NATIONAL BIORESOURCE DEVELOPMENT BOARD

Dept. of Biotechnology
Government of India, New Delhi

For office use only

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 : Vertebrate (Zooplankton) Fish larvae

Scientific name &Authority: *Engyprosopon cocosensis* (Bleeker) 1855 - Adult
Common Name (if available) :

Synonyms:	Author(s)	Status
Rhombus cocosensis	Bleeker	1855
Platophrys (Arnoglossus) *cocosensis*	Bleeker	1866-72
Scianectes macrophthalmus	Jenkins	1910
Engyprosopon cocosensis	Norman	1927
Arnoglossus annulatus	Norman	1927
Bothus (Arnoglossus) *cocosensis*	Weber and Beaufort	1929

Classification:

Phylum: Vertebrata	Sub- Phylum	
Super Class : Pisces	Class : Osteichthyes	Sub- Class:
Super Order: Teleostei	Order: Pleuronectiformes	Sub Order : Pleuronectoidei
Super Family:	Family : Bothidae	Sub-Family:Bothinae
Genus : *Engyprosopon*	Species : *cocosensis*	

Authority: Bleeker
Reference No.

Bleeker, 1855. Nat. Tijdschr. Ned. Ind., viii, p. 179.

Geographical Location:

These larvae mostly confined to coastal and nearshore waters. They were found along the south west coast of India, east coast of India, west coast of Burma, south west coast of Srilanka, off the south east coast Srilanka and south coast of Madagascar.

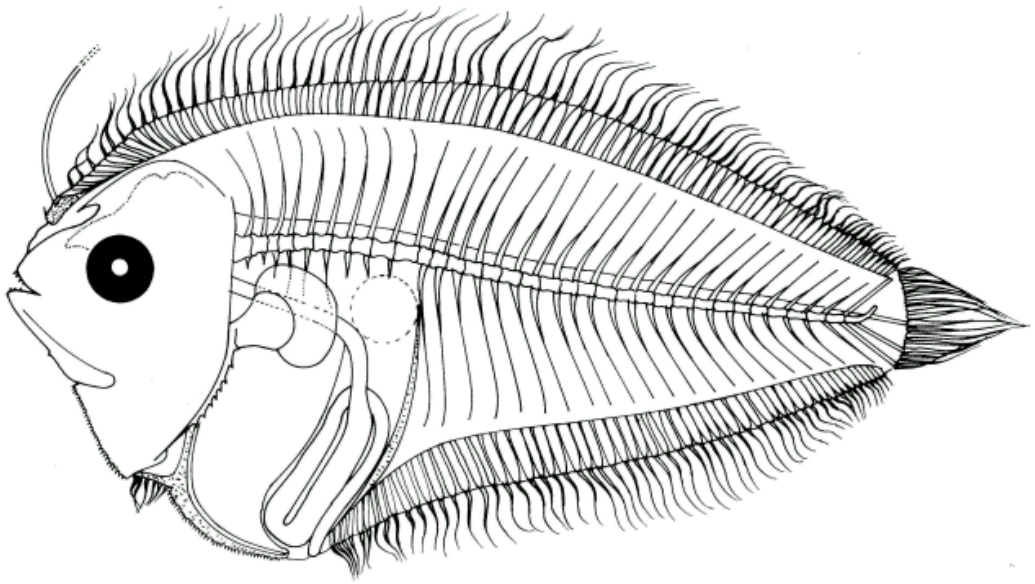
Latitude: Place:

Longitude: State:

Environment

Fresh water : Yes/ No	Habitat :	Salinity :33.08 – 36.37PSU
Brackish : Yes/ No	Migrations :	Temperature : 13-29°C
Salt water : Yes/ No	Depth range : 50 – 200 m	

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



Engyprosopon cocosensis, 12.9 mm SL, from Lalithambika Devi, 1999

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: See first column of last page

Diagnostic characteristics: - " "

Sex attributes:

Descriptive characters: " "

Meristic characteristics : Dorsal fin rays (69) 74-88, Anal fin rays (52) 57-65,
Vertebrae 10+23-26

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.:
Characteristics:

Larvae of *Engyprosopon cocosensis* have thin laterally compressed body, symmetrical in early stages, are mostly diaphanous. Eyes have black pigments and have more height (dorso-ventral diameter) than width (antero-posterior). Right eye shows signs of migration to left side in larvae measuring 11.1 mm SL and above, but not completed even in 13.7 mm SL larva in which right eye has moved a distance equal to half the diameter of the eye towards the dorsal side. Swim bladder is present, occupying space between eighth and ninth vertebral segment in the earliest stage and increases in size to occupy the space between eighth and tenth vertebral segments as the larvae grow. Liver massive, the dorso-ventral axis of which is greater than the anteroposterior axis. Alimentary canal is a single, more or less elliptical coil, placed vertically at posterior end of abdominal cavity in early stages becoming obliquely placed in 12.9 mm onwards. Anus opens at the 10^{th} vertebral segment in early stages but pushed forwards later to open at the eighth vertebral segment, thus reducing the snout-anus length in post-larval stages .

Distinct spines occur on the urohyal (sciatic portion, 20-42), cleithra (3-9) and posterior basipterygial processes (20-49) which increase both in number and size towards post flexion stages. Of the flat fish larvae so far examined, this species possesses maximum number of spines on the urohyal and posterior basipterygial processes Spines on the urohyal are of even size whereas those of posterior basipterygial processes becomes small and feeble towards posterior end. Posterior basipterygial processes on reaching the ascending loop of alimentary canal curves dorsalwards but does not end in a spinous process. There are (69) 74-88 dorsal and (52) 57-65 anal fin rays and 10+23-26 vertebrae including urostyle.

Abundance:

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

SPAWNING INFORMATION:
Locality: Main Ref:
Season:
Fecundity:
Comment:

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

Lalithambika Devi, C.B., 1986. Studies on the flat fish (Heterosomata) larvae of the Indian Ocean. Ph.D. Thesis, University of Kerala, India, 480 pp.

Lalithambika Devi, C.B., 1999. Bothid larvae (Pleuronectiformes-Pisces) of the Indian Ocean. *Indian J. Mar. Sci*., **28** : 198-210.

Lalithambika Devi, C.B., 1999. Larvae of Bothidae (Pleuronectiformes-Pisces), Illustrated Key. Published by National Institute of Oceanography, Goa, pp. 35.

Dileep, M.P., 1989. Studies on the larvae of a few demersal fishes of the south west coast of India. Ph.D. Thesis, University of Cochin, Kerala, India, 271 pp.

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

Dr.C.B.Lalithambika Devi, National Institute of Oceanography, Kochi-14,
Phone :off: 390814 / Res. 348004, Fax :390618, cbldevi@niokochi.org

Dr. M.P. Dileep, Integrated Fisheries Project, Kochi-16.

ACKNOWLEDGEMENT:
(List of persons who contributed, modified or checked information)
Late Dr. E.H. Ahlstrom, Southwest Fisheries Centre for confirming the identification