

## Paleoenvironmental perturbation across the Cenomanian-Turonian boundary (OAE2) in the Kopet-Dagh basin inferred from benthic foraminiferal assemblages and geochemical anomalies

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In order to evaluate the effects of the Oceanic Anoxic Event 2 (OAE2) on benthic foraminifera, a stratigraphic section (Taherabad) in the east of Kopet-Dagh basin of Iran was studied to document the pattern of changes in foraminiferal communities. TOC concentration in the studied succession was increased up to 1 % in the two intervals belonging to *Rotalipora cushmani* and *Whiteinella archaeocretacea* biozones. The  $\delta^{13}\text{C}$  curve shows the typical features of the globally documented Cenomanian/Turonian positive excursion which is the result of burial of isotopically depleted organic carbon. Organic matter-rich intervals are characterized by lower  $\delta^{18}\text{O}$  values that indicate deposition under a warm condition with limited oxygen contents and enhanced primary productivity. These intervals are associated with a low abundance and low diversity of benthic assemblages that strongly dominated by shallow and deep infaunal agglutinated foraminifera. Characteristic taxa in these intervals are *Lagenammina*, *Saccammina*, *Reophax* and *Tritaxia*. A few opportunistic calcareous foraminifera include *Gavelinella dakotensis* and *Lenticulina* spp. are also present. By contrast, the assemblages found below and above warm intervals are more diverse and contain high abundance of calcareous benthic foraminifera. Common taxa in these parts are praebuliminids, lenticulinids, gavelinellids and *Valvulineria*. The significant abundance of praebuliminids and co-existence of infaunal and epifaunal morphogroups indicate a relatively high primary productivity (mesotrophic condition) during the improved ventilation of sea-floor.