

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 : Invertebrata (Zooplankton), Chaetognatha		
Scientific name & Authority : <i>Eukrohnia bathypelagica</i> Alvarino, 1962		
Common Name (if available): Arrow worm		
Synonyms	Author(s)	Status
Classification:		
Phylum: Chaetognatha	Sub-Phylum:	
Super class:	Class:	Sub- Class:
Super Order:	Sub Order:	
Super Family:	Family:	Sub-Family:
Genus: <i>Eukrohnia</i>	Species: <i>bathypelagica</i>	
Authority: Alvarino		
Reference No.:		
Alvarino, A., 1962. Two new Pacific chaetognaths; their distribution and relationship to allied species. <i>Bull. Scripps Instn. Oceanogr. tech. Ser.</i> , 8 : 1-50.		
Geographical Location:		
This is a bathyplanktonic cosmopolitan species. In the Indian Ocean mostly found below 1000m and distributional limit extends to Antarctic and Subantarctic waters.		
Latitude: 15°N to 35°S	Place:	
Longitude:	State:	

Environment

Fresh water: Yes/ No
Brackish : Yes/ No

Habitat : Marine

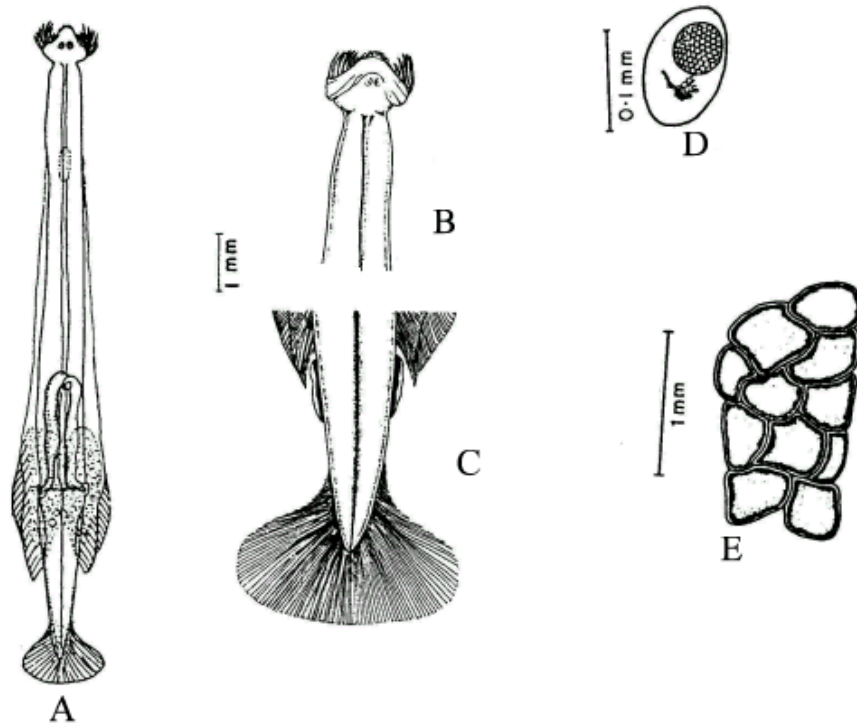
Salinity :

Migrations : Perform vertical migrations.
This can be diurnal in relation
to size/stage of maturity, light
intensity or otherwise

Temperature :

Salt water : Yes✓/ No Depth range: Below 1000m (Nair, 1978)

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



Eukrohnia bathypelagica

A – Dorsal view; B – Details of head;
C – Details of tail and seminal vesicles (dorsal view); D – Eye;
E – Arrangement of ova in the ovary.

<p>DATA ENTRY FORM: Form- 2(Fish / shellfish / others) (please answer only relevant fields ; add additional fields if you require) Form –1 Ref.No.:</p>			
<p>IMPORTANCE</p>			
Landing statistics (t/y) :	from	to	Place :
Main source of landing: Yes/ No			Coast: east/ west
Importance to fisheries:			Ref . No.:
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:
<p>SALIENT FEATURES :</p>			
<p>Morphological:</p>			
<p>Diagnostic characteristics:</p>			
<p>The body of <i>Eukrohnia bathypelagica</i> is transparent and flabby. There is a conspicuous neck. Constriction at tail septum is absent. Body is widest at region of ovaries. Longitudinal muscles are wide and weak. Lateral fields about half the width of dorsal or ventral sides and enlarged at dorsal side of anterior end of tail segment. Intestinal diverticula are absent.</p>			
<p>Head is small and wider than long. The top of head has thick mass of papillae. Tail constitutes about 28 per cent of total length. Eyes are oval in shape and large. They are with out pigment and are closely placed at dorsal side of head. Unpigmented region made of about one hundred hexagonal ommatidia. At lower part of eye structures similar to ommatidia are arranged in triangular pattern. Ventral ganglion is about ¼ distance from neck to tail septum. Paired fins extend from middle of ventral ganglion to seminal vesicles along two thirds of tail segment. Fins are broadest at tail. The fins are rayed only at posterior laminar region. Posterior tips of fins are separated from tail. Collarette tissue begins as thin layer from anterior end of ventral ganglion and goes further down to end of tail segment. Collarette is thicker and broader at the opening of oviducts. Digestive tract appears as thin tube attached to dorsal wall of trunk.</p>			
<p>Sex attributes:</p>			
<p>Hermaphrodite. Male gonads being located in the tail segment, the female in the posterior part of the trunk. Though hermaphrodite cross – fertilization by copulation is the rule.</p>			
<p>Descriptive characters:</p>			
<p>In mature animals ovaries extend to anterior part of paired fins and fill the body cavity. Ova arranged dorsoventrally in three rows. Ovaries of immature specimens are coiled which disappears with progressing maturity. At times ovaries filled with a substance resembling fat leading to reduction in oviduct. Pieces of brood – sac hangs from oviducts. Seminal vesicles are oval sacs and apart from tail fin as well as lateral fins.</p>			

Meristic characteristics:

Hooks vary from 7 to 10 and are strongly curved with a claw like point at the end.

Number of teeth varies from 17 to 22.

Feeding habit: Active, well armed, voracious animals.

Main food : Crustaceans, hydromedusae, other chaetognaths, fish larvae.

Feeding type : Carnivore.

Additional remarks:

Size and age:

Maximum length (cm) (male / female / unsexed)

Ref. No.:

Total length at maturity 23 mm.

Average length (cm) (male / female / unsexed)

Ref. No.:

Range and average length: 13-23 (av. 18.5) mm

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: Characteristics: Abundance:	Ref. No.:
Biochemical aspects: Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Electrophoresis:	Ref. No. Ref. No.
SPAWNING INFORMATION:	
Locality: Season: Fecundity: Comment:	Main Ref:
MAJOR PUBLICATIONS (INDIAN): (include review articles, monographs, books etc.)	
Alvarino, A., 1962. Two new Pacific chaetognaths; their distribution and relationship to allied species. <i>Bull. Scripps Instn. Oceanogr. tech. Ser.</i> , 8 : 1-50.	
Vijayalakshmi Nair, R. 1977. Chaetognaths of the Indian Ocean. <i>Proc. Symp. Warm Water Zoopl. Spl. Publ. UNESCO/NIO</i> . 168-195.	
Vijayalakshmi Nair, R. 1978. Bathymetric distribution of chaetognaths in the Indian Ocean. <i>Indian J. Mar. Sci.</i> 7 : 276-282.	
Pierrot – Bults, A.C and Vijayalakshmi Nair, R. 1991. Distribution patterns in Chaetognaths. <i>In: The Biology of Chaetognaths</i> . Q.Bone, H. Kapp and A. C. Pierrot – Bults (Eds.). Oxford Science Publications, Oxford University Press, Oxford, New York, Tokyo. 86-116.	
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