

### **Basin Formation Along the Propagating Alpine-Carpathian-Dinaride Thrust Belt (Central-Southeastern Europe)**

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The predominantly calcareous Triassic to Early Cretaceous succession of the Alpine-Carpathian-Dinaride mountain belt contains Jurassic sedimentary mélangé deposits arranged in elongated basins parallel to the orogenic strike. The basin fills have a Bajocian to Kimmeridgian aged radiolarite-rich turbiditic matrix and include components with a large variety in both facies/origin and size - mega-slide blocks up to many hectometres in size were mobilised and re-deposited. The components are made up of ophiolite-derived material, radiolarites, pelagic and shallow-water limestones and evaporites with a Permian to Jurassic primary depositional age. The re-deposits originated from the obducted Neotethys-ophiolite and sediment-cover nappes of the underplated European/northwestern Gondwana continental margin off-scraped in the framework of the Neotethys Ocean's partial closure.

Along the Neotethys margin sedimentation dramatically changed in the Middle Jurassic. From the Bajocian the often condensed calcareous deposition was regionally substituted by almost purely siliceous sediments in addition with local formation of trench-like radiolaritic basins. These were related to the accretionary processes after the partial closure of the Neotethys Ocean and the subsequent creation of a propagating thrust belt. The older basins (Bajocian to Callovian) were filled by olistostromatic material deriving from the obducted ophiolites and the accreted outer shelf region domain. During propagation of the thrust belt the younger basins (Oxfordian to Kimmeridgian) took up material mobilised from the accreted and uplifted inner parts of the continental margin. All these basins were successively incorporated in the propagating thrust belt. In Kimmeridgian to Early Berriasian times a carbonate platform developed in a still active convergent regime, prograding over, and sealing, the Jurassic basins. Ongoing tectonic activity triggered marginal degradation of the carbonate platform and led to enormous mass movements in a generally more calcareous depositional setting.

The Bajocian to Kimmeridgian breccias are related to a still poorly known orogeny and must be considered separate from the widespread Early Jurassic breccias of the Alpine region. These were, in contrast, deposited along submarine slopes and escarpments of horst and graben systems of the Atlantic related Penninic-Piedmont Ocean basins and contain all exclusively components from a local source.