COMPARATIVE STUDY OF ECTOPARASITES IN SOME ECONOMICALLY IMPORTANT FINFISHES FROM TWO LOCATIONS OF THE BATTICALOA LAGOON

BY

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ABSTRACT

The parasite fauna of some economically important fish caught at two locations in the Batticaloa lagoon was investigated in their natural habitat. The infection levels of the two localities were surveyed for a period of four months in relation to the existing climate and water quality parameters such as the concentration of Dissolved Oxygen (DOC), Nitrate and phosphate ions.

Location -1 is near Kallady Bridge where the salinity (15.25ppm) and pH (7.8) was higher and is a comparatively clean environment. Location-2 is in Kattankudy where the salinity (9.5) and pH(5.8) was lower. A considerable amount of domestic sewage dumping takes place here.

The ecology of parasitic fauna of the following fish were studied: *Etroplus suratensis, E maculatus, Triacanthus brevirostris,Oreochromis mossambicus,Lutianus fulviflamma, L.decussatus, Leognathus splendins, Siganus* sp, *Hemirhampus* sp, *Mugil cephalus, Chanos chanos, Pertica filamentosa, Tachysurus* sp, *Sillago acuta,Pleuronectus* sp. etc.

From these hosts two protozoans, two monogeneans, one digenean, one acanthocephalon and four crustaceans were identified. *E.suratensis* was found to harbour *Trichodina* sp, *Ichtiophthirius* sp, *Ceylanotroma* sp, *Enterogyrus* sp and *Ergasilus* sp; *O.mossambicus* was found to harbour *Caligus* sp; *P.filamentosa* was found to harbour *Ceylanotroma colombensis, Dermoergasilus* sp and a digenean. *Siganus* was the host for *Ergasilus* sp; *Lutianus fulviflamma* had *Ceylanotrema* sp and *E.seiboldi*; *L.decussatus* was infected with *Echynorhynchus* sp and *E. seiboldi*. *Trachysurus* was infected with *Trichodina* sp.

There was a difference between the concentration of nitrates and phosphates at the two localities. But there was significant difference in the salinity and pH between the locations. The pH and salinity at location-2 was higher than at location-1. Among the parasites found at both localities there was no significant difference between the location in the abundance of *Trichodina* sp, *Ichthyophthirius* sp in *E.suratensis* and

Acanthocephalon in *Tachysurus* sp. But there was significant difference between the location in the abundance of *E.parvitergum* in *E.suratensis*.

The host specificity and the host size preference of the parasites were also studied. Specificity to the host was assessed by comparing the parasitic fauna in a particular species of fish that lives in the same location.

In general there was positive correlation observed between the parasite infection levels and the fish size. The site preference of the gill parasites were also studied and found to vary according to species. A histological study was carried out to assess the potential pathogenicity of the most common parasites found.

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