

EPIPHYTIC DIATOM ASSEMBLAGES ON A SUBTROPICAL MANGROVE (*AVICENNIA MARINA*) AND ITS RELATION TO WATER QUALITY

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The temporal and spatial distribution of epiphytic diatom assemblages on a subtropical mangrove (*Avicennia marina*) has been investigated in the estuary of the Zhangjiang River (23°55'N, 117° 27'E) and in a natural mangrove reserve in Futian, Shenzhen Bay (22°32'N, 114°04'E) in southern China. Samples were collected seasonally (spring [April], summer [July], autumn [October] and winter [January]). A total of 101 epiphytic diatom species and varieties belonging to 28 genera were identified. Dominant species included *Nitzschia fasciculata*, *Hydrosera whompensis*, *Nitzschia brevissima*, *Denticula tenuis* and *Achnanthes javanica* var. *subcontracta*. Further analysis using canonical correspondence analysis revealed that diatom assemblages could be closely related to environmental variables such as salinity and nutrients resources of nitrogen and phosphate. Epiphytic diatom assemblages on mangrove roots would be a good indicator for the evaluation of water quality in mangroves.

This work was funded by the Natural Science Foundation of China under contract No: 40906058 and the Natural Science Foundation of Fujian Province of China under contract No: 2011J01279