

Abstrak

Kajian kelimpahan dan biojisim makrofauna di hutan bakau di Sementa (Selangor) dan Kuala Sepetang (Perak) telah dilakukan daripada bulan September 1993 hingga Disember 1994 dan daripada bulan Januari 1994 hingga Disember 1994 masing-masing. Di setiap lokasi dua tapak kajian iaitu kawasan hutan dan kawasan lapang (pembalakan) yang keluasannya masing-masing satu hektar telah dipilih. Kaedah pensampelan dengan menggunakan kuadrat aluminium 40cm x 40cm yang ditekan sedalam 20 cm ke dalam sedimen telah dilakukan secara rawak dan sebanyak lapan replikat data dicatatkan pada setiap kali pensampelan. Keputusan kajian menunjukkan komuniti makrofauna di sini terdiri daripada lapan kelas iaitu Anopla, Polychaeta, Crustacea, Insecta, Gastropoda, Bivalvia, Sipunculida dan Osteichthyes. Di Sementa spesies Polychaeta *Leiochrides australis* adalah paling dominan berbanding semua spesies dengan kelimpahan di kawasan lapang lebih tinggi berbanding di kawasan hutan iaitu 41.55 ± 28.36 individu/m² dan 40.14 ± 27.64 individu/m² serta biojisim pula 1.0342 ± 2.92 g KBKA(Kehilangan Berat Kering Abu)/m² dan 0.4346 ± 0.29 g KBKA/m². Manakala kelimpahan di Kuala Sepetang pula iaitu 28.82 ± 16.08 individu/m² dan 21.53 ± 15.76 individu/m² serta biojisim pula 0.2508 ± 0.20 g KBKA/m² dan 0.0697 ± 0.04 g KBKA/m². Di Kuala Sepetang pula spesies yang dominan iaitu *Phascolosoma arcuatum* dengan nilai kelimpahan lebih tinggi di kawasan lapang berbanding kawasan hutan iaitu 4.69 ± 3.85 individu/m² dan 2.95 ± 2.20 individu/m² serta biojisimnya iaitu 0.667 ± 0.44 g KBKA/m² dan 0.3834 ± 0.45 g KBKA/m². Nilai kelimpahan dan

biojisim *Leiochrides australis* dan *Phascolosoma arcuatum* lebih rendah di hutan dara iaitu 8.77 ± 10.20 individu/ m^2 dengan biojisimnya 0.1280 ± 0.2292 g KBKA/ m^2 serta 3.39 ± 3.10 individu/ m^2 dan 0.5140 ± 0.54 g KBKA/ m^2 masing-masing. Penemuan awal menunjukkan proses pembalakan menyebabkan peningkatan kelimpahan dan biojisim sebilangan makrofauna tertentu.

Abstract

A study of abundance and biomass of the macrofauna in the mangroves in Sementa (Selangor) and Kuala Sepetang (Perak) was carried out monthly from September 1993 to December 1994 and from January 1994 to December 1994 . Two sites, a forested and a cleared area (deforested) were selected in each location for the study. Sampling for macrofauna was done by randomly selecting a spot and then pressing an aluminium quadrate of 40 cm x 40 cm into the sediment up to a depth of 20 cm. Eight quadrates were sampled on each occasion. The macrofauna community consisted of the following eight classes: Anopla (Nemertine), Polychaeta, Crustacea, Insecta, Gastropoda, Bivalvia, Sipunculida and Osteichthyes. The dominant species in Sementa was the Polychaeta *Leiochrides australis* which occurred in higher abundance and biomass in the cleared area (abundance: 41.55 ± 28.36 individuals/m² and biomass: 1.0342 ± 2.92 g AFDW/m²) than the forested area (abundance: 40.14 ± 27.64 individuals/m² and biomass: 0.4346 ± 0.29 g AFDW/m²) respectively. Meanwhile the abundance and biomass of the same species in cleared and forested areas in Kuala Sepetang were 28.82 ± 16.08 individuals/m² (biomass: 0.2508 ± 0.20 g AFDW/m²) and 21.53 ± 15.76 individuals/m² (biomass: 0.0697 ± 0.04 g AFDW/m²) respectively. In contrast, the Polychaeta occurred in lower densities and biomass in Kuala Sepetang virgin mangrove forest where it's abundance and biomass values were 8.77 ± 10.20 individuals/m² and 0.1280 ± 0.2292 g AFDW/m² respectively. The dominant species in Kuala Sepetang mangroves was *Phascolosoma arcuatum* which occurred in higher abundance and

biomass in the cleared then forested area. The result of this study shows that abundance and biomass of some macrofauna increased due to forest clearance for logging.