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

K. C. GEORGE
Central Marine Fisheries Research Institute, Cochin-682 018

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.

I am thankful to the Director and Project Manager of erstwhile Pelagic Fishery Project, Cochin for giving permission to study this material and Dr. E.G. Silas, Director, Central Marine Fisheries Research Institute for permission to publish this paper. Thanks are due to Dr. C. V. Kurian, Emeritus Scientist at CMFRI, Cochin for critically going through the script of this paper and to Shri M. P. Dileep for drawing the figure.

Three species of seerfishes are fished from Indian waters, namely Scomberomorus commerson (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 :
K. C. GEORGE

<table>
<thead>
<tr>
<th>S. guttatus</th>
<th>S. commerson</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total length (mm)</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Standard length (mm)</strong></td>
<td>14.8</td>
</tr>
<tr>
<td><strong>Head in standard length</strong></td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Snout</strong></td>
<td>Short and less pointed</td>
</tr>
<tr>
<td><strong>Vertebras</strong></td>
<td>48-49 + urostyle</td>
</tr>
<tr>
<td><strong>Pre-opercular spines</strong></td>
<td>Prominent, upper-most Second spine longer</td>
</tr>
<tr>
<td><strong>Teeth</strong></td>
<td>Small</td>
</tr>
</tbody>
</table>

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

**MATERIAL**

The present postlarva of *Scomberomorus* is 10.7 mm in total length and is strikingly similar in morphology and pigmentation to the 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**

<table>
<thead>
<tr>
<th><strong>At surface</strong></th>
<th><strong>At 50 m</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (°C)</td>
<td>28.0</td>
</tr>
<tr>
<td>Salinity (%)</td>
<td>31.80</td>
</tr>
<tr>
<td>Dissolved O₂ (ml/l)</td>
<td>4.56</td>
</tr>
</tbody>
</table>

**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 interior 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 chromatophores 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, peritonal 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


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.

