

Where is the fossil transfer zone between the European margin and the Ligure-Piemontese deep-sea turbidites? The example of the Balagne Nappe, Alpine Corsica

Luca Pandolfi

Dipartimento di Scienze della Terra, Università di Pisa (pandolfi@dst.unipi.it)

The stratigraphic analysis of fossil turbidite systems developed on oceanic crust and their provenance study allow to better understand and constrain the paleogeography of the oceanic basin during the drifting phases.

These depositional systems are generally fed by the outcropping continental crust of the related passive margins that represent their main source areas.

The linkage between the source area and the deep-sea depositional system is represented by a transfer- or by-pass-zone that is formed by a restrict area where the turbidity current flows towards the deep-sea basin.

Although many of the turbidite systems are now exposed in collisional belts, and the tectonic cancelled the original basin and continental margin architecture, the recognition of such proximal portion of the turbidite systems is crucial to better correlate the source area with the deep-sea deposits.

Since in such complex areas the conventional basin analysis methods, developed on basin located on slight deformed crust, cannot be successfully applied, an integrated approach using facies, biostratigraphy and provenance analyses is the only possible method.

In this contribution I will stress the importance of such integrated approach with an example from a Cretaceous turbidite system developed on the Ligure-Piemontese oceanic lithosphere and dismembered by the late alpine collisional tectonics. The aim of this presentation is to document the stratigraphic features of the turbiditic cover of ophiolites from the Balagne Nappe (Corsica) and characterize its source area; then I will try to discuss the relationships between the Cretaceous depositional systems cropping out in the Alpine Corsica and Northern Apennines, in order to suggest new constraints for the Cretaceous Western Thetys paleogeography.