

MESOZOIC AND CENOZOIC CONVERGENT PLATE MOTIONS IN THE CENTRAL AND SOUTH-EAST EUROPE

MIRCEA I.V.SANDULESCU, Faculty of Geology and Geophysics, Bucharest, Romania

The riftings which precede the Tethyan opening in the central and eastern segments of the investigated areas is Permian and/or Lower Triassic. The spreading start in Middle Triassic, in the Carpatho-Dinaric and Hellenic-Anatolian segments and continues in Jurassic; it is Jurassic in the West Carpathians-Alpine domain. Important rifting processes took place within the European continental margin in Triassic time (North Dobrogea-South Crimea) or in Jurassic time (Ceahlau-Severin Rift similar with the Valais Rift). The convergent processes start at the end of the Upper Jurassic, along the Vardar-Transylvanian segment; there subductions develop within the oceanic domain (Mariane-type subduction), documented by calc-alkaline magmatism superposed on oceanic crust. The first important convergent motion is Middle-Cretaceous (Aptian-Albian). It is well documented by compressive structures within the oceanic Tethys (obduction nappes above the European continental margin) and on the European continental margin itself. The opposite continental margin (Fore-Apulian and partly Apulian) react later (mid-Turonian). The continent-continent collision occurs firstly at the end of the Cretaceous but not along the whole Tethyan domain. It is restricted to the Vardar-Transylvanian and partly Hellenic-Anatolian sutures. Along the Pieninic-Liguro-Valaisanne Suture the collisions end in the Lower Miocene or Oligocene. During the same period and also later (Middle and early Upper Miocene) the post collision compressive processes jump within the European continental margin (the external part of the Carpathian Flysch Zone). The latest deformations of some segments of the continental margins are of Lower Pleistocene age.