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2021 Virtual Annual Meeting of IGCP 653

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The Onset of the Great Ordovician Biodiversification Event

2021 Virtual Annual Meeting of IGCP 735

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Rocks and the Rise of Ordovician Life – Filling knowledge gaps in the Early Palaeozoic Biodiversification

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The first record of the Floian (Early Ordovician) conodonts in the East-Central Iran (Kalmard Block)

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Abstract

The existing information on the Ordovician conodont faunas from the East-Central Iranian Platform is poor and mostly confined to the Tremadocian and Darriwilian time intervals. The study of the Lower Ordovician succession exposed at Kuh-e-Asheghan (Kalmards Block) west of the town of Tabas, provides the first record of the occurrence of Floian conodonts in the whole region. A moderately rich conodont assemblage, including *Trapezognathus diprion* (Lindström), *Gothodus costulatus* Lindström, *Drepanoistodus forceps* (Lindström), *Drepanoistodus basiovalis* Sergeeva, *Protopanderodus rectus* (Lindström), *Drepanodus arcuatus* Pander and *Erraticodon patu* Cooper, has been recovered from the carbonate unit in the upper part of the mainly siliciclastic succession, provisionally referred to the Katekoyeh Formation. This assemblage can be assigned to the *Trapezagnathus diprion* Zone, presently recognised in the upper part of the Floian Stage in South China, Peru, Bolivia and Argentina and it can be also correlated with the *Trapezognathus diprion* Subzone in the middle part of the *Oepikodus evae* Zone of the Baltoscandian biozonal scale. The underlying limestone beds contain *Triangolodus bifidus*. This species with a narrow stratigraphical range is the eponymous taxon for the recently introduced uppermost Tremadocian Zone in South China. It also ranges up into the lower part of the *Oepikodus evae* Zone. The Early Ordovician (Floian) conodont fauna of East-Central Iran can be assigned to the Temperate Domain of the Shallow-Sea Realm, following the biogeographical model introduced by Zhen and Percival in 2003, with the closest similarity to the contemporaneous faunas of South China and western South America.

Keywords: Floian, East-Central Iranian Platform, *Trapezognathus diprion* Zone, conodonta, biogeography

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