Hippocampus kuda Bleeker, 1852

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IDENTIFICATION

Order	:	**Syngnathiformes**
Family	:	**Syngnathidae**
Common/FAO Name (English)	:	**Spotted seahorse**

Local names: Jalaghoda (**Gujarati**); Ghoda masa (**Marathi**); Kudure meenu (**Kannada**); Kadal kuthira (**Malayalam**); Kadal kuthirai (**Tamil**); Neeti gurram (**Telugu**); Samudra ghoda (**Oriya**); Samudrik asma (**Bengali**)

MORPHOLOGICAL DESCRIPTION

Dorsal soft rays are 17-18 and anal soft rays are 4. It is distinguished by low, rounded bumps along the body. It has a thick snout and a deep head. Eyes can move independently. Adult male has a brooding pouch.

Source of image : RC of CMFRI, Kozhikode

PROFILE

GEOGRAPHICAL DISTRIBUTION

The spotted seahorse occurs in the Indo-Pacific; Pakistan and India to southern Japan, Hawaii and the Society Islands. It is found in Australia, Cambodia, China (Hong Kong SAR and Province of Taiwan), Fiji, France (New Caledonia and Tahiti), Indonesia, Malaysia, Papua New Guinea, Philippines, Federated States of Micronesia, Singapore, Solomon Islands, Thailand, Tonga, United States of America (Hawaii) and Vietnam.

HABITAT AND BIOLOGY

It is found in shallow inshore waters upto a depth of 40-50 m with more distribution up to 8 m; in mangroves, seagrass beds and estuaries; and on steep mud slopes. It has also been recorded from open waters attached to drifting Sargassum at 20 km away from land. Adult lengths, measured as distance from the tip of the tail to the top of the coronet (a cup-like depression found on top of the head), ranges between 7.0 and 17.0 cm. Adult weights vary with the reproductive stages of both males and females.

It exhibits parental care and shows high site fidelity. It has a relatively sparse distribution and a highly structured social behaviour.

It feeds on zooplankton and is ovoviviparous. As it is a poor swimmer, it utilizes its thick snout and specialized jaws to suck in its prey. The female gives eggs whereas the male broods the embryos for 20-28 days in its pouch. The male nourishes the embryos with a fluid that is secreted within its pouch. This fluid removes wastes and supplies the embryos with oxygen and nutrients. The juveniles on leaving the brooding pouch are fully independent. It is not monogamous. Breeding season is year round. Egg diameter averages 1.8 mm. Length at birth averages 7 mm. It generally remains anchored to substrates using its prehensile tail. It is generally solitary, except for its mates, and is active during the day. In general, pairs remain in close proximity to one another and avoid associations with non-pair individuals.

CONSERVATION

STATUS OF STOCK

Spotted *seahorses Hippocampus kuda* are listed as vulnerable (VU A4cd) under the World Conservation Union's IUCN Red List and are on the CITES Appendix II based on inferred declines of at least 30 % caused by targeted catch, incidental capture and habitat degradation. Though exact information is lacking there are indirect evidences of population declines. Since 2004, international trade is regulated through a licensing system (under CITES Appendix II) with a minimum size of capture fixed at 10 cm.

NEEDS

It is one of the most valuable species in the trade for traditional medicine, curios and aquaria. Its demand is high because of its large size, smooth texture and pale complexion when dried. It possesses all the desirable qualities for traditional medicinal purposes. It is incidentally caught in other fisheries and is affected by habitat degradation. Trade surveys conducted during 2000-2001 indicate an increase in the global trade of seahorses and other syngnathids. Though exact trade figures are not available, considerable population declines have been indicated, raising concerns about this species. The formulation of suitable conservation strategies of this overexploited stocks and the judicious management of resources with participatory approach, will be helpful in the improvement of India's foreign trade and to uplift the economic status of poor fishermen communities along Gulf of Mannar and Palk Bay.

STRATEGIES

Seahorse populations are thought to be endangered as a result of overfishing and habitat destruction. Culture and breeding under captive conditions in laboratories from different countries have been reported. Conservation and commercial mariculture, if permitted, will reduce the pressure on wild populations and its exploitation. To formulate a strategy for stock enhancement and also to curb the depletion of resources in future first of all an assessment of current status of the natural stock all along east coast of India is needed. Recent studies from different countries have shown that these species can be cultured and grown in captive conditions. So relaxation of rules for aquaculture and export of cultured seahorse may reduce the pressure on wild seahorses and its exploitation.

ISSUES

A further decline in its population is predicted if immediate intervention is lacking. One of the major issues affecting proper conservation is taxonomic confusion regarding this species. A detailed taxonomic description of the species is required before further studies on its biology, ecology and abundance can be studied.

FUTURE PROSPECTS

Mariculture of seahorse is currently seen as an alternate strategy to conserve wild seahorse populations, while ensuring livelihood for fishermen dependent on this resource. If the management measures include the restoration of overexploited seahorse stocks by conservation mariculture in the protected areas, it will help the future trade of sea horse from India. Initial research on its ability to grow and survive appears very promising, but further research is needed to determine whether aquaculture on a larger scale can effectively meet the high market demand, at the same time, preventing further depletion of native populations.

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