

ORL-D&H-02**Fish and Fish Parasites in The Tinau River and Its Tributaries: A Case Study**

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Fish are the most important and diverse groups of vertebrates that occupy about half of all the vertebrates found on the planet earth. Fish and fish parasites are regarded as excellent indicators of the river health system. Tinau River is an independent river system which originates from the Mahabharat range in Palpa district of Nepal which receives several feeder streams. A case study was carried out in Tinau River and its tributaries for four months (March-June 2024) to investigate fish and fish parasites. Fish were sampled purposively from the eight different sampling stations of the Tinau River and its tributaries using cast nets.

A total of 22 species of fishes, namely, *Neolissocheilus hexagonolepis*, *Garra gotyla*, *Opsarius bendelisis*, *Psilorhynchus pseudocheneis*, *Tor tor*, *Glyptothorax pectinopterus*, *Schistura beavani*, *Acanthocobitis botia*, *Oxygaster bacaila*, *Puntius sophore*, *Nemacheilus botia*, *Glossogobius giuris*, *Cirrhinus reba*, *Labeo calbasu*, *Esomus danricus*, *Channa punctata*, *Opsarius barna*, *Mystus tengara*, *Mastacembelus armatus*, *Amblyceps mangois*, *Danio rerio* and *Crossocheilius latius* were recorded. A total of 148 fishes belonging to ten different species were inspected carefully for the ectoparasites, and also dissected for the fish helminth parasites.

None of the fish were infected with the ectoparasites, but 14.19% fishes were infected with gastro-intestinal helminth parasites. Comparatively large number of the fishes were infected with Nematode parasites belonging to the Genera *Camallanus* sp. and *Procamallanus* sp. compared to the Trematode parasite of genus *Clinostomum marginatum*. Preliminary identification revealed that *Opsarius* sp., *Neolissocheilus hexagonolepis* and *Oxygaster bacaila* were infected with Nematode parasites, whereas Trematodes was found only in *Opsarius* sp. The fishes belonging to Genera *Garra gotyla*, *Schistura beavani*, *Puntius sophore*, *Cirrhinus reba*, *Esomus denricus*, *Nemacheilus botia* and *Glossogobius giuris* were not infected with parasites.

Furthermore, co-relation between fish and fish parasite distribution required to be explored with the water quality parameters of the Tinau River and its tributaries.



Photo 1. Fish sampling Done by using cast net



Photo 2. Opsarius barna