

SUPERFAM. CLAUSOCALANOIDEA - CALANOIDA

CLAUSOCALANIDAE GIESBRECHT, 1892

- BAYLY 1982: 165, 168 - NL. PARACALANIDAE

- MAUGHLIN 1988: 699, 725 -

- ICZN 1988: 228-229, GIVEN PRIORITY OVER

PSEUDOCALANIDAE SARS, 1901

-- VYSHKVA RTZEVA 1994: 119, CHARACTERS

CALANOIDA

SUPERFAM. CLAUSOCALANOIDEA GIESBRECHT, 1892

- MAUCHLINE 1988: 699, 725 -

- ANDRONOV 1991: 133-134, CORRECT NAME OF  
SUPERFAM.

- VYSHKUARTZEVA 1994: 118, CHARACTERS

in

Clausocalanidae - Calanoida,

Clausocalanus, valid

Giesbrecht, 1888, C. mastigophorus

Syn. Clausocalanus Giesbrecht, 1888, p. 334

Clausocalanus Wheeler, 1901, p. 171,

Clausocalanus Giesbrecht, 1892, p. 50,

Calanus (pars) Dana, 1849, p. 278 [185, 733.

Prefix Clauso and Calanus,

Calanus (pars) Dana, 1852, p. 1047.

Calanus (pars) Claus, 1863, p. 172.

Eucalanus (pars) Claus, 1881, p. 325.

Drepanopus (pars) Brady, 1883, p. 76.

Clausocalanus Esterly, 1905, p. 142.

Eucalanus Car, 1884, p. 239.

Drepanopus Thompson, 1888, a, p. 149.

Eucalanus (pars) Thompson, 1888, c, p. 139.

Eucalanus Gourret, 1889, p. 474.

Clausocalanus Giesbrecht & Schmeil, 1898, p. 27.

Clausocalanus Pesta, 1921, p. 505.

Clausocalanus GIESBRECHT, 1888

(2)

-, Heinrich, 1960, p. 12

--, TANAKA, 1956 b: ~~381~~ 381, 382, 384, 399

--, Artiomkin et al., 1966, pp. 5.

--, BRIAN 1927: 16; TAB. VI.

--, Moore & Sander, 1976, p. 594 (tbl 3 for species ref.)

—, Gardner and Szabo, 1982, p. 25, 179.

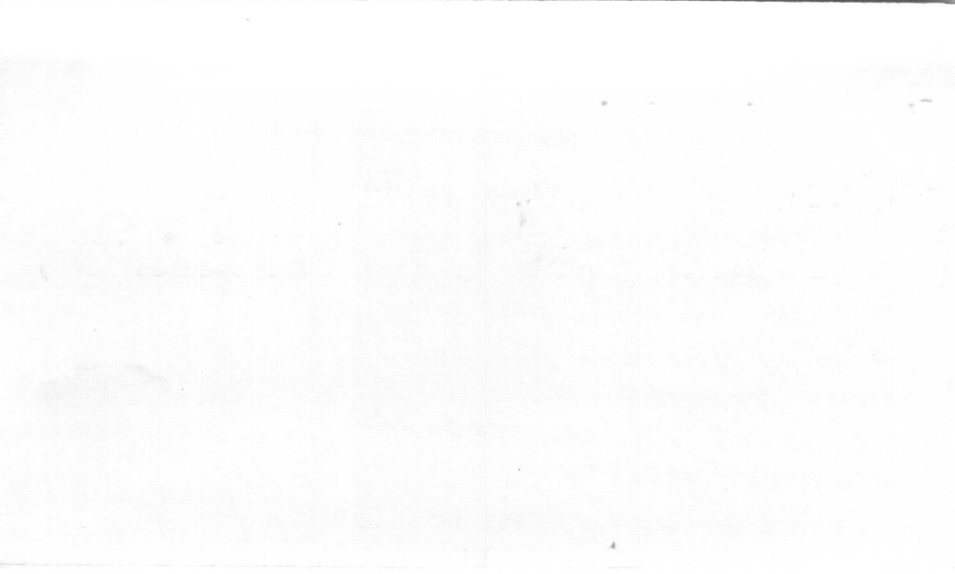
-, ARCOS + FLEMINGER 1986: 170

- BAYLY 1982: 168

- BRADFORD ET AL. 1983: 109

- FLEMINGER 1986: 94

- IANORA ET AL. 1987: 30



Clausocalanus Giesbrecht, 1888

card 3

- Mauchline 1988: 726

- BJÖRNBERG, T. (IN KABATA 1986 (ed.): 199

- DOWIDAR 1986: 629, EGYPT

- ICZN 1988: 228, ~~TYPE~~ PLACED ON OFFICIAL LIST

- FROST 1989: 549

- ARTEMKIN ET AL. 1966 (1973): 175-, CARIBBEAN

- VYSHKUARTSEVA 1989: 34-

Clausocalanidae - Calanoida

Clausocalanus arcuicornis (Dana), ♀, ♂.

Fig. 9a-b

Calanus Dana, 1849, p. 278; 1852, p. 1056: pl. 72, ^

Clausoc. Cleve, 1900, p. 141, [pl. 10, fig. 3-8, 14, 16, 17, 19

— — Giesbrecht, 1892, p. 185: pls. 1, fig. 14: pl. 2, fig. 7:

— — T. Scott, 1894, p. 73: pl. 8, [pl. 36, fig. 29-31, 34

Habitat, Mediterranean: S. Atlantic: Ant-  
arctic Ocean: Pacific, Tropical:  
Arabian Sea, New Zealand, Gulf of Guinea  
Red Sea, San Francisco Bay & ...



- — Giesbrecht, 1895, p. 248 : Brady, 1899, p. 32.
- — Giesbrecht & Schmeil, 1898, p. 27.
- — Wheeler, 1900, p. 171 : fig. 9, text.
- — Cleve, 1901, p. 5 : 1903, p. 359 : 1904, p. 188.
- — I. C. Thompson & A. Scott, 1903, p. 243.
- — Wolfenden, 1905, p. 999 : 1911, p. 203.
- — Esterly, 1905, p. 142 : fig. 13, text.
- — Sars, 1905, p. 3 : Pearson, 1906, p. 9.
- — v. Bremen, 1908, p. 23 : fig. 20, text.
- — Farran, 1908, p. 28 : 1910, p. 91.
- — Pesta, 1909, p. 22      1912, p. 20.
- — Krämer, 1895, p. 217.

*C. arcuicornis*. (2)

*C. arcuicornis* A. Scott, 1909, p. 32.

— — Steuer, 1910, p. 22; Sewell, 1912, p. 360.

*C. arcuicornis* With, 1915, p. 68: pl. 1, fig. 9, a-d.

*Calanus mastigophorus* Claus, 1863, p. 173: pl. 27, f. 5-8.

*Clausocalanus arcuicornis* Giesbrecht, 1888, p. 334.

— — Stebbing, 1910, p. 524.

— — Wheeler, 1901, p. 171: text-fig. 9, a-d.

— — Sharpe, 1910, p. 406.

— — Fowler, 1912, p. 494.

— — Esterly, 1905, p. 142: text-fig. 13, a-c.

*Eucalanus mastigophorus* Claus 1861. 11. 10

- Drepanopus furcatus* (pars) Brady, 1883, p. 77: pl. 4, 24.  
*Eucalanus mastigophorus* Car, 1884, p. 239.  
— — Thompson, 1888, c. p. 139  
— — Gourret, 1889, p. 474.  
*Clausocalanus arcuicornis* Pesta, 1921, p. 505: text f. B14.  
— — Brady, 1899, p. 32.  
— — Sewell, 1914, p. 214.  
— — T. Scott, 1912, p. 531.  
— — Wolfenden, 1908, p. 30: 1911, p. 203.  
— — Farran, 1929, p. 223. (short discussion of size groups)  
— — Sars, 1925, p. 27.  
— — Rose, 1929, p. 17.  
— — Cleve, 1900, p. 55.  
— — Wilson, 1932, p. 42: fig. 24. 1942, p. 178

— — Sewell 1929, p. 91, forma minor, p. 92, fig. 36,  
forma major, p. 92, fig. 37

— — Farran 1936, p. 82-3, text-fig. 2 (p. 5 of large + small form).  
2 size groups 1.38-1.62 mm + 1.08-1.28 mm., not named.

— — , Verwoort, 1946, 140-44, fig. 10 (abn. ♀ p. 5), lit., syn., distr.  
~~form~~ forma minor + major.

— — , Davis, 1949, p. 20 (no size separation)

— — Sewell, 1947, p. 54-5 (infected w/ Blastodinium contortum hyalinum)  
No separation into forma or size measurements.

— — Brodsky, 1950, p. 117-18, fig. 39.

Clausocalanus arcuicornis Krishnaswamy, 1953, p. 116. Madras, India,

forma minor - length ♀ 0.96 mm.

--- Matoda and Anraku, 1955, p. 212, Idzu Is.

--- Mori 1937, p. 34, JAPAN. Pl. 13, Figs. 4-12, Pl. 14, Fig. 1.

--- Chiba, Tsuruta, + Maeda, 1955. Bikini.

--- Cervigon, 1962. p. 183

--- Furuhashi, 1961. p. 7

--- Honjo et al, 1957. pp. 120-128

--- Decker, 1964. p. 20. South Africa

--- Grice, 1962. p. 189, pl. 7, fig 1-6

--- Heinrich, 1961. p. 84 (vertical distribution)

--- Brodsky, 1962. p. 116, fig. 19, 20

--- Colton et al, 1962. p. 168

--- Omori, 1965. pp. 18-27

Clausocalanus arcuicornis (Dana, 1849)

(4)

-- -- Tanaka, 1960. pp. 30-31, pl. 10, fig. 1-9  
-- -- , Owre, 1962

-- -- Deerey, 1966, p. 156

-- -- Park, 1968, pp. 527-572.

-- -- Vervoort, 1963, pp. 78-194.

-- --, Vilela, 1969, pp. 14-16, Est. 2 fig. 3

-- --, Saraswathy, 1967, p. 76

-- --, Shmeleva, 1963, p. 141

-- --, Gilat, Kane & Martin, 1965, pp. 13-20

-- --: Vaupel-Klein, 1970, p. 8.

-- --, Park, 1970, pp. 472, 475

-- -- Frost + Fleminger, 1968, p. 46 (Key)

- Chen, Zhang, Chen, 19 — : 8.2  
— —; Vervoort, 1957, p. 37-38  
— —, Hure & Scotto di Carlo 1968:41  
—, Chiba, 1956, p. 11  
—, Bradford, 1972, p. 36, fig. 5.19-5.24  
— Marikova & Campos, 1967:67  
—, Cleve, 1901, p. 5  
—, Corral, 1970, pp. 140-2, pl. 40  
—, DeDecker, 1962, p. 106  
—, Berdugo, & Kimor, 1968, p. 447  
—, Bernard, 1970, pp. 22, 23, 44, 72, 76,  
—, WHEELER, 1970:3  
—, LAPEZ-OSSORIO, 1978:138

Clausocalanus arcuicornis

card 5

- , Paiva, 1971, p. 20.
- , Rose, 1955, p. 391.
- , Rose, 1956, p. 460.
- , Seno, Komaki and Takeda, 1963, tab. 2, fig. 4.
- , Ehrhardt, 1967, p. 738.
- , Fulton, 1968, p. 35.
- , Fleminger and Hulseman, 1973, pp. 340-341.
- , Omori, 1973, p. 4.
- , Brodskii, 1964, p. 218.
- , Krylov, 1967?, p. 248
- Carli, Crisafi, 1969, p. 279-317.
- Croce, et al, 1973: table 11



- C. arcuicornis
- , Movchan, 1971, p.64.
  - , Seno, 1962, p. 13.
  - , Heron and Bowman, 1971, p. 143.

- , Fruchtl, 1924, p. 43-4
- , Morris, 1970, p. 2300.
- , Hue, 1967, p. 14.

- , Vives, 1972, p. 206, 208, 209, 238.

- , Furuhashi, 1966: 299-~~302~~, 304, 306, 308, 311

- , Furuhashi, 1961: 74 <sup>105</sup>

- , Bjornberg, 1963: 9, 28, 33, 34, fig. 18, pp. 100 (table),  
104 (2 tables), 105, tables 8, 10, ~~115~~, 121, 122, 124, table 17,

- , TANAKA, 1956 b: 382-383 Fig. 11  
126

- , TANAKA, 1964 b: 6, TAB. 2, 3

CLAUSOCALANUS ARCUICORNIS (DANA) CARD 6

- , RAINBRIDGE, 1972: 67, 72
- , DEEVEY, 1971: 226; FIG. 4; TAB. 3
- , BINET & DESSIER, 1971: 435, 452
- , BEAUDOUIN, 1973: 125, 137, 167, 168; TAB. 1
- , ITOH, 1970: TAB. 1
- , OWRE & FOYO, 1972: TAB. 3
- , OWRE & FOYO, 1964b: 363
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , BRIAN 1927: 9, 10: TAB IV

- , CALEF & GRICE, (UNPUBL.) IN KETCHUM &  
RYTHER, 1966 (UNPUBL.): TAB. 2; APPENDIX
- , Cervigon & Marciano 1965: 280; Fig. 8.
- , Chibat HIRAKAWA 1972: 69, 74, 78; Tab. 2; Fig. 2.
- , CHATTON 1911: 1.
- Turner & Dagg, 1983: Tab. 2
- Valentin, 1984: 183-199
- Tanaka, 1965a: 17, fig. 18a-c
- Bjornberg, 1981: 629, fig. 209 #7

Clausocalanus arcuicornis (Dana, 1849)

card 7

--, Regner, D., 1975, p. 8, fig. 4

--, Shmeleva & Kovalev, 1968, p. 58, fig. 6b

--, Kidd & Sander, 1979, p. 678 (tbl. 3)

---, Fernandez, 1977, p. 584, fig. 26

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

--, Gardner & Szabo, 1982, p. 25, 180-181, fig. 12.3.1

--, Wolfenden, 1906: 999

--, Bjornberg, ~~1980: 65~~ 1982: 65, OFF BRAZIL

--, Cannicci, 1959: passim

--, Dakin & Colefax, 1940: a7. Pl. 133a-f.

- Monod, 1931: 399
- Marques 1958: 208
- , PETERSON & MILLER, 1977: 718
- HERMAN 1984: 131, 143
- MASSUTI' & NAVARRO 1950: 20.
- NIVAL & NIVAL 1973: 135-144.
- SANDER & MOORE 1978: 232.
- ACUICORNIS, PATRITI 1984b: 157-166, MARSEILLES
- YOUNG-BLUTH 1979: 22, CARIBBEAN
- GRICE & HART 1962a: 295, w. NORTH ATLANTIC
- GRICE & HART 1962b: TABLE 3
- Nishida, 1985: 127

CLAUSOCALANUS ARCUICORNIS (DANA)

CARD 8

--, BRESCIANI 1986: 126, 128 - Teguement

--, HIRAKAWA + ZAMA, 1985: 117, SOUTH CHILE FJÖRD -

AS CLAUSOCALANUS -

--, MADHUPRATAP + HARIDAS 1986: 107, 108, 110 -

INDIAN OCEAN

— Dawson & Knatz, 1980: 31, pl. 18, fig. a-e

— Deejay & Brooks, 1977: 263

— Hure, 1955: 24

— Hure, 1961: 16

— Wickstead, 1956: 10—11

Clausocalanus arcuicornis (Dana)

card 8

-- Sazhina 1975:80, 81, 84

— Moryakova & Kampos, 1966:131, passim Cuba

— Tafe & Griffiths, 1983:112 Australia

-- ASSIS ET AL. 1984:225-, PORTUGAL

-- REGNER 1987:373-, ADRIATIC

-- CARLI 1963:85-87, FIGS. 1-9, PS ANOMALIES

-- CARLI 1966:319-338, TUSCAN LITTORAL

-- CARLI 1968:100-, LIGURIAN SEA

-- CARLI 1971a:61-, " "



Clausocalanus arcuicornis (Dana)

card 10

-- Carli et al. 1973: 340-, Sicily

-- CARLI & SERTORIO 1964: 207-, LIGURIAN SEA

-- CARLI & VALENTE 1981: 731-, " "

-- KIORTSIS ET AL. 1969: 36-, AEGEAN

-- UROSA 1983: 129-, VENEZUELA

-- LE BORGNE 1986: 141-

-- MAYZAUD 1986a: 191-

-- CORNER ET AL. 1986: 264-

-- CAMPANER 1986: 261-, S. BRAZIL SHELF

Clausocalanus arcuicornis (Dana, 1849)

card 11

-- Mayzaud & Mayzaud 1986: 352-

-- SCHULZ 1986: 463, SARGASSO SEA

-- JAZDZEWSKI ET AL. 1982: 214-, DRAKE PASSAGE/  
BRANSFIELD STRAIT

-- Soldevilla, et al 1988: 58 Canary Islands

-- HERRING 1988: 185-

-- HO & PERKINS 1985: 588 -

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

Clausocalanus arcuicornis (Dana, 1849)

card 12

-- Copley & Wiebe 1990:12, Guaymas Basin

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

-- ARCUCORNIS, VALENTIN 1989: 28, CABO FRIO,  
BRAZIL

-- SUAREZ, F. & GASCA 1990: 62, QUINTANA ROO, MEXICO

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

-- SHIH ET AL. 1971: 44, CANADA-ATLANTIC;  
205, ARCTIC

-- LAKKIS 1984: 289, E. MEDITERRANEAN

Clausocalanus arcuicornis (Dana, 1849)

card 13

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

-- CROCE 1960: 20-, ITALY

-- SUÁREZ, E. ET AL. 1990:126-, W. GULF OF MEXICO

-- REID 1990g: 187

-- RAMÍREZ 1966:10-, LAN. II FIGS. 1-8, MAR DEL PLATA,  
ARGENTINA

-- SUÁREZ M. 1992:133-, GULF OF MEXICO

-- SUAREZ + GASCA 1991: 596-, GULF OF MEXICO

-- N. ROSE 1927: 145-161, OFF ALGERIA

-- N. ROSE 1934: 54-81. " "

CLAUSOCALANUS ARCUICORNIS

-- BOULIGAND 1966: 189-203, FIGS. 2C, PL. II C,  
MEDITERRANEAN

(14)

Clausocalanus arcuicornis major

---, Paiva, 1971, p. 20

--, TANAKA, 1956 b: 383

Clausocalanus arcuicornis forma minor Tanaka (1956b)

-- --, Hure & Scotto di Carlo, 1968, p. 42.

--, TANAKA, 1956b: 383

= CLAUSOCALANUS MINOR, GREENWOOD, 1977: 52

= Clausocalanus arcuicornis, Gardner & Szabo, 1982,  
p. 25, 180-181

Clausocalanus brevipes FROST & FLEMINGER, 1968 (CARD)

- , Frost and Fleminger, 1968 (p. 70) key.
- , Heron and Bowman, 1971, passim, figs. 8-15, 26-30, 45-53, 66-70, 85-93, 116-129.
- , Bradford, 1970, p. 344.
- , Taw, 1974, p. 270.
- Carli, Crisafi, 1969, p. 279-317.
- , Grindley & Lane, 1979, p. 112-117, tbl. 2, fig. 2, 3
- Ramirez, 1969: 52-53, fig 47-48
- Bjornberg, 1981: 629, fig. 209 # 11
- HIRAKAWA & ZAMA 1985: 117, SOUTH CHILE FJÖRD
- Marin & Antezana, 1985: 963 tab 1 Chile
- BJÖRNBERG 1982: 66-67, OFF BRAZIL



Clausocalanus brevipes Frost & Fleminger, 1968

card 2

-- Razouls 1994: 44-, pl. 14, Antarctic; 9

Clausocalanus dubius Brodsky ♂

— — Brodsky, 1950, p. 119, fig. 41 (♂ only)

Clausocalanus farrani Sewell

- \_\_\_\_\_ Sewell 1929, Indian Ocean, <sup>S.</sup> coast of Burma, p. 94, fig. 38, ♀  
a-f.
- \_\_\_\_\_ Farran 1936, p. 81, Great Barrier Reef  
(only outside the reef)
- ~~\_\_\_\_\_~~
- \_\_\_\_\_ Sewell, 1947, p. 55. Arabian Sea.
- \_\_\_\_\_ , Krishnaswamy, 1956, pp. 453-454. Madras coast.
- Frost + Fleminger, 1968, p. 52 (key)
- , Fleminger and Hulseman, 1973, pp. 340-341.
- , Crisafi, Carli, 1969, p. 279-317
- \_\_\_\_\_ Dawson & Knutz, 1969, p. 202

-- CALEF + GRICE (UNPUBL.) IN KETCHUM + RYHER,  
1966 (UNPUBL.): 36; TAB. 2; APPENDIX

-- QING-CHAO + SHU-ZHEN 1974: III; PL. 7: 80-82.

-- MADHU PRATAP + HARIDAS 1986: 107, 108, 110 -

INDIAN OCEAN

-- MICHEL ET AL. 1986: 20, 35 - ARABIAN GULF

-- SHIH 1986: 109 -

-- JIMENEZ PEREZ + LARA-LARA 1988: 126;

GULF OF CALIFORNIA

-- OKENWA + REVIS 1986: 30, TAB. 1, KENYA COAST

Clavso Calanidae — Calanoidea.  
Clausocalanus furcatus (Brady), ♀.

fig. 12-15

Drepanopus — Brady, 1883, p. 77: pl. 4, f. 1-2: pl. 24, ^

Clauso — Cleve, 1900, p. 142; 1904, p. 188; 1901, p. 5.

— — Giesbrecht, 1892, p. <sup>186\*</sup> 194: pl. 36, f. 32, 33, 35.

— — T. Scott, 1894, p. 72; Steuer, 1910, p. 1026 (22).

— — A. Scott, 1902: 403

Habitat. Gulf of Guinea; Adriatic;

Indian Ocean; Australia; Canary

Islands; Mediterranean. Tropical Atlantic

Great Barrier Reef; Arabian Sea

— — Stebbing, 1910, p. 525; Sars, 1925, p. 28  
 — — Thompson & Scott, 1903, p. 243.  
 — — Esterly, 1911, p. 223; pl. 1, f. 2, 7, 9; pl. 2,  
 f. 11; pl. 3, f. 33; pl. 4, f. 36, 40, 44.  
 — — Giesbrecht, 1895, p. 248 = 1888, p. 334.  
 — — Thompson, 1888, a, p. 149.  
 — — Giesbrecht & Schmeil, 1898, p. 27.  
 — — Pesta, 1921, p. 506: text-f. B15.  
 — — Brady, 1899, p. 32; pl. 9, f. 3-7.  
 — — A. Scott, 1909, p. 32; T. Scott, 1912, p. 531.  
 — — Wolfenden, 1905, a, p. 999; 1911, p. 203.  
 — — Brady, 1918, p. 17. Farran, 1929, p. 225.  
 — — Rose, 1929, p. 18.

C. brechtus

## Clausocalanus

C. furcatus

②

Cleve, 1900, p. 56-57.

Wilson 1942, p. 178, figs. 27-29; 1950, p. 190.

Sewell 1929, p. 93, Indian O.

Farran 1936, p. 81

Verwoort 1946, p. 144-146 (syn., lit, distr.)

Sewell 1947, p. 55-6. Arabian Sea

Brodsky, 1950, p. 118, fig. 40 (dorsal)

Mathias &amp; Euzet, 1951, p. 185. Étang de Thau.

Carvalho, 1952, p. 144, pl. 1, figs. ~~14~~ 15-17. Bay of Santos, Brazil.

Matoda and Anraku, 1955, p. 212, Idzu Is.

Anraku, 1954, pp. 1-8, N W Pacific

MORI, 1937. P. 35 TARA. I. O. U.

- — —, Chiba, Tsuruta, & Maeda, 1955. Bikini  
— — —, Grice, 1960, p. 220. W. coast Florida.  
— — —, Grice<sup>Hart</sup>, 1962, passim. Gulf Stream, between Ny + Bermuda.  
— — —, Wickstead, 1956  
— — —, Dahl, 1894, p. 12. Mouth of Tocantin R., Brazil.  
— — —, ~~Gleason, 1900, pp. 56-57.~~ Davis, 1950, p. 92 [Table]. S + W coasts of Florida  
— — —, Cervigon, 1962. pp. 183-184  
— — —, Honjo et al, 1957. pp. 120-128 *C. furcatus*  
— — —, Decker, 1964. p. 20. South Africa  
— — —, Grice, 1962. pp. 189-190, pl. 7, fig. 7-8  
— — —, Heinrich, 1961. p. 84 (vertical distribution)  
— — —, Brodsky, 1962. pp. 116, 119, fig. 12 21  
— — —, Omori, 1965. pp. 18-27  
— — —, González & Bowman, 1965. pp. 246-7, fig. 3j-k, 4a  
— — —, Tanaka, 1960. pp. 31-32



C. furcatus (3) (Clavocalanus)

- -- Park, 1968, pp. 527-572.
- -- Vervoort, 1963, pp. 78-194.
- --, Vilela, 1969, p. 16
- --, Shmeleva, 1963, p. 141
- --, Park, 1970, pp. 472, 475
- --, Frost & Fleminger, 1968, p. 76 (Key)
- --, Hare & Scotti di Carlo 1968: 41
- --, Chiba, 1956, p. 41
- --, WHEELER, 1970: 3
- --, CORRAL + ALVAREZ-OSSORIO, 1978: 138

*C. furcatus*

- , Cleve, 1901, p. 5
- , Corral, 1970, pp. 143-5, pl.
- , DeDecker, 1962, p. 106
- , Berdugo & Kimor, 1968, p. 447
- , Bernard, 1970, p. 22, 167,
  
- , Paiva, 1971, p. 20-21
- , Rose, 1955, p. 391
- , Rose, 1956, p. 460
  
- , Seno, Komaki & Takeda, 1963, tab. 2
- , Movchan, 1971, p. 64
- , Krylov, 1967?, p. 248
- , Frucht1, 1924, p. ~~44~~ 44
- , Bowman, 1971, p. 5-
  
- , GREENWOOD, 1977: 49, 51-52; SYN: DREPANOPUS F.

Clausocalanus furcatus Brady

Card 4

- , Cannicci, 1959: passim
- , Bjornberg, 1971, p. 348-9
- , Vives, 1972, p. 209
- , Corli, Crisafi, 1969, p. 279-317.
- , Furuhashi, 1966: 300, 301, 308, 311
- , Furuhashi, 1961: 105
- , Bjornberg, 1963: 9, 31-34, 41, 94, 96, 99, 100 (+table), 101, 122, 124, table 104, 104 (3 tables), 105 (+tables 8, 10), 111, 114, 117, 120,
- , TANAKA, 1956 b: 382, 383
- , BANBRIDGE, 1970: 69, 70, 73, 75, 80, 87
- , DEEVEY, <sup>1971:</sup> 1005, 1006; FIG. 4; TAB. 3
- , SCOTTO DI CARLO ET AL. 1975: TAB. 1

--, BINET & DESSIER, 1971: 425, 448, 452; FIG. 11

--, OWRE & FOYO, 1964b: 361, 363

--, OWRE & FOYO, 1972: 493; TAB. 3, 6

--, CALEF & GRICE, (UNPUBL.) IN KETCHUM & GRICE  
1966 (UNPUBL.): 35, 36; TAB. 1; APPENDIX

--, EVANS, 1961: 195, 198; TAB. III

--, BRIAN 1927: TAB. IV.

--, DAVIS 1950: Tab. V-p. 92.

--, Cervigon & Marciano 1965: 277, 281.

--, CHENG et al. 1965: 3.

--, CHATTON 1911: 1.

Clausocalanus furcatus Brady

— Mari Kova & Campos, 1967: 67

--, CARVALHO 1952: 144; Pl. 1, figs. 15, 16, 17.

--, Moore & Sander, 1976, p. 589, 594, tbl. 3

--, Regner, D., 1975, p. 12, fig. 7

--, Grindley, Estuarine plankton, p. 124, tbl. 3

--, Kidd & Sander, 1979, p. 678 (tbl. 3)

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

--, Wolfenden, 1906: 999

--, Bjornberg, ~~1980: 65~~ 1982: 65-, OFF BRAZIL

- Crow, et al, 1973: table 11
- Motoda & Marumo, 1963: tbl. 1
- Mori, 1942: 551
- Bjornberg, 1968: 49-50, pl. 6, fig 1-10
- Turner & Dagg, 1983: 21, tbl. 2

CLAUSOCALANUS FURCATUS (BRADY, 1883)

- DIAS & NOGUEIRA 1985: 54.
- , FERRARI, 1984: 177
- , FERRARI, 1984: 222
- , PETERSON & MILLER, 1977: 718-719
- , VAISSIÈRE & SEGUIN, 1984: TAB. 1
- MASSUTI & NAVARRO 1950: 20.
- SANDER & MOORE 1978: 232.
- YOUNGBLUTH 1982: 120, BAHAMAS.
- YOUNGBLUTH 1976: 489-491, PUERTO RICO

Clausocalanus furcatus (Brady, 1883)

card 7

-- Youngbluth 1979: 22, Caribbean

-- YOUNGBLUTH 1980: 265-287, PUERTO RICO

-- MICHEL & FOYO 1976: 90, 131, 133, 135, 136, 138-139,  
157 (FIG. 15 B), 172-178 (TAB. 36)

-- KOGA 1984b: 133

-- GRICE & HART 1962a: 294, w. NORTH ATLANTIC

-- GRICE & HART 1962b: TABLE 3

-- HULSEMANN, 1984: 253, 254

-- DAKIN & COLEFAX, 1940: 97, Fig. 134a-e

-- NISHIDA, 1985: 128



- Dakin & Colefax, 1933: 205
- Valentin, 1984: 183-199
- Bjornberg, 1981: 628, fig. 209 #5
- MADHUPRATAP & HARIDAS 1986: 108, INDIAN OCEAN
- Dawson & Knatz, 1980: 34, pl. 21, fig. a-g  
pl. 22, fig a-f
- Devey & Brooks, 1977: 263
- De Decker, 1984: 315
- MICHEL ET AL. 1986: 20, 35- ARABIAN GULF
- Greenwood, 1982b: table 3
- Hure, 1955: 24
- Hure, 1961: 16

Clausocalanus furcatus (Brady, 1883)

card 8

-- Sazhina 1975:80, 84

— Kimmerer, et al, 1985: table 4, Australia

— Moryakova & Kampos, 1966: 131, passim Cuba

-- REGNER, 1987: 373-, ADRIATIC

-- CARLI 1963: 88, FIGS. 10-11, PS ANOMALIES

-- CARLI 1966: 319-338, TUSCAN LITTORAL

-- CARLI 1968: 100-, LIGURIAN SEA

-- CARLI 1971a: 61-, " "

-- CARLI + SERTORIO 1964: 207-, LIGURIAN SEA

Clausocalanus furcatus (Brady, 1883)

card 9

- Mauchline 1988: 726-, fig. 17b, pore signature
- KIORTSIS ET AL. 1969: 36-, AEGEAN
- UROSA 1983: 129-, VENEZUELA
- CAMPANER 1986: 261-, S. BRAZIL SHELF
- BJÖRNBERG, T. 1986b: 233; FIG. 1b, NAUPLIUS
- SCHULZ 1986b: 459-464, SARGASSO SEA
- MORAITOU- APOSTOLOPOULOU ET AL. 1986: 580,  
JANONICOS GULF, GREECE
- Soldevilla, et al. 1988: 58 Canary Islands

Clausocalanus furcatus (Brady, 1883)

card 10

- Jimenez-Perez & Lara-Lara 1988:126, Gulf of California
- COPLEY & WIEBE 1990: 12, GUAYMAS BASIN
- VALENTIN 1989: 287, CABO FRIO, BRAZIL
- COPLEY ET AL. 1989: 11-, NW ATLANTIC
- LAKKIS 1984: 289-, E. MEDITERRANEAN
- ALVARINO 1989: 69-, OFF S. CALIFORNIA
- MONTEIRO RIBAS ET AL. 1990: 82, OFF CABO FRIO S., BRAZIL
- SUÁREZ, E. ET AL. 1990: 126-, W. GULF OF MEXICO
- REID 1990 g: 187, DOMINICA, MARTINIQUE, ST. LUCIA,  
TRINIDAD/ TOBAGO.

Clausocalanus furcatus (Brady, 1883)

card 11

-- Suárez M. 1992: 133-, Gulf of Mexico

-- LÂNSAC TÔHA & LIMA 1993: 91-, TAB.1, S. PAULO, BRAZIL

-- ALVAREZ CADENA ET AL. 1996: 700-702, TAB.2,  
CARIBBEAN COAST - MEXICO

DREPANOPUS -, RINGUELET, ANOR ET AL. 1962: 52, ARGENTINA

-- M. ROSE 1927: 145, OFF ALGERIA

-- M. ROSE 1934: 54-81, OFF ALGERIA

Clausocalanus ingens FROST + FLEMINGER 1968

-- Frost + Fleminger, 1968, p. 39, (key)

-- Carli, Crisafi, 1969, p. 279-313

-- Bjornberg, ~~1980~~: 65 1982: 65, OFF BRAZIL

-- Bjornberg, 1981: 628, fig. 209#9

-- De Decker, 1984: 315

-- CAMPANER 1986: 261, S. BRAZIL SHELF

-- Marin e' Antezana 1985: 963 tab 1 Chile

-- DE DECKER 1984b: 158, OFF S. AFRICA

-- RAZOULS 1994: 46

Clausocalanus jobei

- , Frost & Fleminger, 1968, p. 55, (key)
- , Fleminger and Hulseman, 1973, pp. 340-341.
- Carli, Crisafi, 1969, p. 279, 317.
- , CORRAL & ALVAREZ-OSSORIO, 1978: 138
- , BINET & DESSIER, 1971: 435, 452
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , ANDRONOV & MAIGRET 1980: 71, TAB. 3.
- , ARCOS 1978: TAB. III, 50.
- , Regner, P., 1975, p. 9-10, fig. 5
- , PETERSON & MILLER, 1977: 718-719, 722

- Hulsemann, 1984: 253
- Turner & Dagg, 1983: tbl. 2
- Dawson & Knatz, 1980: 36-37, pl. 23, fig a-d  
pl. 24, fig a-e

-- REGNER 1987: 373-, ADRIATIC

-- SHIH 1986: 109-

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

-- BJÖRNBERG, T. K. S. 1982: 67, DISTRIBUTION OFF S. A.



Clausocalanidae - Calanoida

Clausocalanus laticeps Farran, ♀

①

— — Farran, 1929, p. 224: text fig. 4, a-e.

— — Verwoort, 1951, p. 59.

— — Tanaka, 1960. pp. 32-33. pl. 11, fig. 1-14

— —; Verwoort, 1957, p. 38, fig. 9.

Habitat

~~N. Temperate, tropical, S. temperate~~

~~Atlantic~~. Antarctic, south of New Zealand

— —, TANAKA, 1964b: 7, TAB. 2, 3

Clausocalanus laticeps

card 2

- , Grindley & Lane, 1979, p. 112-117, tbl. 2, fig. 2,3
- Ramirez, 1969: 53-54 fig. 53 & 55
- Bjornberg, 1981: 628, fig. 209#8
- De Decker, 1984: 315
- ALMEIDA PRADO POR 1986: 517-523, ANTARCTIC
- JAZDZEWSKI ET AL. 1982: 214-, DRAKE PASSAGE/  
BRANSFIELD STRAIT
- KANAYEVA 1968: 563-, SCOTIA SEA
- MARIN 1987: 109-, SCOTIA SEA

Clausocalanus laticeps

card 3

- , Frost and Fleminger, 1968, p. 42 (key)
- , Heron and Bowman, 1971, passim, figs. 3-7, 19-25, 37-44  
59-65, 78-84, 100-115.
- , Cushing, 1951, p. 166
- , Taw, 1974, p. 270.
- Carli, Crusafi, 1969, p. 279-317.
- Nakamura et al 1982: 28-30 fig 2 tab 1 S. Indian O.  
(Antartic)

Clausocalanus laticeps Farran

card 34

- Atkinson & Ward 1988: 329-, South Georgia
- MARIN 1986: 12-, SCOTIA SEA
- DE DECKER 1984b: 154-, OFF S. AFRICA
- P. WARD 1989: 144-, S. GEORGIA, ANTARCTIC
- DJÖRNBERG, T. 1982: 67, DISTRIBUTION OFF S. AMERICA
- RAZOUK 1994: 46-, PL. 15, ANTARCTIC; 9

Clavocalanidae - Calanoida.

Clavocalanus latipes T. Scott, ♀.

— — T. Scott, 1894, p. 72: pl. 8, fig. 28-37.

— — Giesbrecht & Schmeil, 1898, p. 28.

--, Seno, Komaki & Takeda, 1963, tab. 2, fig. 4, 5

Habitat. Gulf of Guinea.

Clausocalanus lividus FROST & FLEMINGER 1

- , Frost & Fleminger, 1968, p. 35 (Key)
- Carli, Cusafi, 1969, p. 279-317.
- , CORREAL & ALVAREX-OSSORIO, 1978: 138
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , Regner, D., 1975, p. 6-7, fig. 3
- , Gardner & Szabo, 1982, p. 25, 182-183, fig. 12.3.2
- Dawson & Knatz, 1980: 38-39, pl. 25, fig. a-h
- REGNER 1987: 373-, ADRIATIC pl. 26, fig a-f
- CARLI 1971a: 61-, LIGURIAN SEA
- CARLI ET AL. 1973: 340-, SICILY

Clausocalanus lividus Frost & Fleminger

card 2

-- Lakkis 1984:289-, e. Mediterranean

CLAUSO

Calanidae — Calanoida.

Calanus mastigophorus (Claus) ♂, ♀.

- — Claus, 1866, p. 10: pl. 1, f. 1; pl. 5, f. 20-21.
- — Gruber, 1879, p. 428: pl. 26, fig. 2.
- — Claus, 1863, p. 173: pl. 27, f. 5-8.
- — (= Clausocalanus arcuicornis) Giesbrecht, 1892, p. 186.

Made syn. of Clausocalanus arcuicornis.  
(F. Sterly, 1905, p. 142).

- Andronov, 1986: 297

- ICZN 1988: 228, TYPE OF CLAUSOCALANUS GIESBR.



Clausocalanus mastigophorus Giesbrecht, ♀.

- , Giesbrecht, 1888, p. 334
- , (=C. arcuicornis) Giesbrecht, 1892, p. 186.
- , Park, 1970, pp. 472, 475.
- A synonym of Clausocalanus arcuicornis.
- , Frost and Fleminger, 1968, p. 29(key)
- , Heron and Bowman, 1971, p. 142, 143.
- , Carli, Crisafi, 1969, p. 279-317.
- , GREENWOOD, 1977: 52
- , BINET & DESSIER, 1971: 455, 452
- , SCOTTO DI CARLO, ET AL., 1975: TAB. I
- , ARCOS 1978: TAB. III,

Clausocalanus mastigophorus

card 2

- , Regner, D., 1975, p. 5, fig. 2
- , Bjornberg, ~~1980:65~~ 1982:65, OFF BRAZIL
- , PETERSON & MILLER, 1977:718-719
- Hulsemann, 1984:253
- Bjornberg, 1981:628, fig. 209 #10.
- MADHU PRATAP & HARIDAS 1986:108, INDIAN OCEAN
- Dawson & Knatz, 1980:40-41, pl. 27, fig a-g  
pl. 28, fig a-f
- REGNER 1987:373, ADRIATIC

Clausocalanus mastigophorus Giesbrecht, 1888

card 3

-- Schulz 1986b: 463, 464, Sargasso Sea

-- JIMENEZ - PEREZ + LARA-LARA 1988: 126,  
GULF OF CALIFORNIA

-- LAKKIS 1984: 289-, E. MEDITERRANEAN

*Clausocalanus minor* SEWELL

--, Frost & Fleminger, 1968, p. 59, (Key)

-- Carlì, Cristofari, 1969, p. 279-317.

--, Fleminger and Hulseman, 1973, pp. 340-341.

--, GREENWOOD, 1977: 49, 52-54; FIG. 1; SYN: C. ARQUICORNIS  
MINOR; C. ARQUICORNIS, FRUCHTL, 1924

--, FLEMINGER & HULSEMAN, 1974: 112

--, MADHUPRATAP & HARIDAS, 1986: 108, INDIAN OCEAN

- Greenwood, 1982b: table 3

①

Clausocalanus parapergens Frost and Fleminger, 1968.

-- --, Park, 1970, p.475

- -, Frost & Fleminger, 1968, p. 72 (key)

-- Carli Cristafi, 1969, 279-317.

--, BINET & DESSIER, 1971: 425, 452

--, SCOTTO & CARLO, ET AL, 1975: 184; TAB.1

--, Regner, D., 1975, p. 10-11, fig. 6

--, Gardner & Szabo, 1982, p. 25, 184-185, fig. 12.3.3

--, Bjornberg, ~~1980: 65~~ 1982: 65, OFF BRAZIL

--, PETERSON + MILLER, 1977: 718-719

- Bjornberg, 1981: 629, fig. 209 #12

CLAUSOCALANUS PARAPERGENS FROST + FLEMINGER (2)

-- MADHUPRATAP + HARIDAS, 1986: 108, INDIAN OCEAN

— Dawson & Knatz, 1980: 42-43

pl. 29, fig. a-h, pl. 30, fig. a-g

-- REGNER 1987: 373 -, ADRIATIC

-- CAMPANER 1986: 261-, S. BRAZIL SHELF

-- SCHULZ 1986b: 463, 464, JARGASSO SEA

Clausocalanidae - Calanoida

Clausocalanus paululus Farran ♀

— — Farran, 1926, p. 240: pl. 6, figs. 7-12.

— — Farran, 1929, p. 224; 1936, p. 82 ♀

— —, Decker, 1964, p. 20. South Africa

— —, Tanaka, 1960, p. 33, pl. 12, fig. 1-5

-- -- Vervoort, 1963, pp. 78-194.

Habitat, New Zealand: Bay of Biscay.  
Great Barrier Reef, outside the reef only

-- --, Shmeleva, 1963, p. 141

-- --, Park, 1970, p. 472, 475

-- --; Vervoort, 1957, p. 38.

(See back)

- --, Hure & Scotto di Carlo, 1968, p. 42.  
--, Corral, 1970, pp. 145-9, pl. 40, 41  
--, DeDecker, 1962, p. 106  
--, Fleminger and Hulseman, 1973, pp. 340-341.  
--, Movchan, 1971, p. 64  
--, Krylov, 1967?, p. 248  
-- Carli, Crisafi, 1969, p. ~~289~~ 317.  
--, Bjornberg, 1963: 104 (table 7), *Table 10*, 122  
--, WHEELER, 1970: 3  
--, CORRAL & ALVAREZ-OSSORIO, 1978: 138  
--, DEEVEY, 1971: 236; FIG. 4; TAB. 3  
--, SCOTTO DI CARLO, ET AL., 1976: TAB. 1



CLAUSOCALANUS PAULULUS

CARD 2

- CALEF + GRICE (UNPUBL.) IN KETCHUM + RYHER,  
1966 (UNPUBL.): TAB. 2; APPENDIX
- QING-CHAO + SHU-ZHEN 1974: 111-112; PL. 7:  
83-88.
- Shmeleva & Kovalev, 1968, p. 60, fig. 7a
- Bjornberg, ~~1980: 65~~ 1982: 65, OFF BRAZIL
- Shmeleva & Zaika, 1973: 873
- PETERSON + MILLER, 1977: 718-719, 723.
- GRICE + HART 1962a: 293, 294 - W. NORTH ATLANTIC

Clausocalanus paululus Farran

card 3

-- Grice & Hart 1962b: Table 3

— Bjornberg, 1981: 629, fig. 209 #14.

-- MADHUPRATAP & HARIDAS 1986: 108 - INDIAN OCEAN

— Dawson & Knatz, 1980: 44-45  
pl. 31, fig. a-g, pl. 32, fig. a-e

-- KIORTSIS ET AL. 1969: 36, AEGEAN

-- Soldevilla, et al. 1988: 58 Canary Islands

Clausocalanus pavo ~~Dana~~

-- --, Chiba, 1956, p. 44

~~---, Rose, 1956, p. 45~~

Calanidae - Calanoidea

Clausocalanus pergens Farran ♀, 1926

— — Farran, 1926, p. 239: pl. 6, figs. 4-6.

— — Farran, 1929, p. 224,

— — Matoda and Anraku, 1955, p. 212, Idzu Is.

-- -- , Anraku, 1954, pp. 1-8.. NW Pacific

— —, MORI, 1937 P. 35, JAPAN

Habitat. Bay of Biscay, 0-1250 fath.

North Atlantic, off New Zealand

-- , FURUHASHI, 1957, P. 18, JAPAN.

— —, Chiba, Tsuruta, + Maeda, 1955. Bikini.

- --, Furuhashi, 1961. p. 10
- --, Honjo et al, 1957. pp. 120-128
- --, Omori, 1965. pp. 18-27
- --, Tanaka, 1960. pp. 34-35, pl. 12, fig. 6-10
- -- Park, 1968, pp. 527-572.
- --, Park, 1970, p.475
- --; Vervoort, 1957, p. 38.
- --, Frost and Fleminger, 1968, p. 66, (Key)
- --, Bjornberg, ~~1981: 65~~ 1982: 65, OFF BRAZIL
- --, Hure & Scotto di Carlo, 1968, p. 42.
- --, Chiba, 1956, fig. 4
- --, Bradford, 1972, p. 36, fig. 5.25-5.26
- --, Krylov, 1967?, p. 248
- --, Seno, Komaki & Takeda, 1963, tab. 2
- --, Hue. 1967. pp. 7, 14, 18, 21, 23.

Clausocalanus pergens Farran 1926

card 2

- , Vives, 1972, p. 209.
- Cami, Crusaf, 1969, p. 277-317.
- , Furuhashi, 1961: 74, 105-
- , Bjornberg, 1963 : 104( table ~~5~~<sup>7</sup>), table 10
- , TANAKA, 1956 b: 382, 383
- , HIROTA, 1977: 45; TAB. 1
- , WHEELER, 1970: 4
- , CORRADI & ALVAREZ-OSSORIO, 1978: 138
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , Chiba & Hirakawa 1972: 78.

- CALEF + GRICE (UNPUBL.) IN KETCHUM + RYDER  
1966 (UNPUBL.): TAB. 2; APPENDIX
- , PETERSON + MILLER, 1977: 718
- GRICE + HART 1962a: 293, w. NORTH ATLANTIC
- GRICE + HART 1962b: TABLE 3.
- Bjornberg, 1981: 629, fig. 209 #13.
- Dawson & Knatz, 1980: 46-47  
pl. 33, fig. a-h, pl. 34, fig. a-f.

Clausocalanus pergens Farran, 1926

card 3

--, Regner, D., 1975, p. 10

- Moci, 1942: 551

-- REGNER 1987: 373-, ADRIATIC

-- CARLI 1968: 100-, LIGURIAN SEA

-- CARLI + SERTORIO 1964: 207-, LIGURIAN SEA

-- KIORTSIS ET AL. 1969: 36-, AEGEAN

-- Soldevilla, et al. 1988: 58 Canary Islands

- ALVARIÑO 1989: 69-, OFF S. CALIFORNIA



CLAUSOCALANUS PUNGENS

--, JOHNSON, 1954: 309

Clausocalanus sp.

--, Beklemishev, 1961, p. 165

--, FIGUEIRA 1971: 150.

--, Chiba & Hirakawa 1972: Tab. 2.

--, CRISAFI & CRESCENTI 1975: 211-212.

--, SPECCHI & VALLI, 1979: 134.

-- RODRÍGUEZ & VIVES 1984: 242, MALAGA HARBOR

Clausocalanus spl.

- sp., Omori, 1965. pp. 18-27
- , Seno, Komaki & Takeda, 1963, tab. 2
- , Aekfors & Zillioux, 1975, p. 8
- , Bowman, 1971, p. 5 -
- Croe, et al 1973: ~~table~~ table 12
- , NOTODA + MINODA, 1972: 213
- PATRITI ET AL 1984: 138-140, MARSEILLES
- JUV., BOERO + CARLI 1977: 167
- BRUZZONE ET AL 1979: 79, GULF OF GENOVA
- BRUZZONE ET AL. 1982: 235, " " "
- CARLI 1971a: 61, LIGURIAN SEA

Clausocalanus sp.

card 3

-- Carli et al. 1973: 340-, Sicily

-- CAMPANER 1986: 261-, S. BRAZIL SHELF

-- VILLATE & ALCARAZ 1986: 612, BILBAO, SPAIN

-- JAZDZEWSKI ET AL. 1982: 203-242, DRAKE PASSAGE)

BRAUNSFIELD STRAIT (= C. ARCUICORNIS + C.  
LATICEPS )

-- McLAREN, TREMBLAY ET AL. 1989: 579, SCOTIAN SHELF

-- SHIH ET AL. 1971: 150, CANADA - PACIFIC

-- DE DECKER 1984b: 158, OFF S. AFRICA

Clausocalanus spp.

--, Roe, 1972a, pp. 280-

--, JAWED, 1973: 7-104

--, Moore & Sander, 1976, p. 594 (tbl. 3 for species ref.)

--, HIROTA, 1982: 50.

-- PATRITI 1984a: 157-161, Gulf of Fos-sur-MER

-- CORNER ET AL. 1986: 265-

-- DESSIER & DONGUY 1987: 14, 396-, EASTERN  
EQUATORIAL PACIFIC

-- ROE 1974: 103-, N. ATLANTIC