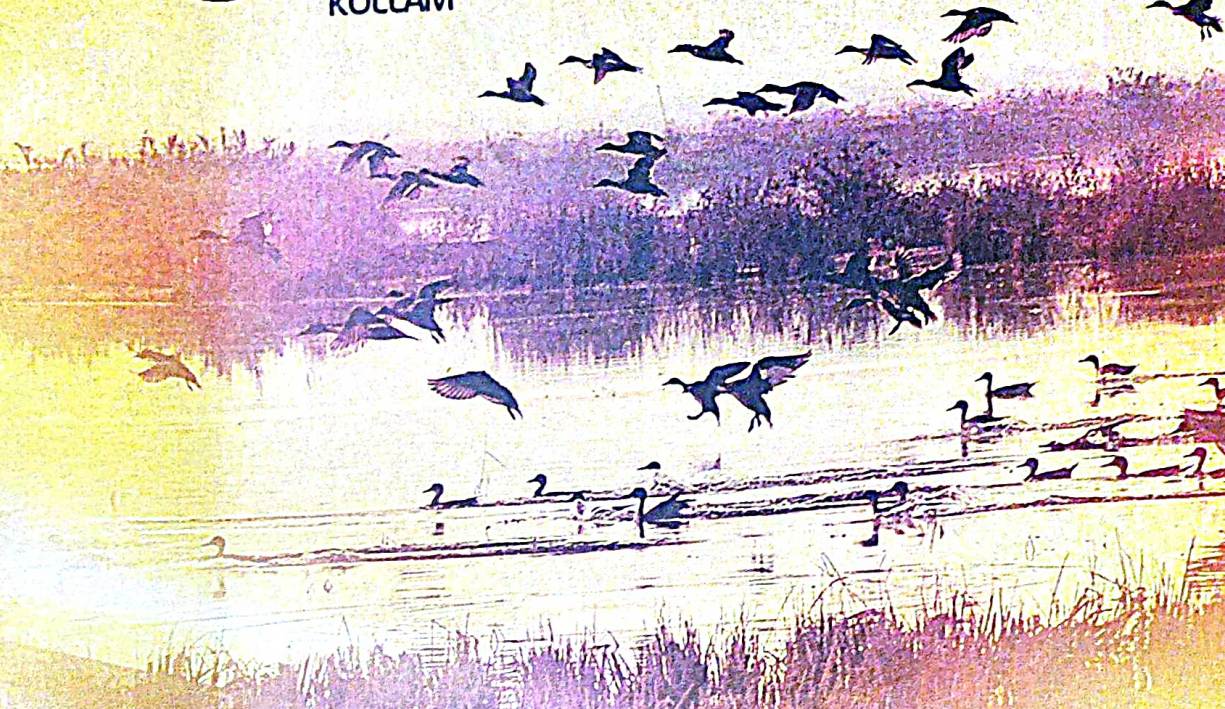




DEPARTMENT OF
BOTANY
S.N.COLLEGE FOR WOMEN
KOLLAM



National Seminar on
CONSERVATION OF
**WETLAND
ECOSYSTEMS**
FOR LONG TERM
**ECOLOGICAL
SECURITY**

ORGANIZED BY
DEPARTMENT OF BOTANY
SREE NARAYANA COLLEGE FOR WOMEN
KOLLAM



SUPPORTED BY
KERALA STATE COUNCIL FOR SCIENCE
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abstracts

**NATIONAL SEMINAR ON
CONSERVATION OF WETLAND
ECOSYSTEMS FOR LONG TERM
ECOLOGICAL SECURITY**

18th – 20th January 2018

ABSTRACTS

Organized by

**DEPARTMENT OF BOTANY
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Department of Botany, Sree Narayana College for Women, Kollam

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10⁵cfu respectively. The predominant colonies in the sediments were *Aeromonas* sp. (35.5 %), *Vibrios* sp.(33.0 %), *Bacillus* sp. (11.5 %) and *Proteus* sp. (10.5 %) and that of fish surfaces were *Aeromonas* sp. (42.0 %) and *Vibrios* sp.(37.5 %).

Key words : Estuary, sediment, fish skin, bacteria

BBE 47

PESTICIDE INDUCED HISTOPATHOLOGICAL CHANGES IN A FRESH WATER FISH AND HISTOPATHOLOGY AS A TOOL FOR RISK ASSESSMENT IN POLLUTED WATERS

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ABSTRACT

Kuttanad, the rice bowl of Kerala, India (Altitude – sea level; Latitude –9.9 N and Longitude – 76.2 E) is a region where there is overdose application of pesticide during the punja cultivation periods. Phosphamidon, Monocrotophos, Henosan and Thymet are the major components of the pesticides being used in Kuttanad. The exposure of fish to pesticides is likely to induce a number of lesions in body organs like gills, liver, kidney. The gills are the most important and sensitive organs of a fish body, which first experience the hazards of, polluted ambient water. As the fish gills are exposed to pesticides, a wide variety of structural changes in fish gills have been reported. They are hypertrophy, hyperplasia, oedema, mucous secretion, telangiectasis, stasis, hemorrhage, necrosis, fibroid, etc. The present study is aimed at assessing the extent of Phosphamidon induced pathogenesis in the gills of *Etroplus maculatus*, a fresh water food fish inhabiting the paddy fields of Kuttanad, and to arrive at a Maximum Allowable Toxicant Concentration (MATC) based on histopathology. This end point gives an early warning of the damage caused in the fish at the histological level before their mortality. Hence preventive measures can be taken to protect the fishery resources. The study shows that the pathological changes are gradually increasing from the lowest concentration to the highest concentration. Based on the index value, the MATC is 0.1732 ppm and the Application Factor (AF) is 0.0583.

Keywords: Phosphamidon, *Etroplus maculatus*, histopathology, MATC, AF.