

Biomass and habitat characteristics of epiphytic macroalgae in the Sibuti mangroves, Sarawak, Malaysia

ABSTRACT

Mangroves support diverse macroalgal assemblages as epibionts on their roots and tree trunks. These algae provide nutrients to the primary consumers in the aquatic food web and have been reported to be substantial contributors to marine ecosystems. The species diversity, biomass, and habitat characteristics of mangrove macroalgae were investigated at three stations in the Sibuti mangrove estuary, Sarawak, Malaysia, from November 2012 to October 2013. Three groups of macroalgae were recorded and were found to be growing on mangrove prop roots, namely Rhodophyta (*Caloglossa ogasawaraensis*, *Caloglossa adhaerens*, *Caloglossa stipitata*, *Bostrychia anomala*, and *Hypnea* sp.), Chlorophyta (*Chaetomorpha minima* and *Chaetomorpha* sp.), and Phaeophyta (*Dictyota* sp.). The biomass of macroalgae was not influenced ($p < 0.05$) by the season in this mangrove forest habitat. The macroalgal species *Hypnea* sp. contributed the highest biomass at both Station 1 (210.56 mg/cm²) and Station 2 (141.72 mg/cm²), while the highest biomass was contributed by *B. anomala* (185.89 mg/cm²) at Station 3. This study shows that the species distribution and assemblages of mangrove macroalgae were influenced by environmental parameters such as water nutrients, dissolved solids, and salinity in the estuarine mangrove habitats of Sibuti, Sarawak.

Keyword: Macroalgae; *Bostrychia anomala*; Biomass; Mangrove; Sarawak