

# **REDEPOSITION OF PELAGIC SEDIMENT BY TURBIDITY CURRENTS; A COMMON PROCESS FOR BUILDING ABYSSAL PLAINS**

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## **A B S T R A C T**

Reworked pelagic detritus forms the bulk of graded beds from the upper 10 to 20 m of most abyssal plains. Coccoliths are by far the commonest detrital particle in many of the abyssal plains and occur with discoasters in the fine silt fraction, whereas reworked radiolaria, diatoms and planktonic foraminifera occur in the coarse silt and fine sand fractions. Piston and gravity cores from the Argo and Gascoyne abyssal plains off northwest Australia contain graded beds which consist of pelagic detritus sorted into layers of either radiolaria, diatoms or planktonic foraminifera. These layers clearly define the basal portions of many graded beds of different color shades. The source for most of the sediment must lie in the pelagic oozes of the adjacent abyssal hills and rises and not in the upper continental slope and shelf areas. There is increasing evidence that density currents commonly originate in the more immediate fan valleys and rises flanking the abyssal plains and infrequently on the upper continental slope.

# **GEOCHEMISTRY, MINERALOGY AND ABSOLUTE AGES OF A CARIBBEAN SEDIMENT CORE**

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## **A B S T R A C T**

Chemical and mineralogical variation were studied in a core dated by the  $^{10}\text{Pb}$  method. During interglacial periods the content of detrital minerals (quartz and muscovite) reach a maximum, while clay minerals are more abundant during glacial periods. The concentration of Mn is higher during glacial periods. The data suggest that chemical weathering was maximum during glacial periods, while interglacials were more arid in the Caribbean area.