学 术 报 告

The Significance of calcareous nannofossils as Indicators of Ocean Water Masses and Palaeoproductivity

报 告 人：Barbara Balestra 博士

报告时间：2026 年 7 月 4 日 14:00-15:30

地　　点：实验技术中心会议室（实验楼西 201）

报告简介：

As one of the most prominent phytoplankton groups in the ocean, coccolithophores are critical drivers of marine primary production and the global carbon cycle. Their calcified remains are major constituents of deep-sea sediments. Both extant and extinct coccolithophore assemblages are used for biostratigraphy and as paleoceanographic proxies. Variations in nannofossil assemblages serve as direct proxies for temperature and environmental changes.

The purpose of this seminar is to explain what these phytoplanktonic organisms are, why they are important and show how the coccolithophore assemblage variation can be used to characterize the dynamics of the different water masses in paleoceanographic studies. Preliminary coccolith results from the recent IODP Exp 401 (December 2022 to February 2023) in the West Iberian Margin, Gulf of Cadiz and Alboran Sea will be also presented.

报告人简介：

Barbara Balestra is a paleoceanographer and biostratigrapher discovering past climates through ocean sediments and a senior professorial lecturer at American University where she teaches and manages laboratory classes for the Environmental Science Department. She also holds a research associated position at the Smithsonian Institution National Museum of Natural History, in the Paleobiology Department.

She received her Ph.D. in Earth Science from the University of Florence, Italy. Prior to joining American University, Dr. Balestra was a post doc at the Universities of Florence (Italy) and at Lamont-Doherty Earth Observatory (LDEO; USA); then she was a researcher at the School of Earth and Environmental Sciences (SEES) at Queens College (CUNY) and at the University of California Santa Cruz (UCSC).