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### **Mangroves, heavy metals and food web: do crabs choose between contaminated and non-contaminated leaves?**

João Marcelo Silva<sup>1\*</sup>; Gray A. Williams<sup>2</sup>; Stefano Cannicci<sup>2</sup>; Christelle C. Not<sup>2</sup>; Ronaldo A. Christofoletti<sup>3</sup>

1. Universidade Federal do ABC, Santo André - SP, Brazil; 2. The Swire Institute of Marine Sciences and School of Biological Sciences, The University of Hong Kong, Hong Kong. 3. Insitituto do Mar, Universidade Federal de São Paulo, Santos - SP, Brazil. \*Correspondece to [j.msilvabot@gmail.com](mailto:j.msilvabot@gmail.com)

Tema/Meio de apresentação: Interações ecológicas/Oral.

Although mangroves represent a highly diverse and functional intertidal habitat they are subject to strong impacts from multiple anthropogenic stressors, including heavy metal pollution. Here we assess the role of mangrove trees in the transfer of heavy metals to consumers at polluted and non-polluted sites in Hong Kong. Heavy metals are a complex and resilient group of elements which accumulate in sediments where they become bioavailable and potentially toxic to plants whose metabolic responses to these stressors are species-specific. Such plant-specific responses will be reflected in the nutritional quality of leaves and may therefore affect the diet-choice of their consumers (e.g. grapsoid crabs). We evaluated the concentration of seven metal elements in mangrove sediments, leaves from trees (i.e. *Kandelia obovata* and *Avicennia marina*) and the soft tissues of two crabs (i.e. *Perisesarma bidens* and *Metopograpsus frontalis*) from four different mangrove sites (two heavily polluted and two relatively pristine) in two different seasons. Hence we were able to identify spatio and temporal variability regarding accumulation of some metals in both sediments, plants (Al, Mn and Fe) and crabs (Al, Fe, Zn) with variations between sites and within site areas. The assimilation rates between plants and crabs show that *P. bidens* tends to accumulates Cu, Fe and Zn from *K. obovata* and Al, Cu and Zn from *A. marina*. The enrichment factors between plants from polluted and pristine sites reveal that both species accumulate metals at a higher rate at the polluted sites. Feeding preference experiments showed crabs consuming more of polluted *A. marina* leaves and selectively assimilating and egesting metals from the leaves they eat.

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