WATER QUALITY EFFECT OF JAPANESE WEATHER LOACH *(Misgurnus anguillicaudatus)* AS BIOTURBATOR OF SOIL

By

JEMARHOSE MUNLITING TAKINAN

An Undergraduate Thesis submitted to the faculty of the College of Fisheries
in partial fulfillment of the requirements for the degree of

BACHELOR OF SCIENCE IN FISHERIES

Department of Aquatic Resources, Ecology and Management
COLLEGE OF FISHERIES
CENTRAL LUZON STATE UNIVERSITY
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WATER QUALITY EFFECT OF JAPANESE WEATHER LOACH *(Misgurnus anguillicaudatus)* AS BIOTURBATOR OF SOIL[1/]

ABSTRACT

The study was conducted to determine the potential of loach as bioturbator in improving the quality of soil organic matter and to determine the effect of loach bioturbation activity in the quality of water. The water quality parameters considered in the study includes temperature, pH, dissolved oxygen, alkalinity, hardness, total ammonia nitrogen (TAN), nitrite and phosphorus. Soil organic matter was also included in the study.

Water samples were collected on a weekly basis from January to February 2016. Analysis of water temperature and dissolved oxygen were measured on site using the DO meter and pH was measured using the pH meter. Other water quality parameters (alkalinity, hardness, TAN, nitrite and phosphorus) and soil parameters were analyzed in the Soil and Water Quality Laboratory of FAC-CLSU. On the analysis of soil, soil organic matter was analyzed before and after the experiment.

Results showed that most of the physico-chemical parameters of water (temperature, pH, alkalinity, hardness and phosphorus) were found to be in the optimum range. The final SOM of the two treatments have decreased from the initial SOM. However Treatment 2 has a larger reduction and the final SOM (2.32) is significantly different than that of the Treatment 2 (4.69). The presence of Japanese weather loach which disturb the bottom soil can expedite the reduction of SOM.

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