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Algal Biozonation of Fahliyan Formation (Neocomian) in the Zagros Basin, Iran

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The Lower Cretaceous Faliyan Formation (Neocomian) of the Zagros Mountains consists of shale and limestone, deposited on a gentle deep carbonate ramp. The Faliyan Formation expands over a vast area in Fars and Northeast of Khuzestan provinces. The Formation, in this regions, conformably overlain by Gadvan Formation and underlain by the Hith and Surmeh formations in the subsurface and outcrop sections, respectively. Towards to Southest of Khuzestan, this carbonate dominated formation changes to shaly Garu Formation.

Calcareous algae are frequent and variety in shallow marine limestone of Cretaceous strata in Zagros Mountain in South-West of Iran. Based on thin sections and well cuttings of Faliyan Formation, 8 genera of green algae and 4 genera of red algae have determined. Following abundant taxa are described in this paper: Salpnigoporella dinarica, Salpingoporella anullata, Permocalculus innopinatus, Lithocodium aggregatum (Syn. Bacilina irregularis), Actinoporella podolica, Coptocampylodon fontis ,Acicularia sp.

Based on these calcareous algae 2 biozones are recognized, that in ascending order are:
1) Salpingoporella spp. ass.zone containing Salpingoporella annulata, S. steinhauseri, Clypeina cf. marteli, Boueina sp., Actinoporella podolica and Coptocampylodon fontis.
2) Salpingoporella muehbergi ass. zone including Salpingoporella dinrica, Lithocodium aggregatum, Permocalculus ampulacea, P. innopinatus.