Calcareous nannofossil biochronology and paleoecology of onshore and offshore Miocene Colombian sequences

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A high-resolution stratigraphic and biochronologic study was carried out on Neogene sedimentary sequences from multiple onshore sections in Colombia and offshore cores drilled in the Caribbean Sea (ODP Site 999). In the sequences studied, calcareous nannofossil horizons were identified using the biochronology proposed by Berggren *et al*. (1985), Raffi & Flores (1995), and Raffi *et al*. (2006).

Exceptionally high abundances of *Sphenolithus heteromorphus* and *Sphenolithus abies* were recorded in the sections. Both species became the dominant components of the nannofossil assemblage in what are called SDI (*Sphenolithus* dominance intervals) (Mejía-Molina *et al*., 2010). In northern Colombia and the Caribbean Sea, these dominance intervals occurred in both shallow-water and open-marine paleoenvironments and may be useful for regional correlations (Figure 1).

References

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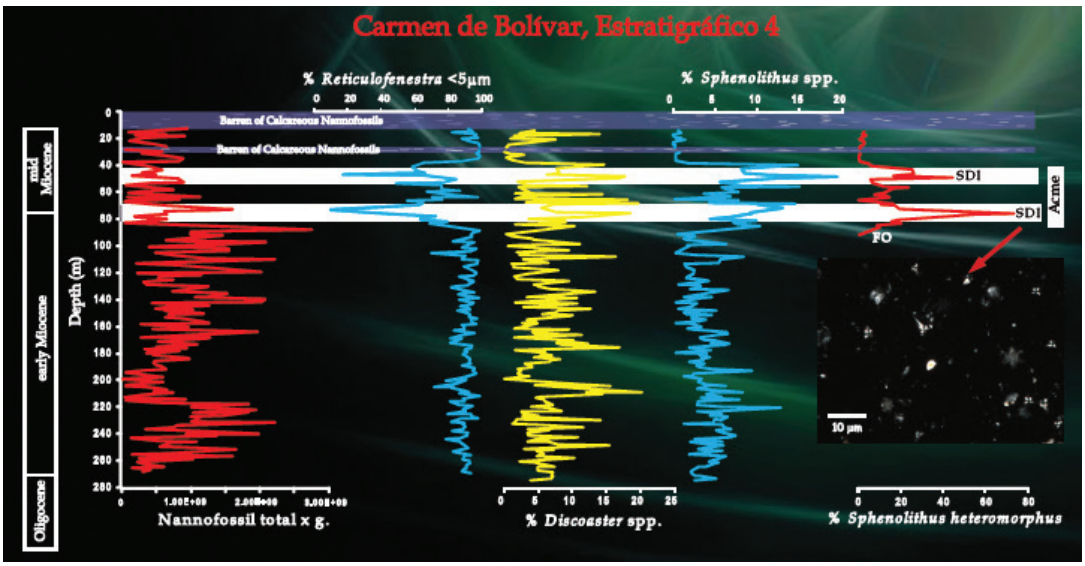

Figure 1: Percentages of *Reticulofenestra* <5µm, *Discoaster* spp., *Sphenolithus* spp., *Sphenolithus abies*, *Sphenolithus heteromorphus*, and total nannofossils per gram in the Carmen de Bolívar, Estratigráfico 4. White bars correspond to calcareous nannofossil barren intervals. FO, first occurrence; SDI, *Sphenolithus* dominance interval