

in) Temoridae - Calanoida

Epischura valid.

Forbes, 1882

E. lacustris.

Syn. Epischura Forbes, 1882, p. 647.

Epischura Herrick, 1895, p. 81.

Epischura Herrick, 1884, p. 130.

Epischura Schmeil, 1897, p. 182

Επιχουω = to make strong.

Epischura Giesb. & Schmeil, 1898, p. 98.

Scopiphora (?) Pickering, 1844, p. 62

Epischura Guerne & Richard, 1889, p. 141.

Cephalothorax slender, 5-6-jointed: abdomen 4-jointed in ♂, 3-jointed in ♀; 2^o antennae as in Diaptomus.

Mandibular palp biramous: swimming legs biramous endopod 1-jointed: left foot of last pair aborted or obsolete, right foot in ♀ slender, right foot of ♂ greatly modified; foot biramous, inner ramus short, lamellate, 1-jointed, with claw-like setae, outer ramus nearly like ♀; left foot coalesced with first 2 joints of abdomen, extremity alone free: setae of caudal stylets 3.

Epischura Marsh, 1925, Art. 8, p. 2

Epischura FORBES, 1882

CARD 2

- Sprules 1984: 322.
- BORUTZKY, 1960: 13, IN KEY; 68-70, KEY TO SOME SPP;
- ~~EPISCHURA~~ HUMES 1955: 441
- HUMES 1954: 156, SPECIES LIST.
- Workman & Sigler, 1965: Tab. 1
- WILLIAMSON 1991: 788 -
- BORUTZKY ET AL. 1991: 65-66, DIAGNOSIS

Epischura Forbes, s. str.

-- Humes 1954: 156, lists spp. in subgenus: lacustris,
nevadensis, nordenskiöldi, massachusettsensis

- - BOWMAN 1991: 460

Epischura (Epischurella) Smirnov, 1936

-- Humes 1954: 156, includes E. baikalensis, E. chankensis
and probably E. udyensis in subgenus.

-- WECKEL 1914: 188-189, DIAGNOSIS, KEY

-- BOWMAN 1991: 460

-- BORUTZKY ET AL. 1991: 67, DIAGNOSIS, KEY

Epischura baikalensis G.O. Sars, ♀. ①

— — G.O. Sars, 1900. b, p. 226.

— — Pylov, 1930, p. 258 : figs. 84-85.

— — Marsh, 1933, p. 23 : pl. 13, figs. 1-4.

--, MAIN, 1962 : 38

--, ITO, ~~1977~~ & KIKUCHI, 1977 : 53

Habitat. Lake Baikal.

--, Kurenkov, 1978, p. 137-138

- baikalensis, BREHM 1949 : 419.

Epischura baikalensis G.O. Sars 1900

card 2

Epischura, Galazy 1983: 4,5,7.

- baikalensis, Galazy 1984: 1138.

- BAICALENSIS, FLÖSSNER 1984b: 151, L. BAIKAL

- BAICALENSIS, BROOKS, J., 1950: 42, 43

- BAIKALENSIS, BORUTZKY, 1960: 69; FIGS, 25 (3, 4), FIGS,
69 (14-18)

--, LABBÉ 1929: 606, 609

-- HUMES 1955: 449

-- HUMES 1954: 156

Epischura baikalensis G. O. Sars, 1900

card 3

- Baicalensis, Zhadin & Gerd 1961: 256, 348, 353, USSR

^{BORUTZKY ET AL. 1991:}
E. (EPISCHURELLA) - 68, FIG. 19, DIST-USSR; 445

REDESCRIPTION

- HAMER ET AL. 1996: 91-92

Temoridae — Calanoida

Epischura chankensis W. Rylow, 1928 ♀♂

— — Rylow, 1930, p. 260 : figs. 86-88

— — Marsh, 1933, p. 24 : pl. 10, figs. 1-2.

— — Rylow, 1928, p. 125 : figs. 1-12.

-- , ACADEMIA SINICA, 1979 : 55-56 ; FIG. 8

-- , BORUTZKY, 1960 : 68, 69, FIG. 25 (1, 2)

-- HUMES 1955 : 441

Habitat Russia. Lake Chanka.

-- HUMES 1954 : 156

-- RYLOV 1932 : 255-256, E. SIBERIA

E. (EPI)SCHURELLA — BORUTZKY ET AL. 1991 : 70 — FIG. 20, 21, USSR

Epischura gluviatilis Herrick, ♀♂.
^{Calanoida-}

- — Herrick, 1883, p. 384: pl. 5, figs. 10-20.
— — Herrick, 1884, p. 133: pl. Q, fig. 14, 16.
— — Herrick, 1887, p. 13: pl. 2, fig. 21-24.
— — De Guerne & Richard, 1889, pl. 18: table.
-- HERRICK, 1887: 13, ALABAMA, USA.

Habitat. Alabama.

- Herrick, 1895, p. 83: pl. 13, f. 14, 16.
-- Schmeil, 1898, p. 183 (= Lamellipodia f.)
Lamellipodia Giesb. & Schmeil, 1898, p. 100.
-- HARRIS, 1978: 27
-- HUMES 1954: 156
-- FORBES, S. A. 1893: 254
-- BOWMAN 1991: 460-462, FIG. 1, L LAKE, SOUTH CAROLINA

Temoridae - Calanoida.

Epischura lacustris Forbes, ♂. ♀.

MICHIGAN & ILLINOIS, U.S.A.

pl. 9, f. 8

— — Forbes, 1882^{l.}, p. 541 & 648: pl. 8, f. 15, 16, 21, 23;

— — Herrick, 1884, p. 131: pl. 9, f. 15.

— — Herrick, 1887,

110

— — De Guerne & Richard, 1889, p. 90: pl. 4, f. 3, 9,

— — FORBES^{S.A.}, 1890: 704-706, pl. I (1-5), II (7), LAKE

Habitat. Great Lakes,

SUPERIOR.

- — Herrick, 1895, p. 82: pl. 13, f. 15.
— — Forbes, 1891, p. 704: pl. 1, f. 1-5: pl. 2, f. 7.
— — Marsh, 1893, p. 200: pl. 4, f. 6.
— — Marsh, 1897, p. 10: pl. 2, f. 1-6: pl. 3, f. 1-6
— — Marsh, 1918, p. 756: text-fig. 1175.
— — Birge, 1897, p. 332.
— — De Guerne & Richard, 1889, pl. 18: table.
— — Juday, 1902, p. 62 (Lake Max.).
— — Pearse, 1905, p. 149.
— — Schmeil, 1898, p. 183.

Scopiphora vagans Pickering, 1844, p. 62.
Epischura lacustris, Marsh, 1933, p. 18: pls. 9; 10, f. 3-5: 11, fig. 1.

Epischura lacustris

(2)

-- --, Davis, 1961. pp. 933-942 Lake Erie

S- -- Smith, 1968, pp. 120-139.

- - , Anderson, 1970, p. 1229, 1238

--, Pearse, 1911, p. 130

--, Davis, 1955, p. 842

--, Eddy, 1934, p. 31, 32, 34, 59

--, Forbes, 1890, p. 478

--, Wilson, 1960, p. 165

--, Robertson, 1966, p. 130, 134, 136.

--, MAIN, 1962: 1-135; Plates 1-5; Figs 2-6; Tab. 1, 2, 5-12

--, CARTER, 1969: 2551

— Willey, 1923: 310

- , CARTER, 1971: 221-222, 224, 227; FIG. 4-8
- , GANNON & BEETON, 1971: 36
- , BARDACH, 1954: 50
- , ACADEMIA SINICA, 1979: 55
- , DAVIS, 1954: TAB. 3
- , FABER & TERMOLOATEV, 1966: 302
- , HALL & WATERMAN, 1968: 188; TAB. 1, 2
- , REED, 1963: 50
- , RIGLER & LANGFORD, 1967: 82, 83; FIG. 1, 2; TAB. 1
- , Robertson & Gannon, 1981, pp. 383-384.

Epischura lacustris

- RYAN 1984: 413, 414
- , Sutherland, 1982, p. 478
- , PATALAS + SALKI, 1984: 616 TAB. 1, 625
- DELISLE ET AL. 1985: 137, 138
- CHENGALATH ET AL. 1984: 425, 427
- EVANS 1984: 489
- WATSON + LAWLER 1965: 1337.
- GANNON ET AL. 1982: 1-23, 70.
- BRICKER ET AL. 1976: 267.

Epischura lacustris Forbes

card 4

-- Bricker & Gannon 1976: 39.

-- ^{JE}GANNON 1974: 32-49.

-- ^{JE}GANNON 1975: 83-89

-- ^{JE}GANNON 1976: 90-93.

-- ^{JE}GANNON 1980: 101, 103.

-- ^{JE}GANNON 1981a: 23-36.

-- JE GANNON ET AL. 1978: 10, 11.

-- JE GANNON & STEMBERGER 1978: 27.

-- JE GANNON & STOCKWELL 1978: 31, 67.

Epischura lacustris Forbes

card 5

-- Bigelow 1923: 58, Lake Nipigon, Canada

-- SERNS & HOFF 1984: 1-24, LAKE NEBISH, WISCONSIN

-- BRUNEL 1963b: 85, TAB. I - GULF OF ST. LAWRENCE

-- CHANDLER, D. 1940: 325, L. ERIE

-- DAVIS 1955b: 365, CRYSTAL LAKE, OHIO

-- HAVEL 1985: 147

-- ~~Epischura~~

— Chow-Fraser & Wong, 1985: passim

— Wong & Chow Fraser; 1985: 3190-3194

— Bradshaw, 1964: 703

fig. 1C

EPISCHURA LACUSTRIS FORBES

CARD 6

- BORUTZKY 1960: 69, FIG. 26 (3-4)
- REED 1964: 692-, CANADA
- HUMES 1955: 441
- HUMES 1954: 156, 158.
- REED 1959: 25-, RECORDS- CANADA
- DAVIS 1978: 236 - 238, LABRADOR
- DALCER ET AL. 1984: 77-, PL. 25, GREAT LAKES
- EVANS, M.S. ET AL. 1986: 629, LAKE MICHIGAN
- WONG 1986: 638.

Epischura lacustris Forbes

card 7

-- Sprules et al. 1988: 137-, Lake Huron

-- Laybourn, et al. 1988: 2712

-- M. E. Pereira 1988: 1-, Cochran Lake, Michigan

-- LAWLER + WATSON 1958: 210-, MANITOBA

-- MALLEY ET AL. 1988: 3-, ONTARIO

-- MALLEY ET AL. 1989: 3-, ONTARIO

-- LANGFORD 1938 a: 29-, ONTARIO

-- WECKEL 1914: 189

-- CLEMENS ET AL. 1923: 184-, LAKE NIPIGON

Epischura lacustris Forbes

card 8

- Rawson 1956a: 71-, Great Slave Lake
- SMITH & FERNANDO 1978 b: 22-, Figs. 24-28, ONTARIO
- WONG 1981: 275-279, QUEBEC
- MALLEY ET AL. 1988: 2240-, ONTARIO
- SHIH ET AL. 1971: 46, CANADA-ATLANTIC
- MALY 1984: 318-, QUEBEC
- BOWMAN 1991: 460
- ~~WONG, 1980: 80-88~~ -- Wong & Sprules, 1986: 80-88
- WILLIAMSON 1991: 794-

Epischura lacustris Forbes

card 9

- Schindler & Noven 1971:249-, Ontario, Canada
- BAN & MINODA 1991: 299 -
- CZAIAK 1982: 441-, FIGS. , DEVELOPMENT;
NEW YORK, USA
- REED 1958b: 665-, CARIBOU LAKE PONDS, N. MANITOBA (CANADA)
- MALLEY & CHANG 1995: 276-285, ONTARIO, CANADA
- CARTER & DADSWELL ET AL. 1980: 1360-1362, FIG. 7,
TAB. I, NE USA, & CANADA

E. LACUSTRIS VAR. COLUMBIAE - SEE

E. NEVADENSIS VAR. COLUMBIAE.

Epischura massachusettsensis Pearse

①

— — Pearse, 1906, p. 242: figs. 4-5.

— — Marsh, 1933, p. 24

-- , MAIN, 1962: 7, 8, 11, 36, 38, 39, 41, 42, 45, 113, 116, 118, 123, 127; Tab. 1

-- ITÔ, TATSUNORI 1970b: 486

-- IZAWA 1987: 170-; FIG. 9B

Habitat. Massachusetts.

-- HUMES 1954: 154-158, FIGS. 1-20, REDESCRIPTION -

DOVER, MASSACHUSETTS

-- HUMES 1955: 441-472, PLS. 1-6, DEVELOPMENT; DOVER, MA.

Epischura massachusettsensis Pearse, 1906

card 2

-- Bowman 1991:460

-- OHTSUKA & BOXSHALL 1994:164

-- HAMER ET AL. 1996:207

Temoridae - Calanoida.

Epischura nevadensis Lilljeborg, ♂. ♀.

— — De Guerne & Richard, 1889, pl. 18: table.

— — Herrick, 1895, p. 84: pl. 11, fig. 1, 6, 8.

— — Marsh, 1918, p. 756: text-fig. 1174.

— — Elrod, 1901, p. 72.

Habitat, Sierra Nevada Lakes, CANADA,
ALASKA. WIDELY DISTRIBUTED.

- — Schmeil, 1898, p. 183. [f. 21
— — Willjeborg, 1889, p. 145: pl. 2, f. 12. 24: pl. 3, n
— — Giesbrecht & Schmeil, 1898, p. 99
— — Wilson, 1932, p. 115: fig. 77, a-f.
— — Marsch, 1933, p. 19: pl. 11, figs. 2-7: pl. 12, fig. 1.
— —, Kincaid, 1953, p. 66,
— —, Fulton, 1968, p. 39
— —, Eddy, 1934, p. 33, 34
— —, MAIN, 1962: 2, 41
— —, MALONEY & TRESSLER, 1942: 43, 44, 45, 47-51; FIG. 1; TAB. 5
— —, Mc MAHON, 1954: 479-499; FIG. 2, 4-8; TAB. I-VII.
— —, KERFOOT, 1977a: 317-18, 320-324; FIGS. 2, 3, 6; TAB. 1
— —, KERFOOT, 1977b: 304, 309, FIG. 4

EPISCHURA NEVADENSIS LILLJEBORG CARD 2

- WHITTAKER & FAIRBANKS 1958: 49-65, WASHINGTON STATE
- KERFOOT, 1978: 1090, 1092-93, 1097-1100
- COMITA & ANDERSON, 1959: 46
- REED, 1963: 50
- FIGUEIRA 1971: 152.
- FOLT & GOLDMAN, 1981, passim
- SUTHERLAND, 1982, p. 478
- PATALAS & SALKI, 1984: 616 TAB. 1, 624-5
- WATSON & LAWLER 1965: 1337.
- OLIVE 1955: 433.

Epishhura nevadensis Lilljeborg

card 3

- Clemens et al 1938: 92, Shuswap Lake, Canada
- FRANTZ & CORDONE 1960: 7, LAKE TAHOE
- HAVEL 1985: 145
- BORUTZKY 1960: 70, FIG. 36 (5, 6)
- Folt, 1985: passim
- Simenstad & Cordell, 1985: 2176-2180
- REED 1964: 692-, CANADA
- HUMES 1955: 441; E. N. OF WILSON (1932) = E.

NORDENSKIÖLDI

Epischura nevadensis Lilljeborg

card 4

- Humes 1954: 156
- FORBES, S. A. 1893: 254
- REED 1959: 25-, RECORDS-CANADA
- HUTCHINSON 1953: 572-
- LAWLER + WATSON 1958: 210-, MANITOBA
- M. S. WILSON, UNDATED: 2, PLATE I, WASHINGTON
- ZIESENHENNE 1938: 9-, WILLAMETTE NATIONAL FOREST
- WECKEL 1914: 188, 189, FIG. 10.
- RICKER 1938: 42, CURTUS LAKE, BRITISH COLUMBIA
(FROM M. S. WILSON NOTE)

Epischura nevadensis Lilljeborg, 1889

card 5

-- Shih et al. 1971:152, Canada - Pacific

-- ORSI & MECUM 1986: 330-, SAN JOAQUIN R., CALIF.

-- BOWMAN 1991: 460

Calanoida.

Epischura nevadensis

var. columbiae Forbes, ♂.♀.

— — — Forbes, 1893, p. 254: pl. 41, figs. 19-21.

— — — Henick, 1895, p. 84: pl. 11, figs. 4, 10.

— — — HUMES 1954: 156 (As E. LACUSTRIS VAR. c.)

Habitat, Montana:

Calanoida.

Epischura nordenskiöldi Lilljeborg, ♀.

-- De Guerne & Richard, 1889, pl. 18: table.

-- Herick, 1895, p. 85: pl. 11, f. 2, 5, 9.

-- Richard, 1891, p. 138; pl. 5, f. 4.

-- Schmeil, 1898, p. 183.

Habitat. Newfoundland; Greenland.

Nova Scotia, New England, SE North Carolina (Coker 1938).

- — Willjeborg, 1889, p. 146: pl. 1, f. 36: pl. 2, f. 15, 23
- — Giesbrecht & Schmeil, 1898, p. 99.
- — Kiefer, 1931, p. 583: figs. 1, 2.
- — Marsh, 1933, p. 21: pl. 12, figs. 2-6.
- — Coker 1938: 131. White Lake, SE North Carolina.
- —, Davis, 1972, p. 280

— NORDEN SKJÖLDI, BORUTZKY 1960: 69, FIG. 26(1-2)

— Willey, 1923: 310

Epischura nordenskioldi

CARD 2

- , Brooks & Dodson, 1965, p. 28
- , MAIN, 1962: 41
- , DAVIS, 1970: 280
- , DAVIS, 1975: 739
- , Davis, C.C., 1972a, p. 391, 392, tbl. 4
- BLOUIN ET AL. 1984: 402.
- BLOUIN ET AL. 1984: 824, 828, 837-8
- HUMES 1955: 441, E. NEVADENSIS OF WILSON, 1932
= E. NORDENSKIOLDI
- HUMES 1954: 156

Epischura nordenskiöldi

-Forbes, S. A. 1893: 254

- E. NORDENSKÖLDI, DAVIS 1976 b: 807-, NEW FOUNDLAND
-- DAGGETT + DAVIS 1974 b: 677-, NEW FOUNDLAND
-- DAGGETT + DAVIS 1975: 51-, " "
-- PEREIRA, M.E. 1988: 100 -
-- WECKEL 1914: 189
-- BOWMAN 1991: 460
-- MCKEE + COKER 1940: 179-, NORTH CAROLINA
-- COKER 1938: 76

EPISCHURA NORDENSKIÖLDI LILLJEBORG

4

-- CARTER, J. ET AL. 1980: 1360-1362, FIG. 7, TAB. 1,
NE USA, SE CANADA

Epischura (Epischurella) smirnovi
Borutzky 1961

-- Borutzky, 1961: 11-14, fig. 1a-e

-- BORUTZKY, 1960: 69, FIGS. 25 (5-6) Amur R.

E. (EPISCHURELLA) -, BORUTZKY ET AL. 1991: 74-75,
FIG. 4, USSR-DIST.

Epischura udylensis Borutzky

-- Borutzky, 1947: 1513-1515, fig. 1-4.

-- HUMES 1956: 156

Epischura sp.

--, Flanigon, 1942, p. 169

-- GALAZY 1983: 4, 5, 7. - LAKE BAIKAL; = E. BAIKALENSIS

-- RAWSON 1945: 928, CLEAR LAKE, MANITOBA

-- RAWSON 1959: 20, WOLLASTON LAKE, SASKATCHEWAN
+ CREE LAKE

Epischura spp.

-- Watson 1963:282-, Manitoba

— Workman & Sigler, 1965:78 Abl. 1.