

Biostratigraphy and Palynostratigraphy of Asmari Formation at the Katula Stratigraphic Section (Izeh Zone) in the Zagros Basin

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The Asmari Formation is well-developed in the Zagros Basin and it is one the most oil producer rock units in southern Iran. This formation were paleontologically investigated at the Katula stratigraphic Section, which belongs to the Izeh zone. In this area, the Asmari Formation is 631 m thick and it has conformable contact with the overlying (Razak Formation) and underlying (Pabdeh formation) units. The Asmari Formation has informally been divided into the lower, middle and upper parts. The lower and middle parts contain benthonic foraminifers whereas the upper part includes dominant pelagic fauna.

The composition of identified foraminifers of the Asmari Formation at this outcrop are as follows:

Nummulites fichteli, *N. vascus*, *Subterraniophyllum thomasi*, *Eulepidina elephantina*, *E. dilatata*, *Peneroplis glynnjonesi*, *Archaias kirkukensis*, *Borelis haueri*, *Favreina asmarica*, *Elphidium sp.14*, *Miogypsina spp.*, *Ammonia spp.*, *Borelis melo curdica*, *Meandropsina iranica*, *Globigerinoides trilobus*, *G. immaturus*, *G. primordius*, *Globorotalia continuosa* and *Globigerinella obesa*. These are associated with dinocysts including *Polysphaeridium zoharyi*, *Spiniferites ramosus*, *S. pseudofurcatus*, *Cleistosphaeridium placacanthum* and *Cribriperidinium tenuitabulatum*.

These are arranged in ascending stratigraphic order to the following biozones:

1. *Nummulites fichteli* - *Nummulites vascus* Assemblage Zone.
2. *Lepidocyclina*-*Operculina*-*Ditrupea* Assemblage Zone.
3. *Archaias asmariricus*-*Archaias hensoni* Assemblage Subzone 2b.
4. *Elphidium sp.14*-*Miogypsina* Assemblage Subzone 2a.
5. *Neoalveolina* (*Borelis*) *melo curdica* Zone.
6. *Globigerinoides spp.* Acme Zone.
7. *Polysphaeridium zoharyi* Assemblage Zone.

Based on the index foraminiferal and dinocyst taxa an Early Oligocene to Early Miocene age is suggested for the Asmari Formation in the Katula stratigraphic section. On the other hand based upon foraminifers, dinocysts and sedimentologic data in this section the Asmari Formation was deposited at carbonate ramp environments in the studied area.

Key words: *Asmari Formation, Biostratigraphy, Early Oligocene-Early Miocene, Zagros Basin, Izeh zone*