

RASSER, M. & PILLER, W. E. *Vienna* - Crustose algal buildups in the Upper Austrian Molasse Zone (Late Eocene).

Late Eocene sediments of the Upper Austrian Molasse Zone contain up to 80 m thick red algal limestones ("Lithothamnienkalk") which are underlain by up to 40 m thick siliciclastic series. Red algal limestones mainly consist of algal debris and rhodolith pavements. In distinct horizons, however, up to 7 m thick crustose algal buildups develop either on the siliciclastic basal series or rhodolith pavements.

The buildups consist of up to 1 cm thick consecutive coralline algal crusts, mainly formed by *Mesophyllum* sp., and of crustose corals. Growthforms of *Mesophyllum* sp. cause considerable cavities, which are filled by finegrained bioclasts and micrite. No bioerosion was observed within the buildups.

Modern crustose algal buildups are known from temperate to tropical environments. Tropical and subtropical buildups ("algal ridges") are restricted to the intertidal/shallow subtidal and usually develop from coral reefs. Temperate buildups are known from the Northern Atlantic and the Mediterranean. They occur either in the rocky intertidal ("trottoir") or on soft red algal sediments ("coralligène de plateau") from 30 to 150 m water depth.

Comparisons with modern equivalents provide the possibility to interpret the palaeoecology of the Late Eocene algal buildups.