



Biostratigraphy of Dalichai Formation in Talu section (NW Damghan) to base Dinoflagellate and Foraminifera

zohreh boroumand, ebrahim ghaseminejad, and monireh Kheirkhah

boromand_zohre@yahoo.com, RESEARCH INSTITUTE FOR EARTH SCIENCES, Tehran, Iran

The Dalichai Formation in Talu section in NE Damghan (24 kilometers NE Damghan) was studied. Middle Jurassic sediments with a thickness of 168 meters in this section contain grey to green marl and grey marly limestone. 35 samples were collected systematically and 200 silde were prepared. forty nine species of dinoflagellate belonging to 30 genera were identified. A few fungle spores and foraminiferal test living and spors and pollen, grain were also recorded.

Dinoflagellate species are abundant but all the species were concentrated in lower parts of sections in samples numbered 1 to 107 some 125 meters above the base of The section two biozones were established.

Cribroperidinium crispum Total Renge Biozone (Ccr) & *Dichadogonyaulax sellwoodii* Interval Biozone (Dse) another local biozone : *Ctenidodinium combazii*/*Ctenidodinium ornatum* Acm-zone were also introduced. Late Bajocian – Late Callovian age was proposed for the studied section.

Coefficient of similarity was calculated for dinocysts of Talu section and compared with other studied sections. The section shows more similarity with the Jajarm and Frizi sections.

Organic particles in palynological slide were studied and three types of palyfacies have been recognized. According to palynofacies environmental interpretation and dinoflagellate separation a shallow and proximal environmens and a tropical to subtropical paleoclimate have been proposed for Dalichai Formation in Talu section. Relationship between palynofacies and sequence stratigraphy was discussed and system tracts of lowstand , transgressive and highstand were identified.

Based on Foraminifers studied, 26 species related to 19 genera have been identified, from which tow biozones *Lenticulina varians*- *L.nodosa*- *Nodosaria simplex* Assemblage - zone and *Globigerina helveto-jurassica* taxon rang zone were established, suggesting an age of Late Bajocian to Callovian for the formation.