

NATIONAL BIORESOURCE DEVELOPMENT BOARD

Dept. of Biotechnology
Government of India, New Delhi

For office use:

MARINE BIORESOURCES

FORMS DATA ENTRY: Form- 1(general)

Fauna: <input checked="" type="checkbox"/>	Flora	Microorganisms
General Category: Invertebrata (Zooplankton) Pelagic amphipod		
Scientific name & Authority: <i>Vibilia stebbingi</i> Behning and Woltereck, 1912 Common Name (if available):		
Synonyms:	Author(s)	Status
<i>Vibilia stebbingi</i>	Behning & Woltereck	1912: 5
<i>Vibilia stebbhing</i>	Behning	1912: 213, 1925: 482
Classification:		
Phylum: Arthropoda	Sub- Phylum: Mandibulata	Sub- Class: Malacostraca
Super class	Class: Crustacea	Sub Order: Hyperidea
Super Order: Peracarida	Order: Amphipoda	Sub-Family
Super Family: Vibiliodea	Family: Vibiliidae	
Genus: <i>Vibilia</i>	Species: <i>stebbingi</i>	
Authority: Behning, A.L. and R. Wolereck. 1912. Reference No.: Behning, A.L. and R. Wolereck. 1912. Achte Mitteilung uber die Hyperiidien der "Valdivia" -Expedition insbesondere uber die Vibiliideb <i>Zool. Anz.</i> , Vol. 41, No. 1, pp. 1-11		
Geographical Location: Tropical and subtropical waters of the three oceans as well as in the Mediterranean Sea. Most catches made had only small number of animals.		
Latitude:	Place:	
Longitude:	State:	

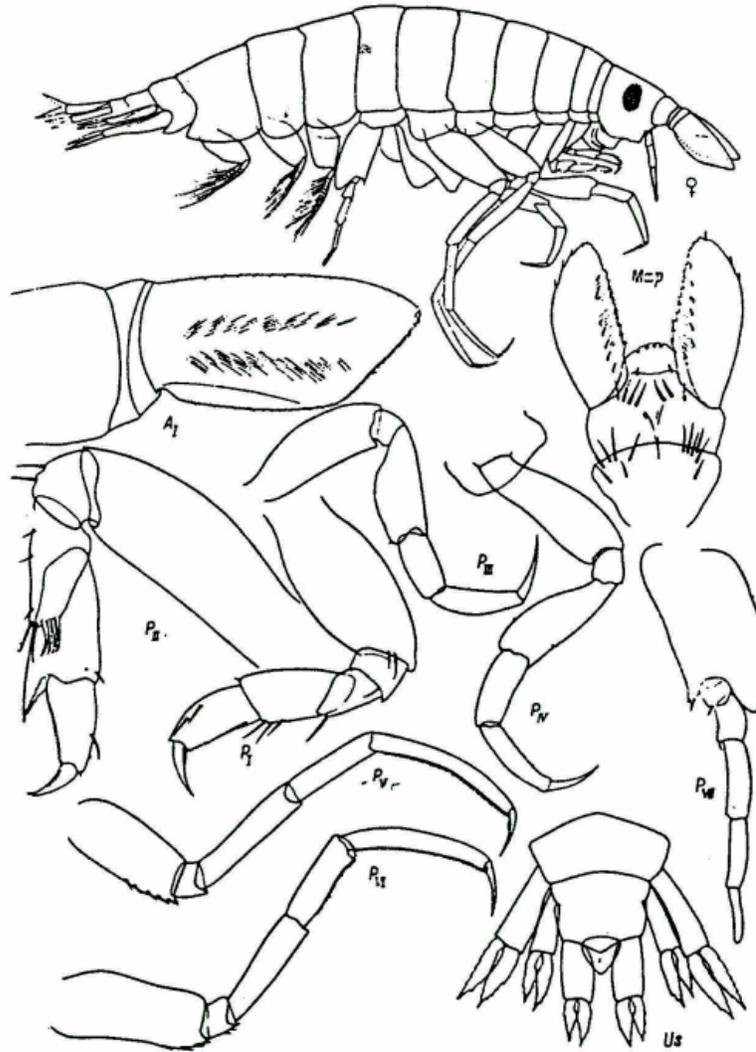
Environment

Freshwater: Yes/ No
Brackish: Yes/No
Salt Water: Yes/No

Habitat: Marine
Migrations:
Depth range :

Salinity:
Temperature:

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



Vibilia stebbingi Behning and Woltereck (Us-after Behning, 1925)

DATA ENTRY FORM: Form –2 (Fish/ Shell fish/ Others) Ref. No.:
(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:

Small species, in which adults reach only 5.5 mm. The body is well proportioned, with a thin integument. The head is equal in length and height. The eyes of females are small but in males large (occupying 1/5 and 1/2 of the lateral surface of the head respectively). Antennae I are longer than the head and first two somites of the pereon; the 1st segment of the flagellum is longer than the head and somite I of the pereon, anteriorly acute, obliquely truncate, and with parallel lower and upper margins; the flagellum is broader and longer in males than in females. The 2nd segment of the flagellum is small, reduced, and located apically on the 1st. Antennae II in females are shorter than antennae I and five to six-segmented, in males longer than antennae I and seven- to eight-segmented. The medial lobe of the maxillipeds is trapezoid with a round apex while the lateral lobes have a row of seven-eight spinules on the surface and three-four spinules in the distal part of the outer margin.

In pereopods I the 2nd segment is broadened in the middle, the 5th segment is distinctly longer than the wide and bears several setae; the 6th segment is twice longer than wide and its posterior margin straight and finely denticulate except in the proximal part; the claw is longer than half the 6th segment and posteriorly denticulate. In pereopods II the 2nd segment is elongated, its posterior margin convex and the anterior margin straight the lobe of the 4th segment has several spiniform setae at the apex; the acute process of the 5th segment is denticulate and extends to the middle of the 6th segment; the 6th segment is constricted distally, longer than its maximum width, and the distal 3/4 of its posterior margin finely denticulate; the claw is strong, longer than half the 6th segment, with several denticles on the posterior surface. Pereopods III-IV are identical in structure but pair IV slightly longer; the 4th segment is broadened distally, twice longer than its maximum width, and has a

convex anterior margin; the 5th segment is linear and its length is 1.5-2 times its width; the 6th segment is about five times longer than broad; the claw is smooth and longer than half the preceding segment. In structure of pereopods III-IV, *V. stebbing* is similar to *V. viatrix* but distinguished by lesser developed musculature of the legs, much elongated segments, and shorter claws. Pereopods V-VI are long and thin. The length of the 2nd segment of pereopods V constitutes 1/5 that of the entire leg, is twice its width, the anterior margin distally bearing five small spinules; the 4th-6th segments are narrow and the ratio of their lengths 3: 2: 4; the claw is 1/4 the length of the 6th segment and its posterior margin, like that of the 6th segment, is finely serrated. The 2nd segment of pereopods VI is the same width as in pereopods V but its length three times its width, constituting 1/4 the length of the leg; the distal part of the anterior margin has four spinules; the proportions of the 4th-5th segments are the same as in pereopods V; not only the posterior margin of the 6th segments but most of the posterior margin of the 5th segment also is denticulate; the claw is slightly longer than 1/4 the length of the 6th segment. The structure of pereopods VII is characteristic for the species; the 2nd segment is almost half the length of the leg and relatively narrower (length twice width); the wing of the posterior margin is cuneate and stretches downward to the middle of the 4th segment or even farther; the anterior margin is straight or slightly concave, distally acute and stretched downward, with an apical spinule; the 4th-7th segments are cylindrical and each successive one narrower than the preceding segment, with the 5th the longest; the last segment is finger-shaped.

The urosome is identical in females and males. The posterior lateral angles of the last urosomite do not project backward. The basipodites of the uropods are smooth except for the faintly denticulate distal part of the outer margin of pairs I-II. The rami of uropods I are denticulate on both margins. The denticulation of uropods II is much finer on the inner margin of the rami than in the outer. The rami of uropods III are shorter than the basipodite, identical in length and structure in both sexes, and constricted towards the end; a characteristic apical seta is located in a notch on the endopodite of the male.

Sex attributes:

Dimorphic

Male: 1st antenna well developed, female: 1st antenna reduced.

Descriptive characters:

Meristic characteristics:

Feeding habit:

Main food:

Feeding type:

Additional remarks: The species closely resembles *V. viatrix* as well as *V. antarctica*. It is distinguished from the first species by long antennae I, short process on the 5th segment of pereopods II, much weaker development of pereopods III-IV with elongated segments and short claws, and highly stretched margins of the 2nd segment of pereopods VII. It differs from the second species in smaller size, length antennae II, straight posterior margin of the 6th segment of pereopods I, short process of the 5th segment of pereopods II, proportions of pereopods III (much shorter 5th segment), proportions and ornamentation of pereopods V-VI, long and narrow 2nd segment of pereopods VII with more stretched distal angles, and finally, in the absence of any distinct sexual dimorphism in the structure of the uropods. The similarity between *V. stebbingi* and *V. antarctica* and inadequacy of the existing keys for identification (Behning, 1912) have led to some confusion in identifying them. For example, Hurely (1955) described a specimen from New Zealand as *V. stebbingi*, which should have been related to *V. antarctica*, as is clear from the drawings and description given by the author. Ornamentation of the lower margin of epimeron III (as per key of Behning) cannot be considered a satisfactory character for the separation of the species *antarctica* and *stebbingi* because this is a variable trait. Apparently, the difficulty in differentiating these species has arisen because *V. stebbingi* has "penetrated" into Antarctic waters.

Size and age:

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): (captive)

Ref. No.:

Length/ weight relation ships:

Eggs and larvae: Characteristics: Abundance: Biochemical aspects: Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Electrophoresis:	Ref. No.: Ref. No.: Ref. No.:
SPAWNING INFORMATION: Locality: Season: Fecundity: Comment:	Main Ref:
MAJOR PUBLICATIONS (INDIAN): (Include review articles, monographs, books etc.) LIST OF INDIAN EXPERTS (Name, address, phone, fax, e-mail etc.) <div style="text-align: center;"> <p>Dr. K.K.C. Nair Scientist-In-Charge R.C. of NIO, Post Box-1616 Kochi – 682 014 Email kkcnair@niokochi.org</p> <p>Dr. N. Krishna pillai “Radhika” 65- Champaka Nagar Bakery Junction Trivandrum-695 001</p> </div>	
ACKNOWLEDGMENT: (List of persons who contributed, modified or checked information)	