

The first hercynian structures are small size N-S oriented folds, vergent toward the west, which develop an axial plane foliation. These folds are superposed by later N-S oriented folds that are vergent toward the east, which have hectometric to kilometric sizes, reverse limbs and an axial plane crenulation cleavage. Finally, S-C structures with a top-to-the-east sense of movement are developed at subhorizontal shear zones. The orientation and vergence of the second hercynian folding stage are different of those described by Chalouan (1986) in the Rifian Cordilleras and by Balanyá (1991) in the westernmost part of the Betic Cordilleras. All these structures are previous to the basal unconformity of the Triassic rocks.

The first alpine deformations are N40°E oriented folds, vergent towards the south-east which locally develop reverse limbs. Those folds are cutted by reverse faults with a top-to-the-east sense of movement. Basaltic dykes, 22-23 m.y. old (Torres-Roldán et al., 1986), that intruded Palaeozoic rocks, are cutted by some of these reverse faults.

After those deformations, an extensional system composed by low angle normal faults with a top-to-the-southwest sense of movement in generated. These later faults are folded by open N-S oriented folds. The faults of this extensional system are recovered unconformably by Upper Aquitanian - Lower Burdigalian sedimentary rocks (Brecha de la Vinuela). Palaeogene flysch materials overlie the Brecha de la Vinuela rocks and are usually interpreted as a gravitational sliding. Finally there are low angle normal faults with a top-to-the-southwest sense of movement that are active until Tortonian times, and they are affected by E-W oriented open folds.

PRE-ALPINE EVENTS AT THE NORTHERN EDGE (KÜTAHYA-BOLKARDAGI BELT) OF TAURIDE-ANATOLIDE PLATFORM

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Kütahya-Bolkardagi Belt (KBB) is an Alpine unit, characterising the northern edge of the Mesozoic Tauride-Anatolide Platform. Late Cretaceous closure of the northern branch of Neotethys, ophiolite obduction, deformation and metamorphism within the KBB overprinted and obscured the Hercynian events recorded in the Paleozoic aged basement units.

The basement units are best exposed in Konya and Kütahya regions. The Bozdağ marbles, the oldest unit in the area consist of Silurian-Early Devonian shelf carbonate which are intensively intruded by diabase dykes. Halici Group of Carboniferous age comprises a thick sequence made up of olistostromes with huge neritic and hemipelagic

blocks, turbidites with pelagic interlayers, felsic volcanic rocks such as rhyolites, rhyodacites, quartz porphyrites and pyroclastites, dome-shaped trachytic/tracyndesitic intrusions and basic lava-flows. This unit is paraconformably overlain by Eldes formation of Early Upper Permian age, composed of quartzites and shallow marine limestones.

The Halici Group is suggested to be deposited in a back-arc basin, whose rifting was reflected by the diabase dykes intruding Bozdag platform carbonates. The main arc was situated further to the north, represented by the calcalkaline Carboniferous granitoides within the Sakarya Unit. The formation of the arc and back-arc systems were related to the southwards subduction of the Hercynian oceanic crust; The closure of the system was accompanied by polyphase deformation, imbrication and low-grade metamorphism in the region.

Scythian continental clastics unconformably overlying the consolidated Hercynian basement reflect the Alpine rifting. Deposition of Anisian-Lower Cretaceous open-restricted shelf carbonates along KBB is interpreted as the stabilisation of the northwards facing Turide-Anatolide Platform.

THE SOUTH EUROPEAN VARISCAN SUTURE ZONE AND ITS POSSIBLE SOUTHERN CONTINUATION

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The notion for the South European Variscan suture zone has been based on the presence of large ophiolite blocks, obducted over ancient cores in the European Variscides. These blocks are represented by the bodies of the Balkan-Carpathian Precambrian ophiolite Association, the massifs Kraubath, Hochgrossen, Chamrousse and others.

The recent investigations in the southernmost segment of the suture, along Struma river, established new and interesting features in its structure. Two ophiolitic blocks formed by the Unit of the Sheeted dyke were discovered there, with size of 50 and 25 km². They are tectonically imbricated with the Struma diorite Formation (SDF).

SDF is a metamorphosed igneous, mainly intrusive, complex. It's structure, composition and geochemical properties indicate that it was formed in conditions of ensimatic island arc. It's igneous rocks intersect the ophiolites in some localities.

The predominance of intrusive rocks and the presence of dioritisation processes testify that SDF has been formed in the roots of an island arc. The analogous age of SDF (560-660 Ma) to the Balkan-Carpathian island-arc Association, tectonically imbricated with the mentioned Precambrian ophiolites, and other considerations, indicate it