

ORL-EB&C-09**Study on Fish Diversity of Gauri Shankar Conservation Area**

Sangam Thapa Magar* and Santoshi Shrestha

Central Department of Zoology
Tribhuvan University
Kritipur, Kathmandu, Nepal
thapasangam379@gmail.com

The study was conducted on fish diversity of the Tamakoshi and Singati Rivers over three seasons: Pre-Monsoon, Monsoon, and Post-Monsoon from August 2023 to April 2024. Fish samples were collected from nine sampling sites using cast nets with the help of local fishermen.

A total of 536 individuals were caught with 7 species belonging to 2 orders, 3 families, and 6 genera. Among the collected fishes Family Cyprinidae (60%) was recorded to be the most dominant family followed by the Sisoridae (31%), and Psilorhynchidae (9%) respectively. *Psilorhynchus pseudocheineis* was the most dominant species (31.16%), followed by *Schizothorax progastus* (21.26%), and *Schizothorax richardsonii* (15.29%). The Chyadu-Tamakoshi Confluence (Station 9) had the highest Shannon Weiner's diversity index ($H' = 1.881$), while the Tallo-khahare-Tamakoshi Confluence (Station 5) had the lowest ($H' = 1.393$). The maximum Margalef's richness ($d = 1.413$) was observed at stations 4, 8, and 9, whereas the minimum ($d = 0.942$) was at stations 3, 5, 6, and 7. Similarly, the highest Pielou's evenness Index ($J = 1.050$) was recorded at station 9 and the lowest ($J = 0.778$) at station 5.

The RDA showed the fish had a significant relation with water quality parameters. This study also explored four spawning and breeding grounds in the Tamakoshi and Singati Rivers and found the area is at risk of exploitation due to hydropower, illegal electrofishing practices, overfishing, domestic wastes, and pollution so it should be mitigated by concerned authorities.

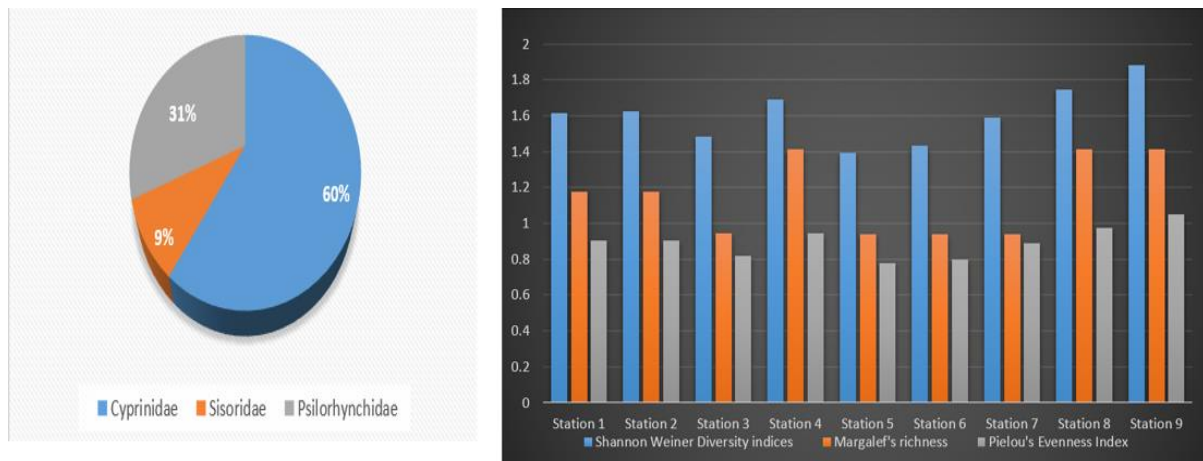


Figure 1: Family-wise composition of fishes. Figure 2: Station-wise species diversity indices in different Stations.