International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 10, Issue. 1, April 2023, pp. 1928-1933 **DOI: 10.26540/ijgsr.v10.i1.2023.224**
***Available Online* at www.ijgsr.com**

Research paper

First record of Andaman grunt, *Pomadasys andamanensis* McKay & Satapoomin, 1994 (Heamulidae: Haemulinae) from Great Nicobar Island, India

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Received: 08/02/2023
Revised: 18/02/2023
Accepted: 22/02/2023

Abstract: The present study reports the distributional record of Andaman grunt, *Pomadasys andamanensis* McKay & Satapoomin, 1994 for the first time from Great Nicobar Island, Andaman and Nicobar Islands based on single specimen (Standard length 156.27 mm). Detailed morphometric measurements and meristic counts of *P.andamanensis* has been provided and compared with its previous records. This finding represents a new addition to the grunt fish fauna of India.

Keywords: First record, grunt, Heamulidae, Nicobar Island, India

Introduction:

Family Heamulidae commonly known as grunts comprises of 137 valid species representing 21 genera distributed worldwide which consist of two subfamilies Haemulinae and Plectorhinchinae. Subfamily Haemulinae is with 95 valid species and the Plectorhinchinae which has 42 species (Fricke *et al*. 2022). The fishes of the genus *Pomadasys* (Family- Heamulidae) are widely distributed in inshore bays and estuaries of the tropical Indo-West Pacific (McKay, 2001). *Pomadasys andamanensis* was first described based on a single individual from Phuket Island, Thailand (McKay and Satapoomin 1994). It was reported from Northeastern Indian Ocean: Bangladesh, Myanmar and west coast of Thailand, Andaman Sea (Fricke *et al*. 2022). Amongst 30 valid species of *Pomadasys*, 9 species have been reported from Indian waters (Mohapatra *et al*., 2020). So far, only six *Pomadasys* species have been reported from Andaman and Nicobar islands (Rajan *et al*., 2013 & 2021). During the survey conducted at Campbell Bay, Great Nicobar Island, a dark black four lined grunt specimen was collected and subsequently identified as *P. andamanensis.* This species was not recorded from Andaman and Nicobar Island, Indian waters earlier. So, the present work reports *P. andamanensis* as a new distributional record to India from Andaman and Nicobar Islands.

Material and Methods:

STUDY SITE: Campbell Bay fish landing Centre (Latitude 7°0′40.7304" N and

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Longitude 93°55'38.946"E), Great Nicobar Island, Nicobar district, Andaman and Nicobar islands (Fig.1).

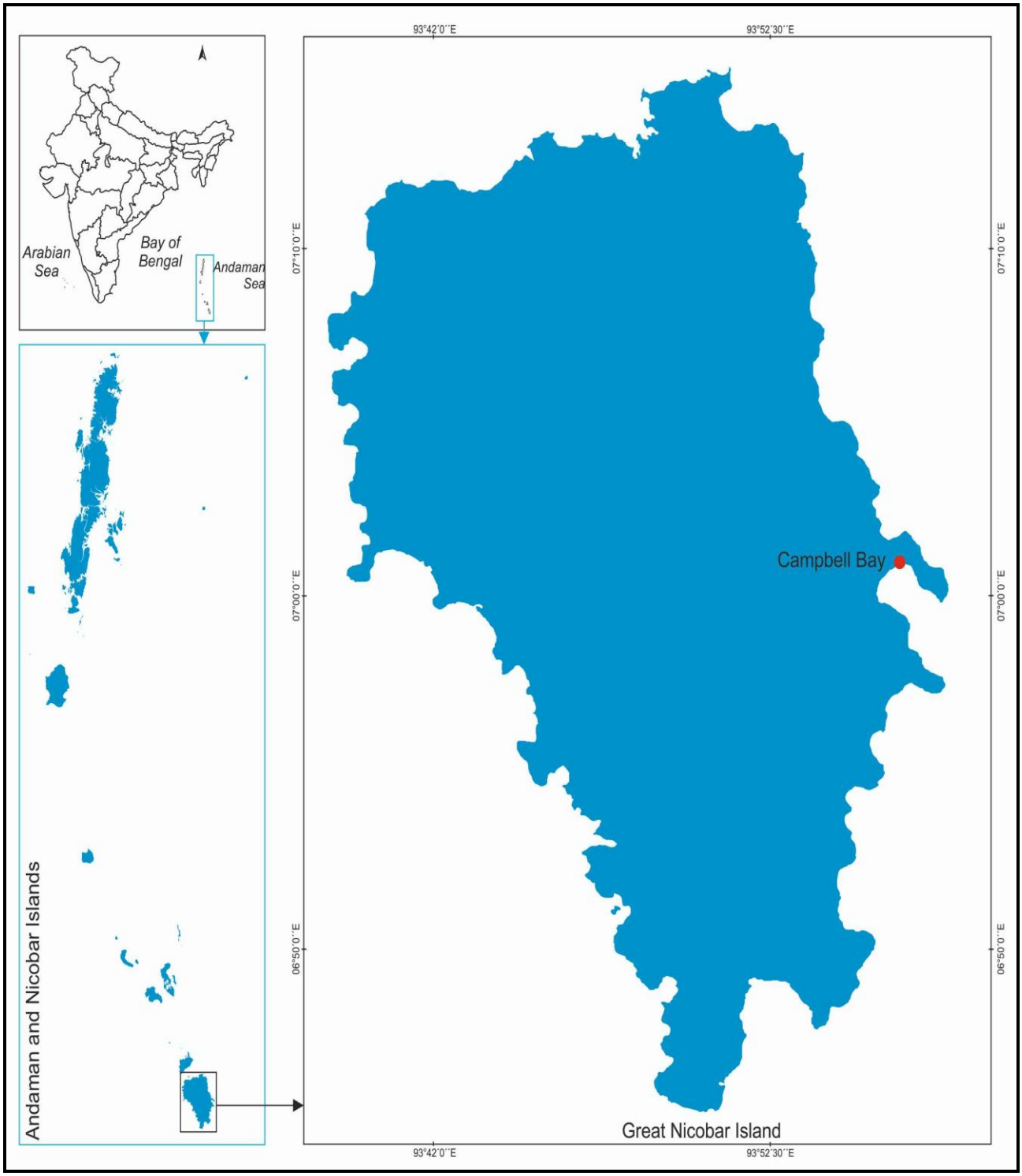

Figure 1: Map showing the collection locality of *Pomadasys andamanensis* McKay & Satapoomin, 1994 from Great Nicobar Island, India

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Single specimen of *P.andamanensis* has been collected from Campbell Bay fish landing Centre, Great Nicobar Island, Nicobar district, Andaman and Nicobar islands on 13th January, 2022. The collected specimen was photographed and preserved in 10% formaldehyde for further study. Morphometric measurements were taken by a digital caliper to the nearest 0.1 mm and the results are expressed in percentage (%) of standard length. For meristic and morphometric measurements Hubbs and Lagler (2004) and McKay and Randall (1995) were followed. The identification of the specimen was based on the morphometric and meristic characters based on McKay and Satapoomin (1994) and Iwatsuki *et al*. (1999). The specimen was registered and deposited in the National Zoological Collections of Andaman & Nicobar Regional Centre, Zoological Survey of India, Port Blair.

Results:

Systematic Account:

Class : Actinopterygii Klein, 1885
Order : Eupercaria incertae sedis
Family : Haemulidae; T. N. Gill, 1885
Subfamily : Haemulinae; Gill, 1885
Genus : *Pomadasys* Lacépède, 1802
Species : *Pomadasys andamanensis* McKay & Satapoomin, 1994

Pomadasys andamanensis, McKay [R. J.] & Satapoomin [U.] 1994: Phuket Marine Biological Center Research Bulletin No. 59, p 1-4, Kata Bay, Phuket, Thailand.

Distribution: Thailand (type locality), Indonesia, Myanmar and Bangladesh.

Diagnostic characters: Morphometric and meristic measurements of the collected specimen expressed as percentages of standard length (% SL) have been given in Table 1. Dorsal-fin spine 12; dorsal fin soft rays 14, Anal fin spine 3, Anal fin soft rays 8; pectoral-fin rays 17; ventral fin spine 1, ventral fin soft rays 5, pored lateral-line scales 53, gill rakers 5+13; scales above lateral line 7 and scales below lateral line 14. Body deep, compressed, covered with ctenoid scales. The greatest body depth 43.6 in % SL; second anal fin spine length 21.7 in % SL. Body depth is greater than head length. Eye and pupil round, eye diameter is larger than interorbital width. Nostrils close to each other, slit-like, anterior to orbit.Caudal fin slightly forked. Posterior margin of preopercle serrated. Scale covering the body, pectoral-fin base, thoracic region, caudal-fin base, opercular bones, cheek, and the head. Scales on top of the head extending anteriorly just behind the eye. Dorsal and anal fins each with a low scaly sheath, rows of small inter-radial scales in soft portions. No canine teeth in jaws, small conical teeth present in narrow bands anteriorly, outermost row much enlarged.

Colour: Body pale silvery grey in colour with four black stripes present horizontally on dorsal half of body. Three faint stripes are present on soft part of dorsal fin. The upper most stripe forms a black margin and inter-spinous membrane of dorsal fin narrowly black-edged. Anterior two-thirds of soft anal fin black in colour, pelvic fin with some anterior dusky markings; upper inner base of pectoral fin is brown in colour [Fig. 2 (a) & 2 (b)].

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Table 1: Morphometric measurements and counts of *Pomadasys andamanensis* McKa & Satapoomin, 1994 compared with published data.

Morphometric Measurements	**Great Nicobar** (present study) n=1	**Holotype** (McKay and Satapoomin,1994)	**Bangladesh** (Hasan et al.2022)
Standard length (mm)	156.27	154	82-129
% SL			
Body depth (maximum)	43.69	42.1	40.4 – 44.2
Body depth at first anal fin spine	35.05	34.5	32.1 – 35.8
Head length	34.28	31.7	32.1 – 35.8
Body width	19.22	15.9	15.2 -17. 9
Snout length	10.70	9.0	8.6 – 10.7
Eye diameter	10.68	9.9	8.7 -11.3
Pre orbital depth	6.96	6.3	5.9 – 7.6
Interorbital width	9.43	8.3	6.38 – 8.5
Upper jaw length	9.89	8.5	8.9 – 10.5
Caudal peduncle depth	11.53	11.4	11.5 – 12.6
Caudal peduncle length	18.23	17.8	16.8 – 18.8
Predorsal length	42.62	42.3	39.7 -43.0
Preanal length	65.32	63.1	69.8 -71.7
Pre pelvic length	38.29	35.1	36.3 – 41.5
Dorsal fin base length	57.69	56.3	54.4 – 60.2
Anal fin base	16.34	16.7	15.7 – 18.3
Caudal fin length	22.74	20.1	24.6 – 28.0
Pelvic fin spine length	13.52	13.2	13.8 – 16.9
First pelvic fin ray length	28.94	28.7	23.1 – 27.4
First dorsal fin spine length	5.40	5.3	3.6 – 7.4
Second dorsal fin spine length	9.64	9.8	9.1 -12.7
Third dorsal fin spine length	17.06	17.5	15.8 -18.6
Longest dorsal fin spine length 4th	17.82	18.0	17.1-19.9
Last dorsal fin spine length	8.09	8.2	7.5 – 10.8
First anal fin spine length	9.37	9.5	8.0 – 10.2
Second anal in spine length	21.76	22.2	19.5 - 23.4
Third anal fin spine length	13.48	13.1	9.6 – 14.3
Meristic characters			
Dorsal-fin rays	XII,14	XII,14	XII, 13 -14
Anal fin rays	III, 8	III, 8	III, 7 - 8
Pectoral fin rays	17	17	17
Pelvic fin rays	I, 5	I, 5	I, 5
Pored lateral line scales	53	53	49 - 51
Scale above and below lateral line	7/14	7/14	7/14
Gill rakers	5+13	5+13	5+12

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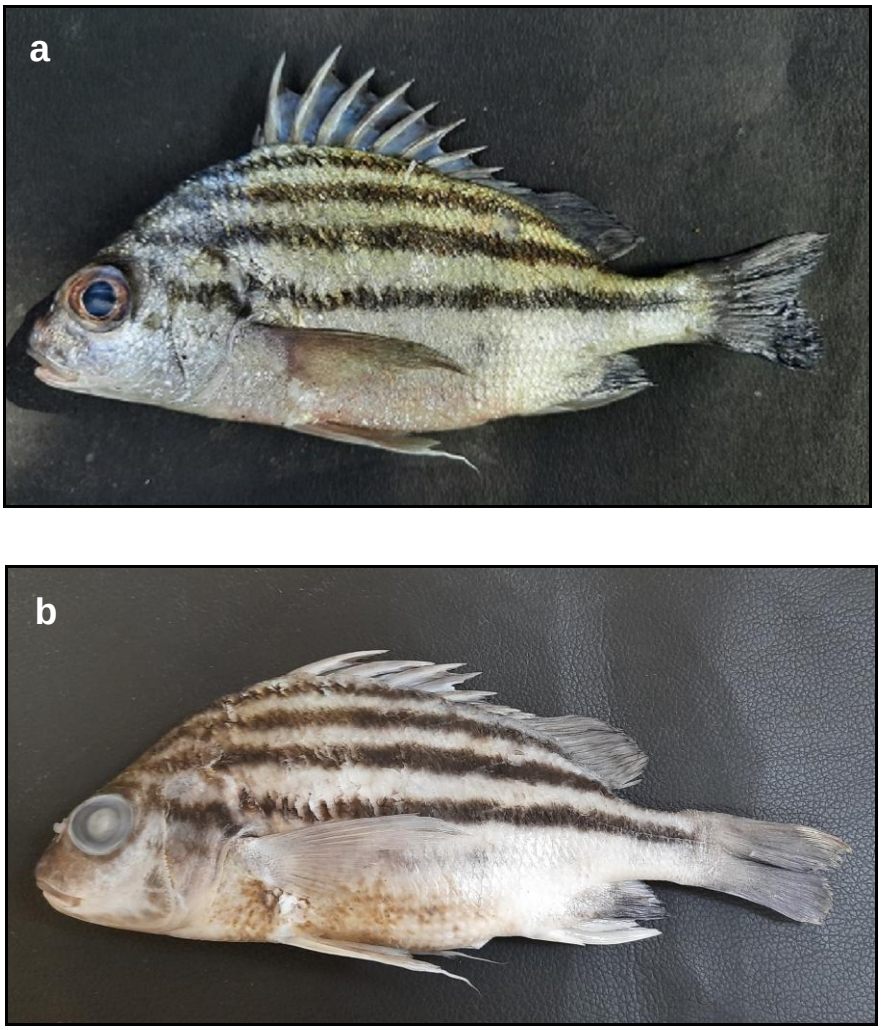

Figure 2. *Pomadasys andamanensis* McKay & Satapoomin, 1994 collected from Campbell Bay, Great Nicobar, Andaman and Nicobar Islands, India
a- Freshly dead specimen & b- Preserved specimen.

Discussion:

Grunt species (Family-Heamulidae) are one of the commercially important fish group in India. Grunt fishes inhabit bottoms of near shore tropical, subtropical, brackish, and warm temperate waters (Froese and Pauly 2022). The species *P.andamanensis* shows similarity with *Pomadasys furcatus* (Bloch and Schneider 1801). But it can be distinguished by having four undivided dark black longitudinal stripes versus six to seven longitudinal brown stripes in *P. furcatus*. From the India waters only 28 species Haemulids under 3 genera were found (Gopi and Mishra 2015). In the present study, the morphometric measurements and meristic counts conform to those in McKay and Satapoomin (1994) and Iwatsuki *et al*. (1999). The present findings confirmed the first record of *P.andamanensis* to India from Andaman and Nicobar Islands beyond its known geographical range and thus add to the knowledge of the ichthyofaunal diversity of Andaman and Nicobar Island, India.

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Acknowledgements:
The authors are thankful to Dr.Dhriti Banerjee, Director, Zoological Survey of India (ZSI), Kolkata for providing permission and necessary facilities to carry out the work.

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