

New Singapore record of the seahorse, *Hippocampus mohnikei*

Subjects: Japanese seahorse, *Hippocampus mohnikei* (Teleostei: Syngnathidae).

Subjects identified by: Sara Lourie (in August, 1999) and contributor.

Location, date and time: Johor Straits, beach at Changi Point; 1993-2004.

Habitat: Estuarine intertidal zone with silty soft sand substrate and patches of macroalgae and seagrass.

Observers: P. K. L. Ng, N. K. Ng, H. H. Tan, T. H. T. Tan and others.

Observations: All specimens were obtained by seine from the intertidal zone, and are preserved and deposited in the Zoological Reference Collection (ZRC) of the Raffles Museum of Biodiversity Research at the National University of Singapore – ZRC 36692 (1 example: 15.0 mm body height), T. H. T. Tan et al., 30 December 1993; ZRC 41763b (1 example: 16.5 mm body height), P. K. L. Ng et al., 17 October 1997; ZRC 54290 (2 examples: 14.8 – 19.1 mm body height), P. K. L. Ng et al., 28 March 1998; ZRC 45619 (2 examples: 12.8 – 13.2 mm body height), P. K. L. Ng et al., 7 October 1999; ZRC 47812 (4 examples: 14.9 – 18.4 mm body height), N. K. Ng et al., 27-28 February 2003; ZRC 49864 (4 examples: 13.8 – 19.5 mm body height), H. H. Tan et al., 19 January 2004 (two examples illustrated in attached photograph). Body height is measured vertically from the vent to the tip of the coronet.

Remarks:

This small species matches *Hippocampus mohnikei* Bleeker in Lourie et al. (1999, 2004), as well as *Hippocampus japonicus* Kaup in Kuitert (2009: 130). Lourie et al. (1999: 114-115, 2004: 70) regard *Hippocampus japonicus* as a junior synonym of *Hippocampus mohnikei*; but Kuitert (2009) treats them as separate, mutually distinct taxa. Kuitert's definition of *Hippocampus mohnikei* is a larger Japanese species with double ventral spines on the shoulder girdle, small nose spine and low and spiny coronet (Kuitert, 2009: 115). The classification of Lourie et al. (1999, 2004) is tentatively followed here as the authors have examined type material of both species.

Hippocampus mohnikei (as defined by Lourie et al., 2004) inhabits estuaries and shallow inlets with seagrass and macroalgae. Although its confirmed distribution is southern Japan, *Hippocampus mohnikei* is also recorded from along the coast of southern China and Taiwan to Vietnam, Cambodia and Thailand (Lourie et al., 2004; Nakabo, 2002: 534). There is even a record from the eastern Indian Ocean (Thangaraj & Lipton, 2007). However, there is the possibility, considering the absence of past records in both India and Singapore, that this small fish was recently introduced. Like the invasive marine goby, *Yongeichthys virgatulus*, examples of *Hippocampus mohnikei* could have been transported to locations beyond its native Japan by ship ballast water (see: Jaafar et al., 2012: 83). *Hippocampus mohnikei* is herein reported for the first time in Singapore.

References:

- Jaafar, Z., D. C. J. Yeo, H. H. Tan & R. M. O'Riordan, 2012. Status of estuarine and marine non-indigenous species in Singapore. *The Raffles Bulletin of Zoology*. Supplement No. 25: 79-92.
- Kuitert, R. H., 2009. *Seahorses and their relatives*. Aquatic Photographics, Seaford, Australia. 334 pp.
- Lourie, S. A., A. C. J. Vincent & H. J. Hall, 1999. *Seahorses. An Identification Guide to the World's Species and Their Conservation*. Project Seahorse, London, U.K. x + 214 pp.
- Lourie, S. A., S. J. Foster, E. W. T. Cooper & A. C. J. Vincent, 2004. *A Guide to the Identification of Seahorses*. Project Seahorse and TRAFFIC North America, Washington D. C. ii + 114 pp.
- Nakabo, T. (ed.), 2002. *Fishes of Japan with pictorial keys to the species. Volume I*. English edition. Tokai University Press, Japan. lxi + 866 pp.
- Thangaraj, M. & A. P. Lipton, 2007. Occurrence of the Japanese seahorse *Hippocampus mohnikei* Bleeker 1854 from the Palk Bay coast of south-eastern India. *Journal of Fish Biology*. 70 (1): 310-312.

Contributor: Kelvin K. P. Lim

Contact address: dbslimkp@nus.edu.sg



Hippocampus mohnikei specimens from Changi, Singapore (ZRC 49864). Left: female of 18.2 mm body height. Right: male of 17.4 mm body height. Photograph by Tan Heok Hui