

The unique tropical fauna of the early Mesozoic Cassian Formation (North Italy)

The marine Late Triassic fauna of the Cassian Formation from South Tyrol, Italy, is the richest Early Mesozoic biota known worldwide.

More than 1200 species have been described.

Snails, clams and sea urchins are especially abundant, diverse and commonly beautifully preserved with fine morphological details and pristine shell material.

Corals and sponges formed reefs that were populated by extremely diverse communities while deeper basins hosted characteristic less diverse communities.

The good preservation was facilitated by low-grade tectonical deformation of the Dolomites and a low grade lithification of the exposed sediments.

Some of highly diverse reef faunas were transported to the basins by mass flows and thus escaped destruction by dolomitization in the former carbonate platforms.

These circumstances facilitate unique insights into the evolution of tropical marine ecosystems and the evolution of diversity.

