

Quaternary Evolution of some coastal Lagoons of the Spanish Mediterranean Littoral (Valencia, Alicante and Mallorca)

M.-P. FUMANAL* ; G. MATEU** and M.-J. VINALS*

*Departamento de Geografía, Universitat de Valencia, 46080 Valencia (España)

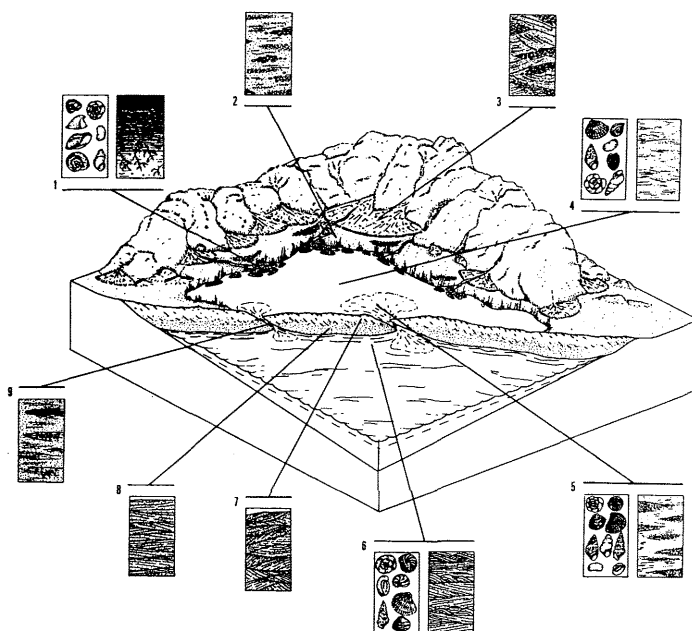
**Instituto Español de Oceanografía, Muelle de Pelaires, Palma de Mallorca (España)

This is a study of the quaternary evolution of four barrier-island systems in the Mediterranean coast.

We have worked in four areas, three of them in the peninsular littoral: The Oliva-Pego marsh (Valencia), Xàbia and Moraira (Alicante). The fourth, S'Albufera de Alcudia, is in the eastern coast of the island of Mallorca. These environments have very active sedimentary dynamics, dependant on the quaternary eustatic oscillations, finally responsible for the migration of the ancient coastlines.

The reconstruction of the successive depositional environments in these littoral zones is approached from the sedimentological and micropaleontological analysis and from absolute datings of the materials extracted from several cores.

The Oliva-Pego marsh is currently a barrier-island system placed in the southern part of the Valencia Gulf. DUPRE et al (1988) and VINALS et al. (1989) have recognized several subenvironments from marginolittoral areas that allow us to place different positions of the coastline during Upper Quaternary.



GRAF: L. NAVAS

Ideal reconstruction of the Oliva-Pego marsh in the Upper Pleistocene. Facies of the margino-littoral environment: (1) Biotope of the freshwater swamp; (2) facies of aluvial plain; (3) facies of aluvial fan; (4) Biotope of brackish lagoon; (5) Biotope of marine influenced brackish lagoon; (6) Biotope marine, infralittoral; (7) Dune facies; (8) Dry beach facies; (9) Inlet facies. Sedimentary structures are from REINECK and SINGH (1975).

The Xàbia and Moraira bays have a more structural morphology since they are inserted in the sea-cliffs of La Nao. Now they are relic systems (FUMANAL and VINALS, 1989 a; 1989 b), whose pleistocene barrier formations are recognizable in the present landscape (FUMANAL et al., 1990).

S'Albufera de Alcudia is the biggest lagoon of the Balears. The cores taken inside this area have a depth of 350 m. From micropaleontological studies COLOM (1985) and MATEU (1982) have established different levels, the majority of them from the Tertiary age. The upper 62 m are due to quaternary sedimentation.

The sedimentological features of the records allow the reconstruction of the different sedimentary environments and the diverse positions of the coastline along the considered period.

The species found permit the paleoenvironmental reconstruction. The fact that many of the species are euryhalines, imply that the study must be based on the consideration of faunistic associations and the dynamics of populations.

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