



Late quaternary pollen diagrams from the central Adriatic Sea (part of the “paliclas” multidisciplinary project)

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This investigation forms a significant component of the PALICLAS research programme funded by EU. PALICLAS is a multidisciplinary project which aims to reconstruct the effects of climatic forcing and of human activities on ecosystems in Italy, during the last 20 k yr.

The project focuses on core sequences obtained from sediment sequences in the Central Adriatic as well as from crater lakes (Lakes Albano and Nemi) situated ca. 10 km SE of Rome. Research teams from Liverpool, Bologna, Modena, London and Verbania Pallanza are studying a wide spectrum of proxy records, including palaeomagnetic, sedimentological, biogeochemical and isotopic variation within the sediments as well as the biostratigraphy of the successions (e.g. pollen, diatoms, Foraminifera).

The chronological framework for the assessment of these data is based on AMS radiocarbon dating. Here we present the results obtained from the pollen-stratigraphical analysis of several cores from the Central Adriatic Sea (obtained by CNR-IGM Bologna). The cores are internally consistent and provide high resolution records for the time interval of interest within the project. The pollen content of the sediments was found to be satisfactory and the pollen were very well preserved. The provisional pollen diagrams which we present are based upon pollen sums of 300-400 pollen. Some of the sequences extend over full Holocene and pre-Holocene times, with one record covering the last 20 ka in full.

Other sequences preserve very high resolution records of the late Holocene. The pollen diagrams provide clear evidence of marked vegetation changes at the Late Glacial/Holocene transition, while increasing human disturbance during the Holocene is reflected in the evidence for forest clearance and pollen of anthropogenic indicator taxa. The Cereal pollen curve in particular indicates strong anthropogenic signals in the mid-to late Holocene records and it provides the potential for correlations with archaeobotanical data from southeastern Italy.