

**SUSPENSION-FEEDERS COMMUNITIES
(SPHINCTOZOAN/SERPULID) AND AUTOMICRITES INDICATIVE
OF A STRESSED ENVIRONMENT IN A NORIAN CARBONATE
PLATFORM FROM NORTHERN CALABRIA (ITALY)**

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The Norian-Rhaetian of the Western Tethys was dominated by widely-distributed shallow water carbonate platforms (Dolomia Principale/Hauptdolomit; Dachstein Kalk, etc.) flanking open marine basins and dissected by intra-platform troughs. These intraplatform basins were often characterized by stressed environmental conditions with dysoxic to anoxic water. The biota were very poor and characterized by microbial-serpulid mounds scattered on the slope and the outer margin of the platforms (Zamparelli et al., 1999; Flügel, 2002; Perri et al., 2003).

The studied case-history is represented by a highly-relief prograding carbonate platform, Early-Middle Norian in age, with margin and lagoon settings laterally grading into slope-basin sediments. The whole carbonate body is completely dolomitized; nevertheless, the morphology and microarchitecture of carbonate components (cements, grains and automicrite) is still clearly recognizable.

The inner platform facies association is characterized by automicrites (mainly cauliflower-columnar stromatolites) associated with detrital carbonate (intraclastic breccia, bioclastic grainstone and packstone). Skeletal metazoans (megalodontids, other bivalves, and gastropods) are rare; foraminifers, dasycladacean algae (e.g. *Gryphoporella curvata*), and subordinately porostromata also occur.

The margin facies association is dominated by automicrites (planar to low-relief stromatolites) associated with thrombolitic-fenestral boundstone. Metazoans are practically absent while a relatively rich assemblage of solenoporacean algae and porostromata flourish. Allochthonous dasycladacean thalli also occur as closely packed grainstone.

The slope facies association includes detrital carbonates (breccia/megabreccia) and automicrites (planar stromatolites and thrombolitic boundstones) mainly associated with sphinctozoan bioconstructions. Sponge patch-reefs, plurimetric in size, are larger and absolutely dominant in respect to serpulid mounds. As a rule individual bioconstructions are due to a single group of framebuilders. Sphinctozoan associations are oligotypic. Sponge skeletons are segmented and asiphonate, and many specimens can be tentatively referred to genus *Deningeria*. The low-diversity fossil association seems to indicate a stressed marine environments, probably corresponding to a restricted intraplatform dysoxic basin.

References

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