

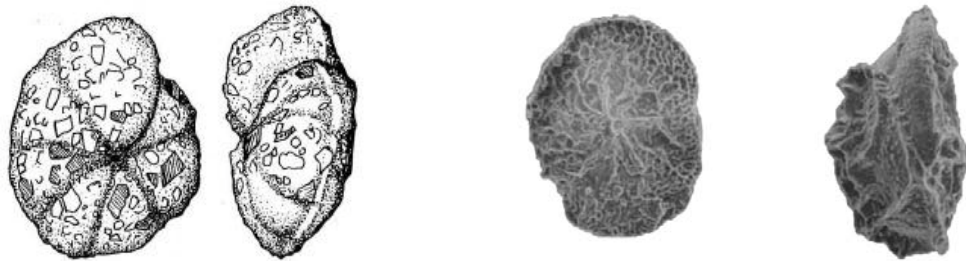
## Shortcourse

### Micropaleontology, Biostratigraphy, Paleobathymetry in Petroleum Basins of the North Sea, Norwegian Sea and offshore Eastern Canada and NW Greenland.

**WHEN:** 26 -30 September 2011

**WHERE:** British Geological Survey, Keyworth, UK\*  
Coordinators: Sev Kender, Mike Stephenson, Stewart Molyneux

**Instructor:** Felix M.Gradstein\*\*



## Course Description

The shortcourse dealing with Micropaleontology, Biostratigraphy and Paleobathymetry in petroleum basins off eastern Canada (Grand Banks, Labrador Shelf), NW Greenland, and Norway (incl. Barents Sea) is designed to provide insight in the industrial utility of Mesozoic and Cenozoic shelly microfossil types and assemblages. This intensive course is intended for professionals and advanced students in applied Micropalaeontology.

The aim is to provide biostratigraphic, paleobathymetric and paleoceanographical models and its economic applications. Attention is given to epistominids and higher latitude planktonic forams. Deeper water agglutinated foraminiferal assemblages also will get extra focus; hence, a primer will be provided on their taxonomy, biozonations and deep water paleoecologic models.

The course will start with a short '*Micropaleontology for Professionals*' (also *handout*)

## Course Structure

The course focusses 2 days on Grand Banks, (+ conjugate Portugal), Orphan Basin and Labrador Margin (+ conjugate W.Greenland), 1 day on the classification and paleoecology of agglutinated foraminifera, and 2 days on North Sea, Norwegian Sea and Barents Sea.

Time Scale Creator software will also be dealt with to create detailed biostratigraphic range and event charts.

Participants do extensive microscope sessions to study key foram taxa, including zonal events and assemblages, with emphasis on the deep water agglutinants and planktonics in higher latitudes.

## Teaching Format

The course consists of morning lectures and afternoon microscope lab sessions to provide the opportunity for participants to learn genera and species, and view Jurassic, Cretaceous and Paleogene shelly microfossil assemblages from selected sites.

Course materials include a large (!) number of reprints of classic and regional micropaleo studies, distributed on memory stick. Datapacks of microfossil events will be uploaded in TimeScaleCreator Pro for creation of attractive zonal schemes.



## Course Outline

### Days 1, 2: Grand Banks, Orphan Basin, Labrador Shelf, offshore NW.Greenland

Introduction (including a brief *Micropaleontology for Professionals*) + literature (pdf's, paper reports) handout and datapacks

General geology and paleoceanographic setting offshore E. Canada and conjugate basins

Birth of the Atlantic and paleoceanography

Drilling history Grand Banks/Labrador, Greenland and Orphan Basins, with linkage to 'Basin'

Mesozoic and Cenozoic Biozonations and Paleobathymetric models

Microscope sessions



### Day 3: Deep water paleobathymetry with forams; DWAF day

Introduction to DeepWaterAgglutinatedBenthicForams+ literature (pdf's, paper reports) handout and datapacks

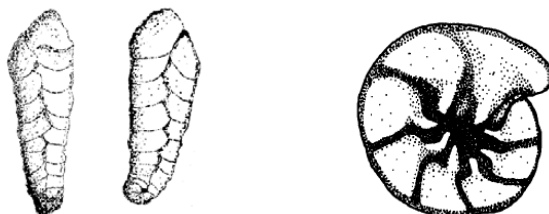
The origins of Applied Micropaleontology – The Gryzbowski School

Primer in the modern taxonomic classification of agglutinated Foraminifera

Paleoecology and paleobathymetry with agglutinated Foraminifera

Microscope session

How to become fluent in TimeScaleCreator for nice charts; self work



**Day 4: 'Bad' biostratigraphy and drilling challenges.**  
**North Sea exploration geology and hydrocarbon production**  
Case histories of drilling with badly applied biostratigraphy

General geology and paleoceanography settings, off Norway

Linkage to the NORLEX website for zonal correlations of wells

Microscope session



**Day 5: North Sea and Norwegian Sea Mesozoic and Cenozoic biostratigraphy**

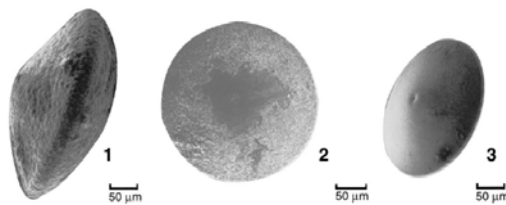
Introduction + literature (pdf's, paper reports) handout and datapacks

Mesozoic and Cenozoic Biozonations and Paleobathymetric models

Vøring basin drilling challenges

Calibration of North Sea multiple biozonations to the time scale

Microscope session



*\*BGS (British Geological Survey), Keyworth, UK.  
Contacts: Dr. Sev Kender. Email: sesev@bgs.ac.uk*

*\*\*email: felix.gradstein@nhm.uio.no  
Past Chair, International Commission of Stratigraphy (ICS)*