



The mesozoic palaeogeographic evolution of Anatolides.

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Turkish orogenic belt is compound of several palaeogeographic units which amalgamated in late Mesozoic-Cenozoic time. Palaeogeographic reconstructions are still debateable owing to the complex, multistage geological development. A new scenario is proposed here based on recently published information and new data acquired in the frame of the DARIUS Programme.

At the end of the Palaeozoic, all the continental domains south of the Izmir–Ankara–Erzincan suture were located within the eastern part of the north-Gondwana margin. The Late Permian–Triassic period was characterised by widespread rifting leading to the opening of various deep-sea basins: between the Tavşanlı and Afyon zones and the Menderes massif (Pindos basin), between the Central Anatolian Block and Anatolia (Intra-Tauride basin), and between the southeastern Taurus and the Bitlis block. In most of the Taurus, a carbonate platform started to develop although parts remained emerge.

During the Jurassic, there was continued opening of the Mesogean Ocean (future East Mediterranean Sea). Anatolia and Taurus drifted northwards. The Taurus units remained as a carbonate platform. In its southeast part, a rift separated the Bitlis platform from the northern platform. Changes are most obvious in the Anatolian region. South of the Menderes platform, a trough developed and separated the Bey Dağları from the Menderes units. The Kızılca pelagic series, similar to the Lycian series, accumulated within this trough. North of the Menderes platform, the Lycian pelagic series accumulated, extending westwards into the Pindos series. This pelagic area was connected to the Tethys Ocean by passages through a neritic archipelago, as represented by the eastern extremity of the Pelagonian units and the western extremity of the Afyon units. The northern part of this area could be where the “Bornova zone series” accumulated. During the Late Jurassic in the Hellenides, ophiolites that had formed between the northern Apulian margin and the Serbo-Macedonian units were then obducted. As a result the most westerly part of the Bornova area emerged and bauxites developed in some places.

During the Early Cretaceous little changed in the Anatolia-Taurus region. But at the end of the Early Cretaceous (> 105 Ma) northward subduction starts in the Tethys between the Pontides and the Central Anatolian Block, as well as north of the Bitlis platform. The Central Anatolian Block was later subducted, and then rapidly exhumed. Dramatic change in Anatolia–Taurus occurs in Turonian times (92–90 Ma) with the initiation of intra-oceanic subduction in the Intra-Tauride Ocean, i.e. between the Central Anatolian Block and the Anatolide–Tauride Block. Ophiolites of the Intra-Tauride Ocean are thrust over the Anatolia-Taurus units in Campanian–Maastrichtian times. In the east, the burial of the Bitlis in the northward subduction zone is associated with a volcanic arc. Ophiolite obduction also took place along the southern margin of Anatolia in the Antalya region. Away from the Central Anatolian Block, a narrow Tethys remained between the Pontides units and Anatolia-Taurus. Cenozoic closure of this remnant ocean and final collision of the Anatolide–Tauride Block with the Central Anatolian Block preceded mountain building in Turkey.