

## **Microtectonic analysis of Paleozoic metaconglomerates from the Bihor Mountains (Romania)**

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In the Bihor Mountains there are several nappes with a complex geometry, the cristalline basement of which is covered by laminated conglomerates of 1) Lower Carboniferous and 2) Upper Carboniferous-Lower Permian age. We analysed the microscopical effects of the deformation of these undergone during the development of shearing in the Turonian.

In the field we distinguished stretching and intersection lineations and several successive foliations. The former defined by deformed pebbles oriented NW-SE show the tectonic transport of the nappes pile.

Microscopical morphological analysis of foliations as well as of the mechanisms of their development led us to identify the characters of a finite strain generated by a progressive pure shear. On the other hand the metaconglomerates analysed show a monoclinic symmetry as an effect of the noncoaxial progressive deformation. Accordingly in their matrix we have recorded the following microstructures: shear band cleavages, quartz mantled porphyroclasts, LPO of quartz c-axes and strain shadows. The two types of strain pass continuously by through a spectrum of successive increments which show the changing finite strain depending upon the value of the incremental rotation.

According to all these observations the kinematic analysis of deformations in the Bihor Mountains has a regional significance and brings new and indubitable arguments to sustain the NW-SE sense of the Alpine nappe displacements.