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 : √ Flora Microorganisms

General Category : Vertebrata (Zooplankton) Fish larvae

Scientific name &Authority:*Neothunnus macropterus* (Temminck and Schlegel) 1844
Adult
Common Name (if available) : Yellowfin tuna

Synonyms:	Author(s)	Status
Scomber albacares	Bonnaterre	1788
Thunnus albacares	Lowe	1839
Germo macropterus	Jordan and Snyder	1901
Neothunnus macropterus	Kishinouye	1923

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: *Neothunnus* Species: *macropterus*
Authority:
Reference No. *Neothunnus macropterus* (Temminck and Schlegel) 1844.

Temminck, C.J. and H. Schlegel, 1844. Sive descriptio animalium 1820-30 Collegit notis observation bus et. *Fauna Japonica* p.98.

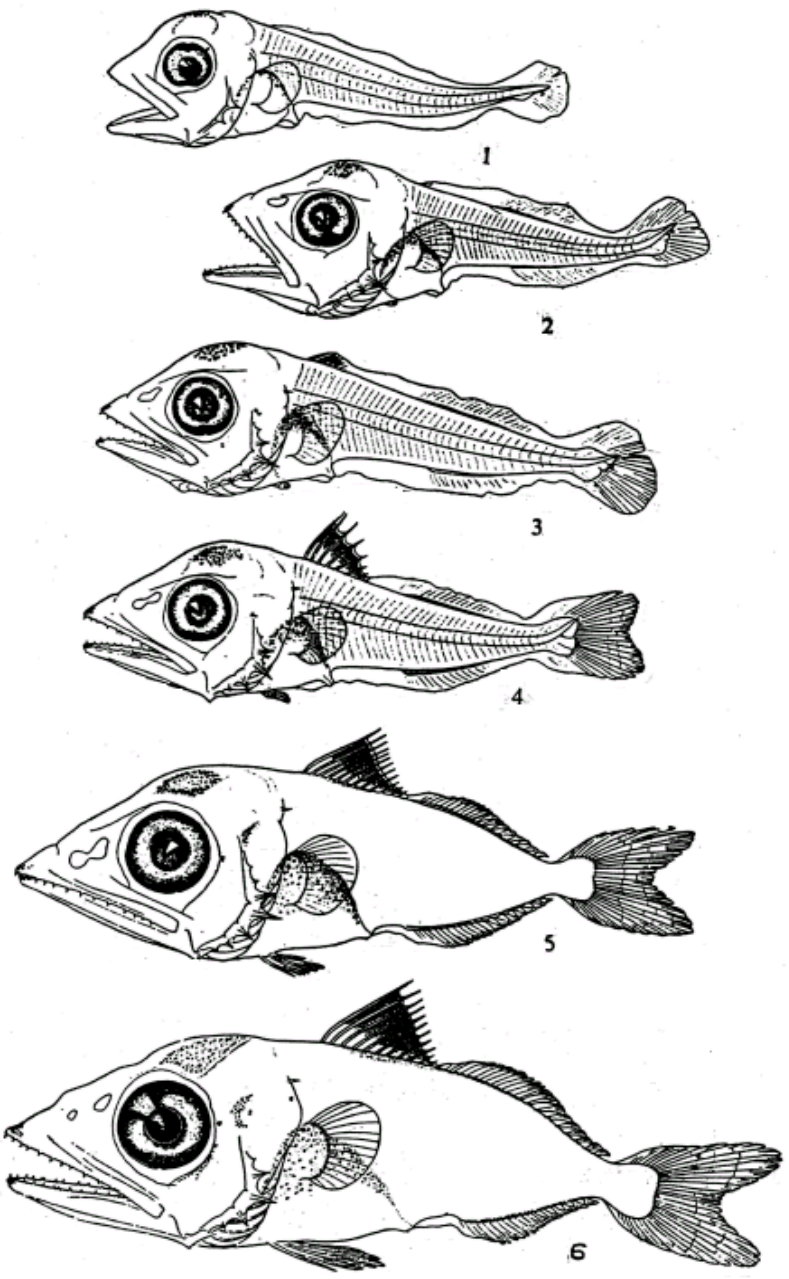
Matsumoto, W.M. 1958. Description and distribution of larvae of four species of tuna in the Central Pacific. *U.S. Fish. and Wildlife Service*, *Fish. Bull.*, **58** (128): 31-71.

Geographical Location:
Mostly in tropical and subtropical regions 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. 1-6. *Neothunnus macropterus* (Reproduced from Jones, 1959)
Fig. 1. 10-38 mm., Fig. 2. 5.25 mm., Fig. 3. 6.88 mm.,
Fig. 4. 7.42 mm., Fig. 5. 8.85 mm., Fig. 6. 10.56 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 relation ships:

Eggs and larvae: Ref.No.:

Ripe ovum is reported to be between 0.76 mm and 1.23 mm in diameter, with a golden yellow oil globule of 0.26 mm size.

The larvae differ from other tuna larvae by the absence of chromatophores over the forebrain and midventral line near caudal peduncle, early development of dorsal spine and heavy pigmentation of the first dorsal in specimens over 7mm length. In specimens of about 5 mm, the dorsal outline tapers from the region of the head to the end of the tail. The ventral outline is rounded in the abdominal region and tapers gradually to the end of caudal. Snout is pointed and diameter of eye is less than the length of snout. The first dorsal develops comparatively early and rudiments of spines are visible even in specimens of 6 mm length. Seven preopercular spines are visible in specimens of about 7.5 mm and one at the angle is the longest. In 8 mm stage, the dorsal contour is deep, mouth is large and oblique, and the maxillary almost reaches a vertical below the posterior margin of the pupil.

Chromatophores are present over the midbrain, along the hindbrain aspect, a few on the sides of the head near the dorsal end of the preopercle and posteroventral boarder of the eye. Body is unpigmented until the larva reaches a length of about 12 mm excepting for the dorsal region of the abdominal sac, which bears internally numerous chromatophores. The dorsal is heavily pigmented in specimens of more than 7 mm length. When the larva approaches 11 mm length, the body becomes much deeper, the abdominal sac is large and elongates, and the vent is posterior to the mid point of the total length. In general, it attains juvenile features early, eventhough preopercular spines persist and the chromatophores not formed at the body (Figs 1-6).

Characteristics:

Abundance:

Biochemical aspects:

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

Electrophoresis: Ref. No.

SPAWNING INFORMATION:

Locality: Main Ref:

Tropical and subtropical regions of the Indian and Pacific oceans.

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 III.*Katsuwonus pelanisi* (Linnaeus) and IV *Neothunnus macropterus* (Temminck and Schlegel). *Indian J. Fish.*, 1959 **6** (2): 360-373.

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**: 483-498

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.

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