

**ABSTRACT.**

There are five species of commercially important penaeid prawns in Negombo Estuary, namely, Penaeus monodon, P. indicus, P. semisulcatus, Metapenaeus ensis and Metapenaeus dobsoni. P. semisulcatus is not present in the Bolgoda Estuary.

Genetic studies indicated that there is only one population in each of Penaeus monodon and Metapenaeus ensis in Bolgoda and Negombo Estuaries. Further there is one population of Penaeus monodon spreading from Puttalam to Hambantota.

M. ensis is mostly a resident species. But it also showed passive local migrations. Small prawns migrate during early hours of the evening. The adults migrate mostly towards the latter part of the night. During day time they stay mostly burried. Migration also takes place mostly along the banks, where there is vegetation, benthic fauna with fine grain substrate.

Tagged Metapenaeus ensis prawns have been found to migrate as much as 1.7 km within 3 weeks of release. All migrations had been in the direction of head end of the estuary or across the estuary. Fence erected at irregular intervals to operate traps have no impact on migration of prawns. However, saw mills and other industries which had altered the habitat along the banks have severely affected the prawn migration in Bolgoda Estuary and not in Negombo Estuary. Migration is active during rainy seasons.

Freshwater prawns migrate to Northern Bolgoda lake for spawning, of

which the most common species is Macrobrachium malcolmsoni. This species migrate twice a year to the lake. The juveniles migrate back to paddy fields and streams. Recruitment of freshwater prawns to Bolgoda lake has been drastically reduced by pollution of canals.

The adult M. ensis population in the Bolgoda estuary is about  $1.35 \times 10^6$  or about 13.5 mt of which only about 20 -30 % is harvested annually.

The population of P.monodon in the Bolgoda Estuary could be increased by stocking the estuary with hatchery reared post larvae.