

Paracalanus valid

Boeck - 1865

Calanoida - Paracalanidae

P. parvus (M)

Syn. Paracalanus Boeck, 1865, p. 232.

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

Paracalanus Wheeler, 1901, p. 168.

Prefix Para and Calanus.

Paracalanus Claus, 1881, p. 326.

Paracalanus Bourne, 1889, p. 145.

Paracalanus Giesbrecht, 1892, p. 48, 757.

Paracalanus Dahl, 1893, p. 21.

Body short & stout. Head fused with 1<sup>st</sup> segt. Thorax in ♀ 4-jointed. 1<sup>o</sup> antennae scarcely longer than body. 10 legs with de- flexed setae at end of basal part inside.

Paracalanus Esterly, 1905, p. 139.

Paracalanus G.O. Sars, 1901, p. 17.

not Paracalanus Brady & Robertson, 1873, p. 126.

Paracalanus Giesbrecht & Schmeil, 1898, p. 23.

Paracalanus Pesta, 1921, p. 500.

Paracalanus BOECK, 1864

2

-, Heinrich, 1960, p. 12

--, Bernard, et al, 1967, p. 92

---, TANAKA, 1956 b: 367, 371, 382, 387, 399, 404

---, Gardner & Szabo, 1982, p. 25, 167

- Corral, et al 1981: 229

-, BOXSHALL, FERRARI + TIEMANN, 1984: 74

-, NISHIDA, 1984: 38

-, ANRAKU + KOZASA 1979: 80

-, PETIPA 1975: 34-47, FEEDING TYPES

-- TURNER 1984d: 8-, FEEDING

Paracalanus BOECK, 1864

3

- Sewell 1929, p. 61, partial revision
- MAUCHLINE 1988: 720-, FIG. 13A, PORE SIGNATURE
- BJÖRNBERG, T. 1986: 58-, FIG. 7C
- HEIP 1986: 100
- BJÖRNBERG, T. 1986: 200 (IN KABATA-ED.)
- BJÖRNBERG, T. 1986B: 232-
- MAYZAUD + MAYZAUD 1986: 353-
- DOWIDAR 1986: 629, EGYPT
- PAFFENHÖFFER + STEARNS 1988: 33-
- VIEIRA ET AL. 1990: 36, AS FISH FOOD, BRAZIL

Calanidae - Calanoida.  
Paracalanus aculeatus Giesbrecht, ♀, ♂

- — Giesbrecht, 1888, p. 33<sup>2</sup>; 1896, p. 318.  
— — Cleve, 1900, p. 142; 1904, p. 194.  
— — Giesbrecht & Schmeil, 1898, p. 24.  
— — Stebbing, 1910, p. 523.

--, BRADFORD, 1978a: 133

Habitat. So. Africa: Tropical Pacific:  
Indian Ocean: Red Sea.

— A. Scott, 1902: 402

- — Giesbrecht, 1892, p. 164: pl. 9, f. 20, 26, 30.
- — Cleve, 1901, p. 8, 47: pl. 6, f. 1-10. ♂
- parvus T. Scott, 1893, p. 26: pl. 1, figs. 9-14.
- — A. Scott, 1902, p. 402: 1909, p. 26.
- — Wolfenden, 1905, a, p. 998: pl. 96, figs. 12-15.
- — Sars, 1905, a, p. 2.
- — Sewell, 1914, p. 204.
- — T. Scott, 1912, p. 531.
- — Wolfenden, 1911, p. 203.
- — Pesta, 1911, p. 44
- — Farran, 1929, p. 222: Sars, 1925, p. 24.
- — Cleve, 1900, p. 79.
- — Mori, 1933, p. 174 ● text-fig. 1, ♂.
- — Wilson 1942, p. 201, fig. 101

*Paracalanus aculeatus* -2

- — forma major, ~~Steuer-19~~ Sewell 1929, p. 63,  
fig. 20, a-f
- — forma minor, Sewell 1929, p. 64, fig. 21, a-g
- —, Carvalho, 1952. Bay of Santos, Brazil.  
p. 142-143
- — Motoda and Anraku, 1955, p. 212, Idzu Is.
- --, Anraku, 1954, pp. 1-8.. N W Pacific
- --, Vervoot, 1946, pp. 127-129, Snellius Expedit.
- —, MORI - 1937, P. 30, JAPAN
- —, Chiba, Tsuruta, + Maeda, 1955. Bikini.
- —, Grice, 1960, p. 220. W. coast of Florida.
- —, Dahl, 1894, p. 21. Off mouth of Tocantim R., Brazil.
- —, Davis, 1950, p. 93

— — ; Grice + Hart, 1962, p. 293. Gulf Stream, between N.Y. + Bermuda.

— —, Cervigon, 1962. p. 183

— —, A. G. Fish, 1962. pp. 10-11

— —, Furuhashi, 1961. p. 7

— —, Honjo et al, 1957. pp. 120-128

— —, Decker, 1964. p. 23. South Africa

— —, Grice, 1962. p. 183, pl. 4, fig. 1-3

— —, Brodsky, 1962. p. 114, fig. 16

— —, González & Bowman, 1965. pp. 243-244, fig. 2a-e

— —, Tanaka, 1960. pp. 22-23

— — Park, 1968, pp. 527-572.

— — Vervoort, 1963, pp. 78-194.

— —, OWRE + FOYO, 1964: 343

— — Chen, 1980; table 1

Paracalanus aculeatus-3

- --, Wellershaus, 1969, pg.247
- --, Shmeleva, 1963, p. 141
- --, Park, 1970, p. 475
- --; Vervoort, 1957, p. 35
- -, Chiba, 1956, fig. 6
- , DeDecker, 1962, p. 111
- , Bernard, et al, 1967, p.87.
- , Bernard, 1970, p. 41,103,
- , Rose, 1955, p. 391
- , Rose, 1956, p. 460
- Pillai P.P. 1971, p. 163
- , Shen & Bai, 1956, p. 219

- , Shen & Lee, 1963, p. 573
- , Movchan, 1971, p. 64
- , Bowman, 1971, p. 5-
- , Bjornberg, 1971, p. 348-9
- , Hue, 1967, pp. 7, 15, 20-22, 24.
- , Furuhashi, 1966: 308, 311
- , Furuhashi, 1961: 105
- , Bjornberg, 1963: 9, 25, 26, 28, 94, 96, 98, 100 (+table),  
104, 104 (3 tables), Tables 8+10, 111, 114, 117, 120, 124, 126
- , MOORE & SANDER, 1979: 200, 201, 203
- , TANAKA, 1956: 367-368
- , HIROTA, 1977: 45
- , WHEELER, 1970: 3

PARACALANUS ACULEATUS

CARD 4

- , GREENWOOD, 1976: 2, 20-22, 24; TAB. 1
- , BAINBRIDGE, 1972: 72, 73, 77, 81
- , DEEVEY, 1971: 22F; TAB. 3
- , BINET & DESSIER, 1971: 423-424, 447, 448, 451; FIG<sup>10</sup>
- , BINET, ET AL., 1972: 133, 136
- , OWRE & FOYO, 1972: 501, 506 & TAB. 3, 6
- , OWRE & FOYO, 1964<sup>10</sup>: 362
- , CALEF & GRICE (UNPUBL.) IN KETCHUM & RYHER  
1966 (UNPUBL.): TAB. 1; APPENDIX

- , EVANS, 1961: 198; TAB. III
- , ARCOS 1978: TAB. III, 50.
- , DAVIS 1950: Tab. V-p. 93.
- , Cervigon & Marciano 1965: 280; Fig. 6.
- , CHENG et al. 1965: 3.
- , Chiba & Hirakawa 1972: 69, 78; Tab. 2.
- , CARVALHO 1952: 142-143; Pl. 1, figs. 11, 12.
- Mori, 1942: 550
- Moryakova & Kampos, 1966: 131, passim
- Wickstead, 1956: 8-9

Cuba

Paracalanus aculeatus GIESBRECHT 1888 card 5

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

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

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

---, Shmeleva, 1973, p. 537

--, Navarrete, 1976, p. 13-16

--, Madhupratap, ~~1979~~, 1979: passim

--, Sreekumaran et al, 1981: passim.

--, Wolfenden, 1906: 998-999, pl. 96, Fig. 12-15

--, Bjornberg, 1980: 65, fig. 12-15, OFF BRAZIL

- Croce, et al 1973: ~~table~~ : table 8
- Marikova & Campos, 1967: 67
- Bjornberg, 1968: 50, pl. 7, fig. 5-8
- DIAS & NOGUEIRA 1985: 54.
- SANDER & MOORE 1978: 233
- ACULAETUS, CHEN & ZHANG 1965: 124.
- -1, CHEN & ZHANG 1965: 129-130, PL. 9, FIGS. 1-6,  
 EAST CHINA SEA- forma mejor, forma minor.
- YOUNGBLUTH # 1976: 489-491, PUERTO RICO
- YOUNGBLUTH # 1979: 27, CARIBBEAN
- YOUNGBLUTH # 1980: 265-287, PUERTO RICO

Paracalanus aculeatus Giesbrecht, 1888

card 6

- Michel & Foyo 1976: 90, 131, 133, 135-137, 143-144, 160 (FIG. 18-B), 221-224 (TAB. 42)
- KOGA 1984b: 127, 130, FIG. 15, TAB. 2-5
- GRICE + HART 1962a: 293, W. NORTH ATLANTIC
- GAJPHIYE ET AL 1984: 77-79, INDIA
- GRICE + HART 1962b: TABLE 3
- Hulsemann, 1984: 254
- Bayly, 1980: 9
- Dakin & Colefax, 1940: 95, fig. 120a-f.
- Nishida, 1985: 127

- Dakin & Colefax, 1933: 204
- Tanaka, 1965a: 17, fig. 14a-d.
- Binet & Dessier, 1968: 13
- Bjornberg, 1981: 222, fig. 207<sup>#</sup>1
- MADHUPRATAP & HARIDAS, 1986: 107, 108, 110
- DeDecker, 1984: 315
- Greenwood, 1982a: 53
- Greenwood, 1982b: table 3
- MICHEL ET AL. 1986: 12, 14, 20, 21, 35 - ARABIAN GULF
- MICHEL ET AL. 1986: 51, 57-61, 67, 75, 88-89, FIGS.
- B13, B14 - ARABIAN GULF
- MICHEL ET AL. 1986c: 60, 62, 65 - ARABIAN GULF
- Kimmereer, et al, 1985: table 3

Australia

Paracalanus aculeatus Giesbrecht, 1888

card 7

-- Mauchline 1988: 720

- KIORTSIS ET AL. 1969: 36-, AEGEAN
- STEPHEN 1984: 165-, ARABIAN SEA
- MONTÚ 1980b: 57-, BRAZIL
- MONTÚ + GLOEDEN 1986: 87-, FIG. 27e-g, BRAZIL
- CAMPANER 1986: 261-, S. BRAZIL SHELF
- BHATTACHARYA 1986: 220-226, BOMBAY
- BJÖRNBERG, T. 1986b: 233-, FIG. 1c
- HO & PERKINS 1985: 59p-

Paracalanus aculeatus Giesbrecht, 1888

card 8

- Suarez, E. & Gasca 1989a:198-, Yucatan Channel
- MICHEL & HERRING 1984: 328-, ARABIAN GULF
- MONTEIRO RIBAS ET AL. 1990: 82, OFF CABO FRIOS, BRAZIL
- SUÁREZ, E. ET AL. 1990: 124-, W. GULF OF MEXICO
- REID 1990g: 188, DOMINICA, MARTINIQUE, ST. LUCIA,  
TRINIDAD / TOBAGO, VIRGIN ISLANDS.
- BOWMAN 1978a: 113-
- SUÁREZ M. 1992: 132, GULF OF MEXICO
- SUAREZ & GASCA 1991: 596, GULF OF MEXICO

Paracalanus aculeatus Giesbrecht, 1888

card 9

-- Alvarez Silva 1988: 167-, Veracruz, Mexico

- RAZOUKS 1994:11

- ALVAREZ-SILVA + GOMEZ-AGUIRRE 1994: 268,  
VERACRUZ, MEXICO

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

- ROSE 1934: 63-81, OFF ALGERIA

- ALVAREZ-SILVA 1996: 19, TAB. 2, VERACRUZ, MEXICO

PARACALANUS ACULEATUS MAJOR Sewell

- , TANAKA, 1956b: 367, 368
- , Madhupratap, et al 1975: passim.
- , Madhupratap et al, 1981: passim
- CHEN + ZHANG 1965: 129-130, CHINA.
- Tafe & Griffiths, 1983: 112 Australia
- WELLERSHAUS 1969: 246, COCHIN BACKWATER, S. INDIA

PARACALANUS ACULEATUS MINOR Seiwul

--, TANAKA, 1956 b: 368, 369

-- CHEN + ZHANG 1965: 129-130, CHINA.

— Tafe & Griffiths, 1983: 112 Australia

Paracalanus aculeatus var. plumulosus

--Wolfenden, 1906: 999, pl. 96, fig. 23

Paracalanus attenuatus

--, Bjornberg, 1963: 121

PARACALANUS BREVISPINATUS SHEN & LEE, 1966

-- SHEN & LEE, 1966: 213-216, 221-222, FIGS. 1-8, n. sp. ♀♂

--, = PARVOCALANUS B., BRADFORD, 1986: 133

Paracalanus campaneri T.K.S. Björnberg, 1982

- Björnberg, T.K.S. 1980(82):65-66, figs. 1-11, n. sp.  
female only; syn. (partial) Paracalanus aculeatus  
in Björnberg, 1963; off Brazil
- Björnberg, T.K.S. 1981:622, fig. 207(2)
- Campaner 1986:261-, S. Brazil Shelf

Calanidae - Calanoida

Paracalanus clevei Carl, ♀.

Acrocalanus pediger, Cleve, 1901, p. 5:33: pl. 1, figs. 1-20

P— c— Carl, 1907, p. 7.

--, Fruchtl, 1924, p. 35-6, fig. 22, Acrocalanus pediger  
is a syn.

Habitat. Malay Archipelago.

PARACALANUS CRASSIPES APSTEIN, 1912

--, LAWSON & GRICE 1973:55

Paracalanus crassirostris Dahl, 1894 - see

Parvocalanus

PARACALANUS CRASSIROSTRIS COCHINENSIS

WELLERSHAUS, 1969

P. C. F. C., WELLERSHAUS 1969: 246-251, FIGS. 1-9,  
COCHIN BACKWATER, SOUTH INDIA

P. C. F. C., LAWSON + GRICE 1973: 55

---, MADHUPRATAP + HARIDAS 1975: 79

---, TAFE + GRIFFITHS 1983: 117, AUSTRALIA

PARACALANUS CRASSIROSTRIS VAR. NUDUS DAVIS, 1944

--- LAWSON & GRICE 1943: 55, = P. NUDUS (DAVIS)

Paracalanus crassirostris scotti Fruchtl

--, De Decker, 1962, p. 111

--, Fruchtl, 1924, p. 37-39

- Marques, 1949: 21-22, fig 1a-d

-- FORMA -, LAWSON + GRICE 1973: 54, P. PYGMAEUS  
= THIS FORM.)

Paracalanus crassirostris ~~form~~. forma Sewelli

syn.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fruchtl 1924, p. 36, 37, 38, 39

syn. P. dubia, Sewell 1929, p. 76

-- , <sup>1948</sup> Deevy, ~~1948~~, p. 21-22

--- , LAWSON + GRICE 1973: 55

--- WELLSHAUS 1969: 249-251

Paracalanus crassirostris typica Früchtl

---, De Decker, 1962, p. 111

-- WELLSHAUS 1969: 250-251

Paracalanus demudatus Sewell

----- Sewell 1929, p. 66, fig. 23, a-h, ♀  
Indian ocean

----- Farran 1936, p. 80, fig. 1

— —, SEWELL, 1947, P. 51.

— —, Krishnaswamy, 1956, p. 452. ♀. Madras coast.

-- --, Decker, 1964. pp. 23-24, South Africa

-- --, Tanaka, 1960. p. 24

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

-- --, Park, 1970, p. 475, GULF OF MEXICO

--, BRADFORD, 1978a : 133

-- --, Fleminger, 1959-1961, pp. 92-98

-- --, Hure & Scotto di Carlo 1968: 37

--, Corral, 1970, pp. 86-91, pl. 15, 16, 17, 18.

--, DeDecker, 1962, p. 111

--, Bernard, et al, 1967, p. 87

--, Rose, 1956, p. 460

--, Movchan, 1971, p. 64

--, Krylov, 1967?, p. 248

--, Furuhashi, 1961: 105

--, TANAKA, 1956 b: 367, 368-369, FIG. 6

--, WHEELER, 1970: 3

PARACALANUS DENUDATUS SEWELL CARD 2

- BJÖRNBERG, T. 1982: 65-
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , CALEF & GRICE (UNPUBL.) in KETCHUM & RUTHER  
1966 (UNPUBL.): APPENDIX
- MADHUPRATAP & HARIDAS 1986: 108, 110 - INDIAN OCEAN
- REGNER 1987: 373 -, ADRIATIC
- KIORTSIS ET AL. 1969: 36 -, AEGEAN
- Soldevilla et al 1988: 57 Canary Islands
- TURNER 1984d: 8 -

Calanidae - Calanoida

Paracalanus dubia Seymour-Sewell, ♀

— — Sewell, 1912, p. 330: pl. 15, figs. 1-5.

— — Sewell 1929, p. 76, fig. 29, a-b

syn. *P. crassirostris* forma Sewelli, Fruchtl 1924, p. 36

-- -- Grice, 1962. pp. 183, 187, pl. 4, fig. 4-12

-- -- Pillai, P.P., 1971, pp. 163.

Habitat. Bay of Bengal.

--, Rose, 1955, p. 391

--, Rose, 1956, p. 460

--, Fruchtl, 1924, p. 37

= *Paracalanus dubia* P. BEADFORD, 1978a = 133

- dubius, Bjornberg, 1963: 100 (table)

--, TANAKA, 1956: 367

--, LAWSON & GRICE 1973: 54-55, = P. CRASSIROSTRIS  
FORMA SEWELLI

PARACALANUS ELEGANS ANDRONOV, 1972

--, = PARVOCALANUS E., BRADFORD, 1978a : 133

KARACALANUS

ELONGATUS - SEE

EUCALANUS

Paracalanus gracilis Chen & Zhang 1965: 123-

-- Chen & Zhang 1965: 123-124, Pl. 9, figs. 13-15,  
n. sp. ♀, East China Sea.

-- CHEN, Q.-C. 1986: 524-

Metridiidae - Calanoida.  
Paracalanus hibernicus Brady & Robertson, ♀  
syn.

— — Brady & Robertson, 1873, p. 126: pl. 8, f. 1-3.

A synonym of Metridia lucens.  
(Norman & Brady, 1909, p. 115).

A synonym of Metridia hibernica.  
(Giesbrecht, 1892, p. 340).

Paracalanus indicus Wolfenden

①

- Bowman, 1971, p. 5 -, fig. 23
- , BRADFORD, 1978a: 133, 135-138 ♀♂; fig. 1-4
- , Andronov 1980: 71, 72, 76, 78, 80, 84.
- parvus, ARCOS 1978: 47-50, TAB. III.
- , Andronov, 1977, p. 154
- , Bjornberg, ~~1980: 65~~ 1980(82): 65 -, OFF BRAZIL
- , PAPPENHÖFER, 1984: 324
- YOUNG BLUTH 1979: 23, CARIBBEAN
- Bjornberg, 1981: 624, fig. 207#8

PARACALANUS INDICUS WOLFFENDEN

(2)

- MADHUPRATAP & HARIDAS, 1986: 108 - INDIAN OCEAN
- Kimmereer, et al, 1985: table 3 Australia
- Tafe & Griffiths, 1983: 112, 123 Australia
- CAMPANER 1986: 261, S. BRAZIL SHELF
- Latz, et al. 1987: 501 in table IV
- HERRING 1988: 185 -
- BURRELL & ZWERNER 1972: 138, CHESAPEAKE BAY
- REID 1990g: 188-189
- MCKINNON ET AL. 1992: 239, PORT PHILLIP BAY, AUSTRALIA

Paracalanus indicus Wolfenden

card 3

-- Bowman 1978a: 113-, Fig. G-H, J, K

Paracalanus intermedius Shen & Bai, 1956

Paracalanus intermedius Shen & Bai, 1956, pp. 184-186,  
pl. 2, fig. 12-16, pp. 219-20

--, BRADFORD, 1978a: 133

-- CHEN, Q.-C. 1986: 524-

PARACALANUS LATUS ANDRONOV 1972

--, = PARVOCALANUS L., BRADFORD, 1978a: 133

Calanidae - Calanoida

Paracalanus mariae Brady, ♀. ♂.

— — Brady, 1918, p. 17: pl. 1. figs. 9-14.

Habitat. Tasmania.

Paracalanus nanus G.O. Sars ♀.

— — Sars, 1907, p. 4. 21

— — Sars, 1925, p. 26: pl. 6, figs. 10-17.

— — Rose, 1933, p. 75, fig. 28 (from Sars).

— — Sewell 1929, p. 71, fig. 26, a-f; 1♀, Indian Ocean.

-- --, Tanaka, 1960. pp. 24-26, pl. 7, f. 1-11; pl. 8, 1♀, 1♂. Indian Ocean, E of Madagascar f. 9

Habitat, Azores, Madeira, Mediterranean.

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

--, DEEVEY, 1971: 226, 228, TAB. 3

--, BRADFORD, 1978a: 133

- , Corral, 1970, pp. 90-95, pl. 19, 20,  
--, Krylov, 1967?, p. 248  
--, Vives, 1972, pp. 207, 208.  
--, Bjornberg, 1963: 100 (table)  
--, TANAKA, 1956b: 367  
--, WHEELER, 1970: 3  
--, SCOTTO DI CARLO, ET AL, 1975: TAB. 1  
--, QING-CHAO + SHU-ZHEN 1974: 105-106; Pl. 3: 23-32.

Paracalanus nanus G.O. SARS

card 2

--, Shmeleva & Kovalev, 1968, p. 55, fig. 4b

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

--, Bjornberg, ~~1980:65~~ 1980(82):65-, OFF BRAZIL

-- Croce, et al, 1973: table 9

-- GRICE & HART 1962a: 293, w. NORTH ATLANTIC

-- GRICE & HART 1962b: TABLE 3

— Bjornberg, 1981: 622, fig. 207 #5

-- MADHU PRATAP & HARIDAS, 1986: 108 - INDIAN OCEAN

— Vives, 1978: 265, 273, pl. 1

Paracalanus nanus G. O. Sars

card 3

-- Regner 1987: 373-, Adriatic

-- CARLI + SERTORIO 1964: 207, LIGURIAN SEA

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

-- Soldevilla et al 1988: 57 Canary Islands

PARACALANUS NUDUS (DAVIS, 1944)

-- and P. CRASSIROSTRIS VAR. NUDUS, LAWSON &  
GRICE 1973:55

P. CRASSIROSTRIS NUDUS, WELLERSHAUS 1969:250-251

Paracalanus nudus Sewell, 1929 - see Delius

Calanoida - Calanidae.

Paracalanus parvus (Claus), ♂. ♀.

Type-locality: Helgoland

Pl. 27, fig. 1-4

Calanus — Claus, 1863, p. 173; pl. 26, fig. 10-14; n

Paracalanus — Boeck, 1865, p. 233 (9).

— — Claus, 1881, b, pl. 3, figs. 1-10; p. 327.

— — Carus, 1885, p. 333; Car, 1884, p. 239

Habitat. Mediterranean: Black Sea:  
Red Sea: Arabian Sea: Indian  
Ocean: Pacific: N. Atlantic.

- — Cleve, 1900, p. 141: 1901, p. 8: 1904, p. 194.
- — Cunn, 1892, p. 169: pl. 1, figs. 1-12.
- — Giesbrecht, 1892, p. 164: pls. 1, 6, & 9.
- — T. Scott, 1894, p. 26: pl. 1, figs. 9-14.
- — Aurivillius, 1898, p. 29: Cleve, 1902, p. 20
- — Giesbrecht & Schneil, 1898, p. 24.
- — T. Scott, 1899, p. 248: 1901, p. 350: 1906, p. 298.
- — T. Scott, 1900, p. 383: Brady, 1899, p. 32.
- — Wheeler, 1900, p. 168: fig. 6, a-c, text.
- — Brady, 1901, p. 32: A. Scott, 1902, p. 402.
- — Fowler, 1912, p. 495.
- — A. Scott, 1902: 402

P. parvus

Paracalanus parvus P. parvus (2).

- P. parvus Wolfenden, 1902, p. 361: 1904, p. 129.  
— — G. O. Sars, 1901, p. 17: pls. 8 and 9: 1905, p. 2.  
— — Jensen, Johansen, & Levinsen, 1903, p. 303: pl. 1.  
— — Thompson & Scott, 1903, p. 243.  
— — Cleve, 1903, p. 367: 1904, p. 194.  
— — var. borealis Wolfenden, 1905, p. 997: pl. 96, f. 7-11, 16.  
— — Farran, 1905, p. 30: 1908, p. 22.  
— — Eisterly, 1905, p. 140: fig. 12, a-e, text.  
— — var. perplexus Norman & Scott, 1906, p. 127: <sup>pl. 12,</sup> f. 1-2.  
— — Stebbing, 1910, p. 523.

- — Pearson, 1906, p. 8: Farran, 1910, p. 61.  
— — v. Bremen, 1908, p. 20: fig. 17, text.  
— — A. Scott, 1909, p. 27: T. Scott, 1906, c. p. 298.  
— — Kraeef, 1910, p. 77: pl. 1, figs. 1-13.  
— — Steuer, 1910, p. 22: Sewell, 1912, p. 358.  
— — With, 1915, p. 54<sup>57</sup>: text-fig. 12, a-f.  
— — Oberg, 1905, p. 40: pl. 1, fig. 2.  
— — Moroff, 1909, p. 436: pl. 24, f. 1-22: pl. 25, f. 23.  
— — Thompson & Scott, 1903, p. 243.  
— — Wheeler, 1901, p. 168: text-fig. 6, a-c.  
— — Sharpe, 1910, p. 406.

P. parvus

Paracalanus parvus P. parvus.

(3).

- P. parvus* Bourne 1889, p. 145: pl. 11, f. 1-3.  
— — Eisterly, 1905, p. 140: text-fig. 12, a-e.  
— — T. Scott, 1898, b, p. 120.  
— — Möbius, 1884, p. 68: 1887, p. 114.  
— — Canu, 1888, p. 81: 1890<sup>a</sup>, p. 478.  
— — Thompson, 1887, p. 65: 1888, a, p. 148.  
— — Gournet, 1889, p. 473.  
— — Bourne, 1889, p. 146: 1890, p.  
— — Hensen, 1890<sup>a</sup>, p.  
— — Pesta, 1921, p. 500: text-f. A12.  
— — Krämer, 1895, p. 217.

- — Timm, 1894, p. 369.  
— — Brady, 1899, p. 32.  
— — Sewell, 1914, p. 208.  
— — Brady, 1918, p. 16.  
— — Thompson, 1893, p. 181: pl. 15. f. 5. a-c.  
— — Farran, 1929, p. 221.  
— — Sars, 1925, p. 24.  
— — Gurney, 1927, p. 143: fig. 16 A.  
— — Rose, 1929, p. 15.  
— — Cleve, 1900, p. 80.  
— — Wilson, 1932, p. 38: fig. 21. 1942, p. 201  
— — Giard, 1888, p. 6: Jespersen, 1934, p. 49.  
— — Bigelow + Sears, 1939, pp. 336-337, fig. 34.

*P. parvum*

Paracalanus parvus-4

Sewell 1929, p. 68, figs. 24, a-g; 25, a-e

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— —, Mathias & Euzet, 1951, p. 184. Étang de Thau.

— —, Carvalho, 1945, pp. 93-94, pl. 7, fig. 4. Guaratuba Bay, Brazil.

— —, Carvalho, 1952. Bay of Santos, Brazil.

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

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— —, SEWELL, 1947, P. 51-52,

— —, MORI - 1937 - P. 29, JAPAN.

— —, BRODSKY, 1950, P. 107, FIG. 33, USSR

— —, FURUHASHI, 1957, P. 15, JAPAN.

— —, Woodmanson, 1958, p. 253-4. Biscayne Bay, Florida.

- — Chiba, Tsuruta, + Maeda, 1955. Bikini.
- — , Marcus, 1957, p. 94, fig. 4. Black Sea.
- — , Cameron, 1957, p. 173. Luan Charlotte Is.
- — , Shen + Bai, 1956, pp. 183-184, pl. 2, fig. 7-11. Off Chefoo, China
- — , Grice, 1960, p. 223. W. coast Florida.
- — , Oliveira, 1945, p. 455, pl. 3, fig. 5, pl. 4, fig. 3-6. Rio de Janeiro.
- — , Davis, 1949, p. 204 (in Tables)
- — , King, 1949, p. 128 (in table).
- — , Sutchiffe, 1948, p. 235.
- — , Grice, 1956, pp. 62-64.
- — , Oliveira, 1947, p. 459, fig. 8. ~~Ilha~~ Ilha Grande + Sepetiba Bays, Brazil.
- — , Deevy, 1952a, p. 92. - 1952b, pp. 142-144, fig. 13. - 1960, p. 29, fig. 8, 11.
- — , Kartha, 1959. pp. 259-262
- — , El-Maghraby, 1965. pp. 41-42, fig. 10, 30
- — , Furuhashi, 1961. p. 10
- — , Honjo et al, 1957. pp. 120-128
- — , Decker, 1964. p. 24 S. Africa

P. p2 v WJ

Paracalanus parvus

(5)

- --, Grice, 1962, p. 183  
-- --, Anraku, 1964 p. 49  
-- --, Kovalev, 1964. pp. 133-136  
-- --, Omori, 1965. pp. 18-27  
-- --, Gonzalez & Bowman, 1965 pp. 245-6, fig. 3b-i  
-- --, Tanaka, 1960. p. 27  
-- --, Vervoort, 1962. pp. 396-399, fig. 1,2  
-- --, Northcote et al, 1964. p. 1079  
-- --, Cronin, 1962, p. 87.  
-- -- Deerey, 1966, p. 156  
-- -- Park, 1968, pp. ~~572-5~~ 527-572.  
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(see back)

— Mori, 1942:551

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

-- --, Vilela, 1969, pp. 11-12, Est. 2 fig. 1

— —, Saraswathy, 1967, p. 76

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

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

-- --, Brian, 1937, pp. 1-18

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

-- --; Vervoort, 1957, p. 36.

-- --, Bacon, P.R., 1971, p. 85

-- --, Deevy, <sup>1948</sup> ~~1948~~, p. 21

P. parvus

-- --, Apstein, 1905, p. VI, VIII, XVIII, XX, XXII, XXIV,  
XXXVIII, LIV, LV, XXVI, XXX, XXXII, XXXIV, XXXV

Paracalanus parvus (Claus, 1863)

card 6

- -, Chiba, 1956, fig. 4
- , Bradford, 1972, p. 34, fig. 5.9-5.12
- , Corral, 1970, p. 84-86, pl. 13, 14
- , DeDecker, 1962, p. 111
- , Heinrich, "The life histories...", p. 16
- , Berdugo, & Kimor, 1968, p. 448.
- , Bernard, et al, 1967, pp. 87.
- , Bernard, 1970, p. 41, 72, 76,
- , Jacobs, 1969, p. 357-68
- , Schwarz, 1960, p. 296
- , Bowman, 1971, p. 28, fig. 23

- , Okada & Taniguchi, 1971, p. 33  
--, Paiva, 1971, p. 21  
  
--, Rose, 1953, p. ~~4~~ 457-  
--, ~~Roes~~, 1955, p. 391  
--, Rose, 1956, p. 460  
  
--, Stormer, 1929, p. 48  
--, Pesta, 1928, pp. 17-18, fig. 11  
--, Stock & Vos, 1960, p. 205  
  
--, Dolzonolskaya, 1970, p. 41, pl. II, fig. 4  
--, Sazhina, 1970, p. 154, pl. II  
--, Bjornberg, 1971, p. 348-9

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- , Sato, 1913, no. 9, pl. 2
- , Shen & Bai, 1956, p. 219, pl. II (7-11)
- , Seno, Komaki & Takeda, 1963, tab. 2
- , Shen & Lee, 1963, p. 571, fig. 1
- , Hammond, 1973, p. 336.
- , Ehrhardt, 1967, p. 737-
- , Zillioux and Gonzalez, 1972, p. 218.
- , Fulton, 1968, p. 35, fig. 35
- , Coker & Gonzalez, 1960, p. 18
- , Steuer, 1910, p. 592
- , Brodskii, 1964, p. 218
- , Robinson, 1948, p. 99-101
- , Movchan, 1971, p. 64
- , Evans, 1972, p. 50. fig. 12.
- , Robertson, 1968, p. 191.
- (15) OFF BRAZIL

- , Kos, 1958, p. 191
- , Crisafi, 1974, p. 146.
- , Lubni-Gertsik, 1959, p. 71-
- -, Hue, 1967, pp. 15, 18, 20, 22.
- , Vives, 1972, pp. 207-8.
- , F uruhashi, 1966: 301, 302, 304, 311
- Furuhashi, 1961:105
- , Bjornberg, 1963: 9, 27, 28, 94, 96, 98, 100 (A table), 104 (3 tables),  
Tables 8, 10, 11, 114, 117, 120, 123, table 17, 124, 126
- , TANAKA, 1956 b: 367, 369-371
- , TANAKA, 1964 b: 6, TAB 2, 3
- , MARSHALL & ORR, 1966: 513-530 (RESPIRATION & FEEDING)
- , HIROTA, 1974: 7, 9, 10; FIG. 4-6
- , HIROTA, 1974: 11

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CARD 8

- , HIROTA, 1979a: 11, 14, 15, 16; FIGS. 3-4.
- , HIROTA, 1979b: 36, 39, 41; FIGS. 4-5; TAB. 2
- , WHEELER, 1970: 3
- , CORRAL & ALVAREZ-OSSORIO, 1978: 138, 145, 161
- , GREENWOOD, 1976: 2, 23-24; TAB. 1; SYN. CALANUS P.
- , HIRAKAWA, 1976: 73
- , LADRY, 1978: 1104, 1107-1112; FIG. 4, 7, 8; TAB. 1
- , MARTENS, 1976: 67
- , BAINBRIDGE, 1972: 67, 69, 70, 72, 75, 80, 81

- , ARCOs, 1976: 91, 99; TAB. II
- , BREEMEN, 1906: 5, 11, 26
- , CHISLENKO, 1977: TAB. 3
- , GELETTN, 1977: 94
- , DIGBY, 1950: 393, 399-400, 415; FIG. 3, 13; TAB. 1, 3, 11, 18-20
- , DEEVEY, 1971: 228; TAB. 3
- , BINET & DESSIER, 1971: 424, 451
- , BINET, ET AL., 1972: 133
- , FLEMINGER & CLUTTER, 1965: 101; TAB. 2, 4, 7, 9, 10
- , BEAUDOUIN, 1973: 125, 133-136, 167; FIG. 7, 8; TAB. 1
- , ITON, 1970: TAB. 1
- , BRADFORD, 1978a: 133

PARACALANUS PARVUS

CARD 9

- , FASHAM, ET AL., 1974: 108
- , JAWED, 1973: 7-104
- , OWRE & FOYO, 1972: 506; TAB. 5, 6
- , SCOTTO DI CARLO, ET AL., 1975: TAB. 1
- , CALEF & GRICE (UNPUBL.) IN KETCHUM & RYTHER  
1966 (UNPUBL.): TAB. 1; APPENDIX
- , ANDRONOV & MAIGRET 1980: 71, 75.
- , BRIAN 1927: 10, 11, 16; TAB. IV, VI.
- , DAVIS 1950: Tab. V-p. 93.

- , Cervigon & Marcano 1965: 279, 280; Figs. 24-29; Tabs. 9-11.
- , FIGUEIRA 1971: 149.
- , CHENG et al 1965: 1, 2, 3.
- , CRISAFI & CRESCENTI 1975: 213.
- , CHATTON 1911: 1, 2.
- , CARVALHO 1952: 143-144; Pl. 1, figs. 13, 14.
- Monod, 1931: 399
- Marques, 1958: 208 fig. d
- Strickler, 1982: 159, fig. 1a.
- Turner & Dagg, 1983: 8, passim, fig. b

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card 10

--, Kovalev, A.V., 1968, p. 441

--, Kasahara, S., S. Uye, & T. Obné, 1975, p. 25

--, Shmeleva & Kovalev, 1968, p. 54, fig. 4a

--, Turner, 1981, p. 369, tbl. 2

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

--, Ueda, 1978, p. 56, tbl. 1, 57

--, Ogawa, 1977, p. 3

--, Kos, 1969, p. 953

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

--, Ueda, 1980, pp. passim

- , Ueda, 1982, *passim*
- , Gardner & Szabo, 1982, p. 25, 168-169, fig. 11.1.1.
- , Uye, 1982, p. 5-7
- , Navarrete, 1976, p. 13-16
- , Sreekumaran, et al, 1981: *passim*
- , Wolfenden, 1906: 997, pl. 96, fig. 7-11, 16
- , Cannicci, 1959: *passim*
- , Croce, et al, 1973: table 8
- Shen & Bai, 1956: 183-184, 219, pl. 2, fig. 7-11
- Hirota, 1969b: *passim*.
- Shen & Lee, 1963: 571-573. fig. 1.
- Chen, 1980: table 1
- Price, et al 1983: 116-123
- Ramirez, 1969: 51-52, ~~4~~

PARACALANUS PARVUS

CARD 11

- , VAISSIÈRE + SEGUIN, 1984: TAB. 1
- , KADOTA + TANAKA, 1984: III
- , PETERSON + MILLER, 1977: 718, 721-722
- , ANRAKU + KOZASA, 1979: 81, 83 FIG. 7
- , HIROTA, 1982: 50
- , HIROTA, 1981: 21-23, TAB. 1
- , PAFFENHÖFER, 1984: 330
- , SPECCHI + VALLI, 1979: 134
- , MOTODA + MINODA, 1974: 232

PARACALANUS PARVUS

CARD 12

- HERMAN 1984:133,143,145
- MILLER ET AL. 1984:1287
- ANRAKU 1975:81-87, FIGS. 3-6
- DUGAS & KOSLOW 1984:131,133
- DIAS & NOGUEIRA 1985: 54.
- BONECKER ET AL. 1985: 356.
- MASSUTI' & NAVARRO 1950:20.
- SANDER & MOORE 1978:233.
- SHEN & LEE 1966:214 -CHINA

PARACALANUS PARVUS (CLAUS)

CARD 13

- UYE & KASAHARA 1978: 114
- UYE 1984a: 47, 48
- UYE 1984b: 172
- CHEN & ZHANG 1965: 124.
- PATRITI ET AL 1984: 138-142, MARSEILLES.
- PATRITI 1984a: 156-161, Gulf of FOS-SUR-MER.
- PATRITI 1984b: 165, MARSEILLES
- YOUNG-BLUTH 1976: 489-491, PUERTO RICO
- YOUNG-BLUTH 1979: 22, CARIBBEAN

Paracalanus parvus (Claus)

card 14

-- Youngbluth 1980: 265-287, Puerto Rico

-- KOGA 1984b: 127, 130, FIG. 14-NAUPLII; 132

-- GOSWAMI 1983: 255-257, INDIA

-- GAJATHIYE ET AL 1984: 77, INDIA

-- MÄEMETS & VELDRE 1956a: 18, 44-46, PL. I FIGS. 5-8-

POSSIBLE RECORDS- ESTONIA

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

-- GRICE & HART 1962b: TABLE 3

-- STEPANOV & SUETLICHANII 1976a: 42, 44, 46

Paracalanus parvus (Claus)

card 15

-- Stepanov & Svetlichnii 1976b: 48, 50

-- Chmyr & Shadrii 1976: 27-38

- Deevy, 1952a: 92

- Deevy, 1952b: 131, 134, 142-144

- Deevy, 1960a: 16, 29

- Dakin & Colefax, 1940: 93, fig. 119a-d

- Dakin & Colefax, 1933: 218, 204

- Turner & Dagg, 1983: 11, 21, 23, 34-36  
fig. 6, 13, 19

- Valentin, 1984: 183-199
- Tanaka, 1965a: 15, fig. 13a-d
- Arcos & FLEMINGER 1986: 185
- HIRAKAWA & ZAMA, 1985: 115-120, SOUTHERN CHILE
- MADHUPRATAP & HARIDAS, 1986: 107, 108, 110 - INDIAN OCEAN
- Dawson & Knatz, 1980: 88, pl. 75, fig. a-i
- Greenwood, 1982a: 55-56
- Greenwood, 1982b: table 3
- Hure, 1955: 22
- Hure, 1961: 16

Paracalanus parvus (Claus)

card 16

-- Lawson & Grice 1973:49,54

-- SAZHINA 1975:80,81

-- PETIPA 1975:35,47, FIG. 5 (1,2)

-- GRANDORI 1913:366,404-412, PL. VIII - DEVELOPMENT; 423,433

-- UEDA 1987:72

-- ZAMORA SANCHEZ 1974:45

-- AMBLER 1986:194

-- AMBLER ET AL. 1985:177-195, SAN FRANCISCO BAY

-- YAMAJI 1951:19, FIG. 4 BAY, JAPAN

PARACALANUS PARVUS (CLAUS)

CARD 18

- TOKIOKA 1951: 13, 15, 23-24, FIGS. 5a, b - EIGU BAY, JAPAN
- FUSHI 1951: 26-30, EIGU BAY, JAPAN
- HERDMAN ET AL. 1910: 228-297, ISLE OF MAN
- HERDMAN + SCOTT 1911: 219-220, ISLE OF MAN
- HERDMAN + SCOTT 1912: 142-145, ISLE OF MAN
- HERDMAN ET AL. 1913: 213-215, ISLE OF MAN
- HERDMAN ET AL. 1914: 289-290, ISLE OF MAN
- HERDMAN ET AL. 1915: 232-233, ISLE OF MAN.
- HERDMAN ET AL. 1919: 31, ISLE OF MAN

PARACALANUS PARVUS (CLAUS)

CARD 18

PARACALANUS, HERDMAN ET AL. 1920: 82, ISLE OF MAN.

— de Oliveira, 1946: 459, fig. 8

— Uye, 1986c: 35-42, fig. 1-4 graphs

— Vives, 1978: 265, 272, tbl. 1

-- YEN 1982: 107-115, PUGET SOUND

-- ASSIS ET AL. 1984: 221-, PORTUGAL

-- RAE + FRASER 1941: 197-, SOUTHERN NORTH SEA

-- RAZOULS, S. ET AL. 1987: 659

-- REGNER 1987: 373

Paracalanus parvus (Claus) 1863

card 19

-- Carli 1968: 100-, Ligurian Sea

-- CARLI 1971a: 61-, LIGURIAN SEA

-- CARLI 1971a: 371-2, " "

-- CARLI ET AL. 1973: 340-, SICILY

-- CARLI + CRISAFI 1983: 37, 38, PL. 1(2), ITALY

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

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

-- IANORA ET AL. 1987: 29-36, FIGS. 1-6, GULF  
OF NAPLES.

Paracalanus parvus (Claus, 1863)

card 20

-- Mauchline 1988: 720

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

-- STEPHEN 1984: 165-, ARABIAN SEA

-- MONTU' 1980b: 57-, BRAZIL

-- MONTU' + GLOEDEN 1986: 87-, FIG. 23a-d, BRAZIL

-- DAVIS 1982: 728-, NEWFOUNDLAND

-- BARETTA + MALSCHAERT 1988: 73-, EMS ESTUARY,  
NETHERLANDS / GERMANY

-- SARGENT + HENDERSON 1986: 75-

Paracalanus parvus (Claus, 1863)

card 21

-- Le Borgne 1986: 139-

-- CORNER ET AL. 1986: 270-

-- CITARELLA 1986: 278-, MARSEILLES

-- BHATTACHARYA 1986: 220, INDIA

-- CHEN, Q.-C. 1986: 526-

-- MORAITOU- APOSTOLOPOULOU ET AL. 1986: 580,  
JONIC GULF, GREECE

-- VILLATE & ALCARAZ 1986: 610-, BILBAO, SPAIN

-- DAVIS, CABELL S. 1986: 628, GEORGES BANK

Paracalanus parvus (Claus, 1863)

card 22

-- Paffenhöfer & Stearns 1988: 33-

-- Marin & Antezana, 1985: 963 tab 1 Chile

-- Soldevilla, et al. 1988: 57 Canary Islands

-- PAFFENHÖFER & LEWIS 1989: 135

-- CARRADA ET AL. 1987: 152-, LAGOONS, ITALY

-- RODRIGUEZ & VIVES 1984: 242-, MALAGA HARBOR

-- REID & FERRARI 1988: 19-

-- FERRARI & HAYEK 1990: TAB. 1

-- RUNGE 1988: 65-

Paracalanus parvus (Claus, 1863)

card 23

- Huntley & Boyd 1984: 458-
- HUNTLEY ET AL. 1986: 105-120, LA JOLLA, CALIFORNIA
- KJØRBOE ET AL. 1988: 219-225, KATTEGAT, BALTIC
- McLAREN & CORRETT 1984: 828-
- McLAREN, TREMBLAY ET AL. 1989: 560-, SCOTIAN SHELF
- UYE 1988: 293
- UYE ET AL. 1987: 421-, INLAND SEA, JAPAN
- UYE & MATSUDA 1988: 281-, " " "
- GILL & POULET 1988: 303-

Paracalanus parvus (Claus, 1863)

card 24

-- Ho & Perkins 1985: 591-

-- JIMENEZ PEREZ ET AL. 1988: 81-, BAHIA DE  
TODOS SANTOS, BAJA CALIFORNIA

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

-- JIMENEZ - PEREZ 1989: 90-, BAHIA DE TODOS SANTOS

-- TURNER 1984 d: 8 -

-- NOGUEIRA ET AL. 1989: 152; GUANABARA BAY, BRAZIL

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

Paracalanus parvus (Claus, 1863)

card 25

- Montú 1989: 40-, feeding
- GAEDKE 1990: 187-, EMS - DOLLART ESTUARY
- BURRELL + ZWERNER 1972: 138, CHESAPEAKE BAY  
(? = P. INDICUS + P. QUASIMODO)
- BOTTGER 1985: 2-
- SHIH ET AL. 1971: 43, CANADA - ATLANTIC; 199,  
PACIFIC; 205, ARCTIC
- GAUDY 1984: 208-
- LAKKIS 1984: 290-, E. MEDITERRANEAN

Paracalanus parvus (Claus, 1863)

card 26

- Alvariño 1989:69-, off s. California
- SABATINI 1989: 848, BAHÍA BLANCA, ARGENTINA
- S.L., MONTEIRO RIBAS ET AL. 1990: 82, CABO FRIO S., BRAZIL
- JAMIESON & BURNS 1988: 253 -
- OHMAN 1985: 28 -
- OHMAN 1988b: 537 -
- OHMAN 1990: 270; DABOB BAY, WASHINGTON STATE
- OHMAN & WILKINSON 1989: 974, OFF S. CALIFORNIA
- Wiborg, 1944: 31, ~~41-52~~, 77, 78, tbl. 2-3, ~~f. 35-37~~  
41-43 f. 19

Paracalanus parvus (Claus, 1863)

card 27

-- Reid 1990g:189

-- UYE 1991: 627 -

- GRANDORI 1914: 164, VENICE LAGOON

- BOXSHALL 1992: 380, FIG. 18A

- RAMÍREZ 1966: 9, LÁM. IV FIGS. 13-19, MAR DEL PLATA,

ARGENTINA

-- BOWMAN 1978a: 116 -

- KOVALEV, 1969: 150 - , BLACK SEA, ETC.

-- RAZOUK 1994: 11

PARACALANUS PARVUS (CLAUS, 1863)

28

- C. B. WILSON 1936: CANADIAN ARCTIC
- LEGARÉ + MACLELLAN 1960: 434, MAINE/NEW BRUNSWICK, USA/CANADA
- HOLMES 1983: 20, IRELAND
- S. L., FLEMINGER + KRAMER 1988: 536, TAB. 1, SAN DIEGO, CALIFORNIA, USA
- ROSE 1927: 145, 152, 155, 161, OFF ALGERIA
- ROSE 1934: 54-81, " "
- LIANG + UYE 1996: 219, 225-226

Paracalanus parvus var. borealis

--, Wolfenden, 1906: 997-998 pl.

Paracalanus parvus var. indicus

--, Wolfenden, 1906: 998

--- REID + FERRARI 1988: 19

PARACALANUS PARVUS MAJOR

- , TANAKA, 1956 b: 370
- , HIROTA, 1974: 5; TAB. 3
- , HIROTA & HARA, 1975: 118, 119, 121; FIG. 5-6
- Hirota, 1979 b: *passim*

PARACALANUS PARVUS MINOR

--, TANAKA, 1956 b: 369-370

--, HIROTA, 1974: 7; TAB. 4

--, HIROTA & HARA, 1975: 119, 120; FIG. 5-6.

--, HIROTA, 1979a: 14

—, HIROTA, 1979b & passim

~~WAKAMOTO, 1931: 399~~

Calanoida—Calanidae.

Paracalanus pygmaeus (Claus), ♀.

Calanus — Claus, 1863, p. 74.

Paracalanus — Claus, 1881, p. 12.

— — Claus, 1885, p. 333.

— — T. Scott, 1894, p. 27: pl. 1, figs. 1-8.

Habitat. Mediterranean: Gulf of  
Guinea

- — Giesbrecht, 1892, p. 164, undetermined.  
— — Giesbrecht & Schmeil, 1898, p. 24.  
— — Sars, 1925, p. 24: pl. 6. figs. 1-9.  
— — Rose, 1929, p. 16.  
— — Wilson, 1942, p. 201  
— — Park, 1968, pp. 527-572.  
—, Corral, 1970, p. 86  
—, Bjornberg, 1963: table 10  
—, BIDET & DESSIER, 1971: 424  
—, BRADFORD, 1978: 133

Paracalanus pygmaeus (Claus)

- , Fruchtl, 1924, p. 37
- , Bowman, 1971, p. 5-
- , Vives, 1972, pp. 207-8.
- , WHEELER, 1970: 3
- GRICE & HART 1962a: 293, w. NORTH ATLANTIC
- GRICE & HART 1962b: TABLE 3
- LAWSON & GRICE 1973: 54, = P. CRASSIROSTRIS

FORMA SCOTTI

- Vives, 1978: 265, 273, t. 1
- REGNER 1987: 373, ADRIATIC

Paracalanus pygmaeus (Claus)

card 3

-- Carli & Sertorio 1964: 207-, Ligurian Sea

-- ROSE 1934: 77, OFF ALGERIA

Paracalanus quasimodo Bowman, 1971

Bowman, 1971, p. 24-28, figs. 20-23, pp. 5-

--, HOPKINS, 1977: 471

--, MILSTEIN, 1979: 70

--, BRADFORD, 1978a: 133

--, Turner, 1981, p. 369, tbl. 2

--, Andronov, 1977, p. 155

--, Björnberg, ~~1980: 65~~ 1980(82): 65-1, OFF BRAZIL

--, PAFFENHÖFER, 1984: 324

-- FULTON 1984: 405

-- YOUNG-BLUTH 1979: 22, CARIBBEAN

-- Turner, 1984: 27-46

— Bjornberg, 1981: 622, fig. #207 #7

P. QUASSIMODO, MILSTEIN + JUANICO 1985: 157, 162,  
MALDONADO BAY, URUGUAY; = P. PARVUS OF SEVERAL  
AUTHORS.

— QUASSIMODO, MILSTEIN 1983: 353, MALDONADO BAY

— MILSTEIN 1984: 339-342, MALDONADO BAY

—, REIDY + FERRARI 1988: 19

— BURRELL + ZWERNER 1972: 138, CHESAPEAKE BAY

— BONECKER, NOGUEIRA + SANTOS 1990: 74, ESPIRITO  
SANTO, BRAZIL

— BONECKER, BONECKER ET AL. 1990: 75, ESPIRITO SANTO,  
BRAZIL

Paracalanus quasimodo Bowman, 1971

card 2

-- Araujo et al. 1990:99, off Sergipe, Brazil

-- UYE 1991: 627 -

-- BOWMAN 1978a: 113, FIG. 1 D

-- LANSAC TÔHA + LIMA 1993: 91, TAB. 1, S. PAULO, BRAZIL

-- SUÁREZ MORALES, E. 1994c: 182, TAB. 1, CHEYUMAL BAY,  
QUINTANA ROO, MEXICO

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

-- LIANG + UYE 1996: 219

Paracalanus scotti (FRÜCHTL, 1923)

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

--, BINET & DESSIER, 1971: 424

--, = PARVOCALANUS S., BRADFORD, 1979a: 133

--, ANDRONOV & MAIGRET 1980: 71, 80, 84.

-- LAWSON & GRICE 1973: 55

-- WELLSHAUS 1969: 250-251

Calanoidae

①

Paracalanus serratipes Sewell, ♀

— — Sewell, 1912, p. 332: pl. 15, figs. 6-10.

— — Sewell, 1914, p. 208.

— — Sewell 1929, p. 66, fig. 22, a, b

--, Bernard, et al, 1967, p. 87

--, Rose, 1955, p. 391

--, Rose, 1956, p. 460

Habitat, Burmese Coast; Gulf of Mannar,

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