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 : *Caranx carangus* (Bloch) 1793-Adult
Common Name (if available) : Black tailed trevally

Synonyms:	Author(s)	Status
Scomber carangus	Bloch	1793
Caranx carangus	Cuvier and Valenciennes	1833
Caranx xanthopygus	Bleeker	1845

Classification:

Phylum: Vertebrata	Sub- Phylum	
Super Class : Pisces	Class : Osteichthyes	Sub- Class: Actinopterygii
Super Order: Teleostei	Order: Perciformes	Sub Order :Percoidei
Super Family:	Family : Carangidae	Sub-Family:
Genus : *Caranx*	Species : *carangus*	

Authority: *Caranx carangus* Bloch 1793

Reference No.
Bloch, M.E., 1793. *Nat. Aust. Fische.* **7** p. 69.

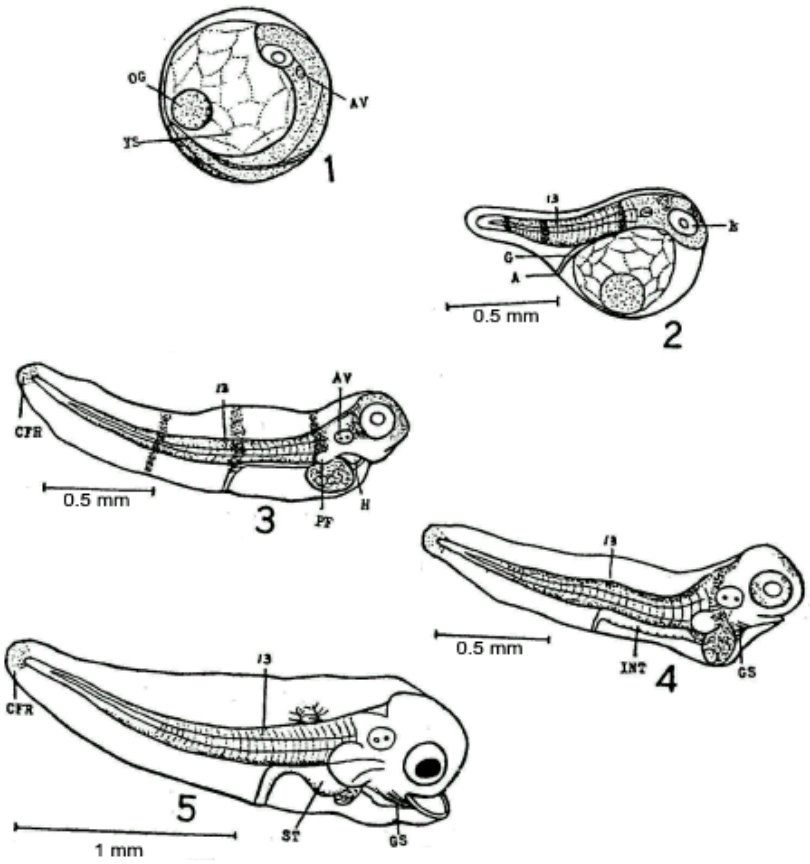
Subrahmanyam, C.B., 1968. Eggs and early development of two more carangids from Madras. *J. mar. boil. Ass. India*. **8** (1): 188-192.

Geographical Location:
Warm waters of the Indo-Pacific. Commonly found on the 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√ / No	Depth range :	

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



Figs. 1-5. Egg and larvae of *Caranx carangus*, laboratory – reared.
(Reproduced from Subrahmanyam, 1966)
Fig. 1. Egg, Fig. 2. Newly hatched prolarva 1.15 mm,
Fig. 3. 24 hour old prolarva 1.8 mm, Fig. 4. 48 hour old prolarva 1.8 mm,
Fig. 5. 72 hour old prolarva 2.15 mm.
A=anus; AV=auditory vesicles; CFR=caudal fin rays; E=eye; G=gut; GS=gill slits;
H=heart; INT=intestine; OG=oil globule; PR=pectoral rudiment; ST=stomach;
YS=yolk sac.

DATA ENTRY FORM: Form- 2(Fish / shellfish / others) Ref.No.:
(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 relationalships:

Eggs and larvae: Ref . No.:

Eggs: Perfectly spherical pelagic egg measuring about 0.71 mm in diameter with narrow perivitelline space. Single oil globule of 0.17 mm diameter is present. Brown pigmented cells are scattered all over the embryo. (Fig. 1).

Larvae: Newly hatched prolarva (Fig. 2) is transparent and measured about 1.15 mm. Anterior margin of the head extended beyond the margin of the yolk sac. Eyes are unpigmented and the auditory vesicles with two statocysts located close to the eyes. Heart is tubular. Yolk sac is prominent with faintly segmented yolk. The gut is short and open below the 13th myotome, there being 12 preanal and 15 postanal myotomes. Yellow pigment cells are present on the embryo and an oil globule located at the anterior margin of the yolk sac. Black cells are present on the dorsal margin of the myotomes and on the inner surface of the oil globule. A few are also observed on the head between the eyes and auditory vesicles. Three faint bands of yellow pigment cells are observed on the larvae, one behind the auditory vesicle, one at the anal region and the last at the posterior region of the body. In the 1.8 mm larva (Fig. 3) the yolk sac is much reduced in size and the oil globule is persistant. Head is distinct and the fin folds are developed. Heart is still tubular. There is no change in the total number of myotomes and the position of the anal opening. Pectoral rudiments are developed, and on the caudal fin fold a few rays can be seen. Yellow pigments are localised into three bands as seen in the previous stage. In the next stage (Fig. 4) the larva has undergone several changes but without any increase in length. The yolk sac is considerably reduced, with the oil globule still present. Eyes are large with brownish pigmentation as in the earlier stage. The total number of myotomes is 29. Two gill slits appear in the pharyngeal region. Mouth is also developed with two horny jaws. The three yellow pigment bands are disappeared. Pigments are noticed on the margins of gut. In 2.15 mm larva (Fig. 5) the yolk sac is completely absorbed and the prolarva is transformed into postlarva. The head is large and the iris of the eyes is black and the margin of the eyes being silvery in colour. Heart has become two-chambered. Two more gill slits appeared. The jaws became distinct and the gape of the mouth wide. The lower jaw protrudes slightly beyond the margin of the upper jaw. The gut shows slight differentiation into stomach and intestine and opens below the 13th myotome. Fin folds are high and without any fin rays, except that of caudal fin. Yellow pigment cells are absent. Black pigment cells are distributed on the ventral margin of the body and gut. Large stellate chromatophores appear on the dorsal fin folds.

Characteristics:

Abundance:

Biochemical aspects:

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

Electrophoresis: Ref. No.

SPAWNING INFORMATION:

Locality: Main Ref:

Eggs and larvae are collected from the southwest and southeast coasts of India during the months of June, July and August.

Season:

Fecundity:

Comment:

MAJOR PUBLICATIONS (INDIAN):
(include review articles, monographs, books etc.)

Premalatha, P. 1986. Studies on the carangid larvae of the southwest coast of India. III. *Alepes kalla* (Cuvier and Valenciennes). *Bull. Dept. Mar. Sci. Univ. Cochin.* **14**: 123-130.

Subrahmanyam, C.B., 1964. Eggs and early development of a carangid from Madras. *J. mar. boil. Ass. Indian.* **6** (1): 142-146.

Subrahmanyam, C.B., 1968. Eggs and early development of two more carangids from Madras. *J. mar. boil. Ass. India*. **8** (1): 188-192.

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