

Revised Biostratigraphy and new Biozonation for the Aptian Succession in Central and High Zagros

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The Aptian sedimentary strata in Central and High Zagros are classically subdivided into three parts comprising of lower (carbonates), middle (marl and argillaceous limestone) and upper (carbonates) units. New and constrained biostratigraphic data of index larger benthic and planktonic foraminifera allowed us to propose a revision on the dating of these units. Four key surface sections were selected and measured through the outcrops of the study area in E-W direction from Shiraz to Gachsaran. Biostratigraphic analysis was resulted in distinguishing six biozones:

1) *Choffatella decipiens* zone 2) radiolaria blooming zone 3) *Globigerinelloides blowi* zone 4) *Orbitolina* (*Mesorbitolina*) *lotzei* zone 5) *Orbitolina* (*M.*) *parva* zone 6) *Orbitolina* (*M.*) *parva* - *O.* (*M.*) *texana* zone. The ammonite data were also used for calibration of the proposed biozonation. The lower unit including biozones 1 and 2 can be dated as lower part of the Lower Aptian. This dating is based on foraminiferal biostratigraphic information and calibration with *Deshayesites* ammonite data. The middle unit enriched by planktonic foraminifera is a diachronous interval. The available biostratigraphic data from the overlying and underlying units confirm its diachrony. Therefore, the middle unit with an age of the upper Lower Aptian including the biozone 3 in the east also extends to the Upper Aptian toward west. Similarly the upper unit characterizing by diversified orbitolinid fauna with an age range of the uppermost Lower Aptian to Upper Aptian in the east of area includes younger sediments of only Upper Aptian age in the west. Hence, the Lower Aptian sediments prograde westwardly and the Lower / Upper Aptian boundary gradually shifts from the upper unit into the middle one. These new biostratigraphic insights were led to correlate the Aptian succession in south of Iran with global time framework.

Key words: *Zagros, Aptian, Orbitolina, Cretaceous, Biozonation, Biostartigraphy*