

# Early Zanclean nannofossils from Car Nicobar Island, northern Indian Ocean, with remarks on the evolutionary significance of the genus *Ceratolithus*

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Abundant, well preserved calcareous nannofossils of Zanclean (early Pliocene) age have been recovered from two outcrops on Car Nicobar Island. The presence of species of the genus *Ceratolithus*, i.e., the horse-shoe-shaped nannoliths, in association with sphenoliths and large reticulofenestrids is indicative of Pliocene sediments. Based on the presence of *Ceratolithus armatus* and the absence of *Ceratolithus cristatus*, the Mus Jetty A Section of Car Nicobar Island is

assigned to Zone NN12. The base of the Mus Jetty B Section is characterized by nannofossils of Zone NN12. In this outcrop, the first occurrence (base) of *Ceratolithus cristatus* is indicative of Zone NN13. The change in morphological features in the ceratoliths demonstrates an evolutionary trend within the genus *Ceratolithus*: a gradual change in the size of the apical beak or rostrum, which shows how *Ceratolithus armatus* evolved from *Ceratolithus cristatus*.