

Samples were analysed for organic carbon and total nitrogen and stable carbon ( $\delta^{13}\text{C}_{\text{org}}$ ) and nitrogen ( $\delta^{15}\text{N}$ ) isotope composition. Isotopic signatures in crab species did not vary between genders, but tissues (hepatopancreas, stomach content and muscle) showed significant differences. Animal tissues, leaves and sediment stable isotope values varied highly between stations. Leaves ranged between 1.9‰ and 7.1‰ for  $\delta^{15}\text{N}$  and -29.9‰ and -27.5‰ for  $\delta^{13}\text{C}_{\text{org}}$ .  $\delta^{15}\text{N}$  of invertebrate muscle tissue ranged between 7.6‰ and 17.1‰ in medium trophic levels and  $\delta^{13}\text{C}_{\text{org}}$  between -25.2‰ and -18.7‰. The crabs *Scylla serrata*, *Epixanthus dentatus* and *Episesarma versicolor* belong to the highest trophic level as inferred from the high  $\delta^{15}\text{N}$  of their muscle tissue (15.3‰). The gastropod *Telescopium telescopium*, assumed to be a grazer, is also at the top of the benthic food web and feeds on more nutritious diets, most likely dead organisms.  $\delta^{13}\text{C}_{\text{org}}$  of muscle tissue of crabs, assumed to be herbivorous, and stomach content analysis indicate that leaves are not their predominant carbon source. These crabs have a much more diverse diet, including polychaetes, fish, sediment, algae and leaves, depending on availability at each station. Our data suggest four trophic levels regarding the examined species. Single species show similar occurrence in trophic levels in all stations, but actual isotopic signatures depend highly on stations as well as food availability. Environmental factors, such as nutrient availability in lagoon water, also seem to influence food web structure.

### **P-05-3: Monitoring Structural Mangrove Forests Over Time (2001-2010)**

Marilia Cunha-Lignon<sup>1</sup>, Ricardo Palamar Menghini<sup>2</sup>, Renato de Almeida<sup>1</sup>, Clemente Jr. Coelho<sup>1</sup>, Yara Schaeffer-Novelli; Gilberto Cintron; Milton Mampel and Farid dahdouh-Guebas; *1. Université Libre de Bruxelles, 2. Instituto BiomaBrasil*

Mangroves occupy geomorphologically active estuarine settings but many studies have focused on short-term. Static views fail to capture the wholeness of these systems and could lead to failed conservation policies or management guidelines. These wetlands are of critical interest to resource managers because of their productivity, economic, and ecological roles. This paper describes the structural, temporal dynamics of forests at the Cananéia-Iguape Coastal System, located along the south coast of São Paulo State (Brazil), between latitudes 24°40'S and 25°20'S where three mangrove species occur in within different depositional facies: *Rhizophora mangle* (Rhizophoraceae); *Laguncularia racemosa* (Combretaceae); *Avicennia schaueriana* (Acanthaceae/Avicenniaceae). Monitoring was done in January/2001, November/2002, May/2003, November/2003, May/2004, November/2004, July/2008, January/2009, July/2009 and January/2010. In each of 15 plots in total, all plants were identified, and tree diameter and average height were recorded. Mean tree diameter, basal area dominance, and stem density were assessed. The forest's succession revealed three distinct stages of development with increasing diameter and mean height: 1. colonization; 2. young; and 3. mature. Where tidal energy dominates, the initial and young stages were dominated by *Laguncularia racemosa* (96-100%) and mature stages by *Avicennia schaueriana* (75-92%). Where fluvial energy dominates, *Rhizophora mangle* dominated in all stages. Sedimentary and hydrological conditions are essential in defining which typical mangrove forest species will colonize accretion areas and how zonation and succession will be manifested. Monitoring structural characteristics over time helps to understand processes involved the differentiation of the landscape. The analysis of historical satellite images allows the assessment of processes at higher hierarchical levels and the relations between morphogenetic and ecological views.

### **P-05-4: The Benthic Mollusk Dominancy, *Turbo* sp. on the Rocky Shores of Way Muli Coastal Village, South Lampung**

Made S.Y Lestari Harta, Made L. Harta ; *Department of Biology, University of Indonesia*

The study of *Turbo* sp. diversity (Turbinidae) was carried out on 16-29th Desember 2009 at the rocky shores of Way Muli coastal village and data was taken between 9 a.m. – 5 p.m. local time. Location examined are rocky shore on the southern part of the Sumatera Island directly toward The Indian Ocean and in consequence there were abundance mollusk nearby sea shore. There was significant