


Nisa Permsirivanich 2007: Study on Relationships between Environmental Factors and Distribution of Zooplankton at Mu Koh Chang National Park, Trat Province. Master of Science (Marine Science), Major Field: Marine Science, Department of Marine Science. Thesis Advisor: Associate Professor Saran Petpiroon, Ph.D. 177 pages.

Study on relationships between environmental factors and distribution of zooplankton at Mu Koh Chang National Park, Trat Province was undertaken during March 2003-January 2004. The result demonstrated that water temperature, salinity, dissolved oxygen, pH and transparency ranged between 26.7-30.8 °C, 22.3-32.1 psu, 5.00-8.28 mg/l, 8.3-8.8 and 2.50-11.10 m, respectively. For nutrient concentration in surface water, the concentration of ammonium-nitrogen, nitrite and nitrate-nitrogen, silicate-silicon and orthophosphate-phosphorus ranged between 0.96-20.21 µM, nd-1.02 µM, nd-19.48 µM and 0.06-0.29 µM, respectively. The concentration of chlorophyll *a* ranged between 0.13-2.29 µg/l. Zooplankton at Mu Koh Chang National Park was found in 7 Phyla of Phylum Coelenterata (Cnidaria), Phylum Chaetognatha, Phylum Annelida, Phylum Arthropoda, Phylum Mollusca, Phylum Echinodermata and Phylum Chordata. The most dominant zooplankton were Copepod, Chaetognatha and *Oikopleura* sp. Statistical analysis of relationship between environmental factors and concentration of chlorophyll *a* indicated that concentration of chlorophyll *a* had positive correlation with salinity, concentration of ammonium-nitrogen, concentration of nitrite and nitrate-nitrogen and zooplankton density. Moreover, concentration of chlorophyll *a* had closely relation with the density of zooplankton. Overall results confirmed that nitrogen source was an important factor for phytoplankton growth around Mu Koh Chang National Park. Likewise, phytoplankton also plays an important role for zooplankton growth.

Student's signature


Thesis Advisor's signature

29 / 05 / 07