

CORALS AMONG LAVAS

The Alpe di Siusi 240 million years ago

THE *PACHYCARDIA* TUFF

This fossil-bearing level is characterized by the bivalve mollusc *Pachyocardia*, generally accounting for 90% of the specimens, easily fossilized thanks to its very thick shell (παχύς meaning 'thick' in ancient greek has been latinized as *pachy*). Actually, this is a pack of conglomerate layers with prevalent clasts of volcanic origin, derived from the shores of the volcanic island that rose in the area of the modern Fassa Valley.

These sediments collapsed down the underwater slope of the island, and reached the deepest part of the basin (now Alpe di Siusi) through the depression (now Orli di Fassa) separating the Sasso Piatto carbonate platform from the Sciliar-Molignon platform. The coarse sands and gravels characterizing these beds suggest a high-energy environment, which is consistent with the thick and robust shell of the *Pachyocardia* and of some other collected molluscs, such as the gastropod *Fedaiella*.

Other bivalve molluscs among those found used to fix their shell through an organic filament called byssus (see the modern mussels). Very small molluscs were also collected; being so small they could even live in the voids among the clasts. Corals are represented by sparse remains and, most of all, by the 'Cipit boulders', often containing large coral colonies. The *Pachyocardia* Tuff is only known on the Alpe di Siusi and is particularly interesting because it suggests that organisms which had lived in rough shallow waters, fossilized in a deep-water basin (a few hundred meters) after collapsing down the underwater slope together with the coarse sediments they resided on.

(Text: Andrea Tintori)