

Fungal Pathogen Associated with Rhizophora stylosa:  
A Comparative Study between Oiled and Unoiled sites within Taklong Island National  
Marine Reserve (TINMAR), Nueva Valencia, Guimaras

An Undergraduate Special Problem

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By

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Abstract of Special Problem entitled

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For the degree of Bachelor of Science in Biology at the  
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Mangroves, refer to an assemblage of trees and shrubs that inhabit the coastal intertidal zone in tropical and subtropical regions. They help in the soil formation, protection, and stabilization of our coastal environment as well as serve as shelter and breeding grounds for some of our marine organisms. A mangrove habitat represents the borderline between land and sea and is considered as one of the principal places where spilled oil and associated impacts converge. Oil spill threaten mangroves by predisposing the plants to fungal attacks thereby reducing their resistance to stress and diseases. Studies also show that certain fungi species are able to utilize oil in contaminated mangrove species. This study generally aims to compare the fungal population found on the diseased leaves of *Rhizophora stylosa* between oiled and unoiled sites in the Taklong Island National Marine Reserve (TINMAR). It also aims to isolate, characterize and identify fungi present in diseased leaves of *Rhizophora stylosa* using potato dextrose agar (PDA) culture media and determine their frequency of occurrence. Leaf samples were collected from two sites in TINMAR, one of which was contaminated by oil and the other one was not. Three trees were selected to represent each of the two sampling sites (oiled and unoiled), and to each of the selected trees, three diseased leaves were collected. The results of this study showed the dominance of some species of fungi namely, *Aspergillus* (40%), *Penicillium* (20%), *Cladosporium* (13.33%), *Monilia* (6.67%), *Mycelia* (6.67%), *Humicola* (6.67%), and *Pestalotiopsis* (6.67%). Five out of these seven genera were isolated from the unoiled site while six of these were isolated from the oiled site. Generally, the fungal population was observed to be greater in the oiled site than in the unoiled. This preliminary data indicate that *R. stylosa* might still be undergoing stress due to the remaining components of the spilled oil in the area. However, this can only be resolved by further monitoring.