SUCCESSION OF MANGROVE FORESTS IN DEPOSITIONAL AREAS: A CASE STUDY IN SOUTHEASTERN BRAZIL

Cunha-Lignon Marília[1,2], Yara Schaeffer-Novelli[2], Ricardo Menghini[2], Renato de Almeida[2], Clemente Coelho Jr.[2], Gilberto Cintrón[3] and Farid Dahdouh-Guebas[1,4]

[1] Université Libre de Bruxelles (ULB), Complexity & Dynamics of Tropical Systems, Avenue Franklin D. Roosevelt, 50, 1050, Brussels, Belgium
E-mail: marilia.cunha@ulb.ac.be

[2] Universidade de São Paulo, Instituto Oceanográfico, Praça do Oceanográfico, 191, 05508-900, São Paulo – SP, Brazil

[3] US Fish and Wildlife Service
4401 N Fairfax Drive Rm 11Q, Arlington, VA, 22203-162, USA

[4] Vrije Universiteit Brussel (VUB), Plant Biology and Nature Management, Mangrove Management Group, Pleinlaan, 2, 1050, Brussel, Belgium

This paper describes the development of mangrove forests monitored in permanent plots at the Cananéia-Iguape Coastal System. The coastal system is located along the south coast of São Paulo State (Brazil), between latitudes 24°40'S and 25°20'S. In different environmental settings, within two transects (Baguaçu and Sítio Grande) fixed plots were established. New plots were placed when new mangrove stands colonized depositional areas. Plot size varied according to stem density, varying from 2m×2m to 20m×20m, according to methodology proposed by Cintrón and Schaeffer-Novelli (1984). The monitoring was done in January/2001, November/2002, May/2003, November/2003, May/2004 and November/2004. Once field data had been collected, the average height, $d_{nominal}$ ($d_{n:}$ diameter at or close to normal stem form), basal area, basal area dominance, and stem density were assessed. The mangrove forest's succession revealed patterns of structural development with increasing d_n and mean height and decreasing density over time. We identified three stages of mangrove forest development: 1. colonization or initial; 2. young; and 3. mature. In the Baguaçu transect, the initial and young stages were dominated by *Laguncularia racemosa* (70-100%), and the mature stage by *Avicennia schaueriana* (80-90%). In contrast, in the Sítio Grande transect *Rhizophora mangle* dominated in the initial and mature stages (100%) and a mixed forest (*R. mangle* and *L. racemosa*) dominated in the young stage. The mangrove forests' zonation and succession in our study sites seem to be the response of depositional processes.

References

Cintrón G. and Y. Schaeffer-Novelli. 1984. Methods for studying mangrove structure. In: Snedaker S.C. and J.G. Snedaker (Eds). The mangrove ecosystem: research methods. UNESCO, Paris, France: 91-113.

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