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Palynostratigraphy based on microflora of the upper part of Chamanbid Formation at the type section

F. Sajjadi (1) and M. Moshayedi (2)

(1) Dep. of Geology, Faculty of Sciences, University of Tehran, Tehran-Iran/Sajjadi@khayam.ut.ac.ir/+982166491623, (2) Dep. of Geology, Faculty of Sciences, University of Tehran, Tehran-Iran/m_moshayedi@yahoo.com/+982166491623

The Chamanbid Formation at the type section has been measured for palynostratigraphical studies, however, the upper part of section (with a thickness of 240 m) was palynologically productive. Diverse and well- preserved palynofloras occur in the upper part of the type section. Trilete and monolete spores and pollen dominate the assemblages, whereas dinoflagellate cyst, foraminiferal test linings, wood debris and fungal spores are minor components. 39 species of spores (28 genera) and 13 species of pollen (11 genera) are identified. Representatives of Corollina, Klukisporites and Cicatricosisporites are particularly abundant.

Based on stratigraphic distribution of miospores, three distinctive stratigraphically successive palynofloras informally termed in ascending order Assemblages zone A, B and C are identified within the upper part of Chamanbid Formation. These are compared with palynozones known from Iran and elsewhere. The oldest of the three assemblages, Assemblage zone A is characterized by the appearance of miospore species Raffordiaspora australiensis (36 m above the base of the section studied). The Assemblage zone B (occurring through 36-86 m of the section) is defined by the co-occurrence of the Laevigatosporites ovatus and Trilobosporites trioreticulatus. The Assemblage zone C. is marked by the appearance of Plicatella sp. and extends through 154 m of the top of the formation.

Based on the the co-occurrence of certain miospore species, Ruffordiaspora australiensis (Thithonian-Campanian) and Ruffordiaspora ludbrookiae (Tithonian- Albian) the upper part of Chamanbid palynofloras are collectively dated as Upper Jurassic (Tithonian), thus corroborating the ammonoid evidence