

THE NERESNICA-PONIASCA GRANITOIDS AND THEIR PROLONGATIONS WITHIN THE SOUTH CARPATHIANS

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The total length of a Variscan intrusive granitoid sheet in the Getic Nappe of the South Carpathians could attain 230 km, its thickness not exceeding 10 km.

Key words: Neresnica-Poniasca pluton extensions; Variscan; Kučaj-Getic Nappe.

The examination of the published geological 1:50000 maps and profiles¹⁻⁶ shows that the so-called Neresnica-Ziman, Brnjica-Sichevița, and Poniasca granitoid “massifs” are in fact a single eruptive body, the continuity of which is interrupted at the present erosion level by overlying younger Mesozoic and Tertiary formations.

The length of this body having a NS position is of exactly 100 km, while in transversal sections its maximum dimension does not exceed 10 km.

According to petrological and geochemical investigations⁷⁻¹³ the granitoids belong to a predominantly tonalitic-trondhjemitic association, with transitions towards monzogranites, granodiorites and granites, the two major petrographic types being biotite diorites (S1) and biotite K-feldspar porphyritic (S2) granites. Predominating I-type rocks are present as well as S-type ones. The structure of the magmatites is often gneissic.

The crystalline formations hosting the granitoid intrusion belong to the Precambrian Lotru-Osanica Series, to the Early Paleozoic Miniș Series and to the Ordovician (Conovici, Iordan) Buceava Series of the Alpine Kučaj-Getic Nappe. Results of geochronological studies by different methods^{10,14,15} gave Variscan intrusion-ages between 237 and 350 M.a. (311 ± 2 M.a. U-Pb zircon data⁷).

Southwards in Serbia, south of the Zagubica Neogene basin, in the core of a dome within the Kučaj Unit, a small granitic outcrop (Beljanica) represents probably the southernmost prolongation of the Neresnica body^{16,17}.

In the Semenic mountains, north-eastwards of the last exposures of the Poniasca pluton, small bodies of granites crop out between Piatra Goznei and Buchin-Poiana hosted by the same Lotru Series of the Getic Nappe¹⁸. A Rb-Sr isochron gave an age of 531 ± 17 M.a. for the Buchin granitoids¹⁹.

Other granitic rocks hosted by the Lotru Series are known along a line with the same north-eastern trend east of the Caransebeș Neogene basin.

Between the former and the Bistra couloir, the Glimboca granites²⁰⁻²⁴ are present. In the southern Poiana Ruscă, a series of outcrops were signaled between the Bistra couloir and the Hațeg basin^{25,26} (Nedelciu valley, Culmea Vacii, Cornișor, Micota valley, Criva), the age of the last being of 329 M.a. The affinity of the Glimboca-Criva granites has already been recognized²³.

After a new interruption due to the Hațeg basin, a granitic body figured by Hârtopan and Săbău²⁷ on the 1:50000 Lupeni sheet in the Getic Lotru Series between Baru Mare and Livadia could possibly represent the prolongation of the discussed intrusion. A clue could be provided by the presence

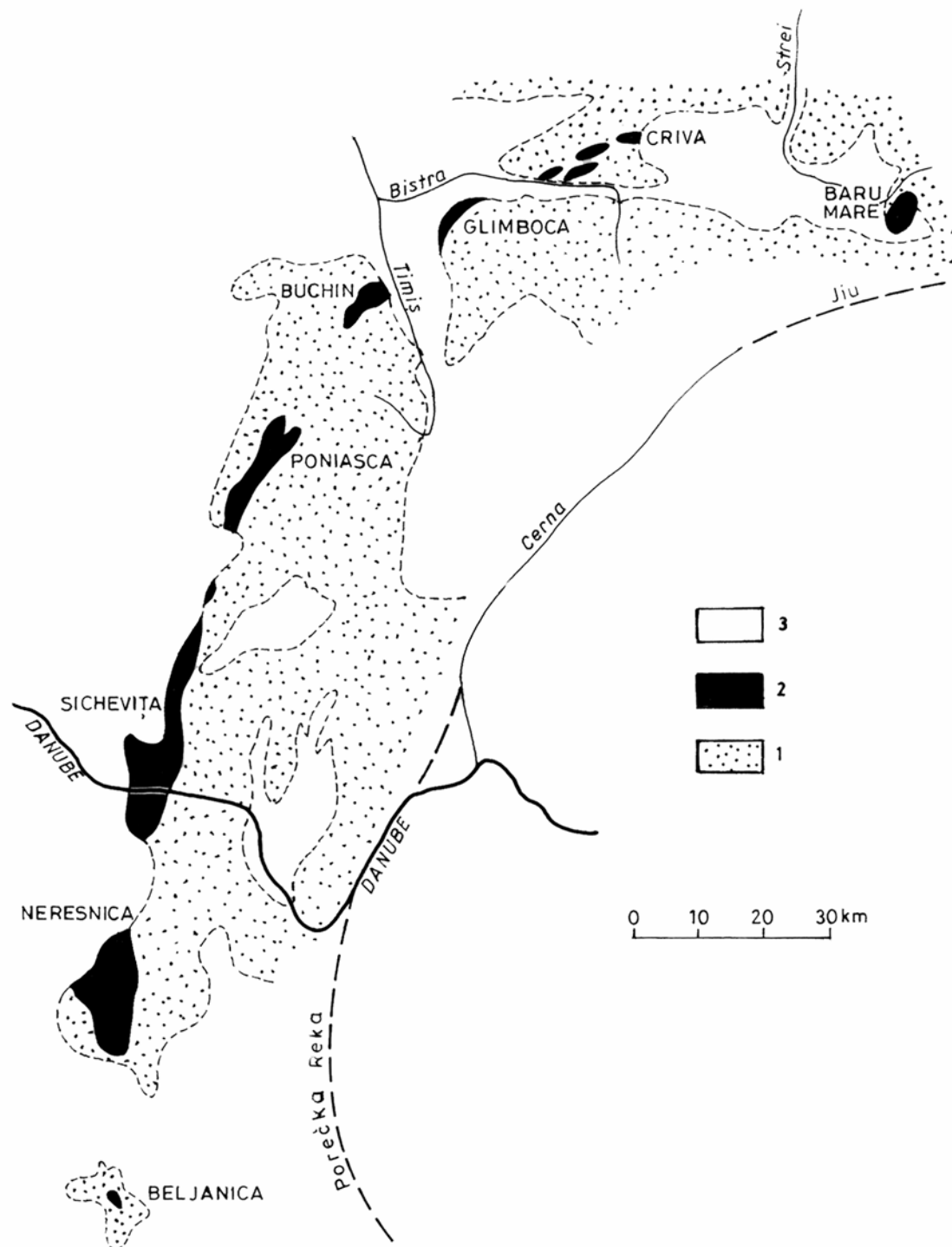


Fig. 1. Distribution of Neresnica-Poniasca and similar granitoids in the western part of the Getic Nappe, South Carpathians.
1. Precambrian and Paleozoic. 2. Granitoids. 3. Mesozoic and Tertiary.

in the Late Cretaceous conglomerates of the Hațeg basin of granitic pebbles, differing from the Retezat Danubian massif²⁸.

The total length of the granitoid intrusion between Beljanica and Baru Mare could be of 230 km.

We suspect that the intrusion has mainly a western, north-western and northern dip, following a marked Variscan dislocation plane or zone. The

latter is curiously almost parallel to the much younger Late-Alpine Porečka Reka-Cerna-Jiu fault zone.

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