the degradation and deterioration phenomena. Also, for their analysis the nature and characteristics of the stone have been considered, along with the procedures of manufacturing, restauration, identifying some anomalies and inadequate interventions, already notorious.

Jurassic calc-alkaline granitoids associated with the East Vardar Ophiolites

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There are two major styles of Jurassic granitic magmatism associated with the Vardar Zone ophiolites: (1) strictly intra-ophiolitic intrusions dominating in the northern part and (2) magmatic bodies intruding both ophiolites and the basement in the southern part.

The intra-ophiolitic granitoids occur near Ždraljica and Kuršumlija (Serbia) and form dykes and small irregular bodies cutting gabbro-diabase ophiolite complexes. Geochemically, three subgroups are distinguished: (i) intermediate rocks, (ii) low-Sr_i granites and (iii) high-Sr_i granites. Intermediate rocks are represented by diorites, quartz diorites and quartz monzodiorites with Sr_i=0.70557 – 0.70746 and $\varepsilon_{Nd}(T)$ -4.5 – -0.8. The low- and high-Sr_i granites are petrographically similar, but differ in isotope composition, i.e., Sr_i=0.70330 – 0.70767 and $\varepsilon_{Nd}(T)$ -5.1 – 1.5 and Sr_i=0.70956 – 0.71602, $\varepsilon_{Nd}(T)$ --6 – -5.1, respectively. Furthermore, the high-Sr_i granites have higher HREE and Y contents.

The southern granitoids in F.Y.R. of Macedonia and Greece (Fanos) form large bodies that intrude both the Vardar Zone ophiolites and metamorphic rocks of the Serbo-Macedonian Massif. The rock suite of F.Y.R. of Macedonia includes intermediate to acid members (diorite, quartz monzodiorite, granite) and shows a trend of decreasing radiogenic $\varepsilon_{Nd}(T)$ -(3.3 – -8.9) and increasing Sr_i (0.70740 – 0.71588) with increasing silica content. In contrast, the Fanos granite is isotopically relatively uniform with Sr_i=0.70516 – 0.70559 and $\varepsilon_{Nd}(T)$ -= -1.6 – -0.7.

Geochemical modeling suggests that the high-Sr_i granites derived from peraluminous magmas that were generated by obduction-induced melting of (meta) sedimentary rocks. The low-Sr_i granites and the intermediate rocks of Serbia formed separate, possibly small, magma chambers, partly related to obduction-induced melting of a low-Sr_i source, formed in part by subduction related volcanic arc magmatism.

Granitic magmatism in the southern part of the Vardar Zone is characterized by melting of slightly enriched mantle- and lower crustal magmas that were modified by AFC processes in F.Y.R. of Macedonia and FC processes in Fanos. Their emplacement was favored by collisional processes resulting in great crustal thickness and the post-collisional emplacement of mantle-derived magmas that provided the heat for partial crustal melting.

Paleoenvironmental setting of rudists in the Upper Cretaceous (Santonian-Campanian) deposits from Valea Neagră de Criş (Borod Basin)-Northern Apuseni Mts, Romania

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The Upper Cretaceous deposits located in the eastern extremity of Borod Depression represent, for the Northern Apuseni Mountains, a well-known cropping out area for Gosau-type facies with rudists which is similar to the typical Eastern Alps section. The investigated