

Piyawat Pongpadung 2006: Abundance and Distribution of Benthic Fauna of Bangpakong River in Ban Pho District, Chachoengsao Province. Master of Science (Fisheries Science), Major Field: Fisheries Science, Department of Fishery Biology. Thesis Advisor: Associate Professor Charumas Meksumpun, Ph.D. 193 pages.
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Benthic fauna had received direct impacts of waste water from various human activities because they are on the basis of microhabitat distribution. Changes of the water and sediment quality will effect to benthic fauna and therefore, we can use them as bioindicators for understanding water resource status. In this study, the species composition, diversity and distribution of benthic fauna in each season of Ban Pho District, Chachoengsao Province were carried out. The study area was divided to 2 zones; the canals that flow into Bangpakong River (stations A to L) and in Bangpakong River (stations 1 to 12). From the results, a total of 40 benthic fauna species were recorded, comprising of 4 Phyla; Annelida, Mollusca, Arthropoda and Sipuncula. Polychetes were the dominant benthos especially *Nephtys (Aglaothamus)* sp. in term of distribution and abundance. When we compared these levels in separated 2 zones classified by sediment properties and water qualities that had apparent impacted from human activities, the canals with intensive shrimp farms were dominated by the polychetes such as *Nephtys (Aglaothamus)* sp., *Namalycastis* sp., *Perheteromastus* sp. and *Polydora* sp. These polychetes were often reported as indicators for organic enrichment areas. In the Bangpakong river with more natural run off and more dissolved oxygen, a better sediment quality was observed and the benthic fauna became less in number but was still dominated by *Nephtys (Aglaothamus)* sp., *Ancistrosyllis* sp.1, *Heteromasthus* sp., *Nereis* sp. and *Polydora* sp.. The abundance of benthic fauna, particularly th ose of *Polydora* sp., had very high densities during August 2005 in Na Bon, Sai Mun and Hua Nean as high as 5,999, 5,955 and 2,022 individuals/m² repectively. The results revealed that salinity in water column, total organic matters and total acid volatile sulfides in sediments were major factors determining the species composition and distribution of the benthic fauna communities.

Student's signature

Thesis Advisor's signature