

**NATIONAL BIORESOURCE DEVELOPMENT BOARD**

Dept. of Biotechnology  
Government of India, New Delhi

For office use:

**MARINE BIORESOURCES**

FORMS DATA ENTRY: Form- 1(general) Ref. No.:  
(please answer only relevant fields;add additional fields if you require)

Fauna : <input checked="" type="checkbox"/>	Flora	Microorganisms
General Category : Vertebrata (Zooplankton) Fish larvae		
Scientific name & Authority : <i>Auxis thynnoides</i> Bleeker 1855 – Adult. Common Name ( if available): Long corseletted frigate mackerel Language: English		
Synonyms	Author( s)	Status
<i>Auxis marn</i>	Kishinouye	1915
<i>Auxis tapeinosoma</i>	Herre and Herald	1951
<i>Auxis thazard</i>	Jordan and Evermann	1990
Classification: Phylum: Vertebrata Sub-Phylum: Super class: Pisces Class: Osteichthyes Sub- Class: Actinopterygii Super order: Teleostei Order: Perciformes Sub Order: Scombroidei Super Family: Family: Scombridae Sub-Family: Thunninae Genus: <i>Auxis</i> Species: <i>thynnoides</i> Authority: <i>Auxis thynnoides</i> Bleeker 1855 Reference No.: Bleeker, P. 1855. Vijfde bijdrage tot de kennis der ichthyologische fauna van Ternate. <i>Natuurk Tijdschr Ned. Ind.</i> <b>8</b> : 301-302.  Matsumoto, W.M.1959. Description of <i>Euthynnus</i> and <i>Auxis</i> from the Pacific and Atlantic Oceans and adjacent seas. <i>Dana Report</i> , <b>50</b> : 1-34		
Geographical Location: Tropical and subtropical sections of Pacific and Indian Oceans, including east and west coasts of India.		
Latitude:	Place:	
Longitude:	State:	

Environment

Fresh water: Yes/ No

Habitat :

Salinity :

Brackish : Yes/ No

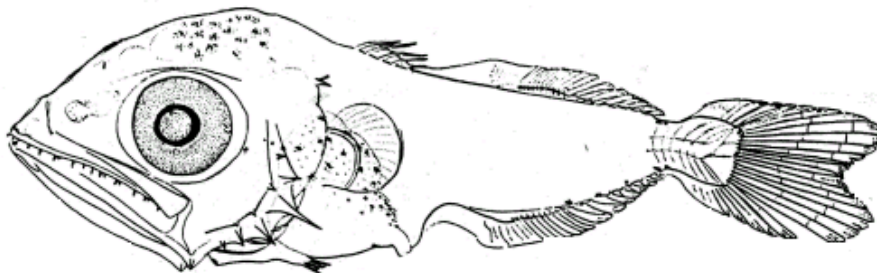
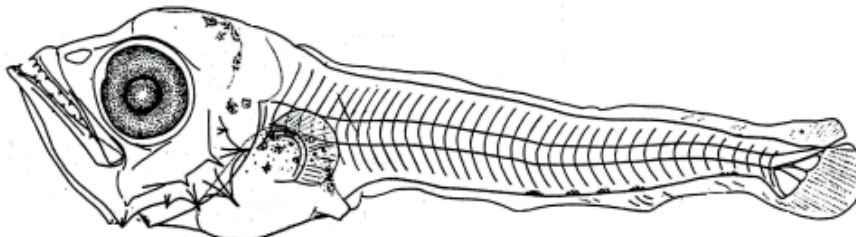
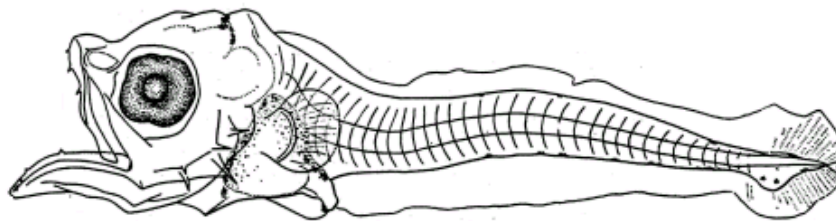
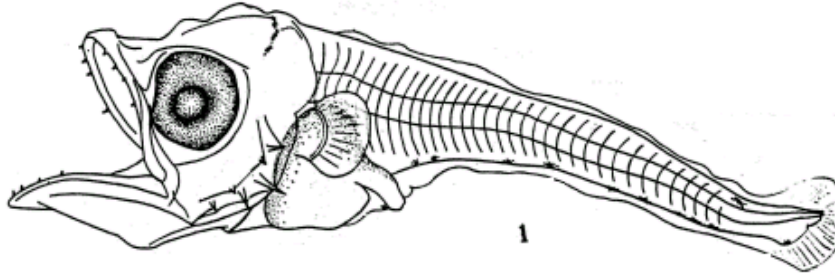
Migrations :

Temperature :

Salt water : Yes

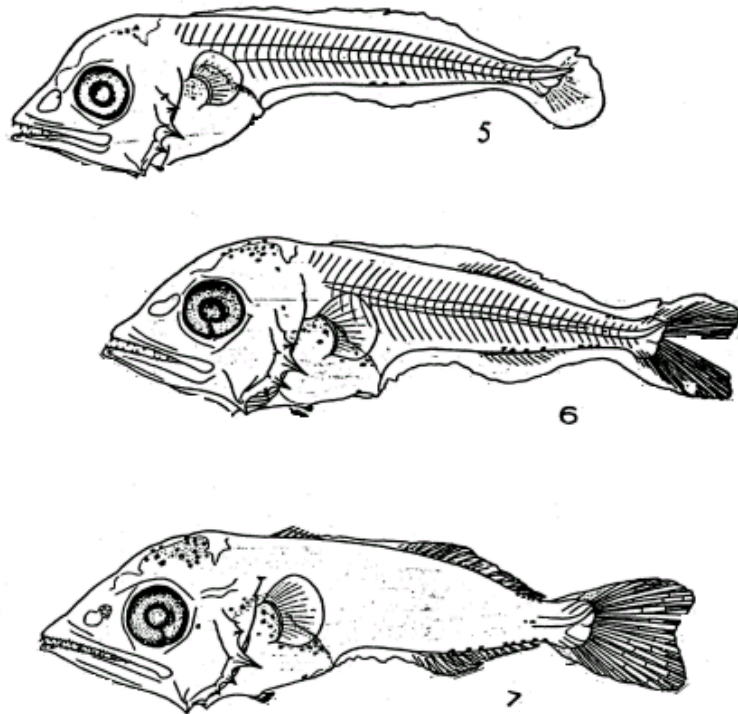
Depth range :

Picture (scanned images or photographs of adult / larval stages )



Figs. 1-4. Larval stages of *Auxis* (type II, reproduced from Matsumoto, 1959)

Fig. 1. 3.5 mm, Fig. 2. 3.7 mm, Fig. 3. 5.2mm, Fig. 4. 7.2 mm



Figs. 5-7. Larval stages of *Auxis thynnoides* (reproduced from Jones, 1961)  
Fig. 5. 4.66 mm, Fig. 6. 6.54 mm, Fig. 7. 8.68 mm,

DATA ENTRY FORM: Form- 2(Fish / shellfish / others )  
(please answer only relevant fields ; add additional fields if you require)  
Form -1 Ref.No.:

IMPORTANCE

Landing statistics (t/y) : from                      to                      Place :                      Ref . No. :  
Main source of landing: Yes/ No                      Coast: east/ west  
Importance to fisheries:  
Main catching method :  
Used for aquaculture : yes/ never/ rarely  
Used as bait                      : yes/no/ occasionally  
Aquarium fish                      : yes/ no/ rarely  
Game fish                      : yes/ no  
Dangerous fish                      : poisonous/ harmful/ harmless  
Bioactivity : locally known/ reported/ not known                      Details:  
Period of availability : Throughout the year – yes/ no                      If no, months:

SALIENT FEATURES :

Morphological:

Diagnostic characteristics:

Sex attributes:

Descriptive characters:

Meristic characteristics:

Feeding habit:

Main food :

Feeding type :

Additional remarks:

Size and age:

Maximum length (cm) (male / female/ unsexed )

Ref. No.:

Average length (cm) (male / female / unsexed )

Ref. No.:

Maximum weight : (g) (male / female / unsexed )

Ref. No.:

Average weight :(g) (male / female / unsexed )

Ref. No.:

Longevity (y) (wild) : (captivity )

Ref. No.:

Length / weight relationships:

Eggs and larvae:

Ref. No.:

Information on eggs is not available. Ripe ovum is reported to be of having a diameter of 0.97 mm with single oil globule of 0.2 mm size.

Larva very closely resembles morphologically that of *A. thazard*, except for the comparatively slender body and small head. There are 5 opercular spines in the 3.7 mm stage larva. Myomeres are 39 in number. Pigmentation on the body is much less. 3.7 mm to 7.2 mm larva lack chromatophores along the midlateral line in the caudal region. The smallest specimen (3.5 mm) has a single dark pigment spot at the symphysis of the pectoral girdle, and chromatophores on the both dorsal and ventral edges of the body in the caudal peduncle region. A long series of well spaced chromatophores is present along the entire length of the ventral margin of the body. Midbrain is sparsely pigmented. In the 5.2 mm stage there are 3 very closely spaced chromatophores on the midventral line of the caudal peduncle, and 4 widely spaced chromatophores farther forward. In 7.2 mm stage first dorsal consists of 5 spines and second, 11 rays. Anal fin also shows signs of development (Figs. 1-7).

Characteristics:

Abundance:

Biochemical aspects:

Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash

Ref. No.

Electrophoresis:

Ref. No.

SPAWNING INFORMATION:

Locality: Larvae were collected from Laccadive Sea from January to April period.

Main Ref:

Season:

Fecundity:

Comment:

MAJOR PUBLICATIONS (INDIAN):

(Include review articles, monographs, books etc.)

Jones, S. 1960. Notes on eggs, larvae and juveniles of fishes from Indian waters VI. Genus *Auxis* Cuvier. VII. *Sarda orientalis* (Temminck and Schlegel). *Indian J. Fish.*, **7** (2): 337-347.

Jones, S. 1961. Notes on eggs, larvae and juveniles of fishes from Indian waters IX. Further observations on the genus *Auxis* Cuvier. *Indian J. Fish.*, **8** (2): 413-421.

Jones, S. and M. Kumaran, 1964. Eggs, larvae and juveniles of Indian Scombroid fishes. *Proc. Sym. Scombr. Fishes*, Mandapam Camp, (*Mar. Biol. Ass. India*) 1962, **1**: 343-378.

Peter, K.J. 1977. Distribution of tuna larvae in the Arabian Sea. *Proc. Symp. Warm Water Zoopl. Spl. Publ. UNESCO/NIO*: 36-40.

Peter, K.J. 1982. Studies on some fish larvae of the Arabian Sea and Bay of Bengal. *Ph.D. Thesis, Univ. of Cochin*, 349pp.

LIST OF INDIAN EXPERTS (Name, address, phone, fax, e-mail etc.)

1. M. Kumaran  
Scientist, CMFRI. (Rtd)  
Malaparambil Housing Colony  
Calicut – 673 009
2. Dr. K.J.Peter  
Scientist, NIO. (Rtd)  
Koithara  
54/2950, Kadavanthara South  
Kochi-682020  
Ph. (0484) 318036  
e-mail: [peterann@md4.vsnl.net.in](mailto:peterann@md4.vsnl.net.in)

ACKNOWLEDGEMENT:

(List of persons who contributed , modified or checked information)