

Contribution to the solution of dolomite sand genesis by investigations under electron microscope

Samples coming from dolomite sand deposit at Malé Kršteňany — Chalmová have been investigated under electron microscope with the aim yield exact proofs on the genesis of the rock. A method of replicas was used to follow surficial structures of dolomite grains. Prismatic crystals of 2.5 μm average size and chaotically protruding over dolomite surface (fig. c, d) bear morphological features of aragonite: parallel groovings along the sense of prolongation and basic prism $\{110\}$ surfaces at 63° angle as well as the prisms terminating by brachydome $\{011\}$ etc. Such mineralogical identification of prisms is supported by electron microdiffraction records of exaction replicas from dolomite grains. The check of records and their comparison with labelled data point to calcite.

The presumed monotropic change from rhombic aragonite into trigonal calcite is observable also on etching figures (fig. 2e, f). The scalenohedric calcite crystals mentioned have peculiar morphology and symmetry which does not reflect the morphology and symmetry of original prisms.

Achieved results have been confronted with data obtained on control samples of dolomite sand from Trebejov and Malá Vieska localities where dolomite was presumably not affected by thermal waters. Dolomite grain surfaces in these samples do not display crystals. Further samples of dolomite sand from the Buda Mts., where the process of desintegration was originally described as developing due to the action of thermal water on dolomite, reveal the same features. These dolomite grains also bear the prismatic crystals similar to ones found at the Malé Kršteňany locality.

Electron microscopic investigation into surficial structures of dolomite sand grains and the identification of calcite paramorphoses after aragonite are hence interpreted in the light of genetic events affecting the entire rock. New data complement and confirm the indirect further proofs on the action of thermal water on dolomite rock and accurate views on the course of dolomite desintegration process which changed the original massive rock into loose sand.

ZO ŽIVOTA SPOLOČNOSTI

Milan Mišík: **Zloženie a zdrojové oblasti jablonických zlepcov — oblasť Malých Karpát** (Bratislava 10. 4. 1986)

Odvodil sa deduktívny postup rekonštruovania znosových oblastí zlepcov: 1. pridanie eróziou odstráneného stĺpca hornín, 2. pravidlo starších erózných zrezov, 3. možnosti redeponovania zo starších zlepcov, 4. pravidlo asociácie zdrojových hornín a korekcie na ich východiskový pomer. V jablonických zlepcoch karpát dominujú horniny triasu vyšších príkrovov, hlavne wettersteinské vápence. Pre transport od JZ slúžia

tieto indexové horniny: metamorfované vápence harmónskej a borinskej skupiny, vápenec s autigénnym živcom a kremeňom, krinoidový vápenec z Crassicolaria pochádzajúci z vysokej jednotky, ojedinelý granatiko-staurolitový svor atď. Dokladom menej zastúpenej zdrojovej oblasti na SV sú vápence plytkomorského malmu s Conicospirillina a Clypeina, vápence morského senónu s úlomkami rudistov a Nummofallotia cretacea, sladkovodné vápence vrchnej kriedy, vápence pelagického noriku s konodontmi a ryolity pochádzajúce z preplavenia kriedových zlepcov.