



De La Salle University - Dasmariñas
GRADUATE PROGRAM

The Occurrence of Helminths in Nile Tilapia (*Oreochromis niloticus* L.) and its Correlation with the Environmental Condition of the Host- fish in De La Salle University- Dasmariñas Lake

A Master's Thesis Presented to
The Faculty of the Graduate School of Education
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of the Requirements for the Degree
Master of Science in Biology

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ABSTRACT

Name of Institution : De La Salle University - Dasmariñas
Address : Dasmariñas, Cavite
Title : The Occurrence of Helminths in Nile Tilapia

(*Oreochromis niloticus* L.) and its
Correlation with the Environmental
Condition of the Host-fish in De La Salle
University-Dasmariñas Lake

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OBJECTIVES OF THE STUDY

1. determine the helminths affecting Nile Tilapia collected from DLSU-D lake, Dasmariñas, Cavite.
2. compute and describe the prevalence on Nile Tilapia.
 - 2.1 establish significant relationship between the prevalence of helminths in and length and weight of host-fish.



2.2 establish significant association between the prevalence of helminths and the age and condition of the host-fish.

3. establish significant correlation between the prevalence of helminths in Nile Tilapia and the environmental condition of the host-fish.

3.1 establish significant correlation between the prevalence of helminths in Nile Tilapia and the temperature of the DLSU-D lake.

3.2 establish significant correlation between the prevalence of helminths in Nile Tilapia and the transparency of the DLSU-D lake.

3.3 establish significant correlation between the prevalence of helminths in Nile Tilapia and the dissolved oxygen of the DLSU-D lake.

3.4 establish significant correlation between the prevalence of helminths and the salinity of the DLSU-D lake.

3.5 establish correlation between the prevalence of helminths in Nile Tilapia and the pH of the DLSU-D lake.

3.6 establish correlation between the prevalence of helminths in Nile Tilapia and the alkalinity of the DLSU-D lake.



Nile Tilapia (*Oreochromis niloticus* L.) collected from DLSU-D lake within a five-month duration of the study were subjected to standard parasitological examination for the presence of helminths. The observed occurrence was correlated with the environmental condition of the host-fish as represented by selected physico-chemical parameters which include temperature, transparency, salinity, pH, dissolved oxygen, and alkalinity.

Of the 34 fish samples, four or 11.76% were positively identified with subclass digenean encysted as metacercariae in fins, scales and muscles. The encysted metacercariae measuring 40 - 60 um were spherical to ovoidal in shape with cyst wall and indistinguishable dense cellular contents.

As statistically tested, the low prevalence rate failed to establish significant correlation with any of the mentioned physico chemical parameters. The result also revealed no significant association between the prevalence of helminths and the host-fish' weight, length, age and condition.



A recommendation is given to include other interrelated factors that ought to have been considered such as the presence of other intermediate hosts, specifically the snail and the fish diet which are deemed to be contributory links to the occurrence of helminths.

