Newsletter of Micropalaeontology

vol. 97, March 2018

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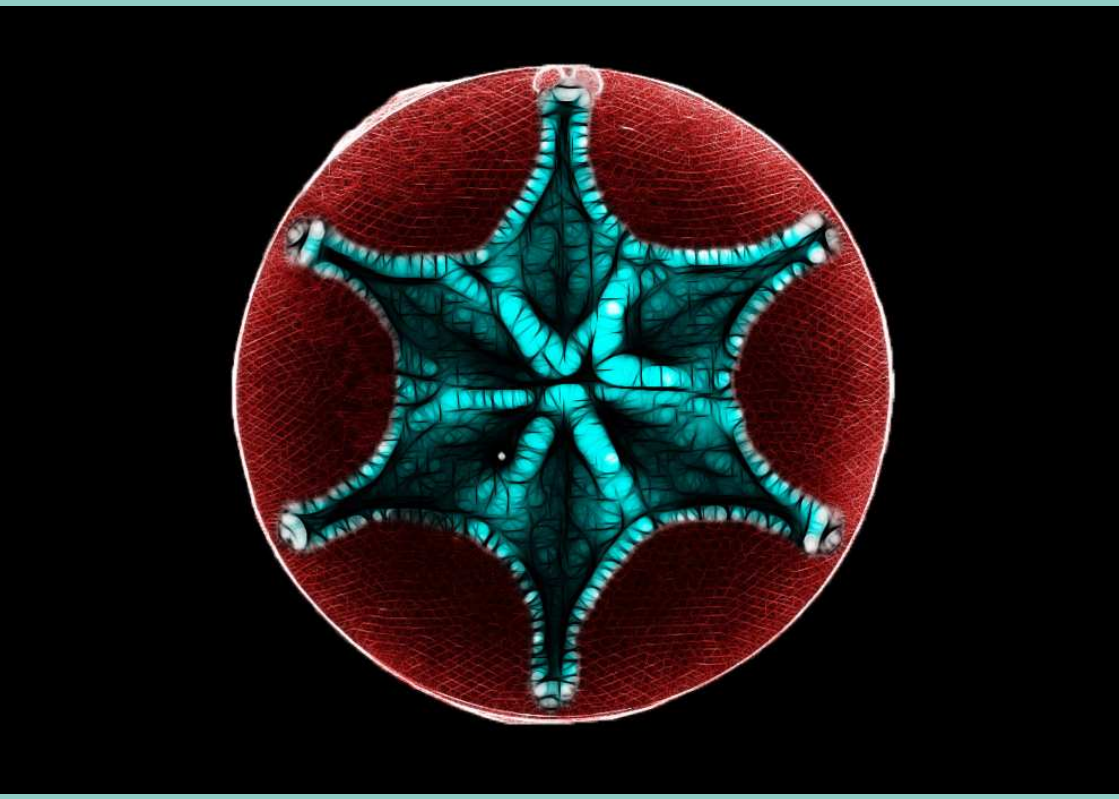

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NB This PDF file is an extract from the TMS Newsletter of the pages directly relevant to nannofossil study, for the full Newsletter please follow the link above.
Jeremy Young

Contributions from

The Micropalaeontological Society

The Grzybowski Foundation

The International Nannoplankton Association

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Editorial

***Manuel F. G. Weinkauf*, Université de Genève (Switzerland)**

The *Newsletter of Micropalaeontology* will get a new face from this issue, with me taking over the job as Newsletter editor from Claudia Cetean. Claudia has been in charge of the *Newsletter of Micropalaeontology* for the last couple of years and did a great job in keeping this newsletter a window for all TMS members and interested scientists and laymen towards The Micropalaeontological Society.

While the design of the newsletter changed ever so slightly, you will still find the usual information in the new version. It will continue to inform about relevant upcoming meetings and present reports by society members and Grant-in-Aid recipients about recent meetings relevant for the micropalaeontological community. It will further keep you up-to-date with everything going on in The Micropalaeontological Society (including its specialist groups), the International Nannoplankton Association (INA), and the Grzybowski Foundation. It will also continue to host book reviews of new and exciting books dealing with all topics of micropalaeontology.

But there will be changes, too. For starters, we will feature regular correspondents in the future. These will be Vanessa Pais (Universidade de Lisboa) and Mike Simmons (Halliburton). Mike will be responsible for a new feature in the newsletter, Trends in Micropalaeontology and Biostratigraphy, where he will present specialised reports about various and exciting news in the fields of micropalaeontology and biostratigraphy. Have a look in this issues article about the newly published 'Landmark Papers in Biostratigraphy and Palaeontology'.

All contributions to the *Newsletter of Micropalaeontology* of very welcome, and we will find space for everything that fits the topic. Should you want to contribute to the newsletter in any way, for instance by writing contributions yourself or suggesting potential contributors, please do

not hesitate to contact me at newsletter@tmsoc.org.

I hope you continue to enjoy the *Newsletter of Micropalaeontology* and wish you a productive year 2018.

International Nannoplankton Association

Lyon 1

INASSET

INA SUMMER SCHOOL on EVOLUTION and TAXONOMY

Lyon July 1th – July 7 th

Université Lyon 1, Laboratoire de Géologie de Lyon (Lyon, France).

A 5-day programme of lectures and practical classes with a strong taxonomic focus will include Microscope lab sessions. A grounding in Cenozoic nannofossil research will be provided through lectures on their crystallography, microscopy, image capture, and use of informatics resources such as the Nannotax website. We will then review the current nannofossil biozonal schemes, discuss their usefulness for biostratigraphical applications, and present case studies examining the geological evolution of these microfossils. A geological excursion on the 6th day will be held in the Ardèche Region.

Organising committee:
Emanuela Mattioli
Giuliana Villa
Jeremy Young
Matt Hampton

Lectures:
Claudia Agnini University of Padova (Italy)
Luc Beaufort Cerege, Aix en Provence (Fr)
Jorge Ferreira University of Lisbon (Portugal)
Eric de Kaenel DPR, Neuchatel (Switzerland)
Emanuela Mattioli University of Lyon (France)
Simonetta Monechi University of Florence (Italy)
Isabella Raffi University of Chieti (Italy)
Baptiste Suchéras Cerege, Aix en Provence (Fr)
Jean Self Trail U.S. Geological Survey Reston VA (USA)
Giuliana Villa University of Parma (Italy)
Jeremy Young University College of London (UK)

Registration:
Max number of participants: 16 - if the course is oversubscribed we may need to select participants.
Deadline for registration: May 5th, 2018
Registration fees: Early registration (registration and payment before April 7, 2018): 500Euro
Late registration (after April 7): 600 Euro
The fee includes: lectures (5-day course), icebreaker party, coffee breaks, lunches, social dinner, excursion.
If you are interested, please complete the pre-registration form, even if you are not certain of being able to attend:
http://ina.tmsoc.org/meetings/summerschool2018/inasset2018.html
For further communication email to emanuela.mattioli@univ-lyon1.fr, or giuliana.villa@unipr.it

for which early career travel support is available; the joint International Paleolimnology Association–International Association of Limnogeology meeting in Stockholm in June 18–21st, and the 6th Polar Marine Diatom Workshop to be held in Iowa, 6–8th August 2018. We would also like to take this opportunity to highlight the recently established 'Young International Society for Diatom Research' blog https://youngisdr.blogspot.co.uk/, featuring a 'diatom of the month' section. Submissions welcome!

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

***Sarah Alvarez[a], Michael McKnight[b], and Jeremy Young[c]*; [a]University of Bristol (UK), [b]University of Birmingham (UK), [c]University College London (UK)**

First, we'd like to note a change of office in the TMS Nannofossil Group, as Cherry Newsam steps down as Chair. Cherry joined the committee as Nannofossil Group Secretary in 2015, taking over as Chair in 2017. We would like to thank her for everything that she has done as a Group representative and committee member. Sarah Alvarez (née O'Dea) has now taken over the role of Group Chair, joining Mike McKnight, who is continuing as Group Secretary.

Recent Meetings

TMS AGM

The TMS AGM was a highly successful event held at the Natural History Museum, London. The theme for the first day of the meeting was 'Microfossils: A deeper understanding of human history' with keynote talks dedicated to this subject. This was followed by an open session on the second day, with presentations related to any aspect of micropalaeontology. There were a number of interesting nannofossil-based talks and posters which were very well received, and which showcased some

of the diverse applications of nannofossil records. Representatives from both academia and industry attended the event, including several early career scientists and students.

INA 16, Athens

INA 16 was hosted by Maria Triantaphyllou in Athens during September 2017, and was a great success. The meeting focussed on 'Advanced Nannoplankton Studies through Geological Time: Geobiology, Environment and Industrial Applications'. There is a separate report on this meeting from Menini Alessandro[2], numerous photographs on the INA Facebook page, and a report on the business meeting on the INA website. We should also say though this was a well-attended conference with many TMS members attending. I think we all found it very rewarding culturally, socially and scientifically, especially due to the efforts of Maria Triantaphyllou as convenor and her fabulous team of student helpers.

The pre-conference fieldtrip introduced us to the wonders of the geology of the Peleponese, the Corinth Canal, Mycenean civilisation, and Greek wine, and the next day we had time before the conference proper started for visits to the Acropolis, the Archaeological Museum, and other highlights of Athens. Then we had a rather intensive program of four evenings of eating and drinking in the centre of Athens and four days of scientific sessions. After this many people needed to retreat home but the more stalwart of us knew better than to miss the opportunity of an INA fieldtrip, and this was a very special one as Maria had persuaded her colleagues Paraskevi Nomikou and Dimitrios Papanikolaou to show us round their favourite field-area the fabled Isle of Santorini. This was somewhere I had wanted to visit since reading long ago, about the eruption of Thera and destruction of the Minoan civilisation there. So, we had three days of ferry trips, views across the caldera and several yomps up and down it, more Greek beer, wine and salads, a boat trip to the active volcanic islands, visits to archaeological sites, historic villages, and an industrial heritage museum, and another group dinner. Then we did finally go home with a new set of

[2]See section Meeting Reports.

good intentions, research ideas and friendships.

Figure 6: Nannofossil workers in Athens and Santorini.

Upcoming Meetings

TMS Nanno Group workshop – May 2018

These events have proved highly productive in the past, so we propose that we hold our next nanno workshop in May, likely as an afternoon event at the University of Birmingham. We would like this to get as many nannofossil workers together as possible, so we suggest that we make this an open session with as many short talks as possible. Ideally this workshop will be a good opportunity to catch up with the current advances and interests within the nannofossil community. We aim to ensure that workshops represent Nanno Group members' interests, so please do not hesitate to contact a Nannofossil Group Committee member if you have any suggestions for any future workshop themes.

Joint Foram and Nanno Group Meeting

The next joint Foraminifera & Nannofossil Group Meeting will take place in Edinburgh on Friday 22 June, and will be held as a one-day session within the main FORAMS 2018 conference. The theme for the session is 'Reconstructing past ocean environments with foraminifera and nannofossils', and will be convened by Lyndsey Fox, Kirsty Edgar, and Martin Langer. Full details are available at: http://forams2018.wp.st-andrews.ac.uk/tms-spring-meeting. One-day registration for the TMS-only meeting is available online, and is open until 28th May. The deadline for abstract submission has been extended to 30th March. It would be really great to see as many nanno-

fossil workers at this one-day meeting as possible so please consider submitting an abstract! The session will certainly provide fantastic opportunities to liaise with colleagues from both the Foraminifera and Nannofossil Groups.

INA Summer School – July 2018

The first INA Summer School on Evolution and Taxonomy (INASSET) will take place from 1st to 7th July 2018 in Lyon, France. The summer school will offer an overview of Cenozoic calcareous nannofossils across a 5-day programme of lectures and practical classes with a strong taxonomic focus. The summer school is primarily intended for research students (Masters of Ph.D. level), and early career-stage industrial staff and research scientists interested in nannofossil micropaleontology and it applications in biostratigraphy and paleoceanography. Further information is available on the INA website: http://ina.tmsoc.org. Also note that student members of TMS could apply to the TMS Educational Trust for an award to support attendance: https://www.tmsoc.org/tms-educational-trust-awards/.

Nannotax update

The Nanotax3 website was launched in 2013 at the INA conference in Washintgton, so to mark the Athens INA conference a significant upgrade to the website was undertaken. This took the form of the addition of a coded set of morphological character descriptions and size data to all the Cenozoic and extant taxa. This was a large project, there are 1400 post Mesozoic taxa in the database and about 10 characters were recoded for each making a total of 15 000 tags, plus a few thousand more quantitative characters. This has primarily been done to allow searching by morphological characters, since several users have noted that the taxonomic arrangement of the website often results in rather similar nannofossils ending up in different places. Producing a set of search characters was not easy since nannofossils are very diverse structures with only limited homology between them—so whilst for example Foraminifera can be systematically described in terms of coiling mode, aperture, wall-structure, chamber shape, etc. it is not easy to do the same for nannofossils. After considerable experimentation

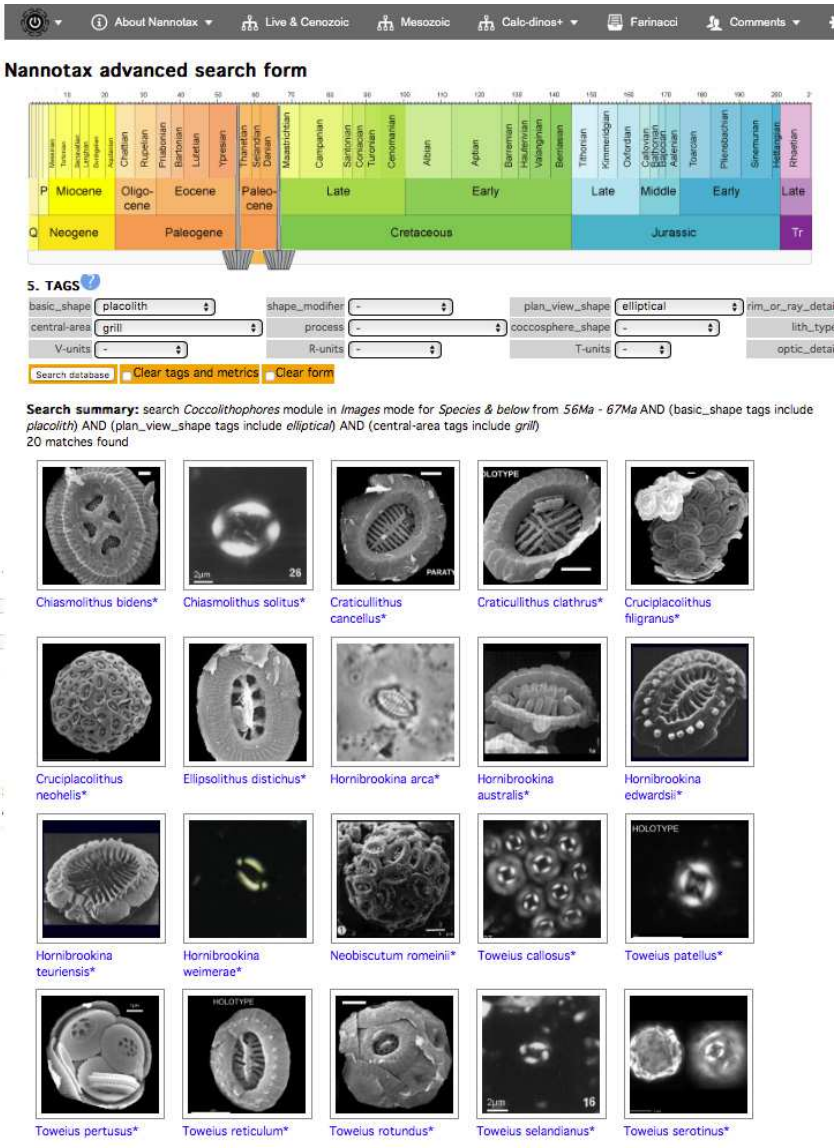


Figure 7: The Nannotax advanced search form.

the system adopted described nannofossils in terms of 5 sets of characters: overall shape, plan-view shape, rim details, central area structures, and central process. In each category there are multiple descriptive-tags that can be applied and for each taxon each applicable tag has been recorded. So, it is now possible to search for all coccoliths with say a diagonal central cross. In addition there two sets of tag for describing the coccosphere, four for describing the crystallography/appearance in cross-polars. Finally estimates for coccolith size, coccosphere size, and number of coccoliths per coccosphere have been added to the database.

So, a large amount of extra information has been added to the system and a wide range of searches can be carried out—especially as criteria such as geological age, taxonomic group, and morphological features can be combined. Hopefully this will prove useful, but it is a slightly complex system so we would suggest that nannofossil workers spend some time experimenting with it. Any feedback will be very gratefully accepted.

TMS Grant-in-Aid reports

INA 16: 16th International Nannoplankton Association Meeting, Athens, 25th–28th September

***Alessandro Menini*, University of Lyon 1 (France)**

An international group of both extant and fossil nannoplankton scientists assembled the Sunday 24th in the Divani Acropolis Hotel, one of the best of Athens hotels, to attend the icebreaker for the 16th International Nannoplankton Association Meeting. The meeting, organized by the Faculty of Geology & Geoenvironment of the National and Kapodistrian University of Athens, took place from the 25th to the 28th of September. This is the biggest congress that deals with all the aspects of nannoplankton research and a huge number of both oral present-

ations and posters were exposed.

Figure 19: The INA reception desk.

The meeting featured also a pre-conference fieldtrip in the Corinth Canal, Mycaenae and Nafplion and a post-conference fieldtrip in Santorini, the very famous volcanic island in the Aegean Sea. The Curinth Gulf is a very interesting 'geosite', being one of the fastest extending regions (~15 mm yr^{-1}) worldwide, forming an outstanding setting for studying active faults and Quaternary sequences. Corinth Gulf is influenced both by glacioeustatic sea level changes and tectonic movements. Sedimentary facies including marls, sandstones and conglomerates represent offshore, shoreface and coastal paleoenvironments. These paleoenvironments have been correlated with the marine isotope stages and the six marine transgressive cycles described in the NW part of the Corinth Canal section, identifying MIS 11 to MIS 5.

Athens is a renewed UNESCO World Heritage site, and was not only a great location to have a fruitful meeting, but also the ideal place to visit some of the most ancient ruins of Ancient Greece (and of course tasting some good Feta cheese or a tempting Moussaka two steps from the Parthenon!).

Figure 20: The Santorini post conference fieldtrip.

The convenors, Maria Triantaphyllou (National and Kapodistrian University of Athens) and Jeremy Young (UCL London) as well as with local authorities, presided the opening-ceremony the Monday 25th at 9.00 am. A wide range of topics were tackled from the beginning: nannofossils biostratigraphy, coccolitophore taxonomy and size variations and calcareous nannofossils as indicators of paleoenviron-

Figure 21: Group photo of the participants.

mental, oceanographic and climatic changes.

The second day was the follow-up of the first one: the section dedicated to paleoceanography was terminated and, thereafter, some presentations focused on coccolitophore phylogeny and molecular genetics.

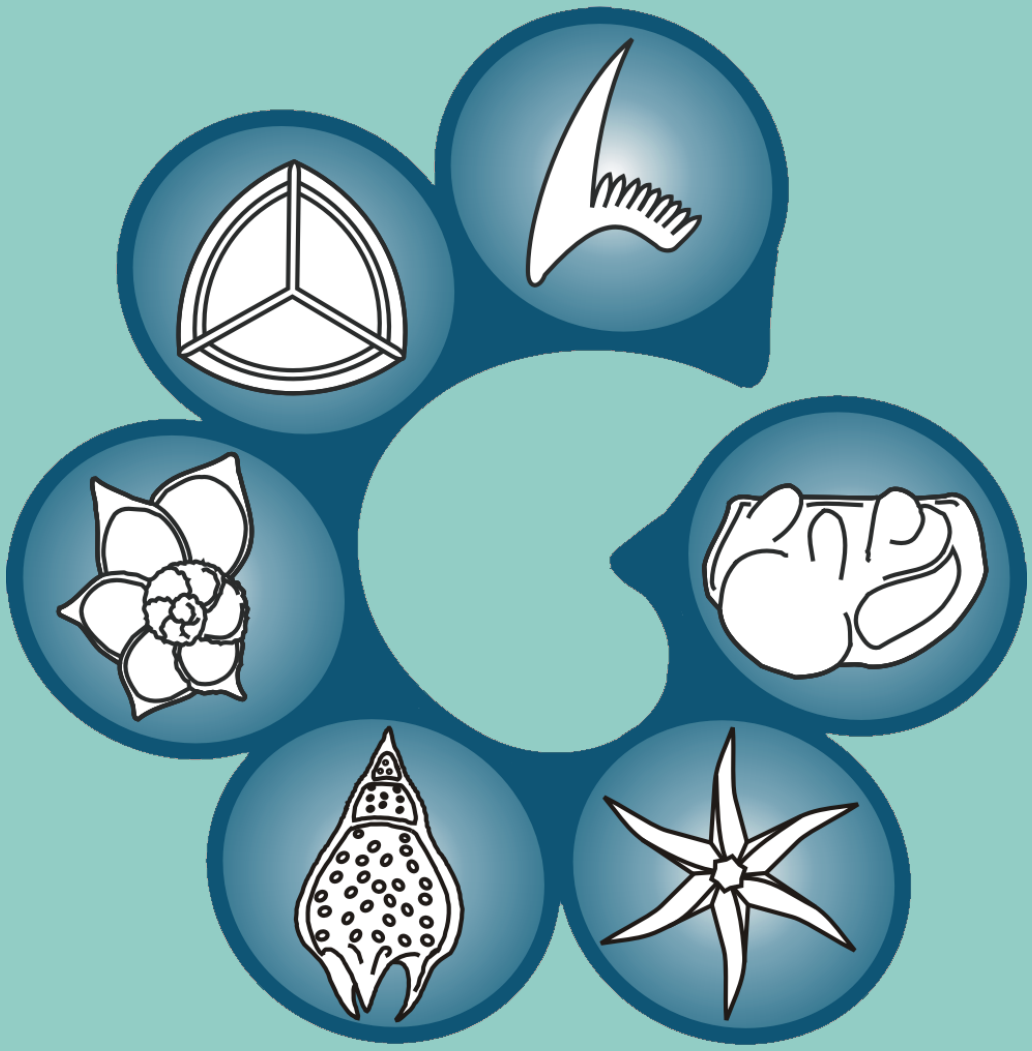
The congress continued with insights on ecology, with particular attention to seasonality and biogeography. The successive section was dedicated to coccolitophore biocalcification.

The last day, that arrived too quickly, featured a special section on Jurassic coccoliths (and it is in this one that I presented) and a last section focused on ecosystem dynamics and applications.

At the end of the meeting, we had a fantastic dinner with INA participants at the Limni Vouliagmenis restaurant and it was with this good souvenir that we gave us appointment to the next meeting in Brazil in 2019!

Finally, I really thank TMS to have funded me with the Grant-in-Aid, because it helped me in paying my staying in Athens, otherwise it would have been surely more complicated. I could present the results of my research, that is a high res-

olution biostratigraphic and chemiostratigraphic study at the Pliensbachian/Toarcian boundary (you can find the abstract on the special number of the *Journal of Nannoplankton Research* dedicated to the meeting) and besides, I had the chance to meet many scientists, sharing both interesting professional discussions and leisure moments.
See you at the next INA meeting!
Alessandro Menini



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