

## Biostratigraphic study of Paleogene calcareous nannofossils from DSDP Leg 39, Site 354, Ceara Rise, equatorial Atlantic

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The Ceara Rise is located in the equatorial Atlantic Ocean at a depth of approximately 3000 m, and is bordered on the north, east and south by the Ceara Abyssal Plain, and on the west/southwest by the Amazonas Basin. This rise is characterised as a submarine topographic elevation that is embedded in the oceanic crust (Kumar & Embley, 1977). This work conducted a biostratigraphic study of Eocene–Oligocene calcareous nannofossils from DSDP Site 354. Fifteen slides were prepared, described and quantified. Richness and abundance indices were recorded for each sample. Some of the primary species present are *Isthmolithus recurvus*, *Sphenolithus pseudoradians*, *S. ciperoensis*, *Discoaster barbadiensis*, *D. saipanensis*, *Clausiococcus subdistichus*, *Sphenolithus distentus*, *S. predistentus*, *Cyclicargolithus abisectus*, *Helicosphaera recta*, *H. euphratis* and *Triquetrorhabdulus milowii*. The main species were photographed and measured in order to construct a detailed biozonation, and a total of six biozones were identified from the Eocene–Oligocene interval. There was a gradual decrease in specimen size upsection, which, in association with the occurrence and preservation of the specimens, suggests a possible transition from a favourable palaeoenvironment for nanoplankton to a less favourable one. This study has shown that it is possible to stratigraphically identify this interval, and this method can be used at similar elevations in equatorial seas.

### References

Kumar, N. & Embley, R.W. 1977. Evolution and origin of Ceará Rise: An aseismic rise in the western equatorial Atlantic. *Geological Society of America Bulletin*, **88**(5): 683–684.