Coralline algae and acervulinid foraminifers in the Eocene of the Krappfeld-Gosau (Carinthia, Austria)

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The isolated and small-scaled Eocene of the Krappfeld-Gosau (Carinthia, Austria, fig. 1) contains Cuisian and Lutetian limestones reaching a thickness of more than 150 m. After a break in sedimentation more siliciclastic influenced carbonates are deposited above pure nummulitic limestones (fig. 2). These terrigenous carbonates contain horizons of Corallinaceae and Peyssonneliaceae (= Squamariaceae) and macroids of the acervulinid foraminifer *Solenomeris*. Besides these also serpulids and rare bryozoans are involved.

One of the most frequent coralline algal species - also in constructing rhodoliths - belongs to *Sporolithon* (*Archaeolithothamnium* in previous works). *Sporolithon* either builds monospecific rhodoliths or it occurs together with the less frequent *Solenomeris* and *Pseudolithothamnium*. The last mentioned may become more frequent in the upper part of the horizon. These Sporolithon-dominated rhodoliths are chiefly elliptic with leached nuclei (fig. 3). With increasing size the growth-structure shows a change from an initial laminated growth to a construction of distinct protuberances.

The most important encrusting organism besides the red algae is Solenomeris. This foraminifer may also construct monospecific macroids (fig. 4) or occurs together with *Pseudolithothamnium*, *Sporolithon*, *Lithoporella*, and the agglutinated foraminifer *Haddonia*. These macroids show in opposition to the rhodoliths a chiefly smooth surface.
A special case are rhodoliths with nuclei consisting of large tests of *Nummulites* (fig. 5, maybe microspheric generations). The tests are encrusted mainly by *Lithothamnion* and *Solenomeris*.

Basing on taxonomic composition, growth form and internal structure, the palaeoecology of rhodoliths and foraminiferal macroids should be worked out.

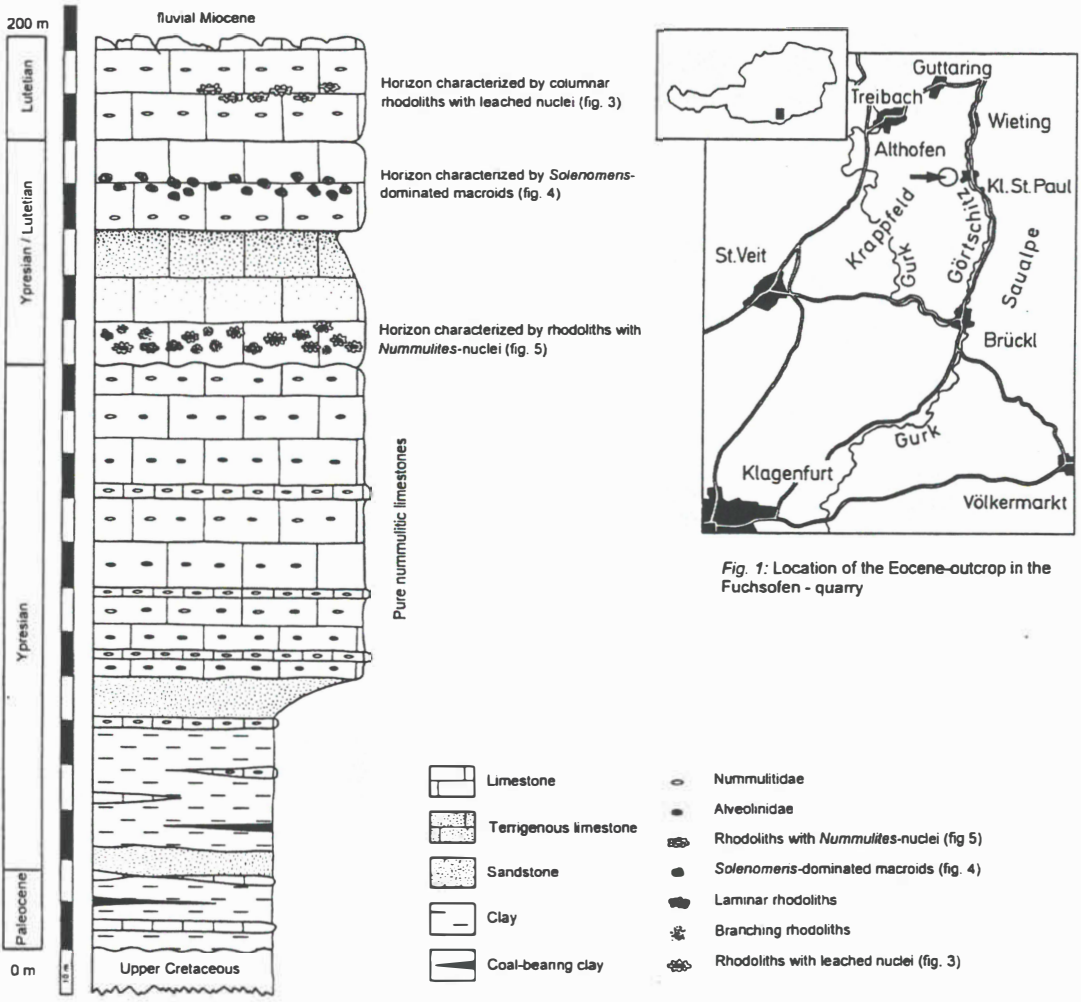

Fig. 1: Location of the Eocene-outcrop in the Fuchsofen - quarry

Fig. 2: Idealized Profile of the Krappfeld - Gosau

Fig 3: Columnar *Sporolithon* - rhodolith with leached nucleus in the lower part of the picture.

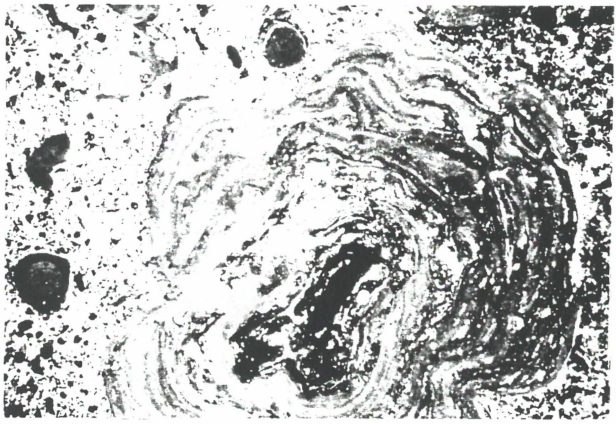

Fig. 4: Macroid consisting dominantly of the foraminifer *Solenomeris*.

Fig. 5: Nummulites encrusted by coralline algae.

Width of the pictures: 35 mm.