

**A NEW LABRID FISH *Xyrichtys rajagopalani* SP. NOV.  
FROM TUTICORIN BAY, SOUTH INDIA**

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ABSTRACT

A new labrid fish *Xyrichtys rajagopalani* sp. nov. collected from Tuticorin Bay is described based on 14 specimens of both sexes with a comparison of the other two closely related species of the same genus.

INTRODUCTION

THE GENUS *Xyrichtys* Cuvier, coming under the family Labridae is widely distributed in the tropical and subtropical waters. Presently six valid species have been recorded from the Western Indian Ocean by Fischer and Bianchi (1984). Some of the species were previously included under the genus *Inilistius* and *Hemipteronotus* by Day (1878), Weber and de Beaufort (1936) and Munro (1955). Of the six valid species coming under the genus *Xyrichtys* four species namely *X. pavo* Cuv. & Val., *X. bimaculatus* Ruppell, *X. pentadactylus* (Linnaeus) and *X. aneitensis* (Gunther) are distributed along the east coast of India. Of these four species, the first two are available along the Tuticorin coast (South East Coast of India). While studying the taxonomy of the labrid fishes of Tuticorin and its environs, a new species of the genus *Xyrichtys* hitherto unknown was encountered and it is fully described in the present study with a comparison of the other two closely related species of this genus viz. *X. pavo* and *X. bimaculatus*.

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The Institute has emerged as an important paradigm in the Fisheries development of the State for higher education and research in Fisheries. The credit for all that has been achieved so far goes to Dr. V. Rajagopalan, whose dedicated and devoted service to the Institute in building up as a centre of national importance will always be remembered. We acknowledge with appreciation the keen interest evinced by him and privileged to name the species presently described after him.

SPECIES DESCRIPTION

***Xyrichtys rajagopalani* sp. nov. (Fig. 1).**

*Holotype*: LA154 (T. L. 189 mm, Male) in Fisheries College reference Museum (FCRM) Tuticorin, Tamil Nadu, India, 160 mm. SL, 7th June, 1985, Coll. K. Venkataramanujam.

*Paratypes*: (1) 10 specimens S.L. 127-168 mm with same details as above.

(2) 3 specimens S. L. 127-154mm deposited in Biological station reference museum

(BSRM) at Porto Novo, Annamalai University, India.

Description based on 14 specimens, 9 males and 5 females 127-168 mm S.L.

orbit; two curved canines present anteriorly in each jaw; teeth present on jaws, upper jaw with three rows of which the outer row bigger, inner rows of teeth irregular; in lower jaw teeth present on two rows of which the outer row

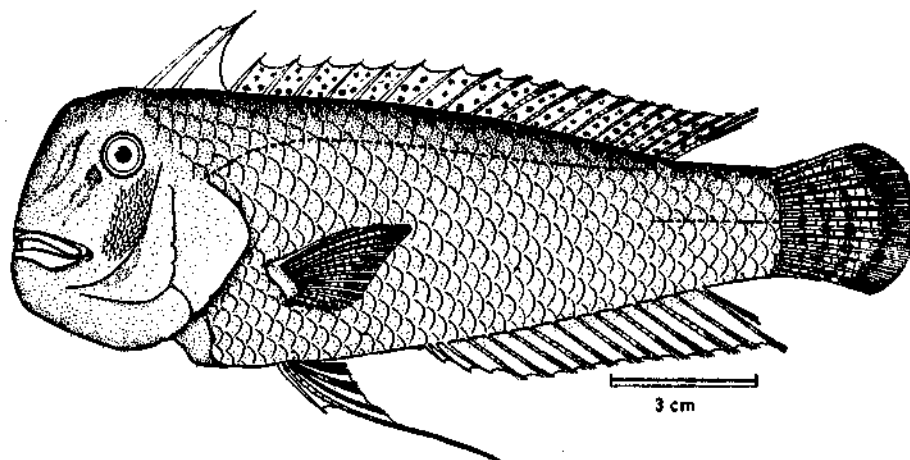


Fig. 1. Lateral view of the holotype specimen of *Xyrichtys rajagopalani* sp. nov. (T. L. 189 mm Male)

Body measurements expressed as percentage of standard length: head length 29.25-33.70; snout length 15.80-19.14; eye diameter 5.70-6.60; least distance between eye and head 6.80-10.54; snout to first dorsal fin 26.80-28.67; snout to second dorsal fin 31.72-36.60; snout to pectoral fin 26.65-34.32; snout to ventral fin 30.55-37.82; snout to anal fin 51.60-59.78; head depth 32.33-37.62; body depth 31.50-36.30; pectoral fin length 22.20-24.32; ventral fin length 18.02-28.06; anal fin base 33.32-38.43; dorsal fin base 65.00-74.75; maxillary length 7.80-11.22

D<sup>1</sup> II, D<sup>2</sup> VII, 11-12; P.2.11-12; V I, 5; L1 22-27; lateral gill rakers on first arch 13-14+6-8 (Table 1). Body moderately deep, maximum depth equal to or more than length of head; dorsal side of head compressed into a knife-like edge, dorsal head profile more oblique before eyes; adipose eye lids poorly developed; mouth small, oblique; maxilla not reaching

bigger; dorsal fin in two parts, first dorsal higher than second, two spines of first dorsal connected by a membrane with a notch almost extending to the base of the first spine of the

TABLE 1. Frequency distribution in *Xyrichtys rajagopalani* sp. nov.

No	Dorsal fin rays		Mean	Range	S.D.	S.E.
	11	12				
14	7	7	11.5	11-12	0.50	0.134
No	Anal fin rays		Mean	Range	S.D.	S.E.
	11	12				
14	14	11	11	11		
No	Pectoral fin rays		Mean	Range	S.D.	S.E.
	11	12				
14	11	3	11.21	11-12	0.410	0.110
No	Gill rakers		Mean	Range	S.D.	S.E.
	13	14				
14	4	10	13.5	13-14	0.50	0.134
No	a) Lower arm		Mean	Range	S.D.	S.E.
	6	7 8				
14	2	3 9	7.5	6-8	0.731	0.195
No	b) Upper arm		Mean	Range	S.D.	S.E.
	6	7 8				
14	2	3 9	7.5	6-8	0.731	0.195

second dorsal, first dorsal originates at the margin of posterior orbit; anal with spines and rays, soft anal similar to soft dorsal; pectoral with two unbranched and 11-12 branched rays; pelvic slightly filamentous and the first ray may be produced and extends upto 2-3 rays of anal; lateral line interrupted below the 10-11 dorsal fin ray; scales cycloid, wanting on to base of dorsal, anal fins and opercle, patches of small scales present on cheeks and after posterior orbit of eye.

In fresh condition colour is bright scarlet red with feeble bands on dorsal and anal fins; in females six scarlet red dots present at the anterior part of head; tip of snout with bluish band and its sides with scarlet red band. In both sexes caudal with two feeble yellowish orange bands at its base, posterior two third of caudal provided with many small yellowish spots, a single prominent blotch may be present in the middle of body below lateral line.

*Distribution:* Tuticorin waters.

*Relationship with other species*—This species is closely related to *X. pavo* and *X. bimaculatus*, which have also been recorded from the Tuticorin bay.

The three species coming under the genus *Xyrichtys* distinguished by the following valid characters:

#### *X. rajagopalani* sp. nov.

Dorsal head profile more oblique, not convex before eyes; maxilla ends before orbit; first two dorsal spines not separated from rest of fin; first dorsal originates at posterior margin of orbit; a small but prominent indentation present on ventral side between head and body; scales in patches present on cheeks and posterior orbit of eye.

#### *X. pavo* Cuv. & Val.

Dorsal head profile more convex before eyes; maxilla reaches anterior margin of orbit; two dorsal spines well separated from rest of fin; first dorsal originates at the posterior margin of orbit; adipose eyelids well developed; no indentation on the ventral region between head and body. Scales wanting in front of dorsal fin, cheek, opercle and lower jaw.

#### *X. bimaculatus* Rüppell

Dorsal head profile more convex before eye; maxilla reaches anterior margin of orbit; first two dorsal spines not separated from rest of the fin, first dorsal spine has its origin beyond posterior margin of orbit; adipose eyelid well developed; no indentation on the ventral region between head and body; a few scales on cheek, opercle and head, otherwise naked.

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