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Foraminifera from a mangrove transect at the Cardoso Island (Cananéia-Iguape System/SP), Brazil

R. H. F. Funo; Décio Luis Semensatto Jr.; Dimas Dias Brito & C. Coelho Jr.

*Laboratório de Análises Micropaleontológicas, Microbióticas e de Ambientes
(LAMBdA), DGA, IGCE,*

*Universidade Estadual Paulista (UNESP), Avenida 24A, 1515, C.P. 178, 13506-900, Rio
Claro, SP, Brazil - semensattojr@terra.com.br*

Two foraminiferal associations composed only of arenaceous species define, landward, two distinct segments along a transect, 340 m long, in a mangrove at the Cardoso Island, facing towards Trapandé Bay (Cananéia-Iguape estuarine system). The “muddy plain” (low plain), 120 m long, is situated between 0.15 and 0.34 m above the mean tide level (mtl), presents higher diversity and evenness ($D = 0.54 \pm 0.21$; $E = 0.68 \pm 0.25$) and is dominated by *Arenoparrella mexicana* and *Trochammina inflata*, which are associated with *Ammotium directum* and *Textularia earlandi* and other 17 less abundant species. The associated mangrove is a *Rhizophoretum* with height of 8.4 ± 1.2 m. This segment remains flooded during 51.5% to 34.4% of time, and is also characterized by higher concentration of organic matter ($93.5 \pm 32.3 \text{ g dm}^{-3}$) and heavy metals ($V = 53.4 \pm 21.8 \text{ ppm}$ and $Zn = 46.4 \pm 21.3 \text{ ppm}$). The “sandy plain” (high plain), 180 m long, is situated between 0.39 and 1.00 m above the mtl and is characterized by an association with lower diversity and lower evenness ($D = 0.33 \pm 0.17$; $E = 0.49 \pm 0.20$), dominated by *T. inflata* and *Miliammina fusca*, which are associated with other 9 less abundant species. The associated mangrove, also a *Rhizophoretum*, presents lower height (3.6 ± 0.6 m). This segment remains flooded during 30.3% to 1.5% of time and presents lower concentration of organic matter ($39.25 \pm 15.0 \text{ g dm}^{-3}$) and heavy metals ($V = 13.0 \pm 6.8 \text{ ppm}$ and $Zn = 6.9 \pm 3.7 \text{ ppm}$). Whereas “elongate” forms (uniserial, biserial and planispiral followed by uniserial portion) are restricted to the low plain, the high plain is mainly composed of trochospiral and planispiral species. These foraminiferal distribution patterns are found in other areas and can be applied to studies which investigate discrete relative sea- level fluctuations during the Quaternary.