

PP-15**Preliminary Observation on The Growth and Spawning of Near Threatened Wild Chital *Chitala chitala*, in Pond Environment**

Abhilasha Jha*, Suresh K Wagle, Md Akbal Hussien, Keshav P Shrestha, Suraj Kumar Singh, and Anjali Chaudhary

Directorate of Agricultural Research (DoAR)
Nepal Agricultural Research Council
Tarahara, Nepal
abhi.sonijha@gmail.com

Artificial breeding of threatened species for restocking in their natural habitat or to establish gene banks aids conservation through captive breeding programs and has the potential to generate new employment opportunities for rural people. Conservation and economic exploitation of important native fish species with high food value has driven to collect and observe the growth and spawning of chital also known as mohi and bhunna (*Chitala chitala*). Ninety-nine wild chital size ranging 0.5 to 2.5 kg each were collected from Koshi River and Gangas stock from the local vendor during January-March 2022, and stocked in earthen ponds with mature tilapia at DoAR, Tarahara, Sunsari. Chital weighing more than 2.0 kg were stocked separately along with mature tilapia in earthen ponds with water surface area of 3333.3 m². Fish were fed with pelleted ration containing 28% crude protein, and chital also preyed offspring of tilapia.

The fish showed external signs of maturity like swollen, palpable and soft belly, protruded and bright pinkish vent of female and running out of milt from vent upon slight pressure on belly of male during early June 2024. Artificial spawning attempt was failed when using Spawn Pro-hormone (LHRH-a) to both female and male. Semi-artificial breeding using longitudinally cut plastic drums in pond as hiding place and coconut fiber as substrate inserted and fixed inside these drums stimulate spawning. Fertilized sticky eggs were seen in the substrate 48h after the brood fish release in the pond. Fertilized eggs were yellowish, transparent, spherical and adhesive in nature. The newly hatched fry of 1-3 days tend to attach to hard substrates and possess a bulky yolk sac with a conspicuous network of blood capillaries. Ten days after the spawning in substrate, 40000 advance larvae with mean size 0.05g were collected and reared in nursery pond following carp nursing practices. The chital fry grew steadily and reached to mean size of 4.1 g after 60 days of rearing. The present observation revealed that the high possibility of captive breeding and production of high value chital. Systematic researches are warned to standardize the breeding and nursing practices of chital for its economic exploitation and ex situ conservation.



Photo: Fry of chital (*Chitala chitala*)

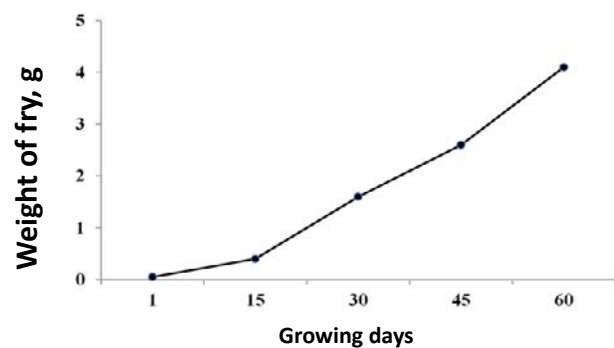


Figure: Growth trend of Chital (*Chitala chitala*) fry