

Facies analysis and environmental interpretation of Glossifunjites and Cruziana ichnofacies of Aitamir Formation (Bazangan Area- East Kopet Dagh, NE Iran)

R. Aghighi¹, A. Mahboubi^{2*}, R. Moussavi- Harami³ and M. Khaneh Bad⁴

1, 2, 3, 4- Dept., of Geology, Faculty of Science, Ferdowsi University of Mashhad, Mashhad

* mahboubi@um.ac.ir

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Abstract

The Aitamir Formation (Albian- Cenomanian) consists of sandstone, shale, siltstone and several limestone beds. Artenj and Ghorghoreh sections have studied in east of basin for determination of the ichnofacies. In this research, trace fossils types and ichnofacies are recognized and their relation with depositional environment has interpreted. Trace fossils in studied sections consist of *Arenicolites* sp., *Cylinderichnous concentricus*, *Ophiomorpha* sp., *Palaeophycus heberti*, *Paleophycus tubularis* and *Thalassinoides* sp. that can be placed in glossifunjites and Cruziana ichnofacies. Glossifunjites ichnofacies with low diversity of trace fossils and oblique to vertical orientation of the Y branched *Thalassinoides*, *Paleophycus* and *Arenicolites* in trough and planar cross-bedded were formed in high-energy barrier complex. Whereas Cruziana ichnofacies with higher diversity and mainly oblique to horizontal trace fossils in sandy substrate with low to moderate sorting are formed in low energy condition in shoreface environment.

Keywords: Tracefossil, Ichnofacies, Cruziana, Glossifunjites, Aitamir