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 field	ds if you require)			
Fauna : √	Flora	Microorganisms			
General Category: Vertebra	ata (Zooplankton), Fish la	rvae			
		ninck and Schlegel) 1842-Adult			
Common Name (if availabl	e): Oriental bonito				
Synonyms:	Author(s)	Status			
Pelamis orientalis	Temminck and Schle	gel 1842			
Pelamis orientalis	Gunther	1860			
Sarda chilensis	Day	1889			
Sarda velox	Meek and Hildebrand	1923			
Sarda orientalis serventyi	Whitley	1945, 1962			
Classification:					
Phylum: Vertebrata	~ 4 ~ 4				
Super Class: Pisces	Sub- Phylum	a 1 a1			
Super Order: Teleostei		Sub- Class: Actinopterygii			
Super Family:		Sub Order: Scombroidei			
Genus : Sarda	•	Sub-Family: Thunninae			
Authority: Sarda orientalis (Species: orientalis	1942			
Reference No.	Telliminck and Schleger)	1642			
	logal 1942 50 Sive day	scripto animaliu, quae in itinere			
		egit, notis observation bus et			
adumbrationibus illustravit P.F.Siebold. <i>Fauna Japonica</i> , Pt.2. Pisces 1-323; Pt.3, 73-112 pls. Lugduni, Batavorum.					
	•	roid fishes (Scombridge Pisces)			
Gorbunova, N.N. 1974. A review of larvae of scombroid fishes (Scombridae, Pisces). <i>Akad. Nauk SSSR, Inst. Okeanol. Trudy,</i> 96 , 23-76 (in Russian)					
Klawe, W.L. 1960. Notes on larvae, juveniles and spawning of Bonito (Sarda) from					
the Eastern Pacific Ocean. <i>Pacific Science</i> , 15 (4): 100-115.					
uno Eustern i dellie o	Tan. I well to Severice, 10	(.,. 100 110.			
Geographical Location:	··				
Indian, Pacific and Atlan					
Latitude:	Place:				
Longitude:	State:				

Environment

Fresh water: Yes/No Brackish : Yes/No Habitat :

Salinity

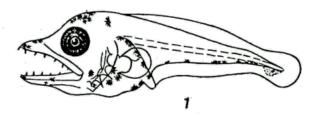
Migrations:

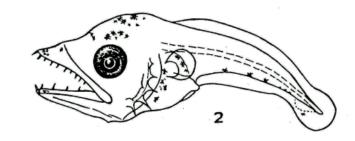
Temperature:

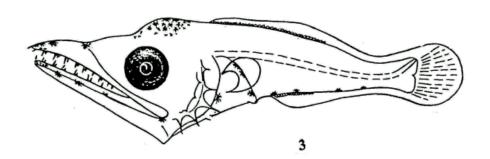
Salt water : $Yes\sqrt{/No}$

/ No Depth range :

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







Figs. 1 –3 Larvae of *Sarda* orientalis Fig. 1. – 4.2 mm. Fig. 2. – 4.9 mm. Fig. 3 – 6.1 mm. (Reproduced from Gorbunova, 1974).

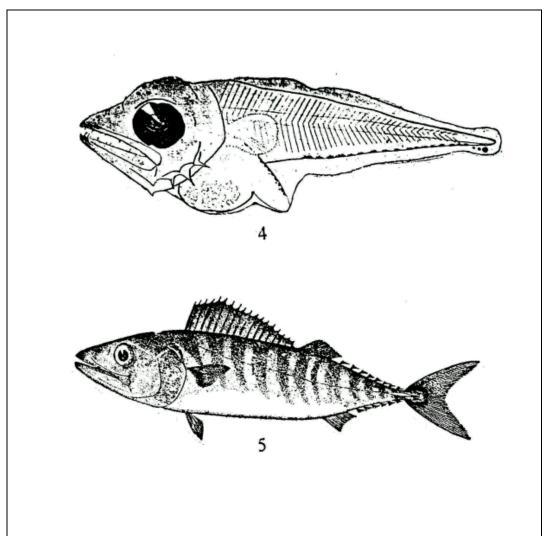


Fig. 4. - *Sarda* sp. 3.5 mm larva (Reproduced from Klawe, 1961). Fig. 5. - *Sarda orientalis* 80 mm juvenile (Reproduced from Jones, 1960).

DATA ENTRY FORM: Form- 2(Fish / she	/	
(please answer only relevant fields; add addition	al fields if you r	require)
Form –1 Ref.No.:		
IMPORTANCE		
Landing statistics (t/y): from to	Place:	Ref . No.:
Main source of landing: Yes/ No	Coast: east/ w	est
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/ harm	ıless	
Bioactivity: locally known/reported/not known		Details:
Period of availability: Throughout the year – ye	es/ 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) Average length (cm) (male / female / unsexed) Maximum weight: (g) (male / female / unsexed) Average weight: (g) (male / female / unsexed) Longevity (y) (wild): (captivity) Length / weight relationalships:	Ref. No.: Ref. No.: Ref. No.: Ref. No.:

Eggs and larvae: Ref . No.:

Eggs: Ripe ovum is large, spherical, transparent with oil globule and an average diameter of 1.3 mm when fresh and 1.04 mm on preservation.

Larvae: No information is available on early larvae. Three larvae measuring 4.2 mm, 4.9 mm and 6.1 mm described by Gorbunova, 1974 (Figs. 1-3) are reproduced here to facilitate identification. These larvae are less pigmented with chromatophores on the forebrain, tip of snout, stomach and along the midventral line up to urostyle. In the first two staged fins are represented by only finfolds. Opercular spines are present, the fourth one being the longest. In the 6.1 mm stage larva the head is more elongated with pointed snout and prominent opercular spines. The jaws are with teeth. There are large pigments noticed on the lower jaw. Rudiments of dorsal and anal are already indicated.

In 3.5 mm larva described by Klawe, 1961 (Fig.4) only 3 opercular spines are seen. Area of forebrain is pigmented. Posterior to the vent chromatophores are present along the midventral line up to the urostyle. In juveniles of about 80 mm length (Fig. 5) twelve transeverse bands which are incomplete ventrally are present over the body gradually change into characteristic wavy lines of the adult.

Characteristics:

Abundance:

Biochemical aspects:

Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Ref. No. Electrophoresis: Ref. No.

SPAWNING INFORMATION:

Locality: Main Ref:

S. orientalis is the only species of the genus found in the Indian ocean. Spawning period seems to be from April to September with peak in July – August. Juveniles are reported to occur along the Kerala Coast.

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. The genus *Auxis* Cuvier, VII. *Sarda orientalis* (Temminck and Schlegel), *Indian. J. Fish.*, **7** (2): 337-47.

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

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

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ACKNOWLEDGEMENT:

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