EVOLUTIONARY MODEL OF THE MELIATA BLUESCHIST ACCRETIONARY WEDGE  
(WESTERN CARPATHIANS, SLOVAKIA)  
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Low-temperature/high-pressure rocks of the Meliata Unit have been traditionally assumed to be formed by a southward subduction and subsequent northward exhumation of the Triassic Meliata-Hallstatt oceanic basin and related continental margin. New structural, petrological data and Ar-Ar cooling ages indicate that the present position of the Meliata unit resulted from two separate processes: a westwards middle Jurassic to lower Cretaceous accretion of Meliata subduction wedge (50 to 70 km in size) and a northward Cretaceous collisional-indentation tectonics. In our model, the Meliata accretionary wedge consists of a complex stack of crustal and oceanic units, which is formed from bottom to top by: (1) Lower Thrust Sheet (LTS) composed of subblueschist facies (8-10 kbar 350-400 °C) Permian phyllites and conglomerates, (2) Upper Thrust Sheet (UTS) consisting of blueschist facies (10-13 kbar 400-450 °C) marbles, metabasites and phyllites derived from Triassic oceanic rocks and subordinate fragments of Variscan amphibolite-facies basement rocks, (3) Very low-grade (4-6 kbar 300-350 °C) Meliata Mélange (MM) composed by Jurassic shales, marls and sandstones containing blocks (olistoliths) of Triassic radiolarites, cherts, and blocks of serpentinites, gabbros and blueschists. (4) Very low-grade to non-metamorphosed superficial nappes derived from Apulian shelf and formed by Upper Permian - Jurassic sediments and volcanics. The Ar-Ar and K-Ar cooling ages indicate progressive younging of exhumed units to the east and towards top of the accretionary prism from 170 Ma determined in LTS, 150 Ma of the UTS blueschists and 120 Ma reported from the Meliata Mélange. Structural evolution of Meliata accretionary wedge is characterized by ductile fabrics and mineral assemblages testifying westward HP subduction followed by coaxial retrogression associated with exhumation of HP rocks and succes-
sive out of sequence emplacement of thrust sheets. The whole accretionary wedge was thrust 50 to 70 km over crystalline Paleozoic basement and subsequently refolded by several kilometer to metre scale N-S striking buckle folds during late buttressing. The Cretaceous collision is marked by indentation of southern continental block actively moving to the north that irregularly and recurrently reworked the Jurassic fabrics. It is the complex Cretaceous (100 Õ 90 Ma) north- directed thrusting and folding that locally completely obscured Jurassic fabric pattern and polarity and made its correct interpretation difficult in past.