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## **Integrated biostratigraphy and paleoenvironments of the Postalm section (Northern Calcareous Alps)**

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A continuous late Santonian to Maastrichtian succession displaying marly limestone- marl alternations is recorded at the Postalm section (Northern Calcareous Alps). The implementation of a cyclostratigraphic model was followed by a high resolution assessment of foraminifera and nannoplankton communities of this interval (Wagreich et al., 2012). Over 300 samples were taken bed-by-bed aiming at high resolution investigation of the palaeoenvironmental changes in the Tethyan Late Cretaceous. Upon the examination of the planktonic foraminifera fauna at Postalm the following planktonic foraminifera suggest ages from the uppermost Santonian *Dicarinella asymetrica* Zone up to the late Campanian to Maastrichtian *Gansserina gansseri* Zone, or nannofossil zones CC17 to CC22. Variations in the composition of foraminifera communities, planktic as well as benthic, reflect several changes in palaeoenvironment throughout the Upper Cretaceous. A conspicuous event recorded from the lowermost part of the section is a distinct deepening around the Santonian-Campanian boundary. We follow the development from a comparatively shallow shelf environment yielding high percentage of benthic foraminifera, to a hemipelagic to pelagic setting displaying planktic/benthic foraminifera ratios of more than 95 percent. Furthermore, bivalves, sponges and echinoderms are highly abundant in the lower parts of the section and decrease in number up section.

Differences in the benthic foraminiferal communities reflect the changing palaeoenvironment. Epifaunal calcareous walled foraminifera are most abundant in shelf-samples while we witness a shift towards evenly distributed infaunal calcareous as well as in- and epifaunal agglutinating foraminifera in samples from hemipelagic and pelagic subsections.

As a consequence of the deepening of the section as well as increasing tectonic activity in the Penninic realm, frequent turbidite events are recorded towards the late Campanian and Maastrichtian parts of Postalm section.

Reconstructing palaeoenvironmental change inferred from variations in planktic and benthic foraminifera communities in respect to an established chronostratigraphic framework will give valuable insights into the course of events in the northwestern Tethyan Penninic realm in the Upper Cretaceous.