

This Final Year Project Report entitled "Ectoparasites in Freshwater Fishes at Lowerstream of Tuaran River, Sabah" was submitted by Siti Nurshafiqah binti HAMDAN in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, Faculty of Applied Sciences, Universiti Teknologi MARA, and was approved by

**ECTOPARASITES ON FRESHWATER FISHES AT
LOWER STREAM OF TUARAN RIVER, SABAH**



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ABSTRACT

ECTOPARASITES IN FRESHWATER FISHES AT LOWER-STREAM OF TUARAN RIVER, SABAH

This study aims on the identification as well as provide information on the prevalence and intensity of ectoparasite in freshwater fishes at lower stream of Tuaran river, Sabah. A total of 42 individual from 5 different types of fish species were examined for ectoparasite from September to December of 2015 by using large and small net. The total number ectoparasite found was 311, with 4 type of ectoparasite found, which were nematode: *Camillanus sp.*, *Capillaria sp.*; trematode: *Opsthorcis sp.*; protozoa: *Piscinoodium sp.*, *Trichordina sp.*, *Gaussia sp.*; and crustacea: *Argulus sp.* The highest number of ectoparasite found was nematode (269), followed by protozoa (41), trematode (8) and crustacea (3). All of the fishes captured and examined were positively infested by ectoparasite at 100% of prevalence, with 8.79 intensity in average. The most infested part in the fish body is ventral fin.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

A parasite is a living organism, which takes its nourishment and other needs from a host (Gerald *et al.*, 2009). Host is an organism which supports the parasite, for example fish. The relationship between parasite and host is known as parasitism, which usually benefit only to parasite while it will cause harm to the host (Peek, 2012). The parasite cannot only cause tissue damage to the host during its various life cycle stages, but also can make the host vulnerable to other diseases since it can harbour bacteria or virus and transmit it to their host. Parasite are common in most ecological and all free-living organism can be potential hosts to parasite.

Parasites are typically divided into two groups which are ectoparasites that live on the outside of the host such as gills, mouth, skin and fin surfaces, and endoparasites that live in the tissues, blood and organs including the gastrointestinal tract. The two groups of parasite physical characteristics, life cycle and host infection site are used to categorize it under which parasite types. Examples of parasite type are fungi and algae, protozoan, trematode, nematode, cestode, acanthophalan, parasitic crustaceans and leeches.