S M Nurul Amin, J Aquac Res Development 2016, 7:6 (Suppl)
http://dx.doi.org/10.4172/2155-9546.C1.004

2nd Global Summit on
Aquaculture & Fisheries
July 11-13, 2016 Kuala Lumpur, Malaysia

S M Nurul Amin
Universiti Putra Malaysia, Malaysia

Population biology of planktonic shrimp, Acetes spp.: Potential candidate of live feed for aquaculture

Taxonomy, reproduction, feeding habits, seasonal abundance, growth, mortality, recruitment and status of the stock of planktonic shrimp Acetes spp., from the coastal waters of Klebang Besar, Malacca, and Peninsular Malaysia were examined during February 2005 to March 2007. In total three species of planktonic shrimps viz *A. indicus*, *A. japonicus* and A. intermedius were identified from the study area. Among them, *A. intermedius* was recorded for the first time from Malaysia coast. The sex ratio of *A. indicus* and *A. japonicus* in the coastal waters of Malacca was in favour of females. The analysis of gonadosomatic index (GSI) showed the continuously breeding of *A. indicus* and A. japonicus throughout the year. The estimated mean fecundity of *A. indicus* was 1666.28 (± 46.32) eggs. The mean monthly GSI for females *A. indicus* showed positive and significant (P<0.05) correlation with conductivity (r=0.67), salinity (r=0.65) and TSS (r=0.59)). Various compositions of food items in the gut contents proved that the two shrimps are bottom feeder omnivore. The average monthly catch per unit effort (CPUE) of the estuarine push net (EPN) was estimated as 2.50 (± 3.42) kg/fisherman/hr. The peak catch was observed in the month of October to December. There was no significant correlation (P>0.05) between monthly catches and environmental parameters (temperature, dissolved oxygen, salinity, conductivity and total suspended solid). Higher natural mortalities of male *A. indicus* and *A. japonicus* versus the fishing mortalities observed from the study indicated the unbalance position in the stock. This study indicated two major recruitment events per year where two cohorts were produced per year for *A. indicus* and *A. japonicus* populations. Results from the analysis of the exploitation rate (E) based on the fishing mortality estimates, indicate that the *Acetes japonicus* fishery is over exploited although *A. indicus* and *A. intermedius* fishery were slightly below the optimum level of exploitation. This implies that any further unrestrained increase in fishing effort might overshoot the level giving maximum sustainable yield, thus driving the stock down and leading to economic losses. Nowadays, *Acetes* wet tissue suspensions are being successfully used as food for all stages in the hatchery. It is also used as live food for brood stock management. Thus, *Acetes* as a food organism may play an important role in Aquaculture.

Biography

S M Nurul Amin awarded Doctor of Philosophy (Aquatic Biology) in 2008 by Universiti Putra Malaysia, Selangor, Malaysia. The above degree is underpinned by a Bachelor and Master in Marine Science, University of Chittagong, Bangladesh (1995 & 1997 respectively). At present he is an Associate Professor with the Department of Aquaculture, Faculty of Agriculture, UPM. He has 18 years of teaching and research experience in Aquaculture and Fisheries Biology. By this time, a total of 25 students (22 Master and 3 PhD) were graduated under his supervision. Simultaneously, he has published 135 articles in referred journals, 13 refereed proceedings, 32 book of abstracts and six (6) books related to fisheries and aquaculture. His current h-index is twelve (12) in Google Scholar and Seven (7) in SCOPUS and total citations number is 635.

smnabd@gmail.com

Notes: