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First Record of Indian Hand Fish *Halieutaea indica* Annandale & Jenkins, 1910 From Chennai Coast, Tamil Nadu, India

Silambarasan. K.,[1*], Sujatha .K.[2], Sundaramanickam. A.,[3], Rajalakshmi. E.,[1] & Senthilkumaar.P.[1]
[1]P.G. and Research Department of Zoology, Sir Theagaraya College, Chennai, India
[2]DR. M.G.R. Educational & Research Institute (University), Chennai, India
[3]Centre of Advanced Study in Marine Biology, Faculty of Marine Sciences, Annamalai University, Parangipettai, India
*[E mail: silambuplankton@hotmail.com]

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The present paper reports the first record of Indian hand fish *Halieutaea indica* from Kasimedu fishing harbour, Chennai coast. A systematic account of this species, description and distribution are provided. Its similarity with the species of *Halieutaea stellata* is also reported.

[Key words: first record, Indian hand fish, *Halieutaea indica*, *Halieutaea stellata*, Chennai coast]

Introduction

The angler fishes (Order-Lophiiformes) have been evolved with some of the most unusual morphological and ecological adaptations in the tremendously diverse and varied clade of bony fishes and are among the most specialized groups of fishes. In the 18 families of the order "Ogcocephalidae", the bat fishes occupies one among them with 10 genera and about 70 species was reported worldwide[1-3]. It is a poorly known group of small (<300 mm) benthic fishes found in tropical and subtropical seas, from shallow inshore waters to depths as great as 3,000 m. They generally inhabit on continental shelves and slopes, on flat, relatively open-bottom habitats of rubble, sand and mud[4].

Materials and Methods

Ogcocephalid batfishes are described by their strongly depressed body disc, triangular, sub triangular or rounded in dorsal view (except box-like in *Coelophrys)*; tail tapering; dorsal surface bearing modified scales, tubercles or bucklers. Species in some genera found with an enlarged snout, the first spine of dorsal fin found modified to form a short illicium in the illicial cavity at the tip of head. A fleshy escal bulb was noticed at the tip of illicium and second spine found greatly reduced. The pectoral fins appeared arm-like structure on the latero-posterior edge of disk. The numbers of pectoral fin rays were 10-19 and the dorsal fin rays completely absent [2-7]. The anal fin rays were 3-4 and the pelvic fins were found on ventral surface disk[5].

Although few works have been carried out on Bat fishes in the world [4,1,5,2], *Halieutaea indica* (Annandale & Jenkins, 1910), *Halieutaea indica* has been reported from Gulf of Mannar region, India without description of the species[6]. Recently, it has been reported from Veeraval fish landing centre, Gujarat coast[7]. In the present observation, five specimens were collected from Chennai coast (Kasimedu fishing harbour $13^{\circ}7'36''$N, $80^{\circ}17'52''$E), Tamil Nadu during August 2014 as shown in Figure 1. The specimen of this species (ZOMUSP-236; Total length-89 mm) was collected by hand picking from the trawl net and deposited in the Department of Zoology, Sir Theagaraya College (STC) Chennai, Tamil Nadu.

A close examination of this specimen was done following the recent work [7] indicates that it is *Halieutaea indica* (Annandale & Jenkins, 1910) and represented in the figures 2 & 3. This species was not previously reported from Chennai coast, Tamil Nadu. The specimen was frozen and subsequently preserved in formalin. Morphometric measurements were taken by dial

caliper. The preserved specimen was used for all measurements. A systematic account of the species is presented in this paper.

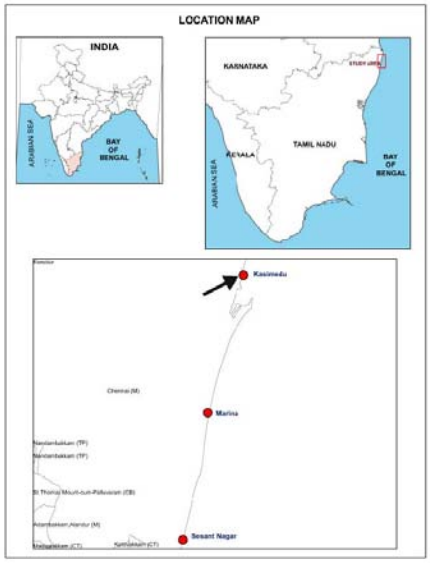

Fig 1. Map showing the location of the study area on the Kasimedu fishing harbour, Chennai coast. The arrow indicates the collection site (13°7'36''N, 80° 17'52''E).

Halieutaea indica (Annandale & Jenkins 1910): 19 (Bay of Bengal; off Orissa coast, India). Yamada 2002: 466[14] (key)

Results and Discussion

Description:

Meristic and morphometric characters given in table 1

Head was found compressed and the rostrum was noticed with clear projection over front of disc. The esca found invisible from dorsal view; dorsal surface covered with sharp and slender tubercles. Ventral surface was covered with few small granules. Teeth on tongue forming two axe-like patches, each has an elongated inner prolongation. Tail was noticed with simple and found with bifurcated needle like structure. Intra orbital gap was narrow sub equal to eye diameter. The mouth was lower and broad. The body was brown to reddish in color (Figs. 2 & 3). Two symmetrical H-shaped brown patterns on dorsal surface were observed. The main key characters for the identification are pectoral fin reddish with broad yellowish margin and white submarginal band.

Distribution

The species is distributed in Indo-west Pacific regions: eastern coast of South Africa, Madagascar, Seychelles, Western Australia, Philippines, Indonesia, Taiwan, China, Japan and India.

Lophius muricatus considered as a synonym of *H. stellata*[8]. The main difference between species that *H. stellata* has small spinules between principal tubercles but no spinules between principal tubercles in *H. indica* having sharp and slender principal tubercles, ventral surface covered with few small granules. This species, *H. indica* is recorded from the Indo-West Pacific Oceans; South Africa, Madagascar, Seychelles, Western Australia, Philippines, Indonesia, Taiwan, China and Japan[3].

Halieutaea sinica has been described a synonym of *H. indica*[9]. *Dibranchus japonicus* recorded [10-12] were apparently noticed that it was misidentified of this present species. The arrangements of scales indicate that the presence of more than one geographical population[5].

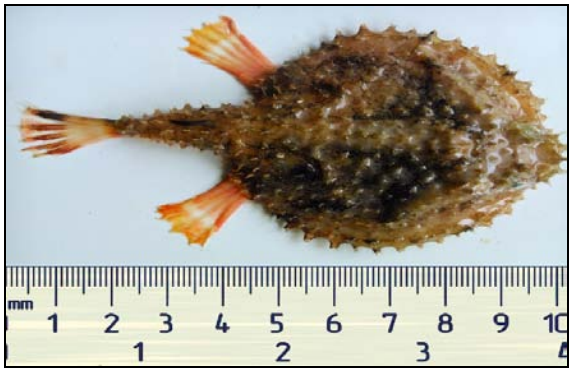

Fig 2. Dorsal profile of *Halieutaea indica*

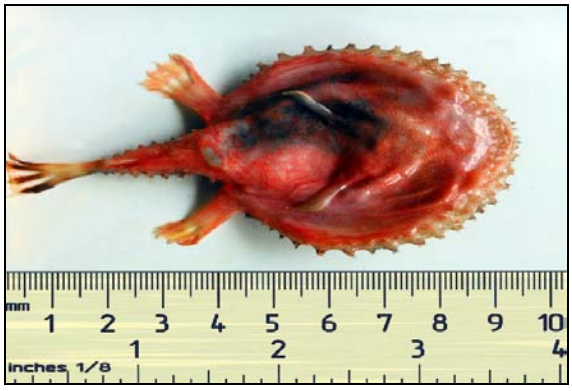

Fig 3. Ventral profile of *Halieutaea indica*

Table 1. Morphometric measurements and meristic counts carried out on the specimen of *Halieutaea indica* captured off the Chennai coast.

Morphometric measurements	in mm	% of SL
Standard length	72	100
Dorsal fin length	8	1.4
Pectoral fin length	17	23.6
Pelvic fin lengthV	13	16.6
Anal fin length	8	11.8
Caudal fin length	7	9.7
Inter orbital space	9	1.6
Eye diameter	5	8.3
Disc length	56	68.5
Disc width	59	62.9
Tail length	21	29.1
Mouth width	21	24.7
Meristic counts		
Dorsal fin spine and rays	0+4	
Anal spine and rays	0+3	
Pectoral fin spine and rays	0+7	
Caudal fin rays	8	

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