

## Study on Effects of Substrates for Captive Breeding of Dankolapethiya (*Dawkinsia singhala*)

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Dankolapethiya (*Dawkinsia singhala*) is an endemic freshwater fish in Sri Lanka. This fish species has high ornamental value in export market and their natural stocks are diminishing day by day due to excessive collection by ornamental fish trade, and habitat degradation resulted by anthropogenic activities. Therefore, from the perspectives of the aquarium fish industry and conservation of the endemic fish species, captive breeding of this species is a good remedy. The objective of this study was to identify the ideal substrate under captive breeding environment. Four different substrate conditions created in cement tanks with size of 1.5 m x 0.75 m using coconut coir, sand, gravel and bare bottom and stocked fish at 2:1 male female ratio. Bottoms of the experimental tanks were fully covered with the selected substrates. Each treatment was triplicated. Height of the water column was maintained as 0.20 m. Breeding experiment was started, after 6 weeks of wild caught *Dawkinsia singhala* brooders' acclimatization period. Experimental tanks were observed closely for 7-14 days after commencement of the experiment and 63 individuals of fry were observed in the tanks with sand substrate condition. Out of four different substrates, captive breeding was only successful in experimental tanks with sandy bottom substrate, while spawning of *Dawkinsia singhala* was not successful (0%) in other experimental tanks. The study revealed that *Dawkinsia singhala* can be successfully bred under sand substrate condition in still water. This study will assist researchers to further develop captive breeding techniques for this species.

**Keywords:** *Dawkinsia singhala*, Endemic fish, Captive breeding, Breeding substrate