



## Short Communication

### A NOTE ON THE OCCURRENCE OF SPOTTED SEAHORSE, *HIPPOCAMPUS KUDA* (BLEEKER, 1852), ALONG THE SINDHUDURG COAST, MAHARASHTRA

#### INTRODUCTION

Seahorses belonging to the family Syngnathidae under the single genus *Hippocampus* are found throughout the world in shallow, coastal tropical and temperate waters and are more abundant in the Indo-Pacific region. The taxonomy of seahorse is confusing due to limited morphological variation among species, ability to changing their body colour and growing skin filaments to match their surroundings, poor type description and independent designation of the same name for different species. As per Lourie *et al.* (1999), the standard morphometric and meristic character analysis may clear the taxonomical ambiguity. Recent taxonomic revisions of seahorses have been dwindling in the number of species described. It has been reported that around 70 valid seahorse species exists worldwide (Kuitert, 2000, 2001), while recent publication recognises around 48 species of seahorses (Vincent *et al.* 2011). Currently, Froese and Pauly (2015) treated 54 species of seahorses as extant in the world. Nevertheless, there are more than 7 species of seahorses reported from India (BOBLME, 2015) of which *Hippocampus kuda* is one of the predominant species distributed along the southeast and west coast of India. This species is known to be overexploited in an unsustainable manner.

*Hippocampus kuda* inhabit in mangroves,

coastal bays, harbours, lagoons, marine algae areas of estuaries, seagrass beds, seaward reefs, near steep mud slopes, and over rocky littoral zones, both marine and brackish environment and can be encountered from the surface down to a depth upto 68 meters/223 feet. *Hippocampus kuda* commonly known as spotted Seahorse is a very popular aquarium fish and is also used in traditional Chinese medicine. In addition to this, this species is used for making souvenir and sold as gift items by stuffing. The main exporters for seahorses are India, Thailand, Vietnam and the Philippines, but over 50 nations are involved in



Seahorse

trade of this species in the international market. The main threats against *Hippocampus kuda* is habitat degradation and intentional and incidental capture. This species is listed as Vulnerable (VU) as per the IUCN Red List of Threatened Species and the international trade is monitored through a licensing system (CITES II).

While conducting the field work as part of the ZSI-GOI-UNDP-GEF-Sindhudurg Coral project, a spotted seahorse *Hippocampus kuda* was sighted on 3<sup>rd</sup> April 2015 near the Mithbhav Jetty in Sindhudurg district of Maharashtra (16°16'47.04''N; 073°24'50.24''E). The specimen was collected, preserved with formalin, packed in a polythene bag and brought to the laboratory for identification. The specimen was identified using the key as suggested by Lourie *et al.* (1999).

### DESCRIPTION

The specimen was confirmed from the morphological characters to be a female (♀) *Hippocampus kuda* (Bleeker, 1852). The body has a grainy texture and coloured yellowish-brown with fairly large, dark spots. The animal has a prominent snout, its length 2.5 times in head length. Coronet: low-medium, rounded, overhanging at the back. Spines are low, more or less like rounded bumps.

The morphometric measurements are as follows:

Parts of body	Measurements (in cm.)
Total body length	14.6
Body width	2
Head length	3.5
Snout length	1.4
Eye diameter	1.1
Mouth width	0.4
Dorsal Fin length	1.7
Pectoral Fin length	0.7
Tail length	9.3

*Conservation:* Because data is lacking on the

sizes of the various seahorse populations, as well as other issues including how many seahorses are dying each year, how many are born, and the number used for souvenirs, there is insufficient information to assess their risk of extinction. Coral reefs and seagrass beds are deteriorating, reducing viable habitats for seahorses. These seahorses are also used as dry food and in Chinese medicine, thus conservation is necessary for this species. Syngnathid fishes are important in ecological, economical, medicinal and cultural terms, whereas its existence has been a question due to its biology and its mode of utilization in Chinese medicine (Vincent *et al.*, 2011). Seahorses are seldom used as medicine in India, however known to cure cough and asthma and therefore, are popular among fishing community. Coastal dweller in southern India especially in Kerala believe that seahorses could prevent epilepsy or other similar disorders, if kept attached to the body as a talisman.

In India, the export value of dried seahorse ranged from Rs. 4,000/kg to Rs.8,000/kg or more before the ban (BOBLME, 2015). Before the CITES listing, India banned the trade and exploitation of seahorses and pipefish in 2001 by placing all species of syngnathids under Schedule I of the Indian Wildlife (Protection) Act, 1972 (Sreepada *et al.*, 2002; Murugan *et al.*, 2011).

Studies on the systematics, diversity, distribution, incidental and targeted catch of seahorses from India is not adequately done. Also, little information on conservation and management of seahorses in the Indian waters. Therefore, along with indepth studies on the biology and conservation of seahorses, awareness of seahorse conservation and involvement of coastal fishing communities in management of seahorse resource is also required.

### ACKNOWLEDGEMENTS

The authors are grateful to the Director, Zoological Survey of India for encouragement and necessary facilities to work. We are also thankful to the GOI-UNDP-GEF-Sindhudurg Project, Government of Maharashtra for funding support.

**REFERENCES:**

- BOBLME. 2015. Participatory management for conservation of seahorses in the Gulf of Mannar, South-east coast of India. BOBLME-2015-Ecology-58.
- Froese, R. and Pauly, D. (Editors). 2015. FishBase. World Wide Web electronic publication. www.fishbase.org, version (10/2015).
- Kuiter, R.H. 2000. *Seahorses, Pipefishes and their relatives*. Chorleywood, TMC Publishing, U.K.
- Kuiter, R.H. 2001. Revision of the Australian Seahorses of the genus *Hippocampus* (Syngnathiformes: Syngnathidae) with description of nine new species. *Records of Australian Museum*, **53**: 293-340.
- Lourie, S.A., Vincent, A.C.J. and Hall, H.J. 1999. *Seahorses: An identification guide to the world's species and their conservation*. Project Seahorse, London, U.K.
- Murugan, A., Dhanya, S., Sarcar, A.B., Naganathan, V., Rajagopal, S. and Balasubramanian, T., 2011. Fishery biology, demography of three spotted seahorse, *Hippocampus trimaculatus* inhabiting Gulf of Mannar region, Southeast coast of India. *Ind. J. Geo-Mar. Sci.*, **40(3)**: 411-423.
- Sreepada, R.A., Desai U.M., Naik, S., 2002. The plight of Indian seahorses: need for conservation and management. *Curr. Sci.*, **82**: 377-378.
- Vincent, A.C., Foster, S.J. and Koldewey, H.J. 2011. Conservation and management of seahorses and other Syngnathidae. *J Fish Biol.*, **78(6)**:1681-724.

SANMITRA ROY, NITESH KUMAR, ABHISHEKH N. SATAM, BASUDEV TRIPATHY\*  
*Zoological Survey of India, M-Block, New Alipore, Kolkata-700053*  
\*Corresponding Author E.mail: tripathyb@gmail.com