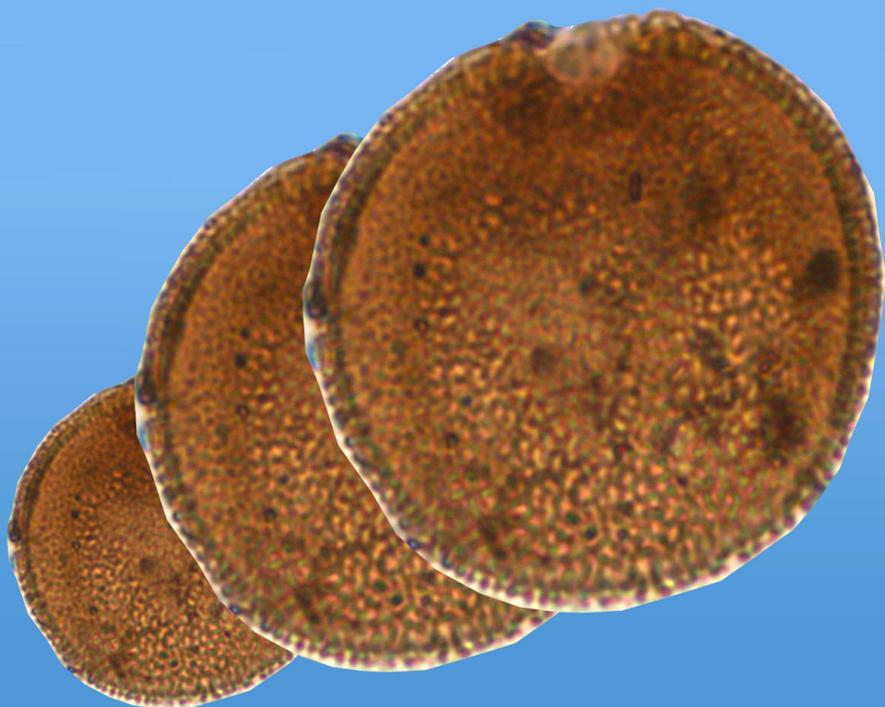


# **Newsletter of Micropalaeontology**

Number 90  
July 2014

Edited by Claudia Cetean







### *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 Urbino's 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 Cetea (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 Cetea 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).



*Birth day group:  
Johan, Mattia and Maria  
Photo credit to Maria Tulbure, Sciences  
Utrecht University*

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

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*