

Palaeoecology of tropical marine invertebrate assemblages from the Late Triassic of Misurina, Dolomites, Italy

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Two marine invertebrate fossil assemblages from the Late Triassic Cassian Formation (Dolomites, northern Italy) were examined to assess their diversity and palaeoecology. Surface and bulk samples from the localities Misurina Landslide and Lago Antorno were taken and analysed separately. Both benthic assemblages are relatively similar in taxonomic composition. Gastropods form the most abundant and diverse group, followed by bivalves. Disarticulated echinoderm ossicles are also common in the bulk sample from Misurina Landslide, but they are rare at Lago Antorno. The Misurina Landslide outcrop has yielded two echinoderm Palaeozoic holdovers, the ophiocistioid *Linguaserra triassica* and plates of putative proterocidarids, supporting the earlier hypothesis that such basins acted as refugia. The gastropod species *Coelostylina conica*, *Prostylifer paludinaris*, and *Ampezzopleura hybridopsis* are characteristic elements of both assemblages. The gastropod *Jurilda elongata*, however, is the most abundant species at Misurina Landslide, whereas juveniles of the gastropod species *Dentineritaria neritina* dominate the assemblage from Lago Antorno. Newly described gastropod taxa are *Angulatella bizzarinii* Nützel and Hausmann gen. et sp. nov., *Bandellina compacta* Nützel and Hausmann sp. nov., and *Ampezzogyra angulata* Nützel and Hausmann sp. nov. Fifty-seven invertebrate species were found in the bulk sample from Misurina Landslide and 26 species were recovered from the bulk sample from Lago Antorno. However, sample size from Lago Antorno was much smaller than that from Misurina. Diversity indices (Shannon, Simpson, Berger-Parker) show similar moderate diversities in both assemblages. Rarefaction curves and rank-abundance distributions also point to very similar diversities and ecological structures of the fossil assemblages. Both assemblages are autochthonous or parautochthonous, stemming from basinal, soft-bottom habitats. Their taxonomic composition differs significantly from that of other faunas known from the Cassian Formation. The tropical marine Cassian palaeoecosystem was highly complex and its diversity is still far from being fully explored.

Key words: Mollusca, Echinodermata, diversity, small body size, Ladinian, Carnian, Cassian Formation, Alps.

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