Suez Canal University
Faculty of Veterinary Medicine
Department of Fish Diseases and Management

STUDIES ON PREVAILING BACTERIAL DISEASES IN FRESHWATER CRAYFISH IN RELATION TO WILD NILE TILAPIA

Thesis presented by

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Summary

A total of 200 freshwater Crayfish *procambarus clarkii* were collected during late summer from different natural water resources of River Nile, Dakahlia governorate. The diseased crayfish showed focal heamorrahge on cuticle, liquifacation of hepatopancreas and/or congestion. A total of 258 Nile tilapia *Oreochromis niloticus* were collected from same water resources of crayfish during late summer and early winter. 60 fish that of healthy appearance were directed for pathogenicity test.

The clinical findings and post mortem lesions of naturally infected crayfish were lethergey and erosions associated with softening and darkening of hepatopancreas, while tilapia showed shallow ulcers, diffuse heamorrahges associated with congested vissera. The detected isolates from crayfish were *Escherichia coli*, *Pseudomonas aeruginosa*, Proteus spp. and *Aeromonas hydrophila* which were of higher prevalence. The rate of isolation in winter seasons was **0%**, while in summer, it was **35%**. In contrast, the rate in tilapia was **8.08** and **17.17**% in winter and summer respectively. Molecular identification revealed that *A. hydrophila* harbor the lip gene at **760bp**, while the genetic diversity using RAPD-PCR OPA-10 primer revealed that **0.9kb** and **1.4kb** amplicons were common to all isolated Aeromonas with **12** different amplicons of size ranging from **0.5** to **1.9kb**. Histopathological findings were varied from severe to mild degenerative changes.

Key word	*Procumbarus clarkii, Oreochromis niloticus, Aeromonas hydrophila*