

# LATE JURASSIC (OXFORDIAN) CORAL REEFS OF THE *FLORIGEMMA*-BANK MEMBER AND HAINHOLZ MEMBER (KORALLENOLITH FORMATION, LOWER SAXONY BASIN, NW GERMANY)

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Coral reefs are widespread during the Late Jurassic and occurred in varying environments. Owing to a relatively uniform climate, there are also records of Late Jurassic (Oxfordian) coral reefs in platform carbonate settings from high palaeolatitudes, e.g. in the Lower Saxony Basin.

Compared with other Late Jurassic coral reefs, those of the Lower Saxony Basin are comparably small. Moreover, they are restricted to a few horizons that can be traced in large parts of the outcropping areas of the Korallenoolith Formation.

The *florigemma*-Bank Member is the most important reef bearing horizon (=Hainholz Member in Osterwald Mts.). Reefal bioconstructions of the *florigemma*-Bank Member show a high variability in their regional appearances. Five different reef types have been recognized: 1) *Thamnasteria dendroidea* thickets with high amounts of thrombolite that grew in lagoonal settings, representing calmer conditions (Süntel Mts., Helm & Schülke 1998); 2) A coral meadow composed of *Thamnasteria dendroidea* in which *Th. dendroidea* built a loose framework and scarce microbial crusts (Kleiner Deister Mts.). 3) A widespread coral biostrome (Deister Mts.); 4) *Stylosmilia* patch reefs with high amounts of thrombolite (Deister Mts., Helm & Schülke 2000); and 5) larger coral thrombolite patch reefs (up to 12m in height) embedded in reef debris (Osterwald Mts., Reuter et al. 2001).

The reefs are characterized by their different coral associations (Helm et al. 2003). The highest diversity (about 40 species of scleractinian corals) is developed in the coral thrombolite reefs from the Hainholz Member of the Osterwald Mts.. Apart from the above reefal setting, the reefs were not subjected to strong physical breakdown, transport and subsequent erosion of skeletal hard parts. Therefore, the reef organisms are still preserved in their life position, and extended aprons of reef debris surrounding the patch reefs are lacking. This excellent fossil record provides the basis of a comparably exact reconstruction of the different reef types.

## References

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