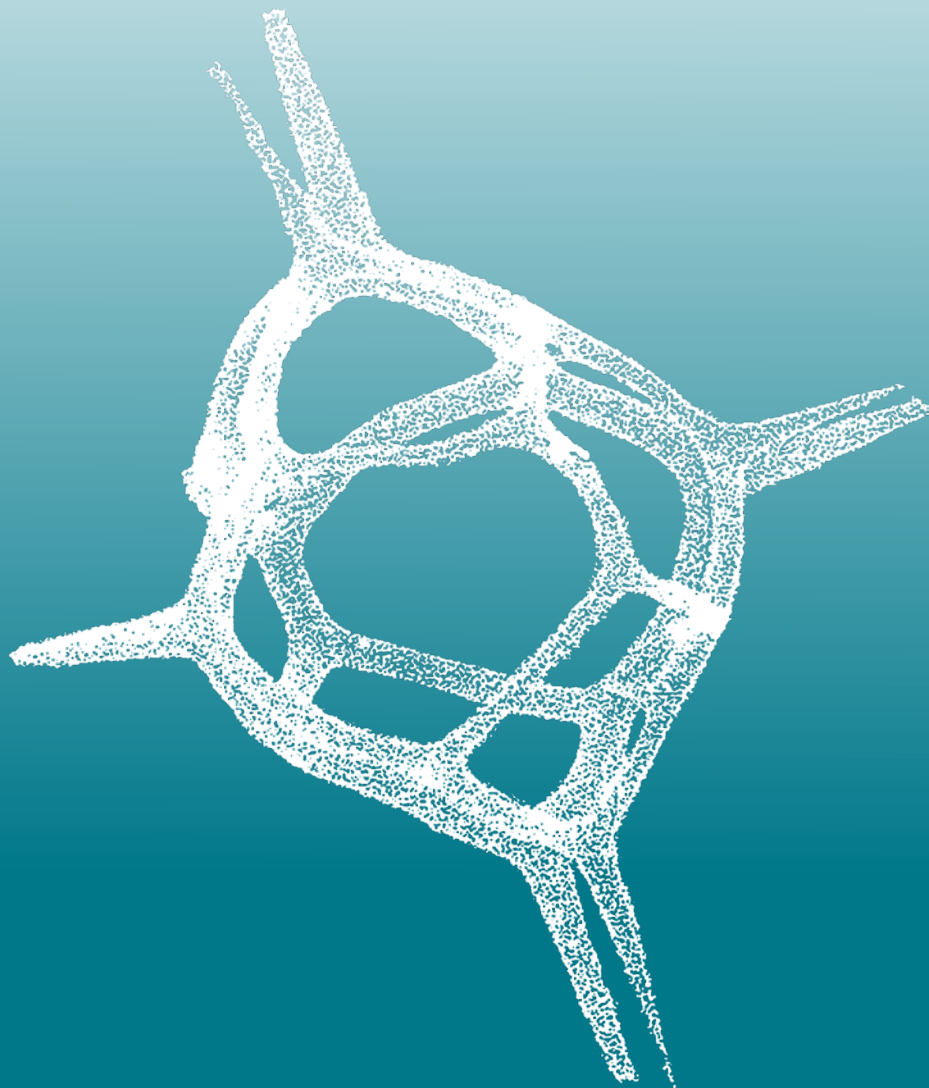


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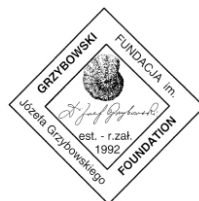


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Nannofossil Group Report

SIMON COLE

Myself and Matt Hampton have recently taken the positions of nannofossil working group secretary and chair. We wish to thank Karl-Heinz Baumann and Tom Dunkley Jones for their valuable contributions to this group over the last few years. As quick introductions; both Matt and I work in the ‘dirty’ side of nannopalaeontology – we are biostratigraphers in industry and are often found frequenting oil rigs throughout the World.

The nannofossil community looks forward to another busy year: The annual Foraminifera and Nannofossil Groups Spring Meeting will be held between 19-21 June in the beautiful city of Prague, Czech Republic. Hosted by Katarína Holcová and colleagues at the Geology Institutes of Faculty of Science, Charles University, the meeting entitled: “Micropalaeontological record of global change: from epicontinental seas to open ocean” will contain talks ranging from the subjects taxonomy, ecology and palaeoecology to biogeography and biostratigraphy. The technical sessions will be broken up with some time to sample the local Czech brews during the conference dinner and again during the post-

conference fieldtrip to an Upper Cretaceous rocky-shore and littoral facies with foraminifera and calcareous nannoplankton near the historic town of Kutná Hora...Na zdraví!

After a three year wait, the 14th International Nannoplankton Association (INA14) Meeting will be held from 15-21 September at the US Geological Survey’s HQ in Reston, Virginia. Conference host Jean Self-Trail has done a fine job of coordinating what looks like a very interesting programme at relatively short notice. Check out the website <https://my.usgs.gov/ina14/> for more details on registration (open) and abstract submission (deadline 15 June). The meeting promises to showcase some of the best nannofossil research currently being undertaken and the location, just outside Washington D.C., offers an extensive list of extra-curricular activities (see website) from great wineries, to beautiful national parks, to World class museums and restaurants. Get in early to sign up for the intriguing “Geology and Wine of the Culpepper Basin” pre-meeting field trip!

Ostracod Group Report

MATT WAKEFIELD

OSTRACOD GROUP MEETING; 6TH OCTOBER 2012

The meeting was organised and hosted by Mick Frogley at the University of Sussex. Our thanks go to Mick and to the university for allowing us to use its facilities.

Ginny Bernardout (Queen Mary University of London, QMUL); “Testing proxy methods for palaeoclimate reconstruction: ostracods & chironomids in lake sediments from Yukon Territory, Canada”. Unfortunately Ginny was ill so Dave Horne gave her talk. Ginny’s PhD studies are focussed on the Delorme (Canada) and US databases but include Joan Bunbury’s arctic Canada work. She aims to recalibrate MOTR and compare it with the Chironomid Modern Analogue Technique (CMAT). Initial work indicates that mean CMAT and July (minimum)

MOTR temperature curves are grossly similar but details of the curves do not match. In part this may be down to the data coming from three cores (the third core provides the radiocarbon dating) that have not been properly correlated, as the mismatch appears to be by only a few samples. The Bunbury OPTIMA calculation is at the lower end of the MOTR calculation for the same species and some are lower still. Further work will aim to include NODE data into the MOTR methodology and will investigate how abundance data may refine MOTR.

Tasnim Patel (QMUL); “From OMEGA to BioFresh; harmonising Recent freshwater ostracod datasets on both sides of the Atlantic”. BioFresh is a EU funded freshwater species database project that will be free and publicly available. Tasnim is building the ostracod portion of this to enable mapping of taxon distribution in Europe (NODE; 10k records + 2k fossil records,

The International Nannoplankton Association (INA)

Who wants enlarged chalk dust?

MARIO CACHAO, UNIVERSITY OF LISBON

Coccosphere replicas have been produced as single display models by various museums. On the other hand several artistic handicraft versions of coccoliths and coccospheres have also been produced and sold. However we feel that there is wider teaching/public engagement value to having such models, if they can be produced at a sensible price.

Since the 2004 INA10 Lisbon Conference we have been experimenting with producing coccoliths in such a way that they can build a coccosphere, as sort of 3D jigsaw. For this purpose two half-coccoliths (more or less corresponding to distal and proximal shields) were molded from SEM images of coccoliths of *Coccolithus pelagicus* at about $\times 10.000$ scale. From these plaster-of-Paris casts were produced from which counter-molds of silicone were extracted and then glued by the central

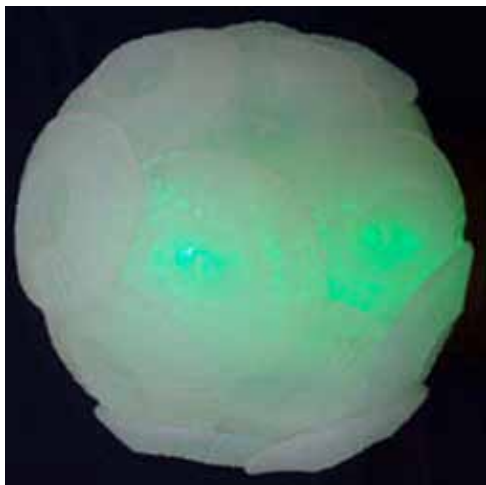


Fig. 1 Prototype of a coccosphere of *Coccolithus pelagicus* illuminated by green LEDs (photograph by Nuno Theias).

area to form entire heterococcoliths. A 20-lith coccosphere was then composed and illuminated from inside by 2 series of green LEDs powered by a small solar panel (Fig. 1).

This first prototype was presented to Sherwood Wise at the moment he retired from the International Nannoplankton Association presidency and, he assures us that it is still operational and much valued (Fig. 2).

Due to the patience and interest of Nuno Theias, the plastic artist that created the original coccosphere, new more robust resin casts have been manufactured leading the way to the manual production of new specimens of silicone coccoliths. Silicone has two major advantages: (1) it allows enough flexibility to enable coccoliths to interlock their proximal and distal shields as in real coccospheres (Fig 3); and (2) conveys the idea of some transparency of the calcite shield that surrounds the coccolithophore, unlike the opacity suggested by SEM images.

Since chalk dust is mainly formed of these (Cretaceous) microscopic calcite structures these silicone replicas may interest a wider community of everyday teachers and not strictly professional experts on calcareous nannofossils. These replicas can stimulate discussion on the nature of organisms which make coccoliths, how they do this - and why?

To enable the production of new sets of coccoliths there is a need to guarantee in advance the production costs of at least two to three hundred specimens. This means that we need several colleagues or institutions to



Fig. 2. Offering the prototype to Sherwood Wise during the 10th INA Conference (Lisbon, 2004).

be interested in this project. A first estimation of the costs indicate a value of 4 euros per single coccolith and between 60 and 80 euros per coccosphere (without LED illumination) depending of the amount of coccoliths (15 to 20) one uses to reconstruct it. To this total amount mail expenses must be added. Several

nannofossil specialists have already agreed to pay for sets but we would like to open this to the wider microfossil community as well. If you are interested in buying a set of n coccoliths of *Coccolithus pelagicus* please contact me, Mario Cachao, by email (mcachao@fc.ul.pt).



Fig. 3. Partial coccosphere reconstructions by coccolith interlocking.

