Mesozoic dasycladalean algae from Romanian Carpathians: diversity, environment and palaeogeographic context

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Dasycladalean algae are important constituents of the shallow-water carbonate sediments of the Mesozoic. The Romanian Carpathians contain such deposits with an extensive development during the Triassic, Late Jurassic and Early Cretaceous.
From the Middle Triassic (Anisian-Ladinian) carbonate platform deposits are known in the Eastern Carpathians (Rarau and Persani Mountains), Southern Carpathians (Sasca zone) and Apuseni Mountains (Padurea Craiului massif). During Anisian the dasycladalean assemblages are dominated by species of the genera *Oligoporella* and *Physoporella*, and in Ladinian by *Diplopora* si *Teutloporella*. These assemblages developed most frequently in internal platform environments (lagoons) and comprise species with limited stratigraphical range, important for biostratigraphy. It is worth mentioning the global uniformity of these associations.

During the Upper Jurassic the dasycladalean assemblages of the Romanian Carpathians are related to the development of the carbonate platforms that generated to so-called Stramberk-type limestones (e.g., Haghimas, Piatra Craiului and Vanturarita Mountains in the Eastern and Southern Carpathians; Trascau massif in Apuseni Mountains). The dasycladalean assemblages developed either in inner platform environments, with dominance of the genus *Salpingoporella*, or in platform margin environments, where large species of the genera *Petrascula*, *Steinmanniporella* or *Triploporella* are dominant. The late Jurassic carbonate platforms extended also in the Neocomian.

A new stage of the shallow-water carbonate sedimentation developed during the Barremian-Aptian giving rise to the Urgonian carbonate platforms. In the Romanian Carpathians such platforms are known from Rarau, Haghimas and Persani Mountains (Eastern Carpathians), Dambovicioara and Resita-Moldova Noua zones (Southern Carpathians) and Apuseni Mountains (e.g., Bihor-Padurea Craiului unit). During the Early Cretaceous the dasycladalean algae reached their maximum of diversity, and beside *Triploporellaceae* (mostly *Salpingoporella* species) frequent *Dasycladaceae* are known (e.g., *Neomeris* and *Montiella*), present in both internal and external parts of the platforms. The Early Cretaceous seems to represent also a time interval with more dasycladalean provincialism. It is well known the southern-Tethyan affinity of *Salpingoporella dinarica* (a species which is not known from the Romanian Carpathians) as well as the existence of some species with limited palaeogeographic range to the Carpatho-Pontic area (e.g., *Kopetdagaria sphaerica* or *Conradella bakalovae*).

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Calcareous algae from the olistoliths at Poiana Zanoaga, northern part of Piatra Craiului Syncline (Southern Carpathians, Romania)

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The Piatra Craiului Massif is a major syncline structure in the Southern Carpathians. Its flanks consist of Middle and Upper Jurassic-Neocomian carbonate deposits, while the filling is represented by conglomerates assigned either to the Upper Aptian, or to the terminal