

# EARLY MIOCENE STRATIGRAPHY AND FORAMINIFERAL BASED ON BIOSTRATIGRAPHY OF THE QOM FORMATION (ARVANEH AREA, SOUTH OF CENTRAL ALBORZ MOUNTAINS, IRAN)

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**RESUMO:** The Qom Formation represents a continuous Oligocene – Miocene sequence and was first described by the name of Qom city, located in the southern part of Tehran city. This formation is extended in vast areas of the Central Iran Basin and few outcrops are known from the southern flank of the Alborz Mountains. The Qom Formation at the Arvaneh section in northern Iran (N 35° 57' 95" and E 53° 01' 54") has about 314 meters thick. In this area, this formation rests unconformable on the Lower Red Formation and is unconformably covered by the conglomerates of the Upper Red Formation. In the studied section, this formation has been divided in 6 lithologic members. The sedimentary succession starts with Member "c2", located at the base of the section. This member consists of 54.9 meters alternating yellowish to greenish marls, thin to thick bedded sandstones, dark to cream mid to thick bedded limestones containing fragments of unidentified bivalves and gastropods and at the top is continued by around 6 meters of gypsum; Member "c3" has a thickness of about 35.57 meters of green to cream marls and thin to thick bedded limestones intercalations; Member "c4" consists of 72.32 meters of greenish to dark marls and mid to thick bedded limestones with bryozoans debris and bivalves such as *Ostrea*. Member "d" is composed of only 7.7 meters of gypsum. Member "e" is the thickest member of the formation in this region and has a thickness of 110.29 meters, being represented by intercalations of greenish to brownish marls with inter-bedded thin to mid-bedded limestones, containing fragments of bryozoans and undetermined echinoderms and bivalves. The top member of this formation is Member "f" with a thickness of 33.22 meters of cream mid-bedded limestones in lower part with undetermined bryozoans, echinoderms and bivalves, being continued with sandy limestones in the upper part. From biostratigraphical point of view, the investigated foraminifera assemblages yields an Early Miocene age (Aquitanian to Burdigalian). The two identified assemblage zones are: the *Archias – Elphidium* sp. 14 for the Aquitanian and the *Borelis melo curdica - Miogypsina* sp. 2 for the Burdigalian stage. The assemblage is mainly composed by benthic species and some planktonic forms are observed mainly in the Aquitanian part, such as: *Globigerinella obesa*, *Paragloborotalia mayeriand*, *Globoturborotalia woodi* and *Globigerinoides primordius*.

**PALAVRAS-CHAVE:** LOWER MIOCENE, QOM FORMATION, FORAMINIFERA.