

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 tasmanica</i> Thomson, 1947		
Common Name (if available) : Arrow worm		
Synonyms:	Author(s)	Status
<i>Sagitta serratodentata tasmanica</i> type	Thomson	1947
<i>Sagitta serratodentata tasmanica</i>	Heydorn	1959
<i>Sagitta serratodentata</i>	Apstein	1911
	Ritter-Zahony	1911
	Jameson	1914
	Huntsman	1919
	Johnston and Taylor	1919
	Fish	1925
	Bigelow	1926
	Burfield	1930
	Bollmann	1934
	Fraser	1937
	Furnestin	1938
	Bigelow and Sears	1939
	Russell	1939
	Redfield and Beale	1940
	Clarke, Pierce and Bumpus	1943
	Kielhorn	1952
	David	1958
Classification:		
	Sub- Phylum	
Phylum: Chaetognatha	Class :	Sub- Class:
Super Class :	Order:	Sub Order :
Super Order:	Family :	Sub-Family:
Super Family:	Species : <i>tasmanica</i>	
Genus : <i>Sagitta</i>		
Authority: Thomson		
Reference No.		
Thomson, J.M., 1947. The Chaetognatha of south-eastern Australia. <i>Bull. Counc. Sci. ind. Res.</i> (Div. Fish. Rep. 14) 222 : 1-43.		

Geographical Location:

This is an oceanic epipelagic species typical of the subantarctic waters and the southern most part of the Indian and Pacific Oceans. In Indian Ocean it is found up to 15°S in layers below 250m rising to the 250-125 m haul at locations south of 25°S. Near the subtropical convergence *S. tasmanica* is quite common in the 125-0 m hauls.

Latitude:

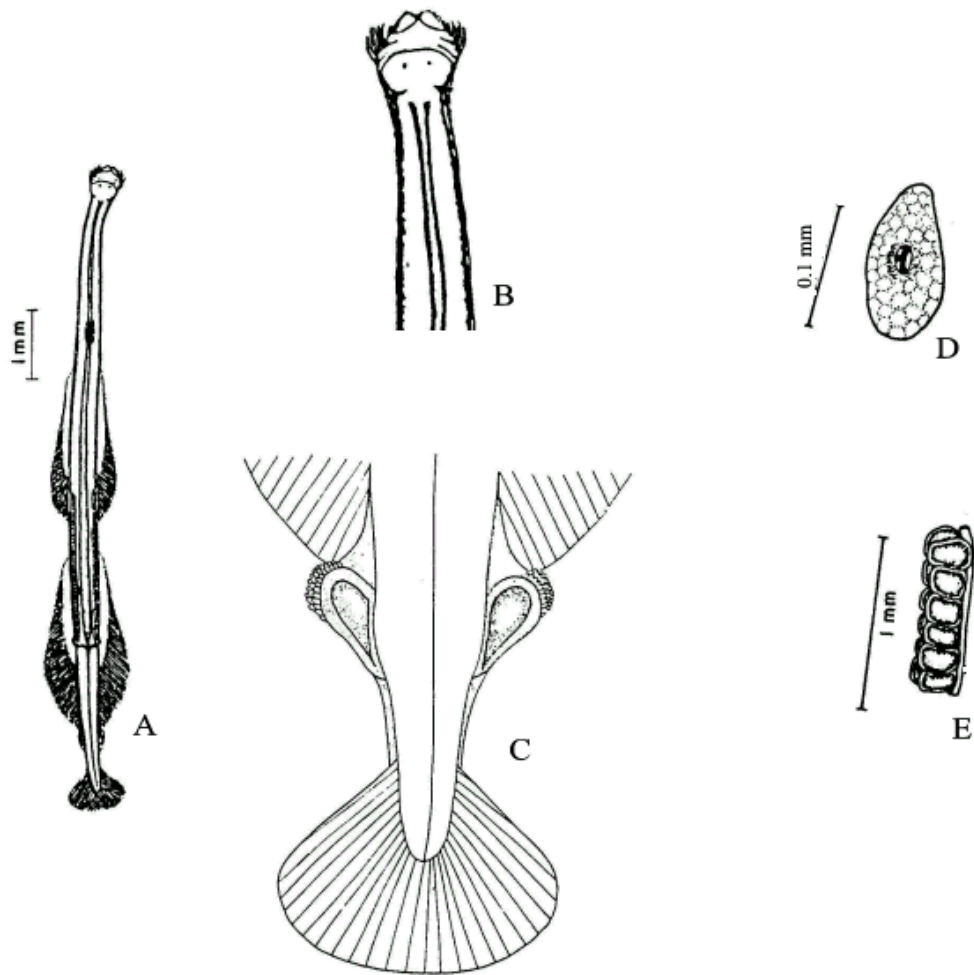
Place:

Longitude:

State:

Environment		
Fresh water: Yes/ No	Habitat : Marine	Salinity :
Brackish : Yes/ No	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: Varies depending on the latitudes between >250-0 m.	

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



Sagitta tasmanica

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 and rigid having almost same width from neck to caudal septum. Lateral fields are narrow. Longitudinal muscles are thin and strong. Intestinal diverticula are absent.</p> <p>Head is small with a conspicuous neck. Tail segment varies from 22 to 26 per cent of total length. Eyes are elongated with longest axis parallel to the longitudinal axis of animal. Pigmented area of the eye extends in three branches with vertical branch larger than the transverse branch. Collarette fills the neck region extending as a thin coat to the anterior end of ventral ganglion. Ventral ganglion is about one third distance between the neck and tail. Anterior fins are long and reach up to level of posterior end of ventral ganglion. It is fully rayed except for a very narrow zone. Posterior fins start from posterior end of anterior fins as a narrow fringe. This is more on tail than on trunk. Narrow rayless zone is observed at the anterior half of the fin.</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>Ovaries are long tubes and in mature specimens extends to level of ventral ganglion. Ova are roundish and arranged in two rows. Seminal vesicles close to posterior end of posterior fins. They are separated from tail fin. The top of seminal vesicles are formed by soft abundant protuberances or papillae.</p>			

Meristic characteristics:

Hooks range from 6 to 9 on each side. Their concave internal edge is serrated. Number of anterior teeth varies between 2 and 9 on each side. Posterior teeth total from 3 to 19 on 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.:

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

Ref. No.:

Range and average length : 15-20 (17.5) 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.)	
Thomson, J.M., 1947. The Chaetognatha of south-eastern Australia. <i>Bull. Counc. Sci. ind. Res.</i> (Div. Fish. Rep. 14) 222 : 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> 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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