



Newsletter

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From the President

From the President Happy New Year to all of you. This year heralds two exciting specialised meetings as well as the Biennial extravaganza in Glasgow, about which more below. More may well be on the way. For next year one of the suggestions is that we hold a 'Millennium meeting', the theme of which would be retrospective: looking back at the key turning points, paradigm shifts and techniques which have made substantial differences to either the way systematists do their work and/or major changes and advances in our particular understanding of the relationships of organisms (e.g. the rise of molecular systematics and our understanding of the origin of the eukaryotic cell). Our intention would be to invite speakers and written contributions from those who can take a broad but incisive overview of particular topics. Dave Williams and I have drawn up a crude first pass and we have received some very helpful comments already but we are open for more. If you contact Dave (dmw@nhm.ac.uk) or myself we can send you what ideas we have so far. One area with which are struggling at the moment is phenetics—any ideas?

In the last Newsletter I had to report that Ken Johnson was stepping down as Membership Secretary because of a job shift. We wish him well. We entered the AGM last December effectively without this post being filled and not a little anxiety. But despair has a wonderful way of turning to hope and, after a few glasses of wine and absolutely no pressure whatsoever Dr Geraldine Reid (gr@nhm.ac.uk) stepped forward with enthusiasm. Her first report is contained below.

One thing that we may think of expanding is our book review activity which at the moment is very irregular and eclectic but, at the same time, very welcome. We would try to get books from the publishers and deal them out. Of course our own books are easy and we hope to be able to provide reviews of some of the current ones but there are several newly published books about which our membership might like to hear. So, if you know of any new books that you feel might be particularly relevant to members please let me know and I'll try and get a copy and reviewer. Once we have momentum I think that Publishers will automatically send copies but until we demonstrate a track record they may show

reluctance. So, please send me suggestions. To get the ball rolling we may publish recent reviews some of you have written for other journals (e.g. has anyone done Rod Page and Ed Holme's excellent new book?)

Finally, Yvonne-Marie Linton and Neale Monks are organising a Young Systematists' Forum for later this year (see this issue). I would encourage members of the Systematics Association to bribe, force or otherwise volunteer their research assistants and students to attend this meeting.

Dr. Peter Forey
Natural History Museum
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From the Editor

The more observant of you will notice a few changes to the format of this issue of the Systematics Association Newsletter—frankly, I'm messing about until I get something I like. But this isn't my newsletter, if you have some ideas for improvements or comments on style, e-mail me!

The next issue of the Newsletter should be out towards the end of April, so if you have a meeting that needs advertising, or a book review that needs publishing, then please send it along soon! Attachments to e-mails are the easiest for me to deal with, and also ensure your formatting is preserved.

Dr. Neale Monks
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Council News

Programmes Subcommittee

Guidelines for organising a meeting with Systematics Association support

The Systematics Association provides financial support towards the organisation of scientific meetings with a significant systematic emphasis and also encourages the production of publications on systematics.

- ✂ Requests for support should be made on the appropriate form (at the back of this issue) and submitted to the Chair of the Programme sub-committee well in advance of the proposed meeting, to allow discussion of the proposal by the sub-committee and the Systematics Association Council. In practice this would normally be at least one year before the proposed meeting. (The published submission dates reflect the timing of Council meetings.)
- ✂ Meetings should be open to any interested individual and Systematics Association members should be encouraged by an appropriately discounted registration fee.
- ✂ The provision of support is contingent on the Systematics Association's support being clearly identified on any publicity material or proceedings.
- ✂ Following approval of a meeting the organiser should keep the Programme sub-committee informed of progress, particularly with respect to meeting content, speakers, registration costs etc. Copies of any flyers and registration forms should be made available to the SA for distribution to members.
- ✂ The SA also requests that, following the meeting, organisers provide a brief report of the meeting to Council and indicate how the financial support was used.
- ✂ Organisers are encouraged to use SA support to facilitate attendance by "less affluent" scientists or post-graduates. In offering support to well-established scientists the SA would prefer that organisers encourage speakers to attend entire meetings by covering registration and accommodation costs rather than airfares.
- ✂ If a publication by the SA is planned in association with the meeting, a book proposal form should be completed and returned to the Editor-in-Chief (Dr A. Warren) as early as possible. The level of funding available for any meeting may be linked to the potential for a publication.

Informal enquiries can be made to the Chair of the programme sub-committee (Dr E. J. Cox) by post or e-mail. To this end, a form is supplied at the end of the newsletter.

Dr. Eileen J. Cox
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Award Recipients

Julia J Day, Phylogeny and biogeography of fossil sparids (Teleostei, Percoidei)

The SA grant was gratefully received and used to finance trips to Civico di Storia Naturale, Verona, Italy and National D'histoire Naturelle, Paris, where I had the opportunity to study the most important collections of fossil sparid fish (and sample some of the local culinary delights...). The aim of both of these trips was to collect morphological data for cladistic analysis, in addition to morphometric data used for a landmark based analysis as part of my Ph.D. thesis.

Sparids, also known as porgies, are a family of reef associated bony fish found in tropical to sub-tropical waters, comprising 29 living genera. One of the earliest records of sparids is from the early Middle Eocene (ca. 50ma) deposits of the Lagerstätte at Monte Bolca, Verona. Investigations into the systematics of sparids have so far focused only on alpha level taxonomy and regional studies. As a result sparid genera are poorly defined anatomically and their interrelationships and evolutionary history have remained obscure. The examination of the fossil record of sparids was therefore essential in providing an historical dimension to the phylogeny of this family.

Julia J. Day

Department of Palaeontology, Natural History Museum, London SW7 5BD

&

Department of Biology, University College London, Gower Street, London, WC1E 6BT



Biennial Meeting

Bursary Awards

The following speakers made successful applications for bursary grants. Well done!

K.A. Monsch

University of Bristol, Wills Memorial Building, Queens Road, Bristol BS8 1RJ England, UK

Title: Combing data of recent and fossil taxa in phylogenetic analyses: the story of scombroid fishes so far

Dyke, Gareth J.

Dept. of Earth Sciences, University of Bristol, Queens' Road, Bristol BS8 1RJ U.K.

Title: Morphological systematics of stem-group Psittaciformes

Pretorius Resia¹ & Clarke H. Scholtz²

¹—Biology Department, Medical University of Southern Africa, Pretoria, Box 139, MEDUNSA, 0204

²—Department of Zoology and Entomology, University of Pretoria, Pretoria, 0001.



Title: Morphometrics used for the first time at superfamily level: analysis of the metendosternites of Scarabaeoidea (Coleoptera)

Michelle Van der Bank¹, Ben-Erik van Wyk¹, Herman van der Bank² & W. Chase Mark²

1—Rand Afrikaans University, Department of Botany, PO Box 524, Auckland Park, 2006, South Africa
2—Rand Afrikaans University, Department of Zoology, PO Box 524, Auckland Park, 2006, South Africa
3—Royal Botanical Gardens, Kew, Jodrell Laboratory, Richmond, Surrey, TW9 3DS, United Kingdom.

Title: the value of molecular data in understanding speciation in *Virgilia* (Fabaceae).

Carlos Lopez Vaamonde

NERC Centre for Population Biology & Department of Biology Imperial College at Silwood Park Buckhurst Road, Ascot, Berkshire SL5 7PY, UK

Title: Correlated evolution between figs and wasps.

Stefanie D. Zarklan¹ & Cliff W. Cunningham²

1—Bamfield Marine Station, Bamfield B.C. V0R 1B0 Canada, and University of Alberta, Edmonton Alberta, T6G 2E9 Canada
2—Zoology Department, Duke University, Durham, N.C. 27708 U.S.A.

Title: Evolution of the king crabs (Lithodidae, Anomura) from a molecular and morphological perspective.

Heide-Marie Daniel¹, Tania C. Sorrell² & Wieland Meyer²

1—The University of Sydney & Westmead Hospital, ICMPR, Level 3, room 3114a, Darcy Road, Westmead, NSW 2145, Australia & Institut für Biotechnologie, Technische Universität Berlin, Germany
2—The University of Sydney & Westmead Hospital, ICMPR, Level 3, room 3114a, Darcy Road, Westmead, NSW 2145, Australia

Title: Partial sequence analysis of the actin gene used to study the phylogeny of *Candida* species and their teleomorphs

Jannika Blomster, Christine A. Maggs & Michael J. Stanhope

School of Biology and Biochemistry, Queen's University of Belfast, Medical Biology Centre, 97, Lisburn Road, Belfast BT9 7BL, Northern Ireland

Title: Linnaeus was right all along

Helen E. Ireland¹, R. Toby Pennington² & Jill Preston²

1—Royal Botanic Gardens Kew, Richmond, Surrey, TW9 3AB
2—Royal Botanic Garden, Edinburgh, 20a Inverleith Row, Edinburgh EH3 5LR.

Title: Systematics of the tribe Swartzieae sensu stricto (Papilionoideae, Leguminosae) with an emphasis on *Ateleia* and *Cyathostegia*.

Joseph Ironside¹, Alison Dunn¹, Judith Smith¹ & David Rollinson²

1—University of Leeds, School of Biology, Woodhouse Lane, Leeds LS2 9JT
2—Biomedical Parasitology Division, Department of Zoology, Natural History Museum, Cromwell Road, South Kensington, London SW7 5BD

Title: Coevolution of transovarially transmitted feminizing microsporidia and their amphipod

hosts on the Isle of Cumbrae, Scotland.

Kathryn A. Hall¹, Thomas H. Cribb² & Rodney A. Bray³

1—Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Queensland, 4072, Australia
2—Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Queensland, 4072, Australia
3—Parasitic Worms Division, Department of Zoology, The Natural History Museum, Cromwell Road, London, SW7 5BD, UK.

Title: *Gyliuachenidae* Ozaki, 1933 (Platyhelminthes, Digenea): Co-evolution, parallelisms and diverging paths.

Stephen Cameron¹, Peter O'Donoghue¹ & Robert Adlard²

1—Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Australia
2—Protozoa Section, The Queensland Museum, Brisbane, Australia

Title: Has *Macropodinium* (Ciliophora, Litostomatea) coevolved with its kangaroo hosts?

Stephen Cameron¹, Robert Adlard² & Peter O'Donoghue¹

1—Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Australia
2—Protozoa Section, The Queensland Museum, Brisbane, Australia.

Title: The phylogeny of the ciliates (Ciliophora, Litostomatea) associated with macropodid marsupials.

Julia J. Day

Department of Biology, University College London, Gower Street, London WC1E 6BT & Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD

Title: A phylogenetic and biogeographic analysis of sparids (Teleostei: Percoidei)

L. Joseph Thorley¹ & Mark Wilkinson²

1—School of Biological Sciences, Woodland Road, University of Bristol, Bristol, BS8 1UG, UK
2—Associate Keeper, Department of Zoology, The Natural History Museum, Cromwell Road, London, SW7 5BD, UK.

Title: Taxon stability.

Thorsen English & Rose Samuel

Institute of Botany, University of Vienna, Rennweg 14, A-1030 Vienna, Austria

Title: Genetic differentiation in *Erophila verna* group (Brassicaceae).

Teresa Mejia-Saules

Biodiversity and Ecology Research Division, School of Biological Sciences, University of Southampton, Bassett Crescent East Southampton, SO16 7PX, U.K. & Instituto de Ecología, Apartado Postal 63, C. P. 91000, Xalapa, Veracruz, Mexico.

Title: Lemma epidermis of selected species of genus *Melica* L. (Gramineae: Meliceae).



Forthcoming Meetings

Taxonomy and biology of parasitic Hymenoptera

17–24 April 1999

An intensive residential course at Imperial College, Silwood Park. Organised jointly by the Department of Entomology, The Natural History Museum, London and the Department of Biology, Imperial College, University of London

Parasitic Hymenoptera are very numerous, diverse, economically important, and of great ecological significance. Their correct identification is vital for workers in many fields, but, because of their diversity and their often small size, they are regarded as inaccessible except to experts. Accurate recognition of the families and subfamilies leads to an immediate insight into the biology and significance of the parasitic wasps concerned and can save a great deal of time and effort in sending material away for identification, as well as greatly enhancing a field worker's chances of later getting the insects identified to species level.

Course aims

- ✂ To give participants a broad overview of the parasitic Hymenoptera and a practical understanding of their biology and systematics.
- ✂ To provide authoritative instruction in the handling and identification of the groups of parasitic Hymenoptera.
- ✂ To expose participants to leaders in Hymenoptera taxonomy.
- ✂ To give participants the opportunity to obtain advice about their own individual problems.

Who should attend?

The course is intended to cater for the needs of a wide range of biologists and others whose interests bring them into contact with parasitic Hymenoptera: graduate students, workers involved in biological control, ecologists, lecturers in tertiary education, researchers in the agrochemical industry, museum curators and committed amateur entomologists. Only a moderate background biological or entomological knowledge is assumed.

Course content

Tuition will comprise an integrated combination of lectures and practicals which will cover the biology, systematics and identification of all the groups of parasitic Hymenoptera. In addition, time will be devoted to a general introduction to the order Hymenoptera and to techniques such as collecting, rearing and preparation of material. Participants are given various published books and a course manual, including identification keys, and will be able to prepare a small collection which they can use for future reference.

Venue

The course will be run at the Silwood Park campus of Imperial College, situated about 50

kilometres west of London, near Ascot, Berkshire. Residential accommodation will be in single study bedrooms and all meals are provided.

Fees

The fully inclusive fee for the course is £720. This covers tuition, the course books and manual, accommodation and all meals.

Queries and Applications

Dr Mike Fitton

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E-mail: m.fitton@nhm.ac.uk*



The Young Systematists' Forum

Speakers are invited to attend a *Young Systematists' Forum* at the Natural History Museum in London on December 1st, 1999. The meeting will provide an opportunity for systematists early in their careers (PhD and MSc students are especially encouraged to attend) to meet and discuss the challenges and problems within the broad field of phylogeny and systematics.

This sort of meeting is generally accepted to be most useful for participants who have only a limited experience in giving scientific presentations. Each talk should last no more than fifteen minutes, and the speaker will be expected to answer questions afterwards. Audio-visual aids will be available, as well as a liquid crystal display device (Mac and PC compatible) for the more high tech.

Bearing in mind the broad range of speakers likely to attend (from geneticists to palaeontologists) talks should focus on techniques or problems associated arising from a research project, rather than the specific outcomes or anticipated results. However, we don't want to be too proscriptive—if you think you have something interesting to say, then please drop us a line.

A lunch will be provided by the Systematics Association. There's even a little bribe: a prize for the best speaker! For more information, please contact the convenors, Yvonne-Marie Linton and Neale Monks.

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Taught Courses

Imperial College of Science, Technology and Medicine, and the Natural History Museum, London

MSc courses in Taxonomy and Biodiversity, and Pest Management

The Department of Biology provides specialised postgraduate training in temperate and tropical pest management and advanced methods in taxonomy and biodiversity through full-time, one year courses leading to the MSc degree of the University of London and the Diploma of Imperial College (DIC). Each programme includes a four months research project. Both courses are intended for graduates in a biological or related science subjects with at least a second class Honours degree.

Advanced Methods in Taxonomy and Biodiversity. This interdisciplinary course, based at The Natural History Museum, provides a diversified curriculum in systematics, comparative biology, biodiversity and conservation biology, and comprises various modules including phylogeny reconstruction, coevolution and biogeography, and molecular systematics. It will be particularly relevant for those involved with agriculture, forestry and fisheries and working with biodiversity assessment, conservation, sustainable development, as well as those planning research careers in taxonomy.

Pest management. This course is held at the Department's campus at Silwood Park, Ascot. Built around a central core of common courses, it offers two specialist options—Applied Entomology and Plant Disease.

Three research council studentships as well as a number of bursaries are available for UK citizens for each of the above courses.

Further information can be obtained from the Pest Management Course Director, Dr Denis Wright (tel. +44 (0)1344 294248, fax 01344 294339, e-mail d.wright@ic.ac.uk) or the Taxonomy Course Director, Dr Donald Quicke (tel. 01344 294238, fax 01344 294339, e-mail d.quicke@ic.ac.uk), Imperial College at Silwood Park, Ascot, Berks SL5 7PY, UK.

Details and application forms can be obtained from the Admissions Office, Imperial College, London SW7 2AZ, UK



Proper Science

Corals, Life and Global Change, more or less since the start of the Cretaceous (contd.)

By G. O. Rubble
Department of Palaeobiology
The Notional Mystery Museum
South Kennington
London SE4

The story so far:

The ploddy old corals have been challenged to a race across the K-T boundary by the far superior

paucispecific rudists who fancied their chances until Super-Tethys arrived and threatened their moment of glory. Lord Skeleton of Evolution warns rudists against trying to build coral reefs. Professor Holy Gale works thousands of innocent geologists to death in the Great Chalk Rush at Eastyawn, Sussex. Meanwhile, back in a lab in Chicago, the rumbling sounds of a giant meteorite can be heard approaching from far off somewhere near Jupiter. Ammonites become decadent and the Last Days of the Dinosaur Empire loom as they glut themselves on cycads . . .

Chapter 1: The Cretaceous: Achilles and the Tortoise (contd)

Wherein is related the final and epic demise of all that was great and good during the Cretaceous.

Just at this moment, the Maastrichtian arrived, along with all that that entailed. Halley's Comet, various heavily armed bolides and the Starship Enterprise all shot by, hi-jacked by Federation bounty-seeking editors of *Paleobiology*. Mesozoic Revolutionaries armed with thick shells, large claws, rapid-fire thermo-nuclear heat-seeking predatory appendages, and Blow-Pipe Missile Launchers, and funded by large NERC and NSF grants, roamed the skies at will. Old hands like Black Jake Hancock were reduced to minor fossil piracy along the Dorset coast, and huge amounts of Cretaceous fell off Beachy Head into the sea, wiping out a whole generation of Professor Holy Gale's Chalk research in one fateful moment. Serious phylogeneticists reassured themselves parsimoniously that there were another Seven Sister groups nearby. But it wasn't to be enough. "Aha!" cried Dr Hoplitus auspiciously, "What you've got to realize is that Moelenkalk completely overlooked the three-degree alignment of the landslip which demonstrates movement along the Owen Fracture Zone. This can only be explained by sudden Earth expansion during the Albian because of volcanicity in the Kerguelen Trench causing erosion of the Gault for thousands of kilometres around Sevenoaks." With Beachy Head gone, however, the expanding Earth was bringing the K-T Extinction ever nearer and ammonites everywhere shuddered at the thought of it.

Having previously been choked by Chalk and bombarded by broken *Ignoceramus* fragments, the Earth now begun to be engulfed in volcanic dust from India. The rapidly overheating Greenhouse Effect turned into The Supertethyan Meltdown. The rudists suddenly got heat-stroke and couldn't get up again. They died in thousands through step-wise heat-exhaustion, while the rest, unable to control themselves, fell into the crater of a large meteorite from Mars, which just happened to have landed nearby in Mexico, with a crew of Extra-Terrestrials, and crate-loads of canned Panspermia on board. Unlike Disconnex Southeast, Virgin Engine Drivers, Great Northern Drains and other recently privatised British Rail disasters, the meteorite arrived spot on time for Inspector N. MacOort-Cloud to note how well it had kept to its 26 million year timetable by arriving absolutely dead on the imminent K-T boundary, so pre-empting likely complaints to Ofmet under the Meteorite Users' Charter.

The dull old corals plodded on regardless, past the now-struggling and gasping rudists, bravely dodging flying bits of meteorite, volcanic bombs, oxygen



isotopes, tektites, pieces of shocked quartz, constipated dinosaurs, and fried coccoliths. Mad Monkenstein's grotesque creation, *Paperclipoceras*, stumbled out from a secret lab in Cromwell Road and terrorised ammonite workers everywhere. Desperately clinging to each other like the true colonialists they were, the corals pulled the alarm cord to expel their symbiotic algae, then held their breath for the rest of the Maastrichtian to avoid inhaling iridium, ozone, leaking CFCs from DNA lab fridges, asbestos on top of their storage cabinets and other undesirable environmental health hazards. As a last desperate measure, the island-hopping rudist *Toryites* finally reached Jamaica via the Aleutian Islands, Milton Keynes, and the North American Interior, having sold off the House of Commons, the Queen Mother and the Geological Society, before getting its legs caught in the Deccan Traps and self-destructing over Cuba.

Carbonate platforms demised themselves eutrophically as Super-Tethys went out and forgot to come back in again, and the skies now darkened everywhere. The very last few rudist survivors were mopped up by the ensuing nuclear winter. A spokes-rudist from Provence apologised to Cretinaceous Customers everywhere by explaining that the whole disaster was due to the Wrong Sort of Dust, while through belching smoke and roaring fires, the giant hulk of Jimme Kennedegger was last seen disappearing into the apocalyptic gloom, with ammonite monographs held aloft engulfed in flames, growling, "I'll be back!" Scottish sea-urchins were only saved from a similar fate at the last subzone by the miraculous intervention of their patron saint, St. Andrew, doing some neat branch swapping with their cladograms. With one final push through the overwhelming chaos, the corals just managed to reach the K-T winning post. Few but the agonised rudist punters in Milton Keynes, Marseille and Barcelona, noticed the corals slipping by through the gaunt remains of ruined rudist reefs, then crossing the line, victoriously firing their nematocysts into the air, and brandishing their mesenteries.

Nobody ever saw the wicked paucispecific rudist bivalves ever again, and the EU ex-communicated all rudist workers for their failure to create wealth and to inflict human mobility and resources on the more obscure and under-developed ethnic minority regions of new member states. Never again would rudist specialists be allowed to harass funding organizations with their grant proposals. The whole shabby story however had triumphantly demonstrated that all the different theories about the K-T extinctions were all equally true. Inspector N. MacOort-Cloud wrote a protest letter to *Nature*, and the corals lived happily ever after - until that is, they met the Crown-of-Thorns starfish. But that, my dearly beloved, is another story (in this case, see Chapter 3).

Moral: If you are a dinosaur, a rudist, a meteorite or an ammonite, don't challenge corals to a race across the K-T boundary. Meanwhile, far off, a celestial choir could be heard sadly singing....

CHALK GETS IN YOUR EYES

[to SMOKE GETS IN YOUR EYES]

[with apologies to Kern, Harbach]


They asked us how we knew
The Cretinaceous was true.
We of course replied
The ammonites inside
Cannot be denied

They said some day you'll find
Chalk-lovers all are blind.
When rudists are on fire
You must realise
Chalk gets in your eyes

So we chaff them and we Gale-ly laugh
To think they could doubt our Chalk
Yet today our Chalk dissolved away—
We are without our Chalk

Now laughing friends divide—
Volcanoes or meteorite?
Extinction's here to stay.
When an *Ignoceramus* dies
Chalk gets in your eyes.

What will the Tertiary Dawn bring after this violent and tragic epic? Peace in our time, or more global conflict? What will the mammals do now that dinosaurs can't hog their ecological hyperspace any more? Will Mandelson fill his Millennium Dome with corals, or will the larffropods take over as usual, as forecast in Old Fortey's Almanackes?

 Brian R. Rosen