

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 gazellae</i> Ritter – Zahony, 1909		
Common Name (if available) : Arrow worm		
Synonyms:	Author(s)	Status
<i>Sagitta lyra</i>	Baldasseroni	1915
	Johnston and Taylor	1921
	Bollmann	1934
	Tokioka	1940
	Thomson	1947
	Fagetti	1958
	Bieri	1957
<i>Sagitta lyra</i> “gazellae” type	Tokioka	1940
<i>Sagitta maxima</i>	Thiel	1938
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>gazellae</i>	
Authority: Ritter-Zahony		
Reference No.		
Ritter-Zahony, R., 1909. Chatognathen, Denkschr. Akad. Wiss. Wien. 84 : 43-54.		
Geographical Location:		
The species extend northward to Subantartic waters. In the Indian Ocean it is recorded at 42°23’S.		
Latitude: 42°23’S	Place:	
Longitude: 74°54’E	State:	

Environment

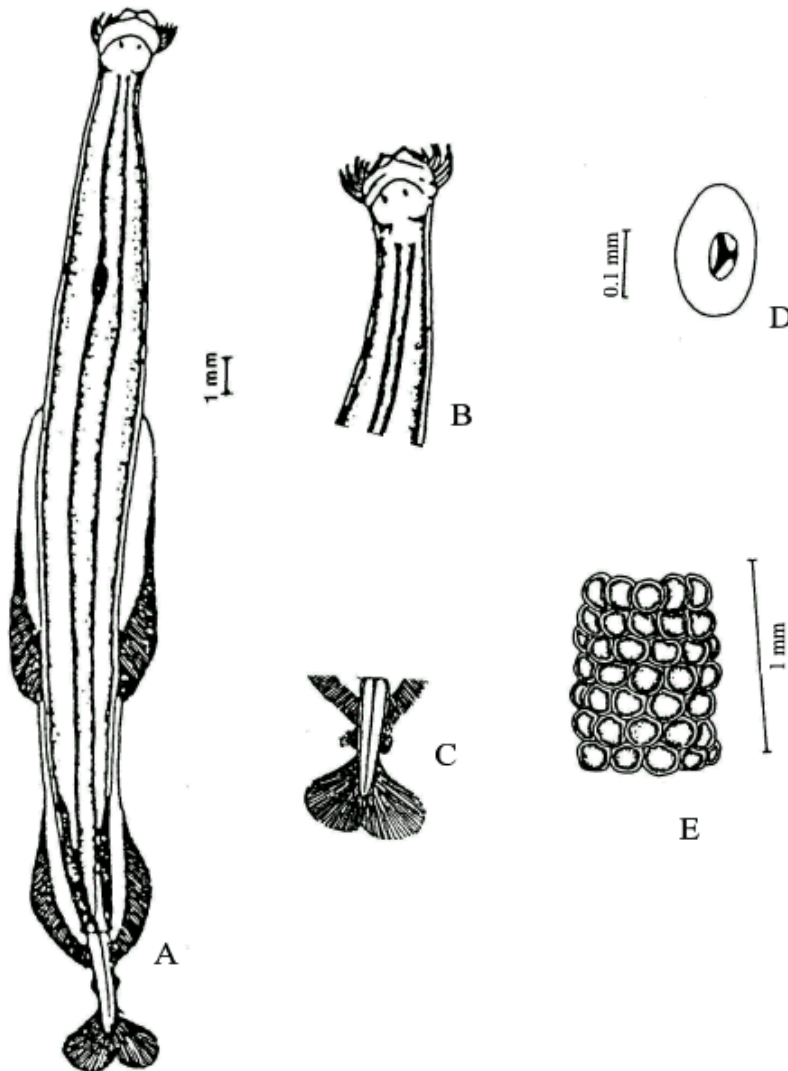
Fresh water: Yes/ No
Brackish : Yes/ No

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

Salinity :
Temperature :

Salt water : Yes/ No Depth range : 2000 to 500 m

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



Sagitta gazellae

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>			
Landing statistics (t/y) :	from	to	Place :
Main source of landing:	Yes/ No		Coast: east/ west
<p>Importance to fisheries: Main catching method :</p>			
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: Diagnostic characteristics: Body is bulky and tumid. Trunk region is widest at about midlength of the animal. A constriction at tail septum is well marked. Longitudinal muscles are thin. Lateral fields are wide. Intestinal diverticula absent. Head is of regular size and wider than long. Neck is very conspicuous.. Tail segment forms 15 per cent of total length. Eyes are oval, strongly pigmented, disposed in to a knob – shape, extending diffusely around, giving a roundish shape. Collarlette is absent. Ventral ganglion is far above the anterior fins. Corona ciliata is pear shaped. Anterior fins are longer than posterior fins. Anterior fins starts far behind the ventral ganglion. Anterior fins connected to posterior fins by a narrow bridge. The posterior end of anterior fins are rayed while the anterior and internal parts are rayless. Posterior fins triangular in shape and located more on trunk than on tail. Posterior fins have a thick central ray less zone. The outer part of the fin is rayed. The tail fin is furcated formed of two round oval parts.</p>			
<p>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.</p>			
<p>Descriptive characters: Ovarian tubes are long not filling completely body cavity. When fully mature it extends up to the posterior end of ventral ganglion. Ova are round and arranged in eight rows. Seminal vesicles are oval in shape. Seminal vesicles are half way between posterior fins and tail fin. But it is closer to posterior fins.</p>			

Meristic characteristics:

Hooks vary from 5 to 8. Number of anterior teeth ranges from 5 to 6 on each side. Posterior teeth reduced to none or occasionally one 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.:

Total length at maturity is 82 mm.

Length variation 45-83 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.) Ritter-Zahony, R., 1909. Chatognathen, Denkschr. Akad. Wiss. Wien. 84 : 43-54 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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ACKNOWLEDGEMENT: (List of persons who contributed , modified or checked information)	