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Induced breeding success and fry rearing of *Mystus Vittatus* (Irı-Ankutta)

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Mystus vittatus (Stripped dwarf catfish), currently listed under 'least concern' conservation category in Sri Lanka is a popular food fish species. Yet, present trends of exploitation, aquatic pollution and habitat modification seem to threaten its current status. The objectives of this study were to perform captive breeding of *M. vittatus* under local culture condition, to identify their brood stock requirements, and to study embryonic development and larval rearing of *M. vittatus*. Adult brood stocks were captured from their natural habitats located in Udawalawa, and in "Senananayaka samudra" reservoir in Inginiyagala. Captured adult male and female fishes (n=49) were separated and acclimatized for one month in fiber-glass tanks (dia. 1 m). Three sequential trials were done for induced breeding. In the first trial, fish were injected with Ovulin® (GnRH+Domperidon) 0.5 ml/kg body weight for females and 0.25 ml/kg body weight for males, and were placed in cages built within a tank. There was no successful spawning probably due to disturbances to breeding behavior. In the second trial, same hormone dosage was injected, and fish were kept in a hatchery jar with aquatic plants. Spawning was observed but eggs did not hatch, may be due to mechanical damage caused by heavy water flow in the hatchery jar. In the third trial, after injecting same hormone dosage, fish were kept in fiber-glass tanks (dia. 1 m), consisting of low flow rate, aquatic plants and mud bottom. Successful spawning occurred, eggs were observed and successfully hatched. Embryo and larval development occurred within the first few days. Larval rearing was successfully conducted using live feeds, yet artificial feed was not accepted by the larvae. The present study reveals that *M. vittatus* can be successfully bred in captivity using hormonal stimulation of Ovulin® with 0.5ml/kg body weight for female and 0.2 ml/kg body weight for male.

Keywords: captive breeding, larval development, *Mystus vittatus*, ovulin

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