

SHORT COMMUNICATION

NATIVE COPPER OCCURENCE IN THE KOZÁR-QUARRY OF W.-MECSEK MOUNTAINS, HUNGARY

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Long ago known carbonatic copper mineralization is found in the Middle Anisian limestone of W-Mecsek Mountains in Kozár-quarry, near Pécs (MEZŐSI 1948, TOKODY 1952, KRIVÁN-SZNAGYIK 1959, e.t.c.). 3-8 m-thick limestone breccia cemented by calcite, in several places contains negligible amount, sometimes euhedral, usually anhedral azurite and malachite minerals.

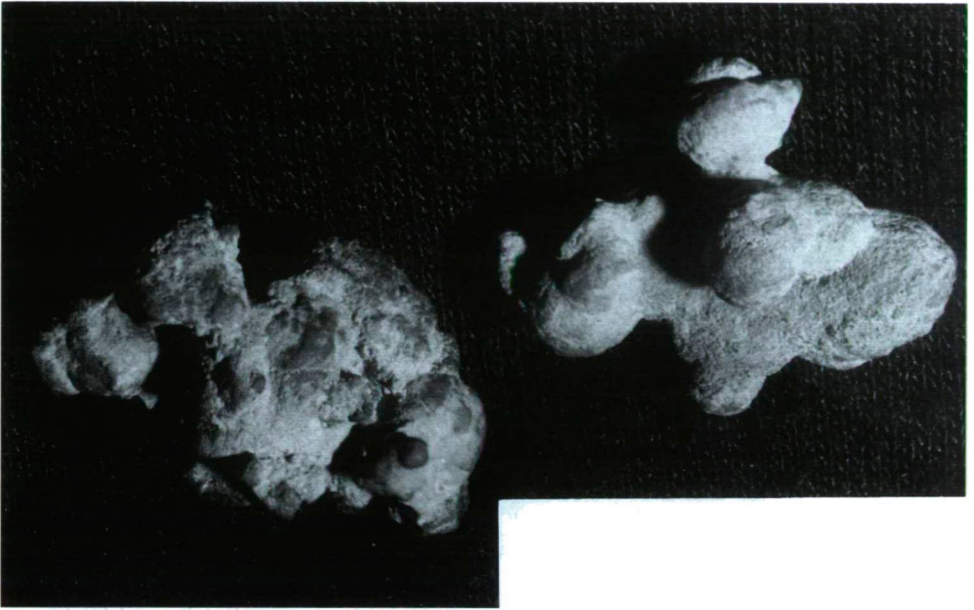
Due to a detailed (1:10.000 scale) geological mapping of the area carried out by Mecsek Ore Mining Co. in 1966 (VÁRSZEGI), numerous 6-7 cm large faultless quartz prisms were recognized in the caverns of this breccia. Similar quartz mineralization without copper enrichment can be found not so far from the Kozár-quarry at Árpádtető enclosed into Upper Anisian limestone and dolomite breccia represented by pseudo-hexagonal columns and „skeleton crystals” showing frequently a dauphine-type twinning (SZANYI 1991).

Anhedral Kozár malachites show here and there arborescent or kidney-shaped appearances. Together with these types irregular malachites several same-shaped and sized (2-3 cm largest size) native copper knots covered by malachite coat are also found (see the photo).

In the lack of systematic field- and laboratory treatments the genetics of these native copper knots is not perfectly clear. Presence of azurites and related malachites in the breccia of Kozár-quarry indicates an oxidation process when the products of a preceeding hydrothermal event (chalcopyrite, tetraedrite, enargite, TOKODY 1952) alter into oxide and hydroxide mineral assemblage. Existence of large quartz crystals in the breccia proves a real hydrothermal process which certainly could produce the mentioned source minerals of copper carbonates. On the other hand, presence of native metals in an oxidation zone shows a not perfectly complete oxidizing event when results of a previous reduction were able to retain themselves, partly.

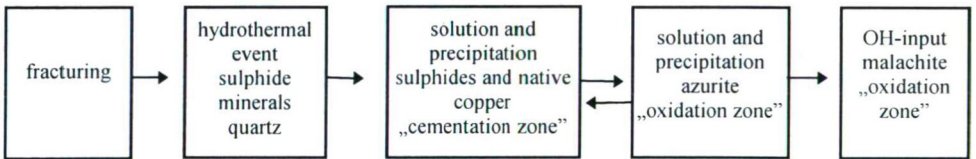
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2 cm

Existence of a metal phasis in this mineral assemblage is a new recognition undoubtedly and at the same time it postulates a more complicated genetic sequence than that of above-mentioned one. At the level of our present knowledge a probable development succession of Kozár-quarry azurites, malachites as well as native copper knots is as follows:



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