Annali dell'Università degli Studi di Ferrara ISSN 1824-2707
Museologia Scientifica e Naturalistica volume 1, 2005

Oligocene Corallinales (Rhodophyta) of Salcedo (Vicenza, NE Italy)

Daniela Basso, Grazia Vannucci & Andrea Tintori

Dipartimento di di Scienze Geologiche e Geotecnologie, Università di Milano-Bicocca, Piazza della Scienza 4, Milano, Italy (daniela.basso@unimib.it)

Some Oligocene fossil benthic assemblages cropping out in the Venetian Prealps near Salcedo (Vicenza) have been investigated on the basis of microfacies analyses, coralline species association, algal structure and growth form. Four facies have been identified:

1) The scleractinian-geniculate coralline facies. This association occurs in a few-metres large bioconstruction (framework) composed of massive small (about 30-40 cm in diameter) coral colonies in life position (*Poritidae*). Corals are bored by endobionts. Abundant articles of *Jania* and *Amphiroa* are associated with the unattached foliose species *Neogoniolithon contii* (Mastrorilli) Quaranta in the micritic depositis between corals.

2) The scleractinian-nongeniculate coralline facies. Corals appear in life position and are frequently encrusted by dominant *Sporolithon pseudokeenani* (Mastrorilli), *Spongites albanensis* (Lemoine) Braga, Bosence & Steneck and *Lithoporella melobesioides* (Foslie) Foslie. In the micritic deposits also *N. contii* and an unidentified masthophoroid occur.

3) The nucleated rhodolith facies. Irregularly shaped coralline nodules with fragments of branched corals at the nucleus are dominant over an 8 m thick rudstone with a muddy sand matrix containing a variable percentage of clay. Larger benthic foraminifers (mainly *Nummulites fichteli*) are common and associated with sparse mollusks, fragments of echinoids and bryozoan colonies. The dominant rhodolith-forming coralline species are *Lithothamnion ishigakiense* Johnson*, S. albanensis, L. melobesioides, Lithoporella minus* Johnson*, S. pseudokeenani* and *Mesophyllum* sp. Rhodoliths are commonly multispecific, contain micrite-filled voids and have a laminar-concentric to boxwork internal structure. Unattached foliose thalli of *?Lithothamnion moretii* Lemoine *Lithothamnion roveretoi* Airoldi and *N. contii* are common in the matrix.

4) The *Nummulites fichteli* facies. Inerbedded or laterally associated with the nucleated-rhodolith facies, the *N. fichteli* facies is dominated by weakly current-oriented tests of this foraminifer in association with crustose/warty or foliose coralline species (*N. contii*, ?*Lithothamnion moretii*) forming micrite-filled envelopes.

The palaeoecology of the four shallow-water marine benthic facies are discussed and their relationships are tentatively reconstructed.