

Agglutinated benthic foraminifera and changes of paleoenvironment conditions across the Cretaceous-Paleogene boundary in the Galanderud section, Alborz basin, North of Iran

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The Galanderud section has been studied for quantitative changes in agglutinated benthic foraminifera. Twenty-five species were recognized in the uppermost Maastrichtian marl and in the K-P boundary clay layer. Three types of assemblages are:

1- Uppermost Maastrichtian assemblages are dominated by calcareous agglutinated wall such as *Spiroplectammina*, *Dorothia*, *Gaudryina* and *Recurvoides*.

2- At this assemblage there has been a drastic decrease in diversity of agglutinated benthic foraminifera within the boundary clay and epifaunal species including *Cibicidoides*, *Anomalinoidea* and infaunal species of *Tappanina* spp. are dominated at this boundary.

3- In the lower Danian some species such as *Dorothia*, *Gaudryina* and *Spiroplectammina* were recovered, although they are low percent.

Regarding the quantitative benthic foraminifera a mesotrophic or relatively eutrophic condition at uppermost Maastrichtian and drastic decrease in surface productivity, collapse of food web and low oxygen condition at the K-P boundary was recognized. The benthic foraminiferal assemblages slowly recover at early Danian, which indicates that surface productivity gradually increased in the early Danian.

References:

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