

## The Oligocene Calciturbiditic Event in the Western Mediterranean Chains

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In the Betic, Maghrebian and Apenninic, units originated by the early Miocene deformation of a remnant oceanic area (Mauretanian, Sicilide, North-Calabrian, Calvana and Canetolo Nappes) are known. This oceanic area represented a branch of the Tethys, separated from the Piedmontese-Ligurian- Nevadofilabride Ocean by a Mesomediterranean microcontinent.

Carbonate turbidite formations, up to 700 m thick, consisting of whitish calcilutites, calcisiltites and minor bioclastic calcarenites, or of greyish calcarenites with abundant siliciclastic content, characterize the units originated from the oceanic area.

All these calciturbiditic formations resulted Oligocene in age. Bioclasts, consisting of macroforaminifers, calcareous algae, echinoids, crinoids and rare bivalves, represent typical Heterozoan associations, indicating cool water environment with a mean temperature of 15-18 °C.

Age and features of the turbiditic formations can be interpreted admitting the existence of open non-tropical shelves, in which Upper Cretaceous-Eocene not yet diagenised mud, silt, sand and bioclasts, were re-mobilized and re-sedimented in the contiguous deep basins, as a consequence of the Oligocene strong sea-level fall. In some areas, the erosion affected deeply the sediments and reached the pre-Alpine basement, producing abundant phyllitic and extrabasinal carbonatic grains. So, both the lack of Eocene-Oligocene sediments in many carbonate platforms and the abundance in contiguous basins of Oligocene turbidites, made up mainly of Cretaceous-Eocene sediments and fossils, may be explained.

The occurrence of these deposits in orogenic sectors in which carbonate platform lack, as the Northern Apennines, and the presence of Middle Jurassic-Lower Cretaceous neritic clasts of unknown provenance in all these formations, as well as in the overlying foredeep and up-thrust deposits, make necessary to locate on the southern and eastern margin of the Meso-mediterranean microcontinent a probably continuous belt of carbonate platforms.