

## **M.S.29. THANKAPPAN PILLAI, C. – Studies on finfish and Shell fish Diseases – 1983 – Dr. E.G. Silas.**

In the present investigation by the candidate, Fifteen types of diseases due to virus, bacteria and fungi such as black spot disease, enteritis, eye disease, fin rot, gill rot, hemorrhagic septicemias, muscle necrosis, shell disease, skin lesion, skin spottiness, streptococcosis, tail rot, proliferative epithelial tumour, deep mycosis and dermatomycosis are documented in twenty one species of finfishes and shellfishes and the causative factors studied. Among these, the diseases of bacterial origin predominated, occurring in nineteen species of finfishes and shellfishes. The fungal diseases, dermatomycosis occurred in the finfish, *Anquilla bicolor bicolor* and deep mycosis in the larvae of *Penaeus indicus*. Proliferative epithelial tumour due to viral infection was detected in a species of finfish, *Arius jella*.

In total 115 bacterial strains were isolated among which Gram negative asporogenous rods predominated.

Only seven bacterial strains, viz., *Vibrio anguillarum*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Escherichia coli*, *Streptococcus pyogenes* and *Proteus vulgaris* and one fungal strain, *Penicillium* sp. could be categorised as definitely pathogenic.

The obligate pathogens were further studied for their sensitivity to various therapeutic agents which are used for the treatment of finfish and shellfish diseases.

The effect of the antiseptics and the antibiotics varied from pathogen to pathogen. However, the antiseptics, acriflavine and silver nitrate were found quite effective. The antibiotics gentamycin, chloromycetin, kanamycin and terramycin were powerful enough to cure the microbial diseases.

Studies on haematological parameters revealed the fact that in the case of diseased fishes there existed a sharp decline of value of haemoglobin resulting in anaemia as compared to the normal healthy fish.