DIVERSITY AND STRUCTURAL COMPLEXITY OF MANGROVE STANDS IN BARANGAY MAG-ABA, PANDAN, ANTIQUE

LUCILLE S. BOLIVAR

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ABSTRACT

Mangrove forests provide a variety of ecological functions and economic services. However, full realization of these is also hampered by lack of understanding of the structural complexity that brings about a unique ecosystem. There is a need to understand the current status and dynamics of mangroves under threats of both natural and anthropogenic factors. The mangrove forest at Barangay Mag-aba, Pandan, Antique, that is part of the Northwest Panay Peninsula Natural Park, is one of the few patches of mangroves in Antique offering good opportunity to study diversity and stand structure. This study provides an important baseline data for conservation efforts and for comparison with other mangrove stands in the region. This study aimed to assess qualitatively and quantitatively the mangrove community structure of the Mag-aba mangrove forest. Specifically, the objectives of this study included (1) determination of selected physical and chemical factors affecting mangroves, (2) identification and classification of true mangrove species in the area and (3) analysis of the community structure. The modified line plot method for community structure survey was applied. A total of 19 true mangrove species from eight families were recorded in the area with Family Acanthaceae being the most represented. The stand basal area of 35.48 m^2/ha was indicative of a mature community system. Structure analysis showed that *Excoecaria agallocha* (31.31%) was the most dominant species and had the highest importance value (81.29) followed by *Bruguiera cylindrica, Xylocarpus granatum* and *Sonneratia alba*. Trees made up 50% of the community composition with a density of 2044.44 t/ha. Barangay Mag-aba had a mean species diversity index (H') of 0.95 indicating a low number of species present and a mean species evenness value (J') of 0.38 indicative of an unequal species distribution. High complexity and diversity were observed in the upper intertidal zone where soil salinity is low. These results provide important insights to the underlying ecological functions of the mangroves in the area as basis of a more dynamic and intensive conservation action.