

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>Makaira audax</i> (Philippi) 1887-Adult		
Common Name (if available) : Striped marlin		Language: English
Synonyms:	Author(s)	Status
<i>Makaira mitsukurii</i>	Morrow	1954
<i>Makaira indicus</i>	Copley	1952
Classification:		
Phylum: Vertebrata	Sub-Phylum:	
Super class: Pisces	Class: Osteichthyes	Sub- Class: Actinopterygii
Super order: Teleostei	Order: Perciformes	Sub-Order: Scombroidei
Super Family:	Family: Istiophoridae	Sub-Family:
Genus: <i>Makaira</i>	Species: <i>audax</i>	
Authority:		
<i>Makaira audax</i> (Philippi) 1887		
Reference No.		
Philippe, R.A. 1887. Sobre los tiburones y alguros otros peces de Chila. <i>Anal. Univ. Chili</i> 71 : 1-48.		
Ueyanagi, S. 1959. Larvae of striped marlin, <i>Makaira mitsukurii</i> (Jordan and Snyder). <i>Rpt. Nankai Reg. Fish. Res. Lab</i> , 11 : 130-146.		
Ueyanagi, S. 1964. Description and distribution of larvae of five istiophorid species in the Indo-Pacific. <i>Proc. Symp. Scomber. Fishes</i> , Mandapam Camp, (Mar. Biol. Assoc. India) 1962, 1 : 499-528.		
Geographical Location: Tropical and sub-tropical areas of the Indian and Pacific Oceans.		
Latitude:	Place:	
Longitude:	State:	

Environment

Fresh water : Yes/ No

Habitat :

Salinity :

Brackish : Yes/ No

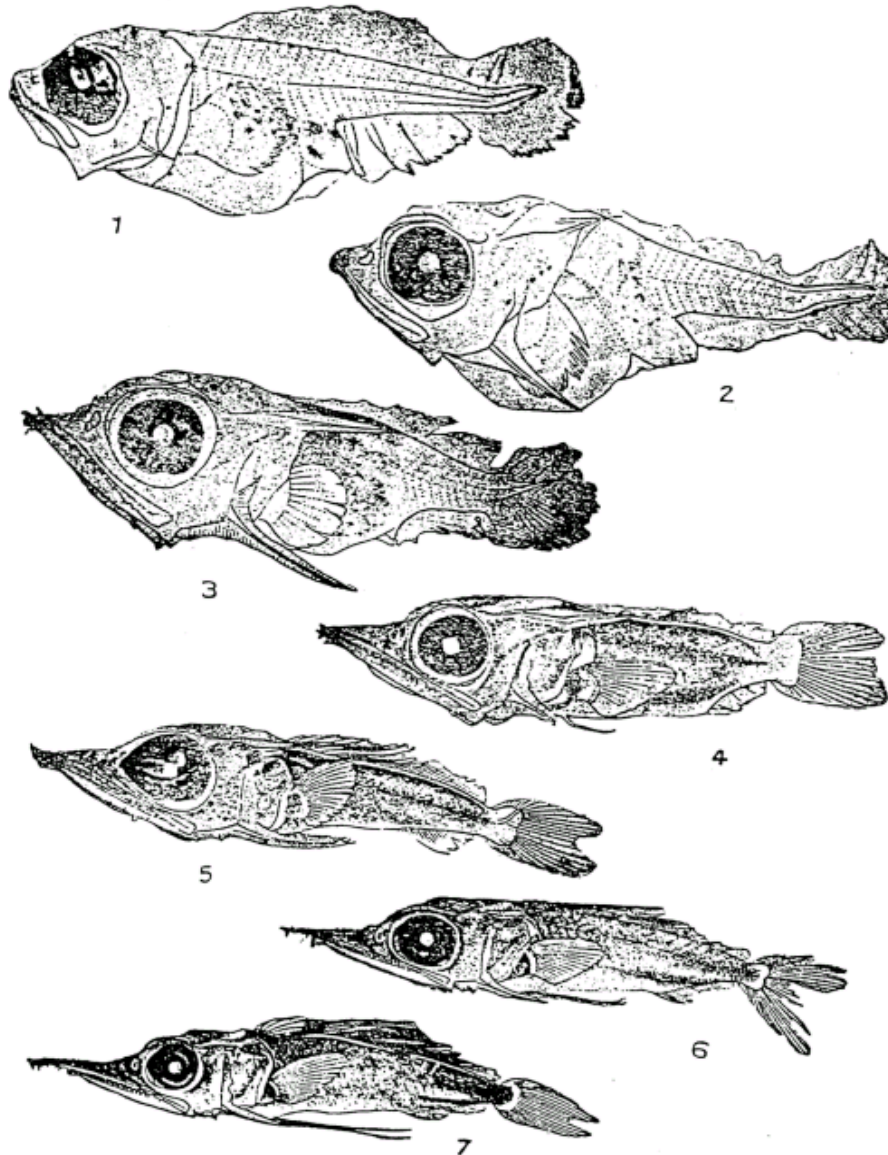
Migrations :

Temperature :

Salt water : Yes

Depth range :

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



Figs. 1-7. *Makaira audax*

Fig. 1. 2.9 mm. Fig. 2. 3.1mm. Fig. 3. 5 mm. Fig.6. 17.4 mm.

Fig. 7. 21.2 mm.

(Reproduced from Ueyanagi, 1959)

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.

Published information on eggs is not available.

Larvae are deep bodied, zoea type with about 24 myomeres. Preanal part is about 50% of the body, characterised by large head, mouth and eyes, long pterotic and preopercular spines with serrated edges. Body lightly pigmented, intestine is short.

Larvae resembles very closely with that of *Istiophorus* but differs from it in the comparatively large head and eyes, relatively low position of the eye and deep body. Centre of eye and tip of snout are approximately in the same level. Preorbital ridge, pterotic and preopercular spines are present as in other related species. Pterotic spine runs parallel to the body. Preopercular spines are inclined sharply downwards forming a large angle with the body axis. Anterior edge of the orbit does not project forward as in *Makaira mazara*. No pigmentation is seen on the lower part head. Head length usually exceeds 40% of total length in specimens of 4-9 mm long. In older stages the pelvic fin is longer than that of sail fish (Figs. 1-7)

No.Characteristics:

Abundance:

Biochemical aspects:

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

Ref. No.

Electrophoresis:

Ref. No.

SPAWNING INFORMATION:

Locality:

Main Ref:

Larvae are recorded from Laccadive Sea. Dana Expedition has collected 55 istiophorid larvae from other parts of Indian and Pacific Oceans.

Season:

Fecundity:

Comment:

MAJOR PUBLICATIONS (INDIAN):

(Include review articles, monographs, books etc.)

Jones, S. and M. Kumaran, 1964. Eggs, larvae and juveniles of Indian Scombroid fishes. *Proc. Sym. Scombr. Fishes*, Mandapam Camp, (*Mar. Biol. Ass. India*) **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*, 349pp

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