

Tithonian carbonate platform and reef complex - a distinction

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Two major carbonate elevation facies developed in the Tithonian on the Tethyan margin of the Bohemian Massif and on the adjacent cordilleras of the future flysch sea - Ernstbrunn limestone and Štrambersk limestone. The primary sedimentation areas of these limestones are not exposed now. They are hidden under the Carpathian nappes. We have the only possibility to study these sediments as olistoliths and clasts in the base-of-slope facies of the flysch basins. These olistoliths are exposed in the front parts of the flysch nappes /Ernstbrunn limestone - Ždánice unit, Štrambersk limestone - Silesian unit/.

These limestones sedimented in the different paleogeographic and paleotectonic settings. Štrambersk limestone deposited as a part of a facially differentiated reef complex. Ernstbrunn limestone developed on the carbonate platform.

According to the microfacial and sedimentological analysis, these two limestones are from the qualitative and quantitative point of view very different. These differences are manifested in the character of facies /facies belts - FB/, microfacies /SMF/, microfacial elements /especially associations of algae, character of ooids, coated grains, micritisation etc./ and diagenesis. The deposition and facies distribution were controlled by the tectonic mobility of the fundamentals, the rate of the subsidence, by the sea level changes and by the character of the compensation.