

A report on egg mass of Hound needle fish *Tylosurus crocodilus*

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During an oceanographic cruise of ICAR-CMFRI on board
FV Silver Pompano on November 2021, a bunch of

pale-yellow spherical egg consisting of about thousand
numbers connected by strong filaments on the chorion



Fig. 1. Bunch of Hound needle fish eggs.



Fig. 2. Eggs chorion with tendrils

were obtained while undertaking experimental trawling in off Kochi region at 20-meter depth (Fig 1). After taking photographs and enumeration of the egg bunch, a small sub sample was taken for further analysis and the remaining eggs were released back into the sea immediately. The collected egg samples were preserved in 95% ethanol and brought to lab for further analysis. Preserved eggs were observed and photographed in the lab by Nikon SMZ 25 stereo zoom microscope. The eggs were small, round (2.5- 2.9 mm diameter) and tanned with eyed embryo having pigment spots on head, yolk sac and tail. Pigmented eyes and nares observed, oil globule was absent and chorion was armed with numerous long filaments to keep them attached. These strong filaments (tendrils) were interwoven with other egg filaments and braided in to a bunch. Detachment of eggs from the bunch was difficult because they were strongly interwoven with filaments. For confirming the identity, isolation of genomic DNA from the egg was done following phenol chloroform method (Sambrook, J., 2006). The COI gene was amplified using primers Fish F1 5'-TCAACCAACCACAAAGACATTGGCAC-3' and Fish R1 5'-TAGACTTCTGGGTGGCCAAAGAATCA-3' (Ward *et al.* 2005) using standard protocols. After sequencing and alignment, we got 683bp sequence. Similarity search (BLAST) in NCBI database showed 100% identity to a needle fish species, *Tylosurus crocodilus* with 100% query coverage. The sequence was submitted to NCBI Genbank with accession no: SUB 11374388 HFE ON331773.

Tylosurus crocodilus (Peron and Lesuer, 1821) commonly

known as Hound needle fish (family Belonidae) is a commercially important needle fish (pelagic) distributed in tropical and subtropical oceanic waters, they normally prefer warmer temperatures of about 20-30°C. The most common depth of occurrence reported for the species is between 0-13m (Breder and Rosen, 1966). Six species of needle fishes namely: *Tylosurus crocodilus*, *Tylosurus acus melanotus*, *Strongylura strongylura*, *Strongylura leiura*, *Ablennes hians* and *Xenentodon cancila* have been reported from south west coast of India (Rema Devi *et al.*, 2013; Barman *et al.*, 2013; Roul *et al.*, 2018). It is reported that epipelagic eggs of *Tylosurus crocodilus* is found attached to objects in the water by tendrils on the egg's surface (Breder and Rosen, 1996). Physico-chemical parameters of the water from the site was analysed as per the standard methods (APHA, 1998). The mean water temperature, pH, salinity and dissolved oxygen at the station was 28° C, 8.03, 31 PSU and 5.4 mg L⁻¹ respectively. Transparency of water was 3.4 m, Chlorophyll a content was 0.2 mg/m³ and turbidity was 2.2 NTU. Zooplankton analysis shows the abundance of copepods and hydrozoa, with 1425.5 and 61.5 numbers per cubic metre respectively.

References

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