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APPENDIX IV

A PALEOECOLOGICAL STUDY OF PTEROPODA LYSOCLINE
IN A CENTRAL NORTH ATLANTIC OCEAN CORE

AN ABSTRACT OF

A THESIS

PRESENTED TO THE GRADUATE FACULTY
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BY

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ABSTRACT

The deep-sea core, Vema 30-60, was taken from the Central North Atlantic Ocean at a depth greater than the present Aragonite Compensation Depth (ACD). The presence of a pteropod-rich layer between 20 and 35 cm depths suggests that fluctuations in the ACD have occurred in the past. Twelve Euthecosomatous Pteropoda species and fourteen planktonic Foraminifera species greater than 74 microns in size were identified. The absolute and relative abundances were calculated and graphed on a sample-by-sample basis for the upper 50 cm. Paleoecological correlations of faunal assemblages and zonations were described on the basis of distributional characteristics. The paleolysocline and ancient ACD were determined on the basis of pteropod assemblages and foraminiferal assemblages, preservational characters, and the carbonate content. The relative age of four samples were obtained through ^{14}C dating. The Holocene-Pleistocene boundary (11,000 yrs B.P.) is marked by the absence of pteropod assemblages. The average sedimentation rate was calculated and reflects paleoclimatic conditions and the depositional character of the region.