



THE Systematics ASSOCIATION

Newsletter

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From the Editor

The House of Lords Report on "Systematic Biology and Biodiversity in the UK" is undoubtedly one of the most important current events for the future of systematics and systematists. The Systematics Association have submitted a response to a request for submissions, and the President has given evidence to the committee compiling the report. The response is included in full below; the transcript of the evidence given by Chris Humphries and Sir David Smith (for the Linnaean Society), as well as that given by Lord May and Dr. Rachel Quinn of the Royal Society, is very long and can be viewed on the website. It is worth noting that the full published documents can be obtained directly from the House of Lords website at the following URL: <http://www.parliament.the-stationery-office.co.uk/pa/ld200102/ldselect/ldsctech/118/11801.htm>. The latest news is that the report is now published and is in line to be debated in the House of Commons around July 20 – watch this space for more news!

Back in December we held very successful AGM, after which the annual address was given by Norman Platnick. He delivered a personal view of the thorny issues around taxon definition, ranks and the phylocode. Though I would love to reproduce the text of his address in full here, it is impossible on space grounds. Please do take a look at it on the website, however, where you can also find links to further Phylocode-related discussion and debate. The latest offering by Jake Alexander, a third year honours student from Imperial College, has recently been posted.

I want to draw to your attention to the details on pages 3 and 4 of this year's recipients of small project grants, and the summaries for those projects. There is also a report from one of last year's projects. Details of the Fourth Young Systematists Forum in December are found in this issue. For me, encouraging and facilitating the work of the next generation of systematists is one of the most important areas in which we are active. Just as the profile of systematics needs to be kept as high as possible through initiatives such as the House of Lords report, we must ensure that a cohort of younger systematists exists to keep the discipline thriving.

Paul Wilkin (p.wilkin@rbgkew.org.uk)



Response Of The Systematics Association To The House Of Lords Committee Of Enquiry: Systematic Biology In The UK

1. The Systematics Association believes that considerable advances have been made in the organisation of Systematic Biology since 1992, and several major funding initiatives (NERC's Taxonomy Initiative, Darwin Initiative, Wellcome Biodiversity Fellowships) have allowed Taxonomy to make important advances, especially in some aspects of molecular systematics and bioinformatics.

2. However all these funding initiatives have been short-term and patchy in their coverage, and have failed totally to provide the basis for a sustainable maintenance of wide-ranging taxonomic expertise across the UK. Even more disastrously, research in whole-organism identification, the fundamental core of Systematics, has become virtually impossible to fund, and its teaching has all but disappeared in Universities.
3. There is strong indications of confusion as to which Research Council should fund Systematics, and where it should be based (major museums and institutions or universities) and the subject consistently falls between perceived areas of responsibility. Systematics clearly is not considered to be of primary scientific importance to UK funding organisations, despite its fundamental role for any biodiversity project. The breadth of Systematics means that it does not fit with the 'hypothesis-driven' focus of UK Research Councils.
4. There is a potentially disastrous perception that molecular and computer techniques alone can be sustained without maintaining core Systematics expertise in whole-organism identification (i.e. alpha-taxonomy). The Systematics Association is convinced that the UK cannot now support the work needed to implement current and future policies on biodiversity.
5. Members of the Systematics Association have been facing these problems as practicing systematists, and since 1992, the Systematics Association has contributed significant proportions of our limited resources to a number of initiatives designed to promote the study of Systematics within and outwith the UK. These new developments include awarding small grants and awards for taxonomic research, establishing an annual Young Systematists Forum, and awarding bursaries to allow young and recently graduated taxonomists to attend our Biennial Symposium (designed to publicise the role of systematics to a wider audience). The large number of high-quality applications for our small grant schemes confirms that that UK Systematics community is being starved of funds and recognition.
6. We are also making urgent attempts to foster links with international bodies, both in Europe and in the USA. During 2002, the President of the Association will attend the PEET meeting in the USA; PEET is an initiative to retain taxonomic expertise in the USA that would be an ideal basis for a similar development in the UK. The Systematics Association is also actively exploring the possibility of funding the attendance of a senior research council administrator at the PEET meeting.
7. We believe that there is an urgent need for a coherent funding policy for UK Systematics. Without such a development, UK expertise in Systematics will have disappeared within the next decade.
8. To implement this, a central funding body must be set up for UK Systematics, and it should be in a position to develop and fund a strategy that will ensure that all branches of Systematics survive and develop. The body should also draw up a clear statement of the range and scope of Systematics research, and explore international collaboration, especially with Europe and North America.

From Cladograms to Classifications: The Road to DePhylocode

Dr. Norman Platnick gave the Annual Address on Wednesday 5th December, 2001 in the Lecture Room of the Linnean Society of London after the AGM. The text of his address 'From Cladograms to Classification: the Road to DePhylocode' can be found on the SA website at <http://www.systass.org/meetings/agm-address-dec2001.html>

There is also a link there to the TAXACOM website (<http://usobi.org/archives/taxacom.html>), the Biological Systematics Discussion Group for the Taxonomic community, so that you can follow recent discussion of the phylocode

You may also be interested to read an unpublished talk on the Phylocode by Gary Nelson, part of a debate between him (against) and Mike Lee (for) held during the Joint Conference of the Australasian Evolution Society and the Society of Australian Systematic Biologists, 16-18 July 2001, University of Melbourne (<http://www.systass.org/meetings/phylocode-debate.html>)



Small Grant Awards 2002

At the Meeting dated 20 March 2002, Council approved the following small grants.

Paul Bates, Harrison Institute, UK, Acoustic identification of bats in Myanmar (Burma), £700

Stephen Donovan, University of Leiden, Netherlands, A monographic study of the ichnobiota of the type Maastrichtian (Upper Cretaceous, The Netherlands), £600

Frédéric Delsuc, Université Montpellier II, France, Tracking the extent of morphological convergence in enigmatic pink-fairy armadillos (Genus *Chlamyphorus*) by deciphering their phylogenetic relationships using DNA from Museum specimens, £700

David Gwynne-Evans, University of Cape Town, South Africa, C.A.P.E.bio : Collaborative Atlas of Plant Ecology and biogeography, £700

Simon Loader, Natural History Museum, UK, Title: "Biogeography of amphibians of the Eastern Arc Mountains, Tanzania, £700

Matthew Nolan, University of Queensland, Australia, Taxonomy, phylogeny and coevolution of the Sanguinicolidae (Platyhelminthes: Digenea) in Tasmanian waters, £800

Helga Ochotorena, UNAM, Mexico, Flower anatomy and systematics of the *Portlandia*-*Catesbaeeae*-*Chicocceae* (Rubiaceae) complex, £800

Sabine Stöhr, Swedish Museum of Natural History, Sweden, Morphology and identification of postlarvae of North Atlantic ophiuroids (Echinodermata), £600

Anna Watson, University of Bangor, UK, Automated hawkmoth identification using resting position images, £700

A total of 37 applications were received before the deadline (31 December each year) and these were from 18 countries. As before, a total of £6000 was made available for these small grants. Five judges from 4 Institutions scored each of the projects. Scoring was done by marking each project 0-10 (10 = best), and then each judge chose their top ten favourites, giving each of these 10 for the best, 9 second best, etc to 1. Marks were totalled and scores ranked. We have been able to fund nine applicants. Congratulations! Watch out in both the Newsletter and the Web pages for further details on the projects from the recipients. As usual they are a very varied lot. Commiserations to those who were not funded. Many included very interesting projects well-worth funding but unfortunately not quite ranking high enough.

We would like to thank all those who applied to the scheme and would like to encourage members and non-members to watch out for the next round of applications that should be downloadable from the web site around October 2002.

Tim Littlewood
Natural History Museum, UK

Small Grant Project Summaries

Stephen Donovan, Department of Palaeontology, Nationaal Natuurhistorisch Museum, Leiden: A Monographic Study of the Ichnobiota of the Type Maastrichtian (Upper Cretaceous, The Netherlands).

The Maastrichtian is the last stage of the Cretaceous, that is, the rock succession deposited immediately before the end Cretaceous mass extinction. The type area is around Maastricht in Limburg, in the south of The Netherlands, and is a thick succession of highly fossiliferous chalks rich in fossil marine organisms. Although some groups that occur in these rocks are known in great detail, such as the echinoderms, others have received little attention since the 19th century, if at all. The present study focuses on one of these understudied 'groups', the trace fossils. Although best regarded as sedimentary structures generated by organisms – burrows, borings, tracks, trails and coprolites – they provide data on ancient biotic activities that are otherwise unobtainable and some are sufficiently morphologically distinct that they provide unique evidence for the presence of certain biological taxa (e.g., the boring *Entobia*, which is the product of clonid sponges). I intend to undertake a detailed ichnotaxonomic survey of the trace fossils of the type Maastrichtian. This grant will support the purchase of photographic equipment that will be pivotal to the production of a well-illustrated monograph.

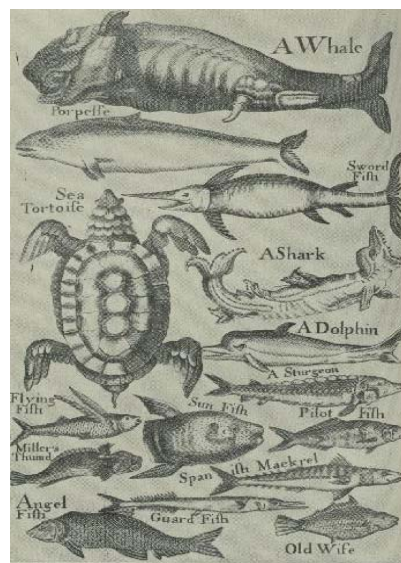
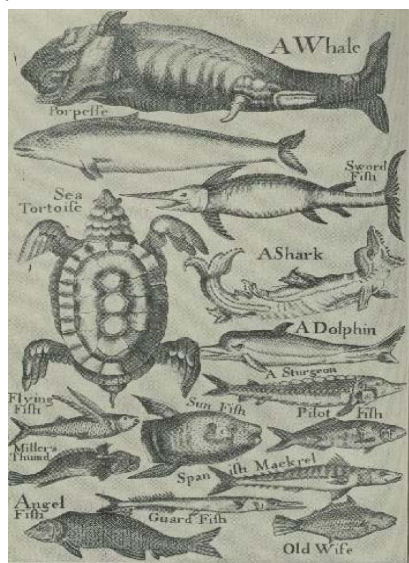
Frederic Delsuc, Univ. of Montpellier: Tracking the extent of morphological convergence in enigmatic pink-fairy armadillos (genus Chlamyphorus) by deciphering their phylogenetic relationships using DNA from museum specimens.

The 20 living species of armadillos (Dasypodidae) are among the strangest placental mammals ever evolved. The eight living genera represent an ecologically and morphologically diverse group containing enigmatic taxa like the dwarf subterranean pink fairy armadillos (genus *Chlamyphorus*). This genus is usually considered containing two distinct species: *C. truncatus* and *C. retusus* which are mainly nocturnal and have highly subterranean habits making their biology and phylogenetic relationships almost unknown. The two species are rather morphologically similar in being highly adapted to burrowing. However, some authors have pointed out marked differences and the larger species *C. retusus* is sometime assigned to its own genus (*Burmesteria*). Moreover, personal observations on museum specimens suggest the possibility of a diphyletic origin of the two species suggesting that the morphological similarities between pink fairy armadillos might be the result of morphological convergence due to the extreme selective pressures induced by the subterranean way of life. To examine the possibility of convergent evolution in pink fairy armadillos, their phylogenetic affinities will be investigated through the study of two mitochondrial markers using DNA from museum specimens. The Systematic Association Grant will help to fund a stay in a laboratory dedicated to the study of ancient DNA in order to minimise the possibility for modern DNA contamination. The confrontation of the results with available morphological data will allow interpreting the evolution of morphological characters in these enigmatic animals.

Simon Loader, Department of Zoology, Natural History Museum & Department of Molecular Genetics, University of Glasgow: Phylogeography of the Eastern Arc Mountains

The SA grant gratefully received will help finance fieldwork in the Eastern Arc Mountains, Tanzania. The aim of the project is to investigate the historical biogeography of this richly diverse and fragmented set of mountains, by studying the phylogenetic relationships within three amphibian genera distributed there- the caecilians *Boulengerula* and *Scolecophorus* and the microhylid frog *Probrevicips*. Previous material has already been collected, but the grant will allow for a more comprehensive geographic sampling of species distributed in these mountains

The focus on amphibians was taken because the Eastern Arc has a unique endemic herpetofauna, with many species that are strictly forest inhabitants, and which therefore have good potential for reconstructing vicariance and dispersal events. Present theories concerning the history of the Eastern Arc Mountains will be critically appraised. Current knowledge indicates several interesting biogeographical distributions and strong patterns of endemism. As a result of these patterns the prevailing theory is that the forests are host to mainly ancient taxa whose age predates the Pleistocene period, and are the result of more ancient biogeographical processes.



Matthew Nolan, University of Queensland, Australia: Taxonomy, phylogeny and co-evolution of the Sanguinicolidae (Platyhelminthes: Digenea) in Tasmanian waters.

The Sanguinicolidae is a family of digenean trematodes that occurs in all types of marine and freshwater fishes from holocephalans through to teleosts. Sanguinicolids are of particular interest to studies of digenean evolution because they exhibit remarkably low host specificity for their intermediate hosts; they use bivalves, both prosobranch and pulmonate gastropods and they are the only family of trematodes known to infect polychaetes as intermediate hosts. Some authors consider the family to be a key taxon for understanding the co-evolutionary processes within the Digenea. However, despite their importance, the Sanguinicolidae are understudied. Key areas of ignorance about the family include: diversity and host distribution; family systematics; life cycles; and whether they have co-evolved with their hosts. The aim of my PhD is to explore these issues in the context of collecting, mainly in tropical Australian waters. Funding from The Systematics Association will allow me to extend the work to the cool temperate waters of southern Australia. The diversity of the Sanguinicolidae is particularly poorly known in this region where they have never been sought systematically. The collecting that has been done in the region has revealed a highly distinctive parasite fauna so it is likely that the sanguinicolids will also be interesting. The grant from the Systematic Association will be used to fund a two-week collecting trip to Tasmania in Sept/Oct. 2002 to expand our knowledge of the fauna from this region. I look forward to reporting the fruits of this collecting in a later report.

Sabine Stöhr, Swedish Museum of Natural History, Sweden: Morphology and identification of postlarvae of North Atlantic ophiuroids (Echinodermata)

Brittle stars (Ophiuroidea) are benthic marine organisms, which can be found in all depths and often in great numbers. Most species begin their lives as planktonic larvae, which undergo metamorphosis into small immature postlarvae before settling on the sea floor. Thus, most ophiuroids spend at least part of their lives in the meiobenthos, suggesting that the postlarval stage may possess different adaptations than the adult. However, juvenile brittle stars are often excluded from ecological studies despite their at times great abundances, because they cannot be identified and matched to the adult, since species descriptions and identification keys are usually based on adult characters. These characters are absent or not well developed in early post-metamorphic stages and in many species postlarvae differ morphologically from adults to such an extent that they appear to belong to a different species. The North Atlantic ophiuroid fauna consists of approximately 150-200 species, but postlarvae have been described for fewer than 30 of them. The aim of this project, graciously supported by The Systematics Association, is to improve the knowledge of post-metamorphic development in ophiuroids by studying postlarvae of additional species by means of scanning electron microscopy. The material for this project has been collected in the waters surrounding Iceland by the project Benthic Invertebrates of Iceland (BIOICE). Using a comparative approach, I also want to provide an aid to the identification of small postlarvae. Additionally, the importance of juvenile traits for phylogenetic analyses will be investigated.

Anna Watson, University of Wales Bangor, UK: Automated hawkmoth identification using resting position images"

The DAISY system, being developed by The Natural History Museum, London, in association with Universidad de Costa Rica (UCR), uses image analysis and pattern recognition to identify unknown images. This prototype system provides a potential solution to the growing burden of routine species identifications. Ichneumonid wasps, biting midges and hawkmoths have all been accurately identified, primarily from forewing characteristics. This work has all involved imaging museum-prepared specimens of standard orientation and lighting. If DAISY is to be a practical tool for biodiversity inventorying it must perform well when faced with field images of specimens at rest in arbitrary positions. A preliminary trial on the moths of Bangor has identified moths with 83% accuracy but a full field trial is needed. The hawkmoths (Sphingidae) are a spectacular family and an ideal test group for a 6-week field trial. Belize has a rich fauna of 104 hawkmoth species and the NHM field station is an ideal base for this research.

Report from 2001 Small Grant Award Holder

Dr Louise Allcock, National Museums of Scotland: Octopus Biodiversity and Evolution

The taxonomy of the family Octopodidae is in a very confused state and recent phylogenetic work has shown that all four subfamilies are probably polyphyletic. The deep-sea fauna is poorly known with some species known only from the holotype, nonetheless the presence of a clade containing the deep-sea groups *Graneledone*, *Bentheledone* and *Thaumeledone* (the subfamily Graneledoninae of Voss, 1988) and the endemic Antarctic shelf genera *Megaleledone* and *Pareledone* is supported by these phylogenetic studies. *Graneledone*, *Bentheledone* and *Thaumeledone* are most diverse in southern latitudes, and only the distribution of *Graneledone* extends into the northern hemisphere. Antarctica appears to be one of few places where the octopodid deep-sea and shelf fauna are known to be closely related and is therefore particularly pertinent for studies of octopodid evolution. The ANDEEP cruise presented an excellent opportunity to try and collect some of these rare deep-sea animals together with some shelf fauna, much of which is currently poorly or un-described. Because of the inaccessibility of the animals in this clade they are amongst the least studied of all cephalopods. The five genera have many characters in common (eg., a uniserial sucker arrangement) however, these characters are rarely exclusive to the clade (eg., *Eledone* also has a single row of suckers but appears not to be closely related). It is hoped that work on this group will help elucidate characters that are important in octopodid systematics.

During the cruise we captured 2,419 specimens of octopod comprising at least 16 species. The majority of these were shelf or slope animals, but two species (identified only to *Thaumeledone* sp., and *Bentheledone* sp. were captured below 3,000 metres depth). Initial examination suggests that the *Thaumeledone* specimens are closely allied to *Thaumeledone brevis* Hoyle, 1885, the type locality of which is off the coast of Uruguay, however the poor condition of the type material and the lack of alternative material from the type locality make a conclusion of conspecificity difficult. Only two *Bentheledone* species have been described. The species of *Bentheledone* captured during ANDEEP is most closely allied to *Bentheledone albidia* Robson, 1930 (known only from the other side of Antarctica) but differs in some morphometric measurements. The *Thaumeledone* specimens comprised mature specimens of both sexes. A mature male *Bentheledone* was also captured. Mature male specimens are extremely useful as they provide us with additional characters (hectocotylus morphology, spermatophore structure etc) for elucidating phylogeny.

12 other species of octopod, thought to belong to the clade of interest, were captured on the continental shelf and slope. Of these, 4 are described, 3 others are well known and the descriptions are in prep, 2 were previously known from insufficient material to produce adequate descriptions and 3 were identified for the first time during this cruise. There is now adequate material of both sexes and a range of ages to produce accurate descriptions of all these species. Furthermore, during the cruise, a key to these species was developed and tested on taxonomists not specialising in octopods. In addition 46 specimens of a *Benthotoxus* species and 9 specimens of *Cirrotopus glacialis* Robson, 1930 were captured. Both species are outwith the clade of interest but will be worked up nonetheless. The *Benthotoxus* specimens are similar to *B. levis*, but differ from it in arm length, web depth, and details of the hectocotylus. These specimens comprise a comparatively large collection for a species in this deep-sea genus and will allow us to describe a new subspecies and to infer patterns in the basic biology of these animals. *Cirrotopus glacialis*, a cirrate octopod, is already well described from the area. However, a cirrate octopod was captured on video at 4000m depth that was tentatively identified as *C. glacialis*. If this identification proves correct then it considerably extends the depth range of this species, which is captured in waters as shallow as 400 metres depth.

Freshly caught material was photographed to document subtle taxonomic characters such as color patterns and skin texture. In addition, where possible, photographs of live animals were taken for a photographic ID guide of Antarctic molluscs that is to be published by Conchbooks. Size and morphometric measurements were taken prior to distortion in preservatives, and further morphometric work including SEM analysis of radulae will be carried out at the National Museums of Scotland, where the specimens will be deposited. Full descriptions of all the new species discovered will be produced. Tissue samples were fixed in ethanol for ongoing phylogenetic studies investigating the radiation of endemic genera within the Southern Ocean and the evolution of the deep sea octopodid fauna.

4th Young Systematist's Forum

From 10.30 am, Thursday, 5th December 2002: The Flett Theatre, The Natural History Museum, London SW7 5BD, UK

The Young Systematist's Forum represents an exciting, annual setting for postgraduate students and young postdoctoral researchers to present their data, often for the first time, to a scientific audience interested in taxonomy, systematics and phylogenetic inference. The meeting provides an

important opportunity for budding systematists to discuss their research in front of their peers, and hopefully supervisors too, within a supportive environment. There is space for up to 15 speakers with additional places available for those wishing to present a poster. Book tokens will be awarded for the most promising oral and poster presentations as judged by a small panel on the day.

Registration

Registration is **FREE**. Please let us know if you wish to attend by Monday 4th November 2002, **or earlier**, by sending - by e-mail if possible - your name, contact address and whether or not you wish to give an oral or poster presentation. Space for either will be allocated subject to availability and for a balanced programme of animals, plants, molecules and others.

Abstracts

Abstracts must be submitted no later than 11th November 2002 and in English. Abstracts should be preferably submitted by e-mail and the body text should not exceed 150 words in length. If the presentation is co-authored, then the actual speaker (*oral*) or presenter (*poster*) must be clearly indicated in **BOLD** text.

All registered attendants will receive by e-mail the list of the abstracts a week in advance, which will also be displayed on the Systematics Association website (www.systass.org) and a hardcopy will also be available for those interested on the day.

Abstract format

A phylogenetic analysis of molecular and morphological data

A. Trees¹ and N. Shrub².

Department of Palaeontology¹ and Department of Zoology², The College of London, Portland Place, London WC1 7HT, UK. **e-mail:** rt10@clu.ac.uk

Abstract text, no more than 150 words.

Presentation

Oral presentations will be 10-15 minutes long, followed by 5 minutes for questions from the audience. 35mm slide and overhead projectors (OHP) will be available as well as a portable computer and projector for PowerPoint on your CD-ROM. Please make sure you specify with your abstract which method you intend to use but make sure you also have OHPs in case of technical problems. Poster boards will be available on the day, ca. 80cm x 90cm.

Some suggestions for your presentations

You are encouraged to prepare your talks for a general biological audience. Please start with a clear introduction of the aim(s) and the specific/general interest(s) of your study. Illustrate specific points where possible with colourful pictures either of the organism itself or aspects of its evolution. Use large text throughout (14 pt font or above) so it is easily readable from the back of the lecture hall; avoid large, complex tables and (or) phylogenetic trees. Highlight your future avenues of research and don't forget to summarise your key points within a final slide.

How to get here

The meeting will be held at Flett Lecture Theatre, The Natural History Museum, near the Geological Museum entrance. Coffee will be available from 10am, lectures starting at 10.30 am. Nearest underground station is South Kensington. Circle, District and Piccadilly lines go direct from most mainline train stations and Victoria coach station. There is a subway passage connecting the tube station to the Museum. See also

www.nhm.ac.uk

Contact: **Dr Russell Stothard** or **Dr Russell Seymour**

e-mail: r.stothard@nhm.ac.uk r.seymour@nhm.ac.uk

Department of Zoology
The Natural History Museum
Cromwell Road, London SW7 5BD



"Voice of the Future" Conference Report

I was recently invited by the British Association for Lung Research (BALR), as an Affiliated Society of the Institute of Biology to attend the 'Voice of the Future' conference in London. This meeting was organised by the Royal Society of Chemistry and the IoB Affiliated Societies were allocated places. It was held in the impressive surroundings of the Royal Geographical Society. It was essentially a Science Question Time for young researchers who were given the chance to quiz members of the House of Commons Select Committee on Science and Technology on issues

concerning our future. Delegates came from a broad range of disciplines and backgrounds; Universities, Industry, research councils and representative bodies such as the Institute of Biology.

The morning session began with the Question Time. The panel consisted of Dr Ian Gibson MP (Labour), Chair of the House of Commons Select Committee on Science and Technology, Tony Harris MP (Labour), Mark Hoban (Conservative), Dr Brian Iddon MP (Labour), Tony McWalter MP (Labour) and Lord Lewis of Newnham (Cross Bench member of the House of Lords).

The first topic was the recent Research Assessment Exercise (RAE) carried out in 2001. These are used to determine the research strengths of UK Universities and with it, allocations of funds are made. Questions came from several newly appointed lecturers who raised the issue that performing well in the RAE is made especially difficult without an established reputation, or sufficient publication record and that the present system does not encourage activities which do not generate income by raising the RAE score. The panel agreed that this was indeed a problem and suggested that money should be made available to 'kick start' young academics at the beginning of their careers. It was also agreed that RAEs in themselves are hugely expensive and for Universities which consistently perform well, they may be an unnecessary expense. It was suggested that in these universities RAEs could be reduced to every 7-10 years, leaving more money available to concentrate on those institutions performing less well.

The next major topics for discussion became linked together through a series of questions. Initially the panel were questioned on 'Women in Science' and this progressed to the general public's view of scientists and science as a career. Individual questions were not answered directly by the panel, but instead up to four or five were taken at a time which allowed the topic of discussion to change quite significantly before the politicians were able to give an answer.

Everyone agreed that there are still very few women at the top of the tree, especially in chemistry, physics and engineering, but none of the delegates who asked the questions had ever encountered sexism themselves in the workplace. Positive discrimination as a way of putting more women in senior posts was raised as a possibility but the panel was split on its benefits, and personally I feel that promotion should be on merit alone. The general feeling was that instead, targeting girls at school and providing role models for them may increase the numbers of female researchers, especially in chemistry and physics. In biological sciences there is not the same problem of recruiting women into university courses and beyond to PhD level, the trouble seems to be how academic research, RAEs etc, can accommodate a career break for a family. The point that I felt summed up the discussion, and would be applicable to all careers, is that the best thing for women's equality would be for paternity breaks to become the norm.

From these discussions came questions asking if science is an attractive career for school leavers and do we as scientists have an image problem with the public? We were described as nerds (by the delegates themselves, rather than the panel!) and it was felt that we may be seen as disconnected from society in this country. One delegate who has recently moved to the University of Leiden in the Netherlands commented that if cab drivers ask her what she does for a living, they are far more enthusiastic and inquisitive as to what her job entails in Europe than she has ever come across in the UK. What I took from these discussions is that if we want to improve our image we have to communicate more ourselves, both on the larger scale through effective media coverage and education, but also personally by telling people what we do and discussing issues which arise from it, rather than giving the impression that it is too complicated to explain.

Finally, we got round to the most obvious topic of the day, money. As expected, this produced the most heated questioning, but unfortunately, the least optimistic answers. We started discussing student debt and the problems of repaying student loans on a postdoctoral salary. One of the panellists put himself in the firing line when he commented that student debt should not be seen as a problem when you know that eventually you will be in a job earning enough to have made it all worthwhile. The audience reacted very strongly to this with lots of hands shooting up to disagree. Whilst all of the panel were extremely sympathetic to our grievances, no one could offer us definite answers as to whether more money could be made available for PhD students or academic research. The story seems to be the same throughout careers such as teaching and nursing, everyone deserves more but there is only a finite pot of money to go round and Universities will have to look more and more into how they bring in funding from the private sector. The most surprising comment of the day from one aggrieved delegate was that refuse collectors in Westminster earn £33,000 a year...

After lunch (held next door at the Royal Society of Chemistry) we came back for the afternoon session with the Rt. Hon. Tony Benn PC, former MP and Cabinet Minister responsible for Industry, Energy and Technology. His talk on the links between Science and Government was extremely entertaining with many anecdotes from his time as a Minister and he concluded by taking questions from the audience. Many of his views related to the use of science in the military and the nuclear industry, which lead to a few heated questions from the physicists present. One of the last questions put to him was to describe the most influential discovery in science during his lifetime. His answer, maybe slightly surprisingly for a man of his generation, was Information Technology which has influenced so many disciplines.

In summary, I thoroughly enjoyed the whole day and I am grateful to the Institute of Biology and the BALR to have been given the opportunity to attend, and to the organizational abilities of the Royal Society of Chemistry's Stephen Benn and Julie Smart. I was pleased that members of the Select Committee took the time to discuss these issues with us and listened to our views, but ultimately I came away with the knowledge that there are no short term solutions to the major issue which affects a substantial amount of young scientists, that of sufficient funding and job security.

Rebecca Hodges
(British Association of Lung Research)



Announcement and call for papers/posters/workshops & entertainment: 50th Symposium of Vertebrate Palaeontology and Comparative Anatomy (Sept 11-14)

Cambridge 2002

& 10th Symposium of Palaeontological Preparators and Conservators (Sept 10-11)

Date for meetings: September 9-15, 2002

Venue: Sedgwick Museum & Department of Earth Sciences, Downing Street, University of Cambridge, CB2 3EQ. UK.

Accommodation: Emmanuel College, Cambridge

Information and initial contact: Alison Allen email: alison@esc.cam.ac.uk Telephone (+44) 1223. 333459
FAX: (+44) 1223. 333450

1st Circular will be posted in Feb/Mar 2002

Organising committee:

David Norman (dn102@esc.cam.ac.uk), Paul Upchurch (pupc98@esc.cam.ac.uk), Leslie Noe (lnoe01@esc.cam.ac.uk), Alison Allen (alison@esc.cam.ac.uk) – administrator, Sarah Sangster (ss348@esc.cam.ac.uk) - postgraduate student contact

Offer to Systematics Association Members from Cambridge University Press
The Freshwater Algal Flora of the British Isles

An Identification Guide to Freshwater and Terrestrial Algae

By D. M. John, B. A. Whitton and A. J. Brook

The first modern account of the freshwater algae of the British Isles (excluding diatoms), covering over 2200 species, many of which also have a world-wide-distribution. Profusely illustrated with line diagrams and photographs, plus an accompanying CD-ROM photo catalogue with more than 500 spectacular colour images of freshwater algae and their habitats.

Publication April 2002

2002 297 x 210 mm 720pp 150 line diagrams 11 half-tones

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