



Newsletter

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From the President

As this is my first letter as President of the Association I would like to thank all of my colleagues for supporting my election as President of the Association, and especially Barry Leadbeater and Zofia Lawrence for initially nominating me. My warmest thanks to Peter Forey for being a great President over the last three years, and wish him well for the future. As Peter noted in his outgoing letter he would be back to haunt us. It did not take him long, and I am happy to say that he has agreed to participate in the organising committee for the Third Biennial Conference and as co-organiser with David Williams of the "Milestones" symposium scheduled as the opening session. I hope that I can emulate his leadership and with your help stake out an even greater claim for systematics in the first three years of the 21st century.

With your help we can make 2001 an interesting year. Through our activities we can make systematics centre-stage for biology and through the development of new initiatives, recruit new members and strengthen our Association. Alongside established activities, holding meetings and publishing proceedings, we should find ways to promote systematics in universities, schools and colleges, through a more diverse range of published products, and promote our activities both here and in other countries around Europe. Our grant and awards schemes, the biennial meetings and the Young Systematists Forum have been great successes and have gone a long way in supporting younger colleagues. My dearest aim is to continue these activities and find new ways of sustaining systematic research in the future, perhaps even through sponsorship of research students within universities.

The Third Biennial Meeting is progressing according to plan and the most recent development has been the student bursary competition. By the closing date on January 1st 2001 we received 28 applications for 12 places. Because the standard of entries was exceptionally high the task to pick 12 winners was difficult. I would like to thank fellow judges of the organising committee for their useful comments. My commiserations to the unlucky

applicants and my congratulations to the following:

Jacob Andersen, M.Sc. student at the University of Copenhagen; Claudia P. Arango, PhD student at James Cook University in Townsville Australia; Henk C. den Bakker, PhD student, Nationaal Herbarium Nederland, Universiteit Leiden; Neil Bell, PhD student, The Natural History Museum, London; Andrea Cardini, Dipartimento di Biologia Animale Università di Modena; Elin Claridge, PhD student at U.C. Berkeley, California; Matthew T. Craig, Graduate student, Scripps Institution of Oceanography University of California, San Diego; Jonathan Davies and Carlos Lopez-Vaamonde, PhD students with Imperial College, based in Silwood Park; Christopher Hardy, Ph.D. Candidate L.H. Bailey Hortorium, Cornell University and the NY Botanical Garden; Mark E. Olson PhD student, Missouri Botanical Garden; and Gail Reeves, Post-Doctoral fellow, University of Cape Town, South Africa.

The winners will each present a 20-minute talk on the third day of the symposium and to give you a flavour of the range, depth and quality of what is in store their abstracts are published below. For me it is most encouraging compared with the Glasgow conference, somewhat dominated by botanists, that a significant number of zoology students as well as a mycologist will be giving papers. If you have not already registered, details can either be obtained from the Web site or from Vilma Bharatan at the Department of Botany in the Natural History Museum, London (e-mail vilb@nhm.ac.uk).

Vilma tells me that fifteen applications are already processed, and we know of at least forty more in the pipeline. Now is the time to hear from the membership so I urge you to send in your registration as soon as possible.

It is sad to note that Foot and Mouth disease has affected the Trilobite meeting at the University of Oxford on 2-6 of April. Although the actual conference has more than 100 delegates registered the field trips to South Wales and Shropshire have had to be cancelled. Hopefully, Oxford will present other diversions.



Finally, it is traditional at this time of year to open up the discussion for a speaker for the AGM in December. This seems to be a long way off but the longer lead time we have, the easier it is to organise. Some of the best lectures I have heard are those that spin an autobiographical yarn. Systematics today is in an argumentative mood with a plethora of methods and results, with little regard for the underlying philosophy, choice of methods, and the meaning of results. Your suggestions by e-mail to the secretary, Zofia Lawrence, would be most helpful.

I look forward to my next three years and will serve the Association to my best abilities.

C.J. Humphries

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From the Editor

Since my semi-retirement from the Natural History Museum, you might find it quicker to e-mail contributions to me rather than post them. Otherwise, it's business as usual!

Neale Monks

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Council News

Systematics Association Grants 2000/2001

The Systematics Association Grants and Awards sub-committee received 56 applications for the 2000/2001 round of funding. The total amount requested was £45354. This is higher than previous years: 1999/00, 45 applicants, £35043; 1998/99, 41 applicants, £28179; 1997/98, 39 applicants, £28100. As usual, the proposed projects covered a diverse array of taxonomic groups, disciplines and methodologies. Applications were received from 19 countries with 38% of the applicants from the UK (21). In 1999/00 applications were received from 17 countries with 42% of the applicants from the UK (19).

To allocate the £6000 of available funding, all of the projects were reviewed and ranked by a five strong committee comprising Gordon Curry (University of Glasgow), Jason Hilton (National Museums of Scotland), Pete Hollingsworth, chair (Royal Botanic Garden Edinburgh), Tim Littlewood (Natural History Museum, London), and Paula Rudall (Royal Botanic Gardens Kew).

Eight grants (14% of applicants) were approved by the Systematics Association Council, for funding totalling £5766 (13% of the total requested). The successful projects are:

Jason Taylor — SHAPE: Simulating host and parasite evolution. Imperial College, UK (£225)

Cheng-Sen Li — Publication of Chinese version of "Plant Identification Terminology". Chinese Academy of Sciences (£770)

Yvonne Linton — Characterisation of *Anopheles maculipennis* complex. Department of Entomology, Natural History Museum, UK (£870)

Helene Citerne — Investigation of TCP genes in the Leguminosae. Royal Botanic Garden Edinburgh, UK (£750)

Louise Allcock — Antarctic benthic deep-sea biodiversity of octopuses. National Museums of Scotland, UK (£800)

John Ryland — Systematics of encrusting intertidal *Alcyonidium* species (Bryozoa). University of Wales, Swansea, UK (£851.60)

Trevor Hodkinson — Systematics of Central American woody and herbaceous Bamboos. Trinity College Dublin, Eire (£800)

Hannah Atkins — *Cytandra* in Sulawesi and adjacent areas: taxonomy, evolution and biogeography. Royal Botanic Garden Edinburgh, UK (£700)

Finally, please note that application forms for the 2001/2002 round of funding can be obtained from October 1st from the Associations' Web site (<http://www.systass.org/>).

Peter Hollingsworth

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New Web Site Launched by Taylor & Francis

Our publishers, Taylor & Francis, have recently launched their life sciences Web site ("Life Sciences Arena"), which has a special section dedicated to the Systematics Association Special Volumes. The URL for the Arena itself is:

<http://www.lifesciencesarena.com>

...and the specific URL for the Systematics Association section is:

<http://www.lifesciencesarena.com/lifesciencesarena/systematics.html>

Please note that this is the first stage of development for the Arena; more information will be added in time and the site will be reviewed on a monthly basis.

All members are encouraged to take a look at the site and to submit suggestions for changes, new links, conferences etc. directly to Nasreen Arain, Marketing Executive Life Sciences, Taylor & Francis, at the following e-mail address:

nasreen.arain@tandf.co.uk

Publications

Members are reminded that they can claim a 25% discount on all Systematics Association volumes, and indeed on all life science titles published by Taylor & Francis. A list of SA volumes that are currently in print is available on the "Publications" page of the SA Web site (www.systass.org).

To order books and claim a discount from Taylor & Francis, please contact:

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If you have any other enquiries concerning Systematics Associations publications, please feel free to contact me at: a.warren@nhm.ac.uk

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Biennial Conference

Student Abstracts

Growth and form in Marmota (Rodentia, Sciuridae): ontogenetic and phylogenetic implications of the mandible geometric morphometrics

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Geometric morphometrics techniques were applied in a comparative study of the marmot mandible morphology. Post-natal growth of the mandible was studied in *M. flaviventris*: the sexual dimorphism was moderate, while shape differences among age classes were highly significant and mainly due to ontogenetic scaling. The adults of all the 14 living marmot species were compared and their mandible mean forms used to investigate the morphological evolution of the genus *Marmota*. Two major trends can be outlined. 1) The phylogenetic signal in the variation of the land-

mark geometry, which describes the mandible form, seems to account for the shape differences at higher taxonomic levels: the subgenus *Marmota*, recently proposed on the basis of mitochondrial cytb sequence, is supported by the mandible morphology; moreover, when other sciurid genera are included in the analysis, also the monophyly of the genus *Marmota* and that of the tribe Marmotinae (i.e., marmots, prairie dogs and ground squirrels) are strengthened by the morphological data. 2) Allopatric speciation in peripheral isolates may have acted as a powerful shape modelling force. This is strongly suggested by the peculiar mandible of *M. vancouverensis* and, in a lesser degree, by that of *M. olympus*, which are thought to have originated as isolated populations in Pleistocene ice-free refugia.

Timing the origin and diversification of Phyllonorycter leaf mining moths: Macroevolutionary patterns of host plant use.

Carlos Lopez-Vaamonde NERC Centre for Population Biology and Department of Biology Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, U.K.

The explosive diversification of angiosperms has been attributed to a number of factors, such as coevolutionary processes with pollinators and seed dispersers. Enhanced speciation rates in angiosperms has also been attributed to an arms race scenario between phytophagous insects and their host plants. Exploration of the processes that have generated the current diversity and associations requires robust phylogenies and timelines for both insects and host plants. Here, I reconstruct the phylogenetic relationships of 74 *Phyllonorycter* species feeding on 33 plant genera (belonging to 14 families, 9 orders and 4 subclasses) based on the partial nucleotide sequence (1000 bp) of the nuclear 28S rDNA. The genus *Phyllonorycter* shows no statistically significant instance of parallel cladogenesis with their host plants despite prevailing host specificity. The mapping of the host plant use onto the *Phyllonorycter* phylogeny clearly shows a conserved degree of association which is not the result of a random process. A non parametric rate smoothing analysis with fossil data as internal calibration points is used to estimate the time of colonisation of host plant groups. The results provide no evidence of synchronous co-diversification. It is likely that this host plant colonisation scenario proposed here might apply to other internal feeding Insecta lineages.

Radiation and Macroevolutionary Ecology of the African Genus Protea

Gail Reeves Compton Herbarium Kirstenbosch Research Centre Private Bag X7 Claremont 7735 South Africa.

The Cape floristic region (CFR) of South Africa harbours one of the highest concentrations of plant species on Earth. The aim of this study was to investigate factors promoting the radiation of this diverse flora using a reconstructed species-level molecular phylogeny, based upon using five non-coding regions from the plastid and nuclear genome, for one of the CFR's flagship genera, *Protea*. Extremely low levels of sequence divergence were found among species, and



consequently amplified fragment length polymorphism (AFLP) markers were also employed to infer relationships. Contrary to previous hypotheses, the phylogeny supports a Cape origin for the group followed by expansion into tropical Africa. The age of the root node of *Protea* was estimated to evaluate the widely held view that much of the diversification in the Cape occurred since the onset of Mediterranean-type climates ca. five million years ago. Contrary to this hypothesis, the timing and the temporal dynamics of the radiation of *Protea* indicated that the lineage is at least 36 myr old, and that its diversification rate has declined significantly over the last 20 mya. Special characteristics of the CFR, including complex topography and heterogeneous edaphic environment were also investigated to evaluate their role in diversification. In *Protea*, it appears that speciation has been largely allopatric, but there is no significant pattern to suggest that soil factors or habitat sub-division have been involved in speciation. Comparison of diversification rates between lineages that re-seed and re-sprout after fire indicated higher diversification rates in the former within the Cape, but this rate is less than that for re-sprouting lineages outside of the Cape. In summary, the diversity of *Protea* species in the CFR may be due to high coexistence of species that diversified over a long timespan, rather than a recent rapid radiation in this lineage.

Evolution of floral and habit diversity in Moringa

Mark Olson, Missouri Botanical Garden, St. Louis, Missouri, USA

I am studying the role of evolutionary changes to developmental patterns in the evolution of morphological diversity. I am using the dry tropical plant genus *Moringa* as a study system, because with just 13 species, they reflect the great diversity of life form found in dry tropical habitats. I have studied wood, root, flower, and seedling development using light and scanning electron microscopy. To make sense of these findings, it is necessary to have a phylogenetic hypothesis, which I have reconstructed using three molecular and one non-molecular data set. It appears that tiny tuberous shrubs with bilaterally symmetrical flowers have evolved via paedomorphosis – a sort of juvenilisation – from huge, baobab-like bottle trees with flowers that are radially symmetrical at maturity. Surprisingly, the early stages of all of these flowers are clearly bilaterally symmetrical, changing to radial symmetry at maturity in the basal species. I have also explored the utility of ontogenetic characters in phylogeny reconstruction. In the case of *Moringa*, inclusion of ontogenetic characters greatly enhanced resolution. In addition, my interpretation of homology in this group was substantially altered by examination of ontogeny compared to my interpretations based solely on adult morphology.

Identification of biologically important areas on Borneo through a study of the diversity and distribution patterns of palms

Jacob Andersen, University of Copenhagen

The distribution patterns of the palm family (Arecaceae) on Borneo will be analysed using WORLDMAP with the view to identify areas impor-

tant for the conservation of palms. The applicability of palms as indicators for plant diversity or biodiversity overall will be investigated and I will conclusively make an assessment of the relevance of existing protected areas on Borneo and give recommendations for future protection of nature by comparing my own results with corresponding WORLDMAP-investigations of other groups of organisms.

The palm family has been chosen first and foremost because it is well investigated in the region - there is a large amount of palm collections from Borneo and the taxonomic treatment is up-to-date for most genera. Furthermore, the palm family contains numerous economically important species and it is represented on Borneo by a number of species (approx. 250) appropriate for a WORLDMAP analysis and it is well investigated in the region. The fact that the palm family is well investigated is a prerequisite for the feasibility of the study since the majority of the distribution data used in the WORLDMAP-analysis, will be the palms collected by other botanists that are found in various herbaria. I will supplement the existing data with own collections from areas that have up to now been more or less ignored in terms of collection of palms.

The project should result in:

- Increased knowledge and better overview over the diversity and the distribution patterns of palms on Borneo
- Increased knowledge on biologically important areas in Borneo and through that, a better basis for the authorities and others to make decisions concerning conservation of nature

Using a molecular phylogeny to examine patterns of species richness in flowering plants.

Jonathan Davies, Imperial College Silwood Park Berkshire SL5 7PY U.K.

The flowering plants (angiosperms) are one of the major radiations of organisms with over 250,000 species. Within angiosperms familial species richness varies over several orders of magnitude. Here, we test the importance of intrinsic (biological) characters and extrinsic (environmental) factors in explaining these differences. Using a three-gene phylogeny including all major lineages, we locate significant shifts in diversification rate within angiosperms. Comparisons between sister clades confirmed that species richness varies significantly more than expected under a null model of equal rates of diversification. We then test for the role of five biological traits in promoting diversity: mode of dispersal, mode of pollination, growth form, sexuality, and life history. Comparisons between sister clades found limited support for any correlation, suggesting that biological factors do not explain species richness at this scale. Therefore we compared species richness between sister clades in relation to environmental energy (temperature and actual evapotranspiration) and UV radiation. We use the results to evaluate two competing hypotheses i) that high energy load increases the capacity of an environment to sustain a greater number of species, or ii) that high energy load increases the rate of evolution.

Preliminary studies of phylogeny and the evolution of pleurocarpy in the Rhizogoniaceae (Bryophyta)



Neil E. Bell¹ AND Angela E. Newton². 1. The Centre for Plant Diversity and Systematics, School of Plant Sciences, The University of Reading, Whiteknights, Reading, RG6 6AS, United Kingdom. 2. Department of Botany, Natural History Museum, London SW7 5ED, UK.

The Rhizogoniaceae is a predominantly southern hemisphere family of eubryalean mosses with a centre of diversity in Australasia and a distribution pattern suggestive of a late Mesozoic Gondwanic origin. Many of the taxa are unusual with respect to character states associated with acrocarpy and pleurocarpy, the normally closely associated suite of secondary pleurocarpous traits being variably present in conjunction with more typically acrocarpous features. Such observations are consistent with recent cladistic analyses which place rhizogoniaceous exemplars in a critical phylogenetic position at the base of the other pleurocarpous groups. In the initial stages of a combined morphological and molecular phylogenetic study of the Rhizogoniaceae, an examination of morphological characters was undertaken within the context of recent redefinitions of pleurocarpy. Observations confirm that the family contains both unambiguously acrocarpous and pleurocarpous taxa according to currently accepted definitions. Preliminary molecular analyses resolve several novel clades, many of which can be supported by morphological synapomorphies, and suggest that the family may represent a diverse grade immediately basal to the other pleurocarps. Lack of resolution in the basal nodes of the rhizogoniaceous grade compared with the apical rhizogoniaceous and "true" leurocarp nodes implies a relatively ancient origin for the former.

Mutations unlimited? ITS-length polymorphisms in the genus Leccinum (Basidiomycota, Fungi)

by H.C. den Bakker¹, B. Gravendeel¹, M. E. Noordeloos¹ & Th. W. Kuijper²

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Leccinum is a genus of obligate symbiotic fungi growing together with predominantly Betulaceae, Pinaceae and Ericaceae. The rDNA ITS1-5.8S-ITS2 region was sequenced for 14 species within section *Scabra* and allied sections and two Boletaceae outgroups to study interspecific relationships. The species belonging to section *Scabra* were represented with several accessions representing individuals from Scandinavia, The Netherlands and Belgium. Most species of section *Scabra* form a strongly supported clade with long internal branch lengths congruent with their distinct morphology (autoxidation reactions of fruitbodies and anatomical features of spores and tissues). Surprisingly, a clade around *L. bolopus* (previously presumed to belong to section *Scabra*, based on morphology), containing several distinct and morphologically undisputed species, shows a small molecular diversity and is interspersed among species of section *Leccinum*, thereby making section *Scabra* polyphyletic. The ITS1-region in this clade shows a remarkable length variation: 200 - 900 bp, not only among different species but even within individual fruit bodies. At first sight the occurrence of these multiple length-

types are not phylogenetically informative. A combined analyses of ITS-data and another nuclear non-ribosomal DNA region currently being sequenced may elucidate the evolutionary constraints on mutations in the ITS1-region in *Leccinum*.

On the status of the serranid fish genus Epinephelus: Evidence for parphyly based upon 16S rDNA sequence.

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Matthew T. Craig, Scripps Institution of Oceanography, 9500 Gilman Dr., La Jolla, California, 92093-0208, USA

Historically, attempts to elucidate evolutionary relationships among members of the genus *Epinephelus* (Teleostei: Serranidae), commonly known as groupers, have been hindered by the overwhelming number of species (98, *sensu stricto*), a pan global distribution, and the lack of morphological specialisations traditionally used in ichthyological classification. To date, no comprehensive phylogenetic study, morphological or molecular, has been presented to evaluate the monophyly of this genus. In this study, previous hypotheses regarding the relationships among the American grouper species and allied genera were evaluated by examining mitochondrial DNA sequences of the 16S ribosomal DNA region. A 590 base-pair region of the 16S rDNA gene was amplified using a universal primer pair for 42 serranid species including members of the genera *Epinephelus* (*sensu lato*), *Mycteroperca*, and *Paranthias* from the New World and selected Indo-Pacific congeners. Maximum parsimony criteria and neighbour joining analysis dispute the monophyly of the American *Epinephelus* species as previously hypothesized. The data support the monophyly of *Cephalopholis* only with the inclusion of the morphologically distinct *Paranthias*, as well as the monophyly of *Mycteroperca* with the inclusion of the Indo-Pacific *Amyperodon leucogrammicus*. Sequence divergence in geminate pairs separated by the Panamanian Isthmus ranged from 1-2%, as did those for sympatrically distributed species pairs, indicating that divergence of more recently derived species may have occurred within the past 3.5 million years.

Systematics of Cochlostema, Geogenanthus, and an undescribed genus (Commelinaceae)

Hardy, Christopher R.^{1,2}, Davis, Jerrold I.¹, and Stevenson, Dennis Wm.^{2,1} 1. Cornell University, Ithaca NY 14853, USA and 2. New York Botanical Garden, Bronx NY 10458, USA

Commelinaceae are of great interest in systematics as recent molecular phylogenetic studies support a phylogenetic position for the family in striking contrast to what had previously been supported using traditional (non-nucleic acid) characters alone. Conflict between morphology-based and molecular-based phylogenetic studies has highlighted the need for more detailed morphological and systematic studies within



Commelinaceae. We conducted a systematic study of a reclusive group of neotropical Commelinaceae with a fascinating assortment of bizarre flowers, undescribed species, and novel lifeforms for the family. Here we provide hypotheses of character and lifeform evolution for this assemblage in the context of cladistic studies of variation in morphology plus DNA sequences from plastid (*rbcL*, *trnL-F*) and nuclear (5S) loci. In particular, our studies indicate that the aberrant spirally-coiled anthers and other oddities associated with the flowers in *Cochliostema* are elaborations of some prominent developmental synapomorphies shared by *Cochliostema*, *Geogenanthus*, and an undescribed genus. The adaptations associated with the novel epiphytic habit of *Cochliostema* are best understood in light of their similarity to homologous features in the undescribed genus. Finally, our inclusion in this study of two new species of *Geogenanthus* has revealed a prominent reductive trend in the inflorescence of this genus.

A Cladistic Analysis of the Sea Spiders (Pycnogonida) Based on Morphological Characters

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The phylogenetic relationships among the main lineages of sea spiders were studied based on the cladistic analysis of 35 morphological characters. This is one of the first attempts to analyse the high level relationships of the Pycnogonida using different cladistic approaches and testing the hypothesis of a reduction series of the head appendages as an evolutionary trend. An exemplar method was implemented to sample the 35 species representing all the eight valid families. A fossil species from the Devonian was included as an outgroup. Three most parsimonious trees were obtained under the implied weights method implemented by the program *PeeWee* and the strict consensus of these is presented as the preferred hypothesis of pycnogonid phylogeny. Two major clades are shown, one grouping the Ammotheidae genera with Austrodecidae and Rhynchothoracidae appearing related to its sub-clade *Achelia - Tanystylum*. The other major group includes the Callipallenidae, Nymphonidae and Phoxichilidiidae, all presented as monophyletic. The genus *Pallenopsis* branches out separately. Different techniques and assumptions such as ordering and weighting of characters were tested and the results are presented. The relationships here proposed are confronted and the fitness compared to the traditional classification based on the "regressive evolution" of characters. Events of convergent evolution might have occurred and had not been considered before. Difficulties such as the coding of inapplicable data and the effect of missing values introduced by the fossil taxon are discussed. Anatomical, behavioural and developmental data are needed as well as larval and juvenile characters. Molecular data will be compared to the results obtained with morphological characters.

The radiation of Neocicindela tiger beetles in New Zealand

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The tiger beetles of New Zealand are represented by a single endemic genus, *Neocicindela*. The genus contains twelve species that occupy various habitats from coastal sand dunes to glacial loess in the sub-alpine zone. A molecular phylogeny was derived for the genus using mitochondrial cytochrome b and 16S rRNA sequence data. The most parsimonious phylogeny corresponds well with the taxonomic groupings proposed by Savill (1999) on the basis of morphology and habitat preference, though there appear to be grounds for further sub-division of several species, reflecting the high levels of sequence divergence observed between species and within populations. This supports the idea that the group radiated in the distant past. The distribution of putative sister groups is consistent with the notion that the genus had a Gondwanic origin. The common ancestor of the genus may have colonised New Zealand while it was still linked to Gondwanaland more than 70 million years ago.

C. J. Humphries

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Meeting Report: Institute of Biology Affiliated Societies Forum

Launch of Science Policy Priorities
6 April 2001 Royal Society

The policy document is the result of a consultation programme initiated in 1999. The Systematic Association's concerns regarding taxonomy and systematics are covered in sections 15 and 16 of this document and were also raised by Professor Rob Marrs (British Ecological Society) in his presentation. He deplored the lack of "whole organism biology", and stressed the need to marry molecular biology with systematics.

All political parties had produced a response to the IOB document. David Sainsbury was the only one who seemed to have read the document. Evan Harris (Lib Dem.) had the grace to admit he had not read it when he prepared his response. Presentations were given by David Sainsbury and Evan Harris. Richard Page (Conservative) was absent due to ill health.

Apart from the tendency to lapse into party politics it was an interesting debate providing insight into Government thinking. £110m is to be invested in post genomics with a large chunk to Bioinformatics. All departments now have a science and discovery policy which will be published "soon". There is also a cross-department science committee at ministerial level chaired by David Sainsbury.

Sainsbury did not pick up the "Whole organism debate" in his presentation. However, during later discussions Peter Cotgrieve (Director, Save British Science) suggested that Sainsbury was approachable on this topic and they (SBS) were pressing the case.



He said DS was the point to apply pressure and he was genuinely receptive to comment. Jonathan Cowie (IOB) felt the best way to progress was through IOB, to ensure that Society representatives on committees tabled the subject as agenda item. IOB could then formally adopt the issue and prepare position papers. He thought the Environment and Agriculture committees were the best ones to approach.

Peter Cotgrieve gave an interesting paper in the morning session on Science Funding. We learnt that the UK spends less on Science funding than do other EU countries. For example, in the UK, £180 per tax person is spent on science, compared with £240 by Germany, £300 by France and £350 by the USA.

The afternoon session was given over to presentations by media: Daily Mail journalist and BBC Radio Science Editor. Interesting insight into how the system works.

Zofia Lawrence

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***Press Release: Institute of Biology ,
for all affiliated societies
(13/02/2001)***

MPs get manifesto message from science community at a 14th February 2001 launch in the Houses of Westminster

At a unique gathering of MPs, scientists and engineers in Portcullis House, Westminster on Wednesday 14 February 2001, the importance of ensuring that the UK continues to be strong in science and engineering will be highlighted by the launch of a Charter for Science and Engineering.

The event reflects the increasing collaboration between the many prestigious bodies representing science and engineering in the UK including the Institute of Biology, Royal Society of Chemistry, Institute of Physics and others¹. This is the first time that so many bodies, spanning all of science and engineering, have formally worked together. It highlights the importance of the continued dialogue between those who practice science and engineering, legislators and the public at large while providing a key opportunity for the political parties at Westminster to consider and outline their plans for science and engineering in their manifestos.

The Charter for Science and Engineering contains 10 articles (each including three or four points) that need to be addressed by the next Government. In contributing to the Charter's drafting, the Institute of Biology presented the top priorities for UK science identified by the biological Affiliated Societies belonging to the Affiliated Societies Forum. Consequently the Science Charter includes concerns such as:

- Scientists' career paths
- Science funding
- Science education

- The value of the human genome and the challenges this offers

- Science's contribution to environmental conservation

- The need to conserve biodiversity

- Parliamentary and public dialogues on science issues

At the event, four leading scientists and engineers¹ will outline critical issues that must be addressed if the UK is to maintain its World-leading role in science and engineering. Representatives from all the major political parties will address the audience of more than 100 of the UK's leading scientists and engineers on how they plan to ensure that the continued prosperity of the UK will be maintained through a strong science and engineering base.

Attending the launch, Professor Peter Caligari (CBIol FIBiol (IoB Vice President and Chair of its Science Policy Board) said that: "It is vitally important that the disparate range of interests that make up the UK biological community are able to come together to express a single view. As such, the Affiliated Societies Priorities exercise has, and is, proving immensely valuable. I am delighted that, despite short notice, representatives from some 23 Affiliated Societies are able to be at the Westminster launch of a Charter to which their inputs played such a useful role. Just as it is important for learned biological societies to band together, so it is essential that biology contributes to the UK scientific community's view. Biology must take a prominent place alongside chemistry, physics and engineering. Indeed it is symbolic that this week also sees the publication of the human genome: a project in which a number of our nation's scientists have taken a lead."

For more information Affiliated Society newsletter editors should contact Jonathan Cowie (e-mail j.cowie@iob.org), Head Science Policy & Books.

Notes —

1. *The following participating organisations with a combined UK membership of around 750,000 have all agreed to support the event:*

- Royal Society of Chemistry - the Learned Society for chemistry and the Professional Body for chemists in the UK. The RSC is a registered charity and has a membership of 46,000. It has taken a lead in coordinating the Parliamentary dimension to the event.

- Institute of Biology - is the independent, charitable body, founded in 1950, chartered by Royal Charter to further UK biology. It represents some 15,000 biologists and provides a 'Forum' for 75 learned biological societies. 23 of these societies are sending representatives to the Charter launch. The size of the total biological delegation through the Institute is 34.

- Institute of Physics - an international learned society and professional body for the advancement and dissemination of physics. The Institute is a registered charity and has over 30,000 members.

- Save British Science - a pressure group with the aim of improving the scientific health of the UK. SBS publicise issues of science policy whenever possible, to ensure that they can never be neglected.



And also contributing to the event are...

- Royal Society - the independent scientific academy of the UK dedicated to promoting excellence in science. Founded in 1660, the Royal Society plays a crucial role as champion of top quality science and technology
- Royal Academy of Engineering - founded in 1976 as The Fellowship of Engineering on the initiative of HRH The Duke of Edinburgh and a group of distinguished engineers, it was granted its Royal Charter in 1983. The Academy adopted its present title in 1992, is a registered charity and the only publicly funded engineering body in the UK.
- Engineering Council - created by Royal Charter in 1981 "to advance education in engineering, and to promote the science and best practice of engineering for the public benefit and thereby promote industry and commerce.
- Science Council - The Science Council helps coordinate the policy across science. The membership of its constituent bodies totals some 100,000 scientists. Its member bodies include the Royal Society of Chemistry, Institute of Biology, Institute of Physics, Institute of Mathematics and Royal Geological Society.

2. The speakers highlighting key aspects of the Charter for Science and Engineering are:

- Professor Lynne Gladden, Professor of Chemical Engineering Science and Director of the Magnetic Resonance Research Centre, Cambridge University - how science and technology combine to solve diverse problems in healthcare, food science and materials science.
- Sir Richard Sykes, Rector of Imperial College, London and Chairman of GlaxoSmithKline plc - the importance of investment in science and engineering training for the future health/wealth of the UK.
- Dr Paul Nurse, Director General, Imperial Cancer Research Fund - the importance of long term investment in scientific research to facilitate the discovery of new treatment opportunities
- Professor Roland Clift OBE, Professor of Environmental Technology, University of Surrey - the continuing need for widespread involvement in tackling environmental issues

The Bioscience contingent to the 14th February Westminster Science Charter launch for Parliamentarians:

- Mrs Norma Broadbridge
Council Member, Institute of Biology
- Professor John Bryant, Vice-President Elect, Society for Experimental Biology
- Mr Leslie Butler, President, Association of Clinical Cytogeneticists
- Professor Peter Caligari, Vice-President, Institute of Biology
- Jonathan Cowie, Head of Science Policy & Books, Institute of Biology
- Dr Eileen Cox, President, British Psychological Society
- Dr Hugh Dawson, Council Member, Institute of Biology
- Dr Keith Eaton, President, British Society for Allergy & Environmental Medicine
- Professor Malcolm Elliott, Chairman, International

- Association for Plant Tissue Culture & Biotechnology (UK)
- Dr Michael Elves, Honorary Treasurer, Institute of Biology
- Dr John Fisher, General Secretary, British Crop Protection Council
- Professor Malcolm Goyns, Executive Committee Member, British Society for Research on Ageing
- Dr P J B Hart, President, Fisheries Society of the British Isles
- Professor Alan Hildrew, Chairman, Freshwater Biological Association
- Professor C J Humphries, President, The Systematics Association
- Dr Owen Jewiss, IoB Representative, British Grassland Society
- Mr Alan Johnston, Council Member, Institute of Biology
- Dr P C Lee, President, The Primate Society of Great Britain
- Professor Alan Malcolm, Chief Executive, Institute of Biology
- Professor Jeff Moorby, President, Institute of Horticulture
- Mr Graham Moore, President, Laboratory Animal Science Association
- Dr Stephen Moss, President, British Mycological Society
- Mr Mike Mullan, Founder, UK Registry of Canine Behaviourists
- Bill Parry, Editor of Biobits, Institute of Biology
- Professor David Perrett, Executive Committee Member, The British Electrophoresis Society
- Dr Henry Potts, Council Member, The Galton Institute
- Professor Sir Ghilleen Prance FRS CBiol FIBiol, President, Institute of Biology
- Professor David Shuker, Honorary Treasurer, British Association for Cancer Research
- Dr Mike Siva-Jothy, IoB Representative, The Association of Animal Behaviour
- Dr C J Skidmore, Honorary Secretary for Policy, Education & Professional Affairs, Biochemical Society
- Professor Duncan Stewart-Tull, Publications Officer, Society for Applied Microbiology
- Mrs Ruth Tittensor, Council Member, Institute of Biology
- Professor Helmut van Emden, President, Association of Applied Biologists
- Professor John Whittaker, President, British Ecological Society
- Dr Bernard Dixon CBiol FIBiol (science writer) has been included on the press list. MPs who are bioscientists have been included on the MP invite list.*