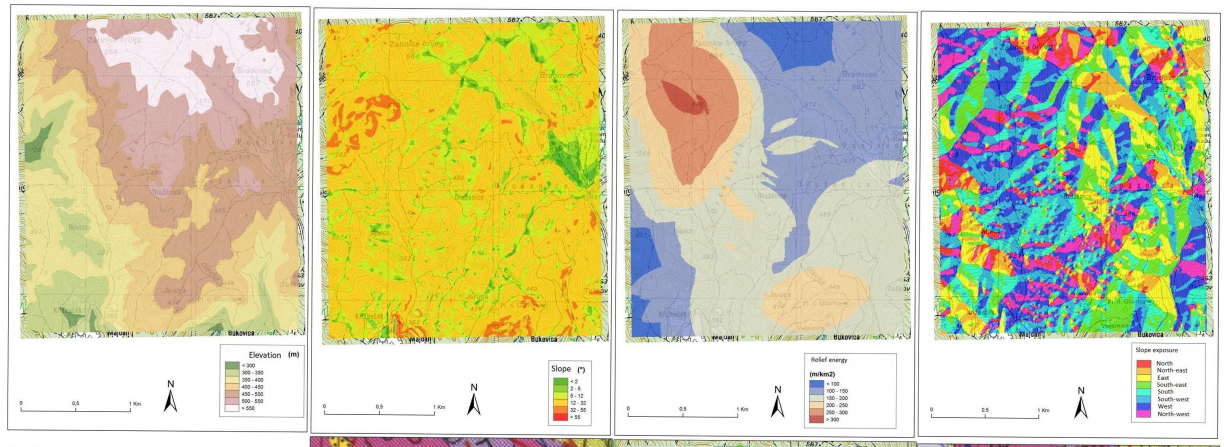
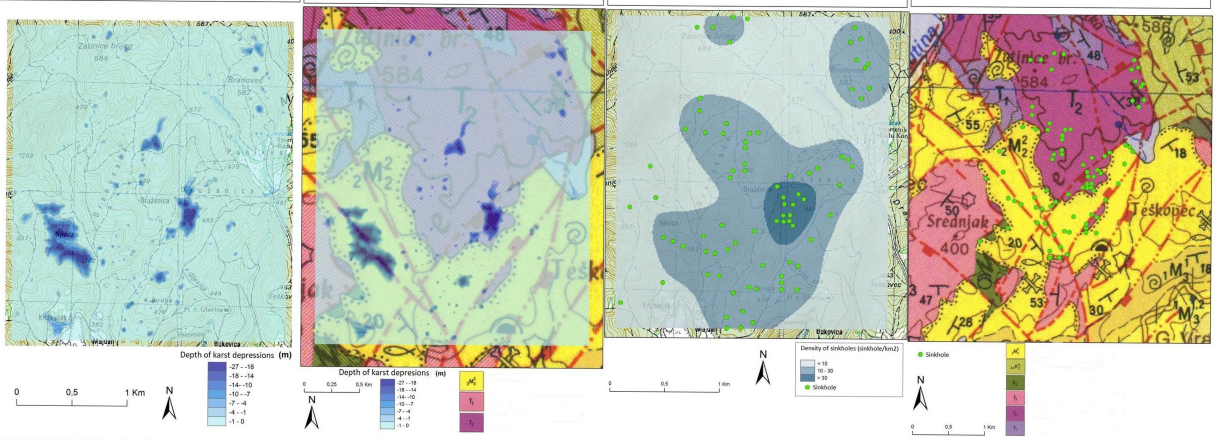
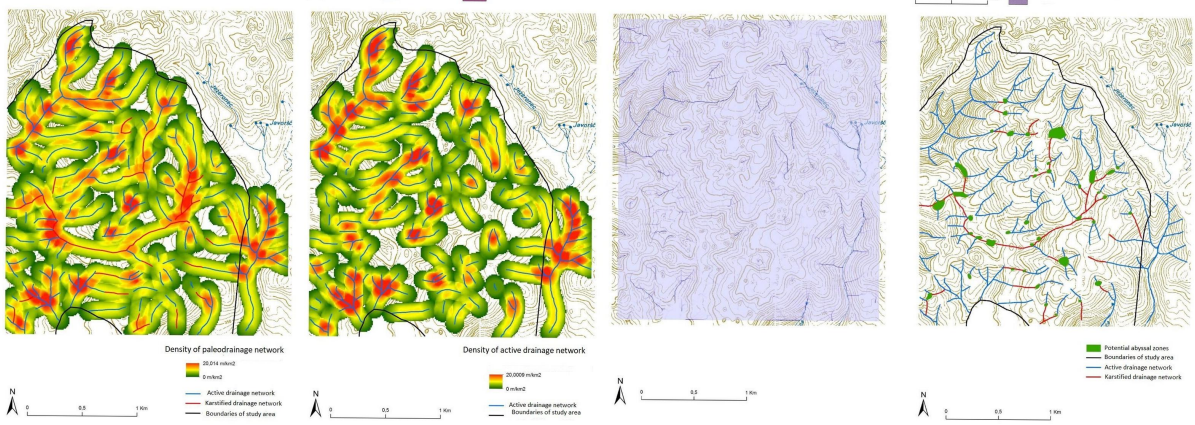
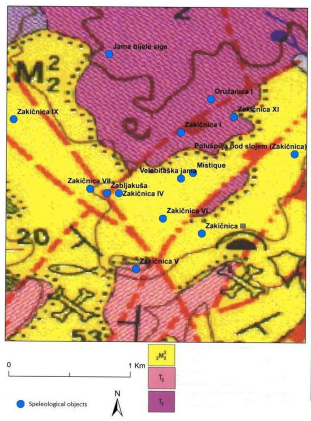
28th INTERNATIONAL KARSTOLOGICAL SCHOOL "CLASSICAL KARST" 2021.

MORPHOGENESIS RESEARCH OF KARST LANDSCAPE IN THE AREA OF WEST MEDVEDNICA MT. (CROATIA)









Three phases of morphogenesis of karst relief in this area can be distinguished. The first phase is characterized by the development of the surface drainage network due to tectonic uplift and the creation of a larger hydraulic gradient. Deep valleys are cut in and ridges are developed between them. The drainage network is developing because the substrate can erode at high speed. The most probable reason for this is the higher share of dolomite and insufficient tectonic fracture of the rock base.

As the karsification developes more, part of the drainage network is abandoned and underground runoff develops. Abyssal zones and areas with developed sinkholes are formed. The karstification and development of karst forms is related to fault zones, lithological contacts and morphological steps in the longitudinal profile of the valley. Speleological objects begin to develop as a consequence of seepage and as a consequence of underground runoff in abyssal zones.

Third phase resulted in further progress of the process from the second phase and the creation of a recent relief. Sinking occurs in more places, and most often, it moves upstream. This leads to the lowering of the water face and the creation of new conductors (lower and higher upstream), ie cave channels. At the same time, pits are developing more and more due to seepage from the surface. In addition, there is a general lowering of space due to erosion and corrosion. This brings some speleological objects to a position well above the erosion base.

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