

## HISTOPATHOLOGICAL SCREENING OF THE TISSUES OF FISH AND SHELLFISH HARVESTED FROM VALAICHENNAI AND MORAKATTANCHENNAI LAGOON IN THE BATTICALOA DISTRICT

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Degradation of the lagoon environment through industrial and municipal eutrophication and also human encroachment on the coastal habitats is a significant concern about the health of fin fish and shellfish. Aquatic animals particularly fin fish could serve as biological indicators for environmental degradation and pollutants in coastal habitats.

Histopathological screening of tissues of fish and shellfish that were harvested from both lagoons was carried out in the Laboratory of the Department of Zoology, Eastern University. Tissues of gill, liver, kidney, muscle and heart dissected out from the randomly selected fish have been subjected to histopathological screening using standard procedure. Ecological parameters such as salinity, dissolved oxygen concentration and temperature were also measured. The results indicate that gills have been affected by the benign or proliferative disease characterized by the presence of cysts in the branchial epithelia of the host. Significant number of cysts on the secondary lamella ( $p < 0.005$ ) and extensive necrosis, sloughing of epithelial cells and melanin infiltration were the quite obvious pathological symptoms due to proliferative cyst formation on the gills. The caudal fin rot and gill rot were found in 5% of the *Tilapia* sp. collected from the Morakottanchennai lagoon.

The fish with significant level of cysts showed the anemic gills, discolouration of lamella and excess mucus secretion meanwhile the liver pathology indicated lipid degenerative hepatic tissues, fatty infiltration, liposiridin deposition and focal necrosis.

Among parasites, copepods and leech were common. Low level of dissolved oxygen concentration was measured in the area where the fish were collected for the histopathological screening (7.6ppm to 8.8ppm).