr., July, Oct., the unnumbered annual report also issued in Apr.

[3]J. T. C. Sellick's indices list obituaries and most but not all of the useful lists of deaths.

Glasgow 1913: A Defence of the Research Commitment of a University Botany Department

The power bases established in Scotland by certain Regius Professors of Botany appointed in the Victorian era, their confidence and the extent of their influences beyond their Departments and Universities, have been described for F.O. Bower (Glasgow 1885–1925) and I. Bayley Balfour (Edinburgh 1888–1922) (1,2). It seems reasonable to assume that their power bases would have been especially strong and sound in their immediate academic environments and that they reigned supreme over their Departmental organisations. To a large extent such assumptions are true. But there was one occasion when Bower was questioned about the running of his Department by the Court, the governing body of Glasgow University. Not surprisingly, this brought forth a spirited response from Bower, in the course of which he set out his views on the balance to be struck between teaching and research in University Departments.

The Chain of Command in the University

The Court

Its role in 1912–13 was based on the 1889 Universities (Scotland) Act. It was defined as 'a body corporate and with perpetual succession'. Its responsibilities were wide, including the administration of the whole revenue and property of the University; to regulate fees; to receive representations and reports from the Senate; to appoint members of staff and examiners and where necessary to take proceedings against a Principal (who is also Vice-Chancellor), Lecturers and Assistants. Court membership consisted of the Rector, the Principal, Assessors nominated by the Chancellor, and by the Lord Provost, Magistrates and Town Council of Glasgow. In addition, four Assessors were nominated by the Senate and four by the General Council (an association of graduates of the University).

The Senate

Its role was defined as being charged with the regulation of the teaching and discipline of the University. Its membership consisted of the Principal and all the Professors.

The Faculties

There were five Faculties – Arts, Law, Divinity, Medicine and Science. By virtue of the courses offered in his Department, Bower was a member of three Faculties, Arts, Medicine and Science.

In 1909 Bower had been appointed one of the four Assessors on the Court nominated by the Senate. The appointment was for four years, so that in 1912–13 he was a sitting member of the Court.

The present day powers of the Court remain much the same as in 1912–1913 with some modifications through the Universities (Scotland) Act of 1966. The membership is

a similar representation but with six assessors of the Senate of which two must be Readers or Lecturers. The role of the Senate is the same as in 1912–1913 with an additional charge – the promotion of research. Membership consists of the Principal and Professors and representatives of the academic staff.

Routine Business at a Court Meeting

The Court meeting on 12th December 1912 was mainly occupied with routine business and Bower intended to introduce one such item pertaining to his own Department. In January 1912 the Botany staff consisted of A.A. Lawson, Lecturer (£300 p.a.), J.M.F. Drummond, Senior Assistant (£200 p.a.) and J. McLean Thompson, Junior Assistant (£75 p.a.). Student Demonstrators, each paid £25, were employed during the April to June period with the Medical Botany classes, the number so employed depending on class sizes. In March of that year Bower had asked the Court to allow Drummond's title to be changed to 'Lecturer in Botany, with special reference to Plant Physiology', a change permitted by the Court but without change in salary (3). In May 1912 the Court had agreed to pay £100 towards the fitting out of a small plant physiology laboratory which had been established in the Botany Building by partitioning off part of the Departmental workshop. In February 1912 Bower had joined A.C. Seward (Cambridge) and D. Prain (Director at Kew) to form a Selection Committee for the Chair of Botany at the University of Sydney. Their first choice was A.G. Tansley (Cambridge), but he subsequently withdrew his application. Their second choice was A.A. Lawson who was duly appointed after some delay (4). He gave a notice of resignation to the Court on 7th November 1912, effective from the 22nd of the month (5). Hence, at the December 12th Court meeting Bower proposed that Drummond be appointed to the Lectureship vacated by Lawson, 'Since from my knowledge of available personnel in Great Britain no one is better qualified than Mr Drummond for the appointment' (6). The Court agreed with this proposal, with Drummond's appointment to run from 1st January 1913 and with his salary increased to £300 p.a. In August 1912 Drummond had shown interest in a Chair of Biology in the University of Western Australia, Perth. In the draft of a reference (28th August 1912) Bower described Drummond as 'A botanist of wide knowledge, a skilled experimenter, an expert in the field of plant physiology, a stimulating teacher and well versed in fungi… there was no better experimenter in his generation' (7). In the end Drummond did not apply – it may be questioned whether this was a genuine interest or a more subtle move. This chance of promotion came at an opportune time for Drummond. He had just completed an English translation of G. Haberlandt's 1884 *Physiologische Pflanzenanatomie*. Whilst Harberlandt's book had at first brought a mixed reaction and divergent judgements from leading botanists it is credited with stimulating a fresh and more experimental approach to plant antomy (8). Drummond's translation was soon to be published by Macmillan & Co.

Hence, an afternoon spent with routine business had brought a satisfactory result for Bower with the promotion of a protégé now assured.

An unexpected Intervention and Enquiry

Also present at the 12th December meeting was one Assessor who was seemingly not entirely satisfied with the background to Drummond's promotion. This was Sir David M'Vail, a long serving Assessor appointed by the General Council. A graduate in Medicine in 1876 he had been first appointed to the Court in 1891, and had been re-appointed every four years up to 1911. At some time prior to 1911 he had been knighted. M'Vail pointed out that with Lawson's resignation and Drummond's promotion there was now a staff vacancy. Since Drummond could not take on Lawson's lecture programme in addition to his own, how was Lawson's work to be carried on. On reflection M'Vail's enquiry seems rather quick off the mark – perhaps suspiciously so. Lawson's notice had terminated 20 days prior to the meeting – due to delays he had not known the result of his Sydney appointment until late October (4 ibid). Even with the administrative powers then enjoyed by Regius Professors it was unlikely that a suitable successor to Lawson would have been available at such short notice. Bower explained that meantime he would be responsible for Lawson's lecture programme. M'Vail replied that if that was the case then prior to Lawson's resignation the Botany staff would not have been fully employed. He moved that the Court ask Bower to supply a breakdown, with figures, of the duties of the staff in his Department.

Bower's immediate reaction can be imagined. To be faced with such an enquiry whilst a member of the Court would be a severe test of anyone's equanimity. However, Bower was never one to take precipitate action when something of a serious nature arose. There are many examples in his lifetime when a careful 'sounding' was made of his botanical colleagues prior to sending out an open letter or giving an address from the Chair when a controversial matter was to be discussed. He spent the following vacation over Christmas and the New Year in preparing his reply.

Reply to an Enquiry

Bower's reply came in the form a lengthy letter dated 4th January 1913, from which he addressed the Court meeting on 9th January (9). The delicacy of the matter was recognised by the meeting being held 'in camera' (a discussion 'not in open court' according to Latin or Roman Law). At this point it would be relevant to give in outline Bower's standing in the botanical world in 1912–1913. In October 1912 he had occupied the Glasgow Chair for 27 years. He has been elected FRSE soon after arriving in Glasgow, and was elected FRS in 1891, serving on the Council of the latter society in 1901–02. He had been awarded the Neill Prize of the Royal Society of Edinburgh in 1909, the Linnean Medal of the Linnean Society in the same year, and the Royal Medal of the Royal Society of London in 1910. Some 52 memoirs had been published, mainly on fern morphology and phyletic relationships. His book *The Origin of a Land Flora* had been published in 1908. The tone of his response can be judged by the opening sentence of his statement:

'Without any allegations having been made of inadequate working of the Department I am

requested to give a return apparently on the ground that the staff had not been 'fully employed'.'

He then pointed out that, prior to Lawson's resignation, his staff had been fully employed but that such full employment did not mean solely class teaching the whole of every day, which was apparently the type of 'full employment' envisaged by Sir David M'Vail. There followed another telling sentence:

'He begged to offer his opinion on the employment of staff as that of one who for 25 years had managed one of the larger Departments of the University'.

Whilst no member of the teaching staff in a University should every be 'fully employed' solely in teaching neither should there be detailed specification on the number of hours to be worked. Such an approach would do '…infinite injury to the University since the effective working of any University depends on the spirit of voluntary effort of its staff'. There was a world of difference between a day school and a University. Whilst the former exists to inculcate knowledge the latter is expected to both inculcate knowledge and increase it:

'…it should always be kept before the mind of the student of a University the sense of nascent knowledge, and it is only investigators who can do this'.

Whilst a timetable with specific hours of teaching would be necessary in a day school in a University this can never be done in more than general terms. As an annexe to his letter he supplied notes outlining the duties expected of his staff in terms of lectures and especially practical classes. Preparations for the latter were impossible to estimate beforehand or to specify. Some such classes would require more attention than others. There followed a frontal attack:

'I tell the Court plainly that such figures as are asked for are worthless for estimating whether or not the Botany staff is fully employed compared with one week's experience in managing the work of the Department. The Court should be wise to show more confidence in the advice of a Professor who knows the needs of his Department and less on mere returns, as a means of adjusting the number of his staff and its duties'.

Bower next defined his interpretation of the duties of a Head of Department and of his staff. As will be shown, this was part of a strategic plan. The duties of the Head of Department were threefold; to organise the teaching work; to take such share of this as shall properly fall to him; and to contribute to the general knowledge of his subject by research. The second duty should remain an approximate constant quantity but so regulated in demand in an academic session that some period will ensure freedom for research to take its proper place. Departmental organisation, if properly carried out, would occupy less time as the year's progressed and more time could be devoted to research. With Lawson's resignation and Bower having taking over his teaching responsibilities, the latter's time for research would be reduced. No other member of staff had been affected, so that the suggestion by M'Vail that prior to Lawson's resignation that the Botany staff was not 'fully employed' could only apply to Bower himself. His

reply to this suggestion was very much to the point:

> 'I do not know whether the Court as a whole understood what it was doing when its members allowed themselves to be led into an enquiry whether or not I personally was or was not 'fully employed' before Dr. Lawson's departure. My reply is that I was fully employed according to the analysis of the duties of a Head of Department given above'.

Note the reference to members of the Court allowing themselves to be led. Bower's target was of course M'Vail. Was there some degree of animus in the exchange? Between 1894 and 1898 Bower had been involved in a protracted series of discussions and plans for a Botany Building to be erected in the grounds of the University. The planning process also involved the Professor of Engineering, Archibald Barr, who had also been promised a new building. At various stages in the planning process objections had been raised by the medical Professors, who were concerned over Barr's ambitious plans for his Department which would occupy sites in the grounds they wanted for the expansion of their own Departments. At various times this opposition had been effectively promoted, at the same time holding up plans for the Botany Building. On the court the Medical Faculty found a willing advocate in M'Vail, who had at one stage suggested abandoning plans for the new buildings in the grounds and to make use of a large building off the campus which had become available. This idea was not acceptable to other members of the Court. The intervention of Lord Kelvin at a Senate meeting on 25th March 1898 had defused the situation (10). The Botany Building was officially opened on 13th June 1901. But Bower had a long memory.

He now took the opportunity to fully express his views on the research commitment he expected of his staff. Whilst it was important for the Head of Department to be actively engaged in research, it was absolutely essential that the members of his staff had this full opportunity. Published researches played a very important role in promotions. All members of staff should have the opportunity for advancement and they should never be employed solely in class teaching. The opportunity for research would ensure their continuing enthusiasm for their subject, an enthusiasm which would be reflected in their teaching. As a staff manager he endeavoured to arrange duties so that at some time in the academic session the staff member could pursue his researches uninterrupted by teaching responsibilities. With the annual round of teaching programmes, the third (Whitsun) term was too heavily committed to allow any member of staff research time. Each member of staff knew that research was expected of him in any time allowed during the first two terms, and that they should be prepared to give some time in the vacations to their projects. The results of such management were to be seen in the list of publications produced annually. In the previous six years three former members of his staff had been appointed to Professorships, W.H. Lang, Barker Professor of Crytogamic Botany at the University of Manchester; D.T. Gwynne Vaughan, Professor of Botany at Queen's University, Belfast, and A.A. Lawson at Sydney. A previous Junior Assistant, R.C. Davie, had been appointed Senior Assistant to Bayley Balfour at Edinburgh in August 1911. Bower was also on strong ground in referring to publication lists. In the

University's Calendar for 1912–13 with all Departmental publications listed for 1909-1911 he had published a small book (*Plant Life on Land*, 173 pp.), and seven papers including five on fern morphology and phyletic relationships and one (in German) on fern reproduction for a *Handwörtenbuch der Naturwissenschaften*. A.A. Lawson had published three papers on Gymnosperms and Drummond, as already mentioned, had his translation of Haberlandt's book close to publication. In addition, R.C. Davie had published a paper on *Peranema* and *Diocalpa*, and a Miss H.E. Allison, working in the Department as a Carnegie Research Scholar, had published a paper on *Marsilia* (11), Bower's summing up said the following:

> 'I hold these results to be a full justification of the methods of keeping the Junior Staff fully employed, though not exclusively on teaching. I may add that I am not aware of any complaint being made by a student that he had not received sufficient personal attention in the Botanical Department'.

Finally he returned to his theme on the importance of voluntary effort in the successful running of a University Department. To apply measured work specifications would lead to the lowest grade of University service – that measured solely by time. It was through this voluntary work level, which could not be measured, that the status of a University would be assessed. He concluded:

> 'The court should consider very carefully whether it can expect effectively to survey the service it already has by means of an enquiry specified by the minute of the Court. In my opinion it cannot'.

The response of the Court was somewhat subdued. The record states that it was 'highly satisfied with Professor Bower's statement'. There was no dissenting voice.

As already mentioned, there was a hidden strategy in Bower's reply. Having supplied sufficient evidence in his view to settle any argument about 'full employment' of his staff, and having made a clear cut case for the recognition of research time, he turned again to his staff vacancy which had been the basis of the original enquiry, and over which he himself would be losing out in his research time. He proposed that J. McClean Thompson be appointed Senior Assistant as from 1st January 1913 with a salary of £150 p.a. Thompson was not experienced enough to be promoted to the vacant Lectureship but he showed great promise and his career would be prejudiced if anyone were appointed to the Lectureship from outside. Thompson would be given lecture experience in the remainder of the academic session. His appointment was also necessary with the coming commitment in the 3rd (Whitsun) term when there would be 13 lectures and 13 practical classes per week. With Thompson and four Student Demonstrators there would be adequate staffing for this third term. In due course another Junior Assistant would be appointed, and the staff balance would come close to that of January 1912 - and Bower would have regained his research time in full. Not surprisingly, these proposals were approved by the Court. Bower could be well satisfied at the end of the meeting. He had successfully repulsed M'Vail's attack and had at the same time achieved promotion for

another protégé. Thompson had been a Student Demonstrator in the summer of 1911, appointed Junior Assistant in 1912, and was now well on the way to a Lectureship in Plant Morphology in the Department which came after his war service with the RAMC in 1914–18. He was appointed to the Chair of Botany in the University of Liverpool in 1921. One of the Student Demonstrators appointed in the 3rd term of 1913 was J. McLuckie who, after graduating in 1914, joined A.A. Lawson as Lecturer in Sydney (4 ibid).

Botany Courses in the University, 1912-13

Mention has already been made of an annexe to his statement provided by Bower with a detailed breakdown of the courses run in the Department over the three terms, Martinmas (1), Candlemas (2) and Whitsun (3). Student numbers were included.

Botany for Medical Students Term 3
50 lectures, 8 am – 9 am
30 practical classes, 3 days per week, duplicated each day, 9–11 am, 1–3 pm
134 students

M.A. and 1st B.Sc.
20 lectures (Cryptogams) Term 1
30 lectures (Gymnosperms, Angiosperms, Anatomy, Morphology) Term 3
30 practical classes each 2 hours in Term 1
20 practical classes each 2 hours in Term 3
59 students

2nd B.Sc. ('Advanced classes')
60 lectures (Cryptogams) 3 days per week over 20 weeks in Terms 1 and 2
60 practical classes 3 days per week, laboratory open all day 9 am – 4 pm, Terms 1 and 2
50 lectures (Physiological Anatomy, Gymnosperms, Angiosperms) Term 3
50 practical classes 5 days per week over 10 weeks, Term 3, laboratory open all day 9 am – 4 pm
9–14 students in 1911–12
14–16 students in 1912–13

Agricultural Botany
30 practical classes in Term 2
4 students

Sharing of duties by staff members

Professor (a) all Medical Botany lectures except for a few at the end of the course
(b) a few M.A. and 1st B.Sc. lectures 'to keep in touch'
(c) a large part of the 2nd B.Sc. lectures

Whilst not specified, Bower was involved with practical classes at all levels,

introducing the exercises more directly related to his lectures with what the staff called 'the Chief's inspired jawbations'.

Lecturer	(a) entire charge of M.A. and 1st B.Sc. over two terms, all lectures and practical classes except those taken by the Professor. (b) a share in 2nd B.Sc. lectures
Lecturer (Plant Physiology)	(a) Lectures to 2nd B.Sc. Demonstrating in 1st and 2nd B.Sc. practical classes
Assistant	Demonstrating in all practical classes and seeing that all material and reagents are available
Student Demonstrators	All practical classes in Medical Botany

Additional duties shared out included assistance in the collection of plant material and the cutting of sections and preparation of slides for classes. Care of the Herbarium, Museum and Departmental Library.

Some reflections on the incident

Bower's chagrin at being challenged in such a way at a meeting he was attending can be well imagined. His anger was not only due to how he viewed such an enquiry in relation to his standing scientifically and in the University, but also that M'Vail had made a move which was accepted by other members of Court. Bower's successful defence of his corner needs no embellishment. However, some points he raised are not without interest in relation to the present day academic environment.

In terms of staff management he insisted on retaining complete control of teaching and research commitments in terms of timing, with no set hours of 'class contact' being officially required, nor any 'returns' to the University. Repeatedly he emphasised the 'spirit of voluntary effort' as being essential to the effective working of the University. At the same time such freedom of action would have called for a corresponding certainty that his organisation methods would guarantee the required results – that as Head of Department he would always be on top of his job.

Evidence from erstwhile members of his staff underline Bower's success in departmental management. W.H. Lang was a protégé who joined the Botany staff in 1895 after graduating in Medicine and Science. Over the years he progressed from Assistant to Lecturer (1901), leaving in 1909 for the Barker Chair of Cryptogamic Botany in the University of Manchester. He was in regular correspondence with Bower up to the latter's death in April 1948. On his retirement in 1924 it was Bower's wish, shared by Lang, that he should succeed to the Glasgow chair, but this was not to be (1.2 ibid). In his 1949 Bower obituary (12) Lang described him as a 'wonderful departmental chief', with the Botany Department '… unique in the University where the old tradition of the gulf between professor and assistant was still general. In Botany there was intimate comradeship, all co-operated in seeing that the running of the department and the teaching

never suffered … Bower took care that there was time for research as the fundamental business of all … he had a clear practical sense and wise prudence in matters that concerned him … he dealt admirably with all his duties'. C.W. Wardlaw was one of the last Assistants appointed by Bower in 1921 and who accompanied him on his last day in the Department in March 1925. In a letter to Lang regarding the obituary he stated 'When I was a student with Bower and later on his staff I had heard all sorts of tales of his fiery temper as a young professor (i.e. a professor of middle age). The reputation, of course, remained with us and we were all very diligent in our departmental duties. I do not recall an occasion in the big laboratory for 116 students when anything went wrong – but a collection of *Capsella* with tri-cotyledonary embryos produced profound merriment in him. It just did not occur to us that we would begin a day's work with the medical class or any other unless all arrangements were at the peak of perfection, e.g. 5 stages of fern prothallus showing everything' (13). Bower's advice to his staff regarding their research was also described by Wardlaw, namely, 'We were all permeated with the idea that we should be constantly keeping one eye on the wider issues and looking out for generalisations'.

Bower stated that he was unaware of any complaint being made by a student of not having received sufficient personal attention. It may be questioned whether in the academic environment of the time that a student would have been bold enough to voice a personal complaint. There was an outlet for collective comment in the student's own publication, the weekly *Glasgow University Magazine*, as seen in an issue in December 1889 (14):

> 'Arts Professors, as a rule, elevate themselves like Gods above the common herd of students and only in the Medical Quadrangle is there any approach to intercourse between the two'.

Lang described Bower as being 'an inspiring teacher', with the success of a course depending on '… the continuous drive of Bower's enthusiasm whether in the lecture room and laboratory or on the crags of Ben Lomond'. Lang's views are reflected in an article in March 1891 in the *Glasgow University Magazine*, one of a series under the heading 'Our Professors' (15):

> 'Everyone attends to Dr. Bower's lectures because he can't help attending – would that it was so in every class! The subject is presented with such clearness and minuteness that the lectures in Botany are universally esteemed as the best of all courses …'

The eulogistic nature of the article continues, describing Bower's handling of first year classes, his enthusiasm on field trips, and his participation in social activities with student societies. The author of the article is not named. Lang had attended the Medical Botany lectures in the Whitsun Term of 1890. He was often named in the magazine in reports on meetings of the student's Medico-Chirurgical Society. The 1890 lectures had helped change his direction in life, turning to Botany after graduating in Medicine. Was Lang the author of the article?

Warlaw's undergraduate memories of Bower's teaching methods prior to 1920

underline those of Lang. Botany staff members also received student approbation on leaving. Thus Lang in 1909 'had filled his Lectureship with distinction' (16), and Lawson's resignation in 1912 'will be regretted by those who have known the value of his helpful tuition in Botany' (17).

Bower knew that he was on safe ground regarding the teaching capabilities of his Department. In later years (1939) he could ignore the comments of O.H. Mavor (the playright James Bridie) who gave his impressions of Bower's course in his authobiology (18):

> 'There seemed to be a great deal of unconnected detail about these botany lectures, in so far as I was able to take any intelligent interest in them all'.

By his own admission, Mavor's attendance at Bower's lectures had been irregular. He eventually graduated in Medicine in 1913 after a protracted student career which he started in 1906.

The strong morphological bias of the courses in Glasgow 1912–13 is evident. A full account of phylogenetic relationships would have been included. Bower, with Bayley Balfour at Edinburgh, believed firmly in the application of 'organography' in their teaching – the study and interpretation of the interdependence of form and function in the living plant. Notably the 'Physiological Anatomy' included was closely linked with the main theme. In December 1917 a group of five botanists from Cambridge and London published a 'Memorandum' in the *New Phytologist* calling for a radical revision of the teaching of Botany in Britain, especially at the elementary level, with the need to cut back on the emphasis on morphology and phylogeny and to introduce a much better balance of pant physiology and ecology (19). The discussion which followed via the *New Phytologist* in the ensuing twelve months was lively on both sides with neither giving way. The profound imprints made by Bower and Bayley Balfour on the teaching of Botany in Scotland were long lasting. The late Sir Henry Godwin, who went up to Cambridge in 1919, summed up the situation from his own experience (20):

'It is hard now-a-days to realise how great was the gap between Botany as taught in Scottish Universities & the subject emerging after World War 1 in England. The campaign centred in the New Phytologist calling for widespread introduction of experimental Sciences, by 1925 had a very firm hold in Cambridge & was the basis of our courses, but we met very few Scottish colleagues at this time in the same disciplines of genetics, ecology, plant physiology, biochemistry etc. I don't know that the time lag was, a decade or two I guess & of course Bower was a most powerful bastion of the 'old school'.'

The 1920s view of Bower as a 'bastion of the Old School' is at marked variance with his views and those of his botanical contemporaries in the 1880s. Then at the outset of their academic careers they were dedicated promoters of the 'New Botany' (also called the 'Botanical Renaissance') which had its origins in the 1870s with the teaching of W.T. Thiselton-Dyer at South Kensington under T.H. Huxley. This new approach was an attack on another 'Old School' which had dominated the teaching of Botany in Britain with attention centred on systematic studies of mainly flowering plants (C.C. Babington,

Professor at Cambridge 1861-95 called such a lecture course 'Descriptive Botany'). The 'New Botany' embraced an experimentally based study of the plant kingdom – structure, function, relationships, life histories etc. with attendant laboratory classes. Bower, an enthusiastic member of a radical movement in the 1880s, came to be regarded as an ultra-conservative in the 1920s.

One puzzling feature of M'Vail's intervention is his apparent lack of appreciation of the quantity of research going on in the University. In the Glasgow University Calendar for 1912–13, already referred to, there are 474 publications of various forms listed for 1909–11. Of these, 180 were by members of the Medical Faculty. The research tradition was well established, and adds further weight to Lang's comment that to Bower research was 'the fundamental business of all'.

One comment made by Bower in describing the duties of a Head of Department rather stands out. He contended that departmental administration and organisation was of a finite quantity, and with experience over the years would progressively take less time. Present day occupants of a similar academic position will no doubt find this contention of interest.

A.D.BONEY

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GUA Glasgow University Archives plus reference number
GUM Glasgow University Magazine plus date

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Book Review

The Story of Life, by Richard Southwood. Oxford University Press, Oxford UK 2003. 264pp. ISBN 0 19 860786 5 PB. Price £12.99.

As the author points out, this book is designed to chronicle the history of life from its very beginning some 3750 million years ago to the present day. It does exactly what it says in the introduction and the result is a no-nonsense account of evolution, major geological epoch by geological epoch. Each of the twelve chapters is prefaced by a description of the changes in life forms and the reasons for those changes as they are understood. The life forms characteristic of each epoch are then described. Physical changes in the Earth's surface, changes in climate, and anomalous events leading to major extinctions are well integrated into the progressing narrative, and the diagrams are generally clear and helpful.

It may be instructive to compare this book with Richard Fortey's **Life: An Unauthorised Biography** (ISBN 0 00 638420 X), which Southwood recommends as further reading for his own book, and which first appeared in 1997. As befits a biographer, Fortey is more discursive and personal, describing a field trip to Spitsbergen in the opening chapter, and drawing useful and humorous analogies from the works of, e.g. Edward Lear ALS, Lewis Carroll, Rudyard Kipling and the film *Jurassic Park.* Although Fortey's drift is the same as Southwood's, his chapters are concentrated on particular life forms, e.g. mammals, or habitats, e.g. the marine. Both books have concluding chapters on the rise and rise of *Homo sapiens*. Fortey's book does charm with the *Nasticreechia* of Edward Lear (and how nice to have a genuinely descriptive name, so much more informative to the uninitiated than the countless *Nomina bullshitii* to be found in the biological literature), or when he weaves a contribution from *The Just So Stories* into the evolutionary tapestry. However, *The Unauthorised Biography* does require a fair grounding in science before it becomes comprehensible. Southwood's book, on the other hand, is an excellent and informative account designed for those with little background in the subject and I believe that it does succeed in doing this, although I felt that Southwood's comments on the origins and characteristics of the early dinosaurs were a trifle obscure and some scientific terms, e.g. isotopes, cherts, Siberian traps, are not adequately explained. A glossary is to be found in *The Unauthorised Autobiography* and *The Story of Life* might usefully follow suit.

That said, Southwood's book is based on lectures he gave to first-year undergraduates on biological diversity, which ran for 18 years. Those of us in other universities who have faced the difficulties of covering diversity (and generally failed to enthuse) might care to take note of his approach.

JOHN MARSDEN

The Linnean Society
Programme

2004

1st April	6pm	LAUGHTER IN PARADISE: HERBERT SPENCER'S WILL Dr John Marsden
22-23rd April		SQUAMATE EVOLUTION AND SYSTEMATICS A conference to mark the passing in late 2002 of Garth Underwood FLS † Dr Roger Thorpe FLS (with the British Herpetological Society & American Herpetological League)
24th May	4pm*	ANNIVERSARY MEETING
30th June – 4th July		INTERNATIONAL LILY CONFERENCE † Colin Ellis FLS (with the Royal Horticultural Society)
12–16 July		INTERNATIONAL PTERIDOPHYTE SYMPOSIUM – FERNS FOR THE 21ST CENTURY † Mary Gibby FLS (at The Royal Botanic Gardens Edinburgh)
10th September		SUBVERSION OF THE HOST IMMUNE CELL SIGNALLING † Bill Harnett (joint day meeting with the British Society of Parasitology)
30th Sept.	6pm	AUSTRALIAN ETHNOBOTANY John Pearn FLS
14th Oct	6pm*	THE GENETICS OF ANIMAL BODY PLANS Peter Holland FLS FRS
18th Dec	2pm	CONVERSAZIONE venue tba

Unless stated otherwise, all meetings are held in the Society's Rooms.
For further details please contact the Society office or consult the website – address inside the front cover. * Election of Fellows † Organisers

Typesetting and layout by Mary J Morris, West Mains, London Road, Ascot SL5 7DG