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THE SOUTH MORAVA MORPHOSTRUCTURAL ZONE (THE EAST PART OF THE BALKAN PENINSULA)

ЮЖНОМОРАВСКАТА МОРФОСТРУКТУРНА ЗОНА (ИЗТОЧНАТА ЧАСТ НА БАЛКАНСКИЯ ПОЛУОСТРОВ)

The article represents a preliminary general view of the regional disposition and morphostructural essence of the South Morava morphostructural zone. This north-west marginal morphostructural unit of the Bulgarian continental micro morphotecture (from the east part of the Balkan Peninsula) is located in the border region of East Serbia, partially in West Bulgaria and in the north border part of the Republic of Macedonia.

The west border of the South Morava morphostructural zone coincides with the primary suture between the Bulgarian continental microplate (to the east) and the Carpathian, Dinarian and Pind continental microplates. This very important tectonic contact was predetermined by the necessity of origin, the place, the direction, the form and the most important internal pattern elements of the South Morava morphostructural zone.

Keywords: Bulgarian continental microplate, morphostructural zone, morphostructural regions, Quaternary morphogenetic.

The article represents a preliminary general view of the regional disposition and morphostructural essence of the South Morava morphostructural zone (fig. 1). This north-west marginal morphostructural unit of the Bulgarian continental micro morphotecture (from the east part of the Balkan Peninsula – Tzankov 2013) is located in the border region of East Serbia, only partially in West Bulgaria (near the town of Tran – fig. 1) and in the north part of Macedonia (between the border and the Kriva and the Pchinya River – fig. 1). The proposed name of the observed morphounit is coming from the South Morava River.

The west border of the South Morava morphostructural zone coincides with the north-west boundary of the Bulgarian continental micro morphotecture (fig. 1). It begins from the flow together between the Svrlig Timok River and the Targoviste Timok River (at the town of Knjazhevats), follows the Svrlig Timok River valley (to the town of Svrlig), peril using the north-west and the west slopes of the Svrlig Mountain (to the Nishava River between the towns of Nish and Nishka Banya – fig. 1). The west border prolongs on to the Kutinska River valley (between Suva Mountain and Selichevitsa Mountain – fig. 1), peril using the south slop of the Selichevitsa Mountain, and follows the South Morava River valley to the town of Vrania (fig. 1). The last boundary segment includes the distance between the town of Vrania and the village of Vladovo and the Pchinya River valley to its flow together with the Kriva River (in the Republic of Macedonia – fig. 1).

The west border of the South Morava morphostructural zone coincides with the primary suture between the Bulgarian continental microplate (to the east) and the Carpathian (to the north of the Nishava River valley) and Dinarian continental microplates. This very important tectonic contact was predetermined by the necessity of origin, the place, the direction, the form and the most important internal pattern elements of the South Morava morphostructural zone.

The south border of the investigated morphounit coincides with the Kriva River between its flow together with the Dragovishtitsa River and the Pchinya River (fig. 1). It corresponds with the fault boundary between the zone and the north slope of Osogovo Mountain from the Bregalnitsa morphostructural area (most west part of the Rila-Rhodopean morphostructural zone).

The east border of the South Morava morphostructural zone follows the Targovishki Timok River valley (to the village of Shugrin – fig. 1) and the right tributary of the Temska River and the Nishava River to the village of Krupac. This border segment has a fault character. It divides the investigated morphounit from the Midzhur morphostructural area (Hemus morphostructural zone). The most south prolongation of the east border coincides with the part of the Nishava River valley and the Erma River to the Bulgarian-Serbian boundary (fig. 1). This border segment divides the South Morava morphostructural zone from the Subbalkan morphostructural zone. The last border segment follows the Erma River valley (in Bulgaria and Serbia), the Bozhichka and Dragovishtitsa rivers valley (in Serbia) and the Dubrovnichka River valley (in the Republic of Macedonia). It represents a system of differently oriented faults between the South Morava morphostructural zone and the Vitosha morphostructural area (Kraishte – Sarnena Gora morphostructural zone).

The general direction of the South Morava morphostructural zone is submeridional (fig. 1). The morphounit is 156 km long and between 65 (between the village of Dollevats on the South Morava River and the village of Krupats on the Nishava River) and 22 km (between the village of Predezhane on the South Morava River and the village of Klisura on the Erma River) wide. The territory of the zone is around 5811,5 km².

The internal morphostructural pattern of the observed morphounit (SM) represents a mosaic of fragments (blocks) with different dimensions, form and directions (fig. 1). They can be grouped in two morphostructural areas (fig. 1). The north one of them – the Nishava morphostructural area – includes (fig. 1) the Tresibaba (fig. 1-1), Turiya (fig. 1-2), Svrlig (fig. 1-3), Babichka Gora (fig. 1-4), Suva Planina (fig. 1-5), Telovats (fig. 1-6), Vlashka Planina (fig. 1-7) and Ruy morphostructural region (fig. 1-8). The south one – the Surdulitsa morphostructural area – includes the Ostrozub (fig. 1-9), Gramada (fig. 1-10), Chemernik (fig. 1-11), Vlasina (fig. 1-12), Vardenik (fig. 1-13), Byasna Kobila (fig. 1-14), Doganitsa (fig. 1-15), Dukat (fig. 1-16), Shiroka Planina (fig. 1-17), Lesnitsa (fig. 1-18), Kozyak (fig. 1-19), German (fig. 1-20) and Bilino morphostructural region (fig. 1-21). The territory of these regions is represented in Table 1.

Territory of the morphostructural regions of the South Morava morphostructural zone

| Morphostructural regions | km ² |
|-----------------------------------|-----------------|
| 1 Tresibaba | 307,00 |
| 2 Turya | 166,50 |
| 3 Svrlig | 342,25 |
| 4 Babichka gora | 409,25 |
| 5 Suva planina | 626,00 |
| 6 Telovats | 85,25 |
| 7 Vlashka planina | 555,25 |
| 8 Ruy morphostructural region | 395,00 |
| 9 Ostrozub | 206,25 |
| 10 Gramada | 244,25 |
| 11 Chemernik | 119,00 |
| 12 Vlasina | 217,75 |
| 13 Vardenik | 301,00 |
| 14 Byasna kobila | 368,25 |
| 15 Doganitsa | 397,50 |
| 16 Dukat | 203,25 |
| 17 Shiroka planina | 98,00 |
| 18 Lesnitsa | 134,25 |
| 19 Kozyak | 339,00 |
| 20 German | 117,50 |
| 21 Bilino morphostructural region | 179,00 |
| Total | 5811,5 |

The Nishava morphostructural area is predominantly limited by the Carpathian continental microplate to the west and the Hemus morphostructural zone to the east (fig. 1). Its morphostructural regions (except the triangular Tresi Baba morphostructural region – fig. 1) are prolonged to north-west – south-east direction. The same orientation shows the neighbouring Midzhur morphostructural area from the Hemus morphostructural zone.

The Surdulitsa morphostructural area is formed between the Dinaric continental plate to the west and the Vitosha morphostructural area from the Kraishite-Sarnena Gora morphostructural zone to the east. Its morphostructural regions have irregular isometric or west-east elongate form.

The indicated differences between the two morphostructural areas show the diverse conditions of the morphogenesis. It is probably connected with the influence of the neighbouring border lands.

The South Morava morphostructural zone differs from the other regional morphounit of the Bulgarian continental microplate by the almost full absence of relics from the primary orthoplen. It is marked by very intensive Quaternary morphogenetic processes. The more or less secondary deformed fragments from the early generations of concentric morphostruc-

tures exist in all territory of the zone (fig. 1). It is one other argument for very intensive Quaternary morphogenetic deformations.

Fig. 1

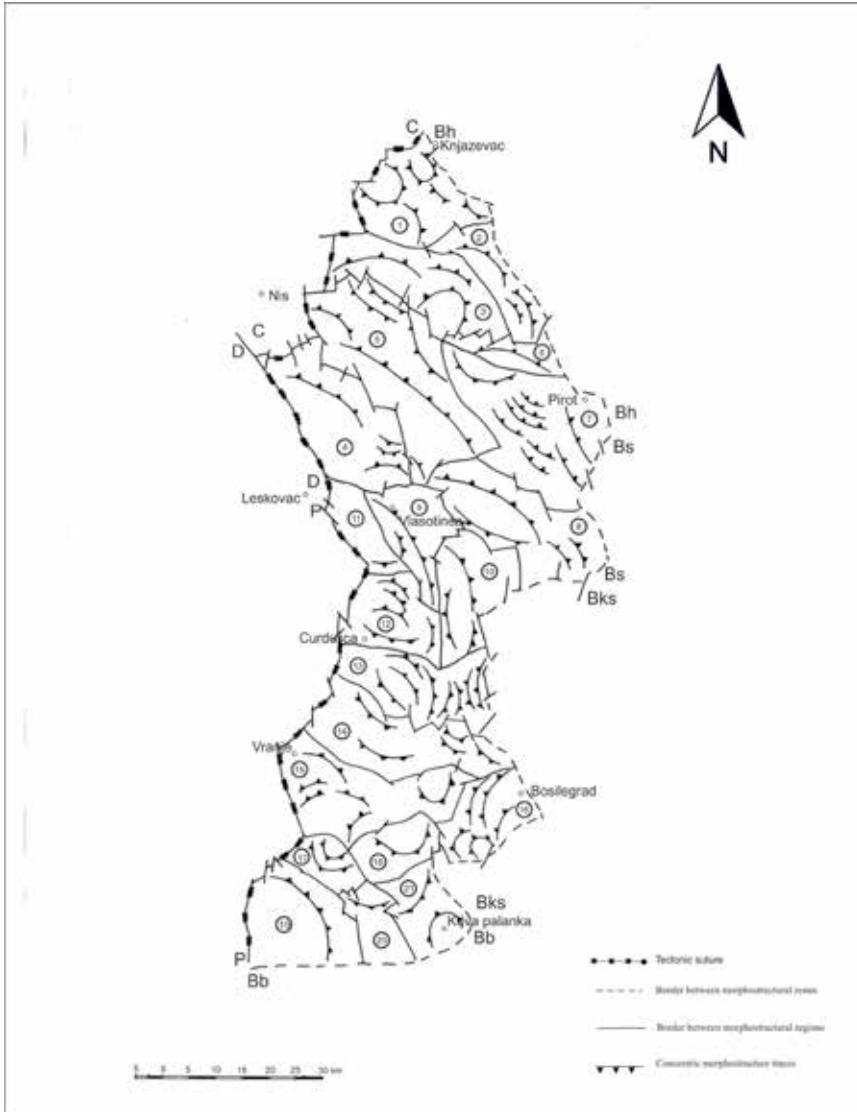


Fig. 1 Morphostructural regions of the South Morava morphostructural zone

Nishava morphostructural area: 1 – Tresibabo, 2 – Turiya, 3 – Svrflig, 4 – Babichka gora, 5 – Suva planina, 6 – Telovats, 7 – Vlasicka planina, 8 – Ruj morphostructural region; **Sardulitsa morphostructural area:** 9 – Ostrouh, 10 – Gramada, 11 – Cherni rnik, 12 – Vlasina, 13 – Vardenik, 14 – Byaina kobila, 15 – Doganitsa, 16 – Dukat, 17 – Siroka planina, 18 – Lesnitsa, 19 – Kozyak, 20 – German, 21 – Bilino morphostructural region.

Borders with the neighbor micro morphotectures: C-C – Carpathian, D-D – Dinarian, P-P – Pindian, Morphostructurale-zones and areas of the Bulgarian continental micro morphotecture: Bh-Bh – Hemus morphostructural zone, Bs-Bs – Sub Balkan morphostructural zone, Bks-Bks – Kraisthe-Sredna gora morphostructural zone, Bb-Bb – Belanitsa morphostructural zone

The specific origin, the place, the direction, the form and the most important internal pattern elements of the South Morava morphostructural zone are predetermined by the building of the first-rate tectonic suture between the Bulgarian, Dinaric, Pind and Carpathian continental microplates. It is one of the very important seams, which has welded together the little continental microplates (fragments) in the post-Mesozoic monolith south European margin – Neo Europe.

SOURCES

Tzankov 2013: Tzankov, Tz., Sv. Stankova. Borders and Principal Regional Units of the Bulgarian Continental Micro Morphotecture (East Part of Balkan Peninsula). – Acta Scientifica Naturalis, University of Shumen, volume 1.