



รายงานวิจัย

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กลุ่มกุ้งในอ่าวปัตตานี

Community structure and feeding ecology of shrimps in Pattani
bay

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ทุนอุดหนุนการวิจัย งบประมาณแผ่นดิน
ประจำปีงบประมาณ พ.ศ. 2554

Part 1:

Community structure of shrimps in Pattani bay

Abstract

Study on the role of Pattani bay as nursery and living grounds for shrimps was conducted in order to 1) investigate species diversity, community structure, distribution and density of shrimps in the bay, 2) determine impact of different characteristic of habitat, 3) examine impact of season and 4) correlate relationship between water parameters with shrimp assemblages. Sampling was conducted at five different habitats for 12 months during daylight hours between February 2011 and January 2012 by a seine net and shrimp trammel net. Altogether, 33,876 individuals of shrimps were collected. Of these, 32,522 shrimps from 14 species were collected by seine net. *Acetes sp.*, *Metapenaeus moyebi* and *Metapenaeus lysianassa* dominated the catch with 50.6%, 22.0% and 27.6, respectively. Additionally, 1,354 shrimps from 13 species were sampled by trammel net. *Penaeus merquiensis*, *Metapenaeus brevicornis* and *Metapenaeus lysianassa* were the most dominant species with 62.6%, 15.6% and 7.5%, respectively. Most of shrimps collected were juvenile or adult of small sized-species. Analysis of variance indicated highly significant differences between shrimp density collected by seine net from five different habitats ($p < 0.005$) and 12 different months ($p < 0.005$) with the lowest density from sandy habitat. For species richness, there was a significant difference between months ($p < 0.05$) but no difference between habitats ($p > 0.05$). For gill-net sample, a highly significant difference of shrimp catch per unit effort was found only on month factor ($p < 0.005$) but not on habitats ($p > 0.05$). However, both habitat and month indicated highly significant differences on species richness of shrimp ($p < 0.005$). Cluster dendogram indicated further that the difference in community structure was based mainly on monthly or seasonal impact but not habitats.

Key words; Gulf of Thailand; Shrimp ecology; Shrimp and environment