

ADAPTIVE VARIABILITY IN LEAF TRAITS OF MANGROVE FERN ACROSTICHUM AUREUM L. IN RELATION TO ECOLOGICAL VARIATIONS

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Received-12.07.2016, Revised-26.07.2016

Abstract: The macro and micro morphological traits of lamina (length and maximal width, the ratio of length & width (L: W), area, and stomatal index) are studied in the mangrove fern *Acrostichum aureum* L. (golden leather fern) grown naturally in mangrove and non-mangrove regions in West Bengal, India. Jharkhali, and Bhagbatpur are two selected sites in mangrove region of Indian Sundarbans from where the mature leaves are collected for study. Besides, the collection sites also include three non-mangrove regions namely, E.M. Bypass, and Garia of South 24 Parganas district and Majherchar, Kalyani of Nadia district of West Bengal. Individual parameter has been assessed and statistically analyzed. One-way analysis of variance (ANOVA) test significant variations in most of the leaf traits between and among the sites, but the percentage of variations in stomatal indices are less which signifies more stability. Results suggest that ecological conditions measured through soil attributes have some important role in controlling leaf traits adaptability.

Keywords: Indian Sundarbans, E.M. Bypass, Garia, Majherchar, Kalyani, macro and micro morphology, ANOVA

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