Moravian Geographical Reports *volume 7 number 1/1999*

Lacika, J.

THE PRINCIPLES OF MORPHOSTRUCTURAL DIVISION OF SLOVAKIA

The contribution is in fact a proposal of morphostructural division of the territory of the Slovak Republic. It is based in Mazúr s morphostructural regionalisation which was used by the Slovak geomorphologists for more than three decades. It has preserved Mazúr s basic classification at the two highest levels discerning the Carpathians and the Pannonian basin, or the West Carpathians, East Carpathians, West Pannonian and the East Pannonian basins in the territory of Slovakia. However, the lower levels of morphostructural regionalisation presented here are different.
The proposal applies a combination of morphostructural units of the spheric and zonal type in the division of the West Carpathians. The compact part of the West Carpathian dome is broken to three spheric units of the third order while the tectonically deformed southern part of the dome is at the same level formed by two units of zonal nature. The East Carpathians are typical for belt-like arrangement of their partial morphostructures of the third order. In case of the Pannonian basin the 3rd order morphostructures overalap to large extend with the classification of lowlands to hilly lands and plains (except the Záhorská nížina lowland).
The proposal of new morphostructural regionalisation of the territory of Slovakia applies individual regionalisation up to the 5th level. The units of the 5th order overlapping to great extent with the geomorphological units are further on typologically classified.

Bíl, M.-Máčka, Z.

THE INFLUENCE OF RIVER NETWORK ARRANGEMENT ON VALUES OF GEOTECTONIC INDICES (ON THE EXAMPLE OF THE OSLAVA RIVER BASIN)

The contribution brings an assessment of river network topology influence on values of geotectonic index (SL-index) introduced by Hack (1973) to evaluate the spatial distribution of stream power. A result of adapting the index to conditions of the system of rivers draining the SE margin of the Bohemian Massif was the use of stream magnitudo M (sensu Shreve, 1966) which both takes into regard the effects of river network topology and better approximates discharge in the equation for stream power. The newly formulated SM-index was applied as a model at analyzing the Oslava River gradient status.

Ivan, A.

GEOMORPHOLOGICAL ASPECTS OF LATE SAXONIAN EPIPLATFORM OROGENY OF THE BOHEMIAN MASSIF (PART 1)

A characteristic feature of the Bohemian Massif (BM) relief connected with the post-Cretaceous (late Saxon) epiplatform uplift is the contrast between the nearly closed intramontane Bohemian Basin (BB) with a centripetal drainage pattern and the ring of marginal elevations whose height ranges between 800-1600 m. The massif uplift was considerably affected by intensive orogeny in the Eastern Alps and Western Carpathians. The Bohemian Basin is a heterogeneous, less uplifted, but relatively stable block with a very differentiated internal structure. The trend towards the development of a depression in the central part of the massif occurred as early as in the Upper Proterozoic. A culmination of earlier subsidence tendencies was probably the extensional collapse at the end of Variscan orogeny with its morphological manifestation being numerous Carboniferous and Permian molasse basins. Weak negative tendencies occurred also in the early period of platform stage (prior to Upper Cretaceous marine transgression).
The post-Cretaceous uplift of southern Moldanubian marginal elevations of the Bohemian Massif (those of the Šumava Mts. System and Bohemian-Moravian System) which are built of an older and more consolidated basement, but have a direct contact with the Alpine-Carpathian area was of a more prolonged character and led to a deeper denudation of the basement. In the northern Saxothuringian marginal elevations (those of the Krušné hory Mts. and Sudeten Mts.) which are geologically more complex but less consolidated, the uplift probably started later and it was perhaps more rapid. Manifestations of the uplift and extension here are young volcanism and the Ohře rift. The Upper-Cretaceous sediments and the height of their base provide a so far more reliable groundwork for considerations about the data and nature of young tectonic movements than the imaginary Palaeogene planation surface. The evidence about the movements can be provided by neovolcanic rocks, Tertiary sediments and by Pliocene and Quaternary river terraces. There is a preliminary hypothesis of the post-Cretaceous differential uplift being associated with the existence and reactivation of mantle elevation under Central Europe, whose activation most probably relates to the plate collision in the Alpine-Carpathian area. The coming into existence of the Bohemian Basin and the

marginal elevations is also a manifestation of the inherited basement heterogeneity. The greater uplift in the southern part of the massif is a continuation of the trend from the pre-platform era.
The aim of delimitation of the Bohemian Basin as a stable intracontinental unit of the massif is a more realistic model of the Bohemian Massif.

Hrádek, M.

THE STABILITY RELATIONS OF SUPPORTING SYSTEMS OF BRIDGES AND TUNNELS IN STRESS FIELDS OF GRAVITATIONAL LOOSENING ZONES (ON THE EXAMPLE OF THE IVANČICE VIADUCT, SOUTH MORAVIA)

Supporting systems of the Ivančice viaduct across the Jihlava River were founded in an uneven way: in crystalline bedrock in the eastern part and in clayey and sand cover of Miocene sediments, river terrace gravel sand and loess in the west. Apart from this, the interdisciplinary geo-scientific and engineering research near the Ivančice viaduct on the slopes of Jihlava River valley provided an evidence on the presence of significant fracture zones generated primarily as a result of Variscan orogenesis and restored in the course of Alpine orogenesis. The existence of deeper loosened tectonic fractures and zones of crushing and the proven deeper circulation of ground water facilitated differentiated subsidence of blocks and gave rise to a pronounced block structure of the valley with partial horsts, floating blocks and grabens. A coherence was sought between the proven block structure of the area with the horizontal and vertical deformations of supporting systems. Except for a possible action of piping in loesses and deeper sunken covers due to subsurface water circulation, the effects of block structure and rock massif loosening on bridge stability were not proven. Mathematical modelling showed that the primary cause to the unstable environment is the dissimilar way of foundation of the two bearing supports.

Kolibová, B.

GLOBALIZATION OF RETAIL NETWORK BY LARGE CORPORATIONS IN THE CITY OF BRNO AND ITS SURROUNDINGS

The paper deals with a new phenomenon of our socio-economic life, i.e. the penetration of supranational trading companies onto the internal Czech market in the period of transformation. The article is an introductory consideration of the situation in Brno and its hinterland.

Kunc, J.

TRANSFORMATION OF INDUSTRIAL PRODUCTION IN THE DISTRICT OF BRNO-PROVINCE

The situation of industrial production in the district of Brno-Province appears relatively stable after the transformation and privatization of companies. In the course of the 90s, some inefficient works were either closed or their production markedly restricted, and in contrast, several hundred of mainly small-scale industrial shops came into existence. It was these smaller establishments that reported rather positive economic results in the last years. The entry of foreign capital into the district and its companies also appears relatively positive. Other possibilities to further develop the industrial potential of the district can be sought in a favourable location near Brno - in the possibility of using fast and good transport connection or to profit from the planned gradual forcing of industrial facilities out of Brno behind administrative city limits.

Havrlant, J.

NEGATIVE INFLUENCES OF COAL EXTRACTION IN THE MINING AREAS OF THE KARVINÁ REGION

The Czech mining industry has undergone a pronounced transformation and damping down. In the year 1996, quality black coal is only mined in the Karviná part of the Ostrava basin and in one colliery in the Frýdek-Místek part of the basin. The employed caving technology of underground extraction, however, caused a number of ecological and economic problems in the Karviná region. The question of future coal mining and consequent negative effects on the local countryside are connected with numerous factors. A more extensive application of new laws concerning the protection of environment, prices of imported coal and other factors come to the fore in the economy of coal mining.

REPORTS

Vaishar, A.-Mikulík, O.: FIVE YEARS OF THE BRNO BRANCH OF INSTITUTE OF GEONICS AT THE ACADEMY OF SCIENCES OF THE CZECH REPUBLIC

Mikulík, O.-Mariot, P.: THE 3RD SLOVAKO-CZECH ACADEMIC SEMINAR IN GEOGRAPHY