

**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 : Invertebrata (Zooplankton), Chaetognatha		
Scientific name & Authority : <i>Eukrohnia minuta</i> Silas and Srinivasan, 1968 Common Name ( if available): Arrow worm		
Synonyms	Author( s)	Status
Classification: Phylum: Chaetognatha Super class:    Class:    Sub-Phylum: Super Order:    Sub Order:    Sub- Class: Super Family:    Family:    Sub-Family: Genus: <i>Eukrohnia</i> Species: <i>minuta</i> Authority: Silas and Srinivasan Reference No.: Silas, E.G. and Srinivasan, M. 1968. A new species of <i>Eukrohnia</i> from the Indian seas with notes on three other species of chaetognatha. <i>J. Mar. Biol. Ass. India</i> . <b>10</b> (1): 1-33.		
Geographical Location: This is an oceanic, mesopelagic species endemic to the west coast of India. They are found in subsurface cold waters with low temperature, low oxygen content and high salinity. Minimum depth from which this species was obtained is 350m.		
Latitude:	Place:	
Longitude:	State:	

Environment

Fresh water: Yes/ No    Habitat : Marine

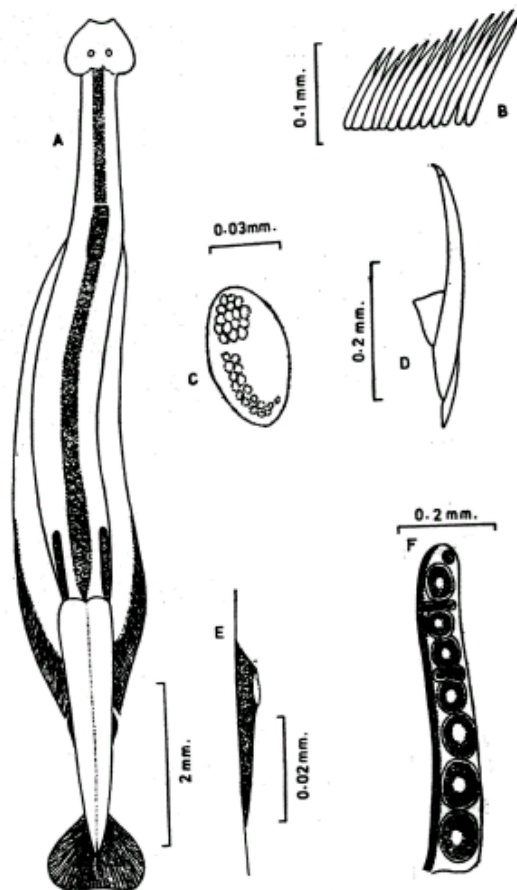
Brackish : Yes/ No    Migrations :

Salt water : Yes ✓/ No    Depth range:

Salinity :

Temperature :

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



*Eukrohnia minuta* After Srinivasan, 1979

A – Dorsal view; B – Arrangement of teeth; C – Eye; D – Hook;  
E – Seminal vesicle; F – Lateral view of 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><b>IMPORTANCE</b></p> <p>Landing statistics (t/y) : from                      to                      Place :                      Ref . No.:</p> <p>Main source of landing: Yes/ No                      Coast: east/ west</p> <p>Importance to fisheries:</p> <p>Main catching method :</p> <p>Used for aquaculture : yes/ never/ rarely</p> <p>Used as bait : yes/no/ occasionally</p> <p>Aquarium fish : yes/ no/ rarely</p> <p>Game fish : yes/ no</p> <p>Dangerous fish : poisonous/ harmful/ harmless</p> <p>Bioactivity : locally known/ reported/ not known                      Details:</p> <p>Period of availability : Throughout the year – yes/ no                      If no, months:</p>			
<p><b>SALIENT FEATURES :</b></p> <p>Morphological:</p> <p>Diagnostic characteristics:</p> <p>Smallest species of the genus <i>Eukrohnia</i>. Body slender, opaque and firm due to strong and wavy longitudinal muscles.</p> <p>Head prominent, wider than long and its width is more than 1.5 times or more than its length. Papillae are seen at the tip of the head. Head is clearly demarcated from trunk by a fragile neck because of which often head breaks off from trunk. Intestinal diverticula absent. Collarette not seen at trunk but seen as thin layer at tail segment and at the origin of the tail fin. Eyes are minute, oval, unpigmented and its length is more than 1.5 times of its width. Tail segment is 27 to 35 per cent of the total length with a clear construction at tail septum. Ventral ganglion seen at 1/4<sup>th</sup> distance from anterior end of animal. The length of the ganglion is greater than the width of the body at the ganglion region. Lateral fins originate at the level of middle region of ventral ganglion and extend to the anterior 1/3 of the tail segment. They are broader at the region of the tail septum. Only the posterior 1/3 of the fins are rayed. The rayed portion of the fins is very thin, delicate and fin rays are sparsely arranged. Tip of the fins are free from tail segment.</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>Ovarian tubes are short, thin and less than 10 per cent of the animal length. Ova small, spherical and arranged in a single row. Seminal vesicles are not prominent and situated closer to lateral fins than caudal fin. They are elongated and break open along the lateral margin, through which the sperms are liberated. In mature specimens the tail segment is robust, filled with sperms and anteriorly bulges into the trunk as two lobes.</p>			

Meristic characteristics:

Number of hooks varies from 7 to 9 on either side of the head. Tip of the hooks are straight. Small serrations are noted in the inner margin of these hooks. With advancing maturity there is decrease in the number of serrated hooks as well as number of serrations in each hook. In fully matured specimens only one or two serrated hooks are seen and each with 1 to 3 serrations. Only one set of teeth and number varies from 8 to 14.

Feeding habit: Active, well armed, voracious animals.

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

Feeding type : Carnivore.

Additional remarks:

This is a new species recorded from the west coast of India.

Size and age:

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

Ref. No.:

Length varies from 5.6 to 12.0 mm.

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: Characteristics: Abundance:	Ref. No.:
Biochemical aspects: Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Electrophoresis:	Ref. No. Ref. No.
<b>SPAWNING INFORMATION:</b>	
Locality: Season: Fecundity: Comment:	Main Ref:
<b>MAJOR PUBLICATIONS (INDIAN):</b> (include review articles, monographs, books etc.)	
Srinivasan, M., 1979. Taxonomy and ecology of Chaetognatha of the west coast of India in relation to their role as indicator organisms of watermasses. <i>Zool. Surv.India, Tech. Monogr. No. 3</i> . Ed. Director, Zoological Survey of India. 1-47.	
<b>LIST OF INDIAN EXPERTS</b> (Name, address, phone, fax, e-mail etc.)	
Dr. Vijayalakshmi R. Nair HB/50, "Vijaya" South Bridge Avenue, Panampilly Nagar, Kochi - 682036 Tel: 0484 - 2316999 Fax: 0484 - 2324972 e – mail: <a href="mailto:vijayalakshmi40@hotmail.com">vijayalakshmi40@hotmail.com</a>	
<b>ACKNOWLEDGEMENT:</b> (List of persons who contributed , modified or checked information)	