A THESIS

entitled

Aspects of the biology of <u>Paracaridinicola platei</u> (Fernando, 1952)

Baer 1953, an ecto-commensal on the endemic freshwater shrimp

<u>Caridina fernandoi</u> (Arudpragasam and Costa, 1962) in the Kandy Lake.

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ABSTRACT

Feeding, reproduction and ecological factors comprise the main biological aspects of this study on Paracaridinicola
Platei - an ecto-commensal with a high degree of host specificity for the atyid shrimp Caridina fernandoi.

Bi-monthly sampling as well as histological and histochemical experiments provided the means for data collection.

The feeding habits and digestive physiology of <u>Paracaridnicola</u> was found to be similar to free-living turbellarians. Eggs are laid singly, and encapsulated by a tanned shell. Optimum phenolase activity in the vitellaria was between 50-55^{oC} and pH 7.6-8.0. A study on environmental and host factors on the intensity of infection showed that the indirect effects of environmental factors (especially rainfall) cannot be eliminated. Of the host factors size and sex were most important, with female shrimps being more susceptible to infection than males, and non-ovigerous females showing a high percentage of infection. Host pigmentation did not appear to be important.

Past and present work with suggestions for future lines of research have been reviewed.

