

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 nairi</i> Casanova and Nair, 2002 Common Name (if available) : Arrow worm		
Synonyms:	Author(s)	Status
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>nairi</i>	
Authority: Casanova and Nair		
Reference No.		
Casanova, J.P. and Vijayalakshmi Nair, R., 2002. A new species of <i>Sagitta</i> (Chaetognatha) from a Laccadive lagoon (Indian Ocean) having fan-shaped anterior teeth: Phylogenetical implications. <i>J. Natural History</i> . 36 : 149-156.		
Geographical Location:		
This species is endemic to the Agatti lagoon of Laccadive Sea.		
Latitude: About 11° N	Place:	
Longitude: About 72° E	State:	

Environment

Fresh water: Yes/ No

Habitat : Marine

Salinity :

Brackish : Yes/ No

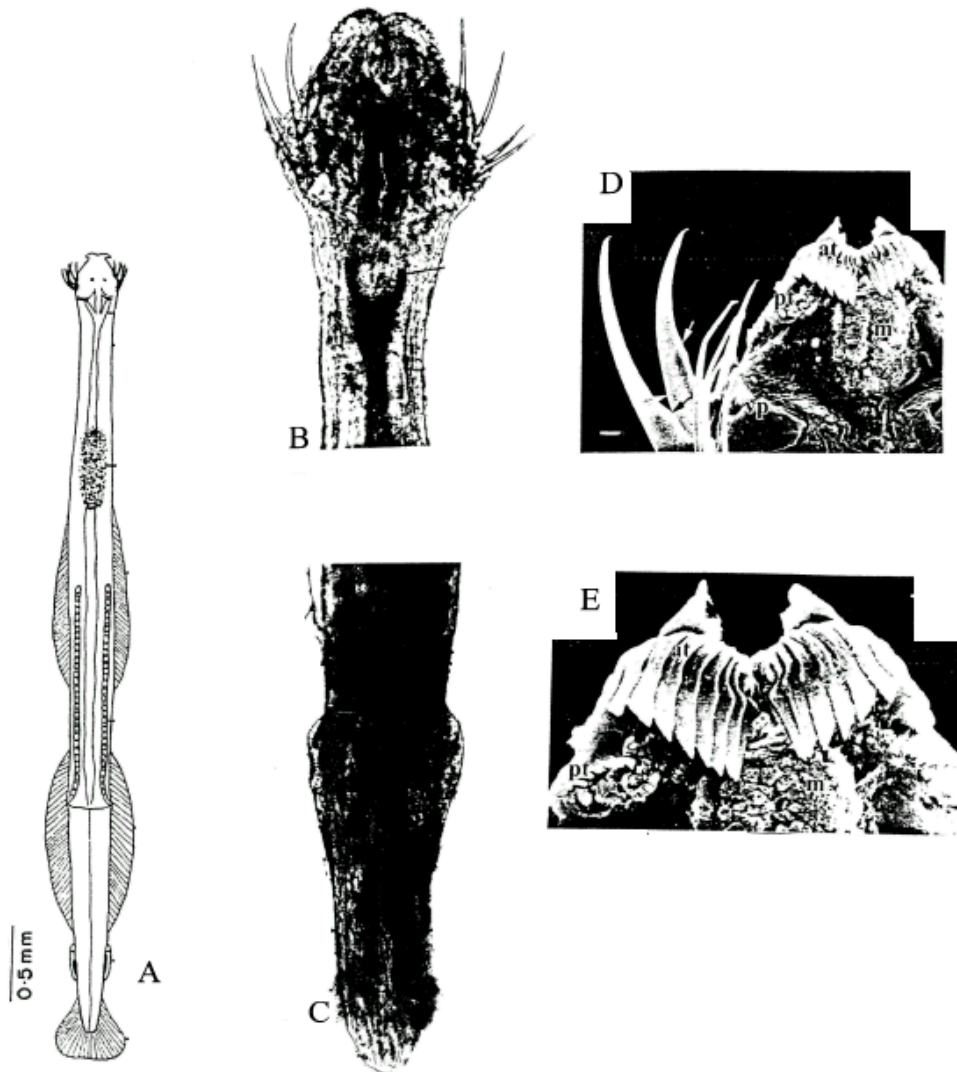
Migrations :

Temperature :

Salt water : Yes/ No

Depth range : 3.5 m.

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



Sagitta nairi After Casanova and Nair, 2002

- A – Dorsal view; B – Details of head, neck and intestinal diverticula (dorsal view);
C – Details of posterior part of tail and seminal vesicles (dorsal view);
D – SEM photograph of head armature (ventral view); E – SEM photograph showing
details of anterior teeth (ventral view);

<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
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:
<p>SALIENT FEATURES :</p>			
<p>Morphological:</p>			
<p>Diagnostic characteristics:</p>			
<p>Small in size. Body slender, slightly rigid and transparent. Lateral fields narrow. Head regular in size with inconspicuous neck. Tail constitutes 28.5-30.2 per cent of the total length. Eyes are large and rounded. Pigmented area is roughly rounded, often looks like a stumpy star. Collarette is thin and restricted to neck region. Only remnants of corona ciliata was observed in the specimens and it appears it begins behind the eyes and reaches posteriorly at least a distance equal to twice the length of head. Intestinal diverticula is well marked at neck area. Ventral ganglion is large, extending about 11 per cent of body length. Anterior fins begin at level of posterior end of ventral ganglion. Posterior fins do not reach seminal vesicles. They lie more on tail than trunk, the ratio T/C (part on trunk/part on caudal segment) being 0.40-0.53.</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 empty rather than immature in all the specimens observed. The characteristics of the ovary namely length, number and size of ova can not be confirmed though they can reach at least the level of ventral ganglion. In some of the specimens seminal receptacles are more or less filled with sperm. In the largest specimens, the tail coelomic cavities are filled with clusters of sperm. Seminal vesicles are small and elongated and open laterally at anterior part that protrudes into a small bulge. They are apart from the posterior fins and separated from the tail fin by distance equal to less than their mid - length when mature.</p>			

Meristic characteristics:

Hooks are 7 to 8, the base of anterior ones are enlarged and their inner and outer sides have no regular curves. Anterior teeth fan-shaped, number 11-14, are large and strong and in ventral view hook like flattened arrows, the outermost overlapping the innermost in lateral view, they are S-shaped. Their narrow base is ornamented with ridges constituted of rows of small spines. Posterior teeth 11-12 in number are less numerous than anterior ones, they are long, thin, bent at their bases and in close contact with each other.

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.:

Maximum length – 5.2 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.)	
Casanova, J.P. and Vijayalakshmi Nair, R., 2002. A new species of <i>Sagitta</i> (Chaetognatha) from a Laccadive lagoon (Indian Ocean) having fan-shaped anterior teeth: Phylogenetical implications. <i>J. Natural History</i> . 36 : 149-156.	
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ACKNOWLEDGEMENT: (List of persons who contributed, modified or checked information)	