

Suwat Pleumarom 2010: Free-living Marine Nematode Community on Seagrass Blades at Tha Len Bay, Krabi Province. Master of Science (Marine Science), Major Field: Marine Science, Department of Marine Science. Thesis Advisor: Associate Professor Chittima Aryuthaka, D.Sc. 189 pages.

The abundance and composition of phytal free-living marine nematode community on five different seagrass species *Halophila ovalis*, *Halodule uninervis*, *Cymodocea serrulata*, *Thalassia hemprichii* and *Enhalus acoroides* were studied in Tha Len seagrass bed, Krabi province. Nine taxa of meiobenthos were recorded consisting of nematodes, harpacticoid copepods, amphipods, polychaetes, cumaceans, tanaidaceans, kinorhynchans, tardigrades and turbellarians. The average density of meiobenthos ranged from 32 ± 1.80 to 48 ± 3.36 individuals/10 cm² leaf area.

Nematodes were the most dominant group and comprised $93 \pm 1.74\%$ of the total meiobenthos followed by harpacticoid copepods, amphipods and the others. From phytal nematode samples, 19 families, 42 genera including 53 species with the average density 39 ± 6.10 individuals/10 cm² leaf area. The highest average density (45 ± 3.16 individuals/10 cm² leaf area) was on *H. ovalis* while the lowest (29 ± 2.77 individuals/10 cm² leaf area) was on *T. hemprichii*. Nematode diversity was highest on *T. hemprichii* ($H' = 3.08 \pm 0.01$ nat) and lowest on *H. ovalis* ($H' = 2.90 \pm 0.11$ nat) and evenness index was highest ($J' = 0.83 \pm 0.01$) on *T. hemprichii* and lowest ($J' = 0.77 \pm 0.02$) on *C. serrulata*. Density and species diversity of marine nematode varied depending on the seagrass species.

Multivariate analysis was carried out in order to verify the relationship between phytal nematode assemblages and seagrass species. The results showed the relation of the nematode biodiversity and the structural features of seagrass habitats; these assemblages were different in structure and in seagrass species.

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