

## **Estuarine macrophytes at Bakkhali, Cox's Bazar, Bangladesh with reference to mangrove diversity**

### **ABSTRACT**

The diversity and ecosystem significance of macrophyte communities was studied, with emphasis on the mangrove species in the Bakkhali estuary of Cox's Bazar, Bangladesh. Macrophytes of the Bakkhali river estuary were mainly mangroves (*Avicennia marina* Forssk Vierh and *A. alba* Blume and *Acanthus ilicifolius* Linnaeus) of inundation Class-IV; i.e., the mangroves are inundated 2-20 times per month (Watson, 1928), a wild rice variety of salt marsh (*Porteresia coarctata* Tateoka), Congon grass (*Imperata cylindrica* P. Beauv.), seagrass (*Halophila beccarii* Ascherson), macro-algae (*Ulva intestinalis* Linnaeus, *Catenella nipae* Zanardini and *Hypnea* sp.) and mangrove associates *Suaeda maritima*. Only two individual plants of mangrove, *Sonneratia apetala* and *Aegialitis rotundifolia*, were found growing in the inter-tidal area of this estuary. On the eastern side of the estuary, almost 100% of the intertidal area is covered by the salt marsh plant *P. coarctata*, with patches of seagrass *Halophila beccarii*. The western portion of the estuary is covered by mangroves, mixed with patchy salt marsh and seagrass in and sheltered by a sand bar. Salt marsh and seagrass grow in mangrove dominated sites as 2nd pioneer species in the newly accreted land at the mouth of Bakkhali estuary. These estuarine macrophytes are of both economic and ecological significance and the macrophyte community plays a principal role directly or indirectly in supporting the local communities as source of food, cash and energy.

**Keyword:** Mangroves; Biodiversity; Estuary; Cox's Bazar; Bangladesh