From the Breakup of Rodinia to Present: A Brief Palaeogeographic Reconstruction of the Tethyan Region

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Palaeogeographic maps have been reconstructed for selected time intervals: Cambrian, Late Ordovician, Early Devonian, Carboniferous-Permian boundary, Permian-Triassic boundary , Norian, Callovian, Aptian, Cretaceous-Cenozoic boundary, Late Eocene. For each time interval both the general picture of the major plate tectonic configuration and a detail of the palaeogeography and palaeoenvironment of the Mediterranean to peri-Gondwanan regiorns are presented. On these latter maps, the major simplified paleoenvironmental settings (from continental, to shallow marine and deep ocean) are presented for the area stretching from North Africa to Afghanistan in all the selected time slices. Some of the presented palaeogeographic maps are chosen among several ones from the literature based on the quality of the alaeomagnetic/paleobiogeographic data on which they are based (i.e. Late Ordovician, Aptian, Cretaceus-Cenozoic); others have been prepared originally for the present paper using selected and updated paleomagnetic data from stable Africa and Europe (Carboniferous-Permian, Permian-Triassic).

For each map the description of the major tectonic events framed in the geodynamic setting of the considered time interval is presented. When contrasting paleogeograpic reconstructions are available, these differences are discussed. In general, major differences concern the interpretation of the setting and positioning of the microplates and terranes among the major continental plates. The major tectonic events are described as is the global climate evolution and their interplay, which in some cases lead to significant biotic turnovers or even to mass extinctions (ie. Late Ordovician, Permo-Triassic boundary, Cretaceous-Cenozoic boundary).