PHYTOPLANKTON ABUNDANCE AND ITS CORRELATION WITH THE PHYSICOCHEMICAL CHARACTERISTICS OF TAAL LAKE, TALISAY, TANAUAN, BATANGAS

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ABSTRACT

Taal Lake is a 24,356-hectare body of water which is tapped for aquaculture, fishing, navigation, and tourism spot of Talisay, Tanauan, Batangas. Taal Lake is also classified under Class C since it serves as fishery water used for the propagation of fish and other aquatic sources. The study conducted in the said site focused on its role for aquaculture. This lake serves as the home for many fishes, especially tilapia, and a primary source of income for most residents near the area. The water quality and food available for these fishes are very important factors for them to grow well. Phytoplankton is a group of microscopic plants commonly known as algae which serve as the foundation, the first link of the marine food chain and serve as food for aquatic organisms. These organisms are good indicators of pollution and water quality of the lake. Based on the study conducted, there are 64 species of phytoplankton found which belongs to 4 phyla, 14 classes, 14 orders and 22 families. The most abundant species found in the dry season were *Melosira islandica, Stauroneis anceps, Stephanodiscus hantzschii, Melosira granulata* and *Synedra ulna*.. The most abundant species found in the wet season were *Synedra acus, Oscillatoria ornate, Melosira granulata* and *Staurastrum cuspidatum*.. Some of these species are involved in water pollution in number of ways causing massive fish kills. The physicochemical parameters such as pH, temperature, DO, nitrate content, phosphate content and water transparency obtained in Taal Lake were correlated with the abundance of phytoplankton species wherein these parameters have a significant effect on the abundance of phytoplankton species.

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