

**ORL-EB&C-15****Gut Content Analysis of Nile tilapia *Oreochromis niloticus* and Glass fish *Chanda nama* of Begnas Lake, Kaski, Nepal**

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Gut content analysis provides information on eating habits, trophic interaction and competition, fish species-specific feed preferences, and geographical and seasonal variation. In fisheries, it helps to ascertain the feeding patterns and diets of fish species as well as provide information about the impact of introduced or invasive species to native fish species. A total of 36 gut of each fish species Nile tilapia (*Oreochromis niloticus*) and Glass fish (*Chanda nama*) of Begnas Lake were collected from December 2023 to March 2024 from the fish landing site of Begnas Lake. The stomach contents were analyzed by volumetric, frequency of occurrence method and also index of preponderance and geometric index of importance were calculated.

The food items in the stomach of *O. niloticus* suggested it to be omnivore while *C. nama* to be carnivore and facultative scale feeder. Index of preponderance depicts that in *O. niloticus*, phytoplankton (61.92%) was the most commonly consumed food followed by zooplankton (24.39%), debris and sand particle (12.57%), nematodes (0.7%) and hatchling (0.42%). The Geometric index importance (GII) result revealed that in *O. niloticus*, phytoplankton is preferential food, zooplankton is secondarily consumed food and remaining other food are occasional food. In *C. nama*, micro crustaceans (48.82%) contributed the most for the total volume of food items, followed by scales (37.76%), insects (13.53%), and phytoplankton (0.29 %). Similarly, GII showed micro crustaceans as primary food, scales and insects as secondary and other as occasional food of *C. nama*. Begnas lake supports 28 phytoplankton species and 12 zooplankton species out of which 24 phytoplankton species and 7 zooplankton species were found in *O. niloticus* gut and 7 phytoplankton species and 4 zooplankton species were recorded from *C. nama* gut.

This diverse feeding of *O. niloticus* might lead to competition with native fishes for food as well as feeding on hatchlings. The lepidophagous behavior of *C. nama* might make local species susceptible to various diseases due to scale removal and exposure of skin. These two invasive fish species have created difficulties to indigenous fishes which might be reason for decline in native fish population.

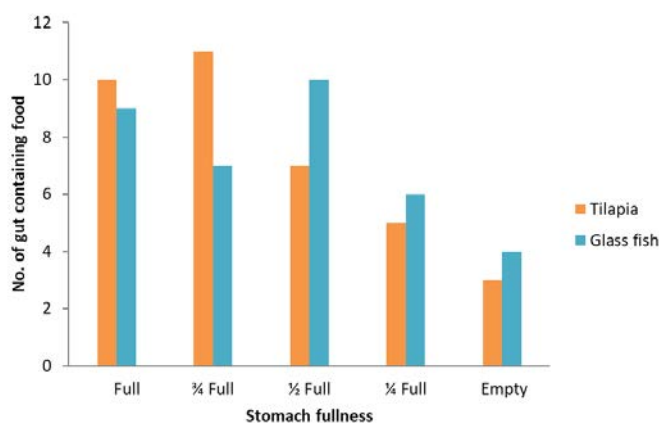


Figure: Fullness index of stomach of tilapia and glass fish