

**AAPG Annual Meeting
March 10-13, 2002
Houston, Texas**

Edward Robinson¹ (1) University of the West Indies, Mona, Kingston 7, Jamaica

Age and Paleoenvironment Using Larger Foraminifera: Examples from the American Tertiary

The so-called 'larger foraminifera' are generally larger than 'smaller foraminifera', and in modern groups are characterized by the possession of algal symbionts. However, most individuals are small enough to be preserved sufficiently completely, or show distinctive features, even from fragments, to allow generic, and even specific identification in well cuttings. The unique elements of their relatively complex test architecture also permit effective identification in random thin sections of limestone. Their shallow water, largely oligotrophic habitats involve a broad array of distinctive assemblages, characterizing a variety of shallow marine environments. While many forms remain morphologically stable over long periods, others evolve relatively rapidly, allowing them to be used as effective markers over geologically short time spans. Downslope transport of larger foraminifera into sedimentary environments dominated by planktic foraminifera and calcareous nannofossils yields mixed assemblages that permit close integration of larger foraminiferal biozones with standard planktic foraminiferal and calcareous nannofossil zones. Examples of integrated zonations, mainly from the Cenozoic of the Americas, are used to illustrate the utility of larger foraminifera in petroleum exploration.