Changes in macroalgae species composition, assemblage and coverage at an inter-tidal rocky shore.

Abstract

Samplings of macroalgae were undertaken at an inter-tidal rocky shore of Kuala Similajau (Lat. 3°22′ 13.9′N, Long. 113°17′ 39.1″E), Bintulu, Sarawak during two peaks of wet period; Feb.-Mar. (monthly total rainfall of 514.0 mm, 481.6 mm; average temperature 25.7℃, 26.2℃) and Jul.-Aug.(monthly total rainfall 585.8 mm, 566.2 mm; average temperature 26.3℃, 27.0℃) 2008. This study investigates the changes in macroalgae species composition, assemblage and coverage covering the two peaks of wet period. A total of 23 taxa comprising 7 green, 5 brown and 11 red algae were recorded covering the two peaks of wet period, with red algae being the most diverse division. Comparatively a lower number of macroalgae species occurred during Feb.-Mar. (12 species) compared to the period of Jul.-Aug. (20 species). Several species such as Ulva clathrata (Roth) Greville, Valonia aegagropila C. Agardh and Lobophora variegata (Lamouroux) Womersley ex Oliveira, were absent during the Feb.-Mar. Common species Anadyomene plicata C. Agardh, Sargassum sp., Acanthophora spicifera (Vahl) Borgesen, Amphiroa fragilissima (Linnaeus) Lamouroux, Gelidiella acerosa(Forsskal) Feldmann & Hamel, Gracilaria salicornia(C. Agardh) Dawson, Hydropuntia edulis (S. G. Gmelin) P. C. Silva, Laurencia papillosa (C. Agardh) Greville and Laurencia sp. were present in both periods. Acetabularia major C. Agardh, Cladophora prolifera (Roth) Kutzing, Ulva intestinalis (Linnaeus) Nees, Padina minor Yamada, Ceramium sp. and Pterocladia sp. were only present in the Jul.-Aug. In terms of mean coverage, there is no distinct trend in domination with respect to a particular species between the two peaks of wet period. However, based on the number of mean coverage contributed by the species, categorically this can be represented as Division Rhodophyta>Division Chlorophyta>Division Phaeophyta.