The First Ever Induced Breeding and Larval Rearing of Critically Endangered, Endemic Freshwater Fish *Labeo lankae*

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Many freshwater endemic fish species in Sri Lanka are listed as either endangered or critically endangered, showing the dire need of human intervention in their conservation. Captive breeding of these fish species may play a pivotal role as the first step of stock enhancement. Captive breeding efforts for critically endangered freshwater fish species in Sri Lanka are scanty and protocols are yet to be developed for many species. Present study was conducted to develop a protocol for induced breeding and nursing of hatchlings of critically endangered fish species Thambalaya (*Labeo lankae*). As the first-ever study, rearing *L. lankae* in captive conditions and breeding were conducted successfully. Induced breeding was performed by hormonal treatment for ovulation and spawning (sGNRHa + Domperidone) at the rate of 0.5 ml per kg for females and 0.2ml per kg for males. Breeding was performed in a hatchery jar and found that the latency period was 10 hrs. Selected females produced approximately 48000 eggs and they were spherical, non-sticky, and kept in hatchery jar and embryonic growth completed within 18-22 hrs. Eggs hatched at the water temperature of 27.4^0C, dissolved oxygen 8.1 mg/l, and pH at 7.4. Free swimming *Post larvae* were first fed with blended whole chicken egg and then with artemia nauplii, followed by daphnia and formulated powdered feed with 42% crude protein. In conclusion, this study records the first ever evidence of successful captive breeding and larval rearing of *L. lankae*.

Keywords: *Critically Endangered, GnRH, Induced Breeding, Labeo lankae, Post larvae*