The parasites of *Etroplus suratensis* (Bloch) and their effects on aquaculture management

N. Nilakarawasam[1] and C. Sommerville[2]

[1] *Department of Zoology, University of Ruhuna, Matara*

[2] *Institute of Aquaculture, University of Stirling, Stirling, FK9 4LA, UK*

The parasite fauna of the cichlid *Etroplus suratensis* (Bloch), a typical estuarine fish capable of withstanding salinities ranging from freshwater to brackish and considered as a promising candidate for aquaculture in the range, was investigated with a view to understanding their importance in aquaculture. This fish has been secondarily introduced to Sri Lankan reservoirs from lagoons around 1950. The study was carried out in Koggala lagoon and Udawalawa reservoir in Sri Lanka. The parasites were identified and the importance of these parasites in aquaculture was estimated by considering their ability to appear in fresh and brackish-water systems, their population levels, the effects of environmental parameters on population fluctuations, the possibility of building up of population levels in aquaculture systems and their pathological effects.

A considerable number of parasites are newly recorded for *E. suratensis*. Monogenea was the only group of parasites recorded previously. Most of the digeneans, all nematodes, and all crustaceans were new records for Sri Lanka. *Ichthyobodo* sp. and all the monogeneans were shown to be tolerant of wide range of salinity whilst the crustaceans were not. Most of the parasites with indirect life-cycles were unable to survive in both habitats, most probably due to the absence of suitable intermediate host. Drastic fluctuations in abundance levels of parasites were not observed in natural habitats. Monsoon rain was the main factor which brought about the changes; a slight fall in temperature appeared to influence cercarial release. Of ectoparasites, *Ichthyophthirius* sp., *Icthyobodo* sp., and gill monogeneans seemed to thrive well in freshwater systems while gill monogeneans and copepods in brackish-water. However, the possibility of having high infection levels with other parasites cannot be eliminated in conditions which favour high densities of intermediate host. Some external parasites were considerably pathogenic. However, the importance of others cannot be eliminated at high infection levels.