

THE GEODYNAMIC MODEL OF THE DOUBLE BENDED CARPATHIAN-BALKAN ALPINE CHAIN

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The Carpathian-Balkan area is a Cretaceous-Tertiary folded belt incorporating: (1) in the Carpathian realm, the Main Tethyan Suture and both its European and Preapulian strongly deformed continental margins, while (2) the Balkan and Rhodope consist mostly of units belonging to the European deformed margin.

The Triassic and Jurassic periods were dominated by spreading (the Neotethys) and extension (rifts within the passive continental margins) processes. In that same time, a peculiar chain developed within the Carpathian-Balkan foreland: the North Dobrogea-Crimean Cimmerides.

Several compressional moments lead to the actual structure and shape of the chain. For the inner parts there are the mid-Cretaceous, intro-Turonian and end-Cretaceous deformations; for the outer ones, the end-Eocene (in the Balkan) and lower-middle Miocene (in the Carpathians).

Important crustal shortening occurred in the Carpathian-Balkan realm due to subduction of oceanic and/or thinned continental crust as well as imbricated continental crust shearing.

The double bended shape of the folded area is the result of differential (in time and amount) driftings of foreland sectors as well as of Preapulian continental bloc. Transcurrent and tear faulting accompanied and facilitated these events.