

**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), Pelagic amphipod		
Scientific name & Authority : <i>Cystisoma magna</i> (Woltereck, 1903) Common Name ( if available) :		
Synonyms:	Author(s)	Status
<i>Cystisoma magna</i> ( <i>Thaumatops</i> )	Woltereck	1903: 455
<i>Cystisoma magna</i> ( <i>Thaumatops</i> )	Spandl	1927: 171
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: Vibilioidea	Family: Cystisomatidae	
Genus: <i>Cystisoma</i>	Species: <i>magna</i>	
Authority: (Woltereck, 1903) Reference No.: Woltereck, R. 1903. Bemerkungen zu den Amphipoda Hyperidea der Deutschen Tiefsee-Expedition, I. Thaumatopsidae. <i>Zool. Anz.</i> , vol. 26, No. 700, pp. 447-459.		
Geographical Location: Three reliable finds are known from the tropical part of the Indian Ocean (two females, one male) and one from the southern Atlantic (female). We obtained three adult females and one male-from the eastern equatorial and north central (27° 03'N 117° 52' W) parts of the Pacific Ocean. Thus the species may be considered as distributed in the warm waters of these oceans.		
Latitude:	Place:	
Longitude:	State:	

Environment

Fresh water: Yes/ No

Habitat : Marine

Salinity :

Brackish : Yes/ No

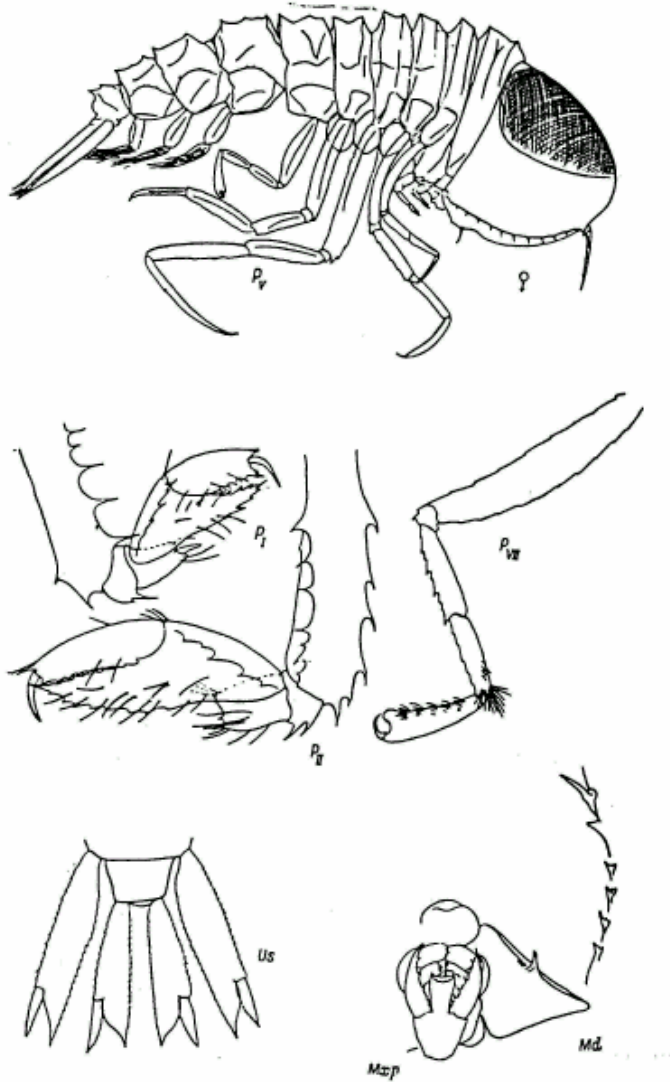
Migrations :

Temperature :

Salt water : Yes✓ / No

Depth range :

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



*Cystisoma magna* (Woltereck) (after Woltereck, 1903; PI-II, Us- after Spandal, 1927).

DATA ENTRY FORM: Form- 2(Fish / shellfish / others ) Ref.No.: (please answer only relevant fields ; add additional fields if you require) Form –1 Ref.No.:	
<b>IMPORTANCE</b> 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:	
<b>SALIENT FEATURES :</b> <b>Morphological:</b> Diagnostic characteristics: The head in females is spherical, in males its height slightly exceeds its length. The eyes are dorsal; occupy only upper part of the smooth convex lateral surface. There are 10-14 marginal denticles. The ventral surface of the head is slightly convex but highly so in the region of two-six pairs of ventral denticles the anterior denticles is very large while the glandular denticles do not differ from the subsequent ones. The mandibles have one strong short central denticle each. Antennae I (view laterally) are distinctly attached in the female below the lateral border of the eyes. The pereon is significantly lower than the head, with a dorsal crest more raised than in other species. The coxal spines are shorter than in <i>C. pellucida</i> . The 2 <sup>nd</sup> segment pereopods I is almost the same length as the rest of the leg; its anterior margin denticulate and the posterior margin smooth; the 5th segment is convex anteriorly and bears two carines, its process is broad and denticulate and extends to the end of the 6th segment; the 6th segment is shorter than the 5 <sup>th</sup> , its anterior margin convex and carinate, the posterior margin straight and denticulate; the chelae of the 5 <sup>th</sup> – 6 <sup>th</sup> segments are indistinctly denticulate, sometimes smooth; the distal denticles on the 6 <sup>th</sup> segment are large and project along the side of the claw; the claw is half the length of the 6 <sup>th</sup> segment. The 2 <sup>nd</sup> segment of pereopods II is slightly longer than the remaining part of the leg, its posterior margin coarsely denticulate and slightly broadened distally; the 5th segment is elongated, the anterior margin convex and carinate; the width of the chelate process is more than half the maximum width of the segment, but the apex extends beyond the middle of the claw; the 6 <sup>th</sup> segment is longer than the 5 <sup>th</sup> , its anterior keels smooth or weakly denticulate and terminating in denticles along the sides of the claw, its posterior margin straight and denticulate; the chelate process somewhat more massive than 6 <sup>th</sup> segment; the claw is barely curved and about 1/ 3 the length of the 6 <sup>th</sup> segment. Pereopods III-IV are along and narrow. The 2 <sup>nd</sup> segment of pereopods III is the same length as the whole of pereopods II,	

slightly curved forward, its posterior margin distally denticulate; the 4<sup>th</sup> and 5<sup>th</sup> segments are the same size and together equal to the 2<sup>nd</sup> in length; the 6<sup>th</sup> segment is the same length as the preceding segments but narrow and with three sharp keel; the posterior margin of all three segments is denticulate, while the distal part of the 4<sup>th</sup>, the proximal part of the 6<sup>th</sup>, and the entire 5<sup>th</sup> segment bears transverse rows of resilient setae. Pereopods III extend only to the middle of the 5<sup>th</sup> segment of pereopods IV. The 2<sup>nd</sup> segment of pereopods IV is narrow and equal to the total length of the 2<sup>nd</sup> 4<sup>th</sup> segments of the preceding pereopods; ornamentation is the same as in pereopods III but the transverse rows of setae are more strongly developed on the 6<sup>th</sup> segment and, on the 5<sup>th</sup> segment, only in the distal part. Pereopods V are longer and more massive than the remaining ones; the 2<sup>nd</sup> segment is twice broader and 1.5 times longer than in pereopods IV, the distal part of the anterior margin bears low denticles, with the last denticle broad and overhanging the 3<sup>rd</sup> segment but not extending to its end; the 4<sup>th</sup> segment is half the 2<sup>nd</sup> in length while the 5<sup>th</sup> segment is 1.5 times longer than the 4<sup>th</sup>; both these segments bear denticles anteriorly; the 6<sup>th</sup> segment is narrow and somewhat longer than the 5<sup>th</sup> and curves forward evenly; the claw is small. Pereopods VI are shorter than V by approximately half the length of the 6<sup>th</sup> segment. Pereopods VII are almost half the length of the preceding pereopods; the 2<sup>nd</sup> segment is linear or slightly convex posteriorly, its margins weakly denticulate; it is somewhat longer than the 4<sup>th</sup> and 5<sup>th</sup> segments together; both segments are anteriorly denticulate, the 5<sup>th</sup> also bearing a fascicle of setae in its distal part; the 6<sup>th</sup> segment is narrow at the base and distally clavate; the medial surface of the 5<sup>th</sup> – 6<sup>th</sup> segments bears transverse rows of setae. The “egg forceps” is formed by the anterior bulge of the distal margin of the 6<sup>th</sup> segment and the uncinatous claw, attached to the raised posterior distal part of the segment; its base is inclined forward and an almost perfectly round pore is left between the claw and notch of the distal margin; the apex of the claw leans toward the anterior side of the bulge covering it and the maximum width of the segment occurs along the distal margin. In males the 6<sup>th</sup> segment is narrow and equal to the 5<sup>th</sup> segment.

The urosome (with uropods) is somewhat shorter than the pleon. The total length of the urosomites is equal to the length of the last somite of the pleon; urosomite II is slightly shorter than urosomite I. The rami of the uropods are equal in length of the basipodites are broad. The basipodite in uropods I is three times longer than wide, its margins denticulate; the rami are  $\frac{1}{4}$  the length of the basipodite; the endopodite is proximally very broad and distally sharply constricted and acute, while the exopodite is narrow. The basipodite of uropods III is distally broadened, its length four times the maximum width; the ratio of length of rami and basipodite is the same; the sides of the rami facing each other are finely serrate while the opposite sides bear low denticles.

Sex attributes:

Dimorphic

Male: 1<sup>st</sup> antenna well developed, female: 1<sup>st</sup> antenna reduced.

Descriptive characters:

Meristic characteristics:

Feeding habit:

Main food :

Feeding type :

Additional remarks: Shoemaker (1945a) reported a find of 15 specimens of *Cystisoma* in the region of the Bermuda islands, which he identified as *C. magna* on the basis of Stephensen's (1918) and Barnard's (1932) keys. However, from the morphological notes of the author, it appears that an error has occurred in identification: as per the aforesaid keys, the given specimens should have been related to the species *C. longipes* which bears two spinules on each of the mandibles and up to 18 marginal denticles.

Size and age:

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

Length of females up to 140 mm, of males up to 70 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 relational ships: Ref. No.:

Eggs and larvae: Characteristics: Abundance: Biochemical aspects: Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Electrophoresis:	Ref. No.:    Ref. No.: Ref. No.:
<b>SPAWNING INFORMATION:</b> Locality: Season: Fecundity: Comment:	Main Ref:
<b>MAJOR PUBLICATIONS (INDIAN):</b> (include review articles, monographs, books etc.)  <b>LIST OF INDIAN EXPERTS (Name, address, phone, fax, e-mail etc.)</b>  <div style="margin-left: 40px;"> <p>Dr. K.K.C. Nair            Scientist-In-Charge            R.C. of NIO,            Post Box-1616            Kochi – 682 014            Email <a href="mailto:kkcnair@niokochi.org">kkcnair@niokochi.org</a></p> <p>Dr. N. Krishna pillai            “Radhika”            65- Champaka Nagar            Bakery Junction            Trivandrum-695 001</p> </div>	
<b>ACKNOWLEDGEMENT:</b> (List of persons who contributed, modified or checked information)	