

## 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°C, 26.2°C) and Jul.-Aug.(monthly total rainfall 585.8 mm, 566.2 mm; average temperature 26.3°C, 27.0°C) 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.

**Keyword:** Bintulu; Coverage; Macroalgae species; Rocky shore; Species composition.