

A study of ectoparasitic infections related to environment condition in fresh water ornamental fish culture systems at Kalutara area.

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Abstract

Disease outbreak has directly affected the development of the aquarium fish industry in Sri Lanka. Parasitic diseases are common among them and fish may harbour ecto or endoparasites. The species and the number parasitizing a fish depend on the physiological conditions of the fish and their environment.

This study investigated the environment conditions (Water Quality) in relation to the parasitic outbreak in fish in culture system.

Study was conducted for a period of one year. Sampling was done once a month from the small-scale fish farms in Kalutara area. The study included farm visits and interviews with farmers in this area. The cultured fish varieties available were *Poecilia reticulata* (Guppy), *Xiphophorus maculatus* (Platy), *Xiphophorus helleri* (Swordtail), *Poecilia latipinna* (Molly) and *Cyprinus carpio* (Koi carp) At the laboratory parasites were directly isolated from skin and gills of the fish collected from every site.

Through out the study period water quality parameters namely temperature, pH, salinity, alkalinity and ammonia were found to ranged from 26⁰C – 31.5⁰C, 6.8 – 9.51, 0% – 6%, 35.6 mg/l – 162.8 mg/l and 0.061 mg/l – 1.131mg/l respectively. Parasites from fish were isolated and identified. The parasites were *Trichodina sp.*, *Gyrodactylus sp.*, *Dactylogyrus sp.*, *Argulus sp.*, and *Lernaea sp.* The predominant parasite was *Trichodina sp.* and the severity of the infection was high and with high ammonia (> 0.4mg/l) and low temperature (26⁰C) conditions.

The study revealed that beginning of the year and end of the year as disease prone period with the cold climatic conditions.

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