



Benthic foraminifera of the Dammam Formation in the UAE

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A 600 m thick stratigraphic section of the Paleogene age Dammam Formation was studied and benthic foraminifera were used to interpret the age and reconstruct the depositional environments.

The studied section is located on the eastern flank of the Jabel Hafit anticline near the town of Al Ain in the United Arab Emirates. The mixed siliciclastic-carbonate Dammam Formation overlies the clean limestones of the Rus Formation and is, in turn, overlain by the Asmari Formation. These three formations consist of shallow-marine sediments that were deposited in a foreland basin that formed at the eastern margin of the Arabian Plate during the Cretaceous to early Paleogene obduction of the Semail Ophiolite.

The Dammam Formation in the studied stratigraphic sections consists of shallow-marine sediments exhibiting an alternation between marly and poorly- lithified siliciclastic horizons and lithified limestones. Larger benthic foraminifera characteristic of a shallow-marine carbonate setting, such as Nummulites, Discocyclina and Alveolina, are the dominant fossils throughout the stratigraphic section. Based on benthic foraminifera the age of the studied interval has been refined to Middle to Late Eocene in age.