

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>Phronima solitaria</i> Guerin-Meneville, 1836 Common Name (if available):		
Synonyms:	Author(s)	Status
<i>Phronima solitaria</i>	Guerin-Meneville	1836: 7
<i>Phronima solitaria</i>	Bovallius	1889: 372
<i>Phronima solitaria</i> (<i>atlantica</i> var)	Vosseler	1901: 23
<i>Phronima solitaria</i> (<i>atlantica</i> var)	Pirlot	1929: 112
<i>Phronima solitaria</i>	Shih	1969: 16, 1971: 28
- <i>custos</i>	Bate	1862: 318
- <i>megalodous</i>	Stebbing	1988: 1353
Classification: Phylum: Arthropoda Sub- Phylum: Sub- Class: Malacostraca Super class Mandibulata Sub Order: Hyperidea Super Order: Peracarida Class: Crustacea Sub-Family Super Family: Order: Amphipoda Phronimoidea Family: Phronimidae Genus: <i>Phronima</i> Species: <i>solitaria</i>		
Authority: Guerin-Meneville, 1836 Reference No.: Guerin-Meneville, F. -E 1836: Description de quelques genres nouveaux de Crustacés appartenant à la famille des Hyperines. <i>Mag. Zool.</i> , Vol. 6, No. 8, pp 1-12.		
Geographical Location: Atlantic Ocean, particularly its eastern part; western part of the Mediterranean Sea. Indian Ocean, western and southern parts of the Pacific Ocean. In temperate and high latitudes it does not cross beyond the limits of the Subtropical Convergences.		
Latitude:	Place:	
Longitude:	State:	

Environment

Freshwater: Yes/ No

Habitat: Marine

Salinity:

Brackish: Yes/No

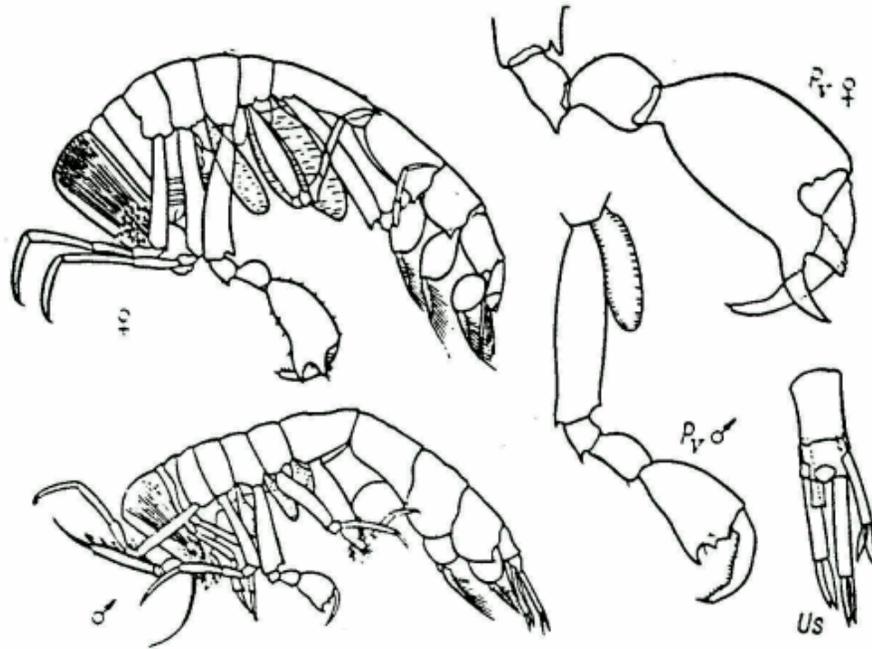
Migrations:

Temperature:

Salt Water: Yes/No

Depth range :

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



Phronima solitaria Guerin- Meneville
(female-after Vosseler, 1901; - after Shih, 1969)

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: The antennae in males are well developed. The length of antennae I is approximately equal to the height of the head; the flagellum is seven segmented. Antennae II are somewhat shorter than antennae I (reaching the tip of the 5th segment of the flagellum of antennae I), their flagellum nine-segmented.

The last pereon somite in females is appreciably, in males slightly longer than pleon somite I. Pereopods V have a slightly elongated 4th segment in females, appreciably elongated in males; length of the 5th segment approximately 1.5 times its width, the anterior margin is straight in males and slightly bulged in females, the posterior margin bulged, the proximal angle not produced, and the maximum width of the segment occurs in the distal part; the anterior distal tooth is strong, curved, in females reaches, in males does not reach the level of the tip of the medial protuberance; the medial denticle of the distal margin is absent in females, in males developed and separated from the medial protuberance by a shallow notch; the medial protuberance in females in strong, high triangular, and has a tuberculate posterior margin; in males it is not high and has three-four poorly discernible tubercles; the 6th segment has a weakly developed protuberance in the middle of the anterior margin, and in a bent position extends beyond the anterior margin of the 5th segment by not more than 1/3 its length in females and 1/4 its length in males. The rami of the uropods are approximately equal in length.

Sex attributes:

Dimorphic

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

Descriptive characters:

Meristic characteristics:

Feeding habit:

Main food:

Feeding type:

Additional remarks: *Phronima solitaria* is close to *P. atlantica* in body proportions, but in structure of the 5th segment of pereopods V to *P. sedentaria*; however, unique morphological features enable identification of even juvenile crustaceans. The possible hybrid nature of this crustacean has also been suggested (Shih, 1969). However, relatively recently the same author (Shih, 1971a) identified and described the male *P. solitaria* and confirmed the independent status of the species. The males of this species are similar to those of *P. sedentaria* but have well-developed antennae II (although much smaller than antennae I) and a much shorter anterior distal tooth on the 5th segment of pereopods V; the 6th segment of pereopods V is also relatively shorter than in *P. sedentaria* or *P. atlantica*, in which it projects beyond the anterior margin of the 5th segment by more than 1/3 its length.

Size and age:

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

Ref. No.:

Length of adult females up to 24 mm, of males 19mm.

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 relations:

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)	