

Breeding ability of Thatudandiya (*Chela laubuca lankensis*) under captive conditions

W.H.K.M. Wanigasooriya¹, M.G.C.R. Wijesinghe^{1,2*} and M.A.J.P. Munasinghe¹

¹Department of Livestock Production, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.

²Department of Animal and Food Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka. Puliyankulama, Anuradhapura, Sri Lanka.

Ornamental fish industry contributes a considerable amount of foreign exchange to the Sri Lankan economy. Thatudandiya (*Chela laubuca lankensis*) is an endemic fresh water fish species with significant ornamental value and is naturally observed in the dry zone of Sri Lanka. Ornamental fish breeders face many problems in breeding this species under captivity since the life cycle and breeding methods are yet to be fully identified. Further, a few research has been performed for the captive breeding of *Chela laubuca lankensis* under local conditions. The objectives of this study were to determine the ideal breeding condition (environmental) and optimum sex ratio for *Chela laubuca lankensis* in captivity. The experiment was conducted at the Ornamental Fish Breeding and Training Center, Rambodagalla. Firstly, seven different environments were created in cement tanks to identify the best environment for captive breeding. Water quality parameters such as pH, water temperature, ammonia, nitrate and water hardness were also measured during the experiment. Secondly, three tanks (T1: aquatic plant with sandy bottom, T2: aquatic plants, sandy bottom and water flow, T3: coconut coir only) were used with different numbers of males and females to identify the best male:female ratio (male:female, 1:1, 1:2 and 5:5). Out of the three different environmental conditions provided, the highest number of fry (265.66 ± 98.80) was observed in the experimental tank with aquatic plants, sandy bottom and water flow (T2), with 5:5 male:female ratio (community tank) and it was identified as the best condition for the captive breeding of *Chela laubuca lankensis*. Thus, it seems likely that captive breeding of *Chela laubuca lankensis* is possible through environmental manipulation and use of suitable male:female ratio.

Keywords: Thatudandiya, *Chela laubucalankensis*, captive breeding, male:female ratio

Corresponding author e-mail: chinthaka_wijesinghe@yahoo.com