

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>Sagitta serratodentata</i> Krohn, 1853 Common Name (if available) : Arrow worm		
Synonyms:	Author(s)	Status
<i>Sagitta serratodentata atlantica</i>	Baldasseroni	1915
	Ghirardelli	1959
<i>Sagitta bierii</i>	Furnestion	1962
Classification:		
Phylum: Chaetognatha	Sub- Phylum	
Super Class :	Class :	Sub- Class:
Super Order:	Order:	Sub Order :
Super Family:	Family :	Sub-Family:
Genus : <i>Sagitta</i>	Species : <i>serratodentata</i>	
Authority: Krohn		
Reference No.		
Krohn, A., 1853. Nachtragliche Bemerkungen uber den Ban der Gattung <i>Sagitta</i> , nebst der Beschreibung einiger neuen Arten. <i>Arch. Naturgesch.</i> 19 : 266-281.		
Geographical Location:		
This is a typical epiplanktonic species of temperate and warm Atlantic waters. Reported from Indian Ocean from southern part. Species are rarely obtained from stations located near 15°S from 1000-500 m and 2000-1000 m hauls. South of 25° S they are found between 500 and 250 m and beyond 30° S in 250-125 m hauls.		
Latitude:	Place:	
Longitude:	State:	

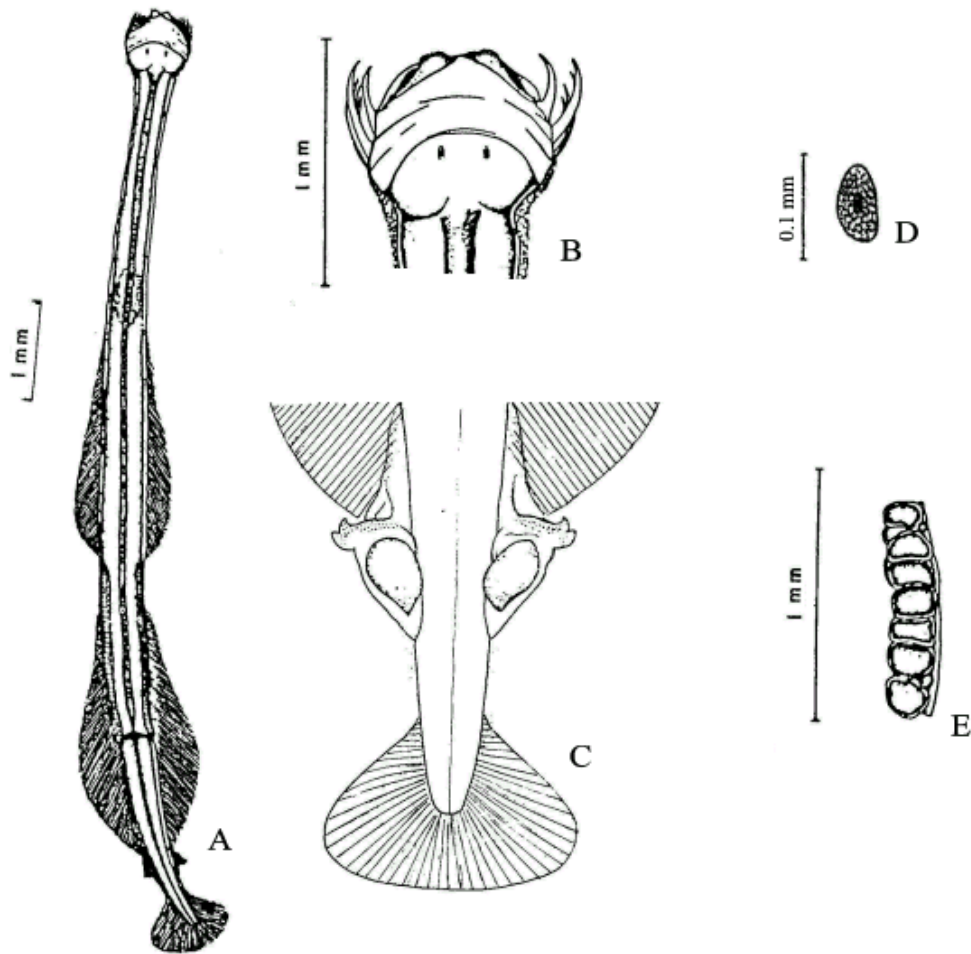
Environment

Fresh water: Yes/ No
Brackish : Yes/ No
Salt water : Yes/ No

Habitat : Marine
Migrations : Perform Vertical migrations.
This can be diurnal in relation to size/stage of maturity, light intensity or otherwise
Depth range : Varies depending on the latitudes.
Between 125-2000m hauls.

Salinity :
Temperature :

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



Sagitta serratodentata

A – Dorsal view; B – Head;
C – Details of posterior part 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> <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>SALIENT FEATURES :</p> <p>Morphological:</p> <p>Diagnostic characteristics:</p> <p>Body is slender, firm and rigid having almost same width from neck to caudal septum. The longitudinal muscles are thin and strong. Lateral fields are narrow. Intestinal diverticula are absent.</p> <p>Head is small and the neck is well defined. Tail segment constitutes 23-26 per cent of total length. Eyes are elongated with longest axis parallel to the longitudinal axis of animal. Pigmented area extended in 3 branches two longitudinal being longest and the third is transverse. Collarette covers the neck region extending further along the body as a very thin layer and again thickens at the anterior part of seminal vesicles.. Ventral ganglion is just in front of the anterior fins. Anterior fins reach up to a level close to the posterior end of ventral ganglion. Internal rayless zone is seen at anterior end. Posterior fins are long, rounded, about the same length on tail as on trunk. Internal rayless zone is seen at the level of opening of oviducts, extending to anterior end of fins. Anterior and posterior fins are almost of same size.</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 long and in mature specimens extend to the level of ventral ganglion. Ova are roundish and arranged in one row. Seminal vesicles are placed away from tail fin but close to posterior fins. The seminal vesicles have two prominences at the anterior lateral corner. In front of the anterior end of the vesicles collarette is thick and clearly seen.</p>			

Meristic characteristics:

Hooks on each side vary from 6 to 7 at each side and their concave internal edge is serrated. Anterior teeth range between 10 and 11 on each side while posterior teeth from 18 to 20 at 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.:

Total length at maturity : 10-13 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.
SPAWNING INFORMATION:	
Locality: Season: Fecundity: Comment:	Main Ref:
MAJOR PUBLICATIONS (INDIAN): (include review articles, monographs, books etc.)	
Krohn, A., 1853. Nachtragliche Bemerkungen uber den Ban der Gattung <i>Sagitta</i> , nebst der Beschreibung einiger neuen Arten. <i>Arch. Naturgesch.</i> 19 : 266-281.	
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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