

CONCLUSION

Throughout the World ornamental fish keeping is a very popular hobby and freshwater ornamental fishes of Indian origin have great demand in overseas market. The trade of Indigenous ornamental fish still totally depends upon wild collection, which is creating tremendous pressure on natural stock. At present about 374 freshwater indigenous ornamental fish species are available in the country, but only 13 indigenous fish species successfully bred in captivity and only a few species like *Puntius conchonius*, *Puntius denisonii*, *Colisa lalia*, *Danio rerio* are partially commercialized (Mahapatra *et al.*, 2014). This situation wants immediate attention on captive maturation, breeding and culture of all commercially important native ornamental fishes. Noble gourami, *Ctenops nobilis* McClelland is one of the most valuable gourami fish among the small indigenous ornamental fish market. In order to decline the amount of fish, suppliers cannot meet the market demand so large scale seed production of *C. nobilis* is very important. Very scanty information is available on biology of *C. nobilis*. So the proper study on biology of the fish and to standardise the captive breeding and rearing protocol of the fish is very important to meet the increasing demand of the fish among aquarium hobbyist. The fish is collected from different rivers and streams of North Bengal and Assam. Data on ecological condition and feeding habit also collected from the natural habitat. After collection of the live specimen the study carried out in the laboratory condition at ICAR-Central Institute of Fisheries Education, Kolkata and in semi-natural field condition at Ram Kumar Fisheries Farm, Domjur, Howrah. Taxonomical identification of the fish is

done through morphometric and morphomeristic analysis. Age wise growth parameters are also studied. In this study length-weight relationship and condition factor of 400 specimens were estimated and concluded that the fish shows good physiological condition like well growth and good L-W relationship. The seasonal changes in length weight relationship and condition factor were studied. The condition factor of males is better than females. The fishes are preferred to stay in stagnant, vegetated water body. Approx. 24-32°C temperature gives the maximum growth in the fish. The length of alimentary canal and the RLG value implies that the fish is carnivorous in nature. Seasonal changes in RLG and monthly changes in GaSI value recorded for the fish. Tubifex, Daphnia and Mosquito larvae gave the highest growth of the fish. The adult male fishes are clearly identified by their broad spouts. The male and female ratio observed was 1.97:1. 50% of female attained their first maturity at 75-85 mm length and 5.50-6.45g weight. The breeding season of the fish extend from late July to December. The Gonadosomatic Index, fecundity and ova diameter was observed. The fish is mouth brooder and female and male both sexes shows parental care. Between 10-20 days the hatchlings come out from the mouth with attaining the length of 3-6mm and freely moved in the water. At the time of breeding the water temperature was around 27-32°C and pH should be 7.6-8. At this time if there were any stresses they can engulf the eggs also.

It is concluded that not every aspects on the morphology, feeding and reproductive biology of *C. nobilis* is claimed to have been covered in this research work. Further extensive studies especially on breeding may be able to throw more light on the subject and hopefully present endeavour will form the basis of future studies.