

Study of *Miogypsina* and *Lepidocyclina* from the Paleogene – Neogene marine sediments of Andaman Basin, India.

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Quantitative analysis of the *Miogypsina* and *Lepidocyclina* populations from the Oligocene – Miocene subsurface succession of Andaman Basin has been carried out, following the principles of Nepionic Acceleration. The biometric parameters have been measured from the median sections and used for taxonomic classification and establishing phylogenetic trends. The Miogypsinidae lineage comprises of two distinct trends, i.e. *Miogypsinoides* (*complanata* – *formosensis* – *bantamensis* – *dehaartii*) and *Miogypsina* s.s. (*basraensis* – *gunteri* – *tani*). The *Lepidocyclina* lineage is represented by *L. isolepidinoides*, its gradation to *L. sumatrensis* and *L. sumatrensis*.

The sequence of mean values of the biometric data indicate a gradual and sustained evolutionary trend for the older species and pulsating pattern for the younger species of the lineages. The protoconch diameter of Miogypsinidae has an increasing trend and the Nepionic diameter has a decreasing trend from Oligocene to Miocene. The number of adauxiliary chambers around the deuterioconch of *Lepidocyclina* show an increasing trend from the Oligocene to Miocene.

The Paleogene – Neogene boundary is demarcated here at the mean value of X (number of spirally coiled Nepionic chambers excluding both embryonic chambers) at 10.40 ± 0.60 in the *Miogypsina* scale. This level coincides with the transition of *L. isolepidinoides* to *L. sumatrensis* and LAD of *Globigerina ciproensis angulisuturalis*. Thus the occurrence of *M. bantamensis*, *M. gunteri* and *L. isolepidinoides* denote Oligocene where as *M. dehaartii*, *M. tani* and *L. sumatrensis* assemblage as Miocene in this area of study.