



## **Biostratigraphy and paleoclimatology of Qum formation in Pasangan area, Central Iran**

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Qum formation in Pasangan area is located at 51° E and 34° N, and contain all members (a-f), and comprises limestone and marl. This formation rests on the lower Red formation, and it is underlain by the upper Red formation.

For the first time the calcareous nannofossil from the member of this formation, which is mostly marl, was studied, by using both light and scanning electron microscope. The thickness of this member was 104 meters, and 21 samples were taken. As a result of this study: 10 families, 20 genera, 58 species and 1 subspecies were determined and illustrated.

Based on the obtained nannofossils the sample interval is consistent with NN2-NN5 of Martini (1971), and CNlc-CN4 of Okada & Bukry (1980) zonation. Therefore the member of Qum formation is aligned to Lower - Middle Miocene.

Paleoclimatological investigations based on fossil assemblages during studied section indicate that sedimentation in Qum basin was in warm climate according to high diversity and abundance of Sphenoliter and Helicosphere which are the index of warm climate.