

Earth Sciences Department

Paleontology - Paleopalynology



FACULDADE DE
CIÊNCIAS E TECNOLOGIA
UNIVERSIDADE NOVA DE LISBOA

CICEGe

FCT

Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR



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Ph.D. in Geology (Stratigraphy and Paleobiology), FCT/UNL

MSc in External Dynamic Geology, FCUL

Graduation in Geology, FCUL

Objectives

Studies in Palynology (mainly dinoflagellate cysts), stratigraphic distribution, paleoecology, paleogeography during Miocene (main lithologies: sands, marls and biocalcarenites) in the distal part of the Lower Tagus Basin.



Distal part of the Lower Tagus Basin

Methodology

Standard palynological laboratory procedures applied to all samples.

Light (LM) and scanning electronic microscopy (SEM) allows the identification of dinoflagellate cysts, acritarchs cysts, spores families, gymnosperms and angiosperms pollen families; international studies and indexes used for the identification of palynomorphs.

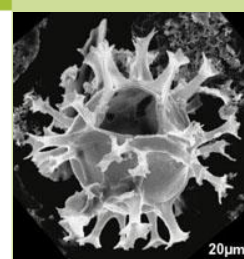


Laboratory where the samples are treated

Expected Results

Review of the temporal distributions of the identified groups and characterization of the associations. Paleoecologic and paleogeographic evolutions. Identification of the transgressive and the minor sea level episodes of the distal region of Lower Tagus Basin. Correlation with the global eustatic curves. Paleogeographic maps are presented for each Miocene Stage, based upon environmental distributions (from continental to oceanic) of palynomorphs. Variations of marine environments (with the presence of dinoflagellate cysts) and the proximity of land to the marine depositional environment (reflection of pollen and spores assemblages). The oscillations in the sporomorph/dinocyst ratio allow to analyse sea-level changes. Comparison of the associations identified with international biozonations, in order to establish a valid biostratigraphic scale for the Portuguese Miocene.

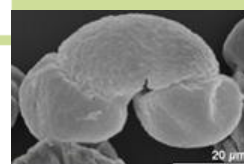
Funding:



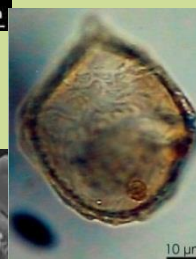
Dinoflagellate cyst (SEM)



Spore (LM)



Pollen (LM)



Dinoflagellate cyst (LM)