

**A STUDY OF LITTORAL FORAMINIFERAL FAUNA OF THE
SEDIMENTS OFF THE LAGOS COAST, SOUTHWESTERN
NIGERIA**

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BY

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This study is aimed at documenting, determining the distribution, composition, and diversity pattern, and defining the biotopes and biofacies of foraminiferal fauna with the view to characterizing the littoral environments off the Lagos Coast, Southwestern Nigeria.

Twenty grab-samples, supplied by the Nigeria Institute for Oceanography and Marine Research, Lagos, were washed over 2000 μm and 63 μm sieves. The foraminiferal contents were picked, stored in micro-paleontological cellules, and the systematic description carried out. The identified individual foraminiferal taxa were counted and the relative abundance data generated were subjected to diversity index and multivariate analyses.

Eighty-three foraminiferal species were recorded. The identified foraminiferal fauna is constituted by 96 % Rotaliina, 2.73 % Miliolina and 1.27 % Textulariina. They belong to 15 super families, 27 families and 41 genera. Rotaliina strongly dominated the inner and middle continental assemblages. Textulariina and Miliolina occur only in the inner continental shelf as rare species. The four most abundant benthic species are *Hanzawaia boueana*, *Cancris auriculus*, *Florilus boueanum*, and *Nonion depressulum*. They constitute 6.90 %, 4.27 %, 3.68 %, and 3.54 % of the total identified benthic fauna respectively.

The most abundant planktic taxa are *Globigerinoides rubber*, *G. trilobus immaturus*, *G. trilobus trilobus*, *Neogloboquadrina dutertrei dutertrei*, and *Globigerina bulloides*. These respectively constitute 8.80 %, 6.95 %, 3.06 %, 6.40 %, 9.60 %, and 2.80 % of the total recorded planktic foraminifera.

The Planktic / Benthic (P / B) ratio of the foraminiferal species increases from near the shoreline to the middle shelf in the study area. The 11 diversity indices employed indicate a general increase in the diversity indices away from the shore. The samples belong to three Fisher's (a) diversity index groups. Group A has low diversity value of 4.81 while group B has moderate diversity of 8.07 and group C has relatively high diversity value of 17.36. The samples also belong to three multivariate clusters that are interpreted as biotopes. Biotope A comprises samples LE4 and LE4A. Abundance of Rotaliina and rare occurrence of Textulariina and Miliolina characterize it. Biotope B comprises samples LE3, LE1 and LE1A and is dominated by Rotaliina but has common occurrence of Textulariina and Miliolina species. Biotope C consists of samples LE2, LE5 and LE7 and is characterized by abundance of Rotaliina species and very rare occurrences of Textulariina and Miliolina species.

Most of the Benthic and planktic species identified are "warm-water" tolerant. The only "cold to temperate-water" forms recorded are the benthic species of *Cassidulina*, *Eponides*, *Lenticulina* and *Uvigerina*, and planktic *Globigerinoides bulloides*, *Globorotalia inflata*

and *G. scitula scitula*.

The study concluded that all the taxa are normal marine, well-oxygenated inner to middle continental shelf forms. They constitute the foraminiferal fauna characteristic of the shallow marine waters and littoral sediments off the Lagos Coast.