

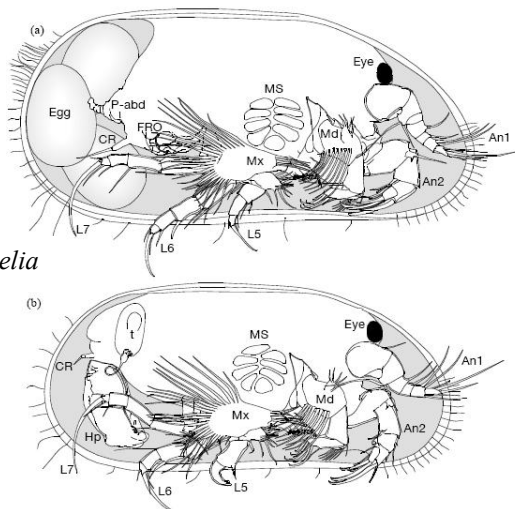
Newsletter of *Micropalaeontology*



July 2006

Number 74

Edited by I.J. Slipper



Vestalenula cornelia

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The Ostracod world seems to be doing well in attracting the world's press to reporting its significant discoveries. Not so long ago our Chairman David Siveter had the limelight with the famously preserved soft parts; now it is the turn of Robin Smith, Takahiro Kamiya and David Horne who have discovered male specimens of a lineage that is believed to have been asexual since the Jurassic. This kind of exposure can only benefit our science and raise the profile of Micropalaeontology with the public. Full story see page 31.

You too can help to raise the awareness of the Society by acting on the words of our Chairman and using the enclosed advertising and membership forms to recruit new members.

Copy deadline for next issue: **1st Dec 2006**

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Society News

Report from the Chair - Prof. David Siveter

As I remarked in my first missive as TMS Chair, the success of any learned Society depends largely on securing and enhancing a sound membership base. From its early dependence on mostly UK-based members over the last 10 years our Society has tried to widen the geographical base of not only its membership, but also of those who serve TMS either as officers or as Chair or Secretary of one of its six specialist groups. This shift was of course signalled in the name change from the British Micropalaeontological Society. If the Society is to flourish it is vital that it recruits as many new members as possible from around the globe. In this Newsletter you will find a TMS Membership application form, the production of which was more or less the first job tackled, as a priority, by **Mark Williams** when he recently became Publicity Officer of TMS. One thing that all TMS members can do to help the Society is to pass the form to a potential new member amongst students, colleagues and associates; please don't 'bin it', do try to recruit a new member. Some of the benefits of membership are outlined on the form. Currently there are about 400 individual members, and TMS would very much like to increase that number in this, the 35th year since the foundation of the Society and the 25th year of publication of *The Journal of Micropalaeontology*. I am pleased to report that **Malcolm Hart**, Editor of TMS Special Publication series, notes that there has been substantial progress in the schedule to bring the next two volumes in the series to press. *A Stratigraphical Index of British Ostracoda*, published in 1978 and now long since out of print, was the first of what turned out to be a very successful run of similar volumes on various microfossil groups that appeared under the imprint of what was then BMS. Work towards a second edition of the ostracod index, first proposed as long ago as 1991, has been really kick-started in the last

two years (us ostracodologists take a little time to get going!) and now almost all of the chapters are with the Editor. Similarly, good progress is being made with copy for a volume in honour of the late Dennis Curry. TMS Committee welcomes suggestions, by way of a short written proposal, for other potential additions to this series that is published in association with the Geological Society Publishing House.

I would like to remind TMS members that the Society offers a limited number of 'Grants in Aid' for students engaged in micropalaeontological studies and that it also selects an individual to receive the 'Charles Downie Award'. The latter is given annually to a member of the Society who, in the opinion of TMS Committee, has published the most significant paper, in any journal, based upon his or her postgraduate research. The Committee of course generates names to be considered, but we would also like the membership to be more proactive in that regard and would welcome nominations for this award from members of the Society.

For the Annual General Meeting of TMS, to be held in London on 15th November, **Mark Williams** has arranged a very attractive programme on "Microfossils and Climate Change", the theme of which will also form the basis of a future volume in the Special Publication series. The six invited talks from UK and overseas speakers embrace a wide range of microfossils groups and time periods. There is no registration fee to attend the meeting; what good value! The venue will be, as usual, University College London. This gives me the opportunity to thank **Alan Lord**, who is now based in Frankfurt, for all the work that he did in arranging the AGM at University College London over many years. It is hoped that attendance numbers top the 100 that turned out for the last AGM and associated wine reception. See you there.

Secretary's Report - Dr Michal Kucera

My first term as TMS Secretary is coming to an end in November. This is normally the time to throw in some statistics, reflect on the great things done and praise the progress that has been made. On second thoughts it would have been rather boring so I will just write one sentence that sums up what is really important: the Society is doing well because of active and engaged members who are keen to promote our science. My thanks go to all who work on the Committee, organise meetings, contribute to the Newsletter and do all those small things that make us all feel like part of one community. These words are ever so much easier to write having just returned from another successful meeting of the Foraminifera and Nannofossil Groups, this time in Liverpool. The organisers have done a great job again and I have enjoyed every one of the 30 or so talks and posters.

Below is the usual report containing the formalities of the Society, the awards and membership numbers. Happy reading and a great micropalaeontological summer!

Annual General Meeting 2006

The 2006 Annual General Meeting will be held at University College London on Wednesday 15th November. Items for the agenda should be presented to the Secretary by e-mail or in writing by Wednesday 25th October 2006. The agenda for the AGM will then be displayed on the Society's website:

www.tmsoc.org

Following the success of the last year's meeting, the 2006 AGM will follow a similar format with six speakers followed by awards of prizes and honours. The full programme of the AGM is printed on page 8 in this newsletter.

Changes to the Committee

The terms of office of the following Officers of the Committee come to an end at the

2006 AGM: *Secretary, Treasurer, Journal Editor, Special Publications Editor.*

Nominations for this position should be submitted to the Secretary by Wednesday 25th October 2006 [see page 45, ed.]. Nominees, proposers and seconders should all be members of the Society. Those who consider standing for any of the offices are welcome to contact the Secretary or the Chairman for information on what duties these posts entail.

Charles Downie Award 2006

The Charles Downie Award is an annual award made to the member of the Society who, in the opinion of the Committee, has published the most significant paper, in any journal, based upon his or her postgraduate research. The Committee has awarded the 2006 Charles Downie Award (best paper published in 2005) to **Dr Samantha Gibbs** for her publication: Gibbs, S. J., Young, J. R., Bralower, T. J. & Shackleton, N. J. Nannofossil evolutionary events in the mid-Pliocene: an assessment of the degree of synchrony in the extinctions of *Reticulofenestra pseudoumbilicus* and *Sphenolithus abies*. *Palaeogeography Palaeoclimatology Palaeoecology* **217**, 155-172 (2005). The committee received three nominations for the award. Dr Gibbs will receive her award at the 2006 AGM.

Charles Downie Award 2007

Nominations for the best paper published in 2006 should be submitted either to the appropriate Specialist Group representatives or directly to the Secretary by 28th February 2007. Nominated papers can have either single or multiple authorship as long as the nominee is the senior author.

Honorary Membership

Honorary Memberships are offered to those individuals who have, in the view of the Committee, made an outstanding and sustained contribution to the Society. This year,

the Committee decided to confer Honorary Membership on **Dr John Whittaker** for his very distinguished and sustained contribution to micropalaeontology and unstinting and much valued service to TMS over many years. John Whittaker will receive the award at the 2006 AGM.

Grants-in-Aid 2006

Five applications had been received by the deadline, all of which were of high standard. It is encouraging for the Society to see an increasing engagement by its young members. This year the Committee decided to award £200 each to **Benjamin Kotrc** (Bristol) to visit the MMRC facility in Berlin and **Tom Dunkley Jones** (UCL) to participate at the INA 2006 conference in Nebraska.

TMS Grants-in-Aid are awarded annually to help student members of the Society in their fieldwork, conference attendance, or any other specific activity related to their research which has not been budgeted for. Grants-in-Aid cannot be awarded for miscellaneous expenditure (e.g. slides, sample bags, sample preparation, laboratory costs, SEM photography or producing, photocopying, printing

and binding of theses), nor can they be awarded retrospectively. A maximum of £200 can be awarded to each successful applicant, and a total of £600 is available annually. Awardees are also expected to write a short report for the Newsletter once their grant has been used. Application forms may be obtained from the Secretary:

<michal.kucera@uni-tuebingen.de>

Deadline for applications is 28th February 2007.

Membership Database

The Society's database currently comprises 407 individual members of which 220 are resident in the UK, 102 in Europe and 85 in the Rest of the World. So far, the Society has welcomed 29 new members, the highest number in four years!

Your address label indicates whether or not you have renewed for 2006. Bold "LP" letters indicate you have not paid yet. Members who do not renew their subscriptions by the AGM (15th November 2006) will be struck off the database and will receive neither *Newsletter of Micropalaeontology* vol. 74 nor Part 2 of Volume 25 of the *Journal of Micropalaeontology*.

Treasurer's Report - Dr Stephen Packer

Hopefully you have all received a 2006 subscription invoice by now. At the time of writing there are approximately 44 late payers for 2006. I have recently sent out reminders to those concerned and would be grateful if you could pay as soon as possible. The Society's policy in the past has been to remove non-payers from the mailing list if payment has not been received once reminders have gone out. (Copies of the 2006 subscription invoice can be downloaded from the website just in case you've lost it!).

Also a reminder for those with a UK bank account that Direct Debit mandate forms can be downloaded from the website. If you would like to pay your 2007 subscription

using this method please return this form to me over the next few months. This saves you the bother of returning credit card details or cheques to the treasurer each year.

The Society administers two memorial funds (Charles Downie and Alan Higgins). The Charles Downie fund has received no new contributions in the last couple of years, so any donations to this fund would be gratefully received. If you would like to make a donation to either fund please send your cheques etc. to me.

Thank you for your continued support of TMS and I look forward to seeing many of you again during 2006.

Journal Editor's Report - Dr John Gregory

Journal of Micropalaeontology

Volume 25, Part 1, April 2006

all these articles are available for download as pdfs by paid-up members at:

www.tmsoc.org

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1. Editorial

F. J. Gregory

2. Taxonomy of the fossil marine diatom resting spore morpho-genera *Xanthioisthmus* Suto gen. nov. and *Quadrocistella* Suto gen. nov. in the North Pacific and Norwegian Sea.

I. Suto

3. Late Maastrichtian dinoflagellate cysts from the Cerro Butaló section, southern Mendoza province, Argentina.

M. B. Prámparo & O. H. Papu

4. Late Miocene siliceous endoskeletal dinoflagellates from the Sawai Bay Formation, Neill Island, Andaman Sea, India.

J. Rai

5. Multivariate discrimination of *Buryella* species from the Lower Eocene of the Outer Flysch Carpathians, Poland.

M. Bak & W. Barwicz-Piskorz

6. Middle Pleistocene Ostracoda from a large freshwater lake in the presently dry Qaidam Basin (NW China).

S. Mischke, U. Herzschuh, Z. Sun, Z. Qiao, N. Sun & A. M. Zander

7. The ostracod genus *Paijenborchella* and some of its species in the Early Tertiary of Pakistan.

Q. A. Siddiqui

8. Recent marine Ostracoda from the Solomon Islands: part 3 - Cypridoidea, Platycopina and Cladocopina.

R. Titterton & R. C. Whatley

9. Honorarium - Professor John Murray.

J. E. Whittaker & E. Alve

Micropalaeontology Notebooks

1. The occurrence of dinoflagellate cysts in calcareous/siliceous microfossil preparation from the Eocene of southeast England.

J. B. Riding, I. P. Wilkinson, L. D. Jones & K. Freeborough

2. The Hawaiian megatsunami of 110 ± 10 ka: the use of microfossils in detection.

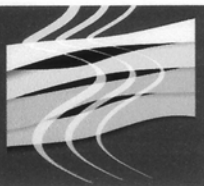
M. Williams, I. P. Wilkinson, D. R. Tappin, G. McMurtry & G. J. Fryer

So far this year there have been 10 submissions, and there is already enough material being typeset for issue 25/2 with this issue anticipated to be published on time in mid-October 2006. I am pleased to have seen an upsurge in submissions covering the less well represented groups including silicofossils and conodonts.

The online article pdf download facility hosted on The Micropalaeontological Society website is up and running, with many thanks to **Andy Henderson** and staff at the Natural History Museum. The entire backlog has been scanned and once Andy and I have checked the quality of the pdfs these will be uploaded en masse (hopefully in the next month or so).

As indicated previously, a major milestone in 2006 has seen *The Journal* celebrating 25 volumes and to further mark this occasion I will be including an extended review article in issue 25/2. This will cover the major scientific advances seen over the last 25 years in each of the Society specialist groups. I still intend to produce a full cumulative index (the previous one was compiled by Lesley Sheppard and covered volumes 1-10) which will be made freely available online, along with a full End-note bibliographic file.

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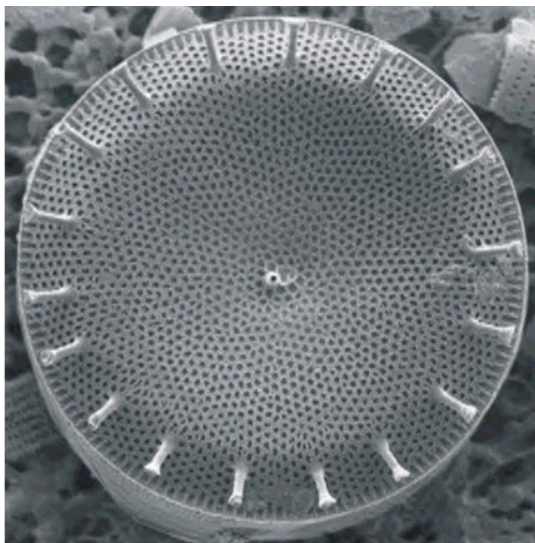
or email: jobs@petrostrat.com

Closing date for all applications: 31st July 2006.

www.petrostrat.com



Microfossils and climate change



Annual General Meeting, 2006 The Micropalaeontological Society

Speakers: Howard Armstrong, Durham - *Tracking the end Ordovician glaciation.* Mike Stephenson, British Geological Survey - *The fossil record and deglaciation in the Early Permian.* Toby Tyrrell, National Oceanographic Centre, Southampton - *Nannofossils, carbonate production and atmospheric CO₂ Cretaceous to Recent.* Nick Hogg, Shell - *The Palaeocene-Eocene Thermal Maximum in the UK North Sea.* Alan Haywood, British Antarctic Survey - *Modelling ancient Earth climate.* Ulrich von Grafenstein, Paris - *Importance of micropalaeontology to climate change research.*

Venue - University College London, November 15th, 2006, Commencing 1.00PM (lecture room to be announced)

For further information see TMS website: <http://www.tmsoc.org>

New Members

We welcome the following new members to the Society:

Maryline Vautravers
Carla Riddell
Michael Goodchild
Magali Schweizer
Karolina Koho
Ivo Duijnste
Elisa Guasti
Richard Abell
Elizabeth Sweet
Khaled Gaddah
Katherine Durnell
Ryan Guest

Richard Pearce
Michael Rogerson
Sarah Vinnell
Hartmut Schulz
Anna Hey
Gareth Watkins
Anja Oosting
K. Al-Wosabi
C.F. Dawber
H. Kinkel
S. Fielding
S. Steinke

TMS FOUNDATION

The Micropalaeontological Society Foundation is a sponsorship scheme to help support the *Journal of Micropalaeontology*. The Foundation is made up of members, non-members and institutions who wish to support the science of micropalaeontology via the production of the *Journal*. Any level of subscription is welcome. A minimum annual donation of £25 is suggested; donors or £25 or more will be acknowledged in the *Journal* and in the *Newsletter*.

Subscription is welcome at any time. Please send donations to:

Dr Stephen Packer, TMS Treasurer, Middlemarch, 17 Brewhouse Lane,
Rowsham, Buckinghamshire, United Kingdom, HP22 4QT

Please make cheques payable to "The Micropalaeontological Society". If you wish to pay by credit card, please include the amount you wish to donate, card number, expiry date and cardholder's address; for debit cards please include the issue number.

Ron Austin
David Lazarus
Ana Luisa Carreno
Henk Brinkhuis
Henri Oertli
Kunihiro Ishizaki
John Murray
Randall Penny

Silvia Spezzaferri
Alfred Traverse
Hiroshi Ujje
Gitte Laursen
Darren Anthonissen
Lavinia Trevisan
Pete Green
David Haig

Foraminiferal and Nannofossil Groups' Report

Joachim Schönfeld & Daniela Schmidt, Jeremy Young and Jens Herrle

The Foraminifera and Nannofossil Groups of The Micropalaeontological Society continued their successful tradition of early summer joined meetings. This year, we gathered at the Department of Earth and Ocean Sciences at the University of Liverpool for two days of talks and poster sessions followed by a field trip to the Lake District. The theme of the meeting was "Biology and Palaeobiology of Foraminifera and Coccolithophores" with an encouragement given for presentations dealing with the biological and palaeobiological background of these microorganisms. The meeting was international with 41 attendants and contributors coming from Britain, France, Germany, Italy, The Netherlands, Portugal and Yemen. We heard 16 presentations and we saw 18 posters, with almost equal shares of presentations dealing with benthic foraminifera, planktonic foraminifera and calcareous nannoplankton. There was also a balanced diversity of contributors from experienced colleagues holding Chairs of Micropalaeontology to Diploma Students making their first steps in science. All presentations and the posters were original and of outstanding quality; we really saw the leading edge of foraminiferal and nannofossil research. It was also impressive to see the wide range of microfossil studies currently being undertaken.

My notes are too scattered to be able to review all the talks and posters, but there are a few emerging trends to be reported. There is a strong focus on Palaeogene and Neogene time series to reveal the evolution of microfossils, their habitats and biogeochemical characteristics on a long-term scale. This subject has often been disregarded in the past decade. The recent approaches are clearly necessary to achieve a better understanding of the processes driving the earth's systems into climatic extremes. Another emerging trend is that studies on the ecology of recent foraminifera and coccolithophores include or rely on short-term to

decadal time series. Such data sets, even if scattered or incomplete, are of extreme importance for an assessment of the natural variability of ecosystems. They constrain the forcing of abiotic environmental factors. A considerable number of studies used integrated approaches to describe the ecology and ecosystem functioning. This concept was given preference instead of the classical scope solely regarding a single or small group of species and environmental parameters. Furthermore, it was a common sense among the contributions that a sound understanding of the microorganism's biology must be the background for any use in palaeoceanography. A growing number of studies involved morphometric analyses and genetic studies to achieve a biological species concept.

Many talks and posters showed question marks, and there were intensive discussions between young and established researchers, and between peers and colleagues with different skills. The discussions were so intense during the dedicated poster session, that most of us even did not realise that the doors of the building were closed already. I saw an open and mutual exchange of ideas, opinions and speculations, and I rather experienced a competition of ideas than between different schools or institutions. This spirit is indeed highly fertile for the advancement of science. Thus the meeting demonstrated that our Micropalaeontological Society is vivid and that it becomes the forum for micropalaeontologists from Britain, Europe, and overseas. Not less than five colleagues instantaneously joined The Micropalaeontological Society on the occasion of this meeting.

Who should we thank? **Daniela Schmidt** again did a superb job of organising the programme and putting together the abstract book. **Jeremy Young** patiently attended the reception desk during the icebreaker party on



the first evening. **Jens Herrle** and staff from the Department of Earth and Ocean Sciences were excellent hosts for the meeting. Everything was efficiently organised in the background and on time. Thank you Jens; it could have been done differently, but it hardly could have been done better. Next year, **Frans Jorissen** has invited us to Angers/France, and I like to extend this invitation to everyone.

Twelve of us departed on Friday afternoon from the University of Liverpool for the field trip to the Lake District guided by **Richard Worden** and **Jens Herrle**. The excursion focused on past sedimentary environments from deep-sea plains to mountain belts and deserts. The Lake District National Park exhibits a 300 million year stratigraphic record with key sections of sedimentary geology and tectonics at the ancient Iapetus suture zone. The trip emphasised the early Palaeozoic history of Europe and Eastern North America in order to improve our knowledge of the geological processes shaping the earth resulting in the modern biosphere, including microfossils that we investigate. A three hour ride took us to Coniston, Cumbria, where we stayed at Holly How Youth Hostel, a geologist-friendly and recommended place. On Saturday morning, we hardly could recognize the impressive mountain scenery veiled by dark, deep-hanging clouds. We soon were lifted by our van uphill using a trail deemed unsuitable for motor vehicles. Later we trotted through peat bogs and wet-soaked ferns to see the Mid-Ordovician Borrowdale island-arc volcanics unconform-

ably overlain by the Late Ordovician Coniston Limestone that soon passed into the Ashgill and Timeley Knott deep-water shales. Though we were at the Ashgill type locality, no fossils could be found. We had lunch at Coniston and then went to the Appleby region to see talus conglomerates and eolian dune sandstones that have been deposited in a Permian Rift Valley. The pouring rain, "strictly private" post signs, and high, barbed-wire fences could not impede our approach to the different outcrops, and in the River Eden the sun was shining again and enabled us to successfully retrieve late Permian plant fossils and to examine Triassic sandstones. The evening was bright for a few hours, and we managed to have the first barbeque of the year on the terrace of the Holly How Youth Hostel. As it was only 12 degrees centigrade warm, the gnats left us alone. The following day saw us hiking through the hills near Ingleton examining Carboniferous limestones and their structures, and we entered the gorge of the River Twiss to see the angular unconformity between horizontal Carboniferous bioclastic limestones and tightly folded Ordovician sandstones and siltstones. Soon after lunch we had to say Good Bye and soon dispersed to the nearest railway station and airport. Thank you once again, **Richard Worden**, for your humour, enthusiasm, and excellent guidance in the field. We learned a lot and all became friends.

Joachim Schoenfeld
jschoenfeld@ifm-geomar.de

Ostracod Group Report - Alan Lord & Ian Boomer

A brief business meeting was held at the Drongen meeting [see below] with the following outcomes.

An update was given on the status of the 2nd Edition of the Stratigraphic Atlas; with most chapters being ready to go to press, it is hoped that the finished work can be submitted later this year.

Ostracod Group Secretary

Alan Lord's tenure as group secretary comes to an end at this year's TMS AGM, at which point he will be replaced by **John Whittaker**.

Future Meetings

Autumn 2006

It was suggested that the Autumn meeting of the Ostracod Group be held at the University

of Birmingham on the weekend of 13-15th October 2006, **Ian Boomer** acting as local secretary. To be kept up to date with details please ensure you forward an expression of interest to Ian at i.boomer@bham.ac.uk.

Spring 2007

It was also proposed to hold a Spring field meeting in 2007 around Suffolk and north Essex with a number of sites of interest including Harwich and Felixstowe harbour. (**Alan Lord**, local secretary).

Autumn 2007

No specific ostracod meeting is planned for the second part of 2007 as this will coincide with the next European Ostracod Meeting (EOM VI) due to be held at the place of the first ever EOM, Frankfurt (Senckenberg Institute, 1989).

A Report of the Ostracod Group Talks Meeting 19-21 May 2006 at Drongen, nr Ghent, Belgium — Nicky Johnson

The latest Micropalaeontological Society Ostracod Group talks meeting started, for me, with a typically smooth journey with **Mick Frogley**! Our ferry/small tin-can was cancelled due to a tiny bit of wind (!) and we had a trip round Dover Port to find a ticket for another bigger ferry that wouldn't get tossed around like a cork. We then made a hasty investment in some 'sea-bands' in an attempt to combat sea-sickness after Mick announced he gets sea-sick in the bath! The atypical part of our journey was that we made it at all, and even more spectacularly we were not too late for the Friday night beer session - courtesy of a fabulously stocked fridge in the rather wonderful Drongen Abbey! The local beer flowed, the first for **Koen Martens** (one of our hosts) was courtesy of his very well versed young son - **Emrys** - who, on sighting his father, rushed to the fridge!! The rest of the evening was spent continuously raiding the fridge, catching up with old friends and colleagues, with **Dave Home** & **Ian Slipper** providing their regular entertainment. However, I would not recommend sloping off to bed early the first night -

after which **Helen Vincent** (a fellow sloper) and myself were voted in to provide the meeting report(s)!

The scientific session on Saturday was a fascinating mix of research topics presented very slickly with some flashy presentations and exotic computer wizardry! The attendance around the tables contained the old-hands from almost all corners of the globe, the new up-and-comings and at least one fake (although interested ex-scientist!).

Carys Bennett started the talks in style with amazing ostracods and other fossils from the Lower Carboniferous. This was followed by **Ian Boomer** with a flashy, very informative presentation from the Caspian Sea - concluding with a topical advert for 'Applitek' (Belgian Waste Management company) which extolled the virtues of Belgian Beer,... and Chocolate (both equally important). **Patrick DeDecker** (the only native-speaking Belgian in our taxi Saturday night not to be understood by the local taxi driver - perhaps a result of our beer

tasting that night?!) presented a fascinating comparison of laser ablation and microprobe analyses to standard analyses of valves through solution chemistry.

Dave Horne posed an interesting question: 'Why are darwinulid males like London buses?' - Well, because you can wait ages before seeing one and then 3 come along at once!!! But only in Japan it seems. Dave posed a bigger question at the end, 'What do these males mean? A rarity of asexual groups or the existence of a sexual lineage within certain species of darwinulids?' With the darwinulids posing more questions than being answered, the next question was asked by **Isa Shoen**, 'Why are darwinulid males like tax inspectors?' Answer: 'Because you don't want to see them, and when they do show up they ruin your life!' Isa's speculations on the existence of these males included genetic investigations into whether they could be accidents (mode of sex determination would be crucial) or toy-boys! (their functionality would be investigated!).

David Siveter took us back to the Cambrian in China and a description of an amazing find of fossils showcasing the flowering of early life, together with photographs of the original notes and pictures - a find equal in importance, surely, to the Burgess Shale. **Ian Slipper** took us on a different and fascinating ostracod journey through the life and times of William Harris of Charing - a local amateur geologist in the

south of England who provided invaluable samples for analysis to T. R. Jones (amongst others). **John Whittaker** stepped up and gave his talk title by way of a very topical and fitting Gregorian chant, after which he introduced us to some new ostracods from the United Kingdom's Pleistocene, a favourite having ornamentation giving it a smile! **Koen Martens** closed the talk session musing on *Bennelongia* and whether it could be a living dinosaur amongst Cyprididae - the beginning of a new project which holds lots of promise and, of course, the chance of many more trips to Australia for the fieldwork!

With the talks wrapped up, Belgian Beer was once again top of the agenda. A group outing for a meal followed and we found ourselves down a local street in Ghent, which looked for all the world like 'Coronation Street'. But the equivalent of the Rovers Return was wonderful! A hostelry to rival no others - a Belgian Beer list with over 100 different varieties, including all the Trappist Monk beers you could shake a stick at. An intensive sampling got under way with expert advice provided by our hosts Koen and Isa, and the food served superbly complimented the local liquid!

Sunday morning saw us depart, having had a great weekend with all the elements we have come to expect from our meetings: good science, good company, good accommodation and not least, great drinks. Many thanks to

Koen and Isa for arranging the stunning accommodation and conference room within the Abbey, fine food and a plentiful supply of beer. Those intrepid scientists who drove to foreign parts partook of a field excursion to collect freshwater ostracods and Cretaceous Chalk with Ian Slipper and Dave Horne. Roll on the next meeting - don't miss it.



Palynology Group Report

Ian Harding

TMS generously provided support towards the most recent conference in which our group was involved: the 3rd Joint Meeting of the Palynology and Silicofossil Groups of TMS, which took place from March 9th-10th, 2006 at Utrecht University, The Netherlands. The meeting was hugely successful, drawing together some 50 registrants from 12 countries. I would like to extend sincere thanks from the society to **Henk Brinkhuis** (Utrecht), **Andy Lotter** (Utrecht), **Oscar Abbink** and **Holger Cremer** (both TNO-NITG) for their hospitality and hosting the meeting in the impressive new TNO-National Geological Survey (NITG) building. The meeting would not have been possible were it not for the skillful and efficient coordination of **Marjolein Mullen**, to whom we owe a great debt! A full report of this meeting appears elsewhere in this *Newsletter*.

It is perhaps appropriate that mention should be made of the publication of some of the papers that were presented at this meeting, gracing, as they now do, the pages of *Nature*. The July 1st 2006 issue contains three papers detailing some results from the Arctic Coring Expedition (ACEX), IODP Leg 302, including one by **Sluijs et al.** on the PETM and one by

Brinkhuis et al. on the Azolla event, both of which were delivered at the Utrecht meeting. It is great to see palynology making such a high profile contribution to palaeoceanography and studies of climate change, and I'd encourage any of you out there on related subject areas to set your sights high and emulate the recent similar successes (e.g. **Guy Harrington's** jointly authored paper in *Science* (2005) **310**: 993-996).

Group members should be represented at the Climate and Biota of the Paleogene conference in Bilbao from 12th-20th June, 2006 (www.ehu.es/cbep2006), a report from which will hopefully appear in a later edition of *The Newsletter of Micropalaeontology*.

The next meeting of the Palynology Group has yet to be scheduled, so if anyone out there has a burning desire to host a meeting, please let Duncan or me know! If we receive no replies we will press ahead with something ourselves...There are plans to continue the successful format of the joint Palynology/Silicofossil meetings, and we will be looking to 2008 for the next incarnation of this series, possibly also in mainland Europe.

Webmasters Report

Andy Henderson

All articles from all volumes of the Journal of Micropalaeontology are now available to download as pdfs from TMS website. Please make sure you let the secretary know your current email address as this will serve as your login username and help keep our database up to date.

Please contact me if you are having any problems with the downloading of pdfs; there may

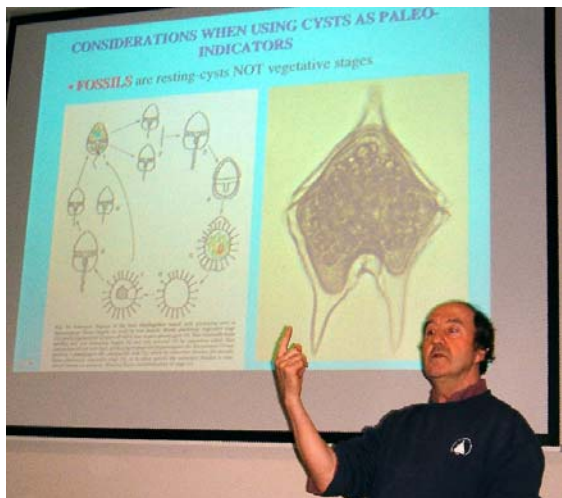
be a few teething problems at first. I am pleased to accept any articles, information and images from the membership and any suggestions for the website are always welcome.

Also remember that if you shop at *Amazon.co.uk* then please visit TMS website first and follow the Amazon link. A percentage of everything you buy will then go to the Society.

Silicofossil and Palynology Groups' Report

Ian Harding & Catherine Stickley

The 3rd Joint meeting of the Palynology and Silicofossil groups was held on the 9-10 March at Utrecht University and convened by **Henk Brinkhuis** (Utrecht), **Ian Harding** (Southampton), and **Catherine Stickley** (Norwegian Polar Institute). The hosts were Henk, **Andy Lotter** (Utrecht), **Oscar Abbink** and **Holger Cremer** (both TNO-NITG). Henk, Andy, Ian and Catherine chaired the oral and poster sessions, which took place inside the auditorium and reception area of the remarkable new TNO-National Geological Survey (NITG) building. All meeting and catering arrangements were skillfully coordinated by **Marjolein Mullen** (Utrecht). This mini-symposium was well attended by 40 scientists from across Europe as well as Japan and Canada!



Barrie Dale indicating the one thing you need to know about cysts

Building on the 2nd Joint meeting at Cardiff University in June 2004, the aim of the Utrecht meeting was to bring together palynologists and silicofossil workers, from academia and industry to demonstrate the mutual benefit of integrating palynological (particularly dinocysts) and siliceous groups (diatoms, radiolarians, silicoflagellates) in palaeoenvironmental and biostratigraphic studies. To inspire us in this direction, two superb keynote lectures were delivered by **Barrie Dale** (Oslo) for the palynological perspective and **Helen Bennion** (UCL) for the silicofossil perspective. Barrie never fails to entertain enormously, with his inspirational lecturing style, and we were not disappointed by his kick-off lecture entitled “*Dinoflagellate cysts as indicators of paleo-productivity*” where he set the pace for the rest of the meeting by enthusiastically leading some exciting discussions into the pros and cons of the use of dinocysts as proxies of productivity in the fossil record. We knew it was going to be a fun 2 days. The discussions continued with further talks on a variety of topics and time-scales for both groups: **Gianluca Marino** (Naples) on productivity patterns and early Holocene climate variability from dinocyst as-

semblages in sapropel S1 from the NE Aegean Sea; **Sebastian Rampen** (Texel, Netherlands) on lipids from the diatom *Proboscia* as indicators of palaeoproductivity; **Kenneth Mertens** (Gent) on coccoliths, dinoflagellates and diatoms as late Quaternary palaeoceanographical tools for the Cariaco Basin; **Jeroen Warnaar** (Utrecht) on a dinoflagellate perspective of the palaeoceanographic and palaeoclimatic evolution of the Eocene Southern Ocean; **Appy Sluijs** (Utrecht) on tropical Arctic SSTs during the PETM and **Ian Harding** (Southampton) on “The Spitsbergen Expedition”, which included some superb video footage of Ian and a small group of lucky students from Southampton on fieldwork braving the cold (and Polar Bears) in spectacular surroundings.

The afternoon session also included pause for the beautifully directed and now (in)famous, Arctic Coring Expedition DVD by **Henk Brinkhuis** and Co. during his talk on the main results from IODP Expedition 302 to the North Pole in August 2004. The poster session rounded the first day off in the late afternoon

with 25 contributions covering a range of topics from new Middle Eocene Ebridians from the North Pole, to palynomorphs, diatoms and silicoflagellates in Holocene coastal sediments of South Brazil. If you would like to read more, the exact presentation titles and full abstracts of all the oral and poster contributions are available at www.bio.uu.nl/~palaeo/Congressen/TMS2006/Intro_TMS2006.htm

With Marjolein and Henk as organisers, exceptional evening entertainment is always guaranteed. True to form, an excellent conference dinner took place over the entire upper floor of the Indonesian restaurant *Djakarta* in downtown Utrecht. Read ‘all you can eat’, and having done so, hearty discussions continued the following morning starting with the fascinating and expertly crafted keynote lecture by **Helen Bennion** “*Reconstructing palaeo-productivity using diatoms and application to lake management*”. Helen guided us through the techniques used to reconstruct productivity from diatoms in lake sediment cores and outlined their use as a tool for defining lake reference conditions in context of water quality assessment. We are particularly delighted that Helen could attend the meeting since the Silicofossil group continues to actively welcome new membership from the (palaeo)limnology community. Her attendance has inspired other palaeolimnologists to join TMS.

Day 2 continued with several further talks punctuated by a lunchtime guided tour of the TNO–National Geological Survey (NITG) building. Presentations included a mix of top-

ics: **Roland Hall** (Waterloo, Canada) on a sustained high-water stand in Lake Athabasca during the Little Ice Age; **Jennifer Pike** (Cardiff) on late Quaternary seasonal diatom records from the East Antarctic Margin; **Karin Zonneveld** (Bremen) on the use of selective aerobic degradation of dinoflagellates to quantify past net primary production and bottom water oxygen concentrations; **Oscar Abbink** (TNO-NITG, Utrecht) on play concepts based on new stratigraphic methods, examples from the Dutch ‘Upper Jurassic’; **Przemek Gedl** (Kraków) on the distribution of dinocysts in bathyal deposits of the Polish Carpathians; **Bas van der Schootbrugge** (Frankfurt) on anoxia, denitrification and changes in primary production across the Triassic/Jurassic boundary in SW Germany, and **Paola Beccaro** (Turin) on Oxfordian radiolarians from the Bucegi and Piatra Craiului Mountains in Romania.

In all, the meeting was enormously enjoyable and for that we are grateful to both of our keynote speakers, to the other 14 speakers and to all of poster participants for their superb contributions and continued support to TMS. The longevity of such joint meetings depends on your participation and certainly in this respect TMS is inspired to continue organising joint gatherings. The final word of thanks goes to our proficient hosts in Utrecht; Henk, Andy, Oscar, Holger and Marjolein for the guaranteed smooth running of 2 days of inspirational science and discussion in a relaxed atmosphere. Long may the Palynology and Silicofossil groups join forces!



***Microvertebrate Group Report* - Howard Armstrong & Rob Raine**

A successful December meeting was held in the Abberley and Malvern Geopark, with a series of Silurian field excursions and an evening of talks. The 2006 meeting will be held prior to the 50th Palaeontological Association annual meeting in Sheffield. It is hoped to visit some of the Carboniferous localities within the Peak District (details to be announced).

An essential meeting for anyone studying conodonts will be the 1st International Conodont Symposium (ICOS), to be held in Leicester from 12th - 30th July.

The final booking deadline is June 30th 2006. A series of technical sessions will cover a wide range of subject areas dealing with conodonts. Pre- and post-conference field trips to Ireland and NW Scotland respectively have been arranged.

Visit <http://www.le.ac.uk/gl/conodont/ICOS2006/ICOS2006.html> for online booking and programme of events.

In memoriam Michel Coen

Michel Coen died at home, by accident, on April 26th, 2006. He was born in Brussels on May 8th, 1943 and graduated in Geology at the University of Louvain in 1967. He obtained a doctorate in 1973, after the public defence of a dissertation on the stratigraphy of the Devonian in the eastern part of the Dinant syncline. To establish the stratigraphy in this region, he mainly used conodonts as tools. He published a paper on facies evolution, the conodont succession and stratigraphy of the Frasnian in the eastern region of Belgium, in which he discussed in detail the evolution of the genera *Ancyrodella* and *Ancyrognathus*. He suggested that the Frasnian should be equated with the *Ancyrodella*-bearing beds. Later, together with his wife Marie Coen-Aubert, who specialised on Devonian reefs and corals, they published on sections in the Philippeville area correlating the biostratigraphical range charts based on different fossil groups. They worked first under the scientific direction of Marius Lecompte, and after his

death in 1970, with Raphael Conil.

At the same time with the speleological team of the university, Michel spent most of his weekends digging caves and discovered new gorges and cavities in many of the famous Belgian caves, such as Han, Remouchamps and Furfooz. He also described the stratigraphical succession of the Frasnian in Remouchamps and did some gravimetric prospecting in Han. Michel worked all his career at the Geology Department of the Catholic University of Louvain-la-Neuve, as a young doctorate student he got a grant as Research Fellow, from the prestigious FNRS (National Found for Scientific Research of Belgium) and was promoted in this institution from which he retired in 2003 as Research Associate. He never quit conodonts, but from the late seventies he started the study of ostracodes, first of the Lower Carboniferous, and then those of the Devonian and Quaternary, concentrating at the end on the Devonian-Carboniferous boundary and the Mississippian of China.

Michel also had a teaching career. He first replaced R. Conil, (director of the department of palaeontology) in 1979-1980 while Conil was ill and became professor of palaeontology after Conil's death, from the years 1991 to 1996. After this, he returned to his research activities. As he was essentially a field geologist, he became manager of the cartographical team in charge, for UCL, of the geological mapping of the Walloon region.

When he retired, he became a member of the editorial board of geological mapping, spending many days in the field with young colleagues to check the tectonic features, and the boundaries figured on the sheet he had to examine. At the time of his death, he still had many research projects, and was close to becoming, for the first time, grandfather to a boy of one of his two sons living in New Zealand.

Eric Groessens

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Conference Announcements

14th Meeting of the Group of European Charophytologists (GEC) Barcelona, Catalonia, Spain 20 - 22 October, 2006

The aim of the meeting is to bring together all the researchers interested in Charophytes. This meeting will be open to all aspects of Charophyte research, including both living and fossil species.

The programme will include one day of lectures (oral and poster presentations) and two connected days of field trips, one for extant Charophytes and the other for fossil ones. The official language of the meeting will be English.

The meeting will be held at the Institut d'Estudis Catalans (IEC) headquarter:

Casa de la Convalescència
Carme Street, 47. (Ciutat Vella district (BCN Center))
08001 Barcelona
Tel: +34 932 701 620, Fax: +34 932 701 180

Friday 20/October: Welcome address, lectures and poster sessions.

Sunday 21/October: Field trip to Basturs carstic lakes. Magnifying glass session at the hotel!!

Saturday 22/October: Field trip to Cerdanya.

for further information contact:

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William Buckland 150th anniversary symposium Oxford University Museum of Natural History 12 August 2006

The Oxford University Museum of Natural History, the History of Geology Group (HOGG) and the Palaeontological Association are meeting together on Saturday 12th August 2006 for a day of talks on the charismatic William Buckland (1784-1856), to remember the 150th anniversary of his death. The Museum will also be exhibiting some of Buckland's specimens.

Speakers on Buckland include:

Jim Kennedy on biography
John Brooke on palaeo-theology
Hugh Torrens on stratigraphy
Martin Rudwick on glacial theory
Philip Powell on Megalosaurus
Simon Knell on museums

Jonathan Topham on Buckland's Bridge-water Treatise

Ralph O'Connor on storytelling

Philippe Taquet on Cuvier

Claudia Schweizer on palaeobotany

Patrick Boylan on institutionalisation

For a full programme see 'events' on the HOGG website: www.geolsoc.org.uk/hogg

For further details contact Prof. Jim Kennedy: jim.kennedy@university-museum.oxford.ac.uk

Conference reports

Interrad 11 Wellington, New Zealand - Dave Lazarus

The International Radiolarian Society's Interrad Congresses, held once every ca. three years, are the premiere event where radiolarian specialists meet, present results of their own work, and catch up on what the rest of the radiolarian community has been up to. Interrad 11 was held 19-24 March in Wellington New Zealand jointly with a Triassic symposium, the latter co-hosted by IGCP and the Subcommittee on Triassic Stratigraphy. **Chris Hollis** and **Hamish Campbell** of GNS Science, Wellington acted as convenors for the two meetings, respectively. This report focuses the radiolarian and joint sessions of the conference.

Over 30 titles have been submitted by participants from both the radiolarian and Triassic meetings for publication as a complementary set of special volumes in the journals *Micropaleontology* and *Stratigraphy*. Scientific sessions, the heart of any meeting, were well attended and marked by a very high standard for both talks and posters. The quality of work presented indeed seems to improve noticeably with each new meeting, which reflects in part an encouraging interest by, and the recruitment of talented young researchers into the field. With around 60 talks (radiolarians or joint sessions alone), nearly 50 posters, and 120 registrants, this was also one of the largest Interrad meetings in many years.

Although radiolarian research ranges very broadly over the Phanerozoic, and includes biology, oceanography, taxonomy, stratigraphy, evolution and palaeoenvironmental themes, a few subjects were of particular interest at this meeting. Biological studies included, for the first time, substantial new insights into radiolarian phylogeny based on molecular data. Initial studies have concentrated on the relationship between higher level groups, as these are very problematic and currently are little advanced beyond the highly arbitrary classification provided by Haeckel more than a century ago. The most surprising was a classification by **T. Yuasa** *et al.* (Tokyo Gakugei U., Japan; just

published in *Marine Micropaleontology* **59**(2), April 2006) based on molecular data, that placed the solitary spicule bearing taxa (Collozoum and Thalassiocolla), traditionally thought to be a stem group within the Spumellaria, instead within the crown of the Nassellaria clade. Rearrangements at this level of classification are perhaps however to be expected, as there are few, if any, skeletal characteristics in common between higher level groups, and information on soft anatomical characters is still very meagre. More reassuringly, molecular data seemed in all cases to confirm lower-level classifications, e.g. the monophyly of the Nassellaria, albeit at low levels of resolution.

Also of interest was the landmark observation by **A. Matsuoka** (Niigata U., Japan) of a relationship between shell characteristics and feeding strategy within living Nassellaria. This is, to this reporter's knowledge, the first determination of the functional significance of differences in radiolarian shell morphology, and is based on a long-term program of observation of living radiolarians being carried out in the coastal waters off Japan.

In taxonomic research the highlight was the announcement by a group of mostly Japanese researchers (including **N. Suzuki**, **Y. Aita**, **T. Sakai** and **K. Ogane**, as well as this reporter) of a new effort to stabilise the species-level nomenclature of radiolarians by re-examination of the original materials studied by C. G. Ehrenberg and E. Haeckel. These two 19th century workers between them described thousands of species and hundreds of genera, and, particularly for the Cenozoic, these are still the most common names in use. But confusingly so, for neither ever designated types: Ehrenberg at least had an excuse, because the concept did not yet then exist. So far numerous original slides from both workers have been examined, using the Ehrenberg Collection in Berlin, and plankton slides held by the Natural History Museum, London; while new slides have been made from the original *Challenger* Expedition

sediment samples (also at the NHM). A 'virtual' collection of the radiolarians found is being built by digitally imaging all the specimens found, and will eventually be placed online so that the world community of specialists can 'examine' and designate appropriate type specimens online for these old but still extremely important names.

Evolution research formed a key theme at the meeting, and in particular the results of interdisciplinary research on the Permo-Triassic boundary were of importance (several talks including that by **Takemura et al.** on the radiolarian pattern). It has now been shown, in well dated boundary sequences in New Zealand, that there was no significant extinction of radiolarians at the P-T boundary. Instead, radiolarians undergo dramatic turnover several conodont zones above the boundary, a pattern already documented by **C. Hollis** in earlier studies of radiolarians across the younger K-T boundary, also from sequences in New Zealand. Why this should be so remains a mystery which hopefully should stimulate much additional research. A special volume on the New Zealand P-T boundary sections will soon appear in the *New Zealand Journal of Geology and Geophysics*.

Lastly, although not a research theme in itself, database development was featured in many talks. It was announced that Rad World, an enormous taxonomic database long in development by the late Cathy Nigrini and Jean-Pierre Caulet, would be made available for use by other specialists. WoRaDD, a database of living

species and their ecology, was announced by **D. Boltovskoy et al.** (Buenos Aires U., Argentina). **Lazarus et al.** described further development of the Neptune database of DSDP-ODP radiolarian occurrence data: this system, now at CHRONOS, has been linked to the Paleobiology Database system and the two linked systems are being developed as a tool for both macroevolution and deep-sea geochronologic research. **Y. Agarkov** described another large database system that he has developed in Russia which, like Neptune, holds extensive occurrence data for several microfossil groups.

Beyond the scientific sessions themselves, which were held in the impressive new National Museum of New Zealand 'Te Papa' (www.tepapa.govt.nz), meeting participants could choose from a variety of field trips in and around New Zealand. Those choosing the pre-meeting trips were treated to beautiful fall weather, while post-meeting trippers experienced the other type, but enjoyed their excursions nonetheless. During the meeting participants had a chance to see the new GNS building in Wellington while partaking of an excellent roast dinner; and to see - however dimly in the rain - the edge of Rivendell (or at least the site used in *The Lord of the Rings* film) at an evening Barbeque held at one of the local parks.

In between happy discussions of scientific themes, virtually everyone present remarked on how well the meeting was organised and run - thanks indeed to the convenors, organising committee and to the staff at Absolutely Organ-

ised for flawless execution. In the business meeting of Inter-rad, **Dr Hui Luo** (Nanjing, China) was elected new President of the society, replacing **Chris Hollis**, and will host the next meeting of Inter-rad in Nanjing in September 2009.



Meeting convenors Hollis & Hamish - front, centre; Inter-rad President Luo - front, far left.

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(founded 1970)

The Micropalaeontological Society

TMS is the world's leading micropalaeontological society. We organize specialist meetings through the year on aspects of research into foraminifera, palynology, ostracods, silicofossils, nanofossils & microvertebrates.

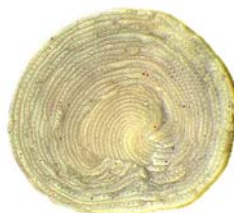
The society holds its AGM in the Autumn of each year with 6 invited speakers on themes such as climate change.

We publish the *Journal of Micropalaeontology* (two parts a year), whose remit includes palaeobiology, palaeoenvironments, evolution, taxonomy & biostratigraphy.

For a profile of the society & the benefits of becoming a member, please visit our website at:

<http://www.tmsoc.org>

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Membership is open to individuals as student, ordinary, or retired members (for libraries please contact the society) **subscriptions are due 1st January**

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Individual Membership - £35 per annum

Retired Membership - £20 per annum

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Issue Number (Debit cards only)

Signed Date.....

Student's supervisor.....

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TMS has a considerable number of back issues of past volumes of the *Journal of Micropalaeontology* and is having a sale in order to try and clear much of this back stock. Not all volumes are available, but we certainly have the majority of the Journal's first 21 volumes for sale at the give-away price of **£1 per issue** plus postage and packaging. Should you wish to purchase back issues of the Journal, then please use the form below.

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The 2006 Pander Society Symposium

Rob Raine

The annual meeting of the Pander Society (conodonts) was held in conjunction with the Geological Society of America, North-eastern Section meeting, at Harrisburg, Pennsylvania on the 20th March 2006. A pre-conference trip was arranged by **John Repetski** (USGS) to the Ordovician of the Appalachians, which was well-attended and, despite some fears, ran smoothly; and the weather was good despite a bitterly cold wind.

On the morning of the 20th March, the symposium on conodonts and sequence stratigraphy, evolution, deposition and correlation was convened by **Jeff Over** (Geneseo), with a good range of talks. **James Helms'** undergraduate project talk on the taphonomy of conodonts by feeding fossil conodont elements to modern fish to analyse wear patterns was original, and

amusing. The symposium was well received with an audience of around 50 with specialist and non-specialists alike.

Following the symposium, eight of the Pander Society members proceeded to Dukes on the waterfront of the Suquenhanna River, for a relaxing lunch, returning to the afternoon geological sessions. With a large lunch sitting heavily and a scenic route taken on the way back, only the last 2 minutes of **Ed Landing's** talk on the Cambro-Ordovician of Mexico were attended with the audience being alerted to the 'conodont geeks' arrival by the speaker.

The next Pander Society meeting will be held in the USA, with date and location to be announced. Visit <http://www.le.ac.uk/geology/map2/pander/index.html> for news of forthcoming events.

21st Réunion des Ostracodologistes de Langue Française (ROLF 21) - Tetouan (Morocco) - Jean-Paul Colin

The 21st Réunion des Ostracodologistes de Langue Française (ROLF 21) was held in Morocco from April 19 to 26 of this year. This meeting, the second of this series in Morocco, organized by **Driss Nachite** of the Laboratoire de Cartographie et de Gestion Environnementale et Marine of the Abdelmalek Essaadi University of Tetouan, managed to gather about 20 ostracode specialists from Belgium, France,

Morocco and Tunisia.

During the first day at the University of Tetouan, 8 papers were presented, most of them dedicated to Moroccan ostracode faunas from Devonian to Recent on the theme "Ostracods and Palaeoenvironments". These papers, after selection and analysis by reviewers, will be published as two special issues of the *Revue de*



Micropaléontologie. In the evening, we all enjoyed a fantastic meal at Driss's place including masterpieces of Moroccan gastronomy such as seafood pastilla, mechoui and Moroccan wines.

During the following days, two field trips allowed the participants to see the marine "post-nappes" Neogene between Tangiers and Asilah as well as the Plio-Pleistocene lacustrine-palustrine basin of Saiss.

The next meeting (ROLF 22) will probably be organized in the Belgium Ardennes, following the invitation of our colleague **Jean-Georges Casier** of the Royal Institute of Natural Sciences of Belgium, Brussels.

Papers presented:

Bekkali, R., Nachite, D. & Rodriguez, J. Qualité de la faune d'ostracodes et type hydrochimique des eaux; comparaisons entre deux bassins continentaux néogènes, le bassin de Saiss (NO Maroc) et le Bassin de Grenade (SE - Espagne).

Carbonel, P., Colin, J.-P. & Guernet, C. A propos du genre *Falunia* Grékoff & Moyes, 1956, ostracode du Néogène NE-Atlantique et méditerranéen.

Casier, J. G., El Hassani, A. & Préat, A. Contri-

bution à l'étude des ostracodes du Dévonien moyen et supérieur du Tafilalt (Maroc).

El Hmadi, A., El Moumni, B., Nachite, D., Hassouni, F. Z., Bekkali, R., Gensous, B. & Monaci, A. Distribution et caractères de la microfaune d'ostracodes au Quaternaire terminal de la marge de Sebta (Mer d'Alboran, Maroc).

Irzi, Z., Guerrouj, K., Amri, E. H., Mathieu, R., Duplay, J. & Nachite, D. Les foraminifères témoins de la pollution des écosystèmes littoraux; cas de la lagune de Nador (littoral méditerranéen du Maroc nord oriental) et de la lagune de Khnifiss (littoral atlantique du Sahara marocain).

Nachite, D. & Bekkali, R.. Les ostracodes du Néogène post-nappe entre Tanger et Asilah (Maroc NO).

Rodriguez, J., Pascual, A., Nachite, D., Martin, M. & Bekkali, R. Les ostracodes holocènes de l'estuaire de l'Urdaibai (Gerbika, N Espagne).

Rossi, A. Associations d'ostracodes et paléoécologie du Crétacé inférieur (Berriasien-Valanginienà, Atlas Atlantique, Maroc).

TMS Grants-in-Aid

TMS Grants-in-Aid are awarded annually to help student members of the Society in their fieldwork, conference attendance, or any other specific activity related to their research which has not been budgeted for. Grants-in-Aid cannot be awarded for miscellaneous expenditure (e.g. slides, sample bags, sample preparation, laboratory costs, SEM photography or producing, photocopying, printing and binding of theses), nor can they be awarded retrospectively. A maximum of £200 can be awarded to each successful applicant, and a total of £600 is available annually. Awardees are also expected to write a short report for the Newsletter once their grant has been used. Application forms may be obtained from the Secretary.

<michal.kucera@uni-tuebingen.de>

Deadline for applications is 28th February 2007

Micropalaeontological News

Local Heroes in Micropalaeontology

In 2007 The Geological Society (UK) will be celebrating its 200th anniversary. The Geologists' Association (UK) is also celebrating its 150th anniversary in 2008. Both of these events coincide with the UN celebration of Planet Earth between 2007-9. TMS have been asked to join in the celebration of geology by identifying topics and/or heroes who have changed the way the public view earth science.

As an example T. R. Jones, Edward Heron-Allen and H. B. Brady are names already being mentioned. The TMS Committee would therefore like to hear from members with any other suggestions or ideas. Please visit these sites:

Bicentenary celebrations:

<http://www.geol soc.org.uk/template.cfm?name=Bicentenary>

Local heroes initiative:

<http://www.geol soc.org.uk/template.cfm?name=BicentenaryLocalHeroes>

New url for the international ostracod newsletter - CYPRIS

Please mark

<http://biology.usgs.gov/cro/Ostracode/cypris.htm>

This will take you to the title page for all of the posted *Cypris* volumes.

New web address for NAMS

www.sepm.org/nams/index.htm
the North American Micropaleontology Section of SEPM has recently initiated a major overhaul of their website. It is still work in progress, but NAMS hope that it will provide useful information about micropaleontology and about the section's activities, including old newsletters, scholarship forms, etc.

New portal for geo websites

A project is underway transforming a former webbing into a genuine portal of e-journals dealing with earth sciences in general (palaeontology, geography, etc.) and with a particular common feature: "they are all offering published material in open-access" (actually most of them offer all their material in full open-access though others still offer a limited number of papers).

Obviously the leading title in palaeontology is *Palaeontologia Electronica*, but the portal includes also journals (*Carnets de Géologie*, *Revue de Paléobiologie*, *Geologia Croatica*, and others) which publish a significant number of palaeontological contributions.

You are invited to bookmark the following URL:

<http://paleopolis.rediris.es/geosciences/>
and to forward this to your friends and colleagues (do not forget your librarians).

Web key for Myodocopa developed by Anne Cohen

Anne Cohen has made a web page in order to make her tabular key to subclasses of Ostracoda and families of Myodocopa available worldwide. On OSTRACON, the listservers, she says "I have attempted this, because I get one web page for no extra charge with my Comcast account. As a complete novice I have used the Comcast web wizard to construct it - this has many limitations for which I apologize. I can make only a single page. I cannot mount an Excel file, so I scanned and mounted my Excel files as jpegs. I had to put in many separators to keep things from run-

ning together. Where things end up spatially is still sometimes a surprise.

"I would be grateful for suggestions, corrections, additions, etc., bearing in mind what I can do. What I can do is to make simple additions, corrections and change the size and order of images and text and the color of text [except links]. Apparently I can add quite a lot more, so I plan to add more anatomical illustrations of key characters with time, as well as a list of the genera and species of Cypridinidae.

The unpublished web site address is:
<http://home.comcast.net/~fireflea2/fireflea2draftindex.html>

Ostracoda in the World's Press

The BBC ran a story with the headline ***Doubt cast on 'ancient asexual'*** in response to the discovery by Drs Robin Smith, David Horne and Takahiro Kamiya of three male specimens of darwinulid ostracods. The story was recounted by Dr Horne at the recent TMS Ostracod Group meeting in Drongen, but for those that missed it, here is the essence from the BBC reporter Rebecca Morrell.

A shrimp-like creature may have to forfeit its claim to be the longest abstainer from sex in the animal world. The discovery of three living male specimens casts doubt on the idea that the Darwinulidae family has been female

and asexual for 200 million years. Darwinulids produce eggs which do not need to be fertilised by sperm.

But a team of scientists, writing in a Royal Society journal, cannot say yet whether the newly found males actually perform a sexual function. If they do not, if researchers can show the males are just some evolutionary hangover that is really no longer needed for reproduction, then the creatures will retain their famed celibacy status.

Darwinulids are freshwater crustaceans with a hinged shell. They measure less than a millimetre in length. Despite their diminutive size, however, they have an excellent fossil record. And it is from studying this long history that scientists believe females have been producing young without the need for fertilisation from the Late Triassic onwards.

How these "ancient asexuals" persist is a mystery. Evolutionary theory suggests they should accumulate so many damaging genetic mutations (errors) over the generations that they would die out within 0.5-1 million years.

The three male darwinulids just reported were found along with hundreds of female specimens on Yakushima, a small island in Japan. The creatures represent a new species, *Vestalenula cornelia*.

"There are about 30 species known in the world belonging to this group," explained Dr David Horne, a palaeobiologist from Queen Mary, University of London, UK, and one of the authors of the paper that is published in the Proceedings of the Royal Society B.

"Thousands of specimens have been studied in the past, with no sign of a male; now, a bit like London buses, three have come along at the same time."

The male specimens were found to be



shorter and smaller than the females; and did not have a brood pouch, which is where the females store their eggs and young.

That they are male can be seen in the differences in their copulatory organs; and the males also have hooks on their limbs, which would seem to be used to clasp the female during sex - as in other similar, but sexual, crustaceans.

Dr Horne - and colleagues Professor Takahiro Kamiya and Dr Robin Smith - say they cannot be certain yet whether the newly identified males play a role in sexual reproduction or not. It is possible the gender's presence has other explanations.

"These males could be functional males and this particular species is having sex; and they might be rare because they are only present for a very brief time in the year," Dr Horne told the BBC News website.

"Another possibility is that they are non-functional males - a throwback to times when darwinulids were sexual.

"Or it might be that they just appear very rarely - so it's almost an asexual species; but it is very, very occasionally having sex.

"It is also possible that males are more prevalent but they are just not being recognised - juvenile females have a similar shell to the males.

"It gives us new information that we can use to go back to the fossil record and have a more careful look," said Dr Horne.

If it is shown darwinulids are having sex, then the record for the longest abstainers would pass to the rotifers, a group of microscopic aquatic creatures which are believed to have given up sexual reproduction about 40 million years ago.

Announcing a new Journal for 2006 — *Palaeoworld*

Palaeoworld is a peer-reviewed quarterly journal dedicated to studies on palaeontology and stratigraphy centered in China and the neighbouring regions, encouraging original works of fossils and strata, comparative studies worldwide, and interdisciplinary approaches in related disciplines. Some issues will be devoted entirely to a special theme in the discipline. *Palaeoworld* is oriented to a broad spectrum of geoscience researchers as well as experts and students in evolutionary biology who are interested in historical geology and biotic evolution. *Palaeoworld* publishes papers in the following areas:

Systematic studies of all fossil groups
-Biostratigraphy, chemostratigraphy, chronostratigraphy
-Palaeoecology, palaeoenvironment and global changes in Earth's history
-Tempo and mode of biological evolution

- Studies of biological events in Earth's history
- Evolving ecosystem
- Molecular palaeontology
- Methods in palaeontology and stratigraphy
- Interdisciplinary studies of fossil and strata

Palaeoworld accepts the following categories of contributions:

- Original research papers and case studies
- Review articles (normally invited)
- Special theme issues
- Short notes
- Book reviews

Online Article Submission Available.

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for more information visit:
www.elsevier.com

New Positions

Ostracode paleoecology

from *Andy Cohen*

I have an opening in my lab for a new graduate student to work on the ostracode paleoecology of a long drill core from Lake Malawi, East African Rift. This will be an exciting opportunity for a bright student to work on a very significant scientific project. The Lake Malawi drill core record is the longest (382m, ~1.5 million year record) continuous sediment core record yet recovered from Africa and the sediments have a rich ostracode fauna.

This study will undoubtedly play a major role in developing our understanding of African paleoclimate over the course of the entire Quaternary. I am specifically looking for a new graduate student with prior continental ostracode and/or paleoclimatology/paleoecology experience (preferably both), who would apply for admission to the University of Arizona Geosciences graduate program to start Aug. 2007.

Although I am primarily interested in finding a Ph.D. student to work on this project, I will consider a qualified applicant for the MSc program as well. If you are interested or know of a student who might be interested please have them contact me via email at acohen@geo.arizona.edu

Planktonic Foraminiferal Ecology

The Laboratory of Recent and Fossil Bio-Indicators of Angers University, France

<http://ead.univ-angers.fr/~geologie/>

is urgently looking for a very good PhD student on planktonic foraminiferal ecology, starting in September 2006.

Subject: Study of the spatial and temporal variability of planktonic foraminiferal assemblages in the Bay of Biscay: development of a proxy for paleohydrology in the north Atlantic.

Abstract: A proxy allowing the quantification of hydrological changes in the north Atlantic, in periods of rapid climate change, will help to evaluate the risks of a future slowdown of thermohaline circulation. We want to obtain a significant amelioration of paleoceanographic proxies based on the isotopic ($^{18}\text{O}/^{16}\text{O}$ et $^{13}\text{C}/^{12}\text{C}$) and trace element composition (e.g. Mg/Ca ratio) of planktonic foraminiferal shells. This will be achieved by a calibration using living faunas and by ecological modelling taking into account the foraminiferal habitat and preferred growth periods.

The role of the PhD student at BIAF will be to study the temporal variability (seasonal, inter-annual) of the composition of planktonic foraminiferal faunas and the vertical position in the water column of various species. Furthermore, the student will be involved in the studies on the influence of these two parameters on the geochemical composition of their carbonate shells.

Five oceanographic missions will take place in the Bay of Biscay. During these missions, particle traps will be deployed at water depths of 500 and 1800 m, and will be retrieved 18 months later. They will allow us to better understand the temporal variability of the planktonic foraminiferal faunas. In order to have more insight into the vertical distribution of the various species in the water column, plankton tows will be used from the surface down to 500 meters.

Collaboration: This subject makes part of ANR Project FORCLIM, based on a close collaboration of BIAF, LSCE (CEA-CNRS UMR 1572, Gif sur Yvette) and EPOC (University Bordeaux I, UMR 5805). The PhD student at BIAF will work on planktonic foraminiferal ecology in collaboration with the team of Bordeaux I University. Next, he/she will participate in the geochemical study of the foraminiferal shells, and the modelling of all observations.

Thesis Directors : H      HOWA (helene.howa@univ-angers.fr) and Frans JORISSEN (frans.jorissen@univ-angers.fr); Laboratory of Recent and Fossil Bio-Indicators (BIAF) Angers University, UPRES EA 2644.

If you are interested, please contact Helene Howa and/or Frans Jorissen and send us a cv asap!

Prof. Frans Jorissen

Laboratoire d'Etude des Bio-indicateurs Actuels et Fossiles, UPRES EA 2644

Universit   d'Angers, 2 Boulevard Lavoisier
49045 Angers Cedex, France

3 PhD researchers Darwin Center for Biogeology Eocene Arctic *Azolla*, culturing and geochemistry

The Darwin Center for Biogeology is a virtual Dutch research institute, which aims at performing cutting-edge science in the central field of Biogeology where Biology and Earth Sciences meet. Its research mission is to understand the functioning of global, regional and local ecosystems, focusing on change and feedback at all time scales in and between biotic and abiotic components of a changing Earth.

The DARWIN *Azolla* project: (palaeo) ecology and biogeochemistry of the freshwater fern *Azolla* and its importance in global biogeochemical cycles.

Through analysis of unique central Arctic drill cores we have recently shown that enormous quantities of the free floating, freshwater fern *Azolla* grew and reproduced in situ in the mid Eocene (~48,5 Ma) Arctic Ocean, timed precisely at the junction from Greenhouse to Icehouse Earth.

Since extant *Azolla* ranks among the fastest growing plants of the planet, this phenomenon may have influenced global C, N and P cycles. From a biogeochemical cycling as well as from a global climate change perspective we identify a strong need for better constraining the capability of *Azolla* as a sink for

atmospheric CO₂ in a fresh and anoxic Eocene Arctic Ocean, and assess its potential role as a regulator of regional and global nutrient cycles. We thus propose three strongly interrelated topics.

DARWIN research avenues via (1) study of extant *Azolla* species using experimental approaches involving varying environmental gradients that mimic the Arctic Eocene (PhD, RU Bio), (2) a study into the palaeobotanical, (palaeo)ecological and (palaeo) biogeographical aspects of the Eocene Northern Hemisphere case, and comparison with modern analogues (PhD UU Bio), and (3) an overarching study investigating and modelling the biogeochemistry of modern and fossil *Azolla* (PhD, UU Geo) in relation to global biogeochemical cycles.

Further information can be obtained from:

<<http://www.bio.uu.nl/~palaeo/>>

Prof. Dr. A.F. Lotter, +31 (0)30 253 2653
Lotter@bio.uu.nl or

Henk Brinkhuis - H.Brinkhuis@bio.uu.nl

Research Leader Vacancies in the NHM

Micropalaeontologists welcome.

As many of you will have seen there are currently several "Research Leader" Posts being advertised in the Natural History Museum, London. Whilst these are open for researchers across a broad range of systematic biology and palaeontology, micropalaeontology is a target field and applications from micropalaeontologists will be very welcome. For more details see the advertisement at: http://www.nhm.ac.uk/hosted_sites/paleonet/Jobs/Jobs.Html

More posts for micropalaeontologists at: <http://www.tmsoc.org/websites.htm#jobs>

New Micropalaeontological Works

Conodont biology and phylogeny: interpreting the fossil record

Special Papers in Palaeontology No **73**, 218 pp. ISBN 0 901702 97 8. £66 (£33 to Palaeontological Association members)

Edited by Mark A. Purnell and Philip C. J. Donoghue

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Modes of growth in the euconodont oral skeleton: implications for bias and completeness in the fossil record. Howard A. Armstrong

An experimental investigation of post-depositional taphonomic bias in conodonts. Peter H. von Bitter and Mark A. Purnell

Biases in the recovery and interpretation of micropalaeontological data. Lennart

Jeppsson

Multielement conodont apparatuses of Triassic Gondolelloidea. Michael J. Orchard

Silurian conodont biostratigraphy and palaeobiology in stratigraphic sequences. James E. Barrick and Peep Männik

Cambro-Ordovician sea-level fluctuations and sequence boundaries: themissing record and the evolution of new taxa. Oliver Lehnert, James F. Miller, Steven A. Leslie, John E. Repetski and Raymond Ethington

Graphical refinement of the conodont database: examples and plea. Walter C. Sweet

The likelihood of stratophenetic-based hypotheses of geological succession. Peter D. Roopnarine

The chronophyletic approach: stratophenetics facing an incomplete fossil record. Jerzy Dzik

Cladograms, phylogenies and the veracity of the conodont fossil record. Linda M. Wickström and Philip C. J. Donoghue

Coastal Plankton Photo Guide for European Seas

Otto Larink & Wilfried Westheide.
ISBN 3-89937-062-7, paperback.
Euro 30.00

This book, with more than 600 micro- and 40 macrophotographs on 60 colour plates, is an introduction to the most important and most common taxa present in the plankton, and it allows the identification even of numerous common species. 117 micrographs demonstrate characteristic forms of the phytoplankton, 70 of protozoans, more than 300 show larvae and other developmental

stages, and about 90 show holoplanktonic adults of the zooplankton. The comprehensively annotated pictures are taken from living organisms, during marine excursions, mainly from the North Sea coastal area but also from other European coastlines, including the western Mediterranean. The book, therefore, is excellently suited to be used in such university courses for students of zoology and marine biology as well as for their teachers, but it is certainly also a comprehensible guide for any amateur microscopist and interested layperson.

For more information see:

http://www.pfeil-verlag.de/04biol/e3_62d.php_

Book Reviews

'Mittelmiozäne Ostracoden aus dem Wiener Becken (Badenium/Sarmatium, Österreich)' ('Middle Miocene Ostracods from the Vienna Basin (Badenian/Sarmatian, Austria)' by Martin Gross 2006. *Österreichische Akademie der Wissenschaften, Schriftenreihe der Erdwissenschaftlichen Kommission, Sonderband 1*: 1-224, 6 figures, 4 tables, 55 plates. ISBN: 3-7001-3650-1. 79.00 EUR.

The Vienna Basin is a classic and long-studied area for the Neogene sequence of the Central Paratethys. The monograph by Gross focuses on Middle Miocene ostracod assemblages from 10 of a large number of boreholes drilled on the site of a planned hydroelectric plant on the River Donau (Danube) in easternmost Austria. The geological context is interesting as the Neogene sediments rest on a spur of Middle Triassic carbonates, with Upper Badenian sediments transgressive onto this basement.

Of the 224 pages, 78 pages are devoted to taxonomic descriptions and 110 pages are the accompanying plates and plate descriptions. Sixty-four taxa are described and illustrated in the 55 excellent quality plates. Two species are platycopes, 2 are bairdioids, 4

cypridoids and the remaining 56 are cytheroid species. The non-marine component in the assemblages is minor. Interestingly in a work of this size there are no new taxa, just a few species left in open nomenclature, which may well be a measure of the maturity of ostracod research for the Miocene of the Vienna Basin.

There is a short discussion of ostracod biostratigraphy and zones of the Central Paratethyan Middle Miocene. Discussion of species ecology is included in the taxonomic descriptions. There are some minor lapses, for example, superfamilial names 'Cytheracea' and 'Bairdiacea' appear in the same systematic scheme as 'Cypridoidea'. The plates are of high quality with numerous views of each taxon including juveniles and details of normal pore canals, etc., but there are no transmitted-light illustrations of marginal zones and marginal pore canals - it may be that preservation did not allow this. Overall, this is a valuable work and essential for workers concerned with the Neogene of Central Europe and the Mediterranean.

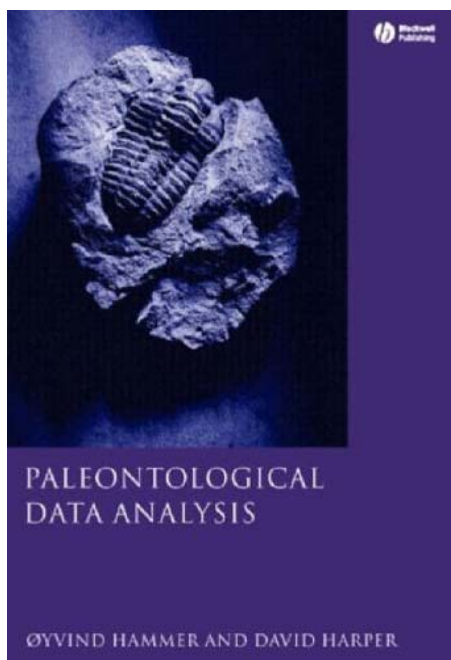
Alan Lord
Forschungsinstitut Senckenberg,
FRANKFURT-AM-MAIN.

Paleontological Data Analysis
Øyvind Hammer and David A.T. Harper.
Blackwell Publishing. 1-4051-1544-0.
£39.99. 2006. 351 pages.

Balance is difficult to attain in a book on the application of statistics. On the one hand, as Stephen Hawking (1988) famously pointed out, equations deter readers. On the other, insufficient mathematical detail will often lead to the blind application of the cookbook's recipes and the publication of indefensible results. Hammer and Harper have achieved an excellent balance. The equa-

tions are included but, because they are clearly separated from the body of the text, they can be ignored until the reader feels the need of them. Until that time, the reader can concentrate on deciding what analytic techniques to use and how to interpret their output using the descriptions and examples.

The book falls into two sections. Chapters 1 to 3 introduce the ideas and tests underlying the analytic methods the book covers; the real meat starts from Chapter 4. A couple of useful appendices (on plotting techniques and mathematical concepts) with the usual



The main section, from Chapter 4 on, is arranged by palaeontological subject with chapters on morphometrics, phylogeny, biostratigraphy, etc. Although this means some discontinuities in the book's statistical structure, I suspect the target readership will find the approach near ideal for their purposes. After reading up to Chapter 3, it is easy to go straight to one's particular interest, ignoring the remainder. Occasionally the reader would have to refer to an earlier section but this would not be so frequent as to be irksome. Having said one could ignore sections of the book, I found I did not want to. Although I have no call for phylogeny at the moment, I find the authors' style so accessible there was no great labour in just continuing to read the book from cover to cover.

Each palaeontological subject is introduced by a brief description and history, a definition of terms, and, sometimes, a discussion of some of the associated problems. Thereafter the various relevant statistical techniques are described in logical order. Each description starts by stating the purpose of the technique and the data requirements. There follows a comprehensive expansion of the purpose, an explanation of the mechanics in a more intuitive than rigorously mathematical way, a comparison with other techniques, references, and a general wealth of other information. Importantly, the pitfalls, if any, in using the techniques are emphasised.

references and index tops things off. As is essential these days, the book has its complementary software package, PAST [PAleontological STatistics] (Hammer *et al.*, 2001), and data files, both obtainable from <http://folk.uio.no/ohammer/past> or the publishers. It must be emphasised that the book is a statistics text and its value is not restricted to PAST users: those who prefer other statistics packages will find it just as useful in guiding their data analysis.

In the first section, Chapter 1 introduces the palaeontological concepts. It is very brief because it is really an expanded table of contents, the *Contents* themselves consisting simply of a list of statistical techniques. Chapter 1, thus, provides a very necessary guide to the rest of the book. Next, Chapter 2 brings a revision of Statistics 101, invaluable for those who unwisely threw away all their notes and until now have had to hunt desperately for an explanation of the difference between Spearman's rank-order correlation coefficient and Kendall's tau. Finally, Chapter 3 discusses the elements of multivariate analysis, a *sine qua non* for those less than fully familiar with the concepts.

Each technique description is followed by an example which tells the reader how to interpret the results of applying the technique, something frequently missing from statistics textbooks. The examples are well illustrated with clear figures but, as is always the case, there are places where the figure and its interpretation are on opposite sides of the same page. Flipping backwards and forwards can easily be avoided, however, because the data are all available in electronic form, so the figures can be generated and even modified on one's computer screen as one reads.

Lastly, technique descriptions each have a *Technical interpretation*, either explaining the underlying statistics or indicating where the explanation can be found. Many readers will skip this part on first reading but they may well return when their real-life application of the technique does not produce the clear-cut results we all hope for. The authors' suggest the Technical interpretation is included to assist readers in programming their own routines. I am inclined to think most contain too little information and it would be better to refer to the source document in the unlikely event that one cannot find a ready-made version to fit one's needs.

This book appears to me to fulfil its aims of providing an easily understood text explaining a wide range of applications met in palaeontological research. It is, of course, not a book for rank beginners in statistical analysis. Before using it, the researcher should attend a reasonably substantial course in basic statistics progressing, at least as far as the elements of multivariate analysis, such as most universities run for their graduate students. Probably, neither should it be the only statistics book on the researcher's shelf, but this will depend on the complexity of the statistics needed for the task in hand.

Some things I think could rate improvement. Firstly, I should have liked to have found worked examples using datasets small enough to go through step-by-step by hand (cf. Ludwig and Reynolds, 1988). For me, and, I suspect, for many others, this is the only way I can be sure I have fully understood the process. Secondly, I had difficulty from time to time in finding the PAST routines for the technique I wanted to test because there are no references in the text. This is probably a device to avoid tying the book too closely to the authors' software offering and the consequent possibility that aficionados of *R*, *S plus*, *SPSS*, etc. would ignore it. The solution would have been to include a table cross-referencing the techniques with their instantiations in a number

of widely-used packages. Thirdly, the use of specific terms for palaeontological variables (such as "taxa" and "locations") sometimes left me wondering which were the rows and which the columns of the datasets, something one must know to make sense of the formulae. A personal gripe: there is nothing about canonical correspondence analysis despite PAST having a routine to implement it; apparently the routine postdates the book. [Ed's note: this was introduced October 2005 in V1.36]

I would definitely encourage students, later-year undergraduate or graduate, embarking on palaeontological research involving more than the most trivial statistics to buy this book, not just rely on the library copy. I shall also be recommending it to some more mature researchers of my acquaintances who might find its accessibility a spur to widening their repertoire of statistical methods. My copy is going to get very regular use. I can already see that, even as I get to know one set of techniques, my research will carry me into areas where I shall have to familiarise myself with another.

References

Hammer, Ø., Harper, D.A.T., and Ryan, P. D., 2001. PAST: Paleontological Statistics Software Package for Education and Data Analysis. *Palaeontologia Electronica*, **4**(1).

Hawking, S.W., 1988. *A Brief History of Time*. London: Transworld Publishers.

Ludwig, J. and Reynolds, J., 1988. *Statistical Ecology: a primer on methods and computing*. New York: John Wiley & Sons.

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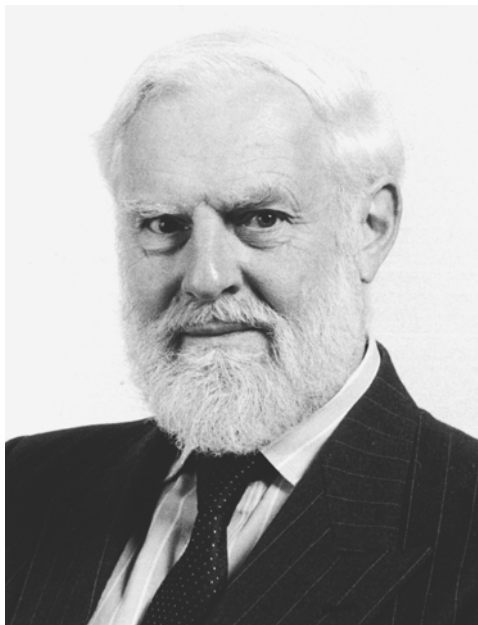
Obituaries

Professor John W. Neale

Authority on microcrustacea who saw a Geology Department from inception to closure.

Born in Burton-on-Trent in 1926 and educated at three grammar schools in the Midlands, mostly at Charles I School, Kidderminster, he volunteered for the Navy in 1943. He spent a year on the lower deck, and was proud to have been taught his ropework by an old Chief Petty Officer (CPO) pulled out of retirement who had served in the Navy in the time of sail. He was then commissioned as a midshipman. The Japanese war ended unexpectedly early and on promotion he joined the 18th Fleet mine-sweeping Flotilla, serving mostly in HMS Onyx, sweeping the fields off Southern Ireland and based at Cobh. His duties included watch-keeping, gunnery and asdics, and as quarter-deck divisional officer. He was one of the few British officers who could claim to have marched a party of British servicemen through a town in the Irish Republic, albeit only to church on Sundays!

After graduating with first class honours at Manchester University in 1949, he joined the fledgling Sub-Department of Geology at University College Hull as assistant Lecturer in Mineralogy and Petrology. The founder having left after one year, he and the new Head of the Sub-Department inherited three students, a technician and a wooden hut. By dint of a tremendous workload of formal teaching and by building up specimen and map collections, this small unit grew to achieve the status of a full independent department, coincident with the award of full University status to the College in 1954. With increasing staff and a transfer to teaching stratigraphy and some palaeontology, John Neale settled down to supervise his own Ph.D on the succession of faunas in the local Lower Cretaceous, concentrating on the ostracod crustacea.



A paper on a glacial ostracod, which required two years to track down material in the Stockholm Museum, resulted in an invitation to speak on recent Ostracoda at a symposium in Naples in 1963. This in turn led to a year teaching in Kansas University and a visit and lecture at the University of Minnesota, where he was asked to organise a successor to the Naples Symposium in Hull in 1967. The success of this led to it becoming a regular event every three or four years held in a variety of venues in Europe, Asia, America and Australia, and at which he was a regular contributor until the 1990's.

Usually lecturing without notes, his method of teaching the function and movement of the ostracod appendages led to students devising 'The Ostracod Dance' at a Christmas party, a dance which proved a great success at an International Ostracod workers party in Beijing during a lull in the proceedings.

As his reputation grew, he was invited to establish a course in Palaeontology at the University

of Rio Grande do Sol in Brazil, to conduct research in the Biology Research School in the University of Waterloo in Canada and in the Geology Department in Shizuoka in Japan, and to lecture at the Oil and Gas Institute of India in Dehra Dun.

After being awarded a DSc at Manchester at the same ceremony in which his daughter received her degree in Zoology, he spent a good deal of time in his later career in the USSR and China, forging strong links with many workers and institutions. In 1988 he was hit by a double whammy. Having completed preliminary collecting in southern Tibet near Yamze Yamco with Professor Huang Bao Ren of the Nanjing Institute in an ambitious programme to traverse Tibet and cross the Russian border to Lake Baikal, the political situation in Tibet deteriorated and the Chinese authorities clamped down. At the same time, Hull was one of the ten university geology departments identified for closure as a result of the notorious Oxburgh Report.

After seeing the last students leave in 1991, and with the disappearance of his laboratory and equipment, he declined an offer to commute to Leeds to do research and retired completely. Thereafter he devoted himself to cultivating his one acre garden and two 30 foot

greenhouses as well as finding himself in three operatic societies doing three full shows a year in various venues.

A member of the International Commission on the Jurassic/Cretaceous boundary, he also served at various times as President of the Yorkshire Geological Society, Chairman of the International Committee on Recent Ostracoda and Chairman of the British Micropalaeontological Society amongst others. Author of over a hundred scientific papers, his work was recognised by the award of the John Phillips Medal for contributions to knowledge of the geology of the north of England, the Gold Medal of Beijing University, an inscribed salver and honorary life membership of the British Micropalaeontological Society, and life memberships of the Yorkshire and Hull Geological Societies. Noted for his careful and meticulous dissections, his Recent and fossil material and his collection of over three thousand articles on Ostracoda are now in the British Museum of Natural History.

John William Neale, Professor Emeritus of Micropalaeontology was born on 19th November 1926 in Burton-on-Trent. He died on 20th January 2006 at the age of 79 years. His wife Patti, whom he married in 1952, survives him along with a son and a daughter. An elder son predeceased him.

In Memory of FREDERICK T. BANNER

Frederick Thomas Banner, a world-renowned scientist, expert on benthic and planktonic foraminifera, and friend and colleague to many micropaleontologists, died on the 16th February 2006 in his 76th year after a short illness.

Fred's diverse and pioneering studies on both benthic and planktonic foraminifera over a 40-year career have greatly influenced our science. He is perhaps best known for his work with Walter Blow on Oligocene to Quaternary globigerine biostratigraphy. Several classic papers, still relevant almost half a century later, resulted from this collaboration, which oc-

curred whilst both Banner and Blow were employed by British Petroleum (BP). But Fred's first love was larger benthic foraminifera, which he first worked with in Papua New Guinea in the mid 1950s. His job for Anglo-Iranian (later to become BP) was to produce a biostratigraphy of Oligo-Miocene reef limestones that were exposed as pinnacles in primary rainforest. Fred, as he always did, succeeded even in this very demanding environment. He also used this opportunity to visit the modern reefs off Port Moresby. His fondness of near-equatorial settings was rekindled later in his career through several visits and student fieldtrips to Freetown, Sierra Leone and Mombasa, Kenya. Unfortunately he was unable to publish much of his groundbreaking industrial research on larger benthic foraminifera at the time, in the way he was able to pub-

lish on planktonics. Nonetheless, his many unpublished reports on the larger foraminifera of the Mesozoic of the Middle East and the Cenozoic of the Far East instantly became, and still remain, standard works within BP.

Fred's influence, however, was not restricted to his research contributions. In 1966 he left BP and joined University College Swansea where he started a subdepartment in Oceanography that was soon to become a full degree-granting department. This was no mean task because Fred had a minuscule budget. In the early years he sent his students out "foraging" for chemicals, glassware, pencils, paper, etc., in the labs and offices of other departments. For 16 years, Fred, as all of his students called him, no matter what their age or place in the pecking order, influenced hundreds of young people as they metamorphosed from raw recruits into fully functioning members of society. Those students fondly remember Fred's non-judgemental and generally liberal but extremely well informed attitude on all kinds of scientific and non-scientific issues.

Fred moved to London in 1983 where for about a decade he split his time between consulting for British Petroleum, teaching at University College London (as Research Professor in Geological Sciences), where his influence on many fledgling micropalaeontologists continued, and researching at The Natural History Museum, then known as the British Museum (Natural History). At the Museum he worked initially in a part-time capacity and then was appointed an Honorary Research Fellow, a position of which he was very proud. One of us (JEW) was lucky enough to collaborate with Fred during this particularly happy time at the "BM" where he relished access to the treasure-trove that is its collections (in particular Middle Eastern larger foraminifera of the Henson and Associates Collection, formerly of the Iraq Petroleum Company) and the time and the atmosphere to develop his ideas on the evolution of early planktonic foraminifera (in particular with Damini Desai and Marcelle Bou-Dagher-Fadel). It was only declining health in

recent years that finally and sadly put paid to his distinguished research and industrial career.

Fred was born on the 12th of March 1930 in Swaffham, East Anglia. He was, however, a rather sickly child and spent much time confined to bed, where he first developed his love of reading. His parents gave him a book on dinosaurs and to aid his convalescences took him on "field trips" into the Norfolk countryside; they even bought him a microscope. Together, these events sparked an early interest in geology, which was developed when he attended Swaffham's famous Hammond's Grammar School, and the headmaster's wife (a Geology teacher) further nurtured his hobby. After attaining exemplary marks at school (he even passed his Geology exams a year early), he went on to University College, London, where he obtained both his BSc in Geology and his PhD in micropalaeontology in 1951 and 1953, respectively, the latter under the tutelage of Professor Tom Barnard. In 1980 he was awarded a DSc by the University of London and in 1987 he became the first Englishman to receive the prestigious Joseph A. Cushman Award for his achievements in the fields of micropalaeontology and marine geology. During his lifetime of research Fred published over 100 peer-reviewed publications on foraminifera and related fields, many of them seminal. He was a very gifted artist and his drawings, often to accompany illustrated keys, were a lesson in concise and masterful illustration.

His main hobby, outside his science, was music, especially jazz, and he was a no mean clarinet and trombone player himself. He also liked reading greatly, especially the works of Charles Dickens, and was fascinated by the Rubaiyat of Omar Khayyam. Fred liked his food and was a connoisseur particularly of Indian cuisine, always accompanied by a glass (or two) of dry white wine.

Dr Frederick T. Banner is survived by his daughters Susan, Penelope and Leila. He will be sorely missed.



SOME KEY PAPERS OF F.T. BANNER

BARNARD, T., and BANNER, F.T., 1953, Arenaceous foraminifera from the Upper Cretaceous of England: *Quarterly Journal of the Geological Society, London*, **109**, 173-216. [Fred's first paper, from his PhD study]

BANNER, F.T., 1982, A classification and introduction to the Globigerinacea, in Banner, F.T. and Lord, A.R. (eds.), *Aspects of Micropalaeontology*. Papers Presented to Professor Tom Barnard: George Allen and Unwin, London, Boston, etc., 142-239. [An illustrated key, with his superb trademark drawings highlighting the generic characters]

-----, and BLOW, W.H., 1959, The classification and stratigraphical distribution of the Globigerinacea: *Palaeontology*, **2**, 1-27. [First major publication of the famous Banner and Blow collaboration]

-----, and -----, 1965, Progress in the planktonic foraminiferal biostratigraphy of the Neogene: *Nature*, **208**, 1164-1166. [Twenty-three "N" zones recognised and defined for the Neogene; predates Blow, 1969 by four years]

-----, and CULVER, S.J., 1978, Quaternary *Haynesina* n. gen. and Paleogene *Protelphidium* Haynes; their morphology, affinities and distribution: *Journal of Foraminiferal Research*, **8**, 177-207. [Model taxonomic study based on detailed wall and surface textural studies]

-----, and LOWRY, F.M.D., 1985, The stratigraphical record of planktonic foraminifera and its evolutionary implications, in Cope, J.C.W. and Skelton, P.W. (eds.), *Evolutionary case histories from the fossil record: Special Papers in Palaeontology*, **33**, 117-130. [Important contribution to the then "hot" evolutionary debate on "punctuated equilibrium" versus "phyletic gradualism"]

-----, and SIMMONS, M.D., 1994, Calcareous algae and foraminifera as water-depth indicators: an example from the Early Cretaceous carbonates of northeast Arabia, in Simmons, M.D. (ed.), *Micropalaeontology and Hydrocarbon Exploration in the Middle East*: Chapman and Hall, London, New York, etc., 243-252.

[Through his larger foraminiferal work he also developed a thorough knowledge of calcareous algae, this being the first systematic attempt to use them as depth indicators in the Mesozoic]

-----, COPESTAKE, P., and WHITE, M.R., 1993, Barremian-Aptian Praehedbergellidae of the North Sea area: a reconnaissance: *Bulletin of the Natural History Museum, London (Geology)*, **49**, 1-30. [First real attempt to use Early Cretaceous planktonic foraminifera as zonation tools, in a commercial area like the North Sea]

-----, SIMMONS, M.D., and WHITTAKER, J.E., 1991, The Mesozoic Chrysalidinidae (Foraminifera, Textulariaceae) of the Middle East: the Redmond (Aramco) taxa and their relatives: *Bulletin of The Natural History Museum, London (Geology)*, **47**, 101-152. [Rehabilitation and revised biostratigraphy of (mainly) Redmond's important agglutinated larger foraminiferal taxa of 1965]

BOUDAGHER-FADEL, M.K., BANNER, F.T., and WHITTAKER, J.E., 1997, *The Early Evolutionary History of Planktonic Foraminifera*: Chapman and Hall, London, New York, etc., 269pp. [Culmination of his lifetime ideas on the origin and initial evolution of planktonic foraminifera]

EAMES, F.E., BANNER, F.T., BLOW, W.H., and CLARKE, W.J., 1962, *Fundamentals of Mid-Tertiary Stratigraphical Correlation*: Cambridge University Press, Cambridge, 163pp. [Important planktonic and larger foraminiferal contributions summarizing the then thinking of this BP team, at the time a "powerhouse" of commercial biostratigraphic research, even though its attempt to disprove the occurrence of Oligocene sediments in the Central American Region was seriously flawed!]

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In Memory of Joe Hazel

Joseph Ernest HAZEL, 72, died Thursday, February 9, 2006, from complications following heart surgery. He was born in Caruthersville, Missouri to Ernest and Irene Hazel on July 7, 1933. While attending the University of Missouri he met and married his wife of 49 years, Marilyn. After a two-year stint in the Army he earned a PhD in Geology from Louisiana State University (LSU) in Baton Rouge, LA. Following a post-doctoral appointment at Harvard University in Evolutionary Biology working with Ernst Mayr, he joined the U.S. Geological Survey in 1963 where he conducted biostratigraphic research for 20 years in at the Museum of Natural History, Washington, DC and in Reston, VA.

He served as Branch Chief of Paleontology and Stratigraphy from 1973 to 1978 where he built up the capabilities of the USGS in fields of biostratigraphy. He received the Meritorious Service Award in 1984 from then Secretary of the Interior, James Watt. Joe Hazel was also adjunct professor at George Washington University in Washington, DC. He then worked for Amoco Production Company for 3 years. The final 15 years of his career were spent as a Campanile Charities Endowed Professor at LSU. He was Chair of the Department of Geology and Geophysics from 1990-1995 before retiring in 2001.

Dr. Hazel conducted pioneering research in several areas of geology and paleontology including quantitative and graphic correlation methods in biostratigraphy, evolutionary patterns in the fossil group Ostracoda, biogeography, and paleoclimatology. He was a leading international authority on Ostracoda, and his taxonomic and biostratigraphic publications stand today as classics in the field. He was also known as an excellent teacher, supervising several post-graduate degrees at LSU.

Upon retirement he devoted his energies to genealogical research and family histories. He is survived by his wife, Marilyn; 3 sons, Joe Hazel III and wife Nancy of Flagstaff, AZ, Jim Hazel and wife Wendy of Norfolk, VA, and Jon Hazel and wife Julie of Tulsa, OK; grandchildren, Peyton, Lauren, Mason, and Jacquelyn; and cousins, Mike Hazel and Jim Hazel of Caruthersville, MO. Joe's sense of humor and infectious laugh will be sorely missed. A memorial service will be held at a later date. Memorials may be made to the Joe Hazel-Memorial Scholarship, LSU Foundation, 3838 Westlakeshore Dr., Baton Rouge, LA 70808.

Dr. Donald S. Van Nieuwenhuise

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The Directory of Micropalaeontologists 2006 addendum

The editor would like to apologise to those TMS members who were unfortunately not included in the list of the January 2006 edition of *The Directory of Micropaleontologists*. Their details are published here.

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Changes of details

Duncan Mclean

has a new email address:
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announces the UCL e-mail address will now cease to be used. Contact me on:
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Ian Boomer

now managing the new Stable Isotope and Luminescence Laboratory (SILLA) here at the University of Birmingham, UK. New email and contact details below. I still continue to be intrigued/baffled by late Quaternary ostracods in the Ponto-Caspian/Aral region.
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Committee Posts

Following the recent Committee meeting, the Society now has nominations from the Committee for the available posts of *Secretary*, *Treasurer*, *Journal Editor* and *Special Publications Editor* for election at the 2006 AGM.

Micropalaeontology Diary

2006	July 12-13	1st International Conodont Symposium, Leicester
	Aug 28 - Sept 3	19th International Diatom Symposium, Irkutsk, Russia
	Sept 6-11	7th European Palaeobotany-Palynology Conference, Prague
	Sept 10-15	International Symposium on Foraminifera, Natal, Brazil
	Sept 24-30	INA 11, Lincoln, Nebraska
	Oct 13-15	Ostracod Group meeting - Birmingham
	Oct 20-22	14th European Charophytologists (GEC), Barcelona
	Oct 22-25	AASP 39th Annual Conference, Philadelphia
	October 25	Nominations for TMS committee positions
	Nov 15	TMS AGM
	Dec 18-21	Microvertebrate Group at 50th PalAss meeting, Sheffield
2007	Feb 28	Nominations for Charles Downie Award
	Feb 28	Deadline for applications for Grants in Aid

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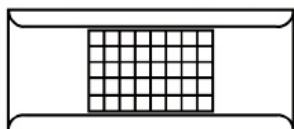
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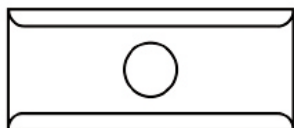
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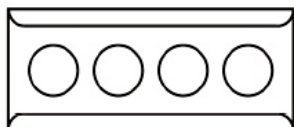
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