

**D-76: Estimation of the size of adult population of *Metapenaeus ensis* in the Bolgoda estuary and their pattern of migration**

J Jinadasa<sup>1</sup>, M G T R Kariyawasam<sup>1</sup>, M Furst<sup>2</sup>

(<sup>1</sup>Dept of Zoology, Univ of Sri Jayewardenapura, Nugegoda,

<sup>2</sup>Swedish Board of Fishery Institute of Freshwater Research, Drottingholm, Sweden)

The prawn fishery of Bolgoda Estuary is dependant on 4 major species of prawns: *Penaeus monodon*, *P. indicus*, *Metapenaeus ensis* and *M. dobsoni*; *M. ensis* is the most dominant of the 4 species. It is present throughout the year and its size is acceptable to most consumers. Therefore, economically, it is the most important species.

Marked and recapture method of population estimation was used within one year to estimate the size of *M. ensis* population in the estuary. The number of tagged prawns varied from 129 to 5,225 per month per station. The study was conducted at 3 stations. The percentage of recaptured prawns varied from 0.04 to 2.24. The population of *M. ensis* estimated for the estuary ranged from 27,570 to 1,354,800 prawns/km<sup>2</sup>. the highest density of population was found in the middle region of the estuary. The rate of exploitation of adult *M. ensis* by the trap fishermen was about 6%.

The pattern of migration as indicated by tags returned of adult *M. ensis* with carapace length from 2 to 3 cm, indicated local migration within the estuary. But they have not been found migrating out of the estuary.

Funding on a research grant from the Swedish Agency for Research-Co-operation, 1989 - 1994, is acknowledged.