

NATIONAL BIORESOURCE DEVELOPMENT BOARD

Dept. of Biotechnology
Government of India, New Delhi

For office use:

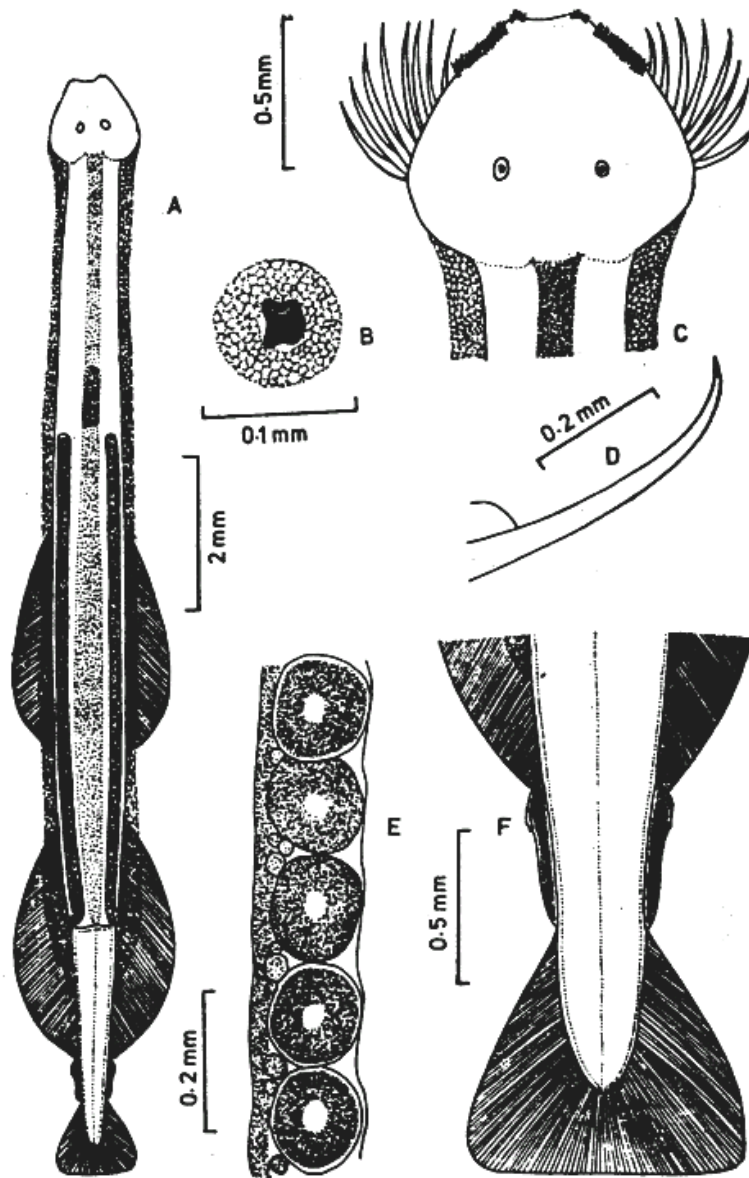
MARINE BIORESOURCES

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 bombayensis</i> Lele and Gae, 1936 Common Name (if available): Arrow worm		
Synonyms <i>Sagitta robusta</i>	Author(s) George	Status 1949
Classification: Phylum: Chaetognatha Super class: Class: Super Order: Sub Order: Super Family: Family: Sub-Family: Genus: <i>Sagitta</i> Species: <i>bombayensis</i> Authority: Lele and Gae Reference No.: Lele, S.H. and Gae, P.B. 1936. Common <i>Sagittae</i> of Bombay Harbour. <i>J. Univ. Bombay</i> , 4 : 105-113.		
Geographical Location: This is an endemic species in shallow near shore waters off Bombay and Lawson's Bay. Reported also from Malaysian coastal waters.		
Latitude:	Place:	
Longitude:	State:	

Environment		
Fresh water: Yes/ No	Habitat : Marine	Salinity :
Brackish : Yes/ No	Migrations :	Temperature :
Salt water : Yes ✓/ No	Depth range: 200-0 m	

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



Sagitta bombayensis After Srinivasan, 1979

A – Dorsal view; B – Eye; C – Head; D – Hook;
 E – Arrangement of ova in ovary; F – Posterior region of tail segment.

DATA ENTRY FORM: Form- 2(Fish / shellfish / others)
(please answer only relevant fields ; add additional fields if you require)
Form –1 Ref.No.:

IMPORTANCE

Landing statistics (t/y) : from to Place : Ref . No. :
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:

SALIENT FEATURES :

Morphological:

Diagnostic characteristics:

Body elongated, slender, translucent and rigid with strong longitudinal muscles.
Head is of moderate size, wider than long and width about 88 per cent of length.
Intestinal diverticula absent. Collarlet well developed extending from head to slightly behind middle of posterior lateral fins, the width being uniform except in front of anterior lateral fins and close to tail septum. Eyes are oval, have a square shaped pigmented region with the convex part towards inside. Tail segment 25-26.3 per cent of animal and clearly differentiated from trunk by a tail septum. Ventral ganglion is small, elliptical and situated distinctly ahead of anterior lateral fins. Anterior fins slightly smaller than posterior fins and measure 16 to 20 per cent of total length of animal and fins are fully rayed. Posterior fins longer and broader than anterior fins, measures 17-21 per cent of total length, are fully rayed and posterior part reaches the seminal vesicles. More than 60 per cent of the posterior fins on tail segment.

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.

Descriptive characters:

Ovarian tubes are long, slender and in mature specimens extend upto ventral ganglion. Ova are round and arranged in one row along with small undeveloped ova placed between large ova. In mature specimens tail segment completely filled with sperms. Seminal vesicles touch both posterior and caudal fins. Anterior part of seminal vesicle spout shaped when fully mature.

Meristic characteristics:

Hooks are long and slender and range from 9 to 10. Anterior teeth number from 9 to 10 while posterior teeth from 18 to 23.

Feeding habit: Active, well armed, voracious animals.

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

Feeding type : Carnivore.

Additional remarks:

This is a new species recorded from the Agatti atoll, Laccadive Archipelago.

Size and age:

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

Ref. No.:

Length varied from 7.8 to 15.2 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.)	
<p>Silas, E.G. and Srinivasan, M., 1967. On the little known Chaetognatha <i>Sagitta bombayensis</i> Lele and Gae (1936) from Indian waters. <i>J. Mar. Boil. Ass. India</i>, 9(1): 84-95.</p> <p>Vijayalakshmi Nair, R., 1977. Chaetognaths of the Indian Ocean. <i>Proc. Symp. Warm Water Zoopl. Spl. Publ. UNESCO/NIO</i>. 168-195.</p> <p>Vijayalakshmi Nair, R. 1978. Bathymetric distribution of chaetognaths in the Indian Ocean. <i>Indian J. Mar. Sci.</i> 7: 276-282.</p> <p>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.</p>	
LIST OF INDIAN EXPERTS (Name, address, phone, fax, e-mail etc.)	
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ACKNOWLEDGEMENT: (List of persons who contributed , modified or checked information)	