

Two Hill Stream Fishes *Danioaequipinnatus* and *Daniorerio* Diversity and Status in the Munchangi Put Stream of Eastern Ghats, Andhra Pradesh

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Abstract: The successful survival and abundance of a particular fish species were inter-relation with adverse environments which they requires, adaptive and finally responsive adjustments in there, structural and physiology and these have been reflected by modifications at the level of their tissues. Two species of hill stream fishes in Munchangi put station of Eastern Ghats was studied from 2014 to 2016. Fishes were collected monthly twice, with the help of local fishermen.

Keywords: Adaptive, modification, inter-relation, environments.

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Introduction

Very few fish species are adapted in the environmental conditions, water regime, geographical and structural differentiations of Eastern Ghats hill streams or water bodies. They adapted then gradually developed some special modification to live in water. Their modification were permanent and modified from integument. These features helps in avoid stress in critical environmental conditions like floods in rainy season or lack of flow conditions during summer seasons. At first the structural modifications were found in hill stream fishes by Hora (1922, 1930). Sufficient literature available on the adaptive modifications of stream fishes of India Singh *et al.*, (1983). The protection of hill stream fishes particularly Mahaseer have been prepared by Kulkarni (1971) and Nautiyal (1984).

The current study focused on two hill stream fishes of Eastern Ghats low velocity stream of Munchangi put stream, which is 149 km far away from district headquarters of Visakhapatnam, Andhra Pradesh. This stream located in between the two major mandals of Pedabayalu and Munchangi put, it is located after the hill region of the one of minor village of Pedabayalumandal, and nearer to Munchangi put so that the people who are living here were pronounced as Munchangi put stream. This stream flows rapidly in rainy season only.

One can find medium size boulders and pebbles as well as gravels here. These are indications of the flowing regime of water flow in different seasons.

Material and Method

The present study of two hill stream fishes was made in Munchangi put stream total two years period 2014 to 2016. The adaptive stream fishes collected with the help of local fisherman from the sampling station and were fixed in 7% formalin and identified according to Day (1978).

Result and Discussion

Collected fishes were identified as *Danioaequipinnatus* and *Daniorerio*. These fishes are belonging to order Cypriniformes, cyprinidae family and devario genus.

***Danioaequipinnatus*:** it is also known as *Giant danio*. It grows up to 10 cm and on body it has clear blue and yellowish stripes. Transparent pools are breeding spots for *Danioaequipinnatus*. These are mainly lives at high elevations. *Giant danio* completely depends on insects as well as crustaceans as their food. In India these have commercial value as an ornamental fish in aquariums.



Danioaequipinnatus**Daniorerio

***Daniorerio*:** The *Daniorerio* also known as zebra fish. It is also aquarium fish and most important thing the species has regenerative abilities according to that, many research institutes were frequently using *Daniorerio* as a one of the main component in their clinical analysis. *Daniorerio* lives clear water mainly prefers shallow depths stagnant streams as well as flowing streams. Prefers muddy and sandy bottoms which are often mixed with boulders and gravel. Because of gold and blue mixed zebra stripes which are present on their body these are called as zebra fish.

Status in Munchangi put stream

Both species are commercially important as ornamental fishes. Local people were preferred to consume as a one of the protein source.

1) Based on two years of investigations *Danioaequipinnatus* very abundant and common species in this stream and available throughout the year. Shows highly adaptive behaviour based on ever changing environmental conditions which is very common in Eastern Ghats.

2) Compare with *Danioaequipinnatus*, *Daniorerio* was very few number were encountered in total study period and both were least concern species but in Eastern Ghats the species *Daniorerio* going to lose their presence in this region. It is also one of the species near threatened in Eastern Ghats, as per our observation, in entire two years of research period, we can easily count encountered number with finger tips. This is alarming situation for species *Daniorerio*.

Conclusion: To increase the population of these two hill stream fishes, it is very important that the stream should be made conservation of watershed of Munchangi put stream and should be protect their habitat community and food chain etc.

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