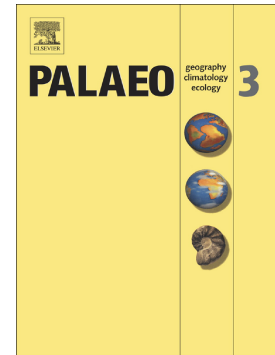


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## The late Pliocene palaeoenvironments and palaeoclimates of the Western Iberian Atlantic Margin from the Rio Maior flora

Manuel Vieira<sup>1,3\*</sup>, Matthew James Pound<sup>2</sup> and Diamantino I. Pereira<sup>3</sup>

<sup>1</sup>Shell UK. 1 Altens Farm Road, Nigg, Aberdeen, AB12 3FY, Scotland, UK

<sup>2</sup>Department of Geography and Environmental Science, Northumbria University, Newcastle upon Tyne, NE1 8ST, UK

<sup>3</sup>Institute of Earth Sciences, Pole of University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal

\*Corresponding author: Manuel.Vieira@Shell.com

### Abstract

Using a revised chronology, a new palynological study on the late Pliocene (Piacenzian and earliest Gelasian) Rio Maior site of the Tagus Basin in western Portugal has been undertaken from the F98 core. Combining light microscopy and scanning electron microscopy, a total of 127 different pollen and spore taxa have been identified from the Piacenzian Lake and indicate the presence of a subtropical to warm-temperate mixed forest during the majority of the Piacenzian (3.6 – 2.8 Ma). It is only in the latest Piacenzian (after 2.8 Ma) that progressive extinctions of climate sensitive taxa and a drop in diversity indicate a cooling and drying climate trend that has also been recorded from high-latitude localities. By the earliest Gelasian (2.58 Ma), a low diversity Ericaceae and *Pinus* dominated vegetation remained. The Piacenzian flora of Rio Maior also shows fluctuations in the presence of climate sensitive taxa and pollen-spore diversity that may be related to Piacenzian glaciations.

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