

**COMPARATIVE STUDY OF ECTOPARASITE ON *Gastromyzon*  
*borneensis* AT UPPER STREAM REGION OF SUNGAI LANGANAN  
AND SUNGAI BONGKUD, RANAU**

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## ABSTRACT

### COMPARATIVE STUDY OF ECTOPARASITE ON *Gastromyzon borneensis* AT UPPER STREAM REGION OF SUNGAI LANGANAN AND SUNGAI BONGKUD, RANAU

Ectoparasite infestation has been discovered as one of the organisms that can threaten the health and survival of the fish. *Gastromyzon borneensis* is an endemic species which highly abundance in Borneo. This fish mainly inhabits in clean, high dissolved oxygen, fast flowing water, thus considered as indicator to clean freshwater area. However, like the other species, *G.borneensis* also susceptible or may be exposed to any type of infection, includes ectoparasite infestation if the condition become unfavourable for their preference. Therefore, this study aimed to identify the prevalence of ectoparasite and how the water physical parameter of the river affecting the prevalence of ectoparasite. The study of ectoparasite on *Gastromyzon borneensis* were conducted at Upper stream of Sungai Langanan and Sungai Bongkud, Ranau. The water physical parameter, which consist of pH, temperature and dissolved oxygen were assessed using multiparameter. In this study, a total of 128 fishes were obtained from both rivers and the mucus was scrapped on external part of the fish body and preserved using ethanol 70%. The mucus then transferred into laboratory for ectoparasite examination. Four types of ectoparasite were found in both rivers which consist of *Ichthyophthrius multifiliis*, *Capillaria pterophylli*, *Cancerilla tubulata* and *Cestoidean proteocephalus*. The prevalence of each parasite in both rivers were evaluated and *C.proteocephalus* showed the highest prevalence where 14.06%, followed by *C.pterophylli* (6.25%), *C.tubulata* (3.13%) and *I.multifiliis* (1.56%) for Sungai Langanan. For Sungai Bongkud, the highest prevalence was *C.proteocephalus* (21.88%) followed by *C.pterophylli* (12.50%), and then *I.multifiliis* and *C.tubulata* (6.25%). By reviewing some of the most recent finding, environment factors were the most affect the prevalence of ectoparasite on fish. In this study, pH, temperature and dissolved oxygen give an effect to prevalence of ectoparasite at Upper stream of Sungai Langanan while prevalence of ectoparasite at Upper stream of Sungai Bongkud was affected by temperature only. Indeed, this study will create awareness and trigger an action toward conservation and avoid activities that may contribute to damage or pollution to the nature.