

Pseudocalanidae Sars, 1901

- ICZN 1988: 228-229, not given precedence over
Clausocalanidae Giesbrecht, 1892

- BORUTZKY ET AL. 1991: 434-435, DIAGNOSIS, KEY

in)

Calanoida - Pseudocalanidae.

Pseudocalanus valid

Boeck, 1872.

P. elongatus.

Syn.

Clausia Boeck, 1865^{p. 233.} (not Claparède)

Troculus Giesbrecht, 1881, p. 258.

Pseudocalanus Boeck, 1873, p. 37 (pars).

Pseudocalanus G. O. Sars, 1901, p. 19.

Prefix

Pseudo and Calanus.

Pseudocalanus Brady, 1878, p. 44 (pars)

Pseudocalanus Giesbrecht, 1892, p. 51.

Pseudocalanus Giesbrecht & Schmeil, 1898, p. 28.

Thorsome slender - with - caudal rami sub-
linear - 1^o antennae shorter than body.
in ♂ with 2 proximal joints coalesced.
2^o antennae with 7-jointed exopod.
5^o legs wholly wanting in ♀, very slender,
right leg shorter than left in ♂.

Tucullus Giesbrecht, 1882, p. 163.

Clavisa Claus, 1881, p. 16.

Pseudocalanus Pesta, 1921, p. 504.

PSEUDOCALANUS

(9)

- , TANAKA, 1956b: 381, 382, 384, 385, 396, 399
- , GAULD, 1966: 314, 15, 17, 19, 20, 31 (SWIMMING & FEEDING)
- , CHATTON 1911: 1.
- , Turner, 1981, p. 369, tbl. 2
- Gardner & Szabo, 1982, p. 25, 171.
- Corral et al, 1981: 229
- , PETERSON & MILLER, 1977: 718, 720-721
- , FERRARI, 1980: 548.
- Andronov, 1986: 297-299

PSEUDOCALANUS BOECK, 1872

(7)

- LAWSON + GRICE 1973: 54
- BAYLY 1982: 168
- MAUCHLINE 1988: 725-
- SAMSTEDT 1986: 9-
- HEIP 1986: 100
- BJÖRNBERG, T. 1986: 232-
- POULET ET AL. 1986: 435-
- RUNGE + MYERS 1986: 444-
- ICZN 1988: 228, ON OFFICIAL LIST

Pseudocalanus Boeck, 1872

card 4

- Frost 1989: 525-551, genus revision; keys to ♀♂

- TURNER 1984d: 8-, FEEDING

= PSEUDOCALANUS

Pseudocalanidae - Calanoida.

Leucillus acuspes Giesbrecht, ♀, 1881 ①
n. gen., n. sp. Giesbrecht, 1881, p. 258

— — Giesbrecht, 1882, pp. ⁶⁰⁻163; pl. 2, 3, 5-11.

— — Thompson, 1888, a. p. 142.

A synonym of Pseudocalanus elongatus.

{ (Jars, 1901, p. 20).

{ (Giesbrecht, 1892, p. 197).

Pseudocalanus acuspes (Giesbrecht, 1881)

card 2

- McLaren, et al. 1989: 565-568 figs 1-2 tabs 1-3
W. Baltic Sea; Nova Scotia; Resolute Bay, N.W.T.
- McLaren et al. 1989: 559-564 figs 1,3 tabs 1-4
Eastern Canada
- McLaren et al. 1989: 552-558 fig 3 tab 2 Nova Scotia
- Frost 1989: 526-, figs. 2B,C, 3, 5, 6, 9, 11-15, 19,
25, Kiel Bay; gives synonymy including Pseudocalanus
sp. of McLaren, 1965, new synonym
- BARTHEL ET AL. 1995: 23-30, TAB. 1, NORWAY

Aetideidae - Calanoida.

Pseudocalanus armatus Brady, ♀.

— — Brady, 1878, p. 46: pl. 4, fig. 1-11.
not — Thompson, 1893, p. 181.

A synonym of Bradyidius armatus.
(T. Scott, 1898^f, p. 264).

Aetididae - Calanoida

Pseudocalanus armatus Boeck, ♀

— — Boeck, 1873, p. 38.

— — Brady, 1878, p. 47, pl. 4.

— — Giesbrecht, 1892, p. 3 p 2, undetermined.

A synonym of Aetidius armatus (Boeck).
(Witt, 1915, p. 75)

— — Giesbrecht & Schmeil, 1898, p. 52 (doubtful)

— — Thompson, 1893, p. 181: pl. 15, f. 4, a-b.

--, Arcos, 1975, p. 15

Pseudocalanidae - Calanoida.

Clausia elongata Boeck, ♀.

①

= PSEUDOCALANUS ELONGATUS (BOECK)

— — Boeck, 1865, p. 234.

— — Canu, 1892, p. 170: pl. 2, figs. 1-13.

— — Brady, 1872, p. 2.

A synonym of Pseudocalanus minutus (Krøyer),
(With, 1915, p. 57)

— — Claus, 1881, p. 16: pl. 3, fig. 11-15.

— — Möbius, 1887, p. 115: Nordquist, 1888, p. 40: pl. 3.

— — (= Pseudocalanus elongatus) Giesbrecht, 1892, p. 197.

— — Giesbrecht, 1882 (nachtrag), p. 160.

— — Braun, 1888, p.

— — Bourne, 1889, p. 146 : 1890, p.

— — Canu, 1890, p.

— — Hensen, 1890, p.

Pseudocalanus cf. minutus, Gardner & Szabo, 1982, p. 25,
172-173, fig. 12-1.1.

— Hensen, 1911: 292

— Andronov, 1986: 297-298

Pseudocalanus clausii (Brady, 1865)

Calanus -, Brady 1865: 33, pl. 1, figs. 1-11, 13

Calanus -, Giesbrecht 1892: 197, syn. of Pseudocalanus elongatus

Calanus -, Norman 1868: 299

P. -, Frost 1989: 526, synonymy with P. elongatus

not established; 535, C. clausii of Brady, 1865 =

P. elongatus

Pseudocalanus elongatus (Boeck), ♀. Calanoida.
2

Clausia elongata, Boeck, 1865, p. 234 (10).

— — Claus, 1881, b, pl. 3, figs. 11-15.

Pseudocalanus — Boeck, 1872, p. 37

— — Cleve, 1900, p. 140: T. Scott, 1902, b, p. 450

— Scott & Scott, 1901: 339

A synonym of *Pseudocalanus minutus* (Krøyer).
(With, 1915, p. 57)

Black Sea — North Sea — Pacific

- — Oberg, 1905, p. 40: pl. 1, figs. 1, 3-7; pl. 6, f. 3.
— — Brady, 1878, p. 45: pl. 3, figs. 1-9.
— — Norman & Brady, 1909, p. 112.
Calanus clausii Brady, 1865, p. 33: pl. 1, figs. 1-11, 13.
Clausia elongata Canu, 1892, p. 170: pl. 2, f. 1-13.
Pseudocalanus elongatus Vanhöffen, 1897, pl. f. 6 (colored)
— — Giesbrecht & Schmeil, 1898, p. 28.
— — Mrázek, 1902, p. 507: text-figs. 5-6.
— — Van Breemen, 1907, p. 25: text-fig. 22.
— — Sars, 1903, p. 20: pls. 10-11.
— — Damas & Koefoed, 1907, p. 407.
— — Stephensen, 1913, p. 312.
— — Linko, 1913, p. 20

- — Trybom, 1881, p. 34, 36. P. elongatus (2)
 — — Brady & Robertson, 1872, p. 127.
 — — Thompson, 1886, p. 204; 1888, a. p. 148
Not — — Thompson, 1888, c, p. 140 (1889, p. 79).
 — — Giesbrecht, 1892, p. 197; pl. 10, f. 22, 31-33.
 Calanus clausii Norman, 1868, p. 299.
 Clausia elongata Brady, 1872, p. 2 [pl. 2, f. 14, 17
 Lucullus acuspes Giesbrecht, 1881, p. 258; 1882, p. 163,
 Clausia elongata Giesbrecht, 1882 (Nachtrag).
 — — Möbius, 1887, p. 115
 — — Braun, 1888, p.

— — Nordquist, 1888, p. 40.

Not Lucullus acuspes Thompson, 1888, c. p. 142.

Pseudocalanus elongatus Willey, 1919, p.

— — Aurivillius, 1898, p. 69.

— — Pesta, 1921, p. 504: text-f. B17

— — T. Scott, 1899^e - p. 91.

— — Willey, 1920, p. 8K.

— — Tinn, 1894, p. 370

— — Thompson, 1893, p. 181: pl. 15, f. 3, a-b.

— — Sars, 1925, p. 27.

— — Rose, 1929, p. 16.

— — Cleve, 1900, p. 82.

— — Jasehnov, 1927, p. 14, Kara Sea

PSEUDOCALANUS ELONGATUS (BOECK) ♀ (4)

— —, BRODSKY, 1950, p. 112, FIG. 34, USSR.

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

— —, Marcus, 1957, p. 94, fig. 3. Black Sea.

— —, Jaschnov, 1939. SW Barents Sea.

-- --, Kovalev, 1964. pp. 133-136

-- --, Northcote, 1964. p. 1079

-- -- CORKETT, 1967,

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

-- --, Apstein, 1905, p. VI, VIII, XVIII, XX, XXII, XXIV,
XXVI, XXX, XXXII, XXXIX, XXXX,
XXXXII, XXXXIV, XXXXXVIII, L, LIV, LVI

--, Chiba, 1956, p. 40

--, Heinrich, "The life histories...", p. 17

--, Pertsova, 1967, p. 240-

--, Stormer, 1929, p. 29, = P. minutus

— Willey, 1923: 322, 325, 330

--, Pesta, 1928, pp. 18-19, fig. 12

--, Stock & Vos, 1960, p. 205

--, **Schwarz, 1960, p. 294**

--, Dolzonolskaya, 1970, p. 43-4, pl. II, fig. 5

--, Sazhina, 1970, p. 154, pl. II

--, Sato, 1913, no. 10, pl. 2

--, *CORRAL Y ALVAREZ-OSSORIO, 1978: 138, 144, 160, 161*

Pseudocalanus elongatus

card 5

- , Fulton, 1968, p. 35, some refs. syns. of P.minutus
- , Katona and Moodie, 1969, pp. 743-747.
- , Omori, 1973, p. 4.
- , Hamond, 1973, p. 336.
- , Meshcheryakova, 1970, p. 97
- , Meshcheryakova, 1970, p. 112
- , Meshcheryakova, 1964, p. 150
- , Colebrook, 1972, pp. 204-207, figs. 1-2.
- , Kos, 1958, p. 191
- , Lubni-Gertsik, 1959, p. 71
- , Cushing, 1951, p. 167
- , Morris, 1970, p. 2300.
- , Hue, 1967, p. 20.

--, Omori, 1970, p. 124.

-- Evans, 1972, pp. 52. Fig. 13.

-- Urry, 1965, p. 47-58

--, Furuhashi, 1966: 298 (cf Minoda, 1958=P. minutus)

--, Bjornberg, 1963: 100 (+ table)

--, (= P. MINUTUS), TANAKA, 19566: 384-385

--, MARSHALL & ORR, 1966: 513-530 (RESPIRATION & FEEDING)

--, MARTENS, 1976: 64; FIG. 1, 2; TAB. 1

--, GAUDY, 1971: 65, 69

--, LAUROIX & FILTEAU, 1971: 781

--, BREEMEN, 1906: 5, 9, 27

--, KOS, 1977: 35-36, 42, 43, 44, 46, 48, 50, 52, 53

PSEUDOCALANUS ELONGATUS

CARD 6

- , PRYGUNKOVA + BURLACOVA, 1977: 109-114; FIG. 2; TAB. 1, 3
- , PRYGUNKOVA, 1977: 105, 106, 107
- , PAUSHTIKS, 1977: 117
- , CHIOLENKO, 1977: TAB. 3
- , TOPITSKY, 1976: 108, 110, 112, 120; FIG. 4, 5; TAB. 1, 2, 1A
BARENTS SEA
- , GELENN, 1977: 82, 83-94; FIG. 3, 4-9
- , DIGBY, 1950: 393, 397-399, 415; FIG. 2, 11-13; TAB. 1, 2, 10, 18-20
- , BEAUDOUIN, 1973: 125, 136, 167; TAB. 1

--, MARTENS, 1976: 412-415; TAB.1

--, LINDQUIST, 1959: 6

--, Farran 1936: 404-406.

Pseudocalanus elongatus

card 8

- , Kovalev, A.V., 1968, p. 441
- , Kraneis & Martens, 1975, p. 188
- , Svetlichnyi, Zagorodnyaya, & Stepanov, 1977, p. 430-436
- , Lacroix, 1966: 52
- , PAFFENHÖFER, 1984: 332
- , SPECCHI + VALLI, 1979: 134
- , MOTODA + MINODA, 1974: 211, 212, 228, 232 (AS P. MINUTUS)
- MASSUTI + NAVARRO 1950: 27.
- UVE ET AL. 1982: 34

Pseudocalanus elongatus (Boeck)

card 8

- Zagorodnyaya 1975:11-18, Black Sea
- SAZHINA 1975: 82-84
- PETIPA 1975: 34, FIG. 4(1,2)
- VILELA 1972:2
- GRANDORI 1913: 402
- HERDMAN ET AL. 1910: 228-297, ISLE OF MAN.
- HERDMAN + SCOTT 1911: 218-223, ISLE OF MAN.
- HERDMAN + SCOTT 1912: 142-146, ISLE OF MAN.
- HERDMAN ET AL. 1913: 212-215, ISLE OF MAN.

PSEUDOCALANUS ELONGATUS (BOECK) 1872 CARD 9

- HERDMAN ET AL. 1914: 288-290, ISLE OF MAN.
- HERDMAN ET AL. 1915: 232-233, ISLE OF MAN.
- HERDMAN ET AL. 1919: 31, ISLE OF MAN
- HERDMAN ET AL. 1920: 82, ISLE OF MAN.
- RAE + FRASER 1941: 174 - , SOUTHERN NORTH SEA.
- CARLI + CRISAFI 1983: 39, PL. 2 FIG. 1 - ITALY
- THOMPSON, B. M. 1982: 359-372, NORTH SEA
- IZAWA 1987: 170 -
- HUNTLEY, MARIN + ESCRITOR 1987: 912 -

Pseudocalanus elongatus (Boeck, 1872)

card 10

- Mauchline 1988: 725-, fig. 17a, pore signature
- ZELIKMAN & KAMSHILOV 1960(64); 11-, BARENTS SEA
- DAVIS 1981: 108
- DAVIS 1982: 729
- MAYZAUD 1986a: 190-
- CORNER ET AL. 1986: 268-
- GROENDAHLE & HERNROTH 1986: 315-, ARCTIC
- CHOJNACKI 1986: 535
- VILLATE & ALCARAZ 1986: 612-, BILBAO, SPAIN

Pseudocalanus elongatus (Boeck, 1872)

card 11

- Martens, P. 1975: 14, 16-25, Ostsee
- ZAGORODNYAYA & SVETLICHNYI 1977: 39-41
- ICZN 1988: 228, CALANUS - CLAUSIA ELONGATA
TYPE OF GENUS PSEUDOCALANUS
- Crawford & Daborn: 1986: 139
- Ayukai, 1987: 146
- McLaren, [†]Sevigny, [†]FROST: 1989: 565-568 figs 1-2
tabs. 1-3 England
- McLaren et al 1989: 563 Tabs 3-7

Pseudocalanus elongatus (Boeck)

card/2

- Uye 1984a: 45, 48
- UYE 1984b: 172
- KOGA 1984b: 105
- MAÄMETS & VELDRE 1956a: 14, 18, 46, Pl. II,
FIGS. 2-6 - ESTONIA
- IWASAKI ET AL 1977: 60.
- BRUNEL 1959: 21.
- CHMYR & SHADRIN 1976: 30, 31
- ZAGORODNAYA & SVETLICHNII 1976: 39-42

Pseudocalanus elongatus (Boeck, 1872)

card 13

- Magnesen 1988: 193- tabs 1,3 W. Norway
- Frost, 1985: 1,5,10,11 figs 4,10
- Franz, et al. 1984: 86- figs 1-3 tabs 1,4
Central North Sea

--Frost, 1989: 526-, figs. 3, 5,6, 10-12, 15, 21~~6~~,
Oslofjord, Raunefjord in Norway, also N. Atlantic;
gives synonymy; P. e. of Marukawa, 1908 = P.
newmani, n. sp.

-- FERRARI + HAYEK 1990: TAB. 1

CLAUSIA-, NORDQVIST 1888: 38-41, PL. III FIG. 5, FINLAND

-- HEAD 1986: 377 -

Pseudocalanus elongatus (Boeck, 1872)

card 14

- Marukawa 1921: 8-, Japan
- HUNTLEY & BOYD 1984: 455-
- KLEIN BRETELER & GONZALEZ 1988: 201-, WADDEN SEA;
209, = PSEUDOCALANUS SP. OF PREVIOUS ARTICLES
- HO & PERKINS 1985: 592-
- DERJUGIN 1928b: 528; KILDIN IS., BARENTS SEA
- LINDQUIST 1959b: 65; GULF OF BOTHNIA
- STEPHENSEN 1917: 305, GREENLAND FJORDS
- TURNER 1984d: 10-

Pseudocalanus elongatus (Boeck, 1872)

card 15

- Gaedke 1990:187-, Ems-Dollart Estuary, Germany/Holland
- PRÉFONTAINE + BRUNEL 1962:253, ST. LAWRENCE
- BRYLINSKI 1984:96-
- ALVARIÑO 1989:69-, OFF S. CALIFORNIA
- CONOVER 1965:318-
- -LIKE FORM, OHMAN 1985:16, DABOB BAY,
WASHINGTON STATE
- OHMAN 1988b:535-
- LINDLEY 1992:368-

Pseudocalanus elongatus (Boeck, 1872)

card 16

-- Alekseev 1990b: 23-, diapause

CLAUSIA ELONGATA, BRADY 1872: 425

-- SARS 1898: 342-, SIBERIA

-- KOVALEV 1969: 159-, BLACK SEA, ETC.

-- C.B. WILSON 1936: 370, CANADIAN ARCTIC + GREENLAND

-- HOLMES 1983: 20, IRELAND

-- CARMAN + DOBBS 1997: 119

-- ASTTHORSSON + GISLASON 1992: 229, 231, TAB. 1, ICELAND

P. MINUTUS ELONGATUS, LACROIX 1966: 52

PSEUDOCALANUS ELONGATUS (BOECK) 1872 17

P. MINUTUS ELONGATUS, HAATELA 1974: 237, FIG. 5

P.M.E., CHOJNACKI 1984: 129-, TAB. 1, BALTIC

P.M.E., FROST 1989: 535, FARRAN + VERVOORT'S

(1951) P.M.E. = P. ELONGATUS

-- LIANG + UYE 1997: 420

Pseudocalanidae—Calanoida.

Pseudocalanus feildeni Norman, ♀.

— — Norman, 1878, p. 5.

— — Giesbrecht, 1892, p. 302, undetermined.

— — FROST 1989: 526, NAME UNAVAILABLE

Habitat Arctic Ocean.

Pseudocalanidae - Calanoida

Pseudocalanus gracilis G.O. Sars, ①

- — G.O. Sars, 1903, p. 154: pl. 1, supplement.
- — Stephensen, 1913, p. 313.
- —, Mori, 1937, p. 36. JAPAN.

A synonym of Pseudocalanus minutus
(Witt, 1915, p. 57)

- Pseudocalanus gracilis, Wilson 1942, p. 204, 2 ♀
- —, Brodsky, 1950, p. 113, FIG. 35, USSR.

- --, Furuhashi, 1961. p. 10
--; Stormer, 1929, p. 29, = P. minutus
--; Hue, 1967, p. 15.
--; Furuhashi, 1966: 297, 302, 304
--; TANAKA, 1956: 384
--; Lacroix & Filteau, 1971: 781
--; GELTIN, 1977: 82-94
--; ITOH, 1970: TAB.1
--; JOHNSON, 1956a: 10
—, Lacroix, 1966: 52

Pseudocalanus gracilis G. O. Sars, 1903

card 2

-- Frost 1989: 526, 530, 532, 534, synonym of P. minutus
(Krøyer), new synonymy

Pseudocalanidae - Calanoida

Pseudocalanus major G.O. Sars, ♀. ①

- — G.O. Sars, 1900, p. 69: pl. 20.
- — Mrázek, 1902, p. 520 (Arctic Ocean).

A synonym of Pseudocalanus minutus.
(With, 1915, p. 57)

- Lacroix, 1966: 52
- — Jaschnov, 1927, p. 15. Kara Sea.
- — Linko, 1913, p. 21.
- —, BRODSKY, 1950, p. 114, Fig. 36, USSR

-- Jaschnov, 1946. arctic distribution

--, Stormer, 1929, p. 29, = P. minutus

--, Lacroix & Filteau, 1971: 781

--, Pavsharsky, 1977: 116; TAB. 1

--, Geletin, 1977: 82-94

--, Johnson, 1956a: 10

--, McLaren & Sevigny, ^{FZOST} 1989: 565-568

figs 1-2 tab 1-3

Baffin Is., N.W.T

~~--, McLaren, et al. 1989. 559-564 fig~~

Pseudocalanus major G. O. Sars, 1900

card 2

-- Frost 1989: 526-, figs. 3,5,6,16, Baffin Island;
gives synonymy including Pseudocalanus sp. of
McLaren 1965 and McLaren et al. 1966, new syns.

Pseudocalanus marinus

--, Chiba, 1956, p. 11

Pseudocalanus mimus Frost, 1989

-- Frost 1989: 529, 530, 534, 537, 543, 544-546, 549, figs. 3, 5, 6, 12, 21, 25, n. sp. ♀♂, eastern North Pacific and Bering Sea

-- PAUL ET AL. 1990: 653 -

-- OHMAN 1990: 260, PUGET SOUND, WASHINGTON STATE

Pseudocalanidae - Calanoida.
Pseudocalanus minutus (Krøyer), ♂, ♀.

Calanus — Krøyer, 1845-7, pl. 41, fig. 4.

— — Krøyer, 1849, pp. 543, 552.

Clausia elongata Boeck, 1865, p. 234

Pseudocalanus elongatus Boeck, 1872, p. 37.

-- -- Faber, 1966, p. 420.

Habitat. N. Atlantic: Arctic Ocean: Black
Sea: Gulf of Suez: Mediterranean.

- — Giesbrecht, 1892, p. 197: pl. 10.
- — Vanhöffen, 1897, p. 278: pl. 1, fig. 6.
- — Giesbrecht & Schmeil, 1898, p. 28.
- — Aurivillius, 1898, p. 69; Sars, 1900, p. 69.
- — major, n. sp. G. O. Sars, 1900, p. 69: pl. 20.
- — elongatus T. & A. Scott, 1901, p. 339.
- — Mrázek, 1902, p. 507: figs. 5 & 6, text.
- — T. Scott, 1902, p. 450; Norman, 1903, p. 135.
- — Wolfenden, 1902, p. 361: 1904, p. 111.
- — G. O. Sars, 1903, p. 20: pls. 10-11: 1905, p. 3.
- — gracilis, n. sp. G. O. Sars, 1903, p. 154: pl. 1, suppl.
- — , Damas, 1907.

P. minutus. (2).

- P. elongatus Jensen, Johansen & Levinson, 1903, p. 304
— — Thompson & Scott, 1903, p. 244. pl. 2
— — Farran, 1905, p. 30 : 1908, p. 28 : 1911, p. 63.
— — Pearson, 1906, p. 10 : Williams, 1906, p. 640.
— — Oberg, 1910, pp. 48, 56 : pl. 1 : pl. 6, fig. 3.
— — Kraeefst, 1910, pp. 67, 77, 79 : pl. 1, figs. 13-21.
— — Steuer, 1910, p. 22 : Farran, 1911, p. 63.
— — Stephensen, 1913^b, p. 71 : pls. 4-5 : 1913. a, p. 312.
Clausia elongata Camm, 1892, p. 170 : pl. 2, figs. 1-13.
Calanus clausii Brady, 1865, p. 33 : pl. 1, fig. 1-11, 13.

Pseudocalanus major Koefoed & Damas, 1907, p. 407.

— — v. Bremen, 1908, p. 25: fig. 22, text.

— *gracilis* Koefoed & Damas, 1907, p. 406.

— *elongatus* v. Bremen, 1908, p. 25, fig. 23, text.

— *minutus* With, 1915, p. 57: pl. 1, f. 8: text-figs. 13 & 14. ^{6b} a-f 4-c

— *elongatus* T. Scott, 1906. c. p. 298.

— — Stephensen, 1916, p. 305.

— — Steuer, 1910, p. 1016 (12).

— — Williams, 1907 p 71; 1906, p. 640.

— — Wright, 1907, p. 14.

Lucullus acuspes Giesbrecht,

Pseudocalanus minutus — Wilson, 1932, p. 43: fig. 25.

- — Wilson 1942, p. 205
- —, Fontaine, 1955, p. 873-8. Ungava Bay. Life Cycle.
- --, Anraku, 1954, pp. 123-136.. Aleutian Is.
- --, Anraku, 1954, pp. 1-8. N W Pacific..
- —, Mori, 1937, p. 36, JAPAN
- --, Jespersen, 1934, p. 49, -w. GREENLAND, BAFFIN BAY AREA.
- --, Jespersen, 1940, p. 14-15. Iceland.
- --, Grice, 1962. pp. 101, 102
- --, Furuhashi, 1961. p. 10
- --, Deerey, 1948, p. 13, 37

P. minutus, Anraku, 1964. pp. 198-199, fig. 2

-- --, Anraku, 1964. pp. 221-231

-- --, Jeffries, 1962. p. 731

-- --, Johnson, 1958. p. 276

-- --, Anraku, 1964

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

-- --, Cronin, 1962, p. 81.

-- -- ~~COOK~~ COOKETT, 1967.

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

-- -- McLaren, 1966, pp 457-469.

-- --, Vilela, 1969, pp. 13-14, Est. 2 fig. 2

--, Chiba, 1956, p. 21

--, JEFFRIES & JOHNSON, 1976: TAB. 1

Pseudocalanus minutus

card 4

--, Heinrich, "The life histories...", p. 16

--, Jeffries, 1970, p. 421

--, Jeffries & Alzara, 1970, p. 215

--, *Robertson, 1968, p. 191.*

--, Okada & Taniguchi, 1971, p. 33

--, *Minoda, 1972, p. 323, 330.*

--, Stormer, 1929, pp. 29-32 (syn.: elongatus, gracilis,
major)

--, Fulton, 1968, p. 35, ^{fig. 36,} some refs. of P. elongatus
are syns.

--, Furuhashi, 1966: 297-299, 302, 304, 314
(P. elongatus of Minoda, 1958. P. minutus)

- , Omori, 1973, p. 4.
- , Van Engel & Tan, 1965, p. 184-
- Geiling and Campbell, 1972, p. 306.
- , Allan, 1976, p. 170-
- , Dunbar, 1956, p. 188
- , Sherman, 1968, p. 6 -
- , Maclellan, 1967, p. 102.
- , Hue, 1967, pp. 7, 15, 18-20.
- , Roe, 1972a, pp. 293-
- ,^bWilson, 1973, p. 912
- , Davis and Green, 1974, p. 57
- Frolander, 1962, p. 657, 659, 662-665.
- , McLaren, 1965, p. 528
- , Furuhashi, 1961: 75

Psuedocalanus minutus

card 5

- , Bjornberg, 1963: 100 (table)
- , TANAKA, 1956 b : 384-385 SYN. P. ELONGATUS
- , BRIGHT, ET AL., 1970 : 296, 297
- , CARTER, 1965 : 345, 348-353; FIGS. 4-8
- , CARTER, 1969 : 2546
- , HEIDY SMOL, 1976 = TAB. 5
- , LAPOIX & FILTEAU, 1971 : 776, 777-783, 784, 809, 810, 811;
FIG. 1-5; TAB. 1-3, 17, 18
- , GELETT, 1977 : 82-94, FIG. 2, 3, 10-15
- , DAMKAER, 1975 : 11

- , DIGBY, 1954: 300, 309-313; FIG. 4, 5, 15, 16; TAB. 2
- , DAVIS, 1976: 37, 39, 41 & FIG. 2
- , EVANS, 1970: 71
- , ITOH, 1970: TAB. 2
- , HEIP, 1974: 123
- , GEEN & HARGRAVE, 1966: 338, 339
- , JOHNSON, 1956a: 10, 19
- , JAWED, 1973: 7-104
- , MARTIN, 1968: 65
- , HEINLE, 1969: FIG. 8, 9
- , TAGUCHI & FUKUCHI, 1975: 150, 153, 157, 159; TAB. I, III, IV,

PSEUDOCALANUS MINUTUS

CARD 6

--, McLAREN, 1969: 1485, 1486, 1488, 1489, 1490, 1492-1509,
1511, 1512, 1513, 1514, 1515, 1517, 1520, 1522, 1523,
1529, 1537, 1538, 1539, 1540, 1548, 1550-1551, 1553,
1554, 1555, 1557; FIG. 1-9, 33; TAB. 1-3, 11, 12

--, FIGUEIRA 1971: 151.

-- (Kroyer, 1849)? : FIGUEIRA 1971: 151.

--, Ravera & Tonolli, 1956, p. 118

--, Smol & Heip, 1974, p. 612

--, Shih & Laubitz, 1978, p. 49

- Lacroix, 1963a : 65, 66
- Deevy, 1952a : 82-84
- Deevy, 1952b : 131, 134, 139-141
- Deevy, 1960a : 16, 25
- Deevy, 1960b : 60, passim

Pseudocalanus minutus (Kroyer), 1845 card 7

- Gardner & Szabo, 1982, p. 25, 172-173, fig. 12.1.
- Uye, 1982, p. 5-7
- HIROTA, 1982: 50.
- PAPPENHÖFER, 1984: 323
- MOTOYA & MINODA, 1974: 211, 212, 228, 232
- CONLEY & TURNER 1985: 115
- UYE ET AL. 1982: 30, 33
- UYE & KASAHARA 1983: 154, 156

Pseudocalanus minutus (Krøyer, 1845)

card 8

-- Uye 1984a: 44

-- WICKSTREAD 1962: 546

-- KOGA 1984b: 132

-- IWASAKI & KAMIYA 1977: 52.

-- GRAINGER 1959: 474, 483-486, ARCTIC.

-- GRICE & HART 1962a: 294, 297-w. NORTH ATLANTIC

-- GRICE & HART 1962b: TABLE 3

-- HARGRAVE & GEEN 1968: 333-342, NOVA SCOTIA

-- JERMOLAJEV 1958: 1219-1228, BAY OF FUNDY

- Tanaka, 1965a: 19, fig. 2a-b
- (-?), LAWSON & GRICE 1973: 53
- SAZHINA 1975: 82
- UEDA 1987: 72
- ZAMORA SANCHEZ 1974: 45
- BAYLY 1986: 214, 223
- HUNTLEY ET AL. 1987: 111
- RUNGE & INGRAM 1988: 282, HUDSON BAY
- SAGE & HERMAN 1972: 32, SANDY HOOK BAY, NJ
- DAVIS 1976b: 820
- DAVIS 1982: 729-, = P. GRACILIS SARS

Pseudocalanus minutus (Krøyer, 1845)

card 9

-- Le Borgne 1986: 122--

-- KLEIN BRETELER + GONZALEZ 1986: 80

-- MAYZAUD + MAYZAUD 1986: 355-

-- KIMOTO ET AL. 1986: 142

-- McLaren ^{FROST} + Sevigny 1989: 565-568 figs 1-2 tab 1-3
Gulf of St. Lawrence

-- McLaren et al. 1989: 552-558 fig 3 Nova Scotia

-- Soldevilla, et al 1988: 57 Canary Islands

-- FONTAINE 1955: 858-, UNGAVA BAY

Pseudocalanus minutus (Krøyer, 1845)

card 10

-- Frost 1989: 526-, figs. 2A,D-F,I, 3-7, 9, 25, new records- Norwegian Sea; gives synonymy; new synonyms

P. gracilis Sars, P. minutus gracilis Farran & Vervoort

-- FERRARI & HAYEK 1990: TAB. 1

-- UVE & FLEMINGER 1976: 260

-- CITARELLA 1989: 123-, ST. LAWRENCE GULF, CANADA

-- BAMSTEDT 1988: 56

-- HUNTLEY & BOYD 1984: 458-

-- KLEIN BRETELER & GONZALEZ 1988: 208

Pseudocalanus minutus (Krøyer, 1845)

card 11

- McLaren & Corkett 1984: 830
 - SHIH ET AL. 1988: 319-324, BRAS D'OR LAKES, NOVA SCOTIA
 - McLAREN ET AL. 1966: 1641-1642, OGAC LAKE, BAFFIN ISLAND; + POLYTENIC FORM.
 - HERZIG 1983: 81
 - TSUDA + NEMOTO 1990: 84, OTSUCHI BAY, JAPAN
 - BURRELL + ZWERNER 1972: 138, CHESAPEAKE BAY, SYD.
- P. ELONGATUS

Pseudocalanus minutus (Krøyer, 1845)

card 12

- Harding, G. et al. 1980:32-, Nova Scotia
- SHIH ET AL. 1971: 45-46, CANADA-ATLANTIC; LOCAL
SYNONYMS.; 151, PACIFIC; 206, ARCTIC
- TSUDA + NEMOTO 1987: 121-130, OTSUCHI BAY, JAPAN
- CITARELLA 1984:139; SHÉDIAC BAY, NEW BRUNSWICK,
CANADA
- PAUL ET AL. 1990: 653-
- GIRACILIS, ALVARIÑO 1989: 69-, OFF S. CALIFORNIA
- LEE, W.Y. + McALICE 1979: 565; DAMARISCOTTA R., MAINE

^a
Pseudoclanus minutus (Kroyer)

(14)

-- -- Grainger 1965, pp. 543-564 (548-549)

-- -- McLaren, Woods, Shea, 1966, pp. 1-2.

-- RADCHENKO ET AL. 1997: 125-126, SEA OF OKHOTSK

Pseudocalanus minutus (Krøyer, 1845)

card 13

-- Gauld 1951:698-9 ne Atlantic

-- Wiborg, 1944: 30-34, 43-48, 77, 78, tab. 2-3, fig 20-23

-- LINDLEY 1992: 370

-- YAMASHITA + MOREIRA 1989: 41

PSEUDOCALANUS -, MOREIRA + VERNBERG 1968: 283

-- LEGARÉ + MACLELLAN 1960: 434, MAINE/NEW BRUNSWICK,
USA/CANADA

-- CARMAN + DOBBS 1997: 124, TAB. 2

-- ARRHENIUS 1996: 704, BALTIC SEA

PSEUDOCALANUS MINUTUS ELONGATUS - SEE

A. ELONGATUS

Pseudocalanus minutus gracilis

--- Frost 1989: 530, that of Farran & Vervoort (1951)
synonymous with P. minutus (Krøyer), new synonymy

Pseudocalanus moultoni Frost, 1989

CARD 1

- Frost 1989: 529, 530, 536-537, 541-543, 544, 546, 547-549, figs. 2G, J, 3, 5, 6, 12, 17-19, 21H, 23-26, n. sp. ♀♂, temperate coastal waters of E and W North America
- McLaren, Sevigny & Frost 1989: 565-568, figs. 1-2, tabs. 1-3, Puget Sound, WA & Halifax, Nova Scotia
- McLaren et al. 1989: 559-564, figs. 1, 2, 4, tabs. 1-4, eastern Canada coast
- McLaren et al. 1989: 552-558, figs. 5, 6, Nova Scotia
- PAUL ET AL. 1990: 653-

Pseudocalanus moultoni Frost, 1989

card 2

-- Ohman 1990:260-, Puget Sound, Washington State

Pseudocalanus newmani Frost, 1989

card 1

-- Frost 1989: 529, 530, 534, 537, 541, 543-544, 546-549, figs. 3, 5, 6, 14, 18, 20, 23-26, n. sp. ♀♂, temperate-boreal waters, both coasts of North America and Asia.

Synonyms: P. minutus, Mori 1937; P. elongatus, Marukawa, 1908, Geletin, 1977; Pseudocalanus sp, McLaren, 1965

~~ASEU~~

Pseudocalanus newmani Frost, 1989

card 2

-- OHMAN 1990: 257 --, DABOB BAY, WASHINGTON STATE

- McLaren ^{† FROST} & Sevigny 1989: 565-568 figs 1-2 tabs 1-3
Baffin Is, N.W.T., Puget Sound, WA, & Nova Scotia

- McLaren et al. 1989: 559-564 figs 1,2,6 tabs 1-4
Eastern Canada

- McLaren et al. 1989: 552-558 figs 3,5,6 tab 3
Nova Scotia

-- McLAREN, TREMBLAY ET AL. 1989: 560-583,
SCOTIAN SHELF

-- TSUDA & NEMOTO 1990: 83-90, OTSUCHI BAY, JAPAN

-- PAUL ET AL. 1990: 653 --

Pseudocalanus newmani Frost, 1989

card 3

P. sp., Ohman 1984:126-, Fig. 2, Puget Sound, Washington

P. sp., Ohman 1985:15-, Dabob Bay, Washington State

P. sp., Ohman 1986:673-, Dabob Bay, Washington State

P.N., LIANG + UYE 1997: 415, 419

Pseudocalanidae - Calanoida

Pseudocalanus pygmaeus, G. O. Sars,

— — Sars, 1900, p. 73: pl. 21.

— — Mrázek, 1902, p. 508: pl. 5, f. 3, 11: 2-10?

— — Giesbrecht, 1902, p. 20: pl. 2, figs. 1-5.

A synonym of Microcalanus pygmaeus.

(Witt, 1915, p. 66).

--, (= MICROCALANUS PYGMAEUS), TANAKA, 1956: 385-387

Arctic Ocean.

- Scott & Scott, 1901: 339

Pseudocalanus sp.

CARD 1

- , Apstein, 1905, p. 12.
- , Pesta, 1928, p. 8, fig. 7
- , FIGUEIRA 1971: ISI.
- ?, FIGUEIRA 1971: ISI.
- , Bertlemishev, 1961, p. 145
- , Björnberg, 1963, p. 100 (table)
- , Skriver, 1980, pp. 230, 231, 235, 244; fig. 3-10
- , Cairn, 1967, p. 559-566, fig. 3-6
- , Blades & Youngbluth, 1980, p. 49
- , Turner, 1982, p. 267
- , Sutherland, 1982, p. 479

PSEUDOCALANUS SP.

CARD 2

- , PETERSON + MILLER, 1977: 718
- , PAFFENHÖPER, 1984: 323
- MILLER ET AL. 1984: 1287
- TURNER ET AL. 1984: 199
- DUGAS + KOSEOW 1984: 131
- BUCHLIN + MARCUS 1985: 219-220.
- Conover, et al, 1986: 1245-1247
- SCHRAM, 1986: 452, FIG. 37-3 F
- Kjørboe, et al, 1985: passim

PSEUDOCALANUS sp.

CARD 3

- AMBLER ET AL. 1985: 189, SAN FRANCISCO BAY
- spp., YEN 1982: 107-115, PUGET SOUND
- spp., YEN 1983: 69-75, PUGET SOUND
- RAZOULS, S. ET AL. 1986: 887
- RAZOULS, S. ET AL. 1987: 659
- HUNTLEY, MARIN & ESCRITOR 1987: 937-
- RUNGE & INGRAM 1988: 280-285, HUDSON BAY -
3 spp.
- DE MOTT 1988: 398-408, KIEL BIGHT, BALTIC

PSEUDOCALANUS sp.

CARD 4

- DAVIS 1982: 729-, NEWFOUNDLAND
- DAVIS 1986: 32-, "
- BARETTA + MALSCHAERT 1988: 73-, EMS ESTUARY,
NETHERLANDS / GERMANY
- GROENDAHN + HERNROTH 1986: 315-, ARCTIC
- KLEIN BRETELER + GONZALEZ 1986: 72
- CONOVER + POULET 1986: 94-, NOVA SCOTIA
- GRAINGER + MOHAMMED 1986: 304-, ARCTIC
- DEXTER 1986: 547- 550, PUGET SOUND

Pseudocalanus sp.

card 5

- Ives 1986: 562-564, Nova Scotia
- DAVIS, CABELL S. 1986: 628, GEORGES BANK
- BERGMAN'S 1984: 295
- Ohman et al, 1983: 1404-1406 figs 1-2 tab 1
Dabob Bay, WA.
- Dey et al. 1988: 321- fig 2, 8 tab 1, 2 Puget Sound
- Frost et al. 1983: 8- fig 6 tabs 1, 6 east subarctic Pacific
- Frost, 1985: 1-12 figs 1, 2, 6 Dabob Bay, WA.
- FROST, 1989: 539, 543, SYNONYMIES

Pseudocalanus sp.

card 6

- Head & Harris 1987: 223-, Nova Scotia
- HEAD 1988: 31-41, BARROW STRAIT, NWT, CANADA
- BAMSTEDT 1988: 54-, SWEDEN
- RUNGE 1988: 65-
- KLEIN BRETELER & GONZALEZ 1988: 209, THIS OF PREVIOUS ARTICLES = P. ELONGATUS
- TESTER 1988: 51-
- TURNER, ^{ET AL.} 1983: 89-, PECONIC BAY, LONG ISLAND
- KIRBOFF ET AL. 1988: 222-, NORTH SEA

Pseudocalanus sp.

card 7

- McLaren & Corkett 1984: 828-
- McLAREN & MARCOGLIESE 1983: 721-, NOVA SCOTIA
- McLAREN ET AL. 1988: 280-
- UYE 1988: 292
- PETERSON ET AL. 1990: 90-
- GRANT 1977: 4-58-, OFF NEW JERSEY
- SHIH ET AL. 1971: 46, CANADA - ATLANTIC; 151,
PACIFIC; 206-207, ARCTIC
- GAUDY 1984: 208-

Pseudocalanus sp.

card 8

- Greene, C.H. & Landry 1985:1408-1416, Fig. 6, Dabob Bay & Puget Sound, Washington
- FRYD ET AL. 1991: 683 -
- OHMAN 1984: 126 -, FIG. 2, PUGET SOUND, WASHINGTON
- OHMAN 1985: 15 -, DABOB BAY, WASHINGTON STATE
(= PSEUDOCALANUS ELONGATUS-LIKE FORM)
- OHMAN 1986: 673 -, DABOB BAY, WASHINGTON STATE
- OHMAN 1990: 260, = P. NEWMANI IN ALL PREVIOUS PAPERS.
- WYNGAARD ET AL. 1995:102

PSEUDOCALANUS SP.

9

-- LEECH + WYNGAARD 1996: 499

-- SIFERD + CONOVER 1992: 277, TAB.1, CANADIAN ARCTIC

Pseudocalanus spp.

-- Paul et al. 1990:648-, Auke Bay, Alaska

-- COYLE ET AL. 1990: 764-, AUKE BAY, ALASKA

-- PETERSON, W. T. & DAM 1990: 450-, LONG ISLAND SOUND

-- CORDELL ET AL. 1992: 262, COLUMBIA RIVER, USA