ABSTRACT

The trade of indigenous ornamental fish mainly depends on wild collections, which is creating tremendous pressure on existing natural stock diversity. Noble gourami, *Ctenops nobilis* McClelland, 1845 is one of the most valuable freshwater indigenous ornamental fish currently depends only on natural collection for its trade. In order to decline the population of fish, suppliers cannot meet the market demand so breeding and large scale seed production of *C. nobilis* is an urgent need. Keeping view on this the taxonomy, age and growth, length-weight relationship, habitat ecology, feeding and reproductive biology were studied in this work for establishing successful breeding and larval rearing protocol of *C. nobilis*. Fin formula as revealed was D. IV-VII/5-8; P. 11-13; V. I/5; A. IV-V/23-28; C. 14-16. The length-weight relationship does not strictly follow the cube law. The 'b' values in each of the groups were differs and were always found to be significantly different at 1% level. The length of alimentary canal and RLG value implies that the fish is carnivorous in nature. Tubifex, Daphnia and Mosquito larvae gave the highest growth of the fish. The monthly values of Gastro-somatic Index (GaSI) have been observed to become high during March to May with the peak being in March. The males are clearly identified by their broad spouts. Sex ratio of Male and female was 1.97:1 from natural collection. 50% of females attained first maturity (M_{50}) at 75-85 mm length and 5.50-6.45g weight whereas male attained maturity at 68-72mm length and 4.75-5.82g weight. Feed with Tubifex and mosquito larvae gives the best gonadal maturation. The breeding season of the fish extend from late July to December. The GSI

ranges between 1.93 to 5.95 and highest peak observed in August and lowest has been observed in the month of December. The fecundity ranges between 350-750. The fish is mouth brooder and both sexes show parental care. The number of hatchlings per pair varies from 116-160 and after 5-6 days of fertilisation the carrier fish started to spat out 10-15 numbers of larvae and the process was continued up to 18-20 days. The size of spat out larvae was 3-6mm length. After yolk sack absorption the spawn were fed with small Daphnia. The fish attained adult size within 9-10 months after hatching.