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Short communication

A NEW SPECIES OF *HIPPOCAMPUS MONTEBELLOENSIS* (FAMILY: SYNGNATHIDAE) FROM THE SOUTH EAST COAST OF INDIA

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ABSTRACT : A survey of the diversity and distribution of coral associated fauna around the Gulf of Mannar Islands of India yielded one new zoogeographical record of *Hippocampus montebelloensis* species under the Syngnathidae family from Puluvinichalli Island, Vembar group, Gulf of Mannar Islands, south east coast. The detailed description, distribution and morphological characters are presented in this paper.

Keywords: Syngnathidae, *Hippocampus montebelloensis*, new records, South East coast, Gulf of Mannar, Indian coast.

INTRODUCTION

Sea horses (genus *Hippocampus*) are members of the family Syngnathidae, which also includes pipefishes, pipehorses and seadragons. They are found in shallow, coastal, tropical and temperate waters [1]. The knowledge of sea horse taxonomy from India is limited to a few reports where morphology has been used as the sole criterion for describing the species. Although it has been reported that two species of *Hippocampus* occur in our waters, no description of species other than *Hippocampus kuda* has been made [2]. The general shape of the sea horse is familiar and easily recognizable, but detailed identification is quite difficult as sea horses often change colour and grow filaments to blend with their surroundings [1]. This paper reports detailed underwater examination of new species *Hippocampus montebelloensis* [3] from the Gulf of Mannar coast during the study period July 2007 – June 2008 and underwater photos have been made by a Canon S45 digital camera. A systematic and detailed description is given below-

Phylum : Chordata

Class: Actinopterygii

Order: Syngnathiformes

Family: Syngnathidae

Subfamily: Hippocampinae

Genus: *Hippocampus*

Species: *Hippocampus montebelloensis* [3]

Description: A live animal is greenish yellow with dark brown bands. It clings to soft corals at more than 10 meters depth. The size of a live animal is 12.5 cm in length of which the Head is 30mm in length, Snout 14mm, Trunk 50mm and Tail 80mm in length; Pectoral fin rays – 16; Dorsal fin rays–19, its base over 2 trunk and 1 tail ring; trunk rings – 11 and tail rings – 37; the spine above the eye is of moderate size and its length is about the pupil-diameter, slightly angled back; moderately large and recurving lateral head spine; long, forward directed nape spine; nose-profile straight; coronet moderately high, with spines on corners, posterior 3 largest and directed backward; 3 spines of moderate size on shoulder ring, uppermost and central spines at ends of pectoral-fin base, lowermost ventrally; superior trunk ridge sharp-edged with spines of small to moderate size on rings 1, 4, 7 and 11, lateral trunk ridge with series of spines from 2nd to 10th rings, first small, progressively increasing in size to spines that are of moderate length and blunt; inferior trunk ridge moderately developed with downward directed blunt angular spines.

Superior tail ridge with enlarged spines and filamentous tips on every 3rd ring, starting with 4th, becoming progressively shorter; inferior tail ridge continuous with trunk ridge, tubercles becoming progressively smaller posteriorly; lateral line present with pores detectable to about 14th tail ring (Figure 1).

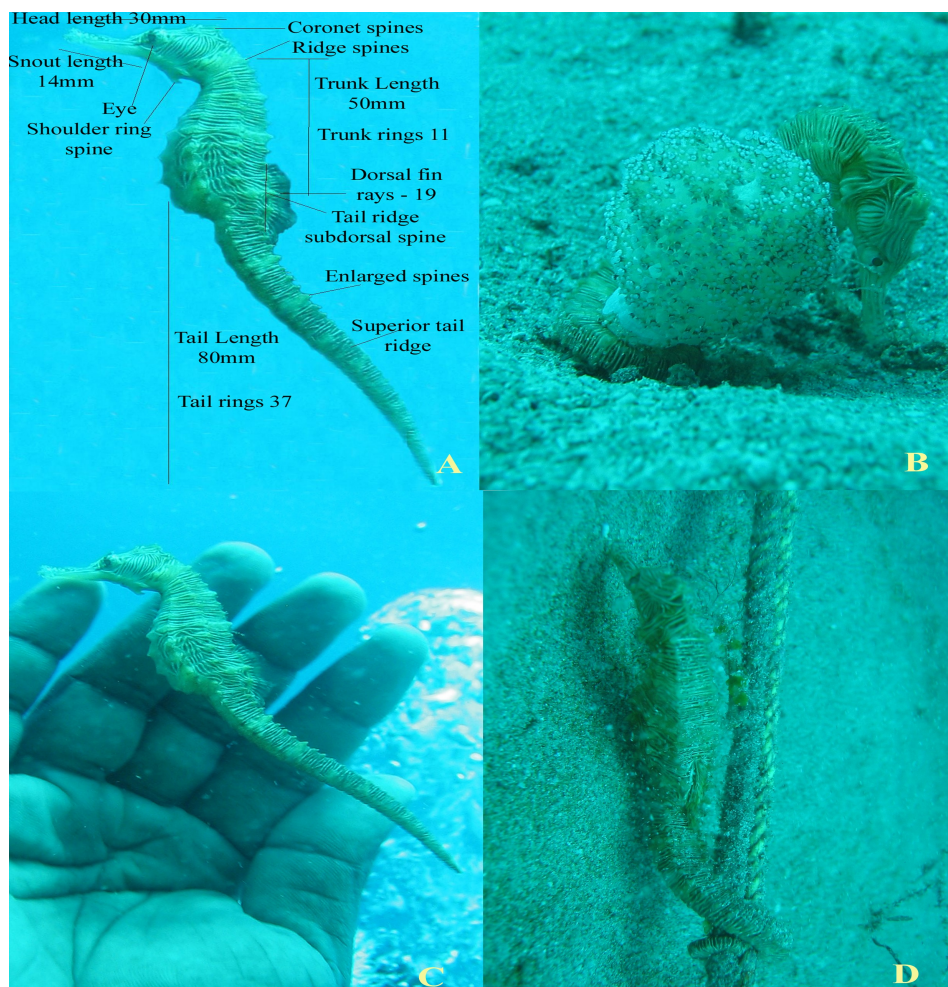


Figure 1 A - General morphological characters, B - *Hippocampus montebelloensis* associated with soft corals, C - Underwater assessment with SCUBA and Canon S45 digital camera, D - Hanging on gill net rope.

Material observed: At Puluvinichalli Island (Lat. 09°06'1.02 N, Long. 078°32'2.05 E); Maximum length of the animal: 12.5 cm; depth: 12 m; sandy area covered with soft corals and seaweeds; associated with *Dendronephthya* species.

Similar species: Similar to *Hippocampus zebra*, which differs in being less spiny, in having a smaller head relative to the trunk length and alternating light and dark bands on the head and body. *H. alatus* occurs in the same region but differs in having its upper shoulder-ring spine near the gill-opening rather than near the pectoral-fin base.

Distribution: Monte Bello Island and Exmouth Gulf in Western Australia and India: Puluvinichalli Island, Gulf of Mannar coast.

Remarks: New record to India.

DISCUSSION

Taxonomical information about the sea horse from India is inadequate and morphology has been used as the sole criterion for describing the species. Three species of seahorses (*Hippocampus borboniensis*, *Hippocampus spinosissimus* and *Hippocampus kuda*) were reported from the South East coast and *Hippocampus kuda* was collected in large quantity for export from the Palk Bay region. *Hippocampus trimaculatus* was dominantly noted in trawl net from Kerala coast [2, 4]; 4 species (*Hippocampus capensis*, *Hippocampus hystrix*, *Hippocampus kuda*, *Hippocampus trimaculatus*) were reported from the Andaman and Nicobar Islands [5]. In the present study, *Hippocampus montebelloensis* under Hippocampinae subfamily and Syngnathidae family was recorded for the first time from India and also in the Gulf of Mannar Islands. These species was only reported from Western Australia [3]. A more extensive survey in deeper waters of Gulf of Mannar may reveal several new findings to India.

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REFERENCES

- [1] Lourie, S.A., Pritchard, J.C., Casey, S.P., Ky, T.S., Hall, H.J. and Vincent, A.C.J. 1999. The taxonomy of Vietnam's exploited seahorses (family Syngnathidae). *Biological Journal of the Linnean Society*, 66: 231–256.
- [2] Marichamy, R., Lipton, A.P., Ganapathy, A. and Ramalingam, J.R. 1993 Large Scale exploitation of seahorse (*Hippocampus kuda*) along the Palk Bay Coast of Tamil Nadu, Marine Fisheries Information Service. Technical & Extension Series, 119: 17–20.
- [3] Kuitert, R.H. 2001. Revision of the Australian Seahorse of the genus *Hippocampus* (Syngnathiformes: Syngnathidae) with descriptions of nine new species. *Rec. Aust. Mus.* 53: 293–340.
- [4] Vincent, A.C.J. 1994. The improbable seahorse. *National Geographic*, 126–140.
- [5] Ramakrishna, Titus Immanuel, Sreeraj, C.R., Raghunathan, C., Raghuraman, R., Rajan, P.T. and Yogesh kumar, J.S. 2010. An account of additions to the Ichthyofauna of Andaman and Nicobar Islands. *Records of Zoological Survey of India, Occasional paper*, 326: 1–140.