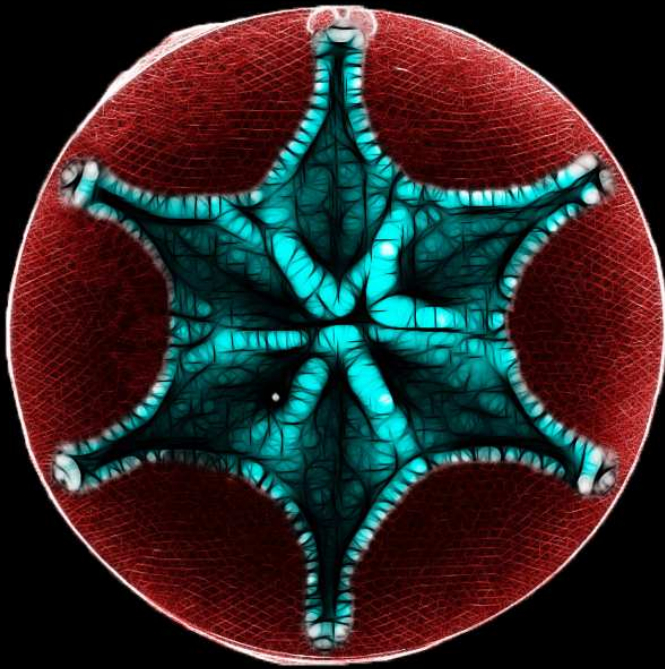


Newsletter of Micropalaeontology

vol. 97, March 2018

<https://www.tmsoc.org>



The
Micropalaeontological
Society

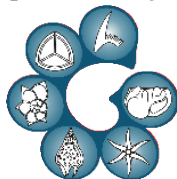
ISSN: 2398-2098

Registered Charity No.: 284013

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



The Newsletter is sponsored by



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.

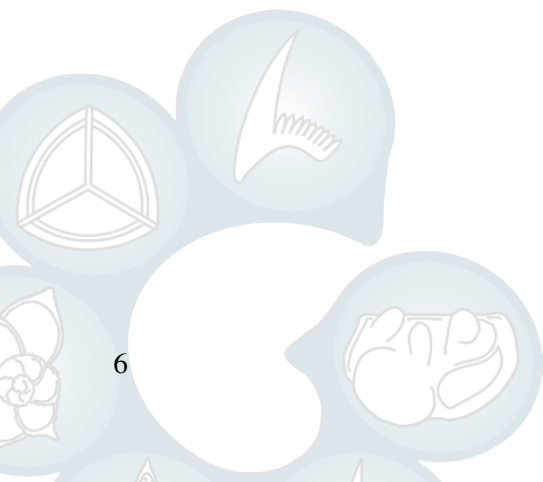
But there will be changes, too. For starters, we will feature regular correspondents in the future. These will be Vanessa Pais (Universidade de Lisboa) and Mike Simmons (Halliburton). Mike will be responsible for a new feature in the newsletter, Trends in Micropalaeontology and Biostratigraphy, where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





INASSET INA SUMMER SCHOOL on EVOLUTION and TAXONOMY

Lyon July 1st – July 7th

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

Lecturers:

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](http://ina.tmsoc.org/meetings/summerschool2018/inasset2018.html), 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; ^aUniversity of Bristol (UK), ^bUniversity of Birmingham (UK), ^cUniversity 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 nanofossil 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 Alessandro², 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 Peloponnese, the Corinth

Canal, Mycenaean 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

²See 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 Nanofossil Groups.

INA Summer School – July 2018

The first INA Summer School on Evolution and Taxonomy (INASET) will take place from 1st to 7th July 2018 in Lyon, France. The summer school will offer an overview of Cenozoic calcareous nanofossils 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 nanofossil micropaleontology and its 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 Washington, 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 nanofossils ending up in different places. Producing a set of search characters was not easy since nanofossils 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 nanofossils. After considerable experimentation

About Nannotax

Live & Cenozoic

Mesozoic

Calc-dinos+

Forinacci

Comments

Nannotax advanced search form

15

30

45

60

75

90

105

120

135

150

165

180

195

210

225

240

255

270

285

300

315

330

345

360

375

390

405

420

435

450

465

480

495

510

525

540

555

570

585

600

615

630

645

660

675

690

705

720

735

750

765

780

795

810

825

840

855

870

885

900

915

930

945

960

975

990

1005

1020

1035

1050

1065

1080

1095

1110

1125

1140

1155

1170

1185

1200

1215

1230

1245

1260

1275

1290

1305

1320

1335

1350

1365

1380

1395

1410

1425

1440

1455

1470

1485

1500

1515

1530

1545

1560

1575

1590

1605

1620

1635

1650

1665

1680

1695

1710

1725

1740

1755

1770

1785

1800

1815

1830

1845

1860

1875

1890

1905

1920

1935

1950

1965

1980

1995

2010

2025

2040

2055

2070

2085

2100

2115

2130

2145

2160

2175

2190

2205

2220

2235

2250

2265

2280

2295

2310

2325

2340

2355

2370

2385

2400

2415

2430

2445

2460

2475

2490

2505

2520

2535

2550

2565

2580

2595

2610

2625

2640

2655

2670

2685

2700

2715

2730

2745

2760

2775

2790

2805

2820

2835

2850

2865

2880

2895

2910

2925

2940

2955

2970

2985

3000

3015

3030

3045

3060

3075

3090

3105

3120

3135

3150

3165

3180

3195

3210

3225

3240

3255

3270

3285

3300

3315

3330

3345

3360

3375

3390

3405

3420

3435

3450

3465

3480

3495

3510

3525

3540

3555

3570

3585

3600

3615

3630

3645

3660

3675

3690

3705

3720

3735

3750

3765

3780

3795

3810

3825

3840

3855

3870

3885

3900

3915

3930

3945

3960

3975

3990

4005

4020

4035

4050

4065

4080

4095

4110

4125

4140

4155

4170

4185

4200

4215

4230

4245

4260

4275

4290

4305

4320

4335

4350

4365

4380

4395

4410

4425

4440

4455

4470

4485

4500

4515

4530

4545

4560

4575

4590

4605

4620

4635

4650

4665

4680

4695

4710

4725

4740

4755

4770

4785

4800

4815

4830

4845

4860

4875

4890

4905

4920

4935

4950

4965

4980

4995

5010

5025

5040

5055

5070

5085

5100

5115

5130

5145

5160

5175

5190

5205

5220

5235

5250

5265

5280

5295

5310

5325

5340

5355

5370

5385

5400

5415

5430

5445

5460

5475

5490

5505

5520

5535

5550

5565

5580

5595

5610

5625

5640

5655

5670

5685

5700

5715

5730

5745

5760

5775

5790

5805

5820

5835

5850

5865

5880

5895

5910

5925

5940

5955

5970

5985

6000

6015

6030

6045

6060

6075

6090

6105

6120

6135

6150

6165

6180

6195

6210

6225

6240

6255

6270

6285

6300

6315

6330

6345

6360

6375

6390

6405

6420

6435

6450

6465

6480

6495

6510

6525

6540

6555

6570

6585

6600

6615

6630

6645

6660

6675

6690

6705

6720

6735

6750

6765

6780

6795

6810

6825

6840

6855

6870

6885

6900

6915

6930

6945

6960

6975

6990

7005

7020

7035

7050

7065

7080

7095

7110

7125

7140

7155

7170

7185

7200

7215

7230

7245

7260

7275

7290

7305

7320

7335

7350

7365

7380

7395

7410

7425

7440

7455

7470

7485

7500

7515

7530

7545

7560

7575

7590

7605

7620

7635

7650

7665

7680

7695

7710

7725

7740

7755

7770

7785

7800

7815

7830

7845

7860

7875

7890

7905

7920

7935

7950

7965

7980

7995

8010

8025

8040

8055

8070

8085

8100

8115

8130

8145

8160

8175

8190

8205

8220

8235

8250

8265

8280

8295

8310

8325

8340

8355

8370

8385

8400

8415

8430

8445

8460

8475

8490

8505

8520

8535

8550

8565

8580

8595

8610

8625

8640

8655

8670

8685

8700

8715

8730

8745

8760

8775

8790

8805

8820

8835

8850

8865

8880

8895

8910

8925

8940

8955

8970

8985

9000

9015

9030

9045

9060

9075

9090

9105

9120

9135

9150

9165

9180

9195

9210

9225

9240

9255

9270

9285

9300

9315

9330

9345

9360

9375

9390

9405

9420

9435

9450

9465

9480

9495

9510

9525

9540

9555

9570

9585

9600

9615

9630

9645

9660

9675

9690

9705

9720

9735

9750

9765

9780

9795

9810

9825

9840

9855

9870

9885

9900

9915

9930

9945

9960

9975

9990

10005

10020

10035

10050

10065

10080

10095

10110

10125

10140

10155

10170

10185

10200

10215

10230

10245

10260

10275

10290

10305

10320

10335

10350

10365

10380

10395

10410

10425

10440

10455

10470

10485

10500

10515

10530

10545

10560

10575

10590

10605

10620

10635

10650

10665

10680

10695

10710

10725

10740

10755

10770

10785

10800

10815

10830

10845

10860

10875

10890

10905

10920

10935

10950

10965

10980

10995

11010

11025

11040

11055

11070

11085

11100

11115

11130

11145

11160

11175

11190

11205

11220

11235

11250

11265

11280

11295

11310

11325

11340

11355

11370

11385

11400

11415

11430

11445

11460

11475

11490

11505

11520

11535

11550

11565

11580

11595

11610

11625

11640

11655

11670

11685

11700

11715

11730

11745

11760

11775

11790

11805

11820

11835

11850

11865

11880

11895

11910

11925

11940

11955

11970

11985

12000

12015

12030

12045

12060

12075

12090

12105

12120

12135

12150

12165

12180

12195

12210

12225

12240

12255

12270

12285

12300

12315

12330

12345

12360

12375

12390

12405

12420

12435

12450

12465

12480

12495

12510

12525

12540

12555

12570

12585

12600

12615

12630

12645

12660

12675

12690

12705

12720

12735

12750

12765

12780

12795

12810

12825

12840

12855

12870

12885

12900

12915

12930

12945

12960

12975

12990

13005

13020

13035

13050

13065

13080

13095

13110

13125

13140

13155

13170

13185

13200

13215

13230

13245

13260

13275

13290

13305

13320

13335

13350

13365

13380

13395

13410

13425

13440

13455

13470

13485

13500

13515

13530

13545

13560

13575

13590

13605

13620

13635

13650

13665

13680

13695

13710

13725

13740

13755

13770

13785

13800

13815

13830

13845

13860

13875

13890

13905

13920

13935

13950

13965

13980

13995

14010

14025

14040

14055

14070

14085

14100

14115

14130

14145

14160

14175

14190

14205

14220

14235

14250

14265

14280

14295

14310

14325

14340

14355

14370

14385

14400

14415

14430

14445

14460

14475

14490

14505

14520

14535

14550

14565

14580

14595

14610

14625

14640

14655

14670

14685

14700

14715

14730

14745

14760

14775

14790

14805

14820

14835

14850

14865

14880

14895

14910

14925

14940

14955

14970

14985

15000

15015

15030

15045

15060

15075

15090

15105

15120

15135

15150

15165

15180

15195

15210

15225

15240

15255

15270

15285

15300

15315

15330

15345

15360

15375

15390

15405

15420

15435

15450

15465

15480

15495

15510

15525

15540

15555

15570

15585

15600

15615

15630

15645

15660

15675

15690

15705

15720

15735

15750

15765

15780

15795

15810

15825

15840

15855

15870

15885

15900

15915

15930

15945

15960

15975

15990

16005

16020

16035

16050

16065

16080

16095

16110

16125

16140

16155

16170

16185

16200

16215

16230

16245

16260

16275

16290

16305

16320

16335

16350

16365

16380

16395

16410

16425

16440

16455

16470

16485

16500

16515

16530

16545

16560

16575

16590

16605

16620

16635

16650

16665

16680

16695

16710

16725

16740

16755

16770

16785

16800

16815

16830

16845

16860

16875

16890

16905

16920

16935

16950

16965

16980

16995

17010

17025

17040

17055

17070

17085

17100

17115

17130

17145

17160

17175

17190

17205

17220

17235

17250

17265

17280

17295

17310

17325

17340

17355

17370

17385

17400

17415

17430

17445

17460

17475

17490

17505

17520

17535

17550

17565

17580

17595

17610

17625

17640

17655

17670

17685

17700

17715

17730

17745

17760

17775

17790

17805

17820

17835

17850

17865

17880

17895

17910

17925

17940

17955

17970

17985

18000

18015

18030

18045

18060

18075

18090

18105

18120

18135

18150

18165

18180

18195

18210

18225

18240

18255

18270

18285

18300

18315

18330

18345

18360

18375

18390

18405

18420

18435

18450

18465

18480

18495

18510

18525

18540

18555

18570

18585

18600

18615

18630

18645

18660

18675

18690

18705

18720

18735

18750

18765

18780

18795

18810

18825

18840

18855

18870

18885

18900

18915

18930

18945

18960

18975

18990

19005

19020

19035

19050

19065

19080

19095

19110

19125

19140

19155

19170

19185

19200

19215

19230

19245

19260

19275

19290

19305

19320

1933

the system adopted described nanofossils 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 nanofossil 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, organ-

ized 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 Corinth Gulf is a very interesting 'geo-site', being one of the fastest extending regions ($\sim 15 \text{ mm yr}^{-1}$) 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, identi-

fying 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, coccolithophore 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 coccolithophore phylogeny and molecular genetics.

The congress continued with insights on ecology, with particular attention to seasonality and biogeography. The successive section was dedicated to coccolithophore 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 chemi-
ostratigraphic study at the Pliensba-
chian/Toarcian boundary (you can
find the abstract on the special num-
ber of the *Journal of Nannoplankton
Research* dedicated to the meeting)

and besides, I had the chance to meet
many scientists, sharing both inter-
esting professional discussions and
leisure moments.

See you at the next INA meeting!

Alessandro Menini

