

POSTLARVA OF THE SEERFISH *SCOMBEROMORUS COMMERSON*
(LACÉPÈDE) (SCOMBRIDAE, PISCES) FROM THE SOUTHWEST
COAST OF INDIA *

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ABSTRACT

Larval and postlarval stages of *Scomberomorus* are rarely recorded from Indian waters. One postlarva of *S. commerson* 10.7 mm in total length was obtained in an oblique tow from 55 m upwards with a Bongo net at a station 60 m depth off Cochin in December 1975, from R.V. *Rastrelliger*. The specimen is described and illustrated.

Compared to postlarvae of other *Scomberomorus* spp., the postlarva of *S. commerson* has a relatively longer head with a longer upper jaw and pointed snout. Myotome count in the present specimen is 46.

INTRODUCTION

LARVAL or postlarval stages of *Scomberomorus* spp. are rarely caught from Indian waters and consequently description of an adequate series of the larval stages of these important commercial fishes is not available at present. In the present communication one postlarva of *S. commerson* collected off Cochin in December 1975 by R.V. *Rastrelliger* is described and illustrated.

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Three species of seerfishes are fished from Indian waters, namely *Scomberomorus commerson*

son (Lacépède), *S. guttatus* (Bloch and Schneider) and *S. lineatus* (Cuvier) of which, the first two species are more common along the SW coast of India.

Jones (1962) described and illustrated late postlarval and juvenile stages of *S. guttatus* (14.8 mm S.L.) and *S. commerson* (14.4 mm S.L.) caught in shore-seines, from Vizhinjam, near Trivandrum. Jones (1962) also referred to the earlier reports on the life-history stages of *S. guttatus* by Delsman (1931) from Indonesian waters, of *S. commersoni* by Munro (1942) from Australian waters, of *S. guttatus* by Vijayaraghavan (1955) and *S. lineatus* by Kuthalingam (1959) from Madras. However, the identifications of Vijayaraghavan (1955) and Kuthalingam (1959) have been shown to be not correct by Jones (1962). Gorbunova (1965) described and illustrated postlarvae of *S. commerson* and *S. guttatus* from the Gulf of Tonkin (South China Sea).

The salient diagnostic features and the specific differences pointed out by Jones (1962) for the late postlarvae of *Scomberomorus* from Vizhinjam can be tabulated as follows :

* Part of Ph. D. thesis, University of Cochin.

	<i>S. guttatus</i>	<i>S. commerson</i>
Total length (mm)	16	—
Standard length (mm)	14.8	14.4
Head in standard length	2.7	2.3
Snout	Short and less pointed	long and pointed
*Vertebrae	48-49 + urostyle	43-44 + urostyle
Pre-opercular spines	Prominent, upper-most spine largest	Second spine longer and extends beyond preoperculum
Teeth	Small	large

*In *S. lineatus* vertebral number is cited as 49 or 50 (Jones, 1962).

MATERIAL	Date of collection	.. 23-12-1975
The present postlarva of <i>Scomberomorus</i> is 10.7 mm in total length and is strikingly similar in morphology and pigmentation to the	Time	.. 0335 hrs
	Depth at station	.. 60 m
	Depth of tow	.. 55 m

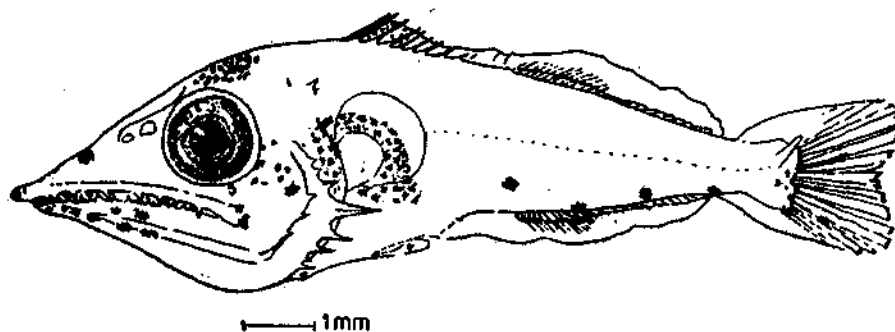


Fig. 1. Postlarva of *Scomberomorus commerson* (10.7 mm TL).

13.3 mm postlarva of *S. commerson* illustrated by Gorbunova (1965). The specimen is described and illustrated, in order to fill the gap in our knowledge of the young stages of *Scomberomorus* which are rarely obtained from the plankton in our waters.

One postlarva was obtained in an oblique tow with a BCF Bongo net from R.V. *Rastrelliger* of the Pelagic Fishery Project, Cochin. The topographical and oceanographical features at the station were as follows :

Locality	.. Off Cochin
Position	.. Lat. 09° 47'
	.. Long. 75° 51'
Station No.	.. 284, Cruise R/75-22

Oceanographical conditions at station 284

	At surface	At 50 m
Temperature (°C)	28.0	27.45
Salinity (‰)	31.80	35.12
Dissolved O ₂ (ml/l)	4.56	4.11

Measurements (in mm) of the formalin preserved specimen (Fig. 1)

Total length	.. 10.7	Height	.. 2.7
Standard length	.. 9.5	Pre-dorsal distance	4.4
Head	.. 4.1	Pre-anal distance	5.3
Snout	.. 2.0		
Eye	.. 1.0	Myotomes	46

Description of the larva (Fig. 1)

This stout postlarva has a longer upper jaw, with a prominent pointed snout. Teeth large and strong, the maxillary and mandibular teeth in an irregular double row pattern, slightly curved inwards, pre-opercular spines in two rows, the posterior row with 8 spines, the 4th from above being the longest and extending much beyond the posterior margin of the pre-operculum, the anterior row has 3 small spines, the post-temporal spine with two prongs, one longer than the other. Head 2.3 and height 3.5 in standard length, snout 2.0 in head.

In comparison, the 14.4 mm (S.L.) late postlarva of *S. commerson* (Jones, 1962) has head 2.3 and height 4.2 in standard length, snout 2 in head (computed from the illustration). For the 13.3 postlarva (Gorbunova, 1965) of the same species, head is 2.1 in standard length and snout 2.0 in head (these proportions have been worked out from the illustration).

Pigmentation: One stellate dark pigment at tip of snout with small pigment spots around it and a cluster of small pigment spots at the tip of mandible, six large stellate chromato-

phores in a row on the mandible and a large stellate one on snout nearly mid-way between tip of snout and eye, cluster of chromatophores over mid-brain, one large stellate chromatophore and a slightly small one at angle of jaw, some irregularly sized chromatophores on pre-operculum. One pigment spot on pectoral symphysis, peritoneal pigmentation on visceral mass, three large chromatophores mid-ventrally in the post-anal region in a row and one anterior to this group placed slightly above; dark pigment spots on the inter-spinous membrane of the dorsal, two large and one small stellate pigment laterally at the posterior part of the caudal peduncle and five dot-like pigments in a vertical row at the posterior margin of the caudal peduncle. The close agreement of the present postlarva of *Scomberomorus* with the postlarva of *S. commerson* described and illustrated by Jones (1962) and Gorbunova (1965) in the important characters such as, relatively longer head; the longer upper jaw; prominent pointed snout, and about 46 myotomes and the striking similarity in pigmentation and body profile to the 13.3 mm *S. commerson* postlarva of Gorbunova, 1965 enable its identification as *S. commerson*.

REFERENCES

- DELSMAN, H. C. 1931. Fish eggs and larvae from the Java Sea. XVIII The genus *Cybtium*. *Treubia*, 13: 401-410.
- GORBUNOVA, N. N. 1965. On the spawning of Scombroid fishes (Pisces, Scombroidei in the Gulf of Tonkin (South China Sea). *Trudy. Inst. okeanol.*, 80: 167-176 (In Russian with English summary).
- JONES, S. 1962. Notes on eggs, larvae and juveniles of fishes from Indian waters VIII. *Scomberomorus guttatus* (Bloch and Schneider), IX. *Scomberomorus commersoni* (Lacépède) and X. *Scomberomorus lineolatus* (Cuvier). *Indian J. Fish.*, 8: (1) 107-120.
- KUTHALINGAM, M. D. K. 1959. Observations on the food and feeding habits of postlarvae, juvenile and adults of some Madras fishes. *Jour. Madras. Univ.*, 29 (2): 139-150.
- MUNRO IAN, S. R. 1942. The eggs and early larvae of the Australian barred spanish mackerel *Scomberomorus commersoni* (Lacépède) with preliminary notes on the spawning of that species. *Proc. Roy. Soc. Queensland*, 54 (4): 33-48.
- VJAYARAGHAVAN, P. 1955. Life-history and feeding habits of the spotted seer *Scomberomorus guttatus* (Bloch and Schneider.) *Indian J. Fish.*, 2 (2): 360-372.