

Romanian Journal of STRATIGRAPHY

continuat on of

DĂRI DE SEAMĂ ALE ȘEDINTELOR INSTITUTULUI DE GEOLOGIE ȘI GEOFIZICĂ
COMPTES RENDUS DES SÉANCES DE L'INSTITUT DE GÉOLOGIE ET GÉOPHYSIQUE
(4. Stratigrafie)

Founded 1906 by the Geological Institute of Romania

ISSN 1220-5664

Vol. 76
Supplement Nr. 7
(3 volumes)



IUGS, REGIONAL COMMITTEE ON MEDITERRANEAN NEOGENE STRATIGRAPHY
4 - 9 September

A B S T R A C T S

VOLUME 1

M.V. TRIANTAPHYLLOU, H. DRINIA, M.D. DERMITZAKIS

THE PLIO- PLEISTOCENE BOUNDARY IN GERAKAS SECTION, ZAKYNTHOS
(IONIAN ISLANDS). BIOSTRATIGRAPHIC AND PALEOECOLOGICAL
OBSERVATIONS.



Institutul Geologic al României
București - 1995

THE PLIO- PLEISTOCENE BOUNDARY IN GERAKAS SECTION, ZAKYNTHOS
(IONIAN ISLANDS). BIOSTRATIGRAPHIC AND PALEOECOLOGICAL
OBSERVATIONS.

M.V. TRIANTAPHYLLOU, H. DRINIA, M.D. DERMITZAKIS

Department of Historical Geology and Palaeontology, Athens University, Athens, GRI 157

The section Gerakas is located in the northeast side of the island of Zakynthos and comprises three parts: "Seliniako Topio" section, Gerakas I section and Akrotirio Gerakas section.

Detailed sedimentary facies analysis leads to the recognition of three units which are indicative of coastal-shallow marine environment and are bounded by unconformities. Unit 1 is composed of laminated marls embedded into blue marls. The base of Unit 2 is characterised by the presence of a thin sandy conglomerate which is going into lithified brown sandstone. The upper part of Unit 2 is composed of bluish marls with laminated marly intercalations and a variety of microfossils and trace fossils. Finally, Unit 3 is composed of brownish calcareous sandstones.

Based on the occurrence of fossil biostratigraphic events, it is possible to recognize the Plio-Pleistocene boundary in "Seliniako Topio" section. The lower part of this section can be placed between 1.89 Ma (highest occurrence of the species *Discoaster browni* and *Discoaster triradiatus*) and 1.60 Ma (lowest occurrence of the species *Gephyrocapsa oceanica* s. l.). The lowest occurrence of the species *Gephyrocapsa oceanica* s. l. points out an age between 1.57- 1.61 Ma and allows the recognition of the Plio-Pleistocene boundary in the above -mentioned section based on biostratigraphic events.

The available data for lower part of the section point to Upper Piacenzian (Upper Pliocene).

The uppermost part of the lower Unit is placed between 1.60 Ma and 1.45 Ma (highest occurrence of *Calchisius macintyreii*) and can be assigned to Lower Pleistocene (Lower Selinuntian).

The quantitative micropaleontological analysis of calcareous nanofossils indicate a coastal-shallow marine environment of low salinity and low temperature in Upper Piacenzian- Lower Serravalloian times and a tendency to higher temperatures in about 1.00 ma. Furthermore, Lower Pleistocene is characterised by relatively warm water of low productivity.