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Induced Spawning and Early Development of Stonelapping Minnow, *Garra cambodgiensis* Tirant

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Abstract

The stonelapping minnow belongs to the family “Cyprinidae” and is native to the Me-kong and Chao Phraya basins. The species inhabits rocky bottoms of swiftly moving water of small and medium-sized streams and feeds on periphyton, phytoplankton and insects. In Thailand, this species has importance as ornamental fish and is used as protein source by hill tribe people. In the past the fish was found abundantly in the streams, but nowadays the numbers are decreasing substantially. A restocking programme is planned, however, till now no information is available about artificial reproduction of this species. To fill this gap of knowledge the following experiments have been carried out. Adult fish (n=406) were collected from the Maejam and Chiang Dow district in ChiangMai province in April, May and October 2001 and brought to the ChiangMai Inland Fisheries Research and Development Center, where the fish were kept in aquaria and fed with tadpole feed (41 % crude protein). In September 2001 and in July 2002, eight and 24 mature females, respectively, were observed. All these females were injected with LHRHa (10 microgram/kg body weight) and domperidone (5 milligram/kg body weight). After injections, groups of 8 fish per sex were kept together in separate units (water temperature 25–29°C). The brood fish started spawning around 12 hours after injections. The spawning success and the fertilisation rates of the September experiments were 71 % and 44 % and 79 % and 56 % in July. Eggs were grey, of round shape, semi-buoyant and 2.2mm in diameter after water absorption. The incubation period was 15–16 hours at 25–29°C water temperature with hatching rates of 74 % in September and 85 % in July experiments. Newly hatched fry had an average length of 3.3mm. After hatching, fry were kept in stocking densities of 500, 1000, and 2000 fry in 12-l-water volume for first feeding. The feeding regime consisted of ad libitum feeding of rotifers and moina for two weeks, followed by ad libitum feeding of a paste of tadpole feed (41 % crude protein). At the end of the 27 days first feeding period, survival rates were 92, 94 and 98 %.

Keywords: Aquaculture, early development, *Garra cambodgiensis*, induced spawning