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Journal of Threatened Taxa

The international journal of conservation and taxonomy

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

NOTE

A FIRST RECORD OF THE LINED WRASSE *ANAMPSES LINEATUS* RANDALL, 1972 (PERCIFORMES: LABRIDAE) IN THE GULF OF MANNAR, TAMIL NADU, INDIA

S. Prakash & T.T. Ajith Kumar

26 June 2016 | Vol. 8 | No. 6 | Pp. 8923–8926
10.11609/jott.1984.8.6.8923-8926



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**A FIRST RECORD OF THE LINED WRASSE
ANAMPSES LINEATUS RANDALL, 1972
(PERCIFORMES: LABRIDAE) IN THE GULF OF
MANNAR, TAMIL NADU, INDIA**

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Wrasses in the family Labridae have a very diverse and abundant distribution in the tropical coral reefs ecosystem. This family is the second largest (after Gobiidae) (Parenti & Randall 2010), with varying numbers of species (504 species belonging to 47 genera), size from less than two inches (the Minute Wrasse *Minilabrus striatus*) to greater than seven feet (the Hump-head Wrasse *Cheilinus undulatus*), and shape, i.e., moderately deep bodied to slender and long to short snouted (Randall et al. 1996; Allen et al. 2003). Wrasses are carnivores, but their food habits mostly depend on the habitats they live in. Structural changes in the skull, in particular the jaws and dentition enable the wrasses to exploit a wide variety of prey items such as hard-shelled invertebrates (crabs, hermit crabs, molluscs, brittle stars) and zooplankton (copepods) (Westneat et al. 2005). The genus *Anampses* also forcefully strike the substratum with their mouths, sucking very small animals including crustaceans, molluscs, worms, and foraminiferans along

with sand and detritus (Randall 1995).

An annotated checklist of the family Labridae provided by Parenti & Randall (2000) lists 453 valid species under 68 genera. This list was again updated by the same authors, which increased to 504 species belonging to 70 genera (Parenti & Randall 2011). The tropical Indo-Pacific genus *Anampses* Quoy & Gaimard, 1824 could be easily distinguished by a couple of large incisiform teeth at the front of the jaws, scale less head, lateral line continuous, smooth pre-opercular margin, nine dorsal spines and 12 dorsal rays and three anal spines and 12 anal rays (Randall 1972). In India, the labrid fishes have been hitherto recorded from the coral reef regions of India such as the Andaman and Nicobar Islands (64 species; Rao 2009), the Lakshadweep (44 species; Jones & Kumaran 1980) and the Gulf of Mannar (43 species; Ramesh et al. 2008). However, the information on the genus *Anampses* from India is very scanty except on two species (*A. meleagrides* and *A. caeruleopunctatus*), documented from the Andaman & Nicobar Islands (Rao 2009) and *A. caeruleopunctatus*, *A. amboinensis* and *A. diadematus* from the Lakshadweep islands (Jones & Kumaran 1980).

The Gulf of Mannar (GOM) coast extends from Rameswaram to Tuticorin lying between 78°5'E–79°30'E & 8°45'N–9°25'N, and extending to a distance of 140km. There are 21 islands running almost parallel to the coastline of the Gulf of Mannar (Image 1). It is



ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

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DOI: <http://dx.doi.org/10.11609/jott.1984.8.6.8923-8926> | **ZooBank:** urn:lsid:zoobank.org:pub:0BF8A488-EE5D-4506-BD1B-8B82964BCC36

Editor: A. Biju Kumar, University of Kerala, Thiruvananthapuram, India.

Date of publication: 26 June 2016 (online & print)

Manuscript details: Ms # 1984 | Received 06 April 2016 | Final received 02 June 2016 | Finally accepted 21 June 2016

Citation: Prakash, S. & T.T.A. Kumar (2016). A first record of the Lined Wrasse *Anampses lineatus* Randall, 1972 (Perciformes: Labridae) in the Gulf of Mannar, Tamil Nadu, India. *Journal of Threatened Taxa* 8(6): 8923–8926; <http://dx.doi.org/10.11609/jott.1984.8.6.8923-8926>

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Funding: The Rufford Foundation, London to SP (Ref. No. 15679-1).

Conflict of Interest: The authors declare no competing interests.



Acknowledgements: The authors are grateful to Mr. Vijayan and Mr. Paramasivam of Tuticorin for helping with the collection of the wrasse specimens. SP is thankful to Prof. T. Subramoniam, Senior Scientist, Centre for Climate Change Studies, Sathyabama University for his valuable comments on the MS. SP is also thankful to The Chancellor, Sathyabama University, Chennai for the facilities and his constant support to the Centre for Climate Change Studies. The present work was carried out as a part of the Rufford Small Grant Project entitled “Status and safe exploitation of marine ornamental fishes and invertebrates from the Gulf of Mannar, Tamil Nadu, India: An expensive reserve for conservation” funded by The Rufford Foundation, London to SP (Ref. No. 15679-1) (http://www.rufford.org/projects/prakash_sanjeevi/)



Image 1. The study area - Gulf of Mannar (sampling site - Tuticorin)

one of the world's richest regions from the perspective of marine biodiversity and the first Marine Biosphere Reserve in South Asia. This highly productive region harbours a rich biodiversity of flora and fauna, making it one of the richest coastal regions in the country (Ramesh et al. 2008).

While assessing the status and exploitation of marine ornamentals from the Gulf of Mannar under the Rufford's Small Grant Project, we carried out a few underwater surveys off the Tuticorin waters by adopting snorkeling and skuba diving methods for identifying the habitats of marine ornamental fishes and invertebrates. The surveyed areas were mostly covered with corals and coral boulders with encrusting algal beds and the depth of sampling sites vary from 10–50 m. Among the several marine ornamental fishes collected, we identified a lined wrasse *Anampses lineatus* Randall, 1972, by analyzing the morphometry and meristic characters. After a detailed understanding of distribution patterns, the range extension of *A. lineatus* was expected for the first time in the Indian peninsular region.

The length of the specimen was given as standard length (SL): the anterior end of the upper lip to the base of the caudal fin; head length (HL): same anterior point to the posterior edge of the opercle flap; body depth taken vertically between the belly and the base of the

dorsal fin; snout length: the anterior end of the upper lip to the anterior edge of the eye; caudal peduncle depth is the least depth, and caudal peduncle length: the horizontal distance between the verticals at the rear base of the anal fin and the caudal fin base; lengths of spines and fin rays are measured to their extreme bases. Meristic characters such as spines, rays and lateral line scales are also considered to confirm the identity of the species. The meristic abbreviations are as follows: D - Dorsal fin; V - Ventral fin; A - Anal fin; P - Pectoral fin; LI - Lateral line scales. Finally, the morphometric characters are expressed as % standard lengths (SL) and % head lengths (HL) (Table 1).

Class Actinopterygii Klein, 1885

Order Perciformes Bleeker, 1859

Family Labridae Curvier, 1816

Genus *Anampses* Quoy & Gaimard, 1824

***Anampses lineatus* Randall, 1972 (Image 2)**

Common names: Lined Wrasse, Lined Tamarin, Tamarin Wrasse

Material examined: ZSI/MBRC/F.1462, 02.ii.2015, two individuals (SL 74mm & 39mm), India, Tamil Nadu, Tuticorin, 8°50'06.90"N & 78°12'48.81"E, depth 4.5m, coll. S. Prakash.

Diagnosis based on the present material: D. IX, 12; V.

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Image 2. Lined wrasse *Anampses lineatus* Randall, 1972 collected from the Gulf of Mannar, Tamil Nadu, SL 74mm (ZSI/MBRC/F.1462).

Table 1. Morphometry (represented as % SL and % HL) and meristic characteristics of lined wrasse *Anampses lineatus* Randall, 1972

Characters	Measurements	
	F.1462	F.1462
Morphometry		
Total length (in mm)	87	45
Standard length (in mm)	74	39
% SL		
Snout length	10.13	10.25
Head length	31.08	30.77
Eye diameter	8.11	6.41
Body length	70.27	58.97
Body depth	29.73	30.77
Caudal fin length	17.57	19.74
Caudal peduncle depth	14.86	14.10
Post-opercular length	83.78	84.61
Pre-dorsal length	33.78	33.33
Pre-anal length	55.40	56.41
Pre-ventral length	36.47	33.33
Dorsal fin base	63.51	64.10
Length of longest dorsal spine	6.76	6.41
Length of longest dorsal rays	8.10	7.69

Characters	Measurements	
	F.1462	F.1462
Length of ventral rays	14.86	14.10
Base of ventral rays	6.75	3.85
Length of anal rays	8.78	10.25
Base of anal rays	35.13	35.90
Length of pectoral fin	18.92	17.95
Base of pectoral fin	6.76	5.12
% HL		
Snout length	36.96	33.33
Eye diameter	26.09	20.83
Meristics		
Dorsal spines	9	9
Dorsal rays	12	12
Ventral spine	1	1
Ventral rays	5	5
Anal spines	3	3
Anal rays	12	12
Pectoral fin rays	13	13
Lateral line scales	26	26

I, 5; A. III, 12; P. 13; LI. 26.

Head scale less, maxillary reaching above the nostrils, mid-dorsal region of the nape scale less, scales on thoracic region smaller than the rest of body, fin scale less, and origin of the dorsal fin above the upper end of gill opening. Body orange-brown with narrow blue-green lines on the longitudinal scale rows, broken into dashes on dorsal, ventral and posterior regions, head and chest with irregular blue-green spots and shading dull yellowish tapered bands, a black spot on the opercular flap, dorsal fin yellow and dusky on the lower half with irregular blue-green spots, anal fin yellow bordered with blue-green stripe, pectoral fins hyaline with pinkish

rays, pelvic and anal fins are yellow bordered with blue stripes, caudal fin black with white stripe in between.

Habitat: Mostly inhabits coral reefs and usually in deeper waters between 20–40 m. Our specimens were collected from the shallow coral reef regions at a depth of 25–28 m. Other species associated with *A. lineatus* are identified as *Halichoeres* sp., *Thalassoma* sp., *Ostorhinchus* sp., *Apogon* sp.

Distribution: Currently known throughout the Indo-Pacific: Red sea (Golani & Bogorodsky 2010) to Natal, South Africa (Randall 1986), Indonesia (Allen & Adrim 2003), the Seychelles (Randall & van Egmond 1994), Maldives (Randall & Anderson 1993), Oman (Randall

1995) and Sri Lanka (Rajasuriya 2013). In the present study, the specimens were collected from the Gulf of Mannar region, Tamil Nadu and the distribution range of this species is extended to mainland India for the first time.

Remarks: Originally described as a subspecies of *A. melannurus* (Randall 1972). *A. lineatus* is easily confused with *A. melannurus* due to its colouration, which affected the distribution record of this species. The presence of *A. lineatus* in Lakshadweep and the Andaman & Nicobar Islands needs further clarification (Cabanban 2010). This species has been frequently collected from the Gulf of Mannar region for the domestic marine aquarium trade (Prakash et al. Unpublished data). As there is no species specific conservation measures related to this species, distribution records also overlaps with other coral reef areas. According to IUCN Red List of threatened species, *A. lineatus* was considered under the Data Deficient (DD) category (Cabanban 2010).

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ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

June 2016 | Vol. 8 | No. 6 | Pages: 8849–8952
Date of Publication: 26 June 2016 (Online & Print)
DOI: 10.11609/jott.2016.8.6.8849-8952

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Articles

Low genetic diversity in *Clarias macrocephalus* Günther, 1864 (Siluriformes: Clariidae) populations in the Philippines and its implications for conservation and management

-- Marc Timothy C. Tan, Joycelyn C. Jumawan & Jonas P. Quilang, Pp. 8849–8859

On the reproductive ecology of *Suaeda maritima*, *S. monoica* and *S. nudiflora* (Chenopodiaceae)

-- A.J. Solomon Raju & Rajendra Kumar, Pp. 8860–8876

Communications

The Nilgiri Tahr (Mammalia: Cetartiodactyla: Bovidae: *Nilgiritragus hylocrius* Ogilby, 1838) in the Agastyamalai range, Western Ghats, India: population status and threats

-- Ponniah Hopeland, Jean-Philippe Puyravaud & Priya Davidar, Pp. 8877–8882

All that glitters is not gold: A projected distribution of the endemic Indian Golden Gecko *Calodactylodes aureus* (Reptilia: Squamata: Gekkonidae) indicates a major range shrinkage due to future climate change

-- Aditya Srinivasulu & Chelmala Srinivasulu, Pp. 8883–8892

Description of a new species of *Umairia* Hayat (Hymenoptera: Aphelinidae) with additional distribution records of aphelinids from India

-- Sagadai Manickavasagam, Chakaravarthy Menakadevi & Mani Ayyamperumal, Pp. 8893–8897

Egg parasitoids from the subfamily Scelioninae (Hymenoptera: Platygasteridae) in irrigated rice ecosystems across varied elevational ranges in southern India

-- M. Shweta & K. Rajmohana, Pp. 8898–8904

Short Communications

Perch height and the hunting success of the Indian Eagle Owl *Bubo bengalensis* (Franklin) (Aves: Strigiformes: Strigidae) targeting anuran prey

-- Eric Ramanujam, Pp. 8905–8908

A checklist of avifauna from Malgaon-Bagayat and Malvan towns of Sindhudurg District, Maharashtra, India

-- Mayura Khot, Pp. 8909–8918

Rediscovery of *Penicillium paradoxum* (Ascomycete: Aspergillaceae) from Maharashtra, India

-- Kunhiraman C. Rajeshkumar, Sayali D. Marathe, Sneha S. Lad, Deepak K. Maurya, Sanjay K. Singh & Santosh V. Swami, Pp. 8919–8922

Notes

A first record of the Lined Wrasse *Anampses lineatus* Randall, 1972 (Perciformes: Labridae) in the Gulf of Mannar, Tamil Nadu, India

-- S. Prakash & T.T. Ajith Kumar, Pp. 8923–8926

A report of False Tibetan Cupid *Tongeia pseudozuthus* Huang, 2001 (Lepidoptera: Lycaenidae) from the Upper Dibang Valley, Arunachal Pradesh - An addition to the Indian butterfly fauna

-- Seena N. Karimbunkara, Rajkamal Goswami & Purnendu Roy, Pp. 8927–8929

Recent sightings of Kaiser-I-Hind *Teinopalpus imperialis* Hope, 1843 (Lepidoptera: Teinopalpani) from Manipur, India

-- Baleshwar Soibam, Pp. 8930–8933

On the occurrence of *Theobaldius(?) tristis* (Blanford, 1869) (Caenogastropoda: Cyclophoridae) in the northern Western Ghats, Maharashtra, India

-- Amrut R. Bhosale, Tejas S. Patil, Rupesh B. Yadav & Dipak V. Muley, Pp. 8934–8937

Are exotics *Amyntas alexandri* (Beddard, 1900) and *Metaphire peguana* (Rosa, 1890) (Clitellata: Oligochaeta: Megascolecidae) a threat to native earthworms in Kerala, India?

-- S. Prasanth Narayanan, S. Sathrumithra, Dinu Kuriakose, G. Christopher, A.P. Thomas & J.M. Julka, Pp. 8938–8942

New phytogeographically noteworthy plant records from Uttarakhand, western Himalaya, India

-- Amit Kumar, Bhupendra Singh Adhikari & Gopal Singh Rawat, Pp. 8943–8947

***Aira* (Poaceae): a new generic record for Nicobar Islands, India**

-- Kumar Vinod Chhotupuri Gosavi, Arun Nivrutti Chandore & Mayur Yashwant Kamble, Pp. 8948–8949

Notes on three new records of foliicolous lichens from Karnataka Western Ghats, India

-- S. Shravan Kumar & Y.L. Krishnamurthy, Pp. 8950–8952