International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 11, Issue. 2, October 2024, pp. 2331-2335 **DOI: https://doi.org/10.26540/ijgsr.v11.i2.2024.270**
***Available Online* at www.ijgsr.com**

Research Paper

Occurrence of Whitemouth jack, *Uraspis uraspis* (Gunther, 1860) (Carangiformes: Carangidae) from the Andaman island, Eastern Indian Ocean

Mrinal Kumar Das* and C. Sivaperuman
Andaman and Nicobar Regional Centre, Zoological Survey of India, Haddo, Port Blair, Andaman and Nicobar Islands, India
*Corresponding author Email: dasmrinal09@gmail.com

Received: 26/05/2024
Revised: 08/06/2024
Accepted: 14/06/2024

Abstract: The white mouth jack fish, *Uraspis uraspis* (Gunther, 1860) has been recorded for the first time in the Andaman waters, Eastern Indian Ocean. The specimens (n = 5, total length 170.94 – 227.14 mm) were collected during the period from May to July 2023. *U.uraspis* was previously reported from main land waters of India only. The species is characterized by 6 spines and 32 soft dorsal-fin rays, 18 pectoral-fin rays, 1 spiny and 5 soft pelvic-fin rays and 21 gill rakers on first-gill arch, curved part of the lateral line is longer than the straight part of the lateral line. The present report added a new member of a carangid fish diversity of Andaman and Nicobar Islands, India.

Keywords: Carangidae, white tongue jack, morphology, Andaman

Introduction:

The family Carangidae is morphologically very diverse group of fishes among the order Carangiformes. These groups of fishes are ecologically and economically very important group because most of them are important food fishes (Smith-Vaniz 1984; Jacobina *et al*., 2014).The fishes of the family Carangidae can be distinguished from other teleost groups by the presence of free anal spines, lateral line scutes, cutaneous fleshy lateral keels, dorsal and ventral grooves on caudal peduncle. Carangidae family is widely distributed worldwide, and includes 153 valid species in 39 valid genera (Fricke *et al*., 2023) and from Indian waters these fishes are represented by 66 species belonging to 20 genera (Gopi and Mishra 2015). From Andaman and Nicobar islands, 48 species of Carangidae fishes belonging to 18genera were reported (Rajan *et al*., 2021). The genus *Uraspis* Bleeker 1855 is characterized by having edentulous tongue, palate and vomer, a thick white membrane on the tongue, roof and floor of the mouth and the scutes along the straight part of the lateral line with the spinous projections sometimes directed forwards (Ruben,1968). This genus is composed of three species including *Uraspis helvola* (Forster, 1801), and *Uraspis uraspis* (Günther, 1860). These three species were reported from the maritime states of India (Mohapatra *et al*., 2020), which was not yet been reported from the Andaman and Nicobar Islands.

International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 11, Issue. 2, October 2024, pp. 2331-2335 **DOI: https://doi.org/10.26540/ijgsr.v11.i2.2024.270**
***Available Online* at www.ijgsr.com**

This paper reports the first distributional record of the white mouth jack fish, *Uraspsi uraspis* (Gunther, 1860) from South Andaman Island district of Andaman and Nicobar Islands, India.

Materials and Methods:

Five fish specimens were collected from Junglighat fishing harbour (11˚39'21.1356" N, 92˚43'32.0124" E), Port Blair, South Andaman district on 10th June, 2023. After the collection the specimens were photographed in fresh condition and then preserved in 10% formaldehyde solution. For morphometric measurements and counts Hubbs and Lagler methodology (1949) was followed. The specimens have been identified by following the standard literatures (Abdussamad *et al*., 2013; Yeo and Kim 2016) and Eschmeyer's Catalog of fishes was referred for the scientific names. The digital caliper (Mitutoyo) was used for the measurement of the morphometric characters nearest to 0.1 millimeters. After identification and registration the specimens were deposited in national repository (Andaman and Nicobar Regional Centre, Zoological Survey of India, Port Blair.

Result and Discussions:

Systematic account
Order: Carangiformes Jordan, 1923
Family: Carangidae Rafinesque, 1815
Subfamily: Caranginae; Rafinesque, 1815
Genus: *Uraspis* Bleeker, 1855
Uraspis uraspis (Gunther, 1860)

1860 *Uraspis uraspis* (Gunther,1860) *Uraspis, Caranx* Günther [A.] 1860:444 [Catalogue of the fishes in the British Museum v. 2; ref. 1963] (Type locality- Ambon Island, Molucca Islands, Indonesia) .

Material examined: 5 unsexed specimens, 132.13 – 177.18 mm SL, Junglighat fishing harbor (11˚39'21.1356" N, 92˚43'32.0124" E), Port Blair, Andaman, and Nicobar Island, Registration numbers are- ZSI/ANRC/M-28975, Collection Date: 10/vi/2023, Collector Name: Mrinal Kumar Das.

Description: All counts and morphometric and meristic parameters are listed in Table 1 compared with earlier published data. In percentage of standard length (% SL), body depth at dorsal fin origin ranged from 42.07 to 44.58, head length ranged from 32.58 to34.58; curved lateral line length 37.86 to 41.51, straight lateral line length 31.52 to 35.22; pectoral fin length 35.39 – 39.08; pelvic fin length 17.70 -21.67; pre dorsal length 38.37 – 40.57, pre pelvic distance 34.02 – 38.69, and pre anal distance ranged from 44.50.0 to 48.07. In proportion as % HL: eye diameter ranges 28.78 – 37.61; snout length 29.37 -39.6 postorbital length 42.64 – 43.44; Inter orbital length ranges from 31.43 to 41.53.

Body oblong and compressed (Fig. 1). Dorsal fin separated, and spinous dorsal fin lower than soft fin. Straight part of lateral line is shorter than curved part; the entire straight part of lateral line with small scutes (35); pectoral fin reaching the junction of straight and curved part of lateral line. Breast naked ventrally to the origin of pelvic fin and laterally extends to the base of pectoral fin; gill rakers on first gill arch in total 21 total (6 upper, 15 lower), Anal fin spines embedded. Caudal peduncle thin and caudal fin deeply forked. Posterior end of maxilla extends to the middle of eye and lower jaw projected. Eye diameter is smaller than snout length. Mouth is small with 1 or 2 rows of sharp conical teeth on each jaw.

International Journal of Global Science Research
Vol. 11, Issue. 2, October 2024, pp. 2331-2335
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: https://doi.org/10.26540/ijgsr.v11.i2.2024.270

Table 1: Morphometric measurements and counts of *Uraspis uraspis* (Gunther, 1860) compared with earlier published data

Morphometric Characters	Present Study (n= 5)	Yeo & Kim 2016 (n= 4)	Lin and Shao(1999) (n= 4)
Total length (mm)	170.94 - 227.14	99.9 - 284.4	-
Standard length (mm)	132.13 - 177.18	74.6 - 234.2	204.0 - 252.4
Fork length (mm)	143.56 - 161.52	84.1 - 255.0	-
% SL			
Body depth at Dorsal fin origin	42.07 – 44.58		
Body depth at Anal	42.82 – 46.58		
Head length	32.58 -34.58		
Head depth	31.06 – 34.99		
Head width	15.30 – 18.79		
Dorsal fin length	19.35 -23.75		
Pectoral fin length	35.39 -39.08		
Pelvic fin length	14.46 -18.67		
Anal fin length	17.70 -21.67		
Caudal fin length	31.13 – 33.80		
Pre Dorsal length	38.37 – 40.57		
Pre Pectoral length	32.56 – 35.20		
Pre Pelvic length	34.02 – 38.69		
Pre Anal length	44.50 -48.07		
Length of base of Anal fin	35.61 -39.89		
Length of Caudal peduncle	14.12 – 19.56		
Curved part LL	37.86 – 41.51		
Straight part LL	31.52 – 33.48		
Meristic Characters			
Dorsal fin spines	VII, 27	VII- VIII+1, 26-27	VII-VIII +1, 25-27
Pectoral fin rays	i,21	i, 21	i + 20 - 21
Pelvic fin rays	i, 6		
Anal fin rays	II+ I, 20	(II)+I, 20	I, 20
Gill rakers	5 - 6 + 13 - 15	5- 7 + 13- 14	5-6 + 13-16
Scutes	33 -35	33 - 35	36 - 39

Color: Body silvery with gradually fading vertical band; darkish grey between and above nostrils and eyes; dark grey from upper part of eyes to caudal part; rays translucent; caudal fin with yellow color with dark posterior margin; Tongue, roof, and floor of mouth white and the rest of mouth dark. Body becomes dark black color after the preservation.

International Journal of Global Science Research
Vol. 11, Issue. 2, October 2024, pp. 2331-2335
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: https://doi.org/10.26540/ijgsr.v11.i2.2024.270

Distribution: Indo-West Pacific: East Africa, Persian Gulf and western Mascarenes (La Réunion) east to Hawaiian Islands (U.S.A.), north to Ryukyu Islands (Japan) and southern Korea, south to northern Australia (Fricke et. al. 2023). From Indian coast this species was reported from Kerala, Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, West Bengal, Gujarat, Lakshadweep (Mohapatra et. al. 2020) and Andaman and Nicobar Islands (Present study).

Remarks: The present record forms the first distributional report of *U uraspis* from Andaman coast. The specimens collected from Andaman Islands during this study and identified as *Uraspis uraspis*, based on the characters like white tongue and roof and, floor of the mouth and the curved part of the lateral line being longer than the straight part. The findings of the meristic character of the specimens were agreed well with the results of the previous studies [Gunther (1860); Senou (2013); Yeo & Kim, 2016]. This species, *Uraspis uraspis* was distinguished from its congener *Uraspis helvola* in having curved part of the lateral line longer than the straight part (vs. chord of straight part of lateral line longer than the curved part in *U.helvola*) ; pectoral fin reaches the junction of straight and curved part (vs. pectoral fin extends beyond the junction of straight and curved part in *U.helvola)* and naked area of the breast extends uninterruptedly to the pectoral fin base (vs. naked area of the breast separated from naked base of pectoral fin by a broad band of scales in *U.helvola*); gill rakers on first gill arch 6 upper,15 lower in total 20-21, (vs. 19-20 I total , 5 upper, 14-15 lower in U *helvola*). *Uraspis uraspis* was distinguished from its other congener *Uraspis secunda* in having gillrakers on first gill arch 6 upper,15 lower in total 20-21 (vs. 18-23 total , 4 -8 upper, 13-16 lower in *U secunda*).From the Andaman waters 48 species of Carangidae fishes belonging to 18genera were recorded (Rajan et al. 2021). However, *U.uraspis* has not been added to the ichthyofauna of

ISSN: 2348-8344 (Online)
DOI: https://doi.org/10.26540/ijgsr.v11.i2.2024.270

Andaman yet. Therefore, the present study is the first record of *U.uraspis* from Andaman and Nicobar Islands, India.

Acknowledgements:

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

References:

Smith-Vaniz, W. F. Carangidae (1984) In: Fischer W. and Bianchi,G. (eds.). FAO species identification sheets for fishery purpose, Western Indian Ocean (Fishery area 51), Vol. 1,FAO, Rome. 1984.

Jacobina, U. P., Bertollo, L. A. C., Cioffi, M. B. and Molina, W. F. (2014) Physical mapping of 18S and 5S genes in pelagic species of the genera Caranx and Carangoides (Carangidae), Genet. Mol. Res., 13:9628e9635. https://doi.org/10.4238/2014.November.14.7. PMid:25501173.

Fricke, R., Eschmeyer, W. N. and Van der Laan, R. (Eds) 2023. Eschmeyer's Catalog of Fishes: Genera, Species, References. Electronic version available at http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp. (Accessed on 12.07.2023).

Gopi, K. C. and Mishra, S. S. (2015) Diversity of Marine Fishes of India, In: Venkatraman, K and Sivaperuman C (eds.). Marine Faunal Diversity in India.Taxonomy, Ecology and Conservation.Elsevire Publ., Amsterdam; p. 171-193. https://doi.org/10.1016/B978 0-12-801948-1.00012-4

Rajan, P. T., Sreeraj, C. R. and Immanuel, T. (2021) Fishes of Andaman and Nicobar Islands: A checklist. J Andaman Sci. Assoc. 26, 95-130.

Reuben, S. (1968) *Uraspis helvola* (Forster) (Carangidae: Pisces) a detailed description with remarks on the species of the *Uraspis* Bleeker. J. Mar. Biol. Ass. India, 10, 133151.

Günther, A. (1860) Catalogue of the fishes in the British Museum.Catalogue of the acanthopterygian fishes in the collection of the British Museum.Squamipinnes, Cirrhitidae, Triglidae, Trachinidae, Sciaenidae, Polynemidae, Sphyraenidae, Trichiuridae, Scombridae, Carangidae, Xiphiidae. Brit. Mus., London, v. 2: ixxi+1548.

Mohapatra, A., Mishra, S. S., Bineesh, K. K., Rajendra, S. Ray, D., Mohanty, S. R. and Roy, S. (2020) Pisces. In Director, Zoological Survey of India (eds) Faunal Diversity of Biogeographic Zones - Coasts of India. 655-722.

Hubbs, C. L. and Lagler, K. F. (2004) Fishes of the Great Lakes Region. Revised Edition. The University of Michigan Press, Michigan.

Abdussamad,E. M., Prathibha, R., Said Koya K. P., Habeeb Mohamed, K.P. and Jeyabalan, K. (2013) Carangids (Family: Carangidae) in the seas around Indian subcontinent with description of macro-taxonomic characters for the field identification of genera and species. Indian J. Fish., 60(2), 21-36.

Yeo, S. and Kim, J. K. (2016) New Record of *Uraspis uraspis* and Redescription of *Uraspis helvola* (Pisces: Carangidae) from Korea. Korean J. Ichthyol. 28(1), 57-64.

Froese, R. and Pauly, D. (Eds) (2023) Fish Base.World Wide Web Electronic Publication. Accessed on 22 July 2023. Available at: www. f ishbase.org.

Senou, H. (2013) Carangidae. In: Nakabo, T. (ed.), Fishes of Japan with pictorial keys to the species. 3rd ed. Tokai Univ. Press, Kanagawa, pp. 878 - 892.