

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>Sagitta enflata</i> Grassi, 1881		
Common Name (if available) :		
Synonyms:	Author(s)	Status
<i>Sagitta inflata</i>	Baldasseroni	1915
	Germain & Joubin	1916
	Scaccini & Ghirardelli	1941
	Ramault & Rose	1945
	Ghirardelli	1947
	Hamon	1950
	Rose	1953
	Silas and Srinivasan	1968
<i>Sagitta gardineri</i>	Doncaster	1903
	John	1933
	Lele & Gae	1936
<i>S.enflata f. gardineri</i>	Tokioka	1959
<i>Sagitta australis</i>	Johnston	1909
	Johnston&Taylor	1919
<i>S. gazellae</i>	Burfield	1930
Classification:		
Phylum: Chaetognatha		
Super Class :	Sub- Phylum	
Super Order:	Class :	Sub- Class:
Super Family:	Order:	
	Sub Order :	
Genus : <i>Sagitta</i>	Family :	Sub-Family:
Authority: Grassi	Species : <i>enflata</i>	
Reference No.		
Grassi, B., 1881. Intorno ai Chaetognati. <i>R.C. Inst. lombardo, Ser. 2, 14:</i> 193-213.		
Geographical Location:		
This is a cosmopolitan epiplanktonic species of temperate and warm oceanic waters. Dominant epiplanktonic species of the Indian Ocean extending southwards to 43°S. Maximum population density was observed north of Equator.		
Latitude: Extends southwards to 43°S	Place:	
Longitude: 20-130°E	State:	

Environment

Fresh water: Yes/ No

Habitat:

Salinity :

Brackish : Yes/ No

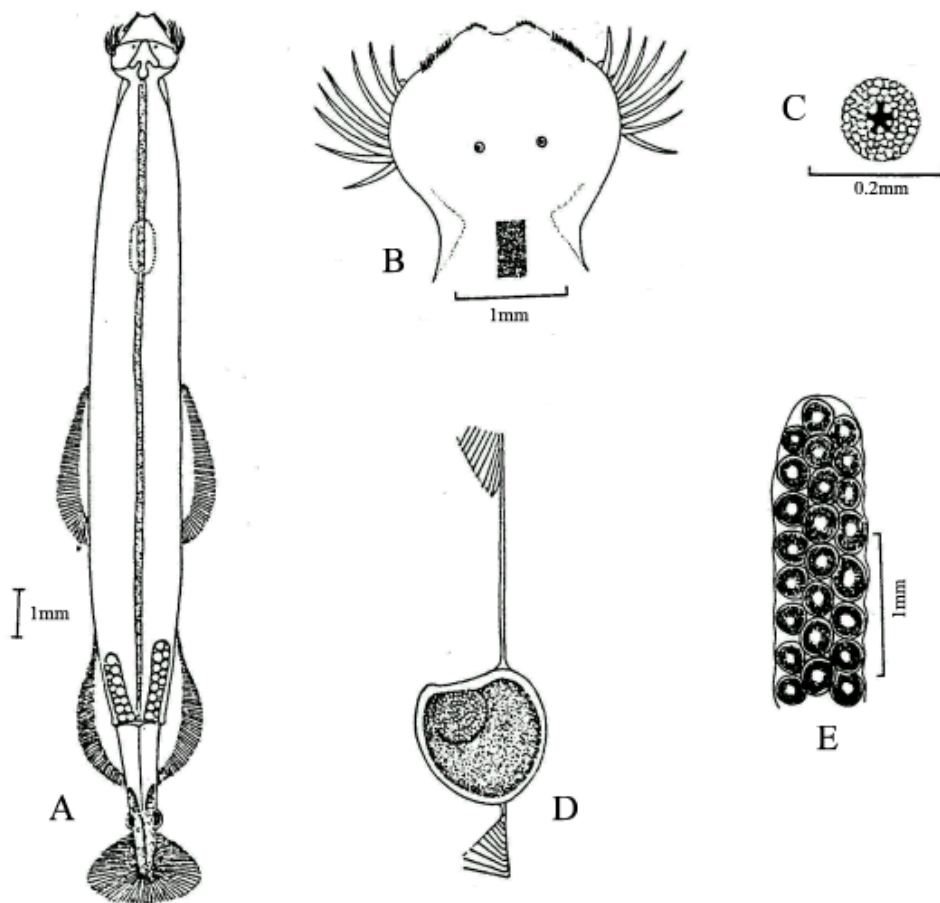
Migrations : Perform vertical migrations.
This can be diurnal in relation
to size/stage of maturity, light
intensity or otherwise

Temperature :

Salt water : Yes/ / No

Depth range : 0-200, seldom penetrates below 250m.

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



Sagitta enflata

A – Dorsal view; B – Head; C – Eye;
D – Seminal vesicle; 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 highly transparent, flaccid, flexible and wider at the centre. The longitudinal muscles are thin and weak. The lateral fields are wide. Conspicuous constriction is observed at the tail septum. Intestinal diverticula are absent.</p> <p>Head is small compared to body and wider than long. Neck is narrow and well marked. Tail percentage to total length 14-17. Eyes placed closer to each other than sides of the head. Eyes oval and pigmented region shaped like five pointed star with tips truncated and two arms longer than other three. Collarette absent. Corona ciliata short and placed almost entirely in head. Ventral ganglion is situated about midway between head and anterior fins. Anterior fins are short and narrow and placed about midway between neck and tip of the tail. Fin rays are absent in the inner part. Posterior fins are slightly longer than anterior fins, wider at caudal septum, extend more on trunk than tail segment and do not reach seminal vesicles. Inner most part of the posterior fins ray less.</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>When fully mature ovaries reach either up to two thirds of posterior fins on trunk or to anterior end of posterior fins or up to anterior fins depending on the first, second or last maturity cycle. Ova are large round and arranged in three rows. Seminal vesicles separated from posterior fins and close to tail fin. Seminal vesicles are spherical, small and break open by a fissure at anterolateral margin through which sperms are liberated. Testis occupies the posterior part of tail segment extending from tip of tail and extend the tail to about half the length of tail.</p>			

Meristic characteristics:

Hooks vary from 8 to 10 on each side with wide base and short curved sheath. Anterior teeth range between 4 and 8 at each side. Posterior teeth number 4 to 13 per set.

Feeding habit: Active, well armed, voracious animals.

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

Feeding type : Carnivore.

Additional remarks:

Representatives of different sizes belonging to 3 maturity cycles often represented in same sample indicating the presence of different populations in which maturity reached at various length –sizes. This indicates the species undergoes consecutive cycles of maturity corresponding with their increase in size.

Size and age: When fully mature the length varies from 6 to 25 mm.

Maximum length (cm) (male / female / unsexed) Ref. No.:

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 relation ships:

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.)	
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.	
Grassi, B., 1881. Intorno ai Chaetognati. <i>R.C. Inst. lombardo, Ser. 2</i> , 14: 193-213.	
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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