

**Quaternary features in Palma Bay (Balears, Spain) and surrounding littoral areas :  
A physiographic approach**

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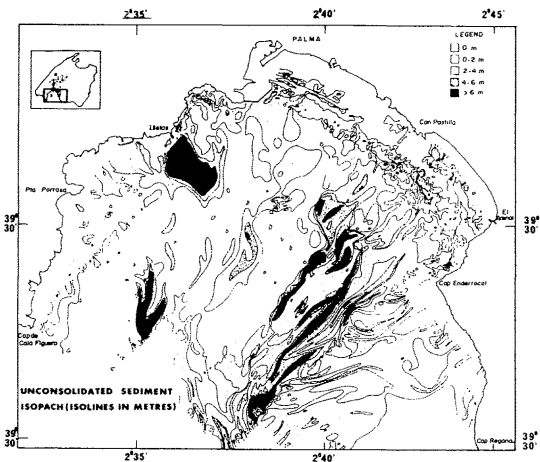
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Palma Bay is a shallow semienclosed embayment located in the Southern of the Mallorca island in the Western Mediterranean. Its morphology is slightly flat, deepen gently in a SW direction. The uppermost litoseismic unit, Quaternary in age, has two different depositional bodies inferring two different genesis as well, on the basis of the recent geological evolution developed in the area. From the analysis of the data available (Uniboom 200 joules, 3.5 kHz, echosounder, side scan sonar, aerial reconnaissance and bottom sediment samples) it seems that a drainage system strongly hierarchized (MATEU *et al.*, 1985) took place over the broad littoral plain formed in relation to the post-glacial relative sea-level drop affecting the Western Mediterranean 18.000 years B.P. (PIRAZZOLLI, 1987). Correlatively to this event an erosional period has been affecting the Plio-Pleistocene basement composing the plain by means of a fluvial encasement highly active. This is the reason why is possible to identify in the litoseismic record, a lower sedimentary body (channel infilling) in the base of the uppermost unit before mentioned (DIAZ-DEL-RIO and SOMOZA, 1991).

Following this relative sea-level drop, there was a steeply-state sea-level rise events, producing a marine carbonate sedimentation (due to high biological productivity) fossilizing the drainage system in successive stages. This evolution finally reach the present time being possible to recognize a smooth sea bottom in the bay, widely covered by a sandy sheet occupied by a seagrass meadow that contribute to sedimentation with great amounts of carbonate skeletons from the living organisms coexisting in this particular ecosystem.

In this poster we present the results of the study in a form of "Physiographical Map" showing the main units (depositional and morphological) recognized in the area, and also a chronology of the littoral units (Early Pleistocene to Holocene). This approach let us establish the interrelation between seabottom units and littoral ones during the Quaternary, and also to infer the role of the benthic communities in the present sedimentary process.



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