

Calanidae: Calanoida

Mesocalanus Bradford and Jillett, 1974

--, Gardner & Szabo, 1982, p. 25, 147.

-, NISHIDA, 1984: 39

-, ARCOS + FLEMINGER 1986: 170

- MAUCHLINE 1988: 719

- BRADFORD 1988: 73-, SPECIES COMPOSITION

MESO -  
alanus lighti Bowman

C -- Bowman, 1955, pp. 414-421 Figs. 1-4. Calif. Coast

C -- , Heinrich, 1957, pp. 691 - , fig. 1-2. NW Pacific.

C -- --, Mullin, 1969, pp. 438-466, figs. 1-3

C -- -- Brodsky, 1967:222

C -- --, Brodsky, 1965:28

C --, Fleminger and Hulseman, 1973, p. 340.

C -- Vyshkvaritseva, 1972, p. 152.

C -- Frost, 1974, pp. 77

C --, VYSHKVARITSEVA, 1976: 23, 25, 26, 33, 34, 35, 36, 44, 50,  
55, 57; TAB. 1, 3, 4, 6, 8, 9, 11, 13, 14, 16

- C  
--, VUSHKUARTZEVA, 1977: 97, 130; FIG. 12, 30
- C - UVE & KASAHARA 1978: 111
- C - LIGHTII, AMBLER & MILLER 1987: 561-576, N. PACIFIC
- C - BAMSTEDT 1986: 11-
- C - REID & FERRARI 1988: 13
- MESOCALANUS -, BRADFORD 1988: 74-

Mesocalanus lighti (BOWMAN, 1955) (2)

CAHANUS -, BRODSKY 1972: 8-107, FIG. 5.

H. Fleminger, 1985: 275-291

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Calanidae - Calanoida.

Calanus tenuicornis Dana, ♀.

- — Dana, 1849, p. 15 (278).
- — Cleve, 1900b, p. 142; 1903, p. 357.
- — Giesbrecht & Schmeil, 1898, p. 18.
- — Cleve, 1904, pp. <sup>180-182</sup>186; Farran, 1905, pp. <sup>26</sup>30
- — Brodsky, 1965: 28

Habitat. South Africa: North Pacific:  
Tropical Pacific: Gibraltar

- — Stebbing, 1910, p. 520: T. Scott, 1912, p. 527
- — Steuer, 1910, p. 1025 (21).
- — Dana, 1852, p. 1069: pl. 73, f. 10a-10b.
- — Giesbrecht, 1892, p. 90, 129: pl. 6, f. 12-13:  
pl. 7, f. 5, 16, 23: pl. 8, f. 18, 27.
- — Esterly, 1905, p. 127: text-fig. 3, a-b.
- — Giesbrecht, 1888, p. 331.
- — Pesta, 1921, p. 496: text-f. A3.
- — Wolfenden, 1904, p. 111.
- — Sars, 1905, p. 1: Pearson, 1906, p. 5.
- — van Breemen, 1908, p. 11, fig. 8.
- — A. Scott, 1909, p. 8. Sewell, 1914, p. 193.

— — Farran, 1929, p. 217.

— — Cleve, 1900, p. 49.

— — Rose, 1933, p. 62: fig. 12.

— — Sewell 1929, p. 20, Indian O.

----- Dana, 1853, p. 1069, pl. 73, fig. 10

----- Giesbrecht, 1892, pp. 90, 98, 129, 725, 727, pl. 6,  
figs. 12, 13, pl. 7, figs. 5, 16, 23, pl. 8, figs  
18, 27

----- Dahl, 1894, pl. 76; 1894a. pp. 3, 11

----- Thompson, 1903, pp. 2, 14, 15

-Farran, 1908, pp. 19, 20; 1920, pp. 16, 19, 24, 29; 1926, p. 227;  
1936, p. 77

-Früchtl, 1920, p. 468; 1923a pp. 152, 153; 1924, pp. 197, 205

----- Marukawa, 1921, p. 7

----- Dakin & Colefax, 1933, p. 204

- Vervoort, 1946, pp. 22-25
- , Motado & Anraku, 1955, p. 212. Idzu Is.
- -- , Anraku, 1954, pp. 1-8 N W Pacific..
- — , MORI - 1937, pp. 16 JAPAN.
- — , BRODSKY, 1950, p. 95, fig. 24, USSR.
- — , Chiba, Tsuruta, + Maeda, 1955. Bikini.
- — , Bowman, 1955
- — , Heinrich, 1957, p. 691- , fig. 1A. NW Pacific.
- --, Furuhashi, 1961. p. 10
- --, Honjo et al, 1957. pp. 120-128
- --, Decker, 1964. p. 18. South Africa
- --, Grice, 1962. pp. 175-177
- — , Heinrich, 1961. p. 8 (vertical distribution)
- — , Omori, 1965. pp. 18-27
- — , Owre, 1962



Calanus (MFSO -

C. tenuicornis

(3)

- -- Park, 1968, pp. 527-572.
- -- Moraitou-Apostolopoulou, 1969, pp. 1-3, table 1
- --, Mullin, 1969, pp. 438-466, figs. 1-3,  
tables 1&2
- --, Vilela, 1969, p. 7, Est. 1 fig. 1
- --, Shmeleva, 1963, pp. 138-152
  
- --, Park, 1970, p. 474
- - Brodsky, 1967:222
- --, Heinrich, 1960, p. 3
- --, Bradford, 1970, p. 342
- --, Bradford, 1970, p. 342

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--, Hure & Scotto de Carlo, 1968 : 34

--, Chiba, 1956, p. 11

--, Bradford, 1972, p. 31, fig. 4.44

--, Corrañ, 1970, p. 64, pl. 4

--, DeDecker, 1962, p. 101

--, Heinrich, 1960, p. 7,8

--, Sato, 1913, no. 4, pl. 1

--, Ehrhardt, 1967, p. 737-

--, Brodsky, 1972, p. 253

--, Vives, 1972, pp. 206-207.

--, WHEELER, 1970:3

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card 4

Calanus tenuicornis

- , Fleminger and Hulseman, 1973, p. 340
- , Beklemishev, 1961, p. 143
- (Neocalanus) tenuicornis (?), Brodskii, 1967, p. 191-
- *Harding, 1974, p. 143.*
- , Krylov, 1967?, p. 248
- , Bowman, 1971, p. 5 -
- , Morris, 1970, p. 2300.
- , Hue, 1967, pp. 14 & 18.
- ,  Roe, 1972a, pp. 280-
- , Roe, 1972b, pp. 317-319, 321, 333
- , *Frost, 1974, pp. 77, 96*

-- VYSHKVARTSEVA, 1972, P. 152, fig. 1.

--, Furuhashi, 1966: 304, 308, 311

--, Furuhashi, 1961: 105

--, Bjornberg, 1963: 4, 10, 11, 9, 100 (table), tables 84, 115,  
117, 120, 122, 124, Table 17, 126, 127

--, TANAKA, 1956a: 252, 255, 261

--, VYSHKVARTZEVA, 1977: 17

--, VYSHKVARTZEVA, 1976: 23, 25, 26, 33, 34, 35, 36, 44, 50, 55,  
57; FIG. 16; TAB. 1, 3, 4, 6, 8, 9, 11, 13, 14, 16

--, VYSHKVARTZEVA, 1977: 97, 130, 131; FIG. 11, 30

--, DEEVEY, 1971: 225, 226, 228; FIG. 6; TAB. 3

--, DEEVEY & BROOKS, 1971: 936, 937

MFSO-

CALANUS TENNICORNIS

CARD # 5

- Cannicci, 1959: *passim*
- CORRAL & ALVAREZ- OSSORIO: 138, 159, 161
- BEAUDOUIN, 1973: 125, 129, 167
- JAWED, 1973: 7, 9, 13, 14, 22-24, 31-41, 43-46, 48-52,  
54-58, 60-62, 64, 66, 68, 71-73, 77, 79, 85, 88, 94,  
96, 98, 99, 101-104
- SCOTTO DI CARLO, ET AL, 1975: TAB 1
- CALEF & GRICE (UNPUBL.) IN KETCHUM & RYDER,  
1966 (UNPUBL.): TAB. 1 ; APPENDIX
- Chiba & Hirakawa 1972: 78.

MESO-

Calanus tenuicornis

Card 6

- , Moore & Sander, 1976, p. 594, plate 3

-- , Shmeleva & Kovalev, 1974, p. 50-52, fig. 2A

-- , Shmeleva & Zaika, 1973, p. 873

Mesocalanus --- , Gardner & Szabo, 1982, p. 25, 148-149

Mori, 1942: 550

-- , PETERSON + MILLER, 1977: 718

-- , HIROTA, 1982: 50

-- , SPECCHI + VALLI, 1979: 134

-- MASSUTI + NAVARRO 1950: 20-28.

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Calanus tenuicornis Dana

card 7

-- Sander & Moore 1978: 232

-- UVE & KASAHARA 1978: 111

-- YOUNGBLUTH 1979: 22, CARIBBEAN

-- GRICE & HART 1962a: 296, w. NORTH ATLANTIC

-- GRICE & HART 1962b: TABLE 3

-- DAKIN & COLEFAX, 1940: 87, fig. 102a-d.

-- DAKIN & COLEFAX, 1933: 204

-- TANAKA, 1965a: 11, fig. 3a-c

-- BJORNBERG, 1981: 616, fig. 205 #6

- Dawson & Knatz, 1980: 23, pl. 10, fig. a-e
- Devey & Brooks, 1977: 263
- De Decker, 1984: 315
- Hure, 1955: 21
- Hure, 1961: 14-15
- AMBLER & MILLER 1987: 561-576, N. PACIFIC
- AMBLER ET AL. 1985: 189, SAN FRANCISCO BAY
- Vives, 1978: 265, 269, Table 1
- REGNER 1987: 373, ADRIATIC
- CARLI 1968: 100-, LIGURIAN SEA
- CARLI 1971a: 61-, LIGURIAN SEA



MESO-

Calanus tenuicornis Dana

card 8

- Carli 1971b: 371-372, Ligurian Sea
- CARLI + CRISAFI 1983: 36-37, PLATE 11 - ITALY
- CARLI + SERTORIO 1964: 207-, LIGURIAN SEA
- KIORTSIS ET AL. 1969: 36-, AEGEAN
- Saldevilla et al. 1988: 57 Canary Islands
- REID + FERRARI 1988: 13 -
- FERRARI + BOWMAN 1990: TAB. 1
- CUMMINGS 1982: 32-, GULF OF MEXICO
- M+ -, BRADFORD 1988: 74 -

MESO-

Calanidae - Calanocida

Neocalanus tenuicornis (Dana), ♀

(9)

Calanus — Dana, 1849, p. 15 (278).

Neocalanus — G.O. Sars, 1925, p. 9.

— Rose, 1929, p. 8.

— Wilson 1942, p. 195

-- --, Brodsky, 1962. p. 98

Habitat. See Calanus tenuicornis.

--, Corral, 1970, p. 64

-- Chen, et al 1983: 352-365.

- Chen, Zhang, Chen, 19--: 64

Mesocalanus tenuicornis (Dana, 1849)

- , Gardner & Szabo, 1982, p. 25, 148-149, fig. 8.3.1.
- Cooney & Coyle, 1985: 310 - 313
- Fleminger, 1985: 275-291, fig 6G
- , ARCOS & FLEMINGER 1986: 171-184, FIG. 16
- , MADHUPRATAP & HARIDAS, 1986: 107, 108 - DISTRIBUTION, INDIAN OCEAN
- SCHULZ 1986b: 463-464, SARGASSO SEA

Mesocalanus tenuicornis (Dana, 1849)

card 11

Calanus -, Marukawa 1921: 7-, Japan

C. -, R. WILLIAMS & CONWAY 1988: 259-, N. ATLANTIC

C. -, JIMENEZ-PEREZ & LARA-LARA 1988: 126-,  
GULF OF CALIFORNIA

C. -, TURNER 1984d: 5-

C. -, SUAREZ, E. & GASCA 1989a: 198, YUCATAN CHANNEL

C. -, SUAREZ, E. & GASCA 1989c: 94-, COSTA RICA TONE

C. -, COPLEY ET AL. 1989: 11-, NW ATLANTIC

C. -, LAKKIS 1984: 289-, E. MEDITERRANEAN

Mesocalanus tenuicornis (Dana, 1849)

card 12

Calanus -, Alvarino 1989:69-, off s. California

— Wishner & Allison, 1986: f. 8, tbl. 2

C. -, SUÁREZ, E. ET AL. 1990: 124-, W. GULF OF MEXICO

C. -, MARUTAWA 1908: 3-4, PL. I FIGS. 1-15, JAPAN

M. -, REID 1990g: 185

M. -, BOWMAN 1978a: 113-

C. -, SUÁREZ M. 1992: 130-, GULF OF MEXICO

C. -, SUÁREZ & GASCA 1991: 596-, S. GULF OF MEXICO

M. -, ARCOS + FLEMINGAR 1986: 171-, 185, E. PACIFIC

MESOCALANUS TENUICORNIS (DANA, 1849)

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CALANUS -, BRODSKY 1972: 8-107, FIGS.

Mesocalanus vulgaris Dana

— Tafe & Griffiths, 1983:112 Australia