

SHORT COURSE ON LARGER FORAMINIFERA: THE NUMMULITIDS

JULY 1-5, 2019

Course Instructors:

Antonino Briguglio (University of Genova, Italy), antonino.briguglio@unige.it;

Cesare A. Papazzoni (University of Modena and Reggio Emilia, Italy), papazzoni@unimore.it

Johannes Pignatti (University of Rome La Sapienza, Italy), johannes.pignatti@uniroma1.it;

Course venue:

DI.S.T.A.V. - Dipartimento di Scienze della Terra, dell'Ambiente e della Vita, Università degli Studi di Genova Corso Europa, 26 I - 16132 Genova, Italy

Course description:

This five-day hands-on course covers all aspects of the biology, taxonomy, (paleo) ecology, and biostratigraphy of Cenozoic nummulitids including their application at industrial level.

Nummulitids are a major constituent of shallow-water Paleogene tropical marine deposits and are routinely used for biostratigraphy and palaeoenvironmental reconstructions.

The course is designed for graduate-level students, PhD candidates, postdocs and practicing micropaleontologists who wish to increase their knowledge on nummulitid foraminifera. Basic knowledge on foraminifera and microscopy is required.

Morning lectures shall be accompanied by afternoon practical sessions during which students can become familiar with the Cenozoic nummulitids from the Mediterranean, Middle and Far East provinces. Most of the practicals will be based on the study of foraminifera in thin section.

Attendants are encouraged to bring their own study material (thin sections, isolated specimens, photographs) if they wish to discuss it with the lecturers.

Handouts and an extensive pdf collection of reprints shall be provided.

Daily schedule:

Morning class: 9am – 1.30pm, with coffee break

Lunch break, 1.30pm – 2.30pm

Afternoon practicals: 2.30pm – 6pm with coffee break

30th June (Day 0 SUN)

Icebreaker party (4pm – 7pm)

1st July (Day 1 MON)

Introduction to nummulitids: biology, morphology (3D & thin section), bauplan and taxonomic features

Coffee break

Field techniques, evolutionary concept, paleoecology, and taphonomy

Afternoon practical: Modern nummulitids, morphology of nummulitids in thin section and 3D.

Industrial applications, taphonomy

2nd July (Day 2 TUE)

Definition of *Nummulites*, *Ranikothalia*, *Assilina*, *Operculina* and other nummulitid genera of the Cenozoic.

Coffee break

Lineages and systematics of Paleocene and lower Eocene nummulitids

Afternoon practical: Thin sections of Paleocene and lower Eocene nummulitids

3rd July (Day 3 WED)

Field trip (entire day)

We will visit some of the famous outcrops of the Italian-French Nummulitico (Nummulitique). Actually, the word Nummuliticum was used for a number of years as a stage in the stratigraphic chart to indicate what is now the Paleogene.

We will visit the stunning Capo Mortola outcrop where densely packed nummulitic carbonatic beds occur. The outcrop is located just outside the world-famous Hanbury Gardens, which we will have a chance to visit as well. After lunch, we will see two more outcrops where the same massive occurrence of nummulitic tests happens in a variety of facies.

We will cross the French border so participants requiring a special visa to enter France are encouraged to make sure they can legally cross this border.

The excursion will take the entire day from early morning to late afternoon; lunch will be provided by the organizers.

4th July (Day 4 THU)

Lineages and systematics of middle Eocene nummulitids

Coffee break

Lineages and systematics of upper Eocene nummulitids

Afternoon practical: Lineages and systematics of middle -upper Eocene nummulitids

COURSE DINNER

5th July (Day 5 FRI)

Lineages and systematics of Oligo – Miocene nummulitids

Coffee break

Heterostegina-Spiroclypeus-Cycloclypeus

Afternoon practical: Lineages and systematics of Oligo-Miocene nummulitids

Visit to the thin section laboratory at DISTAV, hands on experience on splitting and thin-sectioning of nummulitids

Course registration fees:

Academic/Industrial staff - (€ 700 euro)

University student's - (€ 500 euro)

The registration fee includes:

- Tuition fees (4-day course and 1-day field trip)
- Lecture notes, handouts, PowerPoints, pdfs of reprints.
- Icebreaker party, coffee breaks & Course Dinner
- field trip transportation and lunch

Minimum number of participants: 5

Maximum number of participants: 15