

**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) Copepoda		
Scientific name & Authority: <i>Cosmocalanus darwinii</i> (Lubbock, 1860) Common Name (if available): Synonyms:		
	Author(s )	Status
<i>Undina darwini</i>	Brady	1883
<i>Calanus darwini</i>	Giesbrecht	1892
<i>Undinula darwini</i>	A.Scott	1909
<i>Cosmocalanus darwinii</i>	Bradford and Jillet	1974
Classification: Phylum: Arthropoda Sub- Phylum Super class Class: Crustacea Super Order: Gymnoplea Sub- Class: Copepoda (Milne Edwards 1840) Super Family: Order: Calanoida (Sars 1903) Family: Calanidae Sub-Family Genus: <i>Cosmocalanus</i> Species: <i>darwinii</i> Authority: Lubbock Reference No. Lubbock, J. 1860. On some oceanic Entomostraca collected by Captain Toynbee. <i>Transactions of the Linnean Society of London, ser. 2, 23: 173-193.</i>		
Geographical Location: This species is found in tropical and subtropical waters usually restricted to surface waters (Vervoot 1949; Heinrich 1968)		
Latitude: 25°N to 40°S	Place: Indian Ocean	
Longitude: 20°E to 120°E	State:	

Environment

Freshwater: Yes/ No

Habitat: Marine

Salinity: >35‰

Brackish: Yes/No

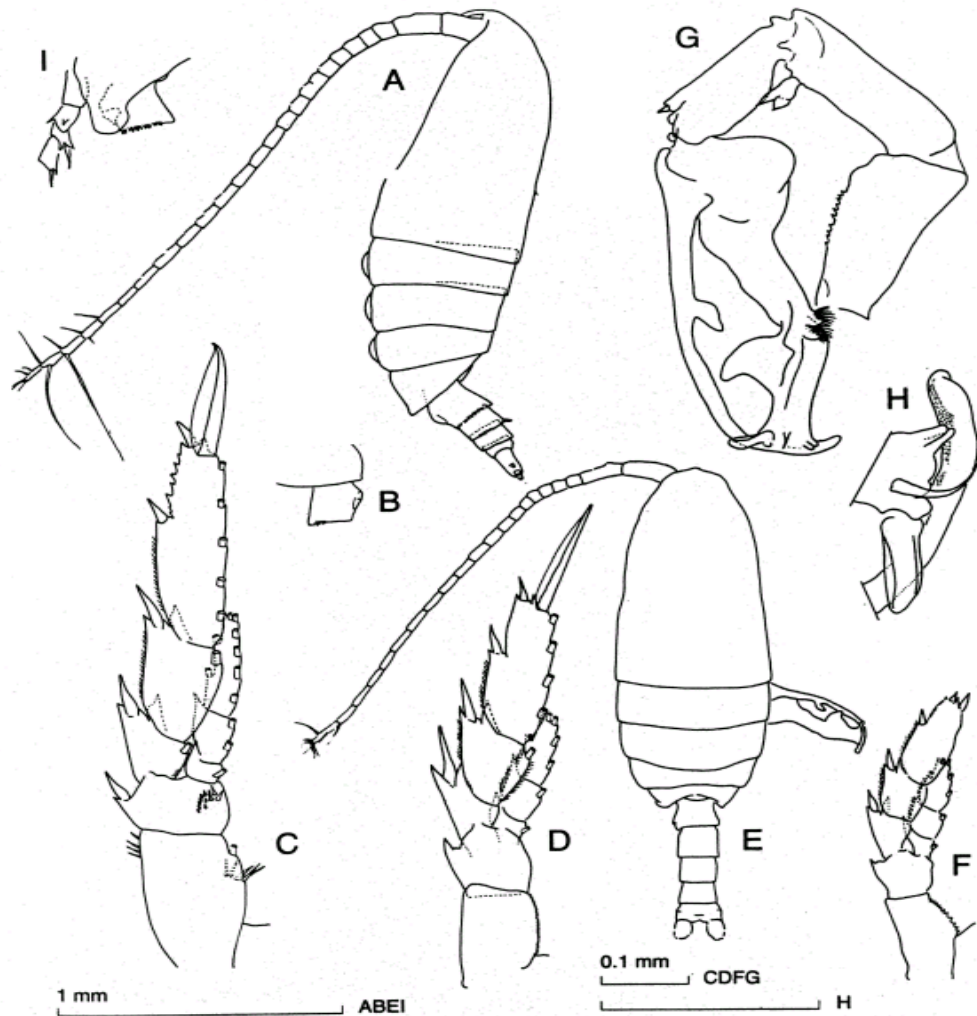
Migrations:

Temperature:

Salt Water: Yes

Depth range : Epipelagic

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



*Cosmocalanus darwiniii* (After Bradford-Grieve, 1994)

Female: A – lateral view; B – right side view of genital segment and pedigerous segment 5; C – leg 3; D – leg 5.

Male: E – dorsal view; F – right leg 5; G – left leg 5; H – detail of the distal part of left leg 5; I – right side of genital segment and pedigerous segment 5 of female.

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: <p>             Prosome and pedigerous segment 1 fused. Mouthparts similar in both sexes; maxilla 2 with 4 setae on inner lobe. Leg 1 basipod 1 anterior margin terminates in a well-defined projection; basipod 2 with a distal seta on the anterior surface modified into a proximally thickened spine appearing as a notch. Legs 2-4 without modification or ornamentation. Leg 5 with the inner border of basipod 1 naked in both sexes. Female leg 5 endopod with 7 setae. Male leg 5 with both rami 3- segmented hardly modified on the right; left endopod with only 2 terminal setae. (Bradford and Jillett 1974).           </p> <p>             Female: Postero lateral metasomal borders may take three forms (symmetrical= forma <i>symmetrica</i>, very asymmetrical with left border produced into a squared –off lappet= forma <i>typica</i> and <i>symmetrica</i> have segments 6 and 7 with a transverse row of small spinules, and forma <i>intermedia</i> has segments 3 to 8 with a transverse row of small spines. Forma <i>typica</i> has the outer edge spine of leg 5-exopod segments 1 extending as far as the base of the outer edge- spine of the next segment, where as in forma <i>intermedia</i> this spine is shorter (Sewell 1929; Vervoot 1949).           </p> <p>             Male: Leg 5 is distinguished by the relatively elongate nature of the left exopod pincers, the detail of the structure of exopod segment 3 with a single prominent lappet extending towards the other part of the pincers, and the position of the lappet (almost at mid- length) on the modified extension of exopod segment 2 which serves as the other part of the pincers (Giesbrecht 1892).           </p>	
Sex attributes: Descriptive characters:	

Meristic characteristics:

Feeding habit:

Main food:

Feeding type:

Additional remarks:

Both forma typica and forma intermedia females were present among the specimens examined here. There did not seem to be a great difference in the lengths of the outer edge spine of leg 5-exopod segment 1; the apparent length appeared to depend on the attitude in which the following segments were held.

Size and age:

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

Female: 1.60 – 2.4 mm.

Male : 1.63-2.05 mm.

Ref. No.:

Bradford-Grieve, 1994

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 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:
<p>MAJOR PUBLICATIONS (INDIAN): (Include review articles, monographs, books etc.)</p> <p>Sewell,R.B.S. 1929. "Copepoda of Indian Seas – Calanoida", <i>Mem. Indian Mus.</i>, Vol X.</p> <p>Saraswathy, M. 1961. Plankton Studies. Qualitative and Quantitative Estimations of Copepods. <i>M.Sc Thesis. Univ. of Kerala.</i> 1-171.</p> <p>Kasturirangan, L.R., 1963. Key to the identification of the more common pelagic copepods of the Indian coastal waters. <i>C.S.I.R.Publ.</i> 1-128.</p> <p>Rosamma Stephen, 1984. Distribution of Calanoid Copepods in the Arabian Sea and Bay of Bengal. <i>Mahasagar</i> <b>17</b>(3): 161-171.</p> <p>Madhupratap, M.and P. Haridas, 1986. Epipelagic calanoid copepods of the Northern Indian Ocean. <i>OCEANOLOGICA ACTA</i> Vol. 9, No.2.</p> <p>LIST OF INDIAN EXPERTS (Name, address, phone, fax, e-mail etc.)</p> <p>Dr. Rosamma Stephen Scientist, National Institute of Oceanography Regional Centre, Kochi – 682 014 Phone: 390814, Res – 203087 Email <a href="mailto:rosa@niokochi.org">rosa@niokochi.org</a></p> <p>Dr. M.Madhupratap Scientist BOD, National Institute of Oceanography Dona Paula, Goa-403 004. Phone – 221322 E mail- <a href="mailto:madhu@csnio.ren.nic.in">madhu@csnio.ren.nic.in</a></p>	

Dr. P.Haridas  
Scientist  
National Institute Of Oceanography  
Regional Centre, Kochi – 682 014  
Phone – 390814.  
E [mail-hari@niokochi.org](mailto:mail-hari@niokochi.org)

Dr. Saraswathy. M.  
“Revathy”  
Palarivattom  
Ernakulam

**ACKNOWLEDGEMENT:**

(List of persons who contributed, modified or checked information)