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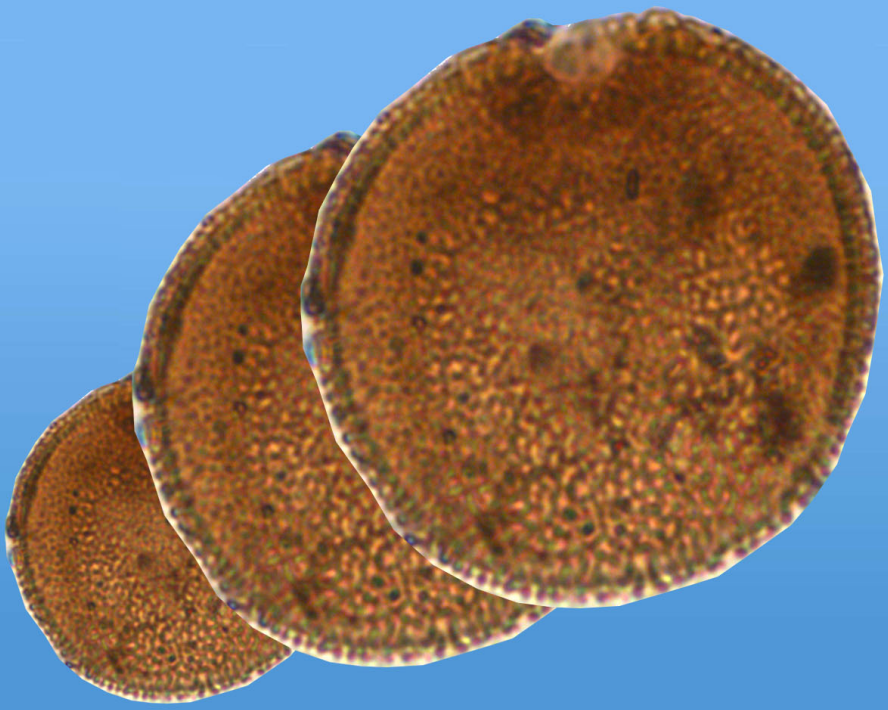
Edited by Claudia Cetean



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Conference and Course Announcements

The Micropalaeontological Society

http://www.tmsoc.org

Annual Conference 2014

Proposed Schedule:

***Wednesday 19th*: "Microfossil phylogenies and their applications" Symposium and Society AGM.**

The afternoon symposium will focus on the multiple applications of fossil phylogenies in micropalaeontology as reviewed by the keynote speakers, followed by TMS Awards and brief Society business. This will be followed by a drinks reception and the Annual Dinner, both to be hosted in the Oxford University Museum of Natural History.

***Thursday 20th*: Poster breakfast and open talks on micropalaeontology**

The day will include open poster and oral sessions. We welcome the submission of abstracts for posters and short (15 min) presentations across all aspects of micropalaeontology. We particularly encourage applications for talks and posters from graduate and early career researchers.

Bursaries will be available through the TMS for postgraduate and early career researchers

Registration will be £20/£10 waged/unwaged TMS members, £40/£20 for non-members. All TMS members can attend the AGM component of the meeting that covers society business at no cost, but not the conference itself.

Poster/presentation abstract deadline 30th September 2014. Registration deadline October 20th. Further information regarding conference fees, accommodation options and transport etc. will be available at www.tmsoc.org

For further information please contact:
Tracy.aze@oum.ox.ac.uk

OUMNH conference conveners:
Tracy Aze and Paul Smith

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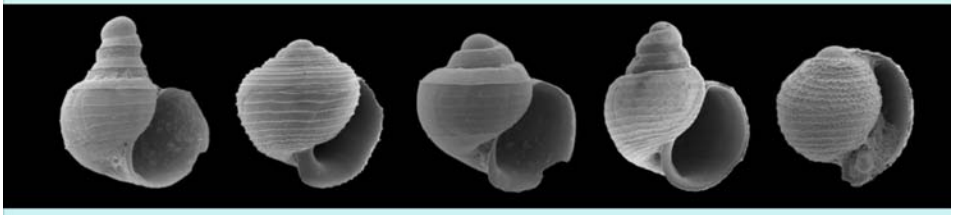
neftex

petrostrat applied stratigraphy

Oxford University Museum of Natural History



The Malacological Society of London Spring meeting and AGM

Planktic gastropods:
biology, ecology and palaeontology

1st April 2015
Natural History Museum, London

To register your interest in presenting a talk or poster,
please contact Deborah Wall-Palmer
deborah.wall-palmer@plymouth.ac.uk

NATURAL HISTORY MUSEUM

The Malacological Society

The Leverhulme Trust

DISCOVER WITH PLYMOUTH UNIVERSITY

TMS Joint Meeting of the Foraminifera and Calcareous Nannofossil Groups: June 2015

At the 2014 meeting on the Dutch island of Texel, it was agreed that the summer 2015 meeting would be help in Plymouth University (UK). While a date in mid-late June is being investigated, interested parties are invited to propose workshops, associated meetings, etc., that might be attached to the two-day lecture/poster sessions. Field visit(s) might include marine sampling offshore Plymouth and the geology of the English Riviera Global Geopark or the Dorset and East Devon World Heritage Site (most notably the Cretaceous of Beer). There may also be an opportunity for presentations or posters on pteropods and heteropods.
All members of TMS are, therefore, invited to come to Plymouth in June 2015 and continue the traditions of this joint meeting. It is hoped that colleagues from Plymouth Marine Laboratory (PML), the Marine Biological Association of the UK (MBA) and Sir Alistair Hardy Foundation for Ocean Science (SAHFOS) will attend some of the meeting and offerings related to ocean acidification (past, present and future) would be welcome. The local team will soon be approaching colleagues to assist in the definition of the programme. In the meantime, look for further information on the TMS website.

Prof. Malcolm Hart
Dr Christopher Smart
Dr Deborah Wall-Palmer

Obituary

David James Carter DFC

David Carter was born in 1922 and educated at Malvern and Birkbeck College (London). He volunteered to join the RAF, expressing a preference for flying operations. He was called up in 1940, undertaking his initial flight training in Canada. It was suggested that David would be particularly useful as a navigator, which David agreed was a sensible decision. He was advanced to the rank of Flying Officer, with navigating duties and soon began navigating Avro Lancaster heavy-bombers over various targets in Germany. Later in the war, his missions included bombing raids on the V2 rocket launch sites that were targeting London and other places in England.

Night flying these heavy bombers over Germany required very accurate navigating, while maintaining an accurate record of the wind speed and directions affecting the Lancaster. The pilot's job was to keep this aeroplane out of the range of search-lights, safe from attacking aircraft and the 'flack' from the ground. If the pilot had complete faith in his navigator, he was able to take evasive action, knowing that the navigator would make all the necessary positional adjustments that would avoid his aircraft being damaged or destroyed. This was, sadly, the fate of many heavy bombers during the airborne campaign. The navigator had to keep the pilot informed of the plane's location at any time so that the bomb-aimer could drop

the payload onto the intended ground objectives. Without the navigator's exceptional skills that would have been impossible.

Later in the war David was navigating one of these Lancaster heavy-bombers whose targets were to be attacked in daylight because of the necessity for near perfect navigation. The planes navigated by F.O. David Carter were very successful at this very dangerous job in which many Lancasters, and their crews, were lost. Dave Carter and the crew were awarded medals for these dangerous and often difficult daylight sorties over Germany. Dave was awarded the Distinguished Flying Cross (DFC) for his contribution to these dangerous sorties. In a small booklet entitled "navigating a Lancaster at the end of the war" Dave wrote an account of his training, flying experiences and his time with 625 Squadron at RAF Kelstern. This account, written in 2012, includes both photographs and a cartoon of the 'The Flying Foos seven man crew' which was drawn by David in 1943. The booklet also contains a poignant post-script noting that nearly half of Bomber Command aircrew were lost in World War ll; this loss of 55,573 airmen (average age 22) is now marked by a memorial in London's Green Park.

The war over, Dave returned to civilian life and began to study geological and other related sciences at Imperial College where he graduated and was appointed to a Lectureship. David remained working at Imperial College until he retired, but with brief periods overseas gaining 'practical' experience in the oil industry. A long-standing colleague at that time was Deryck Bayliss, who he first met in 1955. Later – in 1956 – Deryck and David met in Calcutta, sharing the suffocating damp heat of the city and the agonising screech of the brain fever bird. Working in Pakistan during 1956 and 1957, they shared many experiences on drill sites and in the field. On one of those trips they were in the Quetta area, collecting

from Eocene formations in the Kirthar Range. Later, in the same expedition, they collected Jurassic sediments from the Sulaiman Range. They survived on coffee, sugar, the local bread and some tinned frankfurter sausages, which were cooked over a fire made from juniper wood (which apparently made them palatable!). Such hardships were to be repeated some twenty years later while David was working in Timor and Seram. In future practical work, students were often asked to design field-based processing laboratories and were given practical exercises using some of the material collected during the 1950s. Some of the 'problem maps' looked fairly convincing and served their purpose until, I recall, one of the students in my group spotted a series of rivers with some slightly dubious names (e.g., Eeny, Meeny, Miny and Moe). This was, no doubt, to camouflage the true locations of the samples!

His teaching was greatly respected and appreciated by decades of undergraduate students and by his many research students, a number of whom went into academic life while others followed careers in the petroleum industry.

David Carter had been tempted, when he was completing his school education, to follow a career as an artist – so good were his drafting and artistic skills. He was, however, persuaded to change to his other passion, geology. His lectures to undergraduates were very successful, partly because he could illustrate them with such skill. His lectures in front of the blackboard were illustrated by using drawings – in chalk – of remarkable accuracy and complexity, especially those of foraminifera. These very helpful drawings were created on the blackboard just before a lecture, after which David would just take the duster and remove them. It is fortunate that he also prepared suites of excellent illustrations that he handed out to the undergraduates and post-graduates, most of whom could not reproduce them in the time that they were on the blackboard.

David began a research project on the foraminifera of the Coralline Crag and while he retained an interest in these assemblages, the work was never really completed. Two papers were produced (1951 and 1957) but this project was overtaken by an invitation to use his oil industry expertise to provide the biostratigraphy for the Channel Tunnel Study Group. This work, undertaken between 1958 and 1961 was written up and published by the Institution of Civil Engineers in 1961. An account of this is provided by Hart & Bailey (2012). The full investigation for the route of the planned Channel Tunnel occupied much of 1963–1968 period, during which Dave created a laboratory in the old 'Cook House' of Dover Castle. Cores were brought on-shore in Dover and taken immediately to the Castle where they were sampled, processed and studied. The zonation, developed earlier, was found to work well, but the time required to inspect 20,000+ samples was daunting. Dave developed a correlation scheme using planktic/benthic ratios and an early form of non-computer-based, graphic correlation. Eventually, in the 1980s, the Channel Tunnel was constructed using both his zonation and graphical techniques, with Colin Harris being the on-site geologist (and micropalaeontologist). Colin had undertaken a PhD at Plymouth before working in the oil industry in the Far East. He returned to his native Kent to take up this position based in Dover, remaining there until the end of the construction phase. Colin also spear-headed the production of a massive tome on the geology and engineering of the Channel Tunnel (Harris *et al*., 1996).

After work on the Channel Tunnel was complete, Dave (assisted by Malcolm Hart) worked on the site investigation for the Thames Barrier during 1970–1972. With the Coniacian–Santonian foraminifera virtually unknown, this involved a great deal of background work, which was subsequently continued in Plymouth by PhD student Haydon Bailey from 1973–1978. The

Thames Barrier is still in operation today, though few who see it realise that the study of microfossils was fundamental to understanding the underlying geology: the same is almost certainly true of the Channel Tunnel!

Dave worked widely to solve biostratigraphical problems associated with petroleum exploration problems. Dave contributed to this research in various places around the world. This included the West Indies, in the Indus Ranges of Pakistan (with Dereck Bayliss) and throughout Eastern Indonesia. His work in the island of Crete was more of an academic project related to seeking a better understanding of the evolution of that part of the Mediterranean region. In all these places he left his mark by the geological discoveries and advances he made.

Probably the longest period of study and Dave's most important contribution to advancing our understanding of the more remote regions of the world were located in Eastern Indonesia. Dave's use of micropalaeontology was crucial here over a period of about 25 years. This involved his travelling to remote and often difficult and uncomfortable parts of the eastern end of Banda Arc.

His contributions extended way beyond the biostratigraphy, developing an understanding of the complex structures of these regions that extended over 1000 km from Roti and Savu in the west to Seram in the east. He left behind a series of published papers that deal with the stratigraphy, sedimentology, structure, tectonics and palaeogeography. While more recent work on Timor by Prof. David Haig and colleagues has re-interpreted many of the successions and 'resolved' many of the remaining problems, Dave's work is, however, still appreciated. In a recent publication, Haig & McCartain (2010) established a new genus (*Carteriella*) in Dave's honour. In the initial definition of the genus it was noted that D.J. Carter was…."among those who pioneered the use of foraminifera for

solving geological problems in Timor".

David was laid to rest, in a meadow, at a simple ceremony attended by his family and a small group of friends and former colleagues. Both the geosciences and the artistic world were represented in equal measure: a balance of which he would have approved. David Carter was a delightful colleague, lecturer and supervisor of students and strong friend with a good, dry sense of humour. He was a sound and very reliable geological scientist in both the field and laboratory. He was also an artist whose draughtsmanship and his creative paintings never fail to impress and to enchant. His courage in life and his esteemed war record speak for themselves. He leaves a widow, Pamela, and two sons, Kim and Johnny.

Haig, D.W. & McCartain, E. 2010. Triassic organic-cemented siliceous agglutinated foraminifera from Timor Leste: conservative development in shallow-marine environments. *Journal of Foraminiferal Research*, **40**, 366–392.

Harris, C.S., Hart, M.B., Varley, P.M. & Warren, C.D. 1996. Engineering Geology of the Channel Tunnel. Thomas Telford, London, 526pp.

Hart, M.B. & Bailey, H.W. 2013. Key figures from the history of research on the Foraminifera of the Chalk Group in the UK. *In*: Bowden, A.J., Gregory, F.J. & Henderson, A.S. (eds), *Landmarks in Foraminiferal Micropalaeontology: History and Development*, The Micropalaeontological Society, Special Publications, Geological Society, London, 85–102.

Malcolm Hart – with contributions from Mike Audley-Charles, Tony Barber, Haydon Bailey, Deryck Bayliss, Marjorie Curtis, Colin Harris, John Murray and Martin Norvick.

Book Review

NEW PUBLICATION

will be reviewed by Nigel Ainsworth in the next Newsletter.

COPESTAKE, P & JOHNSON, B. 2014. Lower Jurassic Foraminifera from the Llanbedr (Mochras Farm) Borehole, North Wales, UK. Monograph of the Palaeontographical Society, London: 1-403, pls 1-21. (Publ.641, part of Vol. 167 for 2013).

ABSTRACT

The complete, fully cored Lower Jurassic (Hettangian, Sinemurian, Pliensbachian, Toarcian) succession from the Llanbedr (Mochras Farm) Borehole, North Wales, the thickest known British section, has yielded a diverse and well preserved foraminiferal fauna, comprising 270 species and subspecies which are described and illustrated. An additional nine taxa, not encountered at Mochras, are also described. This typical European Boreal Atlantic foraminiferal fauna is dominated by members of the Lagenida, with the Ceratobuliminoidea, Miliolida, Spirillinina, Involutinina, Buliminida and Textulariida as important accessory groups. The Ceratobuliminoidea and Miliolida are unusually diverse, with Reinholdella and Ophthalmidium being notably abundant. The presence of the Family Oberhauserellidae is significant. A benthonic foraminiferal biozonation scheme for the Lower Jurassic, comprising 16 biozones and tied to the standard ammonite-based chronostratigraphy, is described in detail. It is recognizable across the northern European Boreal province, and is applicable to subsurface hydrocarbon exploration of the UK continental shelf and onshore Europe.

Three new genera (*Duoplanum*, *Extonia* and *Haynesella*) are described as well as 19 new species (*Citharina sherringtoni, Duoplanum inaequale, D. leve, Glomospirella liassica, Lagena? haeusleri, L. semisulcata, Lagenammina pseudofusiformis, L. tangentia, Loxostomum liassicum, Marginulina turneri, Neobulimina bangae, Nodosaria pseudoclaviformis, Ophthalmidium strictum, Reinholdella? mochrasensis, R. robusta, Reussoolina? lacrimaforma, Semiinvoluta excelsa, Tubinella pseudoinornata* and *Vinelloidea lordi*), and 10 new subspecies (*Berthelinella involuta striata, Ichthyolaria terquemi barnardi, I. terquemi mediumcostata, Lenticulina varians barnardi, Loxostomum liassicum liassicum, L. liassicum teres, Ophthalmidium macfadyeni tenuiloculare, Paralingulina cernua ssp. A, Reinholdella margarita dorsoplana* and *R. pachyderma humilis*). Two further species are renamed as *Nodosaria whittakeri* and *Paralingulina paranodosaria*.

Meeting Reports

Biotic and Climatic Events of the Paleogene (CBEP), 1st - 6th July 2014, Ferrara, Italy

Malcolm **H**art, **P**lymouth **U**niversity

This tri-annual conference recently gathered in the Italian city of Ferrara. Held in the splendour of the 'Castello Estense' the meeting was expertly organised by Dr Valeria Luciani (University of Ferrara).

As befits a meeting in a Renaissance Castle, the icebreaker began with a loud fanfare, rhythmic drumming and an exceptional display of flagthrowing (including a virtuoso 'juggling' of 6 flags - using both hands and feet - by the leader of the suitably clad group of performers). Three days of papers included contributions on palaeontology, micropalaeontology, sediment geochemistry and - inevitably - stable isotope analysis of many parts of the Paleogene succession. There were a significant number of papers on recent drilling in the Bighorn Basin as well as contributions from IODP Expedition 342 (N.W. Atlantic Ocean). The focus of many presentations (and posters) was the PETM but other hyperthermals (including EECO and MECO) were also discussed in great detail. The abstract volume (edited by G.R. Dickens & V. Luciani) is included in Rendiconti Online della Societa Italiana, Volume 31, July 2014. The pre- and post-conferenceThe pre- and post-conference

Castello Estennse, Ferrara

field excursions were also provided with informative and colourful field guides.

The meeting, and associated social events, were well-planned and equally well executed. The warm sunny weather and the general ambience of the old Renaissance city (a World Heritage Site) were an added bonus to this meeting which continued the high standards of previous gatherings (e.g., Saltzburg, Bilbao, etc.). Though not finally decided, it is possible that the next meeting - in three years time - may be in Houston (Texas); a far cry from Renaissance Europe!

25th Réunion des Ostracodologists de Langue Française

12-14 June 2014 – Université de Perpignan Via Domitia

Alan **L**ord, **S**enckenberg **M**useum & **M**aria-**C**ristina **C**abral, **U**niversity of **L**isbon

Despite a strike by SNCF 18 delegates and their accompanying members gathered in Perpignan for a ROLF meeting dedicated to Jean-Paul Colin who died last year. The meeting was organised by Maria-Angela Bassetti and her colleagues and students. The first day (12 June) commenced with a tribute to Jean-Paul, and to the late Jean François Babinot, by Pierre Carbonel. Following the traditional Table ronde revelations by delegates and discussion about the future of the ROLF meetings, a number of presentations were made:

·**Cabral, M.C., Danielopol, D.L., Carbonel, P., Gross, M., Stoica, M., Külköylüoğlu, O., Piller, W.E., Yavuzatmaca, M. & Humphreys, W.F.** Sieve-type pores on the valves of Timiriaseviinae ostracods. Their interest for the systematics of selected taxa.

· **Ben Rouina, S., Bassetti, M.A., Touir, J. & Berné, S.** Ostracods distribution in the subsurface sediments of El Akarit river mouth (Gulf of Gabes, Tunisia) during the middle –late Holocene.

· **Vittori, C., Mazzini, I., Salomon, F., Goiran, J.-P., Pannuzi, S., Rosa, C. & Pellegrino, A.** Ostracodes et paléoenvironnements : le cas de l'antique lagune d'Ostie (delta du Tibre, Italie).

· **Casier, J-G., Maillet, S., Kasimi, R. & Préat, A.** Ostracodes du sommet de l'Eifélien et de la base du Givétien à Wellin, Hotton et On-Jemelle (Synclinorium de Dinant, Ardenne, Belgique).

· **Sarr, R.** Ostracodes caractéristiques du Paléocène des bassins du Sénégal, d'Afrique de l'Ouest du Nord .

· **Viehberg, F., Gebru, T., Foerster, V., Schäbitz, F. & Wagner, B.** *Limnocythere* (Ostracoda) distribution pattern in the Southern Ethiopian Rift during the Late Pleistocene and Holocene.

· **Cabral, M.C. & Lord, A.R.** Ostracodes et paleoenvironnements dans le Néolithique du Rio Sizandro, ouest du Portugal.

· **Angue Minto'o, C., Bassetti, M.A., Toucanne, S. & Jouet, G.,** Enregistrements sédimentaires des changements climatiques et environnementaux pendant le Quaternaire terminal sur la marge Est-Corse.

The day ended with a very enjoyable catalan dinner in the heart of the old city of Perpignan.

Day two – 13 June – was devoted to an excursion to the Dinosaur Museum at Esperaza (Aude) and the local excavation site, a splendid picnic lunch, and a visit to the museum devoted to the Tautaval Man (*Homo erectus*) and contemporaneous animal remains from the Arago Cave.

Day three – 14 June – was an excursion dedicated to 'Geology and wine in Languedoc-Roussillon' led by Emeritus Professor Pierre Giresse, where we examined a variety of local *terroir*, and ended the day in the underground gypsum mines of Terra Vinea, Portel-des-Corbières, Narbonne region.

Many thanks to Maria-Angela and her colleagues for organising an excellent meeting.

Participants at the 25th Réunion des Ostracodologists de Langue Française. Photo credit: Claude Meisch.
Leaders Maria-Angela Bassetti and Pierre Giresse extreme right.

"Discovering Microfossils" at the Lyme Regis Fossil Festival

Tom **D**unkley **J**ones, **U**niversity of **B**irmingham, **U**K

"The Micropalaeontological Society" and University of Birmingham led a joint outreach activity at the Lyme Regis Fossil Festival (http://www.fossilfestival.co.uk/) over the bank holiday weekend (2-4 May). This provided primary school groups (Friday 2 May) and the general public (3-4 May) with the chance to hunt for microfossils (benthic foraminifera and ostracods) within samples collected along the Jurassic Coast.

Participants were taught how to identify the fossils and pick them out of residues for mounting on "home-made" slides to take away. All scopes were in constant use, 10-5pm, over the three days and this proved a really valuable outreach activity and learning experience in how to run such events. Many thanks to Carys Bennett, Michaela Radl, Cate Caseman, Jeremy Young, Sally Collins and all the others who helped with the demonstrating, set-up, tidy-up and crowd management! Thanks to Ian Boomer and Aruna Mistry for all their help with sample processing and the loan of stereomicroscopes.

If you've any ideas for how to enhance this activity, have well-preserved and productive sample material we could use in future (need lots!), want to be involved next year or want to host something similar, please get in touch with Tom Dunkley Jones - t.dunkleyjones@bham.ac.uk"


Micropalaeontological Society
Advancing micropalaeontology

TMS Foram-Nannofossil Group meeting, Texel, June 2014

William **A**ustin, **U**niversity of **S**t. **A**ndrews

This year's joint meeting of the Foram and Nannofossil groups was hosted at **NIOZ** (The Royal Netherlands Institute for Sea Research, Texel), with a major contribution to its organization from VU University Amsterdam and Dr **Els Ufkes**, in particular. The meeting was universally accepted as a great success and we are particularly grateful to our Dutch colleagues for the excellent organization and warm welcome which we received in Texel.

The theme of the meeting was *Foraminifera and nannofossils through time, qualification and quantification*. Over 100 registered participants attended this excellent meeting, which included a wealth of excellent talks and extended poster sessions over two days. The meeting was particularly well-supported by Foraminiferal researchers, with three additional workshops held in connection with this year's meeting: (1) *Morphometrics 10: Identifying the top 10 questions in morphometrics and micropalaeontology today*; (2) *Foraminiferal Geochemistry*; and (3) *Foraminiferal Bio-Monitoring*. It is incredibly exciting to see this level of interest in Foraminiferal research and very encouraging to see the widespread international interest in these meetings and workshops.

Meeting the locals; sheep, one of the main export products of Texel

The excellent talks and posters were celebrated by prizes which were sponsored by Springer and it was particularly encouraging to see a large number of excellent presentations from early career researchers. The poster prize winners were: **Esmee Geerken** –Buoyancy of *Orbulina universa* and **Laurie Charrieau** – Zombie foraminifera reveal impacts of ocean acidification in the Baltic Sea. The presentation awards were given to: **Stephanie Hayman** – The determination of palaeoclimate on a high-latitude, South African coral reef using multiple techniques and **Takashi Toyofuku** – Micro environmental variation by foraminiferal calcification process.

The Texel excursion was a real treat, including an introduction to the geology of the Dutch Barrier Islands, a visit to the 'De Slufter' nature reserve (and fantastic microbial mats), a boat trip into the world heritage site of the Wadden Sea (including walk on the intertidal sand flats), before a final stop at the 'Texelese Bierbrouwerij' to sample some local Texel beers. The trip was expertly guided by colleagues from NIOZ and a particular thanks to **Eveline Metzger** and **Anouk Klootwijk** for organizing such an interesting and excellent excursion day.

Boarding the TX-20 after a stroll on the intertidal flat area of Balgzand

The "spring" Foram-Nannofossil joint meeting is quickly establishing itself as a major and increasingly popular event on the conference circuit and it was therefore with great pleasure that we learnt (after delegate voting for two venues in the UK), that **Malcolm Hart's** bid to host the next meeting (2015) in Plymouth, England had been successful. We wish Malcolm and the organising committee well with their preparations for 2015 and look forward to further updates shortly.

At the end of the fieldtrip a beer tasting session at the Texel beer brewery

Looking for foraminifera amidst sea-lavender in the Slufter

The Micropalaeontological Society News

Report from the Secretary and the President

Sev **K**ender & **J**ohn **G**regory

After the astounding success of the 2-day TMS Annual Conference at the Natural History Museum in November 2013 *'Micropalaeontology and the Integrated Ocean Drilling Program'* we are delighted to announce that the 2014 TMS Annual Conference will be held at Oxford University Museum of Natural History (19th–20th November) at the invitation of previous TMS President Professor Paul Smith, following a similar format to last year. There are four confirmed guest speakers on day 1 (Michal Kucera, David Siveter, Helen Coxall and Samantha Gibbs, with one more to be confirmed) on the theme of *'Microfossil phylogenies and their applications'*, followed by Society Business (including awards and elections), a drinks reception and an evening meal. Day 2 will include short oral presentations (15 minutes) and posters open to all conference delegates. Posters will be on display for the duration of the conference.

Additional conference details can be found on page 3, and further information will be continuously added to the website (www.tmsoc.org/agm2014), including registration and abstract deadlines and recommendations for accommodation. If you require any additional information, please contact the conference organisers Tracy Aze and Paul Smith.

Alan Higgins Award

We would like to advertise and solicit nominations for the Alan Higgins Award for Applied Micropalaeontology which is given to a young scientist, less than 10 years from graduation, in recognition of a significant record of achievement in the field of applied and industrial micropalaeontology, as documented by publications, software, patents, leadership or educational activities.

Nominations for the 2015 Alan Higgins Award should be sent to the Secretary by 28th February 2015 using the appropriate nomination form available from our website.

Charles Downie Award

The Charles Downie Award is an annual award made to a member of the Society who, in the opinion of the Committee, has published the most significant paper in any journal based on their postgraduate research. The committee will award the 2014 Charles Downie Award (best paper published in 2013) to Lyndsey Fox at the 2014 TMS Annual Conference, for her paper entitled. "Sytematic taxonomy of early-

middle Miocene planktonic foraminifera from the Equatorial Pacific Ocean: Integrated Ocean Drilling Program Site U1 338", recently published in the Journal of Foraminiferal Research (v. 43, p. 374-405, October, 2013). Nominations for the best paper published in 2015 should be sent to the Secretary by 28th February 2015.

TMS Student Awards

TMS Student Awards are given to those nominated for their outstanding performance on one of our TMS-approved micropalaeontological courses, and consists of a year's free membership. So far this year seven of our new members are recipients of TMS Student Awards. These are: Barbara Casas (Universidad del País Vasco), Deborah Fish (University of Leicester), Ryan Kingsley (University of Keele), Benjamin Man (University of Birmingham), Ryan Marek (University of Bristol), Nicholas Poole (Cardiff University) and Niall Shute (University of Portsmouth). Congratulations to them all.

The TMS Student Award scheme now has 19 approved micropalaeontological courses, and we encourage any TMS Members to consider nominating their taught micropalaeontological course for the scheme to encourage good students to continue with a micropalaeontological career.

TMS Grants-in-Aid

The committee decided to award six applications for Grants-in-Aid, for costs towards attendance at specific micropalaeontological conferences/ training. These were: Christopher Poole (University College London), to attend the TMS Spring Meeting 2014. Marites Villarosa Garcia (University of Chicago), to attend the TMS Spring Meeting 2014. Jamie Boyd (University of Leeds), to attend the 4th International Palaeontological Congress in Mendoza. Karen Halsall (University of Liverpool), to attend the 9th European Palaeobotany Palynology Conference in Padua. Rehemat Bhatia (University College London), to attend the International School on Foraminifera, Urbino, Sam Slater (University of Sheffield), to attend the 4th International Palaeontological Congress in Mendoza and carry out field work in Argentina.

We would encourage all of our student members to consider applying for a Grant-in-Aid. 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, neither can they be awarded retrospectively. A maximum of £500 can be awarded to each successful applicant. Awardees are expected to write a short report for the Newsletter once their grant has been used. Applications forms can be downloaded from the website (www.tmsoc.org), or obtained from the Secretary. The next deadline is 28th February 2015.

Alan Higgins Award for Applied Micropalaeontology

Alan Charles Higgins (1936–2004), a British micropalaeontologist and expert on conodonts, made major contributions to Paleozoic biostratigraphy and helped firmly establish the value of micropalaeontology in hydrocarbon exploration. He was a founding member of TMS, its past Chairman and Honorary Member. The award of £300 is given to a young scientist, less than 10 years from graduation, in recognition of a significant record of achievement in the field of applied and industrial micropalaeontology, as documented by publications, software, patents, leadership or educational activities. The award was established with the help of Alan's family and friends, to commemorate his contribution to micropalaeontology and encourage young researchers in the field. It is presented in person at the Society's AGM in November. The first award was made in 2010.

Nominations can be made by any TMS member using the nomination form available on the website or from the Secretary, and sent by the end of February of each year to the Secretary of TMS. The nominees need not be members of TMS. The award is normally given each year, resubmission of unsuccessful nominees is possible.

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 these), nor can they be awarded retrospectively.

A maximum of £300 can be awarded to each successful applicant. Awardees are expected to write a short report for the *Newsletter of Micropalaeontology* once their grant has been used.

Application forms may be downloaded from TMS website or obtained from the Secretary.

Deadline for application is 28th February 2015

Charles Downie Award

The late Charles Downie was one of the pioneers of palynology in the UK and a mentor who guided the thinking and development of a large number of postgraduate students who passed through the University of Sheffield. Through the efforts of former colleagues at Sheffield, a permanent

memorial has been established to recognise Charles' contribution to micropalaeontology.

An annual award will be made to The Micropalaeontological Society member who, in the opinion of The Micropalaeontological Society Committee, has published the most significant paper, in any journal, based upon his or her postgraduate research.

An award of £200 will be made for the best paper published during 2013 and will be presented at The Micropalaeontological Society AGM in November 2014. Nominations for the best paper published in 2013 should be submitted to the TMS Secretary by 28th February 2015.

The Brady Medal

The Brady Medal is the highest award of The Micropalaeontological Society. It is named in honour of George Stewardson Brady (1832-1921) and Henry Bowman Brady (1835-1891) in recognition of their outstanding pioneering studies in micropalaeontology and natural history. The Medal is awarded to scientists who have had a major influence on micropalaeontology by means of a substantial body of excellent research. Service to the scientific community may also be a factor for consideration by the Award Committee. The medal was commissioned and was awarded for the first time in 2007.

The Medal is cast in bronze from original sculptures commissioned by The Micropalaeontological Society in 2007. The sculptor is Anthony Stones, Fellow of the Royal Society of British Sculptors and President (1999-2004) of The Society of Portrait Sculptors. The Medal is hand crafted by the leading sculpture foundry Pangolin Editions of Chalford, England.

Mechanism for making a nomination:

All nominations must be made on the TMS "Brady Medal" pro-forma which can be downloaded from TMS website. Nominations must have a Proposer and Seconder, both of whom should be Members of the Society and not be affiliated to the same institute as the person they nominate. Nominations should be made in strictest confidence and in no circumstance should the person nominated be informed. The completed nomination form should be returned to the Secretary of the Society. Nominations may be made at any time of the year.

Committee Vacant Offices

At the 2014 AGM, the following TMS Committee positions will become available for election:

Secretary

Nominations for these positions should be submitted to the Secretary by 30th September 2014. 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 President for information on what duties these posts entail.

Journal of Micropalaeontology Report

Alan **L**ord, **E**ditor-**i**n-**C**hief

Journal of Micropalaeontology 'Online First' arrives

From 1st July 2014 electronic publication of papers 'Online First' has arrived, see the pioneer papers on http://jm.lyellcollection.org/content/early/recent . This means that following the standard process of manuscript submission-review-revision-acceptance-copy editing-proof editing, the final paper will be immediately published electronically. This is the definitive date of publication, even if it takes six months or more for the print version of the paper to appear. This is excellent news for both authors and for TMS as publisher of a journal. Many thanks to Sarah Gibbs and colleagues at the Geological Society Publishing House for their efforts.

LATE NEWS - Journal impact factor increases!

2008	2009	2010	2011	2012	2013
0.406	0.375	0.719	0.759	0.778	1

Publicity Officer's Report

Tom **H**ill

Micropalaeontology publicity activities have continued apace, with particular focus on continuing our establishment within social media. We now have 390 members of the TMS Facebook page, up from 235 in August 2013. Members regularly post micropalaeontology-related comments, using the Facebook page to publicise events, ask questions to the micropalaeontology community and advertise publications etc. The Twitter account (@MicropalaeoSoc) now has over 170 followers, up from 120 last year. We continue to encourage TMS members to use the various social media avenues to publicise and interact with fellow micropalaeontologists. They are a great vehicle for promoting activities and events to a global audience!

The Micropalaeontological Society now also has a dedicated Wikipedia page. This has been set up in order to further publicise the society to a wider

audience. The Wikipedia page will help to document the history of the society, in addition to providing information regarding past Presidents, Award winners and advertise the various grant opportunities available to fellow micropalaeontologists. Particular thanks go to Jim Riding and Alan Bowden for their help in putting this together.

We have also recently initiated an image competition to help make the most of the substantial image archives often lingering on micropalaeontologist's computer hard drives! All TMS members are invited and indeed encouraged to submit some of their microfossil images. We will be accepting images until 31st September 2014. An overall winning image will be selected and eleven joint runner-up images will be chosen, which will then be used in a TMS calendar for 2015. The subject can be an individual specimen or an assemblage. The type of image is also entirely open to consideration. The society proposes to print a fixed number of these calendars in the first instance, with additional print runs possible depending on the demand received. The society will charge a small fee for the purchase of a calendar - the price is to be confirmed but will be kept low to cover printing and postage costs and will likely be in the range £5-10. The winners will of course receive free copies! Further details can be found on the dedicated web page, including how to submit your images:

http://www.tmsoc.org/photo-competition.html

Finally, please also do not forget about the availability of the TMS Publicity Banners and TMS promotional flyers. All society members are encouraged to contact me to obtain these, for display and welcome packs respectively, if convening a conference in the near future.

Membership Secretary's Report

George **S**wann

Membership of the society currently stands at 487, which compares favourably to previous years. Approximately 43% of members are based outside of the UK and the society welcomes the following new members who have joined in 2014:

Gregory Barrett
Ana-Maria Benbrahim-Meddani

Jennifer Brzozowska
David Carpenter
Barbara Casas
Catherine Caseman
Laurie Charrieau
Marina Ciummelli
Shane Curran
Carlos Dapolito
Brian Davidson
Noortje Dijkstra
Zeynep Erdem
Johan Fagerholt
Meriel FitzPatrick
Joe Gianninoto
Rachel Gwynn
Matthew Hall
Karen Halsall
Andrew Hawkins
Thomas Hoyle
Natalia Hudackova
Anna Jentzen
Franciscus Jorissen
Giancarlo Manna
Anna March
Graeme Martin
Michael Martinez-Colon
Anna Mikis
Charlotte Miles
Kayleigh Mills
Andrew Morrison
Samuel Morrison
Anthony Muscente
Diana Ochoa
Szymon Okoński
Silvia Ortiz
Brenda Owen
Sina Panitz
Marcel Polling
Christopher Poole
Richard Price
Shan Rayray
Angela Roberts
Andrej Ruman
Patrick Schwing
Qing Tang
Marites Villarosa Garcia
Carrie Walker
Marianne Wamser
Nickolas Wiggan
Edward Young

TMS Student Awards

In order to support the teaching of micropalaeontology at all BSc, MSc and equivalent levels, as well as to encourage and reward student engagement and achievement in this field, The Micropalaeontological Society has established TMS Student Awards. Each award consists of one year's free membership of the Society, including two issues of Journal of Micropalaeontology and Newsletter of Micropalaeontology, discount on TMS and GSPH publications, discounted registration fees at TMS specialist group meetings, and eligibility for awards and grants-in-aid.
The awards are given annually by tutors of registered micropalaeontology courses. Only one award per year per institution may be given. Nominating tutors must be members of TMS and in order to register a course they must submit a completed form to TMS Secretary who will confirm in writing that the given course is approved for the award. The Secretary will keep a list of registered micropalaeontology courses, conferring with the Committee when necessary. Course tutors of registered courses may then give the award at any time of the year on the basis of any criteria to students deemed to have achieved meritorious grades. The tutor reports the name and address of the awardee, as well as a brief statement on the criteria used to select the awardee, to the Secretary, who will collate a list of citations to be tabled each year at the AGM and printed in the Newsletter.

Each year, one TMS Student Award will be awarded in memory of Brian O'Neill.

Eleven courses are currently registered:

EA2009 Microfossils
School of Earth and Ocean Sciences, Cardiff University

500016 Foraminiferen im Schleswigholsteinischen Wattenmeer
IFM-GEOMAR, Kiel

Advanced Micropalaeontology
Department of Geology, University of Leicester

Microfossils, environments and time
School of Ocean & Earth Science, University of Southampton

Mikropaläontologie
Institut für Geowissenschaften, Eberhard-Karls Universität Tübingen

Micropalaeontology
University of Bristol

Micropalaeontology: Principles and Applications
Keele University

16199 Micropalaeontology
Universidad del País Vasco

GLY 5102 Marine Micropalaeontology / GLY 5104 Applied Micropalaeontology /GLY 5207 Case Histories in Marine Micropalaeontology / research project involving micropalaeontology
Environmental and Marine Masters Scheme in the Faculty of Science, University of Plymouth

ESCM 320/440 Micropalaeontology
School of Geography, Earth and Environmental
Sciences, University of Birmingham

Introduction to Micropalaeontology
Masters in Geology, University of Ghent – K.U.
Leuven

Information for Tutors: *In order to register a micropalaeontology course at your institute, please fill in the form below and send it to TMS Secretary. You only need to do this once, unless the course has changed or you wish to report a different course for the award scheme. Tutors are welcome to submit the form electronically.*

TMS Student Award – Course Registration Form

Nominating Tutor:

TMS Membership Nr:

University/Higher Education Institution:

Course Name:

Course Description (level, number of students, hours of instruction etc.):

Date:

Please return by mail or electronically to TMS Secretary

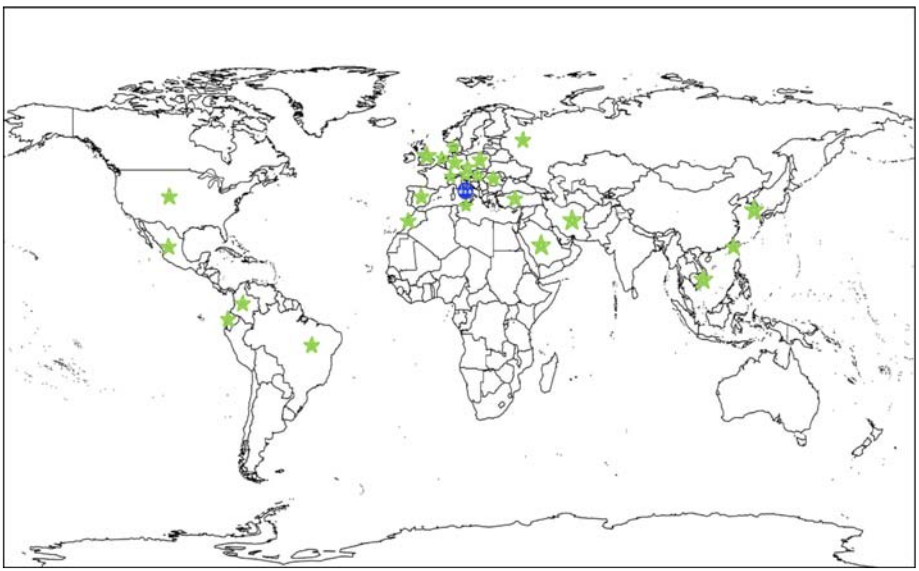
The Micropalaeontological Society
http://www.tmsoc.org

Registered as a Charity No 284013

Forams, piadinas, foosball and pizza: a short account of the 7th International School on Foraminifera

Rehemat **B**hatia, **U**niversity **C**ollege **L**ondon

On June 3rd 2014, 47 eager foram enthusiasts, from industry and academia alike, descended upon the town of Urbino in Italy for the 7th International School of Foraminifera. This year participants came from 25 different countries, including Austria, Colombia, Vietnam and South Korea, working on various material from both deep time and the present. The course was co-ordinated by Professor Mike Kaminiski (King Fahd University of Petroleum and Minerals/UCL) and Dr Fabrizio Frontalini (University of Urbino), and sponsored by TMS and CGG Robertson Ltd .



Map showing where all the ISF participants came from

Urbino is a small, idyllic Renaissance town, located in the foothills of the Apennines in the Marche region of Italy. The town is also a UNESCO World Heritage site and the birthplace of the famous Italian Renaissance painter Raphael. It has narrow brick-paved streets and beautiful architecture, evident from the Palazzo Ducale and Piazza della Repubblica. The university dates back to 1506, and currently has 10 faculties and ~17,000 students.

Urbino

Accommodation was provided at the Collegio Internazionale, and all classes were held within a conference room within the Collegio. As we were all staying in the same place this made it easier to arrange social plans and gave us all a chance to network too. Next to the Collegio there was a student cafeteria, however many of us decided to explore Urbino and sample the local cuisine too (and decide which gelateria in Urbino was the best). As well as featuring classes on planktonic, smaller and larger benthic foraminifera, this year also included a foraminiferal introduction module, which was extremely useful for anyone who had never studied forams before. The ISF course is structured so that it can best cater for the interests of anyone attending, and each module was scheduled separately so that participants could choose which modules to attend. Practicals during the course were mostly independent study of the extensive sample collection provided, but also included evaluation of stratigraphic sections from different locations around the world. Upon registering, all participants were given a range of materials, including ISF branded mugs, rucksacks, stationary and a t-shirt.

The course began with an icebreaker party, held in a quaint open-air courtyard, and allowed all participants a chance to get to know each other. The party then moved onto Urbinos' infamous 'Bosom Pub' (anyone reading this who has been to the ISF or USSP course will probably know this pub very well!), where participants were able to bond further and hone their foosball skills. The foram introduction course was first, with lectures on basic morphology and a brief introduction to the main foraminiferal groups (Mike Kaminski), timescales (Felix Gradstein, Natural History Museum of Oslo,

Norway), stratigraphic concepts (Jeno Nagy, Natural History Museum of Oslo, Norway), foraminiferal genetics (Jan Pawlowski, University of Geneva, Switzerland) and foraminiferal biology (Johann Hohenegger**,** University of Vienna, Austria). The genetics lecture also included a practical where we could study live benthic (*Ammonia* spp.*)* and larger benthic forams (*Heterostegina depressa)* (and some bossy ostracods and bivalves too), which was really exciting (and also included my personal favourite quote from the summer school – "this is not geology, your petri dish must always be filled water!"). Danielle Foy (Stag Geological) also gave a short talk about life as a biostratigrapher and Claudia Cetean (CGG Robertson Ltd.) gave a presentation about foraminifera and calcareous nannofossils from the lower Jurassic Rosso Ammonitico Umbro-Marchigiano unit in Marche, Italy.

The larger benthic foraminifera course was next, and included lectures on different LBF fauna from different time periods (Jurassic – Recent), and larger agglutinated foraminifera (Jurassic – Cretaceous), and was taught by Geraint Wyn Hughes (KFUPM), Cesare Andrea Papazzioni (University of Modena e Reggio Emilia, Italy), Antonino Briguglio and Johann Hohenegger (both University of Vienna, Austria). This was followed by the smaller benthic foraminifera course, which included lectures on Cenozoic paleoceanography, biostratigraphy, paleoecology of smaller benthic forams and concepts about oxygen minima zones and palaeo water depths based on SBF fauna, taught by Mike Kaminski, Fabrizio Frontalini, Laia Alegret (University of Zaragoza, Spain), Claudia Cetean and Rudolf Röttger (Christian-Albrechts-Universität-zu-Kiel, Germany).

Fitting with the 'work hard play hard' ethic of the summer school, there was also a foraminifera garden party and a field trip. The garden party was held at the Parco della Resistenza, and gave participants a chance to talk about their research/experiences in industry in an informal and picturesque setting. The garden party was also partly a birthday party as three participants (Maria Tulbure, Johan Fagerholt and Mattia Greco) had a birthday within the same week!

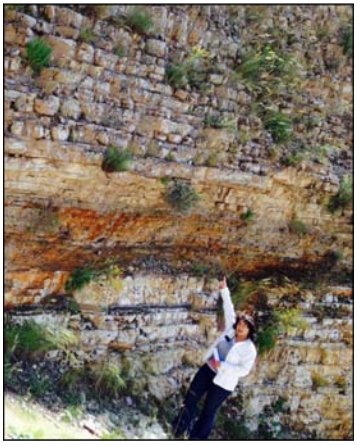
The field trip to visit various localities around the Marche-Umbria region took place on the final day of the smaller benthics course. Localities visited included the Ammonitico Rosso, the Contessa Road section where we were able to look at various successions containing the PETM, the Eocene hyperthermals and the Bonarelli event (Oceanic Anoxic Event 2; OAE2).

Birthday group:
Johan, Mattia and Maria
Photo credit to Maria Tulbure, Utrecht University

Group picture at the garden party
Photo credit to Aneta Majda, Polish Academy of Sciences

We also visited the K/Pg boundary (see group photo!) where the Iridium spike described by Alvarez et al. was first discovered, and were able to explore the town of Gubbio afterwards too. After a long day out in the unexpected sunshine we had a 4-course social dinner.

Group picture at the K/Pg boundary
Photo credit to Mike Kaminski, KFUPM



Claudia Cetean pointing out features of the OAE2 event

The karaoke session during this included a brilliant foraminifera-style rendition of Mike and Fabrizio singing 'Imagine' by John Lennon containing the lyrics "Imagine all the forams.." and Mike's signature rendition of 'Volare'. This was much enjoyed by all the participants, some of whom joined in too!

Mike Kaminski singing 'Volare' at the social dinner, accompanied by various ISF

The summer school ended with the planktonic foraminifera course, taught by Mike Kaminski and Maria Rose Petrizzo (Milano University, Italy). Lectures included concepts about Mesozoic – Recent planktonic foraminifera, as well as classification, morphology, biochronology and zonal schemes, biology, depth habitats and paleoceanography.

I think I can safely conclude that anyone who attended the 7th ISF course left with new foraminifera induced enthusiasm and knowledge and forged many new friendships and professional relationships with the other participants, all of which will definitely be useful in the future. I would highly recommend the course to anyone studying foraminifera; whether you're from a marine biology or geology background, you'll learn loads of new things and meet a bunch of awesome people!

I would like to thank the Micropalaeontological Society for making this experience possible through the allocation of a TMS Grant-in-Aid and I genuinely can't wait to apply what I've learnt during the summer school to my PhD research; I had a foram-tastic time!!

The Micropalaeontological Society joint Foraminifera and Nannofossil Spring Meeting 2014

22nd-25th June 2014, Royal Netherlands Institute for Sea Research (NIOZ), Texel

Chris **P**oole, **U**niversity **C**ollege London (**U**K), **A**ngela **R**oberts, **U**niversity of **St**. **A**ndrews (**U**K), **M**arites **V**illarosa Garcia, **U**niversity of **C**hicago (**U**SA)

After a ferry ride from the Noord Holland port of Den Helder, delegates from around Europe and further afield arrived at the beautiful island of Texel, host of the 11th TMS joint Foraminifera and Nannofossil Spring Meeting 2014: Foraminifera and nannofossils through time: qualification and quantification.

Sunday 22nd June: The meeting was preceded by a one-day workshop organised by Kirsty Edgar (Cardiff University, UK) and Bill Austin (University of St Andrews/SAMS, UK) entitled, "MORPHOMETRICS 10: Identifying the top 10 questions in Morphometrics and Micropalaeontology today". All attendees played the '*Elphidium* Game', an introductory ice-breaker in which we attempted to morphologically discern and group various morphotypes of the benthic foraminifera into their assigned genotypes (to varying degrees of success). We then got taste of the variety of key morphometric issues micropalaeontology from the flash talks that followed, covering a wide range of studies using diatoms, foraminifera and nannofossils. After lunch, we had a break-out group session, in which we discussed the most important of the previously submitted morphometric questions, covering ecology, applied biostratigraphy, molecular systematics and phylogenetics. We reconvened as a whole to present our 'top 10' list of important questions in morphometrics and micropalaeontology. Shortly afterwards, we took the shuttle bus to 'Ecomare' for the meeting registration and ice-breaker party. Ecomare, a wonderful combination of a nature museum, and also a seal and bird sanctuary of the North Sea and Wadden Sea, provided a great setting for the evening (accompanied by some great food and local Texel beers).

Monday 23rd June: The meeting officially began the next morning, where it was opened with talks on the effects of bioturbation on benthic foraminifera (Christine Barras, Université d'Angers, France), and planktonic foraminifera seasonality

(Kate Salmon, Open University and Lucas Jonkers, Cardiff University, UK). Talks on modern and Quaternary foraminifera continued throughout the day, interspersed with generous breaks for the poster sessions. One of the day's highlights included the prize-winning talk of MSc student Stephanie Hayman (Oceanographic Research Institute, South Africa), who discussed her palaeoclimate results from South African coral reef foraminifera and her unique scuba-diving coring technique. The conference dinner was held at the restaurant 'De Worsteltent' that evening, a charming 300 year old farmhouse close to the town of Den Burg.

Tuesday 24th June: We resumed on Tuesday morning with Jan Smit's invited talk, one of three talks of the day to discuss the hotly debated K/Pg boundary, and the preceding and aftermath foraminiferal fossil record. We were later treated to some incredible videos of benthic foraminiferal calcification processes in the other prize-winning talk by Takashi Toyofuku (JAMSTEC, Japan). The first of the nannofossil talks from Marites Villarosa Garcia (University of Chicago, USA), focused on geographic patterns of morphological disparity in coccoliths. Two more morphologically-themed talks followed –Aude Caromel's talk on the developmental constraints on foraminifera form and Christopher Poole's (University College London, UK) talk on the (pseudo)speciation and (pseudo)extinction of the bizarre foraminifera *Globigerinoides fistulosus*. After lunch we heard the second nannofossil talk on Early Cretaceous nannofossil assemblages from Carla Möller (Ruhr-University Bochum, Germany) and continued up the geologic time scale. The last talk of the meeting, was that of Katy Prentice (Imperial College London, UK), presenting her palaeoclimate results from coccolithophores across the Eocene/Oligocene transition. After 25 excellent talks and 40 high-quality posters over two successful days, it was time for the award presentations to wrap up the meeting. One poster prize went to Laurie Charrieau (Lund University, Sweden) for her work on ocean acidification impacts in the Baltic Sea, which revealed 'zombie' foraminifera! The other poster prize recipient was Esmee Geerken (VU University Amsterdam, the Netherlands) for her poster entitled, "Buoyancy of *Orbulina universa*". The main part of the meeting ended with a vote on the venue for the 2015 TMS meeting. Two great pitches from the UK Universities of Plymouth and Bristol were presented, with Malcolm Hart's bid for Plymouth narrowly shading the vote.

Morphometrics 10

Wednesday 25th June: The conference was still far from over the though, with a geological field trip to dunes and marsh habitats of 'De Slufter' nature reserve and the 'Robbentocht'(Sea Journey) on board the TX-20-Orion to the sand flats in the Wadden Sea. We started the day at NIOZ, where our field trip leader explained how the Dutch barrier islands are the product of the interplay between sand, wind, waves, and water. Texel itself differs from the other barrier islands in that it also contains a core of glacial till deposited during the last glacial maximum. We experienced this till-created topography on our way to De Slufter as we passed by the Hoge Berg– which translates into High Mountain– the second highest point in the island, towering a full 15m above sea level. We walked down from the top of the dunes down to the sand flat, where we began our hike. Texel used to be a small island in the 17th C., but the construction of a sand dike in 1630 partly connected it to the larger island of Eierland and in 1855 a second sand dike closed that connection. De Slufter is located where the two islands were connected in the past. Although many attempts had been made to close the connection to the sea in this area, it was eventually designated a protected nature

reserve in the early 20th C., in recognition of its high natural diversity and value. The high diversity of plants was immediately apparent. As we walked further into the tidal zone we encountered microbial mats with their own colourful stratigraphy: a grey sandy layer glued together by cyanobacteria, a reddish/pink layer below it, and a dark black layer below, a site of sulphate reduction. We even found several foraminifera living on top of the mats, when we inspected the mats with a hand lens. As we made our way into the vegetated dunes we saw various birds, including a white spoonbill, in and around the meandering water. We then travelled to the Oudeschild shipyard where we boarded the TX20-Orion and made our way to the sand flats in the Wadden Sea. The 40ft long ship takes visitors to the 'bollen' to see seals and continues onto the 'Amsteldiep' where we unloaded and explored the sand flats. It looked like everyone was walking on water, since the water was so shallow, and from a distance the sand flat seemed like a glassy barren expanse of land. We only had to dip out nets in the water to see this was not true. There was a plethora of shrimp, ctenophores, crabs, clams, and small fishes. Our guide dug his pitchfork into the sand to shows us some of the critters that lived deeper in the sediment. Once back on the main island we headed to our penultimate stop, the Wezenputten or orphanage wells. These wells pull water from a freshwater lens underneath the sand cover, which is reddish to golden brown in colour. The water from these wells was mainly sold to ships sailing to the East Indies, since the iron that gives the water its characteristic colour also inhibits bacterial growth and would last longer before fouling. The money from these sales benefited the orphanage in Den Burg and again we saw another example of how humans have interacted with the geology of the area. We finished the trip at the Texel Beer Brewery and sampled four of their beers before heading back to NIOZ.

Thursday 26th-Friday 27th June: Two workshops succeeded the meeting, a one-day workshop on foraminiferal geochemistry, and the 4th annual Foraminiferal Bio-Monitoring (FOMIBO) two-day workshop.

We would like to thank TMS for helping to fund us to attend and present in Texel. Thanks are also due to the sponsors, and particularly the organising committee (Els Ufkes, Geert-Jan Brummer, Lennart de Nooijer, Gert-Jan Reichart and Frank Peeters) and volunteers (Inge van Dijk, Eveline Mezger, Anouk Klootwijk and Juliane Steinhardt) for a great meeting. Roll on next year's meeting in Plymouth!

Specialist Group News

Foraminifera Group Report

Bill **A**ustin, **K**irsty **E**dgar

Morphometrics10 workshop, NIOZ 2014 (*Kirsty Edgar*)

On Sunday the 22nd June 2014, immediately before the TMS spring meeting, **Kirsty Edgar** and **William Austin** convened a one-day workshop at NIOZ on ***"Morphometrics 10: Identifying the top 10 questions in morphometrics and micropaleontology today"*** sponsored by TMS. We had 40 participants from a diverse range of backgrounds, career stages, countries and microfossil group specialties (planktic and benthic foraminifera, calcareous nannofossils and diatoms) in attendance. The main aim of this meeting was to bring together workers from across the community to identify the top ten questions in the field to help inform and focus future research priorities using a new style of workshop that has proven popular (and successful) in ecological and conservation circles.

How did it work? Prior to the workshop we asked participants and the wider micropalaeontological community to put forward those questions that they felt were most important in the field of morphometrics. These were then compiled and voted on by workshop participants to help narrow down the list before the big day. On the day itself, the workshop kicked off with a short icebreaker exercise aimed to get everyone talking and thinking about the issues at hand. **Kate Darling**, **Clare Bird** and **Angela Roberts**, provided 40 images of benthic foraminifera that participants had to, in small groups, divide into 13 morphospecies. Regardless of participants microfossil group expertise this exercise prompted much discussion about which features were important for taxonomy. This was followed up by a round-up led by **Clare Bird** and **Karen Luise Knudsen** who told us what the genetic information told us about species groupings and which morphological features were really important for distinguishing the different groups. At times this proved to be very tricky and highlighted the importance of some features over others for distinguishing between genotypes. After everyone had enjoyed a cup of good strong Dutch coffee, the talk section of the day began. **Jenny Pike** highlighted the key morphological questions in diatoms and made many of us feel better about the problems that we face with forams – diatom workers have it much

tougher! They have the additional complication of having to worry about seasonal forms of the same species etc. This was immediately followed by 45 minutes of short "flash" talks – three slides in five minutes - enabling a highly diverse range of topical issues from different microfossil groups to be raised. Speakers included: **Helena Filipsson**, **Jeremy Young**, **Andy Purvis**, **William Austin**, **Manuel Weinkauf, Chris Poole, Angela Fraguas and Jaroslaw Tyszka**.

After lunch the real work started and everyone was broken up into groups of approximately ten individuals, each led by an able chairperson to help focus group discussions. The task of each group was to narrow down the pre-workshop list of the most popular questions to ten by the end of the day. Each of the groups took a slightly different approach but after several hours of intense discussion – redrafting of questions, new entries, knock-out question rounds etc. each group presented their favoured ten questions to the rest of the group with a short explanation of why these questions made the cut.

Morphometrics10 workshop participants at NIOZ, June 2014

It was a fun day, in large part because everyone was so enthusiastic and keen to engage and personally I learnt a great deal from being able to talk through the various issues with other interested parties. However, the hard work is not over just yet. The next step is to synthesise the top ten questions from each of the individual groups and over the next few months, in conjunction with the workshop participants, Bill and I will prepare a review manuscript for submission to the

Journal of Micropalaeontology. While we can't promise the answers to all the questions that we raised, we hope that the resulting manuscript will provide a useful up-to-date summary to facilitate further advances in the field of morphometrics and micropaleontology and to help inspire people to tackle the challenges that lay ahead. Watch this space!

Break-out Group C in action trying to identify the top research questions. Democracy via the medium of post-it notes!

FORAMS 2014 meeting, Chile, January 2014 (*William Austin*)

In January, Forams 2014 was hosted at the University of Concepcion, Chile. The scientific programme included a wealth of sessions, including (1) *New classification of Foraminifera – bridging molecules and morphology*; (2) *Recent and Fossil Foraminifera from South America*; (3) *Fjord Foraminifera*; (4) *Invasions, Dispersal and Biogeographic Range Expansions of Foraminifera: Lessons from Earth History*; (5) *Biogeography and evolution of foraminifera*; (6) *The ecology of planktonic foraminifera: From present to past*; (7) *Foraminiferal bio-monitoring methods*; (8) *Advances in Environmental Micropalaeontology*.

Chile served as a stunning back-drop to the Forams 2014 meeting and the welcome and musical reception we received during the opening ceremony at the University of Concepcion was a memorable event. The meeting was well organised by **Margarita**

Marchant and **Tatiana Hromic** and delegates were well looked after throughout, particularly by the ever-present (and always helpful) **Monica Sorondo**. Many of the delegates enjoyed the mid-symposium field trip to the world-famous native woodlands and landscapes of the Nahuelbuta National Park - absolutely stunning and an increasingly rare sight in Chile.

During Forams 2014, the general assembly voted to hold the next meeting, Forams 2018, in Scotland. The International Symposium on Foraminifera Forams 2018 (Scotland) will continue to build on the tradition of the highly successful meetings previously held in Halifax, Canada (Benthos'75); Pau, France (Benthos'81); Geneva, Switzerland (Benthos'86); Sendai, Japan (Benthos'90); Berkeley, USA (Forams'94); Monterrey, Mexico (Forams'98); Perth, Australia (Forams 2002); Natal, Brazil (Forams 2006); Bonn, Germany (Forams 2010) and Concepcion, Chile (Forams 2014). Arrangements are currently underway to secure a meeting venue in Edinburgh for Forams 2018; provisionally the dates of the meeting are 18-22 June, 2018 – any enquiries, including sponsorship enquiries, may be directed to **William Austin** (bill.austin@st-andrews.ac.uk) or **Kate Darling** (kate.darling@ed.ac.uk).

The photograph below shows (left to right) the Forams 2014 organisers **Tatiana Hromic** (Universidad de Magallanes, Chile) and **Margarita Marchant** (University of Concepcion, Chile) with the happy Forams 2018 bid-winners **William Austin** (current TMS Foram Group Chair) and **Kate Darling** (former TMS Foram Group Chair) (photograph: Dr Clare Bird, University of Edinburgh).

Nanno News - updates from the TMS Nannofossil Group and the INA

Matt **H**ampton, **S**imon **C**ole, **J**eremy **Y**oung

Matt and Simon's 2 year terms as chair and secretary of the Nannofossil Group respectively are coming to an end. Therefore if anyone is interested in taking over either of these roles, please contact Matt or Simon. [Based on the interest we receive, Simon is happy to move into the Chair position for another term, thereby freeing up the position of Nannofossil Group Secretary.]

Foram-Nannofossil Group meeting, Texel, June 2014 - and Plymouth plans

The annual Foram Nannofossil Group meeting has become a major event and this year's was excellent as reviewed in detail elsewhere in the newsletter. The nannofossil content of the meeting was somewhat disappointing in terms of quantity but not quality with excellent talks by Katy Prentice, Marites Villarosa Garcia and Carla Möller and posters by Angela Fraguas, Rui de Gama, Katarina Holcova, Nathalie Lübke and Jeremy Young and workshop presentations by Angela Fraguas and Jeremy Young. Matt Hampton and Shirley van Heck also attended and we all

Rui setting off to collect coccolithophores

enjoyed the meeting … but ten people is not a lot especially in contrast to the numbers who attended the splendid *Reticulofenestra* workshop earlier this year (30) or are registered for the Living Coccos workshop in Crete (>50). We are thinking about how to address this and a popular suggestion seems to be that we should have a one day nannofossil workshop associated with the next meting - which is planned for June 2015 in Plymouth. *Discoaster* taxonomy is a topic that has been mentioned but if you have any ideas or requests please do contact us.

Living Coccolithophores Workshop, Crete, October 2014

We announced in the last TMS Newsletter that we were planning a workshop on Extant Coccolithophores in Crete in late summer - organised by Maria Triantaphyllou, Stella Psarra and Jeremy Young. We have had a fantastic reception to this idea and have 50 registrants for the meeting. Actually we could have had more but 50 is as many as we can fit in the meeting venue. The core participants are oceanographers and palaeontologists looking at the ecology and biogeography of coccolithophores in the plankton, sediment traps and surface sediments - and so are identifying them and worrying about their taxonomy. In addition there is useful mix of participants from deeper in the palaeo record who are interested in developing better palaeobiological tools and of more process-oriented biologists who want to learn a bit about the biodiversity beyond *Emiliania*…. and finally there are quite a few partners and family who are going to enjoy the beach while we get on with talking. There are more details on the INA website and we will report back for the next newsletter.

INA15 Bohol The Philippines, March 2015

INA15 - even the logo is pretty amazing

The International Nannoplankton Association conferences are of course the big events in the nannofossil calendar and the next one is coming up fairly soon - actually it is a little earlier than usual since march is a much better time than september in terms of hurricane risk. Planning for the conference is progressing nicely with a lovely website already up (www.ina.upd.edu.ph), registration open, and a couple of sponsored banquets organised. These conferences always attract a large participation from across the world and are invaluable for any nannofossil specialists. There will be some student bursaries to aid attendance, details will be posted on the website.

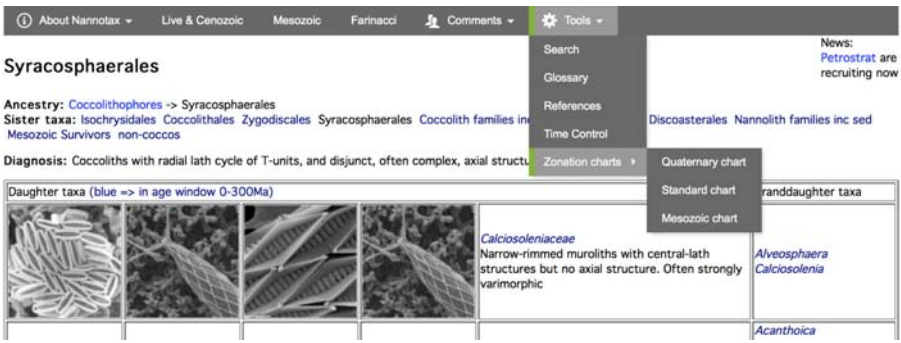
INA video outreach project

Mario Cachao accepted the new post of outreach officer at the last INA conference and has started work on a new initiative to develop a set of short videos for a broader audience. The ambition is to build up a collection of videos which document how nannofossil and living coccolithophores are collected in the field, how they are prepared and studied back in the lab and to show some examples of living cells and SEM exploration of rock surfaces. There is a page on the INA website giving some more details on this project (ina.tmsoc.org/announce.video_project.html) and Mario (mcachao@fc.ul.pt) would be very grateful for any suggestions or contributions. The intention is that the editing will be done professionally so ad hoc unedited clips are very welcome.

Mario showing us how to take videos

Nannotax

The Nannotax project is progressing nicely. Since the last newsletter there has been progressive improvement of content and a major reworking of how the site works - it is now driven by a proper MySQL database. This means it can be edited by us online and we are getting near to having a system which will allow online submission of images by anyone. More obvious improvements in the last few months are much faster search (as a result of the new database structure), appearance of reference lists on every page, a new dropdown menu system to make navigation as clear as possible, comments areas on every page, and better organised geological search (also with some zontion charts thanks to TimeScaleCreator). We have also enabled Google Analytics on the site so we can tell it is being well used (100-200 sessions a day with an average session duration of 13 minutes) and that is backed up by our experience when visiting colleagues. If you have not done so recently please do have a look at the site and use it for reference and teaching.



Improvements on Nannotax include smart new dropdown menus

The Ostracod Group & IRGO combined information

Ian Boomer

From November 2014 Ian Boomer will step down from his post as Ostracod Group Chair and will be replaced by Vincent Perrier (Leicester) who is currently the Ostracod Group Secretary. The ostracod group are delighted to announce that Anna March (PhD student at QMUL) will take over from Vincent in the role of Ostracod Group Secretary at the same time.

The next European Ostracodologists' Meeting will be held in Tartu, Estonia in July 2015. More details can be found at (http://www.irgo.uni-koeln.de/index.php/eom-8-estland).

During the last business meeting of IRGO in Rome, Todd Oakley (University of California Santa Barbara) and Gene Hunt (Smithsonian Institution, Washington D.C.) both offered to host the next ISO in 2017. ISO18 will be the third meeting in the USA succeeding the 4th ISO 1972, Delaware and 8th ISO, 1982 Houston. Washington and Santa Barbara provide excellent facilities to accommodate our next meeting and it is now your choice to vote for one place or the other. There is a pdf-presentation for each city prepared by each convener. Please do not forget to vote, the poll is anonymous and is open from 2014-07-14 to 2014-08-10, you can vote only once (http://www.irgo.unikoeln.de/index.php/18th-iso-2017-usa). Thanks to Finn Viehberg for this text. There are currently no confirmed plans for field or talks meetings for the group but it is hoped that something will be arranged for the Autumn. To ensure that you are kept informed of any future ostracod group meetings please keep an eye on the TMS website, notice of future meetings will also be distributed via the TMS email system.

TMSoc Ostracod Group Field Meeting, 17-18 May 2014

Johan **F**agerholt, **R**obertson **L**td. (**U**K)

The 2014 field meeting was based in Colchester, Essex, with excursions focusing on Quaternary lacustrine and fluvial deposits. In total about a dozen eager ostracodologists met up early on the morning of the 17th at Marks Tey train station for a weekend out in the sticks.

After having gathered almost all of the attendees we headed towards the first locality: Marks Tey clay pit. This pit is not only the parastratotype for the Hoxnian glaciation but has also been an active brick pit for over 150 years. The lacustrine

deposit currently exposes over 12m of sediment sitting on top of the Anglian (MIS12) till. David Horne and Anna March are currently studying the ostracod faunas in the pit along with detailed cross-sections to create a framework for other disciplines to slot their work into. Presently many smaller studies have been carried out in the pit but due to poor documentation and the apparent lateral variations in the pit these studies have been hard to integrate. After having taken some samples, studied the varved deposits, and discussed the origin of faults in the succession, we drove to Mersea Island for lunch in the sunshine.

Participants at TMS Ostracod Group Field Meeting

Having moved up the stratigraphic section, the afternoon was spent looking at fluvial channel deposits of the Lower Thames Formation (MIS9) at Cudmore Grove. This site has been studied using several different methods including Mutual Ostracod Temperature Range and Beetle MCR to constrain the summer and winter temperatures during the interglacial. Beds very rich in ostracods put a smile on every ostracodologists' face and the section was well sampled. After having confused the public by being more interested in dirt than spending the gorgeous day at the beach, we bowed to the social pressure and rewarded ourselves with ice cream, as not to make everyone think we were completely bonkers.

Trying to get off Mersea Island proved to be harder than we had expected as the rising tide flooded the road back to dry land. Eventually we made it across and headed to pick up our last participant and secretary of the group who finally made it out of London. The journey continued to the last locality of the day: Stutton Ness. The clay sequences at Stutton Ness were deposited during MIS7 and have not been well studied. Samples from the locality have yielded ostracods, mainly from mollusk rich horizons and more in depth investigations of the locality are planned. This concluded the first field day, full of muddy boots and stirring geological puzzles.

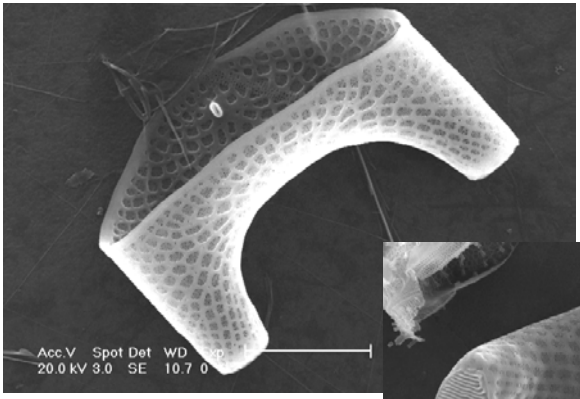
After having cleaned up, the evening was spent in Alan Lord's lovely home before going out for dinner. The food was very good and the company even better.

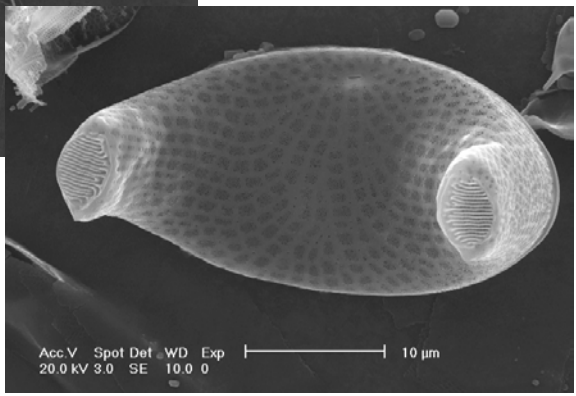
The next morning we made our way to Tollesbury salt marsh in the hopes of finding some live ostracods. This unique ecosystem was presented by Michaela Radl providing a crash course in salt marsh vegetation, ostracods, and foraminifera. After that the hunt was on for the elusive *Terrestricythere* that lives in the soil and on the vegetation at the top of the marsh. It didn't take long before someone's keen eyes spotted one and after that they seemed to be everywhere. It was a perfect ending to a great weekend and we could not have asked for better weather. I would like to thank everyone who attended and especially the organizers for planning and carrying out this field meeting.

Silicofossil Group Report

Claire **A**llen

This month's Journal of Micropalaeontology (JoM) is a special issue compiled based on presentations made at the Lille (2011) and Cambridge (2013) Silicofossil Group Meetings. The variety and scope of work presented at these meetings highlights the breadth of research within the Silicofossil community. The TMS Silicofossil Group is unique as it encompasses several taxonomic groups that share the physiological adaptation of using silica to synthesize skeletal forms. As such, silica biomineralization is a common area of interest to the members of the Silicofossil Group, including factors controlling growth, morphology and preservation of siliceous microfossils which comprise diverse themes including physiology, taxonomy, evolution, genetics and ecology, to application based topics related to biochemical engineering, palaeoceanography, palaeolimnology, biostratigraphy, paleobiology, etc.; ranging from molecular scale (genetics, physiology etc.) to global scale (geochemical cycling, biodiversity etc.) studies. The set of seven thematic papers included in the JoM special issue include contributions on diatom morphology, taxonomic force-fitting, new insights on siliceous biomineralization in living radiolarian taxa and present various aspects concerning the palaeobiodiversity and evolution of Palaeozoic Radiolaria. Happy reading!





Eucampia antarctica (vegetative cells)
Photo Jenny Pike (Cardiff University)

Palynology Group Report

Luke **M**ander

The Micropalaeontological Society Palynology Group Meeting 2014 at the University of Birmingham

The Micropalaeontological Society Palynology Group held their annual meeting on a rainy June 4th 2014 in the School of Geography Earth and Environmental Sciences at the University of Birmingham. The one-day meeting was themed "Palynology in the Modelling World" and contained eight talks from graduate students and post-doctoral scientists. These talks showcased research from a great range of time intervals and locations, from a palynological study of the latest Devonian glaciation in the Bolivian altiplano by Jon Lakin (University of Southampton, UK), to a study of Holocene fires on UK upland peatbogs by Karen Halsall (University of Liverpool, UK).

Such a range of subject matter resulted in a simulating and thought-provoking set of presentations. In stratigraphic order, David Carpenter (University of Southampton, UK) discussed charcoal as a proxy for atmospheric oxygen during the mid Silurian and mid Carboniferous, while Sam Slater (University of Sheffield, UK) used material from the British Jurassic to demonstrate that pollen and spores provide palaeobotanical information that is complementary to the information provided by plant macrofossils such as leaves. The research presented by Stephanie Wood (University of Sheffield, UK) centred on dinoflagellates from the eastern Gulf of Mexico, and explored the applied aspects of the discipline of palynology. Stephanie's presentation included an industrial partner, and this was in keeping with a meeting that was well attended by both academic and applied palynologists. Fitting in with the theme of the meeting, Matthew Pound

(University of Northumbria, UK) took a broad database approach to climate change at the Eocene–Oligocene boundary, while large-scale variability in the West African monsoon over the past 140Ka formed the backdrop for Rachael Lem's talk (University of Liverpool, UK), and Stephanie Strother (University of Northumbria, UK) rounded off the day with an investigation of the Holocene vegetation of Antarctica.

In the afternoon, the delegates retired to the beautiful Lapworth Museum of Geology for coffee and poster presentations. These diverse contributions included an investigation of how palynological data can be used to calculate Carbon burial rates (Phillipa Summers, University of Northumbria, UK), a broad review of the preferred habitats of Neogene dinoflagellates (Jamie Boyd, University of Leeds, UK), as well as a high-resolution palynological study of the Pliocene vegetation, climate and sea-surface temperatures using ODP material from the Norwegian Sea (Sina Panitz,

University of Northumbria, UK), and an investigation of Oligocene vegetation on Wilkes Land, East Antarctica (Stephanie Strother).

This year also saw the Palynology Group's first annual von Post Lecture, which was delivered by Prof. Alan Haywood (University of Leeds, UK) and entitled "Can Models Reproduce Climates of the Past?" Using classic examples such as the growth of the Greenland ice sheet, he explained how climate models can test hypotheses that

stretch the capabilities of current palaeoclimate proxy records, and using the Pliocene as a case study, highlighted that palaeobotanical data can play an integral role in validating model output.

Fabienne Marret-Davies (TMS Palynology Group Chair) and Luke Mander (TMS Palynology Group Secretary) would like to thank all the speakers and poster presenters for communicating the results of their research activities, as well as Guy Harrington (University of Birmingham, UK) who was a wonderful host and local organiser.

We were especially pleased to see students enrolled on the University of Birmingham's Applied and Petroleum Micropalaeontology MSc engaged in the meeting, and speaking with other postgraduates and more senior academic and industrial palynologists. We would like to extend special thanks to all those who made the trip to Birmingham to attend this meeting. There were 37 names on the attendance register, although several more drifted in as the day progressed. Many of these people are shown in the conference photos, which include a selfie taken by yours truly overlooking specimens housed in the Lapworth Museum. The next year's meeting will take place at the University of Northumbria, hosted by Matthew Pound and colleagues, and we are looking forward to another fantastic and stimulating day of palynology.

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How long does and did a cell of the so-called larger foraminifera live?

Wolfgang **E**der, **U**niversity **of V**ienna

Larger benthic foraminifera (LBF) have always attracted the attention and the curiosity of scientists since the times of Erodotus and Strabo, which thought of them as petrified coins or fossil lentils. Once revealed that those tests belong to the taxon foraminifera, scientists started concentrating their research on the geometric complexity of the shells, which commonly have an extremely complicated structure that possibly leads this group of protists among the most beautiful creatures known so far.

Over the last 20 years, LBF have been recognized as valid biostratigraphic markers during selected periods of the earth history, and valuable depth indicator due to the variation of their test shape which is strongly correlated to light intensity and nutrient availability.

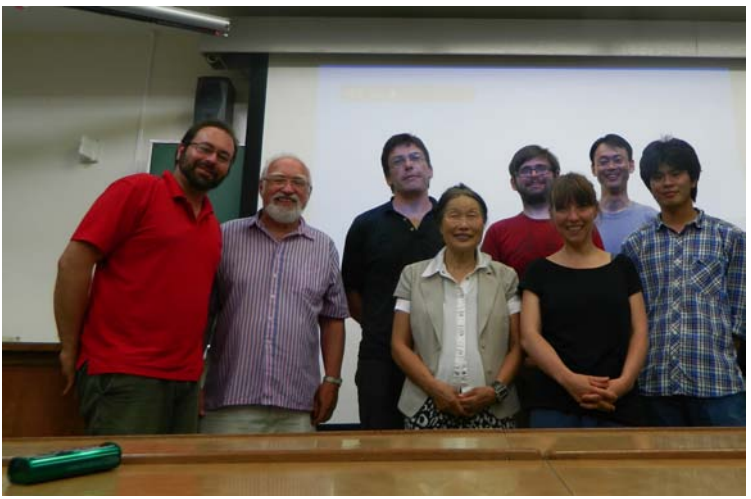
During the last years, the biology and the ecology of living LBF have been closely studied to get more information on the deep time evolutionary tendencies of this systematic group. Representatives of the soritids (porcelaneous test) and nummulitids (hyaline test) have been intensively studied in a number of laboratory experiments (mainly aquaria) under controlled environmental conditions to check what range of environmental variation they might tolerate and what condition might hamper their life and reproduction cycle. These studies seems to point to the fact that LBF might be considered, similarly as corals, as important indicators of climatic changes in the seawater and precise archives of past environmental conditions.

Among the many open questions which still need attention from scientist, there is one that seems to be more urgent to be solved: how long do LBF live? It may sounds like a quite easy or uninteresting point, but without this kind of information all experiments on environmental change in LBF can lead to large misinterpretations. Furthermore, LBF reach incredible size for single cell organisms and they have commonly reached even larger sizes in the fossil record. The largest recent LBF (*Cycloclypeus carpenteri*) might reach 10 cm in diameter, while one of the largest fossil nummulitids (*Nummulites millecaput*) has been measured in a range of 15 cm. How long did these creatures live to create such a large test? The answer is not an easy one!

Long time field observations on population dynamics of species situated on the reef crest have revealed that some species of LBF might live up to

one or one and half years. However, for the mesophotic forms (the largest ones) this sampling task hasn't been attempted yet due to the complexity of taking living samples at 60 meters water depth.

To solve this question and some other related aspects about reproduction strategies and growth patterns of LBF cells, a large research proposal has been granted by the Austrian Science Foundation (FWF – P26344-B25) to the Institute of Palaeontology, University of Vienna, under the leadership of Johann Hohenegger, Carles Ferrandez, Kazuhiko Fujita and Antonino Briguglio. Their large expertise on the biology of the recent and fossil LBF as well as their experience on biometry by computed tomographic applications might be pivotal to address those questions. The three PhD students involved in this project are Wolfgang Eder, Shunichi Kinoshita and Julia Wöger. Each of them will spend 5 months in Japan diving and collecting living forams from 50 and 20 meters water depth on monthly interval to get a set of data which will cover 15 months of LBF life.



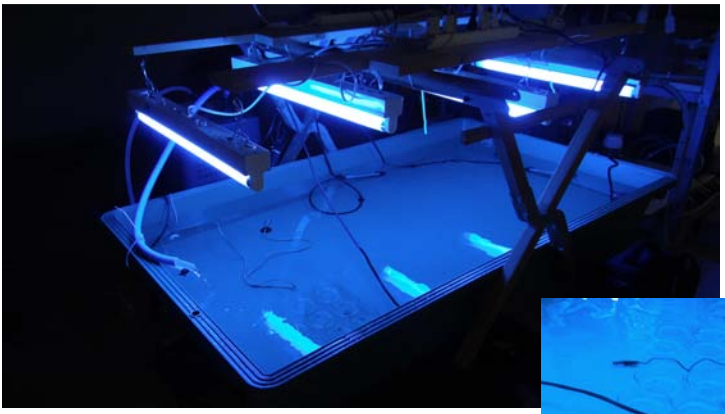
The Team at Ryukyu University, after a lecture by Johann Hohenegger, Carles Ferrandez and Antonino Briguglio. From left to right, Antonino Briguglio, Johann Hohenegger, Carles Ferrandez, Kai Hohenegger, Wolfgang Eder, Julia Wöger, Kazuhiko Fujita and Shunichi Kinoshita.

Population studies coupled with culturing experiments will let us know how long LBF might live, at what speed they grow**,** and if this changes during ontogeny. The constant sampling in the "natural environment" of LBF will reveal important information which cannot be obtained in a "controlled

laboratory", just simply because an aquarium is not an ocean and the forams in the tank will definitely not behave as the forams in the ocean. Therefore, the abundant and constant sampling interval will be used as "natural laboratory" where the forams grow, build their chambers and reproduce without any human controlled disturbance. Our experiments in the aquarium will be used to check how strong the difference between our artificial environment and the real one is.

During the sampling, which is made by diving and is focused to collect only the first centimeter of sediment of 4 standard areas near each other, a number of data are register such as temperature, active photosynthetic light penetration and pH. All these data are used to reproduce in the aquarium a similar environment.

Shunichi has already spent 2 months in the field and the results seem to be promising! The forams are growing happily in the aquarium. In few months we will be able to evaluate if they are growing as their "brethren" do in the ocean!



The LBF from our first sampling living happily in the cultivation tank. Light Intensity and temperature can be adjusted easily to simulate their mesophotic environment

The field work area and the research station who are proving us access to the sea and the samples are located on the small Sesoko Island, around 1km offshore Okinawa (Japan).
On this small island there is a very famous research station called Tropical Biosphere Research Center which is the perfect structure to conduct such a research. It provides scientists with all infrastructure to set up cultivation experiments of many different organism groups, ranging from filtered/unfiltered seawater tap over oxygen pipes to pCO2 regulators in almost each lab.
Our team met in Naha (main airport of Okinawa) on April, Monday 21. After arriving at Sesoko Station, with this breathtaking background of fringing reef ecosystems all around them, the team started setting up the cultivation systems and locating the perfect sampling points around the island to start getting the first samples. We are mostly focused on the following nummulitids species, *Cycloclypeus carpenteri, Heterostegina depressa, Operculina complanata* and *Palaeonummulites venosus*.

If you are interested in our project, or if you have any question on a specific topic we are working on, or if you want to visit our cultivation facility, write an email to wolfgang.eder@univie.ac.at or visit us on our webpage univie.ac.at/largerforaminiferavienna, which will go online next month.

View over the fringing reefs, surrounding the Ocean EXPO Park

The Grzybowski Foundation

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A note from the Chairman's desk

Mike **K**aminski, **K**ing **F**ahd **U**niversity of **P**etroleum & **M**inerals

This summer's newsletter update comes from Kraków, where there are many new things to report (in addition to the football matches watched by loyal pundits at the Sheraton's sports bar).

Firstly, the Seventh International School on Foraminifera at the University of Urbino has been a great success, with 43 students participating from countries as far away as Taiwan and Brazil. This year's course was the longest course ever – we added a new four-day module called "An Introduction to the Foraminifera", that was taught by myself, Claudia Cetean, Felix Gradstein, Johann Hohenegger, and Jan Pawlowski. This module provides an introduction to the systematics, stratigraphy, ecology, and molecular biology of the Foraminifera, and was a huge success. This module will now become a permanent addition to the ISF course, complementing the existing modules on Smaller Foraminifera, Larger Foraminifera, and Planktonic Foraminifera. We even had a guest presentation by Prof. Rudolf Röttger from Kiel, who showed the films he made in the early 1980's on the ecology and reproduction of larger foraminifera. Prof. Röttger also brought along copies of his new book "A Course in Protozoology", which he autographed for the benefit of people who wanted to take a copy home. We were very fortunate this year with our field trip to Gubbio and the conference dinner – although heavy rains had been forecast, the weather turned out to be sunny and pleasant. The dinner at the "Pitrock" in Fermignano was certainly one of the highlights of the course, and the traditional karaoke singing went very well, thanks to Marianna Musco who wrote down from memory the words to "Volare". Next year's course will keep to the same structure of four modules plus a field trip to visit the classic localities near Gubbio. Thanks to sponsorship from the TMS, Robertsons, and ECORD (The European Consortium for Ocean Research Drilling), we will be able to offer several tuition scholarships to eligible Ph.D. students who wish to attend next year's course.

The Grzybowski Foundation is also pleased to announce its closer links with Micropaleontology Press, with the opening of a new office in Krakow. Micropaleontology Press in New York has always been a distributor of our special publication series, and has been listed on the inside title page of the GF books since we founded the series in

1993. Micropress Europe with offices at the AGH University of Science & Technology will now be the official publisher of the Grzybowski Foundation Special Publication series, and the Micropress Europe logo will appear in the next volume. The new Micropress Europe office is located in the second floor of the main building of the AGH University of Science & Technology on Mickiewicz Avenue, and houses paper copies of the Ellis & Messina Catalogues of Foraminifera and Ostracoda, as well as the micropaleontological journals (*Micropaleontology, Journal of Foraminiferal Research, Journal of Micropalaeontology, Voprosy Mikropaleontologii, Palaeontology, Paleontologicheskiy Zhurnal,* etc).

Participants of the Seventh International School on Foraminifera at the University of Urbino

In addition, there is a large collection of reprints on the subject of Foraminifera that was received through the kindness of Dr. Giles Miller at the Natural History Museum in London. Last year, Giles kindly sent us several boxes of duplicate reprints from the Heron-Allen Library, and these are now housed at the offices of Micropress Europe at AGH. I spent a week in July sorting through the reprint collection, alphabetizing them, weeding out poor-quality photocopies of papers that we already hold in the journals, and removing duplicates.

ISF-7 participants at the K/P boundary in the Bottacione Gorge

Prof. Rudolf Röttger signing copies of his new textbook "A Course in Protozoology"

The reprint collection is now quite impressive – it includes reprints from the collections of Goeff Adams, Richard Cifelli, Steve Culver, Dennis Curry, John Murray, Vittorio Roveda, and other people who have donated reprints to the Heron-Allen Library. I will also be slowly transferring my own reprint collection to the new Micropress Europe office. This new resource will be very useful, as the new Micropress Europe offices at AGH will now serve as a nucleus for micropaleontological activities in Kraków – for example the office will assist with the task of compiling new updates to the Ellis & Messina Catalogues. We now have room to host the MIKRO-meetings and other micropaleontological workshops, and we will have cupboard space to store microfossil collections. The opening of the new office could not have come at a better time, because the Polish petroleum company PETROGEO recently decided to close its micropalaeontological laboratory in Kraków (Przedsiebiorstwo Uslug Laboratoryjnych i Geologicznych, Sp.zo.o. Laboratorium w Krakowie) with the loss of two employees. Fortunately, Lucyna Bobrek was able to rescue the micropaleontological collection of Irena Heller, who worked for the same company before her retirement some 20 years ago. With the blessings of Irena Heller, the microfossil collections once housed at PETROGEO and some of her books and journals have now been transferred to the new Micropress Europe office at AGH for safekeeping.

The new Micropress Europe office at the AGH University of Science & Technology in Krakow

It's thanks to Lucyna Bobrek that we received the paper copies of the Catalogue of Foraminifera and Ostracoda.

Speaking of meetings, the next MIKRO-meeting will be hosted by Miroslav Bubik in the Czech Republic – at a time and place yet to be arranged. The MIKRO-2015 meeting will be dedicated to Grzybowski's friend Richard Schubert, and commemorate the 100th anniversary of his tragic death in the First World War. We are also compiling an e-book with Schubert's collected reprints that will be distributed at the meeting.

The Foundation is pleased to extend congratulations to the recipient of this year's Brian J. O'Neill Memorial Grant in Aid: Justyna Kowal-Kasprzyk from the Jagiellonian University. The Grant-in-Aid commemorates the micropaleontological contributions of Dr. Brian J. O'Neill, who was an active IWAF participant and one of the original members of the Grzybowski Foundation. The grant is in the amount of $1,000 (plus some extra travel support to enable the recipient to attend a MIKRO meeting) and supports Ph.D research in the field stratigraphical micropalaeontology. Justyna is currently working on the microfauna and microfacies of Mesozoic exotic calcareous rocks in the Silesian Unit of the Polish Carpathians, under the supervision of Prof. Marek Cieszkowski. Justyna will study the biostratigraphy of the Silesian Basin exotic rocks using foraminifera, calpionellids, and calcareous dinoflagellates. I'm sure I speak for all the GF members when I wish Justyna every possible success with her thesis work.

Tom Dignes (President of Micropaleontology Press), helping sort through the foraminiferal reprint collection at the new offices in Krakow

Collections of Karol Borza on Department of Geology and Paleontology, Faculty of Natural Sciences, Comenius University and Slovak Academy of Sciences, Geological institute in Bratislava Slovakia

Štefan **J**ózsa & **D**aniela **R**eháková, **C**omenius **U**niversity, **B**ratislava
jozsa@fns.uniba.sk, rehakova@fns.uniba.sk

Dr. Karol Borza was the leading person in Western Carpathian microbiostratigraphy and micropalaeontology. He was born in 1937 in Šurany. His deep interest for paleontology started at elementary school with his classmate Ondrej Samuel who became later a foraminifera specialist. They started their studies together at Comenius University, and later he advanced in his career at the Slovak Academy of Sciences. Between years 1958 – 1966 he was named the director of Department of Geology at the Slovak Academy of Sciences and editor of the jurnal "Earth sciences, Geology series" (in slovak). He received several academic awards such the "Metal of Honor of Slovak Academy of Sciences" and "Honorary Award of Slovak Geological Survey of Dioníz Štúr", however the main appreciation of work of every micropalaeontologist is positive response of the world community represented by numerous citatons and names of taxa e.g. *Carpistomiosphaera borzai* Nagy. Dr. Borza was not only a honorably member of academia, he actively helped with his experience solve problems in industry, mainly in cement and oil industry with his contribution mainly from the subsurface of Vienna Basin.

Dr. Karol Borza in his early years

His main interest was research of Triassic-Lower Cretaceous carbonate microfacies and microbiostratigraphy of the Western Carpathians. His advance in research was the study of in that time various groups of enigmatic microfossils (present time dinoflagellates) *Cadosinidae*, *Stomiosphaeridae*, *Calcisphaerulinidae* as well as calpionellids. These have proven as excelent index fossils in the Late Jurassic and Lower Cretaceous. He summarised his results in more than 100 publications that shed light on the taxonomy and biostratigraphic value of these microfossils. Dr. Borza described more than 30 new species and 4 new genera. His original deposits yielded more than 10 000 thin sections, from whose the most important are stored on the Geological Institute of Slovak Academy of Sciences and on Department of Geology and Paleontology, Faculty of Natural sciences, Comenius University in Bratislava, Slovakia.

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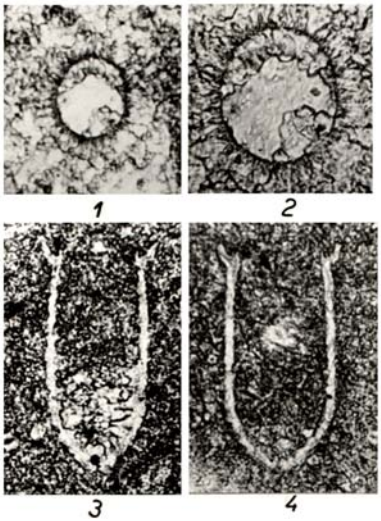
Part of the collections on Department of Geology and Paleontology



1, 2 Colomisphaera nagy (Borza), 3, 4, Sturiella oblonga Borza (3. holotype)

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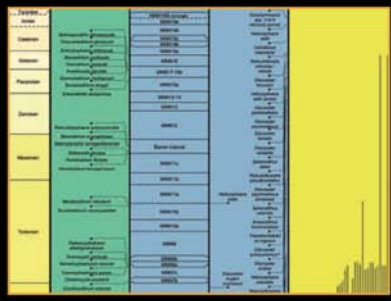

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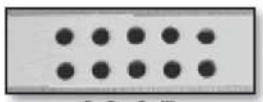
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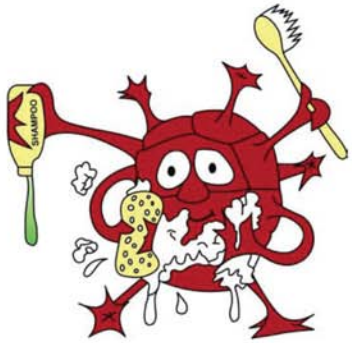

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