

**ORL-EB&C-13****Assessment of Fish Diversity in Rapti and Narayani Rivers in Nepal**

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The rivers Narayani and Rapti flows through Chitwan National Park are renowned for their abundant aquatic biodiversity in Nepal, and house numerous threatened and endangered flora and fauna. However, over the past few years, anthropogenic activities have had significant adverse impacts on aquatic biodiversity. Recognizing the fact that fish is the primary food source for the Gharial, this research was conducted as part of a Gharial conservation project with the aim to gain a comprehensive understanding of the situation and identify the fish species of that area. A survey was conducted from 29th July to 15th August 2021 in Narayani and Rapti rivers to assess the fish diversity.

The study was conducted in 6 sampling sites; Narayani River (Devghat (N1), Shivaghat (N2), and Amaltari (Golaghat) (N3)), and Lothar (R1), Kasara (R2), and Golaghat (R3) in Rapti River. Fishes were sampled by using a cast net with a length of 2.8 meters and a circumference of 15.9 meters, covering an area of 14.2 square meters, conducted 10 times at each site. In total, 24 species (23 indigenous and 1 exotic) belonging 7 orders and 13 families were reported. The exotic species *Oreochromis niloticus* is found from Shivaghat area indicated the escaping from pond or intentional release as this species used in aquaculture farming.

The highest Shannon-Weiner diversity index ( $H'$ ) was observed at Golaghat (R3) whereas the lowest value was at Shivaghat (N2). Similarly, the Shannon equitability index ( $J'$ ) was found the highest at (R1), and the lowest at (N3). The result of study showed Golaghat (R3) has significantly contributed to the richness, evenness, and diversity of the fish community that may be due to the area was fully protected compared to rest of the sites.

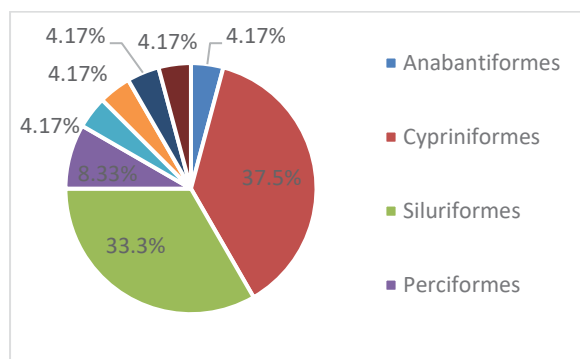


Figure 1. Order wise fish distribution

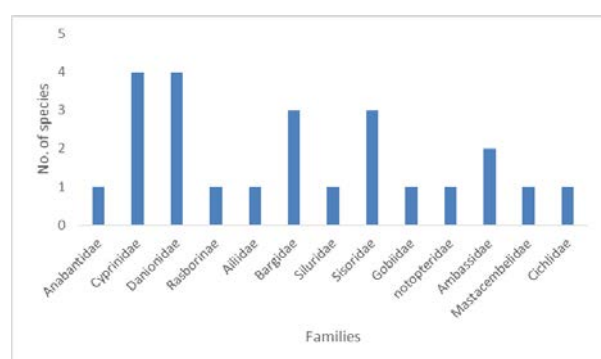


Figure 2. Family wise fish distribution