Captive breeding of critically endangered fish *Dawkinsia srilankensis* (Dankudu pethiya) for species conservation and sustainable utilization.

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Abstract

The *Dawkinsia srilankensis*, commonly known as blotched filamented barb or " Dankudu pethiya", which belongs to family Cyprinidae, is categorized as a critically endangered endemic species. Due to the high rates of overexploitation, habitat destruction and pollution in their natural habitats, captive breeding and rearing seems to be a more effective solution.

The study was carried out at Aquarium, Department of National Zoological Garden, Dehiwala. Sexually matured fish (6.0 cm), were captured from wild in Knuckles region. During the first month, the fish were kept in an earthen pond. They were moved to an especially constructed rocky habitat to help the fish to acclimatize to the artificial environment, when they formed pairs. The temperature was maintained at 25 ^{0}C with natural sunlight, salinity 0 ppt, pH 7.8 and NO_2 and $NH_3 < 0.03$ ppm. The pond was especially modified into three compartments enabling the water circulation at a flow rate of 1.0cm/s. The fish were fed twice a day. Their reproductive behavior was observed closely. After 9 weeks hatchlings were detected in the pond system. Nearly 100 of hatchlings were counted and after 01 week there were 75 fingerlings of 1.0 cm in length. After 2 weeks the mean length of fingerlings reached 2.0 cm.

This is the first study carried out of captive breeding of *Dawkinsia srilankensis*. Therefore this implies the possibility of captive breeding of endemic fish that has faced the threat of extinction. Thus being a positive step towards their conservation.

Key words: *Dawkinsia srilankensis*, blotched filamented barb, captive breeding, natural,