

GLACIO-EUSTATIC SIGNATURE IN LATE QUATERNARY DEPOSITS OF NORTHERN ITALY

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Integrated sedimentological and micropaleontological (foraminifera, ostracods, pollens) analyses of 11 continuously-cored boreholes, 150 to 270 m deep, reveal the depositional history of the Po Plain (northern Italy) during the late Middle Pleistocene-Holocene. Facies analysis and detailed stratigraphic correlations across several tens of km show a cyclic stacking pattern of facies, including continental, paralic and shallow-marine deposits. In landward direction, marginal marine deposits are replaced by alluvial sediments, showing regular alternations of coarse-grained (fluvial channel) and fine-grained (floodplain) deposits. Two major transgressive pulsations, marked at relatively seaward locations by the onset of littoral and deltaic sedimentation, with landward transition to delta plain and then floodplain deposits, are recorded in the uppermost 120 m and correspond to two prominent stratigraphic markers. These transgressive episodes, that were characterized by the development of interglacial mixed deciduous broad-leaved forests, can confidently be attributed to the past two interglacial events (oxygen isotope stages 1 and 5e). In contrast, abrupt shifts to alluvial sedimentation dominated by *Pinus* and non-arboreal pollen types are interpreted to reflect the onset of glacial periods. The good match between facies architecture, pollen distribution and global sea-level evolution strongly suggests that sedimentation in the Po Basin developed under a predominantly glacio-eustatic control. Subsidence exerted an important control in determining changes in accommodation.