

PALEONTOLOGICAL AND BIOSTRATIGRAPHICAL ANALYSIS OF THE FORT MUNRO FORMATION, RAKHI NALA SECTION, LOWER INDUS BASIN, PAKISTAN

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Abstract

A Paleontological and biostratigraphical study on *Orbitoides* specimens collected from the Fort Munro Formation, Rakhi Nala Section, Lower Indus Basin, Pakistan was carried out. Paleontological investigations including the measurement of different biometric parameters and taxonomy (i.e. systematic description) of genus *Orbitoides*. The specimens are discoidal, lenticular, and symmetrically biconvex and their diameter range in size from 2mm to 6mm. Embryo is trilocular to quadrilocular and the shape varies from spherical to elliptical. For biometrics analysis, three peri-embryonic parameters (i.e., number of peri-embryonic chambers directly originating from embryo, total number of peri-embryonic chambers, initial growth steps (neanic stage)) and two embryonic parameters (i.e. size of the embryo and shape of the embryo) were measured. The number of peri-embryonic chambers directly originating from embryo range from 4 to 5, total number of peri-embryonic chambers range from 12 to 16, and the average initial growth steps range from 0.28 to 0.32. The relatively stable values or very small fluctuation in average initial growth steps values show no positive progress in the neopion acceleration from bottom to top of the Fort Munro Formation. The average size of embryo does not show a strong correlation with the average numbers of peri-embryonic chambers originating from embryo as the increase in size of embryo should be followed by the increase of embryonic chambers. Most of the specimens show the average embryo size and number of chambers directly originating from embryo values in the range of *Orbitoides media* therefore, the whole population is attributed to the *Orbitoides media*. Based on the correlation of *Orbitoides media* zone with the *Globo truncana ventricosa* zone middle to late Campanian age of the Fort Munro Formation is confirmed.