

**PREVALENCE OF PARASITIC *Sacculina* SPECIES
ON BLUE SWIMMING CRAB (*Portunus pelagicus*) IN
WATERS AROUND MANNAR, JAFFNA AND
TRINCOMALEE DISTRICTS**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
in partial fulfillment of the requirement of
the degree of
Bachelor of Science in Aquatic Resources Technology

by

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2016

ABSTRACT

Blue Swimming Crab (*P. pelagicus*) is an ecologically and commercially important species which is mainly distributed from northwest to northeast coasts of Sri Lanka. Considerable infection of parasitic *Sacculina* species on the *P. pelagicus* resource is recorded. *Sacculina* is a Rhizocephalan parasite of order Cirripedia. It uses Brachyuran crabs including *P. pelagicus* as a host in their parasitic life cycle causing; cessation of moulting and mating, modification of secondary sexual characteristics and infertility. The objectives of the present study are to study the prevalence of *Sacculina* infection around the waters of Mannar, Jaffna and Trincomalee districts, studying the locality and topography effect on the *Sacculina* infection and finding out the relationship between the infection and the size of crabs. Data collection was carried out at seven sites; Pesalai, Paleimune and Illupakadavai of Mannar district, Mandathive of Jaffna district and Kokkilai, Irakkandi and Upparu of Trincomalee district. *P. pelagicus* samples were randomly collected from fishing boats at the landing sites. Carapace length and width and length and width of claws of each sample were measured using a vernier caliper. Samples were checked for infection by means of *externa* and the scar. There was no sign of parasitic infection in male samples of all sizes and all infected samples were females. Chi square value for the relationship between the size and the infection was 29.06 ($P < 0.001$) indicating that there is a relationship between the size and the infection. Zero parasitic infection in males supports the sex reversal of infected males suggested in previous studies. Highest infection was observed among crabs of 99 mm to 138 mm carapace width. The infected crabs showed stunting which may be due to absorption of nourishment by the parasite. High prevalence (11.02%) of parasitic infection was observed in calm, sheltered and shallow waters of Palk Bay while zero prevalence was observed in comparatively rough eastern and north eastern waters.

Keywords: Crab, Rhizocephala, Occurrence