

Integrated stratigraphy and facies analysis of the uppermost Albian-Cenomanian Glauconitic Limestone of Esfahan (Iran)

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The Glauconitic Limestone of Esfahan (Central Iran) is well known for its diverse (nearly 80 taxa) and well-preserved late Albian to Cenomanian ammonite faunas (e.g., SEYED-EMAMI, 1977; KENNEDY et al., 1979; IMMEL & SEYED-EMAMI, 1985). However, much less is known about the depositional setting, stratigraphic significance and regional correlation of the unit. In order to overcome this gap in knowledge, a sedimentological-stratigraphical study of the upper Albian to lower Turonian interval comprising the Glauconitic Limestone has been conducted in the Kolah-Qazi National Park area (southeast of Esfahan) and preliminary results are reported here.

The Glauconitic Limestone rests with an erosional basal unconformity on lower upper Albian strata of the Bazyab Formation (informal *Beudanticeras* shales; see WILMSEN et al., 2015, for details on the regional Cretaceous stratigraphy). It reaches a thickness of up to five metres but can be reduced to a few decimeters only on relatively short distances (~1 km). The lower part of the unit commonly consists of bioclastic packstone that is poor in macrofossils. In the middle to upper part, a fossiliferous glauconitic conglomerate with large limestone clasts and sharp base is developed, yielding the bulk of the ammonite faunas known from the Glauconitic Limestone. Locally, the beds underlying the conglomerate are absent and it directly rests on the *Beudanticeras* shales. In addition to ammonites, bivalves, gastropods, belemnites, corals, brachiopods, echinoids and shark remains are known from the bed. The conglomerate shows a fining-upward trend and grades into the overlying marly and argillaceous limestone and *Inoceramus* limestone units. These fine-grained offshore deposits could be dated as late Cenomanian to early Turonian in the Takhte-Sheitan section by means of ammonites and inoceramid bivalves. Thus, the Glauconitic Limestone comprises the uppermost Albian to middle Cenomanian, defining its hitherto controversially discussed age more precisely (KENNEDY et al., 1979: exclusively early Cenomanian; IMMEL & SEYED-EMAMI, 1985: latest Albian to late Cenomanian). It correlates with the ammonite-bearing uppermost Albian to Middle Cenomanian strata of the Debarsu Formation of the Yazd Block in the south (WILMSEN et al., 2013). The Glauconitic Limestone is regarded as a complex, condensed transgressive lag deposit overlapping a considerable palaeotopography.

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