

Short Communication

First record of *Kurtus indicus* Bloch, 1786 (Gobiiformes: Kurtidae) from the Andaman and Nicobar Islands, India

M K Das* & C Sivaperuman

Zoological survey of India, Andaman and Nicobar
Regional Centre, Port Blair

Andaman and Nicobar Islands – 744 102, India

*[E-mail: dasmrinal09@gmail.com]

Received 30 July 2024; revised 05 November 2024

The present study reports the occurrence of Indian hump head, *Kurtus indicus* Bloch, 1786 (Gobiiformes: Kurtidae) for the first time from Andaman and Nicobar Islands, India based on a single specimen collected from the Junglighat fish landing Centre, Port Blair. Earlier *K. indicus* was reported from the mainland states of India only. The species has been described along with the morphometric measurements, meristic characters and distributional information to document its first occurrence from the Andaman and Nicobar Islands. This report adds a new record to the ichthyofaunal list of Andaman and Nicobar Islands, India.

[**Keywords:** First record, India, Kurtidae, Morphometric, South Andaman]

Introduction

Andaman and Nicobar Islands, situated in the Bay of Bengal, is considered one of the most diverse ichthyofaunal habitats in the world, in part due to the confluence of the Andaman Sea fishes with Western Pacific and the Indian Ocean¹. The family Kurtidae is small family with one genus and two valid species i.e., *Kurtus gulliveri* Castelnau, 1878 and *Kurtus indicus* Bloch, 1786^(ref. 2). In Indian waters, the family Kurtidae is represented by only one species^{3,4}. The fish species of the family Kurtidae have not been recorded till now from the Andaman and Nicobar Island waters. The present paper reports *K. indicus* for the first time on the basis of a specimen collected from the Junglighat fish landing centre, Port Blair, South Andaman district of Andaman and Nicobar Islands, India.

Material and Methods

A specimen of *Kurtus indicus* Bloch, 1786, has been collected from Junglighat fish landing centre (11°39'23.6" N; 92°43'30.9" E), Port Blair, South

Andaman district (Fig. 1) on 10th June, 2024. The specimen was photographed in fresh condition and preserved in 10 % formaldehyde solution for further study. For morphometric measurements and counts, Hubbs & Lagler methodology⁵ was followed. Morphometric measurements were taken by a digital calliper to the nearest 0.1 millimetres. The specimens were identified following the standard literatures⁶ and Eschmeyer's Catalog of fishes⁷ was referred for the scientific names. Morphometric measurements and meristic counts of the species are presented in Table 1. The identified specimen was registered and deposited in the repository of the Andaman and Nicobar Biology Regional Centre, Zoological Survey of India, Port Blair.

Results

Systematic account

Order: Gobiiformes

Family: Kurtidae Bleeker, 1859

Genus: *Kurtus* Bloch, 1786

Kurtus indicus Bloch, 1786 (Fig. 2, Table 1)

English name: Indian hump head

1786 *Kurtus indicus* Bloch Naturgeschichte der ausländischen Fische. Berlin. v. 2: i-viii + 1-160, Pls. 145-180. [Also a French edition, Ichthyologie, ou Histoire naturelle, générale et particulière des poissons, v. 5, published 1787, Indian Ocean. Lectotype: ZMB 1653. Paralectotypes: ZMB (1, lost)].

Materials examined: 1 specimen, 71.77 mm SL, Junglighat fish landing centre, (11°39'23.6" N, 92°43'30.9" E), Port Blair, Andaman, and Nicobar Islands, Reg. No. ZSI/ANRC/M-30158, 10/vi/2024, coll. Mrinal Kumar Das.

Diagnosis: D V 13; A II 31; P i 20; V I 5. Body strongly compressed, its back elevated. Opercular bone thin and paper like; preoperculum with four spines at angle. Single dorsal fin with 5 rudimentary spines preceded by a recumbent spine directed anteriorly with 13 soft rays. Anal fin with 2 spines and 31 soft rays. Scales very small; pelvic fin with one spine and 5 soft rays. Caudal fin deeply forked. Villiform teeth present in the jaws, vomer and palatines. Lateral line ceases at the opposite end of the soft dorsal fin.

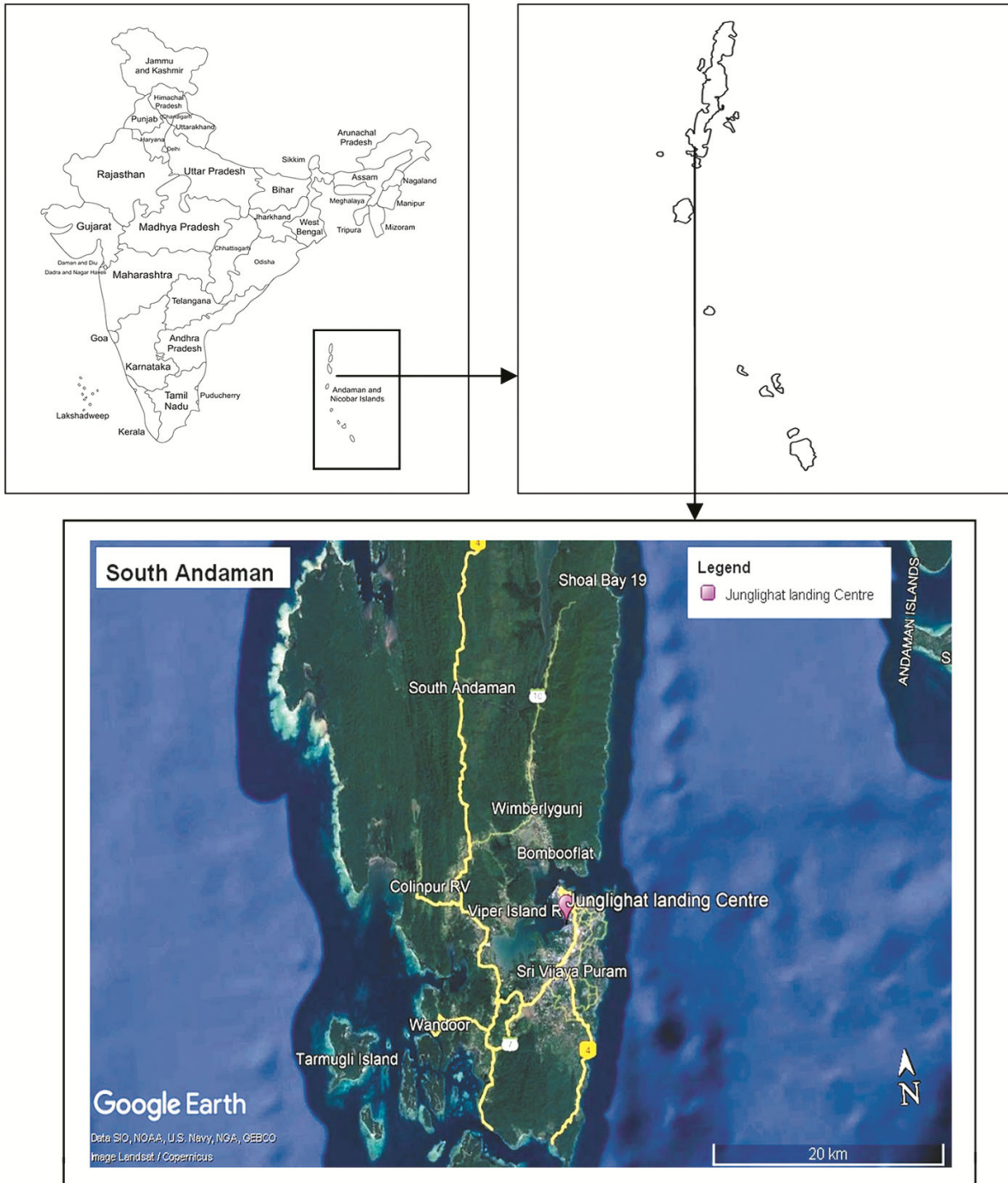


Fig. 1 — Map showing the collection locality in the South Andaman Islands

Colour: Body colour silvery shot with lilac, back with fine black dots forming a round black spot behind the occiput (Fig. 2c).

Distribution: The species is reported from Asia: India, China, Indonesia, Borneo and other countries of the Indo-Malay region^{8,9}. From the Indian waters *K. indicus* was reported from the state of Tamil

Nadu¹⁰, Pondicherry¹¹, Odisha¹², Andhra Pradesh¹³ and West Bengal¹⁴. The present report forms its first record from the Andaman and Nicobar Islands, India.

Discussion

Kurtidae family has a close relationship with the family Apogonidae based on similar dorsal gill-arch

Table 1 — Morphometric measurements of *Kurtus indicus* Bloch, 1786 from Andaman & Nicobar Islands, India

Characters	Measurements	Characters	Measurements
Total length (mm)	86.44	Pre-dorsal length	48.74
Standard length (mm)	71.77	Pre-pectoral length	28.95
In % of Standard length (% SL)			
Body depth at dorsal fin origin	41.48	Pre-pelvic length	30.19
Body depth at anal fin origin	37.43	Pre-anal length	37.76
Body width	12.75	Length of base of dorsal fin	19.97
Head length	31.78	Length of base of anal fin	53.07
Head depth	19.20	Length of caudal peduncle	10.03
Head width	8.30	Depth of caudal Peduncle	11.47
Dorsal fin length	21.36	In % of Head length (% HL)	
Pectoral fin length	11.79	Eye diameter	16.53
Pelvic fin length	16.58	Pre-orbital length	25.78
Anal fin length	11.79	Post -orbital length	56.20
Caudal fin length	22.46	Inter-orbital width	18.90

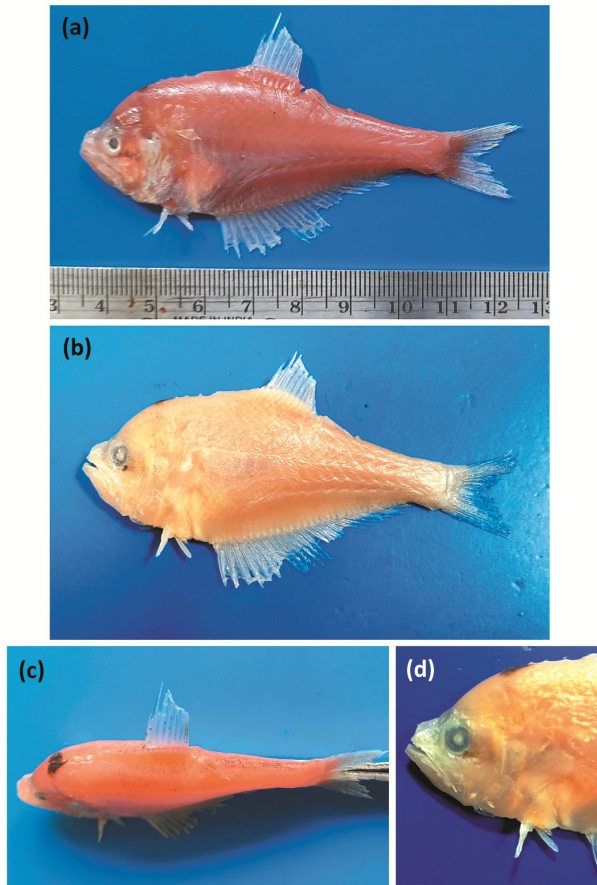


Fig. 2 — Photographs of *Kurtus indicus* Bloch, 1786: (a) Fresh specimen, and (b) Preserved specimen; (c) Dorsal view of the body; and (d) Lateral view of head of the specimen collected from Andaman and Nicobar Islands, India

elements, such as the second epibranchial having no direct articulation with the second pharyngobranchial, the articular head of the third pharyngobranchial expanded and broader than that of the fourth, and the

fourth pharyngobranchial cartilage absent¹⁵. The genus *Kurtus* has only two species, viz. *K. indicus* Bloch, 1786 and *K. gulliveri* Castelnau, 1878. *Kurtus gulliveri* is found in southern New Guinea and northern Australia only. *Kurtus indicus* is distinguished from *K. gulliveri* by having 31 – 32 soft rays in the anal fin (vs. 44 – 47 anal fin soft rays in *K. gulliveri*)². The biology of *K. gulliveri* has been extensively studied in Australia by Berra and Wedd¹⁶. From Indian waters (Bay of Bengal) Kuthalingam¹⁷ studied the fishery and biology of *K. indicus*. The present study confirms the first occurrence report and distributional record of *K. indicus* from the Andaman and Nicobar Islands.

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. The authors would also like to express their sincere gratitude to Ronald Fricke, Senior Curator of Ichthyology at the State Museum of Natural History, Stuttgart, Germany, for the confirmation of the species.

Conflict of Interest

The authors don't have any conflict of interest.

Ethical Statement

The dead specimen was collected from the fish landing centre following scientific collection ethics.

Author Contributions

MKD: Sample collection, preservation, identification and manuscript preparation; and CS: Reviewing of the manuscript.

References

- 1 Rajan P T & Mishra S S, Fishes of Andaman and Nicobar Islands: An Updated Checklist, *J Andaman Sci Assoc*, 23 (2) (2018) 148-181.
- 2 Nelson J S, Grande T C & Wilson M V H, *Fishes of the World*, (John Wiley & Sons, Inc., Hoboken, New Jersey), 2016, pp. 752.
- 3 Gopi K C & Mishra S S, Diversity of marine fish of India, In: *Marine Faunal Diversity in India: Taxonomy, Ecology and Conservation*, edited by K Venkataraman & C Sivaperuman, (Academic Press, Elsevier, London), 2015, pp. 171-193.
- 4 Mohapatra A, Mishra S S, Bineesh K K, Rajendra S, Ray D, et al., Pisces, In: *Faunal Diversity of Biogeographic Zones: Coasts of India*, (Director, Zoological survey of India, Kolkata), 2020, pp. 655-722.
- 5 Hubbs C L & Lagler K F, *Fishes of the Great Lakes Region*, (The University of Michigan Press, Michigan), 2004, pp. 276.
- 6 Talwar P K & Jhingran A G, *Inland fishes of India and adjacent countries*, Vol 2, (Oxford & IBH Publishing Co. PVT Ltd, New Delhi), 1991, pp. 1158.
- 7 Fricke R, Eschmeyer W N & Fong J D (eds), *Eschmeyer's Catalog of Fishes: Genera/Species by Family/Subfamily*. Available online at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/speciesByFamily.asp>; (Accessed on June, 2024).
- 8 Berra T M, *Freshwater fish distribution*, (University of Chicago Press, Chicago), 2007, pp. 615.
- 9 Froese R & Pauly D (eds), *FishBase*, World Wide Web electronic publication, Available online at: <http://www.fishbase.org>; (Accessed on February 2024).
- 10 Mogalekar H S, Canciyal J, Patadia D S & Sudhan C, Marine and estuarine fish fauna of Tamil Nadu, India, *Proc Int Acad Ecol Environ Sci*, 8 (4) (2018) 231–271.
- 11 Krishnan S & Mishra S S, An inventory of fish species described originally from fresh and coastal marine waters of Pondicherry, *Rec Zool Surv India*, 102 (part 3-4) (2004) 65-87.
- 12 Routray R K, Behera S K & Mahanta R, Diversity and Distribution of Ichthyofuna at Gahirmatha coast Odisha, *Sch J Res Agri Biol*, 2 (1) (2017) 50-62.
- 13 Murty V S, *Catalogue of fishes (excluding from the laccadives)*, In the reference collections of the Central marine fisheries research institute, *Bull Cent Mar Fish Res Inst*, No 10 (1969) pp. 366.
- 14 Chandra B & Goswami B, Marine fauna of Digha coast of West Bengal, India, *J Mar Biol Assoc India*, 34 (1&2) (1992) 115-137.
- 15 Johnson G D & Patterson C, Percomorph phylogeny: A survey of acanthomorphs and a new proposal, *Bull Marine Sci*, 52 (1) (1993) 554–626.
- 16 Berra T M & Wedd D, Salinity and spawning of nurseryfish, *Kurtus gulliveri*, in the Adelaide River of northern Australia with notes on electrofishing and photos of a male carrying eggs, *Environ Biol Fish*, 100 (2017) 959–967. <https://doi.org/10.1007/s10641-017-0620-3>
- 17 Kuthalingam M D K, Some observations on the fishery and biology of *Kurtus indicus* (Bloch) of the Bay of Bengal, *Indian J of Fish*, (1963) 159-166.