

Ekachai Budda 2014: Influence of Treated Wastewater on Ecological Niche of  
Phytoplankton on Laem Phak Bia Beach, Ban Laem District, Phetchaburi Province.  
Master of Science (Environmental Science), Major Field: Environmental Science,  
Department of Environmental Science. Thesis Advisor: Assistant Professor  
Onanong Phewnil, Ph.D. 109 pages.

The study of phytoplankton diversity at Laem Phak Bia Beach, Ban Laem District, Phetchaburi Province was conducted during rainy period (September-2012) and summer period (March-2013). Phytoplankton was found in 52 genus (104 species) of 3 Division, 1 genus (1 species) in Division Chlorophyta, 5 genus (5 species) in Division Cyanophyta and 47 genus (99 species) in Division Chromophyta. The dominant species were genus *Coscinodiscus* sp., *Chaetoceros pseudocurvisetus*, *Oscillatoria* sp. and *Protoperdinium* sp. The total amount of phytoplankton equal to 55,856.5 cells per liter and the average of total phytoplankton amount equal to 1,861.88 cells per liter. The pearson was tested to determine the relationship between phytoplankton to water qualities. The correlation related to temperature, pH, salinity, turbidity, dissolved oxygen, total kjeldahl nitrogen, nitrate concentration and chlorophyll a ( $P<0.05$ ). The index of species diversity and evenness index of phytoplankton were 3.62 and 0.78, respectively. The results of relationships between species and amount of phytoplankton and the benthic clam (*Meretrix costa*) showed a very less correlation in both wet period and dry period, but there was more correlation when compared the relationship between diatom and the benthic clam (*Meretrix costa*).

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