

**A NEW SPECIES OF SCIAENID FISH *JOHNIUS MANNARENSIS*
FROM THE SOUTH-EAST COAST OF INDIA**

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WHILE studying the Sciaenid fishes, a new species was observed from the trawl catches of Gulf of Mannar. It is similar to *Johnius dussumieri* Valenciennes [= *Umbrina dussumieri* (Valenciennes)] but for the ctenoid scales, shorter first dorsal fin and mental barbel. Trewavas (1964) described three sciaenid fishes with single mental barbel from India viz. *Nibea russelli* (Cuvier), *Johnius dussumieri* (Valenciennes) and *Johnius macropterus* (Bleeker).

***Johnius mannarensis* sp. nov.**

(Text-figs. 1A-D)

Material :

Holotype. CMFRI No. 149. Total length 192 mm., standard length 164 mm., Female ; Locality : off Pamban (Gulf of Mannar), depth 15 fathoms ; date of collection 10-10-68 ; mechanised boats with trawl net.

Paratypes. CMFRI No. 150A. Total length 209 mm., standard length, 178 mm., Female ; other details as above ; No. 150B. Total length 170 mm., standard length 145 mm., male ; date of collection 7-3-68 ; other details as above.

Diagnosis : Ctenoid scales on body and cycloid scales on head ; first dorsal spine not produced ; mental barbel single short, not perforated at tip ; second anal spine 29.0 to 34.0 per cent of head ; gas bladder hammer head-shaped anteriorly with 13-14 lateral arborescent tubules ; second dorsal soft rays 27 ; colour light grey.

Description : D.X, I, 27 ; A.II, 7 ; P.I, 15 ; L.1.44-46 ; Ltr. 7/1/10-12 ; gill rakers 5+1+10.

Depth (at dorsal origin) 26.7-28.0 (26.7 : 27.2)* in standard length ; 23.0-24.0 (23.0) in total length ; head 29.3-31.7 (29.3 : 30.7) in standard length ; 25.0-27 (26.0) in total length, base of first dorsal fin 18.7-20.2 (20.0) in standard length. In head, eye diameter 19.5-20.0 (20.0 : 19.8), snout 26.0-32.7 (31.2 : 29.9) ; interorbital space 25.0-26.3 (25.0), caudal peduncle depth 29.2-34.8 (31.2 : 31.7), length of second dorsal spine 60.0-64.5 (64.5 : 61.1), third dorsal spine 56.5-62.5 (62.5), second anal spine 29.0-34.3 (33.3 : 32.1), length of pectoral fin 62.5-66.6 (62.5 : 64.5), length of pelvic fin 53.6-66.6 (66.5) ; in eye, snout length 133.3-154.0 (150.0), mental barbel 20.0-27.2 (20.0 : 23).

* Measurements within parenthesis are those of holotype followed by mean. Proportions expressed as per cent.

Snout overlapping lower jaw, mouth inferior, cleft of mouth horizontal; three distinct rostral pores at tip of snout; marginal pores five, outer marginal pore slit-like, inner marginal pore at middle of central flap; free margin of snout lobulated; lower jaw with five distinct mental pores, outer and inner mental pores deep, close together, median mental pore at base of mental barbel which is short, solid, and not perforated at tip (Fig. 1C); preopercular and opercular margins not serrated. Upper and lower jaws with a band of villiform teeth, no enlarged teeth on both jaws. Scales cycloid on cheek, preopercle and opercle, but ctenoid on body: lateral line arched on body, but straightens on caudal peduncle; gill rakers rudimentary, short and stumpy (Fig. 1B); gas bladder anteriorly with a lateral outpushing on each side (hammer head shape), narrow posteriorly, with 13-15 lateral arborescent tubules on each side; inner branch of first arborescent tubule extends to floor of cranium and outer branch of same communicates with exterior through branchial wall; arborescent tubules embedded in fatty tissue; posterior end of gas-bladder extends to base of anal fin as a narrow tube (Fig. 2); otolith (sagitta) *Johnius*-type, with a broad anterior and narrow posterior end; dorsal spines strong, first short, second longest, third slightly shorter than second, tenth short, connected by membrane with base of first spine of second dorsal; second anal spine half as long soft rays; caudal fin rhomboid on lower side; colour dusky dorsally and pale ventrally, first dorsal grey, second dorsal light grey, pectoral and caudal fin lightly mottled.

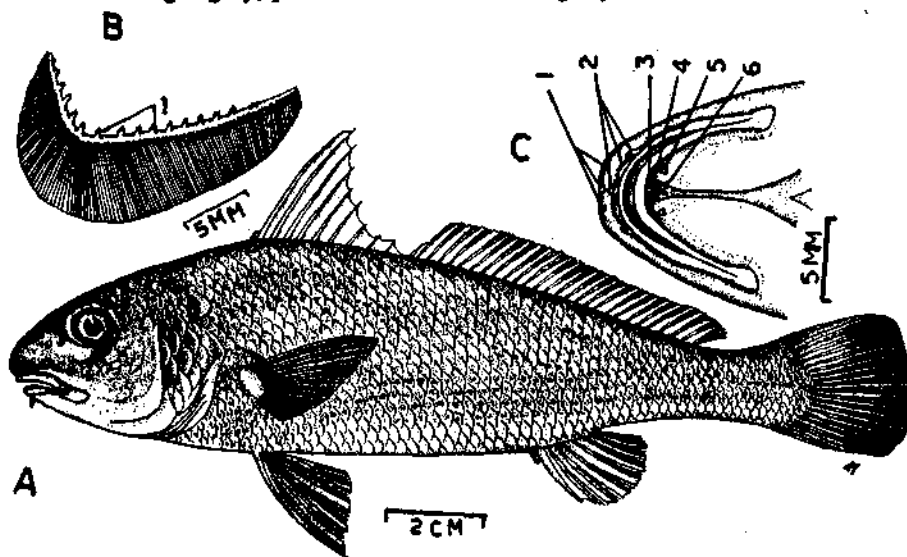


FIG. 1. A. *Johnius mannarensis* sp. nov. Holotype, Female, 172 mm. (T.L.). B. Gillarch, 1. gill rakers.

C. Ventral view of lower jaw. (1). Rostral pores, (2) marginal pores, (3) Median mental pore, (4) inner mental pore, (5) outer mental pore, (6) Median mental barbel.

Habitat: Gulf of Mannar trawling grounds off Pamban.

Relationship: In having villiform teeth, the nature of the otoliths (Sagitta) and other diagnostic character the new species belongs to the genus *Johnius* Bloch. The general body form, number of lateral line and lateral transverse scales and nature of barbel bring *J. mannarensis* closer to *Johnius dussumieri*. However, it differs from *J. dussumieri* (Valenciennes) in having ctenoid scales, a shorter mental barbel, shorter first dorsal fin, and in colouration.

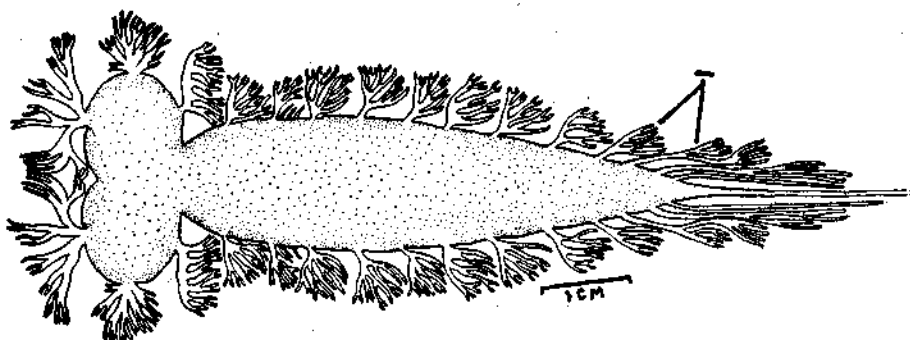


FIG. 2. Gas bladder of *Johnius mannarensis* sp. nov. 1. Arborescent tubules.

SYNOPSIS OF SCIAENID FISHES OF INDIA WITH SINGLE MENTAL BARBEL

- A. Gas bladder without arborescent tubules, mental barbel with a pore at its tip.
 - B. Scale ctenoid on body, soft dorsal rays 27-29, mental barbel 25.0* of eye, second anal spine 50.0 of head.....*Umbrina sinuata* Day
- AA. Gas bladder with arborescent tubules, mental barbel without a pore at tip.
 - C. Gas bladder with anterior lateral outpushings.
 - D. Ctenoid scales on body.
 - E. Soft dorsal rays 30-33, head 26.3-29.0 to standard length, mental barbel 8.0 to 10.0 of eye, second anal spine 33.3-45.5 of head.....*Johnius macropterus* (Bleeker)
 - EE. Soft dorsal rays 27; head 29.3-31.7 to standard length, mental barbel 20.0-27.2 of eye; second anal spine 29.0-34.0 of head.....*Johnius mannarensis* sp. nov.
 - DD. Cycloid scale on body.
 - F. Soft dorsal rays 24-26; head 32.5-35.1; mental barbel 25.5-44.3 to eye, second anal spine 20.0-31.6 of head.....*Johnius dussumieri* (Valenciennes)
 - CC. Gas bladder without anterior lateral outpushings.
 - G. Ctenoid scales on body soft dorsal rays 27-28, mental barbel 80-100 of eye; second anal spine 45.0 of 50 of head.....*Nibeo russelli* (Cuvier)

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* All measurements in per cent.

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