REMARKS ON THE GEOLOGICAL ORIGIN OF RUMANITE

NEACŞU, A.
Dept. of Mineralogy, Faculty of Geology & Geophysics, University of Bucharest, N. Bălcescu Blvd., RO-010041 Bucharest, Romania
E-mail: antonela@geo.edu.ro

Amber is a fossil resin with a disputed paleobotanical origin. Physico-chemical analysis indicated that Baltic amber (succinite) is more similar to the resin produced by family Araucariaceae. But this suggestion is not confirmed by paleobotanical research results (KOSMOWSKA-CERANOWICZ, 1999). In Romania a spectacular amber, named rumanite, has been exploited for a long time near Colţi (Buzău County). The infrared spectra of rumanite resemble those of succinite, but there are some important differences: *e.g.* rumanite has more carboxylic groups than succinite, probably because it is more oxidised than the latter. NMR studies (LAMBERT *et al.*, 1993) suggested that rumanite-like European fossil resin samples might have been weathered materials derived from an Agathis-like source. But the frequent presence of Sequoioxylon gypsaceum both in the amber-bearing formation and in the rumanite itself suggests that this conifer could have been the source of the ancient resin that has fossilized into the present-day amber occurring in the Oligocene deposits at Colţi. The botanical origin of amber may be traced back to plants belonging to Gymnosperms and Angyosperms, although the physico-chemical analysis indicate that it is not abietic acid or its derivatives but byciclic diterpen acid of the labdanum-type which is the fundamental component of amber. This means that pine cannot be regarded as an amber-producing tree. The solution could be a compromise. LARSSON (in FRAQUET, 1987) said that "the tendency is to consider it as rather a primitive type, representing an early stage in the developmental history of the Pinaceae which in their chemistry still retained archaic characteristics in common with the Araucariaceae". The precise origin may be established only when amber occurs together with the wood that produced it, and this is a very rare situation.

References

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