

Mixodiaptomus Kiefer - 1932

Wierzejski, 1882.

M. tatricus ①

Syn. Mixodiaptomus, Kiefer, 1932, p. 472.

MIXODIAPTOMUS KIEFER, 1932

CARD 2

- , BALDI 1936: p. 836, Key to genus.
- , BORUTZKY, 1960: 18, 20, 35-37, KEY
- , STELLA 1984: 34, 76 - DIAGNOSIS + KEY TO ITALIAN SPECIES.
- STELLA 1982: 56-57, " " " "
- DUSSART 1989: 56-57, DIAGNOSIS, KEY - AFRICAN SPP.
- BORUTZKY ET AL. 1991: 329-332, DIAGNOSIS, KEYS

Mixodiaptomus budapestinensis

— Pirocchi, 1944, p. 39

Diaptomidae - Calanoidae

Mixodiaptomus incrassatus (Sars) ♂♀.

Diaptomus — Sars, 1903, p. 202: pl. 11, figs. 2, a-g.

Mixod. — Kiefer, 1932, p. 506 (key).

— —, Kiefer, 1954, pp. 332, figs. 34-37. . Morocco.

— — : - de Lépiney, 1961, p. 51, fig. 11. Morocco, temporary ponds.

-- --, 1964, B. H. Dussart, p. 122;

Habitat. Mongolia.

--, ACADEMIA SINICA, 1979: 112-113; 116. 53; 540:

DIAPTOMOS 1. ; D. PONTIFEX

--, DOMONT & DEGRAEMER, 1977: 258

--, BREHM. 1949: 416, 418.

Mixodiaptomus incrassatus (Sars)

card 2

--, Stella, 1970, p. 81-82

--, Borutsky, 1959: 47-48

--, Gauthier, 1934: 67, 123

— de Lepiney, 1959: 157-159, fig. 1-4

•• BREHM 1955c: 262

— Petkovski, 1983: 168-170, fig. 41A-I

— Alonso & Comelles, 1984: 1701

-- BORUTZKY 1960: 35, 37, FIG. 10 (1, 2)

-- STEPANOVA, 1983: 1745

— V. S. 1970: 212

MIXODIAPTOMUS INCRASSATUS (SARS)

CARD 3

-- STELLA 1984: 3, 76, 83-85, FIG. 33, GIVES DISTRIBUTION-
ITALY + MAJOR SYNONYMY.

D. PONTIFEX, BREHM 1925: 182, FIGS. 1-6, N.SP. ♀♂, SPAIN,
NORTH AMERICA.

D. PONTIFEX, KIEFFER 1927: 104

D. PONTIFEX, BREHM 1947: 58

D. PONTIFEX, BREHM 1949: 413.

D. PONTIFEX, MARGALEF 1943: 382-383, FIGS. 10-12

-- STELLA 1967: 377-384, FIGS. 1-5, SARDINIA; SYN.

D. PONTIFEX

Mixodiaptomus incrassatus (Sars)

card 4

-- Stella 1979a: 317-, distribution, Italy

-- STELLA 1982: 27, 61-63, FIG 38-ITALY

-- STELLA + MARGARITORA 1975-76: 4-, SARDINIA

D. -, SARS 1903: 234-, RECORDS - CENTRAL ASIA

M. -, DUSSART 1989: 60-61, FIG 34, RANGE - AFRICA

D. -, BREHM 1959c: 933

M. -, JAUME 1989: 107-, MAJORCA

M. -, JAUME 1990: 207, 209, -211, FIG 1, BALEARIC IS. -

INLAND.

Mixodiaptomus incrassatus (Sars, 1903)

card 5

- Borutzky et al. 1991: 338-341, Fig. 144, dist.-USSR
- STEPANOVA 1994: 134, NORTH KAZAKHSTAN
- ALONSO 1984: LRF, FIGS. 2Aa, 2B5, 3a, 4a, 5e, 6d,
SPAIN; SYNONYMY
- KIEFFER 1938: 123, 124, MOROCCO

Mixodiaptomus kozhovi Stepanova, 1983

-- Stepanova, 1983: 1743-1745, figs. a-m, n. sp. ♀♂,
Lake Khubsugul, North Mongolia

-- BORUTZKY ET AL. 1991: 341-342, FIG. 145, DIST. - USSR

Diaptomidae-Calanoida.

[MIXO]

Diaptomus kupelwieseri Brehm, ♀. ①

- SEE ALSO MIXODIAPTOMUS KUPELWIESERI

— — Brehm, 1907, p. 321: 2 text-figs.

— — Kiefer, 1927, p. 407: figs. 9-15.

— — Kiefer, 1930, p. 315:

Transferred to Mixodiaptomus Kiefer, 1932, p. 507.

--, Brehm, 1953, p. 163

Habitat. Alps; Southern France;

--, BALDI 1936a: p. 842, synonym with
Mixodiaptomus.

Diaptomidae - Calanoida

Mixodiaptomus kupelwieseri (Brehm) ②

-- Pirocchi, 1944, p. 39-52 fig 1-6, TAB I-IV

-- Kiefer, 1932, p. 575, : figs. 75-79

Diaptomus — Brehm, 1907, p. 321: figs. 9-15

M- — , Hertzog, 1935.

— — , Aguesse, 1957, p. 242. List.

— — , Dussart, in Aguesse + Dussart, 1957, p. 490. Camargue, France.

Habitat North America

Myxo- — , Banaresca + Serban, 1954, pp. 42-43.

Mixo- — , Kubiček, 1959.

- --, Stella, 1961. pp. 51-74, fig. 1-21
- --, Petkovski, 1961, p. 180
- --, Ponyi, 1967, pp. 180-181
- --, Champeau, 1970, pp. 155-189, diapause eggs.
- , Baldi, 1950, p. 92
- , Aguesse & Dussart, 1957, p. 480

Diaptomus —, BALDI 1936 a: p. 842

Mixodiaptomus kupelwieseri (BREHM)

card 3

--, Tonolli, 1949, p. 146

--, Stella, 1970, p. 78-80

- Marcus, 1976: 215, tbl. 1

- Pirocchi, 1949: 365-366

-- WALTON 1985: 175

- Petkovski, 1983: 162-164, fig. 38A-L

- Damian-Georgescu, 1966: 100-104 fig. 38-39

-- BORUTZKY, 1960: 35, FIG. 10 (6)

- Kiefer, 1978: 212

MIXODIAPTONUS KUPELWIESERI (BREHM)

CARD 4

-- STELLA 1984: 3, 4, 14, 76-79, FIG. 30, DISTRIBUTION- ITALY;
GIVES MAJOR SYNONYMY.

DIAPT. BUDAPESTINENSIS, JUNG-MAYER 1914: 95, FIGS. - N.SP.

D. LAMELLATUS, KIEFER 1930: 316, FIG. 4

D. LAMELLATUS, KIEFER 1933: 601, FIGS. 162-169, SYNONYM

OF D. KUPELWIESERI

D. LAMELLATUS, BREHM 1953: 163.

-- STELLA 1964b: 237-, LATIUM, ITALY

-- STELLA 1967: 377

Mixodiaptomus kupeiwieseri (Brehm)

card 5

- Stella 1979a: 317-, distribution - Italy
 - STELLA 1979b: 343 - 344, SICILY
 - STELLA 1982: 27, 57-59, FIG. 35 - ITALY
 - STELLA & MARGARITORA 1975-76: 4-, SARDINIA
 - D. -, BREHM 1908a: 450 -
 - D. -, LÖPFLER 1958b: 11-, AUSTRIA (SEEWINKEL)
 - D. -, LÖPFLER 1959c: 340-, AUSTRIA
 - M. -, KIEFFER 1971: 187, ARCTODIAPTOMUS KLIEFI ♀
- POSSIBLY A SYNONYM.

Mixodiaptomus kupelwieseri (Brehm)

card 6

-- Herzig 1983:65-, Austria

-- BORUTZKY ET AL. 1991: 333-335, FIG. 141, DIST. - USSR

-- ALONSO 1984: 137-, FIGS. 2Ad, 2Od, 3d, 4d, 5d, 6e,

SPAIN; SYNONYMY

-- LESCHER-MOUTOUÉ 1996: 907-

[Mixo]

Diaptomidae - Calanocida.

Diaptomus laciniatus Lilljeborg, ♀.

- — Lilljeborg, 1889, p. 47¹⁰¹ pl. 1, fig. 22, 24, 25.
— — Burckhardt, 1900, p. 164.
— — Matscheck, 1910, p. 39: pl. 6, fig. 54-58,
— — Richard, 1891, p. 250

Habitat. Minnesota: France: Norway:
Switzerland: Germany: Lappland.

- — G. O. Sars, 1902, p. 91: pl. 62.
- — Herrick, 1895, p. 74: pl. 8, f. 15: pl. 10, f. 12.
- — De Guerne & Richard, 1889², pl. 18: table
- — Scourfield, 1903, p. 533.
- — Schmeil, 1898, p. 167: pl. 13, f. 3-5,
- — Giesbrecht & Schmeil, 1898, p. 87.
- — Gurney, 1931, p. 139-148, figs. 170-182
- — Pesta, 1924, p. 556.
- — Rylov, 1930, p. 150: fig. 41.
- — Kiefer, 1928, p. 98: fig. —
- Transferred to *Mixodiaptomus* Kiefer, 1932, p. 506.
- — *migoti*, Monard, 1928, p. 257: figs. 11-12.

[Mixo]

Diaptomus laciniatus

card 2

--, Pesta, 1928, p. 42-3, fig. 32

--Geiling and Campbell, 1972, pp. 304-305.

--, MAIN, 1962: 116

--, COMITA + COMITA, 1957: 321, TAB. 1

--, COMITA + McNETT, 1976: 123

--, BALDI 1936a? p. 842. = Mixodiaptomus.

--, COMITA 1956: 579.

— Löffler, 1958: 22, 24

— Haberbosch, 1920: 108

Diaptomidae - Calanoida

Mixodiaptomus laciniatus (Lilljeborg) ♂♀ ③

Diaptomus — Lilljeborg, 1889, p. 47 (99): pl. I, f. 22, 24, 25.

Mixod. — Kiefer, 1932, p. 506 (key)

— — , Ravera, 1953. Developmental stages, pl. 2, 8, 9.

-- --, Herbst, 1955. p. 114

-- --, Edmondson, et al, 1962. p. 627. Development rate of eggs,
from Eichhorn 1957.

Habitat. ~~Minnesota~~: Europe

--, Roff, 1972, p. 157, 159

--, Pirocchi, 1944, p. 40

--, HEIP & SMOL, 1976: TAB. 5

- , Herbst, 1953, p. 146
- , Kiefer, 1952, p. 52, 61
- , Kiefer, 1958, p. 47-48
- , Baldi, 1949, p. 62
- , Baldi, 1950, p. 95
- , EVANS, 1970: 86
- , COMITA + COMITA, 1964: 153-164 O₂ UPTAKE. Lake Maggiore,
Italy.
- , COMITA, 1965: 466, 467
- , COMITA + Mc NETT, 1976: 123
- , COMITA + COMITA, 1966: 180
- , BALDI et al. 1949: 297-305, ♂ + ♀, size corr. depth.
- , BALDI 1951: p. 39, fig. 1, Tab. 1.

Mixodiaptomus

laciniatus

CARD 4

Diaptomus —, BALDI 1936 a: p. 842.

--, BALDI 1946: pp. 10-12, 15; Figs. 8-9b; Tabs. 9, 10.

--, BALDI et al. 1953: pp. 63, 75, 103, 105-107;
Tabs. 4-7, 9.

--, BALDI 1951: pp. 67, 68.

Misodiaptomus —, BURGIS 1970: 746.

--, COMITA 1956: 588.

--, Grimaldi, E., 1964, p. 211

--, Ravera, 1955, p. 436

Mixodiaptomus laciniatus

card 5

- , Tonolli, 1949, p. 145-155
- , Burgis, 1970, p. 746
- Fryer, 1980: tbl. 1
- Ar Mengol, 1978: 72-74, fig. 63.
- Tonolli, 1949: 283-293
- Tonolli, 19~~46~~⁶¹: 921, fig 1. & (1961)
- NILSSON & PEJLER 1973: 54-77.
- PECORINI 1959: 219-237.
- REY 1984: 1497.

Mixodiaptomus laciniatus (Lilljeborg)

card 6

-- Rey & Capblancq 1975: 1-43, Lac de Port- Bieilh,
Pyrenees.

— Petkovski, 1983: 166-168, fig. 40A-G

~~— Borutzky, 1960: 35~~

— Kiefer, 1978: 212

-- KAMAL & ARMITAGE 1967: 573

-- STELLA 1984: 3, 14, 17, 19-21, 25, 76, 85-87, FIG. 34-61VES

DISTRIBUTION-ITALY, & MAJOR SYNONYMY.

-- STELLA 1967: 377

Mixodiaptomus laciniatus (Lilljeborg)

card 7

-- Stella 1982: 27, 63-64, fig. 39

-- ANTONIETTI ET AL. 1988: 550

D. -, MAUCHLINE 1988: 712

D. -, FORRÓ 1986: 560

M. -: Dussart, 1967: 145-147, fig. 50.

D. -, EKMAN 1904: 39-, SWEDEN

M. -, CAVALLI 1949: 309-315, LAGO MAGGIORE, ITALY

D. -, BREHM 1908a: 452 -

Lilljeborg in

- MIXODIAPTOMUS LACINIATUS (GUERNE ET RICHARD) 8
-- PIROCCHI 1947c: 60-, LAGO MAGGIORE, ITALY
-- , BORUTZKY 1960: 35, FIG. 10(3-4)
-- [STELLA 1984: 85, LILLJEBORG'S ARTICLE WAS CONTAINED
IN A LONGER ONE BY GUERNE + RICHARD.]
-- STELLA 1979a: 317-, DISTR. - ITALY
~~-- STELLA 1982: 27~~
-- DAVIS 1976b: 820
D. -, VAN DOUWÉ 1909b: 12-13, FIGS. 29-31, GERMANY
M. -, COMITA 1968: 51-, LAKE MAGGIORE

Mixodiaptomus laciniatus (Lilljeborg)

card 9

-- Herzig 1983:70-

-- BOWMAN 1990: 293, 295-297, FIG. 3, RECORDS, SPAIN

-- WHITEHOUSE & LEWIS 1973: 233-

D.-, HARDING & SMITH 1974: 14-, FIGS. 6b, 7a, 9a, BRITAIN

-- OHMAN 1988b: 537-

D.-, ROBERT 1921: 46-, LAKE NEUCHÂTEL, FRANCE

-- KAWABATA 1993: 133

M.-, BORUTZKY & STAL. 1991: 342-344, FIG. 146, DIST. - USSR

M.-, ALONSO 1984: 144-, FIGS. 2Ab, 2Be, 3b, 4b, 5c, 6b, SPAIN;

SYNONYMY

MIXODIAPTOMUS LACINIATUS (LILLJEBORG)

CARD 10

-- BOWMAN 1990: 293, 295-297, FIG. 3, SPAN, GROUNDWATER

Mixodiaptomus laciniatus laciniatus Lilljeborg

--- -- --, Champeau, 1970, pp. 155-189.

U. L. STR., DUSSART 1989: 58-59, FIG. 33, RANGE - AFRICA

Mixodiaptomus laciniatus atlantis Kiefer

-- -- Kiefer, 1954 pp. 329-332, figs. 26-29.. Morocco.

-- DUMONT + DEGRAEMER, 1977: 258, 259, 267; Fig. 1

-- Kiefer, 1978: 212

-- BOWMAN 1990: 297

-- DUSSART 1989: 59-60, RANGE - AFRICA

-- ALONSO 1984: 144; FIGS. 2Ae, 2Bc, 3e, 4c, 5a, 6a,

SPAIN

--- BOWMAN 1990: 297

Mixodiaptomus laciniatus migoti Monard, 1928

-- Bowman 1990:297

Diaptomidae - Calanoida.

[Mixo]

Diaptomus lilljeborgi de Guerne & Richard, ♀.

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

-- Richard, 1891, p. 248,

-- Herrick, 1895, p. 76: pl. 9, fig. 6.

-- De Guerne & Richard, 1888, p. 161.

-- BELK & COLE, 1975: 212

Habitat, France: Algiers.

-- Chappuis, 1927: 41

-- COLE 1968: 465, 468.

— — Giesbrecht & Schmeil, 1898, p. 89.
Transferred to Mixodiaptomus Kiefer, 1932, p. 507.

D. — OF DADAY, 1890: STELLA, 1894: 77, SYNONYM OF

MIXODIAPATOMUS KUPELWIESERI

Diaptomidae - Calanoida

Mixodiaptomus lilljeborgi (Guerne + Richard) ♂ (2)

-- Procchi, 1974, p. 40

-- Kiefer, 1932, p. 515: figs. 75-79

Diaptomus — Guerne + Richard, 1889: pl. 18, map.

-- Stella, 1970, p. 80-81, figs. 19-20

-- Gauthier, 1934: 64

Habitat North America

-- Kiefer, 1978: 213

-- STELLA 1984: 3, 76, 79-80, FIG. 31 - GIVES DISTRIBUTION -

ITALY. * MAJOR SYNONYMY.

Mixodiaptomus lilljeborgi (Guerne & Richard, 1889) card 3

-- Stella 1967: 377

-- STELLA 1979a: 317-, DISTRIBUTION-ITALY

-- STELLA 1979b: 342-343, RECORDS-SICILY

-- STELLA 1982: 27, 59-60, FIG. 36

-- STELLA + MARGARITORA 1975-76: 4-, SARDINIA

MYXODIAPTOMUS -, HUTCHINSON 1953: 572 -

D. LILLJEBORG-, BREHM 1908a: 453 -

M. -, DUSSART 1989: 57-58, FIG. 32B, RANGE-AFRICA

M. -, BORUTZKY ET AL. 1991: 335-336, FIG. 142, DIST.-USSR

Mixodiaptomus lilljeborgi (Guerne & Richard, 1889) card 4

-- Alonso 1984: 144-, not found in Spain

D.-, LABBÉ' 1927e: 435-

Mixodiaptomus lobulifer (Rylov) - see Arctodiaptomus

Mixodiaptomus ortizi Alonso, 1984

-- Alonso 1984: 140-, figs. 2Ac, 2Ba, --Bb, 3c, 4e, 5b, 6c,
n. sp. female + male, Spain; synonym M. lacinitatus
var. atlantis of Ortiz, 1957

Mixodiaptomus reedi Streletsкая - see M. theeli

Mixodiaptomus sarsi Streletsкая - see M. theeli

Mixodiaptomus skabitschewskyi - see Nordodiaptomus

Diaptomidae - Calanoida.

[Mixo]

Diaptomus tatricus Wierzejski, ♀.♂.

D-lacinulatus Wierzejski, 1882, p. 234; pl. 3, f. 10-13.

D-tatricus Wierzejski, 1883, p. 26

--- De Guerne de Richard, 1889, pl. 18; table.

--- Herrick, 1895, p. 65; pl. 10, f. 8.

Habitat. Scandinavia.

---, PESTA 1938: 150-152; Figs 1, 2.

- — Brehm, 1907, p. 319: text-fig. 1.
- — Schmeil, 1898, p. 175: pl. 13, f. 6-7.
- — Giesbrecht & Schmeil, 1898, p. 88.
- — Pesta, 1924, p. 556.

Transferred to *Mixodiaptomus*, Kiefer, 1932, p. 507.
Diaptomus Hartmann, 1915, p. 456: figs. 1-3 variety.

- , Pesta, 1928, p. 43, fig. 34
- , BALDI 1936 a: p. 844.

Mixodiaptomus tataricus (Wierzejski) (2)

-- Procchi, 1944, p. 40

-- , Kiefer, 1932, p. 514: p. 507 (key -

Diaptomus — Wierzejski, 1882, p. 234: pl. 3, figs. 10-13.

Myxodiaptomus — , Banarescu & Serban, 1954, p. 42.

-- --, Petkovski, 1961, pp. 180-182

--, Herbst, 1953, p. 146

Habitat. North America

--, ACADEMIA SINICA, 1979: III

-- Petkovski, 1983: 164-166, fig. 39A-H

-- Kiefer, 1978: ~~212~~ 213

- Damian-Georgescu, 1966: 98-100, fig. 36

--, BORUTZKY, 1960: 35, 37, FIG. 10(5)

-- STELLA 1984: 3, 20, 76, 81-83, FIG. 32, GIVES DISTRIBUTION-
ITALY + MAJOR SYNONYMY.

DIAPTOMUS AUREDANUS, LORENZI 1912: 86, FIGS. 1-5, N. SP. ♂♂
FRIULI, ITALY.

D. AUREDANUS, BALDI 1936a: 838

D. APENNICUS, BRIAN 1928: 30, FIGS., N. SP. ♂♀ - ALPINE LAKES.

D. APENNICUS, BALDI 1936a: 838

D. APENNICUS, BRIAN 1927: 30, 1 PL.

-- STELLA 1967: 377

Mixodiaptomus tatricus (Wierzejski)

card 3

-- Stella 1979a: 317-, distribution - Italy

-- STELLA 1982: 27, 60-61, FIG. 37 ITALY

D. -, FORRO' 1986: 560

M. -, TONOLLI + TONOLLI 1951: 53-136, ITALIAN ALPS

D. AUREDANUS, BREHM 1908a: 450 -; ALSO D. TATRICUS

M. -, BORUTZKY ET AL. 1991: 332-333, FIG. 140, DIST. -

USSR

M. -, BREHM 1959: 934

= MIXODIARTOMUS

Diaptomidae - Calanoida.

Diaptomus théeli Lilljeborg, ♂♀ ①

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

— — Herrick, 1895, p. 77: pl. 8, f. 11.

— — Lilljeborg, 1889, p. 109: pl. 1, f. 9, 10, 11; pl. 4, f. 18.

— — Giesbrecht & Schmeil, 1898, p. 93.

— Spandl, 1926: 122

Habitat. Siberia.

--, Grochmalicki 1921: 51-52; 6 Figs.

— — RYLOV, 1930, p. 150 : fig. 43.

Transferred to *Mixodiaptomus* Kiefer, 1932, p. 507

-- -- Reed, 1962, pp. 27-50.

---, Juday & Muttkowski, 1915, p. 26

---, STELLA 1984: 77, D. I. OF SPANGL, 1925 =

MIXODIAPATOMUS KUPELWIESERI

— Smirnov, 1929: 161 — 162

-- REED 1959: 23, ALASKA

D- FORRO' 1986: 560

D---, SARS 1898: 333; Pl. 7 FIGS. 12-17; JANA/SIBERIA

Diaptomidae - Calanoida

Mixodiaptomus theeli (Lilljeborg) ♂ ♀.

(2)

Diaptomus — Lilljeborg, 1889, p. 109: pl. 1, f. 9-11: pl. 4, f. 18.

Mixod. — Kiefer, 1932, p. 507 (key).

-- MÄEMETS & VEEDRE 1956a: 19, 54, 67-68, Pl. II,

FIGS. 13-17, POSSIBLE RECORDS - ESTONIA

Habitat. Siberia.

Mixodiaptomus theeli (Lilljeborg)

card 3

--, Maemets, 1959, p. 32-33

--, BORUTZKY, 1960: 35, 37, FIG. 10 (7, 8)

— Kiefer, 1978: ~~213~~ 213

-- BORUTZKY ET AL, 1991: 336-338, FIG. 143, DIST. - USSR

447, NEW SYNONYMS: M. SARSI & M. REEDI

STRELETSKAYA 1986

DIAPTOMUS (M.) --, REED 1958a: 152-155, FIGS. 1-7,

ARCTIC ALASKA - 1ST NORTH AMERICAN RECORD;

D. T. VAR. LITHUANICA A SYNONYM.

MIXODIATOMUS THEELI (LILJEBORG)

④

M. REEDI, STRELETSKAYA 1986: 69-71, FIG. 3A(II),
N.SP.

M. REEDI, STRELETSKAYA 1986: 94, 97

M. SARSI, STRELETSKAYA 1986: 69-71, FIG. 3A(I),
N.SP.

M. SARSI, STRELETSKAYA 1986: 97

M. THEELI, STRELETSKAYA 1986: 71

M. THEELI, STRELETSKAYA 1986: 94, 97

M. THEELI, VEKHOV 1997: 25-27, TABS. 1, 2, F. BARENTS SEA
+ ISLANDS.

Mixodiaptomus theeli var. lithuanica - syn. of theeli