

**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 hamata</i> (Mobius), 1875		
Common Name ( if available): Arrow worm		
Synonyms	Author( s)	Status
<i>Krohnia hamata</i>	Apstein	1911
<i>Eukrohnia richardi</i>	Germain and Joubin	1912
	Michael	1919
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>hamata</i>	
Authority: Mobius		
Reference No.:		
Mobius, K., 1875. Vermes. Die Expedition Zur Phys – Chem. und Biol. Untersuch. Der Nordsee im Sommer 1872. <i>Jahrb. Comm. Wiss. Untersvel. Deutsch. Meere in Kiel</i> , 2: 153-170.		
Geographical Location:		
This oceanic species extending along the meso – and bathypelagic layers in the tropical and equatorial regions, rising to epiplanktonic levels in cold areas. Shows epiplanktonic bipolarity, sinking to deeper layers in Atlantic, Pacific and Indian Oceans and inhabiting upper levels of Arctic and Antarctic. More abundant south of 20° S. <i>E. hamata</i> lives at great depth in tropical and subtropical regions but towards subantarctic it gradually rises to the upper stratum (500-125 m).		
Latitude: Extends to Antarctic-Subantarctic region	Place:	
Longitude:	State:	



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:

Body is rigid, opaque and firm. Longitudinal muscles are thick. The body is widest at posterior half of trunk with slight constriction at tail septum. The intestinal diverticula are absent.

Head is small with a well-defined neck. Tail segment constitutes 19 to 24 per cent of total length. Eyes large, oval and internal region is formed of hexagonal ommatidia. Inferior part of eye bears four lines of ommatidia like structures. Collarette is absent. At the midpoint of intestine one or several small oil droplets are seen. The colour of oil droplets is bright orange to olive green. Ventral ganglion is located at the anterior tip of the lateral fins. Lateral fins are long extending from level of middle of ventral ganglion to half way from tail septum. The fins are broader around the level of tail septum. Rays are present at posterior outer portion of fins, while anterior part and internal part of posterior part are rayless.

Sex attributes:

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.

Descriptive characters:

Ovarian tubes are attached to ventral edges of respective lateral fields. Ovaries open at lateral dorsal side. Ovaries in mature specimens reach up to mid way from caudal septum to neck. Ova are round, small and arranged in four rows. Seminal vesicles are elongated and ovoid. They are placed close to posterior end of lateral paired fins and away from tail fin.

Meristic characteristics:

Number of hooks varies between 8 and 9 at each side. Hooks almost straight with tips hooked and set almost perpendicular to the shaft. Number of teeth is as many as 25 in each side.

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.:

Reach to a length of 43mm. Specimens from 35 to 40mm long might be fully mature.

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

Ref. No.:

Length range and average :18 – 40(26.5)

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.)	
Thomson, J.M., 1947. The Chaetognatha of south eastern Australia. <i>Bull. Coun. scient. ind. Res. (Div. Fish. Rep. 14)</i> , <b>222</b> : 1-43.	
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> <b>7</b> : 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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<b>ACKNOWLEDGEMENT:</b> (List of persons who contributed , modified or checked information)	