COMPARATIVE SEDIMENTOLOGICAL STUDIES IN DELTAIC PLATFORMS OF EASTERN AND WESTERN MEDITERRANEAN: DELTAIC PLATFORMS OF THERMAIKOS (GREECE), RHONE (FRANCE), EVROS (SPAIN) AND PO (ITALY)

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Detailed oceanographic studies of the last two decades in the deltaic platforms of Eastern anc Western Mediterranean revealed close similarities to the modern dynamic sedimentation as well as to the depositional mechanisms. These mechanisms seems to be predominate throughout the Holocene transgressional period.

The deltaic platforms of Thermaikos, Rhone, Ebro and Po, although they are located in different geodynamic systems, display the same sedimentation mechanisms in space and time. This is expressed a) by the three dimension development of the sediment sequences (lobate deltaic prism), b) the vertical succession of the different sediment units within the deltaic prism and c) the aerial dispersion of the surface sediments in the topsets, foresets, and bottomsets of the prodelta area.

BEACH ROCKS OF THE HELLENIC AREA AND THEIR SIGNIFICANCE IN THE RECENT HOLOCENIC TRANSGRESSION

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This study focuses on the Beachrocks from several regions of the Hellenic area (coasts of SW Attica, south coasts of central Euboia and Argois, Lesbos and Pagasitikos Gulf). Speciel attention wes given to the relationship between the field and the minerelogy and the fabric of the Beachrocks cement.

The fieldwork was oriented towards coastal and submarine research at the sublittoral zone so that the spotting of various fossil coasts in the form of Beachrocks could be attained. Oriented samples were picked up and were undertaken laboratory werk, comprising the following procedures: Thin sections analysis using petrographic and scanning electon microscope (SEM), electron microprobe analysis by SEM and X-ray powder diffraction analysis.

The goal of the laooratory work was to define to structure, character, correlation of the Beachrocks, the nature of cement and its mineralogical composition, necessary factors for the identification of the paleoenvironment and the conditions of their origin.

Through the submarine research it is proved that the Beachrocks of the several studied areas are located in various depths (0-5 m) and form a sequence of coastal land forms which consolidate the existence of older coast lines.

All the located Beachrocks are dated in the second half of the Holocene (from Late Neolithic period up today) and avidence a preexisting sedimental structure.

The samples, independent of region, location and depth of sampling, are characterized by the steady presence of Mg and the uniform distribution of the calcite cement. The steady presence of Mg-calcite was estimated at ≈15 mol% $MgCO_3$ in solid solution. There was not spotted aragonite in detectable quantities. The Mg of the cement has primitive origin and is not product of recrystallization and the lithifying process of Beachrocks is very likely inorgenic.

THE EVOLUTION OF THE DRAINAGE NETWORK OF THE ISLAND OF EUBOEA WITH THE RELATION TO ITS GEOLOGICAL STRUCTURE

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The paleogeography of the island of Euboea is characterised firsty by several preneogene geoforms observed mainly in the central part of the island, and secondly and most importantly by a convergent paleo-drainage system in the three principal neogene basins. Faulting and uplift of the region have changed the paleo-topography. The recent drainage system is located mainly on the neogene formations. The evolution of the drainage network has occured during different stages, a stage of the development of principal streams, following the linking of the small channels with the streams and finally the complete extension of the whole system. This is apparent in the Psachna and Lilas basins where the domirant directions are N-S and E-W and where a «piracy» of the small channels later took place.

The form of the drainage network, in other words the divergence or the convergence of the channels, the study of the longitudinal profiles and the processes of erosion and deposition of the rivers reflect the recent movements of the island. Uplift movements have been observed in the regions of Lichas, north of Nireas river, in the central part of the island and in the southern part (Karistos). On the contrary downwards movements are noted in the coastal river basins and in the region of the Lake Distos in the southern part.