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BREEDING OF THE ENDANGERED SEAHORSE, *HIPPOCAMPUS KUDA* AND CONSTRAINTS FOR LARVAL DEVELOPMENT UNDER CAPTIVITY

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Sea horses are among the first commercially important, marine fishes to be listed in the CITES. They are traded world wide for use in traditional medicine as aquarium pets and as curios. Captive breeding of sea horses have been widely accepted as the major option to address the present market demand for seahorses while conserving the wild endangered stocks. However captive breeding of sea horses is not widely practiced due to limited information available on breeding and rearing technologies. This study was conducted to investigate the breeding of wild caught *Hippocampus kuda* and to rear the larvae to marketable size under captivity.

Wild caught adult seahorses were stocked in brood stock tanks at a density of 5m-2 at a male: female ratio of 3:4. The average total length of female: male was 11.1±0.3cm and 10.5±0.5cm respectively. The average weight of females: males were 7.9±0.9g and 9.4±1.1g respectively. They were fed with *Acetes* shrimp twice a day. Sea horse larvae were counted just after hatching to determine fecundity. Total length and corresponding wet weights of larvae were measured at fortnight intervals. Larvae were fed with *Artemia* until they reached the marketable size (4 months period). Moribund larvae were observed for any abnormalities and external signs of pathological conditions.

Male sea horse released 250±30 individuals a time and new born larvae measured 0.98±0.02cm in length. The mean growth rates at the three growth inflexion points observed at the 2^{nd}, 3^{rd}, 16^{th} weeks were 1.16, 1.06, 1.02 cm/week. Growth rates observed were comparatively better than studies done in the countries for the same species. The condition factor ranged from 0.39 ±0.10 to 1.03 ±0.37 gcm^3. 80% of the larvae died within first two weeks of hatching and the final survival rate at the marketable size was only 3% from 13^{th} week onwards.

Larvae showed lethargy, loss of appetite, erratic swimming, rotational swimming, reddening on the skin and blisters in the tail region. 90% of the moribund larvae were infected with fungi and bacteria. Water quality parameters in the tank were within the optimum range for *H. kuda* larvae. Disease causing agents such as bacteria, fungus, and external fouling organisms are suggested to be the major cause for low survival rates. Further research to identify disease causing agents and their control is warranted.