Asian Journal of Conservation Biology, July 2025. Vol. 14 No. 1, pp. 12 –28 AJCB: FP0259/86652
ISSN 2278-7666 ©TCRP Foundation 2025 https://doi.org/10.53562/ajcb.86652

Research Article

Mangrove Vascular Flora Composition, Distribution, and Diversity in Selected Sites of the Coastal Areas of Surigao del Sur, Philippines

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(Received: November 1, 2024; Revised: February 10, 2025; Accepted: February 14, 2025)

ABSTRACT

Mangrove forests are vital components of coastal ecosystems, particularly in tropical and subtropical regions, where they act as natural barriers against environmental hazards. This study aimed to identify and classify mangrove vascular flora, plants adapted to coastal intertidal zones at the species level, analyze their composition and diversity, assess their zonal distribution, and evaluate their conservation status. The study focused on five municipalities: Hinatuan, Barobo, Lianga, San Agustin, and Cagwait, selected for their diverse mangrove ecosystems. Using a non-destructive belt-transect method, the study identified 32 mangrove species from 13 families, totaling 1,301 individuals. Among the most abundant species were *R. mucronata* (127) and *R. apiculata* (110). Several species were found to be near-threatened, including *C. decandra*, *H. littoralis*, and *A. floridum*, while those classified as vulnerable included *C. tagal*, *O. octodonta*, and *A. rumphiana*. Additionally, two species, *A. aureum* and *B. gymnorrhiza*, are not yet assessed. While, *O. octodonta* is classified as endemic, emphasizing the need for conservation efforts. The overall species diversity index was calculated at 3.68, indicating a very high level of diversity. These findings are crucial for participatory resource management, enabling the development of conservation strategies that protect biodiversity while addressing the economic needs of vulnerable coastal communities. The study provides a baseline for future studies and assists local governments in developing effective mangrove preservation strategies while raising community awareness of these critical ecosystems.

Keywords: Mangroves, species diversity, coastal areas, distribution status, IUCN redlist