ECTOPARASITES ON FRESHWATER FISH *Oreochromis niloticus* Linnaeus, 1758 (TILAPIA MERAH) IN FISH FARMS AT PENAMPANG, KOTA KINABALU, SABAH

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This Final Year Project Report entitled **"Ectoparasites on Freshwater Fish *Oreochromis niloticus* Linnaeus, 1758 (Tilapia Merah) in Fish Farms at Penampang, Kota Kinabalu, Sabah"** was submitted by Sitty Aira M.T Aidala, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Science, and was approved by

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Sitty Aira M.T Aidala

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ABSTRACT

ECTOPARASITES ON FRESHWATER FISH *Oreochromis niloticus* Linnaeus, 1758 (TILAPIA MERAH) IN FISH FARMS AT PENAMPANG, KOTA KINABALU, SABAH

Ectoparasites infection has been posing a threat to the fish cultivation activities in many fish farms, including Penampang area. As the matter of fact due to the ectoparasitic activity, the quality of the fish will be affected and often leads to death of fish resulting in enormous economic losses to the fish industry. The objectives of this study were to determine the type of ectoparasites on freshwater fish *Oreochromis niloticus* to determine the prevalence and intensity of ectoparasitic infections and to determine the relationship of both sex and body size with the parasite intensity of *Oreochromis niloticus* in fish farms at Penampang, Kota Kinabalu, Sabah. Sampling was done from February until June, 2017 with three times replications of sampling that range monthly per sampling. In this study, a total of 180 fish samples from two different fish farms, Putaton and Kipouvo were examined. The fish species examined was *Oreochromis niloticus* (Tilapia merah). Five Phylum of ectoparasites were found from the data observation and analysis. The ectoparasites were, skin blister roundworm from Phylum Nematoda, *Halacarid sp. from* the Phylum Acarina (mites), *Trichonida sp.* from the Phylum Protozoa, *Dactylogyrus sp.* and *Gyrodactylus sp.* from the Phylum Platyhelminthes Monogenea (Gillworms), and *Myzobdella sp.* from the Phylum Hirudinea (leeches). The prevalence and intensity of ectoparasite infection shows a significant different from both fish farms which in Putaton was slightly higher than Kipouvo. According to the statistical analysis, this study also shows that the relationship of the size of fish as well as the sex of the fish to the parasite intensity is negative (*r* value for the weight = - 0.104 and *r* value for the length = - 0.395). Throughout this study, it was observed that poor fish and water management were the main factors of the susceptibility of the fish to the parasitic infections. This study contribute to prepare data and management tool for future researchers in the aquaculture industry. As a recommendation, the distribution and abundance of ectoparasites on *Oreochromis niloticus* at Penampang should be further studied. It is also recommended that the fish farmers to continuously upgrading the water and fish management of the fish farms to maintain a hygienic and favourable condition for the fishes to be their source of economic as well as to be consumed by the society.