

(3) Mid-Cretaceous (110-90 Ma). Gradual underthrusting of the thinned Fatic crust beneath the North Veporic thrust wedge, décollement of the Zliechov basin infill to form an accretionary fold-and-thrust belt with coeval flysch deposition in forearc or piggyback basins. Shortening started also in the South Tatric domain. Thermal relaxation and compressional uplift of the ultra-Veporic thrust stack due to underplating of the Fatic crust.

(4) Late Turonian (around 90 Ma). After elimination of the Fatic basinal area and pushing-up of its detached and imbricated sedimentary filling over the South Tatric frontal ramp, an extensive overthrusting, narrowly age-constrained event occurred in the CWC. The Krizna (Fatic) and Choc (Hronic) nappes were gravitationally emplaced above the Tatric cover.

(5) Early Senonian (90-80 Ma). Shortening relocated to the outer Tatric margin facing the Penninic-Vahic ocean, where flysch coarsening-upward complexes deposited during underthrusting of the Vahic crust. Contemporaneously, the Veporic metamorphic core complex was rapidly exhumed by top-to-the east unroofing. Small anatectic granitic bodies intruded the Veporic basement.

(6) Middle Senonian (80-70 Ma). Deeply denuded Veporic units were overridden by the Silicic relief nappes. Transtension in the inner CWC zones, accretion along their outer edge with terrigenous and pelagic sedimentation.

(7) Late Senonian - Early Paleogene (70-60 Ma). Collision of the Tatric sheet and overlying nappes with the Oravic continental ribbon (Kysuca and Czorsztyn units of the later Pieniny Klippen Belt) after diminishing of the Vahic basin, followed by dextral transpression within the collisional zone and wrench faulting inside the CWC area.

The maps of tectonostratigraphic units and principal structures of the Western Carpathians and adjacent areas

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The first, tentative versions of two map sheets in the scale 1:1,000,000 have been compiled to demonstrate the present state of knowledge about the general tectonic structure of the Western Carpathians and surrounding areas.

The aim of the first map is to outline the dominant composition and regional distribution of the principal tectonostratigraphic units. The units are specified

according to the paleogeographic and paleotectonic principles (e.g. the time of structuralization), less based on the lithostratigraphic and deformation criteria. In general, the map is stripped off the "post-tectonic" sedimentary and/or volcanic cover superimposed on the tectonic edifice formed during the main Alpidic compressive events. Thirty one items of the legend comprise superunits of the Alpine-Carpathian foreland and the orogenic zone itself.

The structural map depicts the most important macro- to megascopic structures, especially antiforms, synforms, large-scale recumbent folds, buried horsts, low-angle thrust faults, high-angle contractional (reverse) faults, extensional normal faults and strike-slip and/or oblique-slip contractional and extensional fault zones. Narrow spacing of reverse faults indicates imbricated tectonic style, the combination of reverse faults and synforms or antiforms defines fold-and-thrust belts. Coincidence of several kinematic types of faults in one line points to re-peated reactivations of a long living "lineaments" (usually former sutures) with changing kinematic role through time. Five temporal periods of formation of principal structures shown (Paleozoic-Middle Jurassic, Late Jurassic-Early Cretaceous, Late Cretaceous, Paleogene-Early Miocene and Neo-gene) are distinguished by different colours. Based on the age of the main phase of structuralization and dominating tectonic styles, two principal structural-tectonic provinces may be recognized in the map. These are the Alpine-Carpathian foreland (North European Platform) and the Alpine-Carpathian orogenic belt. The former obtained its fundamental structural features already in pre-Alpine times, the latter exhibits polyphase Alpidic evolution and a wide range of tectonic styles.

The Southern Alps - Dinarides relationship

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According to the classic division of the Alps, the area south of the Periadriatic line belongs to the Southern Alps. These in general include the Southern Karavanken and Carnic Alps, the Julian Alps and Dolomites and the Sava hills (Sava folds) of Central Slovenia.

The division of the Dinarides originates from the Kober's "bilateral orogen" that determines the External, Central and Internal zone. However, only the terms External and Internal Dinarides have been in common usage. The area to the south, i.e. the Adriatic basin bears different geotectonic names.

The cross-section from the Adriatic basin to the Periadriatic line, at least in Slovenia, shows a