

# Annotated list of diatom names by Horst Lange-Bertalot and co-workers

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## Abstract

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The aim of this paper is to facilitate access to new diatom names of taxa described, combined or renamed by H. Lange-Bertalot and co-workers. These genera, subgenera, species, subspecies, varieties, and formae are listed in alphabetical order. For each name the page of the protologue and the figure is cited. New combinations are followed by the basionym, substitute names by the replaced name. Comments are given in square brackets.

## Introduction

Since 1976 H. Lange-Bertalot is publishing papers with new diatom names. Lange-Bertalot and his co-workers (colleagues and students) have built up a network of related diatom names and taxonomic concepts by cross-referencing comments, corrections, and emendations. This seems to be hermetical for those not familiar with the complete output of the "Lange-Bertalot-School". The aim of this paper is to facilitate access to these names.

The basis for this compilation are the two papers by Metzeltin & Kusber (2001) and Kusber & Metzeltin (2001), improved by Prof. H. Lange-Bertalot (Frankfurt, proof reading and contribution to validations) and by Prof. Dr. W. Greuter and Dr. N. Kilian (both BGBM Berlin, discussions on nomenclatural problems).

Nomenclatural comments follow the [St. Louis Code](#) (Greuter et al. 2000). Author names were standardized according to Brummitt & Powell (1992). Those authors not included in this standard list will be reported to the IPNI-database [<http://www.ipni.org/index.html>]. All data is also made available to the algae names projects at Berkeley University (Index Nominum Algarum, University Herbarium, University of California, Berkeley. Compiled by Paul Silva. Available online at <http://ucjeps herb.berkeley.edu/INA.html>) and the California Academy of Science (Diatom genus project, Fourtanier & Kociolek 1999, available online at [<http://www.calacademy.org/research/diatoms/genproject/index.html>]).

Since this list is work in progress it will be successively updated and maintained at the BGBM Berlin [<http://www.bgbm.org>]. Major corrections and supplementary information will lead to new versions of this list. For special interest, older versions will be available in an electronic archive. A paper print out of each version will be deposited at the BGBM Library.

This list is part of the data services provided by AlgaTerra [<http://www.algaterra.org/default.htm>], a BMBF funded project within the [BIOLOG-Program](#). These data are evaluated in order to provide full protologue information of selected data subsets, which will be available in 2004 within the *AlgaTerra* Information System.

The version 1.0 does not include all the data of Kusber & Metzeltin (2001).

## Diatom names in alphabetical order

*ACHNANTHEIOPSIS* Lange-Bert., Arch. Protistenk 148, p. 200-201 (1997). [Typus generis: *Achnantheiopsis lanceolata* (Bréb.) Lange-Bert., Arch. Protistenk 148, p. 207 (1997). Comment: see [http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=999](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=999)].

*Achnantheiopsis borneolanceolata* Lange-Bert., Arch. Protistenk 148, p. 208, (1997). [*Achnantheiopsis borneolanceolata* Lange-Bert. was already documented and described in Lange-Bertalot & Krammer (1989) Biblioth. Diatomol. 18, p. 30-31 pl. 85: figs 11-14 and pl. 91: fig. 2 as "*Achnanthes borneolanceolata* (Manuskriptname) Lange-Bert.".]

### *ACHNANTHES* Bory

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=843](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=843)].

*Achnanthes acidoclinata* Lange-Bert., Iconogr. Diatomol. 2, p. 22, pl. 21: figs 22-24c, pl. 113: figs 1-7 (1996).

- Achnanthes archibaldiana* Lange-Bert., Biblioth. Diatomol. 18, p. 23, pl. 64: figs 7-16, pl. 66: figs 8-11 (1989).
- Achnanthes biasoletiana* var. *subatomus* Lange-Bert., Biblioth. Diatomol. 18, p. 28, pl. 57: fig. 8, pl. 59: figs 1-11' (1989).
- Achnanthes borneolanceolata* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 30-31 pl. 85: figs 11-14 and pl. 91: fig. 2 (1989). [Comment: *Achnanthes borneolanceolata* is lacking a Latin diagnosis and a type, hence it is invalidly published. Validation within the genus *Achnantheiopsis* Lange-Bert. as *Achnantheiopsis borneolanceolata* Lange-Bert.]
- Achnanthes boudoui* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 18, pl. 69: figs 9-14, pl. 70: figs 1, 4 (1998).
- Achnanthes bremeri* Lange-Bert., Biblioth. Diatomol. 18, p. 31-32, pl. 76: figs 11-12 (1989).
- Achnanthes butterfassiana* Lange-Bert., Biblioth. Diatomol. 18, p. 34-35, pl. 71: figs 15-29, pl. 72: figs 2-5 (1989).
- Achnanthes carissima* Lange-Bert., Biblioth. Diatomol. 18, p. 36, pl. 28: fig. 1, pl. 36: figs 32-34, pl. 38: figs 1-4 (1989). [Comment: *Achnanthes carissima* is only the valve on the right hand side on pl. 28: fig. 1.]
- Achnanthes contrarea* Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 34-35, pl. 5: figs 1-19 (1995).
- Achnanthes daonensis* Lange-Bert., Biblioth. Diatomol. 18, p. 43, pl. 19: figs 27-32', pl. 25: figs 1-6, pl. 95: figs 1-13 (1989).
- Achnanthes dornii* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 49, pl. 38: figs 5-7, pl. 74: figs 10-12' (1989). [Comment: lacking a type and a Latin diagnosis, this name was invalidly published.]
- Achnanthes eutrophila* Lange-Bert., Iconogr. Diatomol. 2, p. 25, pl. 78: figs 29-38 (1996).
- Achnanthes fonticolanceolata* Lange-Bert. et Schim., Biblioth. Diatomol. 18, p. 57, pl. 88: figs 1-7 (1989).
- Achnanthes frequentissima* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 58, pl. 86: figs 1-15', pl. 91: figs 6-7 (1989). [Comment: lacking a type and a Latin diagnosis, this name was invalidly published. Validly published as "*Achnanthes lanceolata* ssp. *frequentissima*" Lange-Bert.]
- Achnanthes helvetica* (Hust.) Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 632 (2001).  
Basionym: *Achnanthes austriaca* var. *helvetica* Hustedt, Rabenhorsts Kryptogamenflora 7 (2) 3. Lieferung, p. 385, pl. 11: figs 831 g-k (1933).  
[Comment: validation of *Achnanthes helvetica* (Hust.) Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 63 (1989).]
- Achnanthes hyperboreoides* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 12, pl. 50: figs 13-19, pl. 75: figs 2, 6, 8 (1996).
- Achnanthes impexa* Lange-Bert., Biblioth. Diatomol. 18, p. 67-68, pl. 74: figs 1-6, pl. 75: ?fig. 1 (1989). [Comment: *Achnanthes impexa* on p. 316 (= caption of pl. 75: fig. 1) is cited as "*A. impexiformis*".]
- Achnanthes impexiformis* Lange-Bert., Biblioth. Diatomol. 18, p. 68-69, pl. 74: figs 7-9, pl. 75: figs 2-4, ?1 (1989).
- Achnanthes indicatrix* Lange-Bert. et Steindorf, Biblioth. Diatomol. 38, p. 82-83, pl. 18: figs 10-14 (1998).
- Achnanthes ingratiiformis* Lange-Bert., Biblioth. Diatomol. 18, p. 70-71, pl. 73: fig. 6, pl. 74: figs 13-18' (1989).
- Achnanthes jan-marcinii* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 12-13, pl. 50: figs 5-9, 22-23, pl. 75: fig. 4, 9 (1996).
- Achnanthes koghisensis* f. *angustifasciata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 84, pl. 19: figs 7-11 (1998).
- Achnanthes koghisensis* Gerd Moser, Lange-Bert. et Metzeltin f. *koghisensis*, Biblioth. Diatomol. 38, p. 84, pl. 19: figs 1-6 (1998).
- Achnanthes kranzii* Lange-Bert., Biblioth. Diatomol. 18, p. 74-75, pl. 55: figs 13-21, pl. 62: figs 6-8 (1989).
- Achnanthes kuelbsii* Lange-Bert., Biblioth. Diatomol. 18, p. 79-80, pl. 36: figs 27-31, pl. 37: figs 1-4 (1989).
- Achnanthes lanceolata* ssp. *frequentissima* Lange-Bert., Biblioth. Diatomol. 27, p. 4 (1993). [Validation of *Achnanthes lanceolata* ssp. *frequentissima* Lange-Bert., nom. inval., Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 78, pl. 44: 1-3, 15-23, pl. 45: fig. 18 (1991). Comment: in Lange-Bertalot (1993) and in the compilation by Kusber & Metzeltin (2001) *Achnanthes lanceolata* ssp. *frequentissima* was treated as a new name and status for *Achnanthes lanceolata* var. *dubia* f. *minuta* Grunow in Van Heurck, Synopsis des Diatomées de Belgique, Type de Synopsis, no. 236 (1880-1887).]

*Achnanthes lanceolata* var. *frequentissima* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 338, 348, pl. 86: figs 1-15', pl. 91: figs 6-7 (1989). [Comment: lacking a type and a Latin diagnosis, this name was invalidly published. Validly published as "*Achnanthes lanceolata* ssp. *frequentissima*" Lange-Bert.]

*Achnanthes leonardii* Witkowski et Lange-Bert., Iconogr. Diatomol. 7, p. 92, 420, pl. 50: figs 1-12 (2000).

*Achnanthes lineariformis* Lange-Bert., Biblioth. Diatomol. 27, p. 7 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1991), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 37: figs 19-23.] [Comment: in Krammer & Lange-Bertalot (1991b) *Achnanthes lineariformis* is documented as "*Achnanthes linearis* sensu auct. nonnull. (excl. Lectotypus)".]

*Achnanthes mercurii* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 13, pl. 50: figs 30-32, pl. 75: figs 1, 5, 7 (1996).

*Achnanthes metakryophila* Lange-Bert. et Rol.Schmidt, J. Paleolimnol. 3, p. 64, figs 6 d-i (1990).

*Achnanthes nitidiformis* Lange-Bert., Biblioth. Diatomol. 18, p. 109-110, pl. 74: figs 19-24 (1989).

*Achnanthes parexigua* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 19, pl. 67: figs 1-11, pl. 68: figs 1-3 (1998).

*Achnanthes peridotitica* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 85-86, pl. 18: figs 1-9 (1998).

*Achnanthes pirogueana* f. *capitata* Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 40, pl. 2: figs 18-26 (1995).

*Achnanthes praecipua* E.Reichardt in Round, Proc. Ninth Int. Diatom Symp., p. 391, figs 1-24 (1988).

*Achnanthes renei* Lange-Bert. et Rol.Schmidt, J. Paleolimnol. 3, p. 64, figs 6 o-t (1990).

*Achnanthes rosenstockii* Lange-Bert., Biblioth. Diatomol. 18, p. 131-132, pl. 61: figs 1-17, pl. 63: figs 1-2, 23-5 (1989). [Comment: the citation of "pl. 63" missing on p. 131.]

*Achnanthes silvahercynia* Lange-Bert., Biblioth. Diatomol. 18, p. 139, pl. 71: figs 30-37, pl. 73: figs 2-4 (1989).

*Achnanthes straubiana* Lange-Bert., Iconogr. Diatomol. 2, p. 26-27, pl. 78: fig. 21 a-b (1996). [Comment: pl. 78: figs 20, 21c is not mentioned on p. 26.] [As a part of the protologue, Krammer & Lange-Bertalot (1991), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 32: figs 53-56 is cited. Comment: in Krammer & Lange-Bertalot (1991b) *Achnanthes straubiana* is cited as "*Achnanthes minutissima* var. << Sippe mit kurzen, breitelliptischen Schalen >>".]

*Achnanthes thermalis* var. *rumrichiorum* Lange-Bert., Biblioth. Diatomol. 18, p. 152-153, pl. 77: figs 30-38, pl. 78: figs 2-4 (1989). [Comment: *Achnanthes thermalis* var. *rumrichiorum* on p. 152, p. 320 and p. 322 is cited as "*Achnanthes thermalis* var. *rumrichiorum*".]

*Achnanthes vistulana* Witkowski, Biblioth. Diatomol. 28, p. 90, pl. 17: figs 1-14 (1994).

*Achnanthes ziegleri* Lange-Bert., Biblioth. Diatomol. 27, p. 8, pl. 35: figs 4-7 (1993). [Comment: validation of *Achnanthes ziegleri* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 39, pl. 23: figs 33-38 (1991).]

#### **ACTINELLA F.W.Lewis**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=827](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=827)].

*Actinella modesta* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 86-87, pl. 10: figs 5-7 (1998).

*Actinella pararobusta* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 41, pl. 8: figs 3-4, pl. 9: figs 8-10 (1998).

*Actinella pseudohantzschia* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 42, pl. 57: figs 7-10 (1998).

**ADLAFIA** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 87-89 (1998). [Typus generis: *Adlafia muscora* (Kociolek et Reviere) Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 87 (1998). [http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=997](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=997)].

*Adlafia coringii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 20, pl. 86: figs 12-13 (1998).

**ALINEA** Lange-Bert. (section within the genus *NAVICULA* s. str.), Diatoms of Europe 2, p. 223, (2001). [Typus sectionis: *Navicula alineae* Lange-Bert. in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 268, pl. 22: figs 175-178 (2000).]

**ALTERASYNEDRA** Lange-Bert. (subgenus within *FRAGILARIA*), nom. illeg., Biblioth. Diatomol. 27, p. 52 (1993). [Typus subgeneris: *Fragilaria ungeriana* Grunow, p. 142, pl. 13: fig. 18 (1863). Comment: according to Lange-Bertalot &

Compère (2001) *ALTERASYNEDRA* is a synonym of *FRAGILARIA* subgen. *ULNARIA* Lange-Bert. et Compère, Diatom Res. 16, p. 103 (2001) .]

**ALVEOALLUM** Lange-Bert. et Krammer, Diatoms of Europe 1, p. 208, 241, pl. 217: figs 1-15. [Typus generis: *Alveovallum beyensii* Lange-Bert. et Krammer, Diatoms of Europe 1, p. 208, 241 (2000). *Alveovallum* was marked as new also in Diatoms of Europe 1 (2001 "2000") p. 207, 240-241.]

*Alveovallum beyensii* Lange-Bert. et Krammer, Diatoms of Europe 1, p. 208, 241, pl. 217: figs 1-15. [*Alveovallum beyensii* is the type of the name of the genus *ALVEOALLUM* Lange-Bert. & Krammer.]

**AMICULA** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 127, 420 (2000). [Typus generis: *Amicula speculum* (Witkowski) Witkowski, Iconogr. Diatomol. 7, p. 127 (2000).]

**AMPHIPLEURA** Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=195](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=195)].

*Amphipleura chiapasensis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 21, pl. 109: figs 1-5 (1998).

**AMPHORA** Ehrenb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=169](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=169)].

*Amphora dissimilis* Metzeltin et Krammer, Biblioth. Diatomol. 38, p. 90, pl. 43: figs 1-8 (1998).

*Amphora fagediana* Krammer, Biblioth. Diatomol. 9, p. 9, pl. 10: figs 1-3 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 150: 14-17 is cited.]

*Amphora hassatica* Krammer et S.Strecker, Biblioth. Diatomol. 37, p. 225-226, pl. 206: figs 1-8 (1997).

*Amphora jostesorum* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 141, 420, pl. 171: figs 1-9 (2000). [Comment: on p. 141 and 784 (caption of pl. 171) the authors are cited as Witkowski, Metzeltin et Lange-Bert.]

*Amphora streckeriae* Krammer, Biblioth. Diatomol. 37, p. 226-227, pl. 206: figs 9-11 (1997).

*Amphora subholsatica* Krammer, Biblioth. Diatomol. 37, p. 223-225, pl. 205: figs 1-10 (1997).

[- *Amphora hosatica* sensu Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 152: figs 4-5.]

*Amphora tomiakae* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 7, p. 153, 421, pl. 169: figs 12-14 (2000).

**ANALUS** Ehrenb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=470](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=470)].

*Anaulus simonsenii* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 7, p. 23, 421, pl.10: figs 7-12 (2000). [Comment: on p. 23 and 462 (caption of pl. 10) the authors are cited as Witkowski et Metzeltin.]

**ANEUMASTUS** D.G.Mann et A.J.Stickle

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=357](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=357)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?ANEUMASTUSDGMANNAJSTICKLE1990>].

*Aneumastus albanicus* Lange-Bert. et Miho, Diatoms of Europe 2, p. 216, pl. 123: figs 1-10 (2001).

*Aneumastus balticus* Lange-Bert., Diatoms of Europe 2, p. 216, pl. 117: figs 11-15, pl. 118: figs 7-8 (2001).

*Aneumastus humboldtianus* Lange-Bert. et Miho, Diatoms of Europe 2, p. 217, pl. 120: figs 3-7 (2001).

*Aneumastus rosettae* Lange-Bert. et Miho, Diatoms of Europe 2, p. 217, pl. 115: figs 1-6, pl. 116: figs 1-5 (2001).

**ANOMOEONEIS** Pfitzer

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=851](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=851)].

*Anomoeoneis garrensis* Lange-Bert. et Krammer, Biblioth. Diatomol. 9, p. 12, pl. 1: figs 1-5 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 103a: 10-13 is cited.]

**ASTARTIELLA** Witkowski, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 91, 357-358 (1998). [Typus generis: *Astartiella bahusiensis* (Grunow) Witkowski, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 357 (1998).]

*Astartiella glacialis* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 100, 421-422, pl. 52: figs 5-10 (2000).

*Astartiella iks* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 100, 422, pl. 52: figs 35-39 (2000).

*Astartiella producta* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 101, 422, pl. 52: figs 1-4 (2000).

**AUSTARIELLA** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 154, 422 (2000). [Typus generis: *Austariella admissa* (Hustedt) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 154 (2000).]

*Austariella admissa* (Hust.) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 154 (2000).

Basionym: *Navicula admissa* Hustedt, Bull. Duke Univ. Mar. Sta. 6, p. 30, pl. 8: fig. 25 (1955).

**BRACHYSIRA** Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=957](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=957)].

*Brachysira acutirhomboides* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 10, pl. 25: figs 1-4 (1994).

*Brachysira acutissima* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 91-92, pl. 39: figs 20-23 (1998).

*Brachysira amoena* Lange-Bert., Biblioth. Diatomol. 29, p. 11, pl. 37: figs 10-14 (1994).

*Brachysira archibaldii* var. *crassistriata* Lange-Bert., Biblioth. Diatomol. 29, p. 16, pl. 32: figs 15-20 (1994).

*Brachysira australofollis* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 17, pl. 20: fig. 4-15, pl. 21: fig. 4 (1994).

*Brachysira australofollis* var. *angustior* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 92-93, pl. 36: figs 1-4 (1998).

*Brachysira babuschka* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 93-94, pl. 39: figs 1-8 (1998).

*Brachysira bouletiana* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 94-95, pl. 35: figs 4-6 (1998).

*Brachysira brebissonii* ssp. *superba* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 22, pl. 24: figs 5-7 (1994).

*Brachysira calcicola* Lange-Bert., Biblioth. Diatomol. 29, p. 23, pl. 41: figs 19-33 (1994).

*Brachysira calligraphica* Lange-Bert., Biblioth. Diatomol. 29, p. 24, pl. 1: figs 1-2, pl. 37: figs 1-9 (1994). [Comment: the diagnosis was emended by Metzeltin et Lange-Bert. in Metzeltin & Lange-Bertalot, Iconogr. Diatomol. 5, p. 22-23 (1998) by excluding pl. 37: figs 6-9. According to Metzeltin & Lange-Bertalot (1998) these figures show *B. steinitziae*.]

*Brachysira coraliana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 23, pl. 103: figs 9-14 (1998).

*Brachysira estoniarum* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 160, 423-424, pl. 134: figs 1-4 (2000).

*Brachysira guttiformis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 95-96, pl. 36: figs 5-7 (1998).

*Brachysira hofmanniae* Lange-Bert., Biblioth. Diatomol. 29, p. 31, pl. 8: figs 1-18, pl. 9: figs 1-3 (1994).

*Brachysira inamoena* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 24, pl. 104: figs 6-9 (1998).

*Brachysira incognita* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 96-97, pl. 39: figs 16-19 (1998). [Comment: validation of *Brachysira incognita* Gerd Moser et Lange-Bert., nom. inval., Biblioth. Diatomol. 29, p. 32, pl. 25: fig. 9 (1994).]

*Brachysira inflata* Lange-Bert., Biblioth. Diatomol. 29, p. 32-33, pl. 25: figs 5-8 (1994).

*Brachysira insolita* Lange-Bert. et Gerd Moser, nom. inval., Biblioth. Diatomol. 29, p. 33-34, pl. 29: figs 19-20 (1994). [Comment: lacking a type and a Latin diagnosis this name is invalidly published.]

*Brachysira insulsa* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 24-25, pl. 107: figs 1-4 (1998).

*Brachysira irawanoides* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 36, pl. 30: figs 12-16 (1994).

*Brachysira julio* Lange-Bert., Biblioth. Diatomol. 29, p. 37, pl. 40: figs 1-9 (1994).

*Brachysira krammeri* Lange-Bert., Biblioth. Diatomol. 29, p. 37-38, pl. 16: figs 8-17, pl. 22: figs 4-6 (1994).

*Brachysira lange-bertalotii* Metzeltin, Iconogr. Diatomol. 5, p. 25-26, pl. 103: figs 5-8, pl. 106: figs 6-7 (1998).

*Brachysira lecohui* Lange-Bert., Biblioth. Diatomol. 29, p. 39, pl. 15: figs 8-13, pl. 22: figs 2-3, pl. 40: fig. 14 [valve on the right hand side] (1994).

*Brachysira lehmanniae* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 40, pl. 39: figs 13-17 (1994).

*Brachysira liliana* Lange-Bert., Biblioth. Diatomol. 29, p. 41, pl. 10: figs 1-12 (1994).

- Brachysira macroserians* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 26, pl. 103: figs 1-4 (1998).
- Brachysira maillardii* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 43, pl. 29: figs 11-17 (1994).
- Brachysira manfredii* Lange-Bert., Biblioth. Diatomol. 29, p. 44, pl. 32: figs 6-14, pl. 48: figs 8-9 (1994).
- Brachysira metzeltinii* Lange-Bert., Biblioth. Diatomol. 29, p. 45, pl. 17: figs 1-6, pl. 18: figs 5-6, pl. 40: fig. 14 [valve on the left hand side] (1994).
- Brachysira microclava* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 46, pl. 30: figs 1-9 (1994).
- Brachysira microserians* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 27, pl. 102: figs 1-5, 10-11 (1998).
- Brachysira nanoclava* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 97-98, pl. 37: figs 16-22 (1998).
- Brachysira neoacuta* Lange-Bert., Biblioth. Diatomol. 29, p. 48, pl. 14: figs 9-10, pl. 15: figs 1-7, pl. 18: figs 3-4 (1994).
- Brachysira neoexilis* Lange-Bert., Biblioth. Diatomol. 29, p. 51-52, pl. 5: figs 1-35, pl. 6: figs 1-6, pl. 17: figs 7-11, pl. 32: figs 27-30, pl. 46: figs 19-27 (1994). [Comment: *Brachysira neoexilis* on p. 194 (= caption of pl. 46: figs 19-27) is cited as "*Brachysira neoexilis* Lange-Bert. or cf. *neoexilis*". Taxonomic comment: According to Wolfe & Kling (2001), Lange-Bertalot-Festschrift, p. 250 *Brachysira neoexilis* is a synonym of *Brachysira microcephala* (Grunow) Compère.]
- Brachysira nubigena* Lange-Bert., Biblioth. Diatomol. 29, p. 54, pl. 38: figs 1-4, pl. 39: figs 7-12 (1994).
- Brachysira procera* Lange-Bert. et Gerd Moser, p. 55-56, pl. 7: figs 8-26, pl. 9: figs 4-6, pl. 32: figs 21-26 (1994). [Comment: *Brachysira procera* on p. 166 (= caption of pl. 32: figs 21-26) is cited as "*Brachysira* species cf. *procera*".]
- Brachysira pseudoacuta* Lange-Bert., Biblioth. Diatomol. 29, p. 57, pl. 16: figs 1-7, pl. 18: figs 1-2 (1994).
- Brachysira pseudoxilis* Lange-Bert. et Gerd Moser, nom. inval., Biblioth. Diatomol. 29, p. 58, pl. 17: figs 12-26, pl. 19: figs 1-6 (1994). [Comment: lacking a type and a Latin diagnosis this name is invalidly published.]
- Brachysira pulchra* Lange-Bert., Biblioth. Diatomol. 29, p. 58-59, pl. 39: figs 1-6 (1994).
- Brachysira pumila* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 28, pl. 102: figs 13-17 (1998).
- Brachysira rumrichiae* Lange-Bert., Biblioth. Diatomol. 29, p. 59-60, pl. 26: figs 1-7 (1994).
- Brachysira ruppeliana* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 98-99, pl. 38: figs 1-3, pl. 39: figs 12-15 (1998).
- Brachysira seippii* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 60, pl. 29: figs 6-10 (1994).
- Brachysira silvicola* Lange-Bert., Biblioth. Diatomol. 29, p. 63, pl. 27: figs 16-23, pl. 28: figs 1-5 (1994).
- Brachysira simplex* Lange-Bert., Biblioth. Diatomol. 29, p. 64, pl. 40: figs 10-13 (1994).
- Brachysira speluncola* Lange-Bert., Biblioth. Diatomol. 29, p. 66, pl. 21: figs 5-6, pl. 22: fig. 1, pl. 23: figs 8-15 (1994).
- Brachysira spicula* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 99-100, pl. 37: figs 10-15 (1998).
- Brachysira steindorfiana* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 101, pl. 37: figs 1-4 (1998).
- Brachysira steinitziae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 29, pl. 102: figs 18-22, pl. 108: fig. 7 (1998). [Comment: see *Brachysira calligraphica*.]
- Brachysira sublinearis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 29, pl. 107: fig. 15, pl. 108: figs 5-6 (1998).
- Brachysira subrostrata* Lange-Bert., Biblioth. Diatomol. 29, p. 68, pl. 35: figs 7-11, pl. 36: fig. 9 (1994).
- Brachysira supriniana* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 103-104, pl. 39: figs 9-11, pl. 40: figs 1-5 (1998).
- Brachysira tenuiserians* Lange-Bert., Biblioth. Diatomol. 29, p. 69, pl. 14: figs 5-8 (1994).
- Brachysira trinodis* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 29, p. 70, pl. 24: figs 1-4 (1994).
- Brachysira wygaschii* Lange-Bert., Biblioth. Diatomol. 29, p. 72, pl. 2: figs 3-6, pl. 13: figs 1-11 (1994).
- BREVISIRA** Krammer, Jahn et al., Lange-Bert.-Festschrift, p. 19 (2001) [Typus generis: *Brevisira arentii* (Kolbe) Krammer in Jahn et al., Lange-Bertalot-Festschrift, p. 19 (2001).]

***Brevisira arentii*** (Kolbe) Krammer in Jahn et al., Lange-Bertalot-Festschrift, p. 19 (2001)  
 Basionym: *Cyclotella arentii* Kolbe, Svensk Bot. Tidskr. 42, p. 464, figs 9-10 (1948). [*Brevisira arentii* is the type of the name of the genus *BREVISIRA*.]

**CALONEIS** Cleve

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=171](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=171)].

***Caloneis constans*** E.Reichardt, Ber. Bayer. Bot. Ges. 64, p. 124, pl. 2: figs 1-7, pl. 4: fig. 6 (1994).

***Caloneis kristinae*** Gerd Moser, Biblioth. Diatomol. 38, p. 105, pl. 54: figs 1-6 (1998).

***Caloneis subclevei*** Krammer, Biblioth. Diatomol. 9, p. 21, pl. 15: figs 5-11 (1985).

**CAMPYLODISCUS** Ehrenb. ex Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=302](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=302)].

***Campylodiscus indianorum*** Lange-Bert. et Metzeltin, Nova Hedwigia Beih. 112, p. 325, fig. 13-20 (1996).

**CAPARTOGRAMMA** Kuff.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=412](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=412)].

***Capartogramma pumila*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 30-31, pl. 98: figs 6-9 (1998).

**CATENULA** Mereschk.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=172](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=172)].

***Catenula robusta*** Witkowski, Lange-Bert. et Metzeltin Iconogr. Diatomol. 7, p. 168, 424, pl. 170: figs 13-14 (2000).

***CHAMAEPINNULARIA*** Lange-Bert. et Krammer, Iconogr. Diatomol. 2, p. 32 (1996). [Typus generis: *Chamaepinnularia vyvermanii* Lange-Bert. et Krammer, Iconogr. Diatomol. 2, p. 37 (1996).]

***Chamaepinnularia brasiliiana*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 31-32, pl. 86: figs 25-27 (1998).

***Chamaepinnularia brasilianopsis*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 32, pl. 86: figs 21-24 (1998).

***Chamaepinnularia circumborealis*** Lange-Bert., Iconogr. Diatomol. 6, p. 35, pl. 45: figs 15-18, pl. 48: figs 1-5, pl. 54: fig. 9 (1999).

***Chamaepinnularia ferrarioana*** Metzeltin et Lange-Bertalot, Iconogr. Diatomol. 5, p. 33, pl. 86: figs 28-31 (1998).

***Chamaepinnularia krasskei*** Lange-Bert., Iconogr. Diatomol. 6, p. 36, pl. 46: figs 1-10 (1999).

***Chamaepinnularia rhombelliptica*** Lange-Bert., Iconogr. Diatomol. 2, p. 35, pl. 28: figs 27-30 (1996).

***Chamaepinnularia schauppiiana*** Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 36, pl. 28: figs 43-47c (1996).

***Chamaepinnularia vyvermanii*** Lange-Bert. et Krammer, Iconogr. Diatomol. 2, p. 37 (1996). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1985) Biblioth. Diatomol. 9, pl. 26: figs 1-6, 22-24 is cited. Comment: in Krammer & Lange-Bertalot (1985) *Chamaepinnularia vyvermanii* is cited as "*Navicula* spec. aus Irland und Finnland". In Iconogr. Diatomol. 2 on p. 37 "Krammer" is missing.] [*Chamaepinnularia vyvermanii* is the type of the name of the genus *CHAMAEPINNULARIA* Lange-Bert. et Krammer]

***Chamaepinnularia alexandrowiczii*** Witkowski, Lange-Bert. et Metzeltin Iconogr. Diatomol. 7, p. 168, 423, pl. 69: figs 1-6 (2000).

***COCCONEIOPSIS*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 172, 424 (2000). [Typus generis: *Cocconeopsis orthoneoides* (Hust.) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 174 (2000).]

**COCCONEIS** Ehrenb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=187](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=187)].

***Cocconeis egregia*** Gerd Moser, Steindorf et Lange-Bert., Biblioth. Diatomol. 32, p. 60, pl. 13: figs 1-9 (1995).

***Cocconeis krammeri*** Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 39, pl. 19: figs 11-19 (1996). [Comment: *Cocconeis krammeri* is not documented on pl. 19: figs 20-22' as cited on p. 39.]

***Cocconeis pseudothumensis*** E.Reichardt, Ber. Bayer. Bot. Ges. 53, p. 99, pl. 1: figs 1-5 (1982).

***COSTERICARDIA*** Lange-Bert. (subgenus within ***GOMPHOSPHENIA***), Biblioth. Diatomol. 38, p. 192-193 (1998). [Typus subgeneris: *Gomphosphenia oahuensis* (Hustedt) Lange-Bert., Biblioth. Diatomol. 38, p. 193 (1998).]

**COXIA** Lange-Bert. et Gerd Moser, **nom. illeg.**, Biblioth. Diatomol. 38, p. 107-110 (1998). [Comment: intended type of the name of the genus *COXIA* Lange-Bert. et Gerd Moser: *Coxia guillauminii* (Manguin [ex Kociolek et Reviers]) Lange-Bert., Biblioth. Diatomol. 38, p. 110 (1998). *COXIA* Lange-Bert. et Gerd Moser is a later homonym of *COXIA* Endlicher, hence illegitimate. For *COXIA* Endlicher see: [http://www.ipni.org/ipni/IpniServlet?id=32773-1&query\\_type=by\\_id](http://www.ipni.org/ipni/IpniServlet?id=32773-1&query_type=by_id)].

#### **CRATICULA** Grunow

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=814](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=814)]

*Craticula accomodiformis* Lange-Bert., Biblioth. Diatomol. 27, p. 13, pl. 69: figs 6-8, 10, pl. 71: fig. 6 (1993).

*Craticula acidoclinata* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 41, pl. 26: figs 1-3 (1996).

*Craticula halopannonica* Lange-Bert., Diatoms of Europe 2, p. 218, pl. 85: figs 1-6 (2001).

*Craticula riparia* var. *mollenhaueri* Lange-Bert., Biblioth. Diatomol. 27, p. 14-15, pl. 70: figs 10-13 (1993).

*Craticula sverirschopkae* Lange-Bert., Diatoms of Europe 2, p. 218, pl. 92: figs 17-19 (2001).

*Craticula vixnegligenda* Lange-Bert., Biblioth. Diatomol. 27, p. 16, pl. 70: figs 15-18, pl. 72: figs 13-15 (1993).

*Craticula vixvisibilis* var. *distinctior* Lange-Bert., Biblioth. Diatomol. 27, p. 18, pl. 72: figs 1-4 (1993).

**CULTRIA** Metzeltin et Lange-Bert. (subgenus within *EUNOTIA*) Iconogr. Diatomol. 5, p. 46 (1998). [Typus subgeneris: *Eunotia falcifera* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 60 (1998).]

#### **CYMATONEIS** Cleve

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=174](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=174)].

*Cymatoneis margarita* Witkowski, Iconogr. Diatomol. 7, p. 179, 425, pl. 109: figs 9-17 (2000).

#### **CYMBELLA** C.Agardh

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=962](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=962)].

*Cymbella affiniformis* Krammer, Diatoms of Europe 3, p. 162, pl. 25: figs 1-8 (2002).

*Cymbella affinis* var. *procera* Krammer, Diatoms of Europe 3, p. 161, pl. 22: figs 8-13 (2002).

*Cymbella alpestris* Krammer, Diatoms of Europe 3, p. 163, pl. 33: figs 1-13 (2002).

*Cymbella arctissima* Metzeltin in Krammer, Diatoms of Europe 3, p. 170, pl. 106: figs 1-3 (2002).

*Cymbella bengaliformis* Krammer, Diatoms of Europe 3, p. 172, pl. 142: figs 8-9 (2002). [Comment: *Cymbella bengaliformis* is not documented on pl. 133: figs 1-4 as cited on p. 172.]

*Cymbella buechleri* Krammer, Diatoms of Europe 3, p. 171, pl. 116: fig. 1 (2002).

*Cymbella cantonatii* Lange-Bert., Diatoms of Europe 3, p. 174, pl. 172: figs 1-7 (2002).

*Cymbella cistuliformis* Krammer, Diatoms of Europe 3, p. 170, pl. 101: figs 1-4, pl. 102: figs 1-5 (2002).

*Cymbella diversa* Krammer, Diatoms of Europe 3, p. 168, pl. 68: figs 1-9 (2002).

*Cymbella diversiformis* Krammer, Diatoms of Europe 3, p. 167, pl. 67: figs 1-2 (2002).

*Cymbella diversistigmata* Krammer, Diatoms of Europe 3, p. 165, pl. 40: figs 1-11 (2002).

*Cymbella dorsirostrata* Krammer, Diatoms of Europe 3, p. 159, pl. 10: figs 1-9 (2002).

*Cymbella duplopunctata* Krammer, Diatoms of Europe 3, p. 171, pl. 116: figs 2-6 (2002).

*Cymbella elizabethana* Krammer, Diatoms of Europe 3, p. 83, 168, pl. 26: figs 9-10 (2002). [Comment: on p. 242 (= caption of pl. 26: figs 9-10) the authors are cited as "Krammer et Buechler".]

*Cymbella excisa* var. *angusta* Krammer, Diatoms of Europe 3, p. 159, pl. 9: figs 8-13 (2002).

*Cymbella excisa* var. *procera* Krammer, Diatoms of Europe 3, p. 159, pl. 9: figs 1-7 (2002).

*Cymbella excisa* var. *subcapitata* Krammer, Diatoms of Europe 3, p. 159, pl. 10: figs 14-18 (2002).

*Cymbella excisiformis* Krammer var. *excisiformis*, Diatoms of Europe 3, p. 160, pl. 11: figs 9-16 (2002).

*Cymbella excisiformis* var. *nonprotracta* Krammer, Diatoms of Europe 3, p. 160, pl. 37: figs 8-15 (2002).

*Cymbella exigua* Krammer, Diatoms of Europe 3, p. 159, pl. 10: figs 19-24 (2002).

- Cymbella geddiana* Krammer et Lange-Bert., Diatoms of Europe 3, p. 62, 165, pl. 44: figs 14-18 (2002). [Comment: on p. 165 "Lange-Bert." is missing.]
- Cymbella gemeinhardtii* Metzeltin et Krammer, Diatoms of Europe 3, p. 172, pl. 152: figs 1-7 (2002). [Comment: *Cymbella gemeinhardtii* is not documented on pl. 146: figs 1-7 as cited on p. 172.]
- Cymbella gondwana* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 101-102, pl. 119: figs 6-11, pl. 121: figs 5-6 (2000).
- Cymbella graciliformis* Krammer, Diatoms of Europe 3, p. 167, pl. 54: figs 12-15 (2002).
- Cymbella guettingeri* Krammer, Diatoms of Europe 3, p. 169, pl. 75: figs 1-9 (2002).
- Cymbella halophila* Krammer, Diatoms of Europe 3, p. 172, pl. 135: figs 1-7 (2002). [Comment: *Cymbella halophila* is not documented on pl. 129: figs 1-7 as cited on p. 172.]
- Cymbella hantzschiana* var. *borealis* Krammer, Diatoms of Europe 3, p. 162, pl. 29: figs 7-12 (2002).
- Cymbella hantzschiana* var. *strontiana* Krammer, Diatoms of Europe 3, p. 162, pl. 30: figs 9-14 (2002).
- Cymbella hedinii* Krammer, Diatoms of Europe 3, p. 159, pl. 29: figs 13-16 (2002).
- Cymbella hofmanniae* Lange-Bert. et Krammer, Diatoms of Europe 3, p. 164, pl. 43: figs 1-11 (2002).
- Cymbella hustedtii* var. *compacta* Krammer, Diatoms of Europe 3, p. 173, pl. 160: figs 19-20 (2002). [Comment: *Cymbella hustedtii* var. *compacta* is not documented on pl. 151a: figs 19-20 as cited on p. 173.]
- Cymbella hustedtii* var. *crassipunctata* Krammer, Diatoms of Europe 3, p. 173, pl. 160: figs 21-27 (2002). [Comment: *Cymbella hustedtii* var. *crassipunctata* is not documented on pl. 151a: figs 21-27 as cited on p. 173.]
- Cymbella hustedtii* var. *rhombica* Krammer, Diatoms of Europe 3, p. 173, pl. 160: figs 14-18 (2002). [Comment: *Cymbella hustedtii* var. *rhombica* is not documented on pl. 151a: figs 14-18 as cited on p. 173.]
- Cymbella hybrida* var. *lanceolata* Krammer, Biblioth. Diatomol. 9, p. 27, pl. 8: fig. 12 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 145: 4-5 is cited.]
- Cymbella inca* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 103, pl. 118: figs 9-10 (2000).
- Cymbella incerta* var. *crassipunctata* Krammer, Biblioth. Diatomol. 9, p. 28, pl. 8: figs 6-7 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 136: 1-3 is cited.]
- Cymbella incurvata* Krammer, Diatoms of Europe 3, p. 163, pl. 35: figs 1-9 (2002).
- Cymbella italica* Krammer, Diatoms of Europe 3, p. 163, pl. 32: figs 1-6 (2002).
- Cymbella kemiana* Krammer, Diatoms of Europe 3, p. 169, pl. 115: figs 1-7 (2002).
- Cymbella kolbei* var. *angusta* Krammer, Diatoms of Europe 3, p. 160, pl. 14: figs 24-28 (2002).
- Cymbella krasskei* Krammer, Biblioth. Diatomol. 9, p. 28-29, pl. 9: figs 3-4 (1985).
- Cymbella laevis* var. *lata* Krammer, Diatoms of Europe 3, p. 174, pl. 192: figs 1-5 (2002). [Comment: on p. 174 the name is erroneously marked as "nov. spec.".]
- Cymbella lanceolata* var. *bottnica* Krammer, Diatoms of Europe 3, p. 172, pl. 148: figs 1-6 (2002). [Comment: *Cymbella lanceolata* var. *bottnica* is not documented on pl. 142: figs 1-6 as cited on p. 172.]
- Cymbella lancettuliformis* Krammer, Diatoms of Europe 3, p. 167, pl. 54: figs 7-11 (2002).
- Cymbella lange-bertalotii* Krammer, Diatoms of Europe 3, p. 174, pl. 179: figs 1-4 (2002).
- Cymbella leptoceroides* var. *sublanceolata* Krammer, Diatoms of Europe 3, p. 174, pl. 161: fig. 11 (2002).
- Cymbella maggiana* Krammer, Diatoms of Europe 3, p. 165, pl. 45: figs 6-13 (2002).
- Cymbella metzeltinii* Krammer, Diatoms of Europe 3, p. 166, pl. 49: figs 6-11 (2002).
- Cymbella mexicana* var. *lata* Krammer, Diatoms of Europe 3, p. 174, pl. 169: figs 10-13 (2002). [Comment: on p. 174 the name is erroneously marked as "nov. comb.".]
- Cymbella modicepunctata* Krammer, Diatoms of Europe 3, p. 171, pl. 117: figs 1-4 (2002).

*Cymbella neocistula* Krammer var. *neocistula*, Diatoms of Europe 3, p. 169, pl. 86: figs 1, 6-7, pl. 87: figs 1-9 (2002). [Comment: on p. 95 additional figs are given: pl. 85: figs 1-4, pl. 86: figs 2-5, 8, pl. 88: figs 1-8, pl. 90: figs 1-8, pl. 91: figs 1-6 and pl. 92: figs 1-3 (pl. 86: fig. 8 which is referred to on p. 95 shows *Bacillaria cistula* Ehrenb.).]

*Cymbella neocistula* var. *islandica* Krammer, Diatoms of Europe 3, p. 170, pl. 93: figs 1-5 (2002). [Comment: *Cymbella neocistula* var. *islandica* is not documented on pl. 89: figs 1-5 as cited on p. 170.]

*Cymbella neocistula* var. *lunata* Krammer, Diatoms of Europe 3, p. 169, pl. 89: figs 1-7 (2002).

*Cymbella neoleptoceros* Krammer var. *neoleptoceros*, Diatoms of Europe 3, p. 173, pl. 156: figs 1-8, pl. 157: 1-19 (2002). [Comment: *Cymbella neoleptoceros* is not documented on pl. 150: figs 1-12 as cited on p. 173.]

*Cymbella neoleptoceros* var. *tenuistriata* Krammer, Diatoms of Europe 3, p. 173, pl. 160: figs 1-6 (2002). [Comment: *Cymbella neoleptoceros* var. *tenuistriata* is not documented on pl. 151a: figs 1-6 as cited on p. 173.]

*Cymbella novazeelandiana* Krammer, Diatoms of Europe 3, p. 166, pl. 47: figs 6-9 (2002).

*Cymbella obtusifformis* Krammer, Diatoms of Europe 3, p. 167, pl. 66: figs 1-7 (2002).

*Cymbella oestrupii* Lange-Bert. et Krammer, Diatoms of Europe 3, p. 163, pl. 34: figs 9-11 (2002).

*Cymbella omaniana* Krammer, Diatoms of Europe 3, p. 166-167, pl. 55: figs 1-6 (2002).

*Cymbella pantocsekii* Krammer, Diatoms of Europe 3, p. 162-163, pl. 55: figs 8-9 (2002).

*Cymbella parviformis* Krammer, Diatoms of Europe 3, p. 160, pl. 15: figs 8-12 (2002).

*Cymbella parviformis* Krammer, Diatoms of Europe 3, p. 168, pl. 69: figs 1-9 (2002).

*Cymbella peraffinis* R.Tynni in Krammer, Diatoms of Europe 3, p. 160, pl. 14: figs 1-7 (2002). [Comment: validation of *Cymbella peraffinis* R.Tynni, nom. inval., Geol. Surv. Finland 296, p. 37, pl. 13: figs 111a-b (1978). A contribution of R.Tynni is deduced from p. 4.]

*Cymbella peraspera* Krammer var. *peraspera*, Diatoms of Europe 3, p. 171, pl. 132: figs 1-6 (2002).

*Cymbella peraspera* var. *colombiana* Krammer et Lange-Bert., Diatoms of Europe 3, p. 172, pl. 134: figs 1-6 (2002). [Comment: *Cymbella peraspera* var. *colombiana* is not documented on pl. 128: figs 1-7 as cited on p. 172.]

*Cymbella percapitata* Krammer, Diatoms of Europe 3, p. 161, pl. 20: figs 1-8 (2002).

*Cymbella percombiformis* Krammer, Diatoms of Europe 3, p. 167, pl. 56: figs 1-7 (2002).

*Cymbella perfossilis* Krammer, Diatoms of Europe 3, p. 170, pl. 100: figs 1-4 (2002).

*Cymbella perjaponica* Krammer et Lange-Bert., Diatoms of Europe 3, p. 64, 165, pl. 46: figs 7-12 (2002). [Comment: erroneously pl. 46: fig. 6 is cited also in the protologue.]

*Cymbella perparva* Krammer, Diatoms of Europe 3, p. 160, pl. 18: figs 1-15 (2002).

*Cymbella pervarians* Krammer, Diatoms of Europe 3, p. 164, pl. 41: figs 7-12 (2002).

*Cymbella proxima* var. *borealis* Krammer, Diatoms of Europe 3, p. 170, pl. 111: figs 1-4 (2002).

*Cymbella proxima* var. *bottnica* Krammer, Diatoms of Europe 3, p. 171, pl. 114: figs 1-7 (2002).

*Cymbella reichardtii* Krammer, Biblioth. Diatomol. 9, p. 32, pl. 5: figs 16-25 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 119: 32-36 is cited.]

*Cymbella reviersiana* Lange-Bert. et Gerd Moser, nom. inval., Biblioth. Diatomol. 32, p. 81, pl. 20: figs 9-12. (1995). [Comment: lacking a type and a Latin diagnosis, this name was invalidly published. Validly published as *Encyonopsis reviersiana* Lange-Bert., Gerd Moser et Krammer, Biblioth. Diatomol. 37, p. 126, 201, pl. 158: figs 13-15 (1997).]

*Cymbella robertii* Krammer, Diatoms of Europe 3, p. 83, 168, pl. 25: fig. 14 (2002). [Comment: on p. 240 (= caption of pl. 25: fig. 14) the authors are cited as "Krammer et Buechler". The type is indicated on p. 83.]

*Cymbella rossii* Krammer et Lange-Bert., Nova Hedwigia Beih. 106, p. 94, figs 1-18 (1993).

*Cymbella rumrichae* Krammer, Diatoms of Europe 3, p. 166, pl. 50: figs 1-13 (2002).

*Cymbella schilleri* Krammer, Diatoms of Europe 3, p. 168, pl. 26: figs 7-8 (2002).

*Cymbella scotlandica* Krammer, Diatoms of Europe 3, p. 162, pl. 31: figs 1-7 (2002).

- Cymbella scutariana* Krammer, Diatoms of Europe 3, p. 165, pl. 45: figs 1-5 (2002).
- Cymbella simonsenii* Krammer, Biblioth. Diatomol. 9, p. 33, pl. 7: figs 1-9 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 130: 1-3, pl. 10: fig. 6 is cited.]
- Cymbella sinensis* Metzeltin et Krammer, Diatoms of Europe 3, p. 171, pl. 121: figs 1-8 (2002).
- Cymbella strontiana* Krammer, Diatoms of Europe 3, p. 162, pl. 30: figs 1-8 (2002).
- Cymbella subantarctica* Krammer, Diatoms of Europe 3, p. 168, pl. 73: figs 1-6 (2002).
- Cymbella subarctica* Krammer, Diatoms of Europe 3, p. 170, pl. 105: figs 2, 6-7 (2002).
- Cymbella subaspera* Krammer var. *subaspera*, Diatoms of Europe 3, p. 172, pl. 136: figs 1-5 (2002). [Comment: *Cymbella subaspera* var. *subaspera* is not documented on pl. 130: figs 1-5 as cited on p. 172.]
- Cymbella subaspera* var. *salina* Krammer, Diatoms of Europe 3, p. 172, pl. 137: figs 1-8 (2002). [Comment: *Cymbella subaspera* var. *salina* is not documented on pl. 131: figs 1-7 as cited on p. 172.]
- Cymbella subcistula* Krammer, Diatoms of Europe 3, p. 169, pl. 84: figs 1-9 (2002).
- Cymbella subhelvetica* Krammer, Diatoms of Europe 3, p. 174, pl. 176: figs 1-7 (2002). [Comment: *Cymbella subhelvetica* is not documented on pl. 177: figs 1-7 as cited on p. 174.]
- Cymbella subkolbei* Krammer, Diatoms of Europe 3, p. 160, pl. 15: figs 1-7 (2002).
- Cymbella subleptoceros* Krammer, Diatoms of Europe 3, p. 173, pl. 154: figs 2-17 (2002). [Comment: *Cymbella subleptoceros* is not documented on pl. 147: figs 10-17 as cited on p. 173. On p. 498 and p. 500 the authors are cited as "(Ehrenb.) Kütz.".]
- Cymbella subtruncata* Krammer var. *subtruncata*, Diatoms of Europe 3, p. 161, pl. 18: figs 16-21 (2002).
- Cymbella subtruncata* var. *similis* Krammer, Diatoms of Europe 3, p. 161, pl. 19: figs 14-19 (2002).
- Cymbella subturgidula* Krammer, Diatoms of Europe 3, p. 166, pl. 44: figs 19-21 (2002).
- Cymbella superparva* Krammer, Diatoms of Europe 3, p. 161, pl. 15: figs 13-15 (2002).
- Cymbella terrafuegiana* Krammer, Diatoms of Europe 3, p. 169, pl. 76: figs 1-3 (2002).
- Cymbella ticinensis* Krammer, Diatoms of Europe 3, p. 161, pl. 24: figs 17-19 (2002).
- Cymbella towietensis* Krammer, Diatoms of Europe 3, p. 173-174, pl. 161: figs 13-14 (2002). [Comment: *Cymbella towietensis* is not documented on pl. 152: figs 13-14 as cited on p. 173.]
- Cymbella transsilvanica* Krammer, Diatoms of Europe 3, p. 173, pl. 158: figs 6-11 (2002). [Comment: *Cymbella transsilvanica* is not documented on pl. 151: figs 6-11 as cited on p. 173.]
- Cymbella tropica* Krammer var. *tropica*, Diatoms of Europe 3, p. 164, pl. 44: figs 7-10 (2002). [Comment: on p. 278 (= caption of pl. 44) also mentioned as *Cymbella tropica* Krammer et Metzeltin.]
- Cymbella tropica* var. *tenuipunctata* Krammer, Diatoms of Europe 3, p. 164, pl. 49: figs 12-13 (2002).
- Cymbella tsonaka* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 104, pl. 119: figs 1-4 (2000).
- Cymbella tumidula* var. *lancettula* Krammer, Biblioth. Diatomol. 9, p. 35, pl. 6: figs 5-8 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 127: 1-7 is cited.]
- Cymbella turgidula* var. *bengalensis* Krammer, Diatoms of Europe 3, p. 166, pl. 48: figs 8-11 (2002).
- Cymbella turgidula* var. *venezolana* Krammer, Diatoms of Europe 3, p. 166, pl. 48: figs 12-17 (2002).
- Cymbella turgiduliformis* Krammer, Diatoms of Europe 3, p. 165, pl. 47: figs 1-5 (2002).
- Cymbella volkii* U.Rumrich, Krammer et Lange-Bert., Biblioth. Diatomol. 27, p. 19, pl. 134: figs 1-10 (1993).
- Cymbella vulgata* Krammer var. *vulgata*, Diatoms of Europe 3, p. 163-164, pl. 36: figs 1-11 (2002).
- Cymbella vulgata* var. *plivicensis* Krammer, Diatoms of Europe 3, p. 164, pl. 32: figs 7-13 (2002).
- Cymbella weslawskii* Krammer, Diatoms of Europe 3, p. 162, pl. 27: figs 1-7 (2002).

*Cymbella zambesiana* Krammer, Diatoms of Europe 3, p. 164, pl. 44: figs 11-13 (2002).

**CYMBELLONITZSCHIA** Hust.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=36](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=36)].

*Cymbellonitzschia szulczewskii* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 358, 425, pl. 213: figs 1-7 (2000).

**CYMBELLOPSIS** Krammer, Biblioth. Diatomol. 36, p. 157, (1997). [Typus generis: *Cymbellopsis apiculata* Krammer, Biblioth. Diatomol. 36, p. 157, pl. 2: figs 2-3 (1997).]

*Cymbellopsis apiculata* Krammer, Biblioth. Diatomol. 36, p. 157, pl. 2: figs 2-3 (1997).

*Cymbellopsis guyana* Krammer, Biblioth. Diatomol. 37, p. 208-209, pl. 196: figs 1-10 (1997).

*Cymbellopsis krammeri* Lange-Bert. et Wydrzycka, Iconogr. Diatomol. 9, p. 105, pl. 111: figs 26-27 (2000).

*Cymbellopsis lanceolata* Krammer, Biblioth. Diatomol. 37, p. 208, pl. 197: figs 7-13, pl. 198: figs 1-3 (1997).

*Cymbellopsis metzeltinii* Krammer, Biblioth. Diatomol. 37, p. 209, pl. 197: figs 1-6, pl. 201: figs 4-8 (1997).

*Cymbellopsis mirabilis* Krammer, Biblioth. Diatomol. 37, p. 209-210, pl. 194: figs 6-7 (1997).

*Cymbellopsis neocaledonica* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 111-112, pl. 43: figs 9-13 (1998).

*Cymbellopsis terminis* Krammer, Biblioth. Diatomol. 37, p. 209, pl. 194: figs 8-9, pl. 195: figs 1-9 (1997).

**CYMBOPLEURA (Krammer) Krammer**, Iconogr. Diatomol. 6, p. 284 (1999).

Basionym: *CYMBELLA* subgen. *CYMBOPLEURA* Krammer in Helmcke & Krammer: Micromorphology of diatom valves 11, p. 20 (1982). [Validation of *CYMBOPLEURA* Krammer, nom. inval., Biblioth. Diatomol. 36, p. 11 (1997). Typus generis *Cymbella subaequalis* Grunow in Van Heurck, Synopsis des diatomées de Belgique, pl. 3: fig. 2.]

*Cymbopleura aequistriata* Krammer et Lange-Bert., nom. inval., Biblioth. Diatomol. 38, p. 112-113, pl. 44: figs 5-8 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published.]

*Cymbopleura crassinervia* Lange-Bert., Metzeltin et Krammer, nom. inval., Biblioth. Diatomol. 38, p. 114-115, pl. 45: figs 1-4, pl. 46: figs 1-3 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published.]

*Cymbopleura declivis* Metzeltin et Krammer, nom. inval. Iconogr. Diatomol. 5, p. 34, pl. 131: figs 1-6, pl. 141: fig. 2 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published.]

*Cymbopleura delicatula* ssp. *judaica* Lange-Bert. et Krammer in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 242, pl. 18: figs 130-133 (2000).

*Cymbopleura heinii* Lange-Bert. et Krammer, Iconogr. Diatomol. 6, p. 38-39, pl. 57: fig. 1 (1999).

*Cymbopleura kanakarum* Lange-Bert. et Krammer, nom. inval., Biblioth. Diatomol. 38, p. 116, pl. 44: figs 1-4 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published.]

*Cymbopleura michelcostei* Metzeltin et Krammer, nom. inval., Iconogr. Diatomol. 5, p. 35, pl. 137: figs 1-8 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published. On page 35 only pl. 137: figs 1-6 is referred to.]

*Cymbopleura neocaledonica* Lange-Bert. et Krammer, nom. inval., Biblioth. Diatomol. 38, p. 117-118, pl. 44: figs 10-12 (1998). [Comment: since the genus *Cymbopleura* was not validated before 1999, this name is invalidly published.]

**DECUSSATA (R.M.Patrick) Lange-Bert. et Metzeltin**, Iconogr. Diatomol. 9, p. 670, (2000).

Basionym: *DECUSSATA* R.M.Patrick [subgenus within *NAVICULA* Bory], Notul. Nat. Acad. Nat. Sci. Philadelphia 324, p. 4 (1959).

**DENTICULA** Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=196](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=196)].

*Denticula eximia* Krammer et Lange-Bert., Biblioth. Diatomol. 15, p. 64, pl. 41: figs 2-5 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 98: figs 8-18 is cited.]

*Denticula kuetzingii* var. *rumichiae* Krammer, Biblioth. Diatomol. 15, p. 66, pl. 43: figs 11-14 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 100: figs 18-

22 is cited. Comment: *Denticula kuetzingii* var. *rumichiae* on p. 66 and p. 232 is misspelled as "*Denticula kuetzingii* var. *rumrichae*".]

*Denticula watanabei* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 132-133, pl. 60: figs 1-10 (1998).

**DENTICULOIDEA** Lange-Bert. (subgenus within **NITZSCHIA**), Biblioth. Diatomol. 27, p. 153 (1993). [Typus subgeneris: *Nitzschia semirobusta* Lange-Bert., Biblioth. Diatomol. 27, p. 149, pl. 120: figs 7-10 (1993).]

**DIADESMIS** Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=935](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=935)].

**DIADESMIS** subgen. **PARADIADESMIS** [see **PARADIADESMIS**].

*Diademesmis arctica* Lange-Bert. et Genkal, Iconogr. Diatomol. 6, p. 40, pl. 21: figs 8-14 (1999). [Comment: *Diademesmis arctica* is not documented on pl. 21: fig. 15 as cited in the 1<sup>st</sup> edition on p. 40, reference corrected in the 2<sup>nd</sup> edition.]

*Diademesmis biscutella* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 138-139, pl. 28: figs 1-4, 10 (1998). [Comment: the authors are cited as "Lange-Bert. in Moser et al. 1998" in Lange-Bertalot & Werum (2001).]

*Diademesmis confervaceoides* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 106, pl. 81: figs 1-10 (2000).

*Diademesmis corrugata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 140-141, pl. 27: figs 1-3, 9 (1998). [*Diademesmis corrugata* is the type of the name of the subgenus **PARADIADESMIS** Lange-Bert. et Le Cohu. Comment: the authors are cited as "Lange-Bert. in Moser et al. 1998" in Lange-Bertalot & Werum (2001).]

*Diademesmis discordabilis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 142, pl. 27: figs 4-5, 10, 12-13 (1998).

*Diademesmis dissimilis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 143, pl. 29: fig. 6 (1998).

*Diademesmis elegans* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 144-145, pl. 29: figs 7-8 (1998).

*Diademesmis fukushimae* Lange-Bert., M.Werum et Broszinski, Diatom 17, p. 6, figs 33-38, 47-57 (2001).

*Diademesmis implicata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 145-146, pl. 27: figs 6-8, 11 (1998).

*Diademesmis lacunosa* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 147, pl. 29: figs 1-3 (1998). [Comment: the authors are cited as "Lange-Bert. in Moser et al. 1998" in Lange-Bertalot & Werum (2001).]

*Diademesmis pantropica* Lange-Bert., Iconogr. Diatomol. 9, p. 109, pl. 82: figs 1-5 (2000).

*Diademesmis paracontenta* Lange-Bert. et M.Werum, Iconogr. Diatomol. 6, p. 41, pl. 21: figs 2-5 (1999). [Comment: *Diademesmis paracontenta* is not documented on pl. 21: fig. 6 as cited in the 1<sup>st</sup> edition on p. 41, reference corrected in the 2<sup>nd</sup> edition. Comment: the Latin diagnosis erroneously refers to fig. 6, it should refer to fig. 5 as corrected in the 2<sup>nd</sup> edition.]

*Diademesmis paracontenta* ssp. *magisconcava* Lange-Bert., Diatom 17, p. 9, figs 11-14, 60-64 (2001).

*Diademesmis tahitiensis* Lange-Bert. et M.Werum, Diatom 17, p. 13, figs 22-29, 78-84 (2001).

*Diademesmis templiniana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 111, pl. 82: figs 6-18 (2000).

*Diademesmis virginiana* Lange-Bert., Diatom 17, p. 17, figs 18-21, 100-105 (2001).

**DIATOMA** Bory

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=963](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=963)].

*Diatoma ochridana* Lange-Bert. et U.Rumrich, Acta Biol. Benrodis 3, p. 118, 120, figs 19-25, 45-48 (1991).

*Diatoma problematica* Lange-Bert., Biblioth. Diatomol. 27, p. 23, pl. 6: figs 11-15, 21-27, pl. 7: figs 1-6, pl. 8: figs 1-5 (1993).

**DIATOMELLA** Grev.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=964](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=964)].

*Diatomella lecohui* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 148, pl. 55: figs 6-16 (1998).

**DICKIEIA** Berk. ex Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=541](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=541)].

*Dickieia resistans* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 181, 425-426, pl. 150: figs 16-20, 221 (2000).

*Dickieia wajdae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 181, 426, pl. 108: figs 19-23 (2000).

**DIDYMOSPHENIA M.Schmidt**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=881](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=881)].

*Didymosphenia pumila* Metzeltin et Lange-Bert., Nova Hedwigia 60, p. 390-391, pl. 8: figs 5-6, pl. 10: figs 1-6 (1995).

**DIPLONEIS (Ehrenb.) Cleve**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=184](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=184)].

*Diploneis kahlui* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 112-113, pl. 103: 1-9, pl. 104: figs 1-3 (2000).

*Diploneis kawabatae* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 149-150, pl. 42: figs 1-7 (1998).

*Diploneis krammeri* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 9, p. 652-653, pl. 4: figs 1-10, 12, pl. 5: figs 1-5, pl. 6: figs 1-5 (2000).

*Diploneis ovalis* ssp. *arctica* Lange-Bert., Iconogr. Diatomol. 6, p. 42-43, pl. 43: figs 1-3, pl. 44: figs 1-5 (1999). [Comment: name and diagnosis on p. 43 only in the 2<sup>nd</sup> edition.]

**EHRENBERGIA** Witkowski, Lange-Bert. et Metzeltin, nom. illeg., Iconogr. Diatomol. 7, p. 30, 426 (2000). [Comment: intended type: *Ehrenbergia granulosa* (Grunow) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 31 (2000). *EHRENBERGIA* Witkowski, Lange-Bert. et Metzeltin is a later homonym of *EHRENBERGIA* K.P.J.Sprengel, hence illegitimate. For *EHRENBERGIA* see also: [http://www.ipni.org/ipni/IpniServlet?id=34541-1&query\\_type=by\\_id](http://www.ipni.org/ipni/IpniServlet?id=34541-1&query_type=by_id) [http://www.ipni.org/ipni/IpniServlet?id=41709-1&query\\_type=by\\_id](http://www.ipni.org/ipni/IpniServlet?id=41709-1&query_type=by_id).]

**ENCYONEMA Kütz.**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=966](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=966)].

*Encyonema accedens* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 118-119, pl. 47: figs 1-4 (1998).

*Encyonema aequilongum* Lange-Bert. et Krammer, Biblioth. Diatomol. 36, p. 61, 160, pl. 98: figs 17-21 (1997).

*Encyonema affine* Metzeltin et Krammer, Biblioth. Diatomol. 37, p. 189, pl. 125: figs 6-8 (1997). [Comment: on p. 298 (= caption of pl. 125: figs 6-8 the authors are given as "Krammer et Metzeltin".]

*Encyonema africanum* Krammer, Biblioth. Diatomol. 37, p. 191, pl. 129: figs 4-18 (1997).

*Encyonema alpiniforme* Krammer, Biblioth. Diatomol. 37, p. 183-184, pl. 101: figs 6-14 (1997).

*Encyonema altiplanense* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 114, pl. 118: figs 11-14 (2000).

*Encyonema amanianum* Krammer, Biblioth. Diatomol. 36, p. 168, pl. 46: figs 4-8 (1997).

*Encyonema ampliutum* Krammer et Lange-Bert., Biblioth. Diatomol. 36, p. 139, 177, pl. 54: figs 1-5 (1997).

*Encyonema angustecapitatum* Krammer, Biblioth. Diatomol. 37, p. 192, pl. 130: figs 8-15 (1997).

*Encyonema apiculatum* Krammer, Biblioth. Diatomol. 36, p. 176, pl. 76: figs 1-2 (1997).

*Encyonema blancheanum* var. *neocaledonicum* (Manguin ex Kociolek et Reviers) Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 632 (2001).

Basionym: *Cymbella suburgida* var. *neocaledonica* Manguin ex Kociolek et Reviers, Cryptog. Algol. 17 (3), p. 210 (1996). [– *Cymbella suburgida* var. *neocaledonica* Manguin, nom. inval., Mém. Mus. Natl. Hist. Nat., Nouv. Sér. B, Bot. 12 (1), p. 28, pl. 5: figs 7a, b (1962).]

[– *Encyonema blancheanum* var. *neocaledonicum* (Manguin ex Kociolek et Reviers) Gerd Moser, Lange-Bert. et Metzeltin, nom. inval., Biblioth. Diatomol. 38, p. 33 (1998).]

*Encyonema brehmiforme* Krammer, Biblioth. Diatomol. 37, p. 182, pl. 104: figs 4-19 (1997).

*Encyonema brevicapitatum* Krammer, Biblioth. Diatomol. 36, p. 170, pl. 34: figs 1-7 (1997).

*Encyonema canadense* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 41, 187-188, pl. 120: figs 6-7 (1997).

[Comment: the type of the name of the species is referred to as Präp. "Can 50LF" (p. 188) respectively "Can 49LF" (p. 41).]

*Encyonema carina* Lange-Bert. et Krammer, Biblioth. Diatomol. 36, p. 152, 179-180, pl. 86: figs 1-8 (1997).

*Encyonema caronianum* Krammer, Biblioth. Diatomol. 37, p. 189, pl. 131: figs 11-16 (1997).

*Encyonema cascadenense* Krammer, Biblioth. Diatomol. 37, p. 190, pl. 192: figs 6-12 (1997).

*Encyonema cespitosum* var. *comensis* Krammer, Biblioth. Diatomol. 36, p. 173, pl. 67: figs 1-8 (1997).

- Encyonema cespitosum* var. *maxima* Krammer, Biblioth. Diatomol. 36, p. 174, pl. 69: figs 1-8 (1997).
- Encyonema chilense* Krammer, Biblioth. Diatomol. 36, p. 169, pl. 46: figs 1-3 (1997).
- Encyonema directiforme* Krammer et Lange-Bert., Biblioth. Diatomol. 36, p. 149, 179, pl. 95: figs 6-11 (1997). [*Encyonema directiforme* Krammer et Lange-Bert. on p. 370 (caption of p. 95) is cited as "*Encyonema directiforme* Lange-Bert. et Krammer".]
- Encyonema distinctepunctatum* Krammer, Biblioth. Diatomol. 36, p. 162-163, pl. 20: figs 1-5, pl. 98: figs 1-6 (1997).
- Encyonema distinctum* Lange-Bert. et Krammer, Biblioth. Diatomol. 36, p. 56, 158-159, pl. 98: figs 13-16 (1997). [- "*Cymbella* nov. spec. Nr. 2 Mittersee" in Lange-Bertalot & Metzeltin (1996), Iconogr. Diatomol. 2, pl. 88: figs 21-24.]
- Encyonema donatoi* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 52, 189, pl. 125: figs 9-10 (1997).
- Encyonema dubium* Krammer, Biblioth. Diatomol. 37, p. 186, pl. 109: figs 8-16 (1997).
- Encyonema elginense* var. *stigmaeum* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 36, pl. 133: figs 21, 24-25 (1998).
- Encyonema evergladianum* Krammer, Biblioth. Diatomol. 37, p. 193, pl. 142: figs 1-7 (1997).
- Encyonema fogedii* Krammer, Biblioth. Diatomol. 36, p. 171, pl. 26: figs 1-12, 18-28 (1997).
- Encyonema friedelinhiae* Krammer, Biblioth. Diatomol. 36, p. 180, pl. 87: figs 1-15 (1997).
- Encyonema geisslerae* Krammer, Nova Hedwigia 65, p. 141, figs 3, 6-7, 13-18 (1997).
- Encyonema graciloides* Krammer, Biblioth. Diatomol. 37, p. 194, pl. 195: figs 11-13, pl. 199: figs 5-6 (1997).
- Encyonema guatemalense* Krammer, Biblioth. Diatomol. 37, p. 193-194, pl. 142: figs 16-21 (1997). [Comment: on p. 332 (= caption of pl. 142: figs 16-21) *Encyonema guatemalense* is cited as "*Encyonema guatemalum*".]
- Encyonema guettingeri* Krammer, Biblioth. Diatomol. 37, p. 188, pl. 132: figs 1-9, 11-12, ?10 (1997).
- Encyonema hebridiforme* Krammer, Biblioth. Diatomol. 36, p. 165, pl. 11: figs 15-17 (1997).
- Encyonema hintzii* Krammer, Biblioth. Diatomol. 36, p. 168, pl. 39: figs 6-9 (1997).
- Encyonema hophense* Krammer, Biblioth. Diatomol. 36, p. 162, pl. 33: figs 6-13 (1997).
- Encyonema hungaricum* Krammer, Biblioth. Diatomol. 36, p. 167, pl. 49: figs 1-4 (1997).
- Encyonema hustedtii* Krammer, Biblioth. Diatomol. 36, p. 166-167, pl. 42: figs 6-8 (1997).
- Encyonema hustedtii* var. *neocaledonicum* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 121, pl. 47: figs 12-14 (1998).
- Encyonema inarense* Krammer, Biblioth. Diatomol. 36, p. 173, pl. 60: figs 5-8 (1997).
- Encyonema incertum* Krammer, Biblioth. Diatomol. 37, p. 190, pl. 137: figs 10-13, pl. 140: figs 5-6 (1997).
- Encyonema incurvatum* Krammer, Biblioth. Diatomol. 36, p. 161, pl. 21: figs 21-23 (1997).
- Encyonema indistinctum* Krammer, Biblioth. Diatomol. 37, p. 187, pl. 192: figs 1-5, pl. 194: fig. 5 (1997).
- Encyonema insulsum* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 121-122, pl. 47: figs 8-11 (1998).
- Encyonema jemtlandicum* Krammer var. *jemtlandicum*, Biblioth. Diatomol. 36, p. 166, pl. 35: figs 1-9 (1997).
- Encyonema jemtlandicum* var. *stigmaeum* Krammer, Biblioth. Diatomol. 37, p. 195, pl. 194: figs 2-4 (1997).
- Encyonema jemtlandicum* var. *venezolana* Krammer, Biblioth. Diatomol. 36, p. 166, pl. 14: figs 1-5, pl. 50: fig. 8 (1997).
- Encyonema jordaniforme* Krammer, Biblioth. Diatomol. 37, p. 191, pl. 201: figs 9-15 (1997).
- Encyonema kamtschaticum* Krammer var. *kamtschaticum*, Biblioth. Diatomol. 36, p. 175, pl. 63: figs 4-11 (1997).
- Encyonema kamtschaticum* var. *parva* Krammer, Biblioth. Diatomol. 36, p. 175, pl. 62: figs 9-13 (1997).
- Encyonema kuelbsii* Lange-Bert. et Krammer, Biblioth. Diatomol. 36, p. 55, 158, pl. 98: figs 7-12 (1997). [- "*Cymbella* nov. spec. Nr. 1 Mittersee" in Lange-Bertalot & Metzeltin (1996), Iconogr. Diatomol. 2, pl. 88: figs 15-20.]
- Encyonema kukenanum* Krammer, Biblioth. Diatomol. 37, p. 184-185, pl. 106: figs 7-9 (1997).
- Encyonema lancettulum* Krammer, Biblioth. Diatomol. 36, p. 160, pl. 21: figs 9-15 (1997).

- Encyonema lange-bertalotii* Krammer var. *lange-bertalotii*, Biblioth. Diatomol. 36, p. 169-170, pl. 5: figs 1-16 (1997).
- Encyonema lange-bertalotii* var. *inarenensis* Krammer, Biblioth. Diatomol. 36, p. 170, pl. 29: fig. 14 (1997).
- Encyonema lange-bertalotii* var. *obscuriformis* Krammer, Biblioth. Diatomol. 36, p. 170, pl. 27: figs 13-16 (1997).
- Encyonema latareolatum* Krammer, Biblioth. Diatomol. 36, p. 180, pl. 96: figs 1-13 (1997).
- Encyonema latecapitatum* Krammer, Biblioth. Diatomol. 36, p. 170-171, pl. 34: figs 8-12 (1997).
- Encyonema latissimum* Krammer, Biblioth. Diatomol. 36, p. 176, pl. 80: figs 1-5, pl. 81: figs 1-3 (1997).
- Encyonema latum* Krammer, Biblioth. Diatomol. 36, p. 174, pl. 71: figs 1-6 (1997).
- Encyonema lineolatum* Krammer var. *lineolatum*, Biblioth. Diatomol. 36, p. 161, pl. 21: figs 1-8 (1997).
- Encyonema lineolatum* var. *major* Krammer, Biblioth. Diatomol. 36, p. 161-162, pl. 13: figs 1-8 (1997).
- Encyonema lunatum* var. *borealis* Krammer, Biblioth. Diatomol. 36, p. 179, pl. 93: figs 3-5 (1997).
- Encyonema magnum* Krammer, Biblioth. Diatomol. 36, p. 177, pl. 99: figs 1-2 (1997).
- Encyonema malaysianum* Krammer, Biblioth. Diatomol. 37, p. 186, pl. 109: figs 17-24 (1997).
- Encyonema marginestriatum* Krammer et Metzeltin, Biblioth. Diatomol. 37, p. 194, pl. 136: figs 15, 17; pl. 202: figs 16-18 (1997).
- Encyonema melidense* Krammer, Biblioth. Diatomol. 36, p. 168, pl. 37: figs 1-9 (1997).
- Encyonema menisculus* Lange-Bert. et Krammer, Biblioth. Diatomol. 38, p. 123, pl. 48: figs 17-20 (1998).
- Encyonema metzeltinii* Krammer, Biblioth. Diatomol. 37, p. 190, pl. 134: figs 1-6 (1997).
- Encyonema mexicanum* Krammer, Biblioth. Diatomol. 36, p. 172, pl. 61: figs 5-8 (1997).
- Encyonema minutiforme* Krammer, Biblioth. Diatomol. 36, p. 159-160, pl. 18: figs 11-15 (1997).
- Encyonema minutiforme* var. *apicodeclinatum* Krammer, Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 115, pl. 111: figs 5-6, (?) (2000).
- Encyonema neocaledonicum* var. *leve* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 124, pl. 48: figs 21-25 (1998).
- Encyonema neogracile* Krammer var. *neogracile*, Biblioth. Diatomol. 36, p. 177-178, pl. 82: figs 1-7, 12-13 (1997).
- Encyonema neogracile* var. *tenuipunctata* Krammer, Biblioth. Diatomol. 36, p. 178, pl. 85: figs 1-6 (1997).
- Encyonema neomuelleri* Krammer, Nova Hedwigia 65, p. 142, figs 23-27 (1997).
- Encyonema norvegicum* var. *alpinum* Krammer, Biblioth. Diatomol. 37, p. 185, pl. 107: figs 12-20 (1997).
- Encyonema norvegicum* var. *capitatum* Krammer, Biblioth. Diatomol. 37, p. 185, pl. 107: figs 1-2 (1997). [Comment: on p. 185 erroneously pl. 106: figs 1-2 is given. On pl. 106: figs. 1-2 *E. distinctepunctatum* Krammer is documented. On p. 262 (= caption of pl. 107: figs 1-2) var. *capitatum* is cited as "var. *capitata*".]
- Encyonema norvegicum* var. *crassipunctatum* Krammer, Biblioth. Diatomol. 37, p. 185, pl. 108: figs 5-6 (1997).
- Encyonema obscuriforme* Krammer, Biblioth. Diatomol. 36, p. 172, pl. 30: figs 11-15 (1997).
- Encyonema obscurum* var. *alpina* Krammer, Biblioth. Diatomol. 36, p. 171, pl. 29: figs 1-11 (1997).
- Encyonema obtusum* Krammer var. *obtusum*, Biblioth. Diatomol. 37, p. 20, 184, pl. 105: figs 1-7, 11-13 (1997). [Comment: *Encyonema obtusum* var. *obtusum* is not documented on pl. 105: figs 8-10 as mentioned on p. 184, on the other hand pl. 105: fig. 13 is missing on p. 184. On pl. 105: figs 8-10 *Encyonema obtusum* var. *truncatum* Krammer, nom. inval. is documented.]
- Encyonema obtusum* var. *truncatum* Krammer, nom. inval., Biblioth. Diatomol. 37, p. 184, pl. 105: figs 8-10 (1997). [Comment: no type is given, hence this name is invalidly published.]
- Encyonema ochridanum* Krammer, Biblioth. Diatomol. 36, p. 159, pl. 31: figs 3-10 (1997).
- Encyonema ostrupii* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 68, 191, pl. 192: figs 17-18 (1997).
- Encyonema pankowii* Lange-Bert. et Krammer, Biblioth. Diatomol. 37, p. 69, 192, pl. 142: figs 9-11 (1997).
- Encyonema parvum* Krammer, Biblioth. Diatomol. 37, p. 183, pl. 191: figs 10-15 (1997).

- Encyonema perelginense* Krammer, Biblioth. Diatomol. 36, p. 173, pl. 61: figs 1-4 (1997).
- Encyonema pergracile* Krammer, Biblioth. Diatomol. 36, p. 178, pl. 88: figs 1-8 (1997).
- Encyonema perminutum* Krammer, Biblioth. Diatomol. 36, p. 161, pl. 25: figs 20-27 (1997).
- Encyonema perpusillum* var. *chilense* Krammer, Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 115-116, pl. 111: figs 20-23 (2000).
- Encyonema persilesiacum* Krammer var. *persilesiacum*, Biblioth. Diatomol. 36, p. 165, pl. 10: figs 1-8 (1997).
- Encyonema persilesiacum* var. *ata-tau* Krammer, Biblioth. Diatomol. 36, p. 165-166, pl. 12: figs 1-5 (1997).
- Encyonema polystigmoideum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 36, pl. 131: figs 8-11, pl. 144: figs 1-2 (1998).
- Encyonema ponteanum* Krammer, Biblioth. Diatomol. 37, p. 192, pl. 142: figs 13-15 (1997).
- Encyonema procerum* Krammer, Biblioth. Diatomol. 36, p. 169, pl. 32: figs 9-19 (1997).
- Encyonema pseudomuelleri* Krammer, Biblioth. Diatomol. 36, p. 174, pl. 43: figs 1-6, pl. 44: figs 1-4, pl. 45: figs 1-4, (1997). [Comment: *Encyonema pseudomuelleri* was the intended new name and status for *Cymbella muelleri* var. *javanica* and *Cymbella grossestriata* var. *javanica*. Krammer published a new species with a Latin description, based on the lectotype, selected by Simonsen, Atlas and catalogue of the diatom types of Friedrich Hustedt 1, p. 130 (1987) for *Cymbella grossestriata* var. *javanica* (erroneously cited for *Cymbella muelleri* var. *javanica*).] [Homotypic synonym: *Cymbella muelleri* var. *javanica* Hustedt, Arch. Hydrobiol., Suppl., p. 425-426, pl. 26: figs. 1-4. Comment: *Cymbella muelleri* var. *javanica* was originally published as a new combination for *Cymbella grossestriata* var. *javanica*. Since *Cymbella grossestriata* var. *javanica* was invalidly published, *Cymbella muelleri* var. *javanica* is treated as a new described variety.] [- *Cymbella grossestriata* var. *javanica* Hustedt, nom. inval., A. Schmidt's Atlas der Diatomaceenkunde, pl. 373: figs 8-9 (1931). Comment: *Cymbella grossestriata* var. *javanica* is lacking a diagnosis, hence it is invalidly published, the term "Nähert sich *Cymbella turgida* Greg." can not be treated as a diagnosis.]
- Encyonema rifelanum* Krammer, Biblioth. Diatomol. 37, p. 193, pl. 134: figs 7-14 (1997).
- Encyonema riotecense* Krammer, Biblioth. Diatomol. 36, p. 169, pl. 41: figs 1-6 (1997).
- Encyonema rostratum* Krammer, Biblioth. Diatomol. 37, p. 190-191, pl. 126: figs 1-14 (1997).
- Encyonema rugosiforme* Krammer, Biblioth. Diatomol. 36, p. 175-176, pl. 63: figs 1-3 (1997).
- Encyonema rumrichae* Krammer, Biblioth. Diatomol. 37, p. 184, pl. 102: figs 9-17 (1997).
- Encyonema schimanskii* Krammer, Biblioth. Diatomol. 36, p. 54, 158, pl. 14: figs 10-17 (1997). [Comment: *Encyonema schimanskii* on p. 208 (= caption of pl. 14: figs 10-17) is cited as "*Encyonema minutum* (Hilse) D.G.Mann".]
- Encyonema schneideri* Krammer, Biblioth. Diatomol. 36, p. 166, pl. 40: figs 1-4 (1997).
- Encyonema schoemaniai* Krammer, Biblioth. Diatomol. 37, p. 183, pl. 136: figs 18-19 (1997).
- Encyonema semilanceolatum* Krammer, Biblioth. Diatomol. 36, p. 172, pl. 33: figs 14-20 (1997).
- Encyonema sibericum* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 44, pl. 59: figs 4-6, pl. 60: figs 5-7 (1999). [Comment: *Diploneis ovalis* ssp. *arctica* is not documented on pl. 59: figs 4-5, pl. 60: figs 4-6 as cited in the 1<sup>st</sup> edition, reference corrected in the 2<sup>nd</sup> edition.]
- Encyonema silesiacum* var. *altensis* Krammer, Biblioth. Diatomol. 36, p. 163, pl. 9: figs 9-19 (1997). [Comment: on p. 163 pl. 9: figs 7-8 is erroneously cited. On pl. 9: figs 7-8 *Encyonema silesiacum* var. *silesiacum* is documented.]
- Encyonema silesiacum* var. *distigmata* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 8: fig. 8 (1997).
- Encyonema silesiacum* var. *distinctepunctata* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 11: figs 1-11 (1997).
- Encyonema silesiacum* var. *elegans* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 14: figs 6-9 (1997).
- Encyonema silesiacum* var. *excisa* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 11: figs 13-14 (1997).
- Encyonema silesiacum* var. *lata* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 12: figs 6-9 (1997).
- Encyonema silesiacum* var. *latarea* Krammer, Biblioth. Diatomol. 36, p. 165, pl. 13: figs 9-12 (1997).
- Encyonema silesiacum* var. *latistriata* Krammer, Biblioth. Diatomol. 36, p. 165, pl. 11: fig. 12 (1997).
- Encyonema silesiacum* var. *ventriformis* Krammer, Biblioth. Diatomol. 36, p. 164, pl. 8: figs 9-15 (1997).

- Encyonema simile* Krammer, Biblioth. Diatomol. 36, p. 160, pl. 18: figs 5-10 (1997).
- Encyonema sinicum* Krammer, Biblioth. Diatomol. 36, p. 175, pl. 72: figs 1-9 (1997).
- Encyonema sparsipunctatum* Krammer, Biblioth. Diatomol. 36, p. 179, pl. 95: figs 1-5 (1997).
- Encyonema spitsbergense* Krammer, Biblioth. Diatomol. 36, p. 163, pl. 15: figs 1-4 (1997).
- Encyonema stigmoideum* Krammer, Biblioth. Diatomol. 36, p. 163, pl. 15: figs 5-14 (1997).
- Encyonema subbrevistriatum* Krammer, Biblioth. Diatomol. 37, p. 188-189, pl. 132: figs 17-23 (1997).
- Encyonema subelginense* Krammer, Biblioth. Diatomol. 36, p. 173, pl. 62: figs 2-8 (1997).
- Encyonema subgracile* Krammer, Biblioth. Diatomol. 36, p. 178-179, pl. 95: figs 12-19 (1997). [Comment: on p. 370 (= caption of pl. 95 the authors are cited as "Krammer et Lange-Bert.".)]
- Encyonema subjavanicum* Krammer, Biblioth. Diatomol. 37, p. 194, pl. 133: figs 13-20 (1997).
- Encyonema subkukenanum* Krammer, Biblioth. Diatomol. 37, p. 185, pl. 106: figs 10-15 (1997).
- Encyonema sublancoletum* Krammer, Metzeltin et Lange-Bert., Biblioth. Diatomol. 37, p. 14, 183, pl. 136: fig. 16, pl. 202: figs 13-15 (1997).
- Encyonema subminutum* Krammer et Lange-Bert., Biblioth. Diatomol. 36, p. 58, 159, pl. 19: figs 17-24 (1997). [Comment: in the Latin diagnosis the author name "Lange-Bert." is missing. On p. 58 (German description) pl. 19: fig. 25, pl. 25: figs 28-34 are also mentioned.]
- Encyonema subnorvegicum* Krammer, Biblioth. Diatomol. 37, p. 186, pl. 112: figs 1-6 (1997).
- Encyonema subobscurum* Krammer, Biblioth. Diatomol. 36, p. 171-172, pl. 27: figs 18-20 (1997).
- Encyonema subperpusillum* Krammer, Biblioth. Diatomol. 37, p. 186-187, pl. 112: figs 12-14 (1997).
- Encyonema subrostratum* Krammer, Biblioth. Diatomol. 37, p. 192-193, pl. 131: figs 1-10 (1997).
- Encyonema subtenerum* Lange-Bert. et Krammer, Biblioth. Diatomol. 38, p. 126, pl. 48: figs 10-16 (1998).
- Encyonema subtenuissimum* Krammer, Biblioth. Diatomol. 37, p. 182, pl. 128: figs 5-5a (1997).
- Encyonema subtriste* Krammer, Biblioth. Diatomol. 37, p. 188, pl. 131: figs 17-18 (1997).
- Encyonema supergracile* Krammer et Lange-Bert., Biblioth. Diatomol. 36, p. 147, 178, pl. 89: figs 4-9 (1997).
- Encyonema tapajoz* Krammer, Biblioth. Diatomol. 37, p. 188, pl. 130: figs 1-7 (1997).
- Encyonema tasmaniense* Krammer, Biblioth. Diatomol. 37, p. 187, pl. 120: figs 1-5 (1997).
- Encyonema tenerum* Krammer, Biblioth. Diatomol. 37, p. 182, pl. 151: fig. 10, pl. 192: figs 20-22 (1997).
- Encyonema tenuicephalum* Lange-Bert. et Krammer, Biblioth. Diatomol. 38, p. 128, pl. 49: figs 6-8 (1998).
- Encyonema thermale* Krammer, Biblioth. Diatomol. 37, p. 185-186, pl. 108: figs 7-10 (1997).
- Encyonema thioense* Lange-Bert. et Krammer, Biblioth. Diatomol. 38, p. 129-130, pl. 49: figs 9-14 (1998).
- Encyonema trianguliforme* Krammer, Biblioth. Diatomol. 36, p. 176, pl. 73: figs 1-5, pl. 74: figs 1-8 (1997).
- Encyonema tropicum* Metzeltin et Krammer, Biblioth. Diatomol. 37, p. 195, pl. 203: figs 1-3 (1997).
- Encyonema truncatum* Krammer, Biblioth. Diatomol. 37, p. 193, pl. 134: figs 15-18 (1997).
- Encyonema vanoyei* var. *grande* Krammer, Biblioth. Diatomol. 36, p. 177, pl. 51: figs 1-2 (1997). [Comment: on p. 138 and 282 var. *grande* is cited as "var. *grandis*".]
- Encyonema venezolanum* Krammer var. *venezolanum*, Biblioth. Diatomol. 36, p. 162, pl. 19: figs 1-8 (1997).
- Encyonema venezolanum* var. *similis* Krammer, Biblioth. Diatomol. 36, p. 162, pl. 20: figs 6-10 (1997).
- Encyonema ventricosum* var. *angusta* Krammer, Biblioth. Diatomol. 36, p. 170, pl. 6: figs 5-7 (1997).
- Encyonema vulgare* Krammer var. *vulgare*, Biblioth. Diatomol. 36, p. 167, pl. 36: figs 4-10 (1997).
- Encyonema vulgare* var. *chilensis* Krammer, Biblioth. Diatomol. 36, p. 168, pl. 38: figs 4-5 (1997).

*Encyonema vulgare* var. *tasmanensis* Krammer, Biblioth. Diatomol. 36, p. 167, pl. 50: figs 1-2 (1997). [Comment: on p. 280 var. *tasmanensis* is cited as "var. *tasmaniensis*".]

*Encyonema wallaceanum* var. *neocaledonicum* Krammer et Lange-Bert., Biblioth. Diatomol. 38, p. 130-131, pl. 48: fig. 26 (1998).

*Encyonema wojtalae* Metzeltin, Iconogr. Diatomol. 5, p. 37, pl. 136: figs 14-19, pl. 143: figs 3-4 (1998).

*Encyonema yellowstonianum* Krammer, Biblioth. Diatomol. 36, p. 174-175, pl. 64: figs 4-6 (1997).

*Encyonema yucatanense* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 38, pl. 139: figs 15-17, 23-25 (1998).

**ENCYONOPSIS** Krammer, Biblioth. Diatomol. 36, p. 156-157, (1997). [Typus generis: *Navicula cesatii* Rabenh., Süßwasserdiatomeen, p. 39, pl. 6: fig. 89 (1853).]

*Encyonopsis alpina* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 97-98, 196, pl. 150: figs 4, 7-10, pl. 193: figs 1 [only valve on the left hand side], 5, 7-9 (1997).

*Encyonopsis angusta* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 98-99, 196, pl. 148: figs 5-6, pl. 150: figs 2-3, 5-6, pl. 193: figs 2-3 (1997).

*Encyonopsis blanchensis* Krammer, Biblioth. Diatomol. 37, p. 205, pl. 138: figs 1-3 (1997).

*Encyonopsis buedeliformis* Krammer, Biblioth. Diatomol. 37, p. 205, pl. 181: figs 1-7 (1997).

*Encyonopsis buedelii* Krammer, Biblioth. Diatomol. 37, p. 205, pl. 170: figs 4-11 (1997).

*Encyonopsis cesatiformis* Krammer, Biblioth. Diatomol. 37, p. 206, pl. 178: figs 7-12 (1997).

*Encyonopsis cesatii* var. *geitleri* Krammer, Biblioth. Diatomol. 37, p. 206, pl. 184: figs 4-13 (1997).

*Encyonopsis degenerata* Gerd Moser, Biblioth. Diatomol. 43, p. 125-126, pl. 1: figs 1-11 (1999).

*Encyonopsis descripta* var. *asymmetrica* Krammer, Biblioth. Diatomol. 37, p. 200, pl. 156: figs 3-8 (1997).

*Encyonopsis difficiliformis* Krammer, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 37, p. 122-123, 200, pl. 162: figs 25-26, pl. 202: figs 7-12a (1997).

*Encyonopsis dubitabilis* Lange-Bert., Gerd Moser et Krammer, Biblioth. Diatomol. 37, p. 143, 204, pl. 140: figs 14-16 (1997). Comment: Validated name for *Encyonopsis dubitabilis* Lange-Bert. et Gerd Moser, nom. inval., Moser et al., Biblioth. Diatomol. 32, p. 71, pl. 24: figs 9-14 (1995). In Metzeltin & Kusber (2001) the authors are erroneously cited as "Lange-Bert., Krammer et Gerd Moser".]

*Encyonopsis eifelana* Krammer, Biblioth. Diatomol. 37, p. 197-198, pl. 150: figs 31-36, pl. 203: figs 7-8 (1997).

*Encyonopsis falaisensiformis* Krammer, Biblioth. Diatomol. 37, p. 199-200, pl. 181: figs 8-13 (1997).

*Encyonopsis floridana* Krammer, Biblioth. Diatomol. 37, p. 203, pl. 167: figs 1-6 (1997).

*Encyonopsis fragilis* Krammer, Biblioth. Diatomol. 37, p. 204-205, pl. 169: figs 10-12 (1997).

*Encyonopsis frequentiformis* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 39, pl. 137: figs 13-14, 16 (1998). [Comment: on page 39 erroneously figs 11-12 are referred to.]

*Encyonopsis frequentis* Krammer var. *frequentis*, Biblioth. Diatomol. 37, p. 201-202, pl. 157: figs 10-11, pl. 158: figs 1-3, pl. 202: figs 1-6 (1997).

*Encyonopsis frequentis* var. *brasiliانا* Krammer, Biblioth. Diatomol. 37, p. 202, pl. 186: figs 2-9 (1997).

*Encyonopsis frequentis* var. *fossilis* Krammer, Biblioth. Diatomol. 37, p. 202, pl. 166: fig. 3 (1997).

*Encyonopsis glacialis* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 116, pl. 116: figs 11-12 (2000). [Comment: on p. 462 (= caption of pl. 111) the authors are cited as "Krammer, Rumrich et Lange-Bert.".]

*Encyonopsis gomphonemiformis* Krammer, Biblioth. Diatomol. 37, p. 203, pl. 183: figs 4-6 (1997).

*Encyonopsis grunowii* Krammer, Biblioth. Diatomol. 37, p. 207-208, pl. 178: figs 2-6 (1997).

*Encyonopsis kergueliformis* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 151, 205-206, pl. 189: figs 14-20 (1997).

*Encyonopsis krammerioides* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 117, pl. 116: figs 3-5 (2000). [Comment: *Encyonopsis krammerioides* in Metzeltin & Kusber (2001) was erroneously cited as "*Encyonopsis krammeroides*".]

- Encyonopsis krasskei* Krammer, Biblioth. Diatomol. 37, p. 207, pl. 174: figs 5-8 (1997).
- Encyonopsis kriegeri* var. *fossilis* Krammer, Biblioth. Diatomol. 37, p. 203, pl. 190: figs 8-10 (1997).
- Encyonopsis lanceo-elliptica* Krammer, Biblioth. Diatomol. 37, p. 207, pl. 189: figs 1-8 (1997).
- Encyonopsis linearis* Krammer, Biblioth. Diatomol. 37, p. 201, pl. 158: figs 4-9 (1997).
- Encyonopsis minuta* Krammer et E.Reichardt, Biblioth. Diatomol. 37, p. 195, pl. 143a: figs 1-27 (1997).
- Encyonopsis moseri* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 104, 198, pl. 152: figs 14-18, pl. 153: figs 1-11 (1997).
- Encyonopsis namibiana* Krammer, Biblioth. Diatomol. 37, p. 206, pl. 181: figs 14-20 (1997).
- Encyonopsis neoamphioxix* Krammer, Biblioth. Diatomol. 37, p. 141-142, 203, pl. 168: figs 1-9, 11-13 (1997).
- Encyonopsis orientalis* Krammer, Biblioth. Diatomol. 37, p. 199, pl. 153: figs 13-24 (1997).
- Encyonopsis patagonica* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 118, pl. 117: figs 21-22 (2000).
- Encyonopsis perborealis* Krammer, Biblioth. Diatomol. 37, p. 198-199, pl. 154: figs 1-12 (1997).
- Encyonopsis radialis* Krammer, Biblioth. Diatomol. 37, p. 200, pl. 164: figs 14-21, pl. 175: figs 6-7 (1997).
- Encyonopsis recta* Krammer, Biblioth. Diatomol. 37, p. 202-203, pl. 165: figs 12-14 (1997).
- Encyonopsis reichardtii* Krammer, Biblioth. Diatomol. 37, p. 202, pl. 166: figs 1-2 (1997).
- Encyonopsis reviersiana* Lange-Bert., Gerd Moser et Krammer, Biblioth. Diatomol. 37, p. 126, 201, pl. 158: figs 13-15 (1997). [Comment: validated name for *Cymbella reviersiana* Lange-Bert. et Gerd Moser, nom. inval., Biblioth. Diatomol. 32, p. 81, pl. 20: figs 9-12. (1995). On p. 366 (= caption of pl. 158) *Encyonopsis reviersiana* is cited as "*Encyonopsis reviersianum*".]
- Encyonopsis rostrata* Krammer, Biblioth. Diatomol. 37, p. 197, pl. 150: figs 24-30 (1997).
- Encyonopsis rumrichae* Krammer, Biblioth. Diatomol. 37, p. 197, pl. 148: figs 10-24 (1997).
- Encyonopsis schneideri* Krammer, Biblioth. Diatomol. 37, p. 207, pl. 176: figs 1-10, pl. 201: figs 1-3 (1997).
- Encyonopsis speciosa* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 119, pl. 117: figs 5-7 (2000).
- Encyonopsis spiculiformis* Krammer, Biblioth. Diatomol. 37, p. 204, pl. 171: figs 6-9 (1997).
- Encyonopsis subcapitata* Krammer, Biblioth. Diatomol. 37, p. 201, pl. 180: figs 1-4 (1997).
- Encyonopsis subfonticola* Krammer, Biblioth. Diatomol. 37, p. 199, pl. 152: figs 7-13 (1997).
- Encyonopsis subminuta* Krammer et E.Reichardt, Biblioth. Diatomol. 37, p. 195-196, pl. 144: figs 6-11 (1997).
- Encyonopsis subrutneri* Krammer, Biblioth. Diatomol. 37, p. 198, pl. 151: figs 12-17 (1997).
- Encyonopsis subspicula* Krammer, Biblioth. Diatomol. 37, p. 204, pl. 168: figs 8-9 (1997).
- Encyonopsis substodderi* Krammer, Biblioth. Diatomol. 37, p. 206-207, pl. 172: figs 5-8 (1997). [Comment: the holotype erroneously is cited as "Lectotypus".]
- Encyonopsis symmetrica* Krammer, Biblioth. Diatomol. 37, p. 208, pl. 179: figs 1-4 (1997).
- Encyonopsis tavrana* Krammer, Biblioth. Diatomol. 37, p. 196, pl. 148: figs 1-3 (1997).
- Encyonopsis thumensis* Krammer, Biblioth. Diatomol. 37, p. 198, pl. 154: figs 13-15, pl. 158: figs 16-22 (1997).
- Encyonopsis tiroliana* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 102, 197, pl. 203: figs 10-12 (1997). [Comment: *Encyonopsis tiroliana* was already documented in Lange-Bertalot & Metzeltin, Iconogr. Diatomol. 2 (1996) pl. 91: figs 18-20 as "*Cymbella* nov. spec. Nr. 10 Mittersee".]
- Encyonopsis vandamii* Krammer et Lange-Bert., Biblioth. Diatomol. 37, p. 109-110, 199, pl. 151: figs 21-27, pl. 187: figs 9-11 (1997).
- EOLIMNA** Lange-Bert. et W.Schiller, Paläontol. Z. 71, p. 166, 168 (1997). [Typus generis: *Eolimna martinii* W.Schiller et Lange-Bert., Paläontol. Z. 71, p. 166, 168 (1997). Comment: in Moser et al. (1998), Biblioth. Diatomol. 38, p. 151 an additional Latin diagnosis is given.]

*Eolimna inconspicua* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 152-153, pl. 23: figs 1-5 (1998).

*Eolimna martinii* W.Schiller et Lange-Bert., Paläontol. Z. 71, p. 168, figs 2, 6-12 (1997). [The fossil *Eolimna martinii* is the type of the name of the genus *EOLIMNA* Lange-Bert. et W.Schiller. Comment: in Moser et al. (1998), Biblioth. Diatomol. 38, p. 151 an additional Latin diagnosis is given.]

*Eolimna rhombelliptica* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 155, pl. 24: figs 1-9 (1998).

*Eolimna rhombica* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 156, pl. 23: figs 11-20 (1998).

*Eolimna thioense* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 157, pl. 23: figs 6-10 (1998).

*Eolimna verecundaeformis* (Manguin ex Kociolek et Reviere) Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 632 (2001).

Basionym: *Navicula verecundaeformis* Manguin ex Kociolek et Reviere, Cryptog. Algol. 17 (3), p. 204, (1996).

[– *Navicula verecundaeformis* Manguin, nom. inval., Mém. Mus. Natl. Hist. Nat., Nouv. Sér. B, Bot. 12 (1), p. 22, pl. 2: figs 21a, b (1962).]

[– *Eolimna verecundaeformis* (Manguin ex Kociolek et Reviere) Gerd Moser, Lange-Bert. et Metzeltin, nom. inval., Biblioth. Diatomol. 38, p. 35, 52 (1998).]

*Eolimna zalokariae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 39-40, pl. 167: figs 1-2 (1998).

#### **EPHEMERA Paddock**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=888](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=888)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?EPHEMERATBBPADDock1988>].

*Ephmera bjoernoeyaensis* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 14, pl. 55: figs 10-16, pl. 78: figs 1-4 (1996). [Comment: *Ephmera bjoernoeyaensis* on p. 142 (= caption of pl. 55: fig. 16) is cited as "*Proshkinia* cf. *bulnheimii* (Grunow) Karayeva".]

#### **EPITHEMIA Kütz.**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=795](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=795)].

*Epithemia gracilis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 158, pl. 65: figs 1-9 (1998).

*Epithemia illuminata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 159, pl. 61: figs 1-4 (1998).

*Epithemia krammeri* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 160-161, pl. 66: figs 1-7 (1998).

*Epithemia miranda* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 163, pl. 62: figs 1-7, pl. 63: figs 1-6, pl. 64: figs 1-6 (1998).

#### **EUCOCCONEIS Cleve ex F.Meister**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=551](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=551)].

*Eucocconeis leptostriata* Lange-Bert., Iconogr. Diatomol. 6, p. 46, pl. 7: figs 4-5, pl. 8: figs 1-6 (1999). [Comment: the genus on p. 45 is erroneously not cited as *Eucocconeis* Cleve ex F.Meister, see Fourtanier & Kociolek (1999), p. 62.]

#### **EUNOTIA Ehrenb.**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=175](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=175)].

**EUNOTIA subgen. CULTRIA** [see *CULTRIA*].

*Eunotia acicularis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 47-48, pl. 61: figs 8-9 (1998). [Comment: *Eunotia acicularis* on page 356 (= caption of pl. 61: figs 8-9) is cited as "*Eunotia* spec. Nr. 61/8, 9".]

*Eunotia actuariola* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 48-49, pl. 44: figs 2-8 (1998). [Comment: *Eunotia actuariola* on page 322 (= caption of pl. 44: figs 2-8) is misspelled as "*E. acutuariola*".]

*Eunotia acus* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 49, pl. 13: figs 8, 9A-C (1998). [Comment: *Eunotia acus* is not documented on pl. 12 as cited on p. 49.]

*Eunotia acutinasuta* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 50, pl. 59: figs 14-17 (1998).

*Eunotia andinofrequens* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 120, pl. 18: figs 18-24 (2000).

*Eunotia arcubus* Nörpel et Lange-Bert., Biblioth. Diatomol. 27, p. 24-25, pl. 16: figs 1-6, pl. 19: figs 1-10, pl. 20: figs 1-6, pl. 21: figs 1-11 (1993).

*Eunotia arculus* Lange-Bert. et Nörpel, Biblioth. Diatomol. 27, p. 26 (1993). [Validation of *Eunotia arculus* (Grunow) Lange-Bert. et Nörpel, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2

(3), p. 213, pl. 157: figs 4-12 (1991).] [- *Eunotia paludosa* var. *arculus* Grunow, nom. inval., in Van Heurck, Synopsis des Diatomées de Belgique, Type de Synopsis, no. 274 (1880-1887).]

*Eunotia australominor* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 164, pl. 10: figs 8-13 (1998).

*Eunotia bicornigera* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 51, pl. 28: figs 17-24, 28 (1998).

*Eunotia bilunaris* var. *linearis* (Okuno) Lange-Bert. et Nörpel-Schempp in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Eunotia flexuosa* var. *linearis* Okuno, Atlas of fossil diatoms from Japanese Diatomite deposits. Kawakita Printing Co., Kyoto, p. 31, pl. 23: fig. 18 (1952).

[- *Eunotia bilunaris* var. *linearis* (Okuno) Lange-Bert. et Nörpel, nom. inval., Süßwasserflora von Mitteleuropa 2 (3), p. 180, pl. 137: figs 13-16 (1991); Biblioth. Diatomol. 27, p. 28 (1993).]

*Eunotia bilunaris* var. *mucophila* Lange-Bert., Nörpel et Alles, Nova Hedwigia 53, p. 196, pl. 5: figs 12-21 (1991).

*Eunotia borealpina* Lange-Bert. et Nörpel-Schempp, Iconogr. Diatomol. 5, p. 52 (1998). [As a part of the protologue Krammer & Lange-Bertalot (1991): Süßwasserflora von Mitteleuropa 2 (3), pl. 163: figs 1-7 is cited. Comment: in Krammer & Lange-Bertalot (1991a), p. 222 and p. 163 (= caption of pl. 163: figs 1-7) *Eunotia borealpina* is cited as "*Eunotia incisa* <<borealpina>>-Sippe".]

*Eunotia boreotenuis* Nörpel-Schempp et Lange-Bert., Iconogr. Diatomol. 2, p. 46, pl. 9: figs 21-23 (1996).

*Eunotia botellus* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 165-166, pl. 15: figs 1-4 (1998).

*Eunotia botuliformis* F. Wild, Nörpel et Lange-Bert., Biblioth. Diatomol. 27, p. 29, pl. 33: figs 2-15 (1993).

*Eunotia brinkmannii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 52-53, pl. 39: figs 4-6 (1998). [Comment: *Eunotia brinkmannii* on page 312 (caption of pl. 39: figs 4-6) is misspelled as "*E. brinckmannii*".]

*Eunotia cameliopsis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 53-54, pl. 29: figs 13 (?14) (1998). [Comment: *Eunotia cameliopsis* is not documented on "pl. 21" as cited on p. 53.]

*Eunotia chelonina* Nörpel-Schempp, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 47, pl. 13: figs 14-17 (1996). [Comment: on p. 144 (caption of pl. 13) the authors are cited as "Nörpel-Schempp, Metzeltin et Lange-Bert.".]

*Eunotia circumborealis* Lange-Bert. et Nörpel, Biblioth. Diatomol. 27, p. 30 (1993). [Validation of *Eunotia circumborealis* Lange-Bert. et Nörpel, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (3), p. 197, pl. 143: figs 16-23 (1991).]

*Eunotia coccinea* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 54, pl. 12: figs 12-15 (1998).

*Eunotia crassispinata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 166-167, pl. 17: figs 1-4 (1998).

*Eunotia crassula* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 55-56, pl. 59: figs 11-13 (1998).

*Eunotia dacostae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 56, pl. 50: figs 5-6 (1998).

*Eunotia damasii* ssp. *melanesica* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 167-168, pl. 16: figs 9-11 (1998).

*Eunotia deformis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 57, pl. 16: figs 9-11 (1998).

*Eunotia disproportionata* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 58, pl. 11: figs 7-8, pl. 13: figs 2-5 (1998).

*Eunotia distinguenda* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 58-59, pl. 15: figs 10-15, pl. 46: fig. 1 (1998).

*Eunotia eurycephaloides* Nörpel-Schempp et Lange-Bert., Iconogr. Diatomol. 2, p. 48-49, pl. 9: figs 18-20, pl. 112: figs 2-3 (1996).

*Eunotia falcifera* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 60-61, pl. 12: figs 19-26 (1998). [*Eunotia falcifera* is the type of the name of the subgenus *CULTRIA* Metzeltin et Lange-Bert.]

*Eunotia filum* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 168-169, pl. 15: figs 5-8 (1998).

*Eunotia fukushimae* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 169-170, pl. 12: figs 1-2 (1998).

*Eunotia genufalcata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 170-171, pl. 15: figs 9-10 (1998).

*Eunotia genuflexa* Nörpel-Schempp, Iconogr. Diatomol. 2, p. 50, pl. 9: figs 14-17 (1996).

*Eunotia georgii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 61, pl. 41: figs 1-7, pl. 42: figs 7-8 (1998).

- Eunotia glacialifalsa* Lange-Bert. in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 3, 2, 2. edition, p. 594-595, pl. 151: fig. 6, pl. 151A: figs 3-6 (2000). [Comment: *Eunotia glacialifalsa* on p. 532 (= caption of pl. 151) is cited as "*Eunotia glacialis* Meister sensu stricto = *Eunotia gracilis* Ehrenberg sensu auct. nonnull.".]
- Eunotia incisatula* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 62, pl. 59: figs 25-30 (1998).
- Eunotia inspectabilis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 63-64, pl. 55: figs 8-11 (1998).
- Eunotia kanakarum* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 171-172, pl. 13: figs 1-4 (1998).
- Eunotia krammeri* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 64, pl. 53: figs 1-7, pl. 63: fig. 1 (1998).
- Eunotia lenis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 65, pl. 60: figs 10-16, pl. 62: figs 3, 4, 5 (1998). [Comment: *Eunotia lenis* is not documented on pl. 62: fig. 6 as cited on p. 65 and 354, p. 358 (caption of pl. 62) is correct.]
- Eunotia limax* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 172-173, pl. 16: fig. 8 (1998).
- Eunotia longicollis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 66, pl. 15: figs 6-8 (1998).
- Eunotia melanogaster* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 173-174, pl. 12: figs 3-8 (1998).
- Eunotia meridiana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 67, pl. 59: figs 7-10 (1998).
- Eunotia michaelis* Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 4, p. 14-15, pl. 34: figs 2-8, pl. 90: figs 5-6 (1996). [Comment: *Eunotia michaelis* is not documented on pl. 33: figs 2-8 and pl. 90: fig. 4 as cited on p. 14].
- Eunotia monodontiforma* Lange-Bert. et Nörpel-Schempp, Iconogr. Diatomol. 9, p. 121-122, pl. 21: figs 1-7 (2000). [Comment: validation of *Eunotia monodontiforma* Lange-Bert. et Nörpel, nom. inval., in Biblioth. Diatomol. 27, p. 37, pl. 28: figs 1-6, pl. 29: figs 4-6. (1993).]
- Eunotia muscicola* var. *tridentula* Nörpel et Lange-Bert., Biblioth. Diatomol. 27, p. 39 (1993). [Validation of *Eunotia muscicola* var. *tridentula* Nörpel et Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (3), p. 217, pl. 156: figs 12-22 (1991).]
- Eunotia napoleonica* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 68, pl. 49: figs 4-8 (1998).
- Eunotia neofallax* Nörpel-Schempp et Lange-Bert., Iconogr. Diatomol. 3, p. 73-74, pl. 58: figs 7-29 (1996).
- Eunotia neomundana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 69, pl. 19: figs 1-6 (1998). [Comment: on p. 272 (= caption of pl. 19) the newly described species is erroneously cited as "nov. stat.".]
- Eunotia noerpeliana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 70, pl. 59: figs 1-6 (1998).
- Eunotia odebrechtiana* Metzeltin et Lange-Bert. var. *odebrechtiana*, Iconogr. Diatomol. 5, p. 71, pl. 56: figs 1-6, 13-14 (1998).
- Eunotia odebrechtiana* var. *essequiboensis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 72, pl. 57: figs 1-2 (1998).
- Eunotia parapectinalis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 123, pl. 19: figs 4-8 (2000).
- Eunotia parasolii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 72-73, pl. 60: figs 17-30 (1998).
- Eunotia pirarucu* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 73, pl. 49: figs 1-3 (1998).
- Eunotia ponspendens* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 174-175, pl. 14: figs 1-6 (1998).
- Eunotia praestans* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 175-176, pl. 11: fig. 6, pl. 12: figs 9-11 (1998).
- Eunotia rhynchocephala* var. *satelles* Nörpel et Lange-Bert., Biblioth. Diatomol. 27, p. 39-40 (1993). [Validation of *Eunotia rhynchocephala* var. *satelles* Nörpel et Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (3), p. 203, pl. 154: figs 18-22 (1991).]
- Eunotia schneideri* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 77, pl. 15: figs 1-2 (1998).
- Eunotia seminulum* Nörpel-Schempp et Lange-Bert., Iconogr. Diatomol. 2, p. 53, pl. 17: figs 43-47 (1996).
- Eunotia serra-australis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 78, pl. 42: figs 1-5 (1998).
- Eunotia silvae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 79, pl. 39: figs 7-10 (1998).
- Eunotia silvahercynia* Nörpel, Van Sull et Lange-Bert., Nova Hedwigia 53, p. 208, pl. 6: figs 22-44 (1991).

*Eunotia sioliopsis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 177, pl. 10: figs 1-4 (1998).

*Eunotia sparsiornata* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 178, pl. 4: figs 7-11, pl. 17: figs 5-13 (1998).

*Eunotia subarcuatooides* Alles, Nörpel et Lange-Bert., Nova Hedwigia 53, p. 188, pl. 4: figs 1-36 (1991).

*Eunotia tapacuminor* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 81, pl. 54: fig. 2 (1998).

*Eunotia tapacumopsis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 83, pl. 54: figs 6-8 (1998).

*Eunotia torganiae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 84, pl. 28: figs 25-27 (1998).

*Eunotia transfuga* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 84-85, pl. 8: fig. 5, pl. 9: figs 1-3 (1998).

*Eunotia ursamaioris* Lange-Bert. et Nörpel-Schempp, Iconogr. Diatomol. 6, p. 48-49, pl. 4: figs 18-21 (1999).

*Eunotia vitiosa* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 179, pl. 11: figs 1-5 (1998).

*Eunotia weisingii* Lange-Bert., Biblioth. Diatomol. 27, p. 40, pl. 15: figs 1-11 (1993).

*Eunotia yanomami* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 86-87, pl. 34: figs 1-6, pl. 35: figs 1-6, pl. 36: figs 1-13, pl. 37: figs 7-8, pl. 45: fig. 6, pl. 63: fig. 2 (1998).

*Eunotia yoshitakeae* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 180, pl. 16: figs 3-7, (1-2?) (1998).

#### **FALLACIA A.J.Stickle et D.G.Mann**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=367](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=367)]

[[http://128.32.109.44/cgi-bin/porp\\_cgi.pl?FALLACIAAJSTICKLEDGMANN1990](http://128.32.109.44/cgi-bin/porp_cgi.pl?FALLACIAAJSTICKLEDGMANN1990)].

*Fallacia clepsidroides* Witkowski, Biblioth. Diatomol. 28, p. 120, pl. 26: figs 1-12 (1994).

*Fallacia costericardii* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 181, pl. 22: figs 4-6 (1998).

*Fallacia ecuadoriana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 125-126, pl. 69: figs 1-8 (2000).

**FISTULIFERA** Lange-Bert., Arch. Protistenk 148, p. 73 (1997). [Typus generis: *Fistulifera saprophila* (Lange-Bert. et Bonik) Lange-Bert., Arch. Protistenk 148, p. 73 (1997).]

*Fistulifera saprophila* (Lange-Bert. et Bonik) Lange-Bert., Arch. Protistenk. 148, p. 73 (1997).

Basionym: *Navicula saprophila* Lange-Bert. et Bonik, Arch. Hydrobiol. Suppl. 49 (Algol. Stud. 16), p.312, figs 8-9, 29 (1976). [*Fistulifera saprophila* is the type of the name of the genus **FISTULIFERA**.]

**FOGEDIA** Witkowski, Lange-Bert., Metzeltin et Bafana, Nova Hedwigia 65, p. 81 (1997). [Typus generis: *Fogedia giffeniana* (Foged) Witkowski, Lange-Bert., Metzeltin et Bafana, Nova Hedwigia 65, p. 81 (1997).]

*Fogedia christensenii* Witkowski, Metzeltin et Lange-Bert., Nova Hedwigia 65, p. 85, figs 30-45 (1997).

*Fogedia geisslerae* Witkowski, Metzeltin et Lange-Bert., Nova Hedwigia 65, p. 90, figs 64-92 (1997).

*Fogedia giffeniana* (Foged) Witkowski, Lange-Bert., Metzeltin et Bafana var. *giffeniana*, Nova Hedwigia 65, p. 81 (1997).  
Basionym: *Navicula giffeniana* Foged, Biblioth. Phycol. 16, p. 38, pl. 22: figs 16-17 (1975).

*Fogedia giffeniana* var. *yemenitica* Bafana, Nova Hedwigia 65, p. 82, figs 23-29 (1997).

#### **FRAGILARIA** Lyngb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=811](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=811)].

**FRAGILARIA** subgen. **ULNARIA** [see **ULNARIA**].

**FRAGILARIA** subgen. **ALTERASYNEDRA**, nom. illeg. [see **ALTERASYNEDRA** and **ULNARIA**].

*Fragilaria acidoclinata* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 41-42, pl. 14: figs 8-13 (1993). [Validation of *Fragilaria acidoclinata* Lange-Bert. et G.Hofmann, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 412, pl. 82: figs 11-13 (1991).]

*Fragilaria acutirostrata* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 89, pl. 1: figs 18-19, ?17, ?32, pl. 2: fig. 4 (1998).

*Fragilaria amicornum* Witkowski et Lange-Bert., Limnologica 23, p. 62, fig. 3: a-d, j-k (1993).

*Fragilaria barbararum* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 15, pl. 48: figs 32-35, pl. 73: figs 6, 8-9 (1996).

- Fragilaria bronkei* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 48, 427, pl. 12: figs 1-12 (2000).
- Fragilaria canariensis* Lange-Bert., Biblioth. Diatomol. 27, p. 43, pl. 14: figs 1-6 (1993).
- Fragilaria cassubica* Witkowski et Lange-Bert., Limnologica 23, p. 65, fig. 4: a-f, n (1993).
- Fragilaria crassa* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 89-90, pl. 1: figs 20-23, pl. 2: fig. 1 (1998).
- Fragilaria eichhornii* Witkowski et Lange-Bert., Fragm. Florist. Geobot. 40, p. 731, fig. 1-9 (1995).
- Fragilaria geocollegarum* Witkowski et Lange-Bert., Fragm. Florist. Geobot. 40, p. 731, 734, figs 16-22 (1995). [Validation of *Fragilaria geocollegarum* Witkowski et Lange-Bert., nom. inval., Biblioth. Diatomol. 28, p. 127, pl. 6: figs 1-5, pl. 9: fig. 4 (1994).]
- Fragilaria germainii* E.Reichardt et Lange-Bert. in Ricard, Ouvrage dédié à la Mémoire du Prof. H. Germain, p. 204, pl. 1: figs 1-13 (1990).
- Fragilaria germainii* f. *acostata* Lange-Bert., Iconogr. Diatomol. 9, p. 127, pl. 5: figs 15-20, pl. 6: figs 4-6 (2000).
- Fragilaria guenter-grassii* Witkowski et Lange-Bert., Limnologica 23, p. 65, fig. 5: a-h (1993).
- Fragilaria improbula* Witkowski et Lange-Bert., Fragm. Florist. Geobot. 40, p. 734, figs 28-38 (1995).
- Fragilaria incognita* E.Reichardt, Diatom Res. 3, p. 237-238, figs 1-10 (1988).
- Fragilaria labei* Witkowski et Metzeltin, Iconogr. Diatomol. 4, p. 16, pl. 49: figs 31-40, pl. 71: figs 1-2, pl. 74: figs 4-6 (1996).
- Fragilaria loetschertii* Lange-Bert., Ann. Limnol. 21, p. 214-215, figs 13-17, 30-34 (1985).
- Fragilaria nanoides* Lange-Bert., Iconogr. Diatomol. 2, p. 55, pl. 109: figs 2-6 (1996).
- Fragilaria neoelliptica* Witkowski, Biblioth. Diatomol. 28, p. 128-129, pl. 10: figs 1-13 (1994).
- Fragilaria neoproducta* Lange-Bert., Biblioth. Diatomol. 27, p. 48 (1993). [Validation of *Fragilaria neoproducta* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (3), p. 136, pl. 125: fig. 3, pl. 127: figs 1-5a (1991).]
- Fragilaria oldenburgioides* Lange-Bert., Iconogr. Diatomol. 2, p. 55-56, pl. 7: figs 42-47, pl. 111: figs 8-9 (1996).
- Fragilaria opacolineata* Lange-Bert., Iconogr. Diatomol. 2, p. 56, pl. 7: figs 36-41b, pl. 111: figs 2-3 (1996).
- Fragilaria polonica* Witak et Lange-Bert., Fragm. Florist. Geobot. 40, p. 736, figs 39-45 (1995).
- Fragilaria rolandschmidtii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 90, pl. 1: figs 14-16 (1998).
- Fragilaria santaremensis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 91, pl. 1: figs 24-28, 233, pl. 2: fig. 2 (1998).
- Fragilaria sopotensis* Witkowski et Lange-Bert., Limnologica 23, p. 67, fig. 6: a-p (1993).
- Fragilaria spinarum* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 57, pl. 7: figs 33-35 (1996). [Comment: pl. 17: figs 31-32 is not mentioned on p. 57.]
- Fragilaria synegrotesca* Lange-Bert., Biblioth. Diatomol. 27, p. 49-50, pl. 12: figs 1-11, pl. 13: figs 1-6 (1993).
- Fragilaria viereckiana* Gerd Moser, Biblioth. Diatomol. 43, p. 127-128, pl. 2: figs 1-17, pl. 3: fig. 2 (1999).
- FRAGILARIOPSIS** Hust.  
[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=822](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=822)].
- Fragilariopsis bjoernoeyaensis* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 16, pl. 67: figs 20-21, pl. 87: fig. 8 (1996).
- Fragilariopsis humboldtianorum* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 17, pl. 67: figs 25-27, pl. 87: figs 5, 9-10 (1996).
- Fragilariopsis reginae-jahniae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 361, 427, pl. 213: figs 31-36 (2000).
- FRANKOPHILA** Lange-Bert., Arch. Protistenk 148, p. 66 (1997). [Typus generis: *Frankophila similioides* Lange-Bert. et U.Rumrich, Arch. Protistenk 148, p. 66 (1997). ]
- Frankophila horstii* U.Rumrich et M.Rumrich, Iconogr. Diatomol. 9, p. 128, pl. 9: figs 1-10 (2000).

*Frankophila similioides* Lange-Bert. et U.Rumrich Arch. Protistenk 148, p. 66, fig. 1-15 (1997). [*Frankophila similioides* is the type of the name of the genus *FRANKOPHILA* Lange-Bert.].

**FRUSTULIA Rabenh.**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=910](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=910)].

*Frustulia alfinitosilviae* Lange-Bert., Diatoms of Europe 2, p. 219, pl. 139: figs 1-6 (2001).

*Frustulia altimontana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 93, pl. 113: figs 1-5 (1998).

*Frustulia angustata* (Pant. et Greguss) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *angustata* Pant. et Greguss, Bot. Közlem. 12, p. 211, pl. 7: fig. 80 (1913).

*Frustulia australis* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 182-183, pl. 35: figs 1-3 (1998).

*Frustulia baicalensis* (Skvortzov et D.I.Mey.) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *baicalensis* Skvortzov et D.I.Mey., Proc. Sungaree River Biol. Sta. 1 (5), p. 15, pl. 1: fig. 38 (1928).

*Frustulia chilensis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 131, pl. 91: figs 1-3 (2000).

*Frustulia corneliae* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 131-132, pl. 100: figs 1-9 (2000).

*Frustulia crassipunctata* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 94, pl. 112: figs 1-6 (1998).

*Frustulia disjuncta* Lange-Bert., Diatoms of Europe 2, p. 219, pl. 135: figs 3-7 (2001).

*Frustulia ellipticoides* Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Replaced name: *Frustulia rhomboides* var. *elliptica* Hustedt, Arch. Hydrobiol. Suppl. 15, p. 214, pl. 16: fig. 2 (1937).

*Frustulia elongata* (WilliKrieg.) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *elongata* WilliKrieg., Ber. Deutsch. Bot. Ges. 54, p. 82, pl. 10: fig. 16 (1936).

*Frustulia elongatissima* (Manguin) Lange-Bert. et Metzeltin, Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *elongatissima* Manguin, Algues d'eau douce de la Guadeloupe, SEDES, Paris, p. 54, fig. 47 (1952).

*Frustulia gaertnerae* Lange-Bert., Iconogr. Diatomol. 2, p. 59, pl. 39: figs 7-8, pl. 119: figs 3-4 (1996). [Comment: *Frustulia gaertnerae* on p. 59, 196, and 356 is misspelled as "*Frustulia gaertmeriae*".]

*Frustulia guayanensis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 95, pl. 115: figs 10-11 (1998).

*Frustulia guayanensis* ssp. *ecuadoriana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 133, pl. 99: figs 9-14 (2000).

*Frustulia huberi* (F.Meister) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *huberi* F.Meister, Z. Bot. 23, p. 458, fig. 6 (1930).

*Frustulia kosmolliana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 133, pl. 84: fig. 5, pl. 95: figs 1-9 (2000).

*Frustulia krammeri* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 5, p. 96 (1998). [Comment: *Frustulia krammeri* was documented already in Lange-Bertalot & Metzeltin (1996), Iconogr. Diatomol. 2, pl. 37: figs 1-3 as "*Frustulia* (?nov.) spec. Nr. 1 Julma Ölkky" and on pl. 120: fig. 4 as "*Frustulia* nov. spec. Nr. 1 Julma Ölkky".]

*Frustulia lakatosii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 96-97, pl. 115: figs 7-9 (1998).

*Frustulia lange-bertalotii* Metzeltin, Iconogr. Diatomol. 6, p. 51, pl. 37: fig. 8, pl. 38: figs 1-8 (1999).

*Frustulia leptcephala* (Østrup) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *leptcephala* Østrup, Meddel. Grønland 15, p. 257, pl. 1: fig. 1 (1897).

*Frustulia longinqua* Lange-Bert., Diatoms of Europe 2, p. 220, pl. 135: figs 8-10 (2001).

*Frustulia magaliesmontana* ssp. *americana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 97, pl. 116: figs 4-6 (1998).

*Frustulia magna* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 98, pl. 110: figs 1-4, pl. 113: fig. 6 (1998).

*Frustulia mamillaris* Gerd Moser, Biblioth. Diatomol. 43, p. 129-130, pl. 4: figs 1-8, pl. 5: fig. 9 (1999).

*Frustulia mediocris* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 99, pl. 117: figs 16-17 (1998).

*Frustulia modesta* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 100, pl. 115: figs 1-6 (1998).

***Frustulia nana*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 183-184, pl. 32: fig. 7, pl. 33: figs 6-10 (1998).

***Frustulia neocaledonica* var. *minima*** Lange-Bert. et Gerd Moser, nom. inval., Biblioth. Diatomol. 32, p. 102, pl. 37: figs 5-6, pl. 40: figs 5-8, pl. 42: figs 10-11, pl. 44: fig. 7 (1995). [Comment: lacking a type and a Latin diagnosis, this name is invalidly published.]

***Frustulia neofrenguelli*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 230, pl. 94: figs 1-7 (2000).

***Frustulia neomundana*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 135, pl. 97: figs 1-12 (2000).

***Frustulia pangaea*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 101, pl. 111: figs 1-4 (1998).

***Frustulia pangaeopsis*** Lange-Bert., Diatoms of Europe 2, p. 220, pl. 130: figs 1-6 (2001).

***Frustulia pararhomboides*** Metzeltin et Lange-Bert. var. *pararhomboides*, Iconogr. Diatomol. 5, p. 102, pl. 114: figs 1-9, pl. 116: figs 1-3 (1998). [Comment: *Frustulia pararhomboides* on p. 466 (caption of pl. 116: figs 1-3) is cited as "*Frustulia* aff. *pararhomboides*".]

***Frustulia pararhomboides* var. *subundosa*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 103, pl. 114: figs 10-12 (1998). [Comment: on page 462 (caption of pl. 114: figs 10-12) the var. *subundosa* is misspelled as "var. *subnodosa*".]

***Frustulia peridotitica*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 184-185, pl. 33: figs 1-5 (1998).

***Frustulia pumilio*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 136, pl. 99: figs 1-8 (2000).

***Frustulia pusilla*** (F.Meister) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *pusilla* F.Meister, Kieselalgen aus Asien. Bornträger, Berlin, p. 35, pl. 12: fig. 91 (1932).

***Frustulia quadrisinuata*** Lange-Bert., Iconogr. Diatomol. 2, 59-60, pl. 38: figs 10-12, pl. 119: figs 1-2 (1996).

***Frustulia quadrisinuata* ssp. *meridiana*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 104, pl. 111: figs 5-6 (1998).

***Frustulia rhodesica*** (Cholnoky) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *rhodesica* Cholnoky, Portugal. Acta. Biol. Ser. B. 4, p. 213, pl. 3: fig. 60 (1954).

***Frustulia rostratiformis*** Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Replaced name: *Frustulia rhomboides* var. *rostrata* Manguin, Travaux Algol. Sér. 1 (Rev. Algol. 13), p. 133, pl. 2: fig. 26; non *Frustulia rostrata* Hustedt 1937 (1942).

***Frustulia saxonica* f. *nipponica*** (Skvortzov) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *saxonica* f. *nipponica* Skvortzov, Philipp. J. Sci. 61, p. 265, pl. 4: fig. 14 (1936).

***Frustulia septentrionalis*** Lange-Bert., Iconogr. Diatomol. 2, p. 61, pl. 37: figs 4-5, pl. 119: figs 5-6 (1996).

***Frustulia spicula* ssp. *judaica*** Lange-Bert. in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 249, pl. 18: figs 122-129 (2000).

***Frustulia stagnalis*** Gerd Moser, Biblioth. Diatomol. 43, p. 131, pl. 5: figs 1-6 (1999).

***Frustulia tenuirostris*** (Cleve-Euler) Lange-Bert., Syst. Geogr. Pl. 70, p. 258 (2000).

Basionym: *Frustulia rhomboides* var. *tenuirostris* Cleve-Euler, Kongl. Svenska Vetenskapsakad. Handl. Fj. Ser. 3, p. 8, fig. 1326 b (1952).

***Frustulia undosa*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 105, pl. 116: figs 14-18, pl. 117: figs 1-7 (1998).

***Frustulia zizkae*** Lange-Bert., Iconogr. Diatomol. 5, p. 106-107, pl. 116: figs 7-13 (1998).

**GEISSLERIA** Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 63 [Typus generis: *Geissleria moseri* Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 2, p. 66 (1996).]

***Geissleria arkonensis*** Lange-Bert., Diatoms of Europe 2, p. 220-221, pl. 96: figs 1-4 (2001).

***Geissleria boreosiberica*** Lange-Bert., Genkal et Vekhov, Diatoms of Europe 2, p. 121, 221, pl. 96: figs 12-15 (2001). [Comment: validation of *Geissleria boreosiberica* Lange-Bert., Genkal et Vekhov, nom. inval., Iconogr. Diatomol. 6, p. 28, pl. 20: figs 9-13, 14? (1999). On p. 221 the authors are missing.]

***Geissleria lange-bertalotii*** Metzeltin, Iconogr. Diatomol. 4, p. 236, pl. 1: figs 1-16, pl. 2: figs 19-23, pl. 3: figs 23-27 (1996).

***Geissleria moseri*** Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 2, p. 66, pl. 31: figs 1-2, 7-8, pl. 123: fig. 4 (1996). [*Geissleria moseri* is the type of the name of the genus *GEISSLERIA* Lange-Bert. et Metzeltin.]

***Geissleria neotropica*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 108, pl. 75: figs 25-34 (1998).

***Geissleria schmidiae*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 138, pl. 66: figs 1-15 (2000).

**GOMPHONEMA** Ehrenb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=970](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=970)]

***Gomphonema aequirostrum*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 110, pl. 151: figs 7-11 (1998).

***Gomphonema affine* var. *rhombicum*** E.Reichardt, Iconogr. Diatomol. 8, p. 15, pl. 10: figs 1-15 (1999).

***Gomphonema alineae*** Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 56, pl. 84: figs 1-7 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1985) Biblioth. Diatomol. 9, pl. 40: figs 9-11 and Lange-Bertalot (1980) Bot. Not. 133, p. 4: figs A-D.] [Comment: In Biblioth. Diatomol. 9, *Gomphonema alineae* was documented as "*Gomphonema spec.*" in Bot. Not. 133 as "*Gomphonema aff. herculeanum* aus dem See von Tiberias, Israel".]

***Gomphonema americobtusatum*** E.Reichardt et Lange-Bert., Iconogr. Diatomol. 8, p. 33, pl. 34: figs 1-18, pl. 35: figs 1-7 (1999).

***Gomphonema amoenum*** Lange-Bert., Biblioth. Diatomol. 9, p. 42, pl. 35: figs 1-6, pl. 42: figs 7-8 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 161: 9-11 is cited.]

***Gomphonema angusticephalum*** E.Reichardt et Lange-Bert., Iconogr. Diatomol. 8, p. 49-50, pl. 55: figs 5-8, pl. 60: figs 1-26 (1999).

***Gomphonema angustivalva*** E.Reichardt, Nova Hedwigia 65, p. 112, pl. 6, figs 1-29 (1997).

***Gomphonema archaevibrio f. cuneatum*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 111, pl. 160: figs 4-7 (1998).

***Gomphonema archaevibrio*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 1, p. 15-16, pl. 26: figs 8, 9, 10-11, pl. 27: figs 1-7, pl. 28: figs 1-6 (1995). [Comment: *Gomphonema archaevibrio* on p. 46 (= caption of pl. 26: fig. 9 as "*Gomphonema vibrio* Ehrenberg". *Gomphonema archaevibrio* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 1 (second edition), p. 32, pl. 26: figs 8, 9, 10-11, pl. 27: figs 1-7, pl. 28: figs 1-6 (1995). *Gomphonema archaevibrio* on p. 92 (= caption of pl. 26: fig. 9 as "*Gomphonema vibrio* Ehrenberg". In the second edition *Gomphonema archaevibrio* Lange-Bert. et E.Reichardt was again marked as new.]

***Gomphonema bavaricum*** E.Reichardt et Lange-Bert., Nova Hedwigia 53, p. 534, pl. 7: figs 1-12 (1991).

***Gomphonema bohemicum* ssp. *angustiminus*** E.Reichardt, Iconogr. Diatomol. 8, p. 54, pl. 62: figs 1-15, 18-19, 21-25 (1999).

***Gomphonema bourbonense*** E.Reichardt, Nova Hedwigia 65, p. 118, pl. 9, figs 1-15 (1997).

***Gomphonema bozenae*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 68-69, pl. 65: figs 11-15, pl. 121: figs 4-5 (1996).

***Gomphonema brasiliense* ssp. *pacificum*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 185-186, pl. 50: figs 1-6 (1998).

***Gomphonema camburnii*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 113, pl. 159: figs 16-17 (1998).

***Gomphonema capitatum* var. *macilentum*** (Kociolek et Stoermer) E.Reichardt in Jahn et al., Lange-Bertalot-Festschrift, p. 194 (2001)

Basionym: *Gomphonema truncatum* var. *macilentum* Kociolek et Stoermer, Canad. J. Bot. 69, p. 1561, figs 40-41 (1991).

***Gomphonema cathedralis*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 69, pl. 65: figs 1-4 (1996). [Comment: on the "Errata" the name was corrected to "*Gomphonema cathedrale*".]

***Gomphonema clava*** E.Reichardt in Jahn et al., Lange-Bertalot-Festschrift, p. 214, pl. 12: figs 1-14, pl. 13: figs 1-8 (2001).

***Gomphonema clavatum*** E.Reichardt, Iconogr. Diatomol. 8, p. 25, pl. 25: figs 1-23, 27-28 (1999).

***Gomphonema contraturris*** Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 57-58, pl. 78: figs 2-9, pl. 79: figs 1-5 (1993).

***Gomphonema costei*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 115, pl. 154: figs 7-12 (1998).

- Gomphonema crassicingulatum*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 186-187, pl. 50: figs 7-10 (1998).
- Gomphonema cuneolus*** E.Reichardt, Nova Hedwigia 65, p. 123, pl. 11, figs 1-18 (1997).
- Gomphonema cymbelliclinum*** E.Reichardt et Lange-Bert., Iconogr. Diatomol. 8, p. 36, pl. 39: figs 11-14, 24-26, pl. 40: figs 1-33, pl. 41: figs 10-17 (1999).
- Gomphonema daphnoides*** E.Reichardt, Iconogr. Diatomol. 8, p. 15-16, pl. 12: figs 1-12 (1999).
- Gomphonema designatum*** E.Reichardt, Nova Hedwigia 65, p. 120, pl. 10, figs 1-13 (1997).
- Gomphonema drutelingense*** E.Reichardt, Iconogr. Diatomol. 8, p. 38, pl. 39: figs 21-23, pl. 42: figs 1-18 (1999).
- Gomphonema ellipsis*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 116, pl. 154: figs 6, 6A (1998).
- Gomphonema extantum*** E.Reichardt et Lange-Bert., Ber. Bayer. Bot. Ges. 64, p. 128, pl. 1: figs 16-21, pl. 5: figs 5-8 (1994).
- Gomphonema frigidum*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 6, p. 54, pl. 64: figs 1-8 (1999).
- Gomphonema geisslerae*** E.Reichardt et Lange-Bert., Nova Hedwigia 65, p. 114, pl. 8, figs 1-10 (1997).
- Gomphonema genkalii*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 6, p. 55-56, pl. 65: figs 1-7 (1999).
- Gomphonema grasmueckii*** Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 59, pl. 75: figs 1-5, pl. 77: figs 1-14 (1993).
- Gomphonema halbachii*** Lange-Bert. et E.Reichardt in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 253-254, pl. 20: figs 157-160 (2000).
- Gomphonema inkadoriae*** Lange-Bert. et E.Reichardt in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 255, pl. 21: figs 164-172 (2000).
- Gomphonema innocens*** E.Reichardt, Iconogr. Diatomol. 8, p. 32, pl. 33: figs 1-21, 24-29, 32-34 (1999).
- Gomphonema insigniforme*** E.Reichardt et Lange-Bert., Iconogr. Diatomol. 8, p. 10, pl. 3: figs 1-22, pl. 4: figs 1-7 (1999).
- Gomphonema interpositum*** E.Reichardt, Iconogr. Diatomol. 8, p. 47-48, pl. 58: figs 1-8, 10-14 (1999).
- Gomphonema inversum*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 187-188, pl. 51: figs 1-3 (1998).
- Gomphonema jadowigiae*** Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 70, pl. 98: figs 11-14 (1996).
- Gomphonema kaweckana*** Metzeltin, E.Reichardt et Lange-Bert., Iconogr. Diatomol. 4, p. 17-18, pl. 22: figs 6-10, 12-13 (1996).
- Gomphonema kobayashiae*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 117-118, pl. 154: figs 13-16 (1998).
- Gomphonema lacus-vulcani*** E.Reichardt et Lange-Bert., Nova Hedwigia 65, p. 116, pl. 8, figs 11-33 (1997).
- Gomphonema lateripunctatum*** E.Reichardt et Lange-Bert., Nova Hedwigia 53, p. 530, pl. 5: figs 1-19; pl. 6: figs 1-3 (1991).
- Gomphonema laticollum*** E.Reichardt in Jahn et al., Lange-Bertalot-Festschrift, p. 199, pl. 5: figs 1-14 (2001).
- Gomphonema latipes*** E.Reichardt in Jahn et al., Lange-Bertalot-Festschrift, p. 196, pl. 3: figs 1-13 (2001).
- Gomphonema leptoproductum*** Lange-Bert. et Genkal, Iconogr. Diatomol. 6, p. 57, pl. 64: figs 9-15 (1999). [Comment: *Gomphonema leptoproductum* is also documented on pl. 64: fig. 15 although not cited on p. 57 in the 1<sup>st</sup> edition, reference corrected in the 2<sup>nd</sup> edition.]
- Gomphonema lingulatiforme*** Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 60-61, pl. 83: figs 1-11 (1993). [Validation of *Gomphonema lingulatiforme* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 422, pl. 87: fig. 11, (1991). As a part of the protologue is cited: Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 166: figs 6-11 and pl. 167: figs 3-4.] [Comment: In Krammer & Lange-Bertalot (1986) *Gomphonema lingulatiforme* was documented as "*Gomphonema grovei* var. *lingulatum* (Hust.) Lange-Bert.".]
- Gomphonema lippertii*** E.Reichardt et Lange-Bert., Iconogr. Diatomol. 8, p. 21, pl. 21: figs 1-15 (1999).
- Gomphonema longilineare*** E.Reichardt, Iconogr. Diatomol. 8, p. 39, pl. 43: figs 1-15, pl. 44: figs 11-13 (1999).

*Gomphonema macLaughlinii* E.Reichardt, Iconogr. Diatomol. 8, p. 22, pl. 22: figs 1-14 (1999).

*Gomphonema makarovae* Lange-Bert., Iconogr. Diatomol. 6, p. 58, pl. 63: figs 1-6 (1999).

*Gomphonema malayense* var. *melanesicum* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 188-189, pl. 52: figs 1-4 (1998).

*Gomphonema micropumilum* E.Reichardt, Nova Hedwigia 65, p. 107, pl. 4, figs 1-19 (1997).

*Gomphonema minutiforme* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 61-62, pl. 83: figs 16-20 (1993). [Comment: validation of *Gomphonema minutiforme* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 410, pl. 81: figs 20-23 (1991).]

*Gomphonema minutum* f. *lemanense* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 63 (1993). [Comment: validation of *Gomphonema minutum* f. *lemanense* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 410, pl. 81: figs 15-15A (1991).]

*Gomphonema minutum* f. *pachypus* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 64 (1993). [Validation of *Gomphonema minutum* f. *pachypus* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 410, pl. 81: figs 16-19 (1991).]

*Gomphonema minutum* f. *syriacum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 64 (1993). [Validation of *Gomphonema minutum* f. *syriacum* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 410, pl. 81: figs 9-14 (1991).]

*Gomphonema neoapiculatum* Lange-Bert., E.Reichardt et Metzeltin, Iconogr. Diatomol. 5, p. 120, pl. 157: figs 6-9 (1998). [Comment: in Metzeltin & Kusber (2001) the authors are erroneously cited as "Metzeltin, E.Reichardt et Lange-Bert.".]

*Gomphonema neobourrellyi* Gerd Moser et Lange-Bert., Biblioth. Diatomol. 32, p. 110-111, pl. 45: figs 1-9 (1995).

*Gomphonema neobourrellyi* ssp. *prolongatum* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 189-190, pl. 51: figs 8-10 (1998).

*Gomphonema neonasutum* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 5, p. 121, pl. 156: figs 1-4 (1998). [Comment: in Metzeltin & Kusber (2001) the authors erroneously are cited as "Metzeltin et Lange-Bert".]

*Gomphonema netriviale* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 190-191, pl. 52: figs 5-10 (1998).

*Gomphonema occultum* E.Reichardt et Lange-Bert., Nova Hedwigia 53, p. 538, pl. 10: figs 1-13 (1991).

*Gomphonema okavangoanum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 65, pl. 78: fig. 1, pl. 79A: figs 1-5 (1993).

*Gomphonema olivaceum* var. *olivaceolacuum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 67, pl. 80: figs 1-8, pl. 81: figs 3-4, pl. 82: figs 1-4 (1993). [Comment: validation of *Gomphonema olivaceum* var. *olivaceolacuum* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 424, pl. 88: figs 14-15 (1991).]

*Gomphonema ortalii* Lange-Bert. et E.Reichardt in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 257-258, pl. 20: figs 149-156 (2000).

*Gomphonema pala* E.Reichardt in Jahn et al., Lange-Bertalot-Festschrift, p. 212 pl. 10: figs 1-22, pl. 11: figs 4-7 (2001).

*Gomphonema paludosum* E.Reichardt, Iconogr. Diatomol. 8, p. 26, pl. 26: figs 1-22, pl. 27: figs 1-9 (1999).

*Gomphonema parallelistriatum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 68, fig. 76: 11-16 (1993). [Comment: validation of *Gomphonema parallelistriatum* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 408, pl. 80: figs 7-11 (1991).]

*Gomphonema parvulum* f. *saprophilum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 69 (1993). [Comment: validation of *Gomphonema parvulum* f. *saprophilum* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 400, pl. 76: figs 8-13 (1991). The proptologue includes also Krammer & Lange-Bertalot (1991b) pl. 77: figs 5-9, originally on p. 402 documented as "(?) *Gomphonema parvulum* var. *parvulum* f. *saprophilum* Lange-Bert. & E.Reichardt, Umrißvariante (?)".]

*Gomphonema parvulum* var. *parvulus* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 70 (1993). [Validation of *Gomphonema parvulum* var. *parvulus* Lange-Bert. et E.Reichardt, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 400, pl. 76: figs 22-29 (1991).]

*Gomphonema potaroense* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 122, pl. 146: figs 4-8, pl. 161: figs 8-10 (1998).

- Gomphonema pratense* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 8, p. 18-19, pl. 15: figs 4-7, pl. 16: figs 1-9 (1999).
- Gomphonema procerum* E.Reichardt et Lange-Bert., Nova Hedwigia 53, p. 526, pl. 4: figs 1-12 (1991).
- Gomphonema pseudoaugur* Lange-Bert., Arch. Hydrobiol. Suppl. 56,2 (Algol. Stud. 23), p. 213-214, figs 11-16, 79-80 (1979).
- Gomphonema pseudoboheemicum* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 71-72, pl. 66: figs 9-10 (1996). [As a part of the protologue, Krammer & Lange-Bertalot (1991), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 77: figs 16-21 is cited. Comment: in Krammer & Lange-Bertalot (1991b), p. 402, *Gomphonema pseudoboheemicum* is cited as "(?) *Gomphonema boheemicum* Reichelt et Fricke".]
- Gomphonema pseudoclavatum* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 3, p. 92, pl. 40: figs 1-15 (1996).
- Gomphonema pseudopusillum* E.Reichardt, Iconogr. Diatomol. 8, p. 48-49, pl. 59: figs 1-15 (1999).
- Gomphonema pseudotenellum* Lange-Bert., Biblioth. Diatomol. 9, p. 51, pl. 35: figs 7-12 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 164: 22-24 is cited.] [Comment: the diagnosis was emended by E.Reichardt in Nova Hedwigia 65, p. 114 (1997).]
- Gomphonema pumilum* var. *elegans* E.Reichardt et Lange-Bert., Nova Hedwigia 65, p. 103, pl. 1, figs 1-6, pl. 2, figs 1-29, pl. 4, figs 20-23 (1997).
- Gomphonema pumilum* var. *rigidum* E.Reichardt et Lange-Bert., Nova Hedwigia 65, p. 105, pl. 1, fig. 7, pl. 3, figs 1-41, pl. 4, figs 24-25 (1997).
- Gomphonema punae* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 140, pl. 129: figs 1-14 (2000).
- Gomphonema reichardtii* Lange-Bert., Iconogr. Diatomol. 2, p. 72-73, pl. 65: figs 16-19, pl. 121: figs 1-3 (1996). [As a part of the protologue, Krammer & Lange-Bertalot (1991), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 78: figs 20-23 is cited. Comment: in Krammer & Lange-Bertalot (1991b), p. 404, *Gomphonema reichardtii* is cited as "(?) *Gomphonema lagerheimii* A.Cleve-Euler (pro parte?); (?) *Gomphonema angustatum* var. *linearis* Hustedt; (?) *Gomphonema angustatum* var. *cymbelloides* Fusey".]
- Gomphonema ricardii* var. *pachypus* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 32, p. 114, pl. 46: figs 11-12, ?10 (1995).
- Gomphonema riotecense* Lange-Bert., E.Reichardt et Metzeltin, Iconogr. Diatomol. 5, p. 123-124, pl. 149: figs 1-6, pl. 150: figs 1-5 (1998).
- Gomphonema roehringeri* E.Reichardt, Iconogr. Diatomol. 8, p. 55-56, pl. 66: figs 1-12 (1999).
- Gomphonema rosenstockianum* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 71, pl. 76: figs 1-10 (1993).
- Gomphonema salae* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 5, p. 124-125, pl. 157: figs 3-5 (1998).
- Gomphonema scharfii* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 141, pl. 130: figs 1-14 (2000).
- Gomphonema scoticollegarum* Lange-Bert., Iconogr. Diatomol. 8, p. 12, pl. 6: figs 1-9 (1999).
- Gomphonema spectabilissimum* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 127, pl. 146: figs 1-3, pl. 162: figs 3-5 (1998).
- Gomphonema spheovertex* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 73-74, pl. 65: figs 22-23 (1996).
- Gomphonema stonei* E.Reichardt, Iconogr. Diatomol. 8, p. 16, pl. 13: figs 1-17 (1999).
- Gomphonema subarcticum* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 6, p. 59-60, pl. 65: figs 8-20, pl. 66: figs 1-5 (1999).
- Gomphonema supersedens* E.Reichardt, Iconogr. Diatomol. 8, p. 54-55, pl. 63: figs 6-7, pl. 64: figs 1-8, pl. 65: figs 1-9 (1999).
- Gomphonema tristigmatum* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 128, pl. 161: figs 1-7 (1998).
- Gomphonema utae* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 8, p. 27, pl. 28: figs 1-37, pl. 29: figs 1-7 (1999).
- Gomphonema vibrioides* E.Reichardt et Lange-Bert., Nova Hedwigia 53, p. 524, pl. 3: figs 1-9 (1991).

***Gomphonema wiltschkorum*** Lange-Bert., Iconogr. Diatomol. 6, p. 61, pl. 67: figs 12-22 (1999). [Comment: *Gomphonema wiltschkorum* is also documented on 67: figs 12-16 although not cited in the 1<sup>st</sup> edition, reference corrected in the 2<sup>nd</sup> edition.]

***Gomphonema yucatanense*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 131-132, pl. 146: figs 9-10 (1998).

***Gomphonema zellense*** E.Reichardt, Iconogr. Diatomol. 8, p. 11, pl. 5: figs 1-11 (1999).

**GOMPHONEMOPSIS** Medlin

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=246](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=246)]

***Gomphonemopsis lindae*** Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 18, pl. 54: figs 36, 39-41, pl. 77: figs 9-10, pl. 79: fig. 3 (1996).

**GOMPHOSPHENIA** Lange-Bert., Nova Hedwigia 60, p. 242-243 (1995). [Typus generis: *Gomphosphenia lingulatiformis* (Lange-Bert. et E.Reichardt) Lange-Bert., Nova Hedwigia 60, p. 242 (1995).]

**GOMPHOSPHENIA** subgen. **COSTERICARDIA** [see *COSTERICARDIA*].

**GOMPHOSPHENIA** subgen. **RHOICOSPHENULA** [see *RHOICOSPHENULA*].

***Gomphosphenia lingulatiformis*** (Lange-Bert. et E.Reichardt) Lange-Bert., Nova Hedwigia 60, p. 242 (1995).

Basionym: *Gomphonema lingulatiforme* Lange-Bert. et E.Reichardt, Biblioth. Diatomol. 27, p. 60, pl. 83: figs 1-11 (1993). [*Gomphosphenia lingulatiformis* is the type of the name of the genus *GOMPHOSPHENIA*.]

***Gomphosphenia paradoxa*** Lange-Bert., Nova Hedwigia 60, p. 246, 248, pl. 1: figs 1-18, pl. 2: figs 1-6, pl. 3: figs 1-7 (1995). [*Gomphosphenia paradoxa* is the type of the name of the subgenus *RHOICOSPHENULA* Lange-Bert.]

**GRUNOWINITZSCHIA** Lange-Bert. et U.Rumrich (subgenus within *NITZSCHIA*), Iconogr. Diatomol. 9, p. 191 (2000). [Typus subgeneris: *Nitzschia andicola* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 193 (2000).]

**GYROSIGMA** Hassall

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=815](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=815)].

***Gyrosigma gondwana*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 194-195, pl. 41: figs 1-2 (1998).

***Gyrosigma moresbyana*** E.Reichardt, Nova Hedwigia 47, p. 92, pl. 5: figs 1-4 (1988).

**HANTZSCHIA** Grunow

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=911](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=911)].

***Hantzschia abundans*** Lange-Bert., Biblioth. Diatomol. 27, p. 75, pl. 85: figs 12-18, pl. 89: figs 1-6, pl. 90: figs 1-6, pl. 92: fig. 1 (1993).

***Hantzschia barckhausenii*** Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 75, pl. 66: figs 16-18, pl. 67: figs 1-2 (1996).

***Hantzschia brunneri*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 132, pl. 206: fig. 1 (1998).

***Hantzschia eximia*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 195-196, pl. 59: figs 3-5 (1998).

***Hantzschia giessiana*** Lange-Bert. et U.Rumrich, Biblioth. Diatomol. 27, p. 80, pl. 94: figs 1-6, pl. 95: figs 1-6 (1993).

***Hantzschia graciosa*** Lange-Bert., Biblioth. Diatomol. 27, p. 81, pl. 101: figs 1-5, pl. 102: figs 1-6 (1993).

***Hantzschia graciosa* ssp. *neotropica*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 133, pl. 206: figs 2-5 (1998).

***Hantzschia kaiseri*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 363, 427-428, pl. 175: figs 11-15; pl. 219: figs 1-5 (2000).

***Hantzschia pannonica*** Lange-Bert., Biblioth. Diatomol. 27, p. 83-84, pl. 97: fig. 6, pl. 98: figs 1-6, pl. 99: figs 1-6, pl. 100: fig. 1 (1993).

***Hantzschia vivacior*** Lange-Bert., Biblioth. Diatomol. 27, p. 86, pl. 104: figs 1-6, pl. 105: figs 1-7, pl. 106: figs 1-6 (1993).

**HIPPODONTA** Lange-Bert., Metzeltin et Witkowski, Iconogr. Diatomol. 4, p. 249 (1996). [Typus generis: *Hippodonta lueneburgensis* (Grunow) Lange-Bert., Metzeltin et Witkowski, Iconogr. Diatomol. 4, p. 262 (1996).]

***Hippodonta arkonensis*** Lange-Bert., Metzeltin et Witkowski, Iconogr. Diatomol. 4, p. 252, pl. 4: figs 11-18 (1996).

***Hippodonta caotica*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 225, 428, pl. 131: figs 25-29 (2000).

***Hippodonta costulatiformis*** Lange-Bert., Metzeltin et Witkowski, p. 254-255, pl. 1: figs 27-28, pl. 4: figs 21-22 (1996).

***Hippodonta coxiae*** Lange-Bert., *Diatoms of Europe* 2, p. 221-222, pl. 76: figs 29-33, pl. 77: fig. 15 (2001).

***Hippodonta geocollegarum*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 255-256, pl. 4: figs 1-5 (1996).

***Hippodonta germainii*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 256-257, pl. 2: figs 6-11, pl. 3: fig. 6 (1996).

***Hippodonta grunowii*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 257-258, pl. 1: fig. 41 (1996).

***Hippodonta kaiseri*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 259, pl. 2: figs 13-19, pl. 4: fig. 25 (1996).

***Hippodonta kissii*** Lange-Bert., *Diatoms of Europe* 2, p. 222, pl. 78: figs 1-10 (2001).

***Hippodonta kociolekii*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 260, pl. 3: figs 7-7b (1996).

***Hippodonta lueneburgensis*** (Grunow) Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 249 (1996). Basionym: *Navicula hungarica* var. *lueneburgensis* Grunow in Mojsisovics et Neumayr, *Beiträge zur Paläontologie Österreich-Ungarns und des Orients* Bd. 2 (4), p. 156, pl. 30: figs 43-44 (1882). [*Hippodonta lueneburgensis* is the type of the name of the genus *HIPPODONTA*.]

***Hippodonta neglecta*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 262, pl. 1: figs 8-15, pl. 3: fig. 2, pl. 4: fig. 10 (1996). [Comment: *Hippodonta neglecta* is not documented on pl. 2: fig. 2 as cited on p. 262]

***Hippodonta pseudopinnularia*** Lange-Bert., *Diatoms of Europe* 2, p. 222, pl. 77: figs 1-8 (2001).

***Hippodonta ruthnielseniae*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 264, pl. 3: figs 8-15 (1996). [Comment: *Hippodonta ruthnielseniae* on p. 272 (caption of pl. 3: figs 8-15) is misprinted as "*Hippodonta subtilissima*".]

***Hippodonta subtilissima*** Lange-Bert., Metzeltin et Witkowski, *Iconogr. Diatomol.* 4, p. 265, pl. 3: figs 16-23 (1996). [Comment: *Hippodonta subtilissima* on p. 272 (caption of pl. 3: figs 16-23) is misprinted as "*Hippodonta ruthnielseniae*".]

***HYALINELLA*** Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 60, 428 (2000). [Typus generis: *Hyalinella lateripunctata* Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 60, 429 (2000).]

***Hyalinella lateripunctata*** Witkowski, Lange-Bert. et Metzeltin *Iconogr. Diatomol.* 7, p. 60, 429, pl. 32: figs 6-18 (2000). [*Hyalinella lateripunctata* is the type of the name of the genus *HYALINELLA* Witkowski, Lange-Bert. et Metzeltin.]

***HYALOSIRA*** Kütz.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=846](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=846)]

***Hyalosira delicatula* var. *gibbosa*** (Østrup) Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 61 (2000). Basionym: *Striatella delicatula* var. *gibbosa* Østrup, *Bot. Tidsskr.* 26, p. 276, pl. 1: fig. 13 (1904).

***HYGROPETRA*** Krammer et Lange-Bert., *Diatoms of Europe* 1, p. 206, 240 (2000). [Typus generis: *Hygropetra balfouriana* (Grunow ex Cleve) Krammer et Lange-Bert., *Diatoms of Europe* 1, p. 207 (2000).]

***Hygropetra balfouriana*** (Grunow ex Cleve) Krammer et Lange-Bert., *Diatoms of Europe* 1, p. 207 (2000). Basionym: *Pinnularia balfouriana* Grunow ex Cleve, *Kongl. Svenska Vetenskapsakad. Handl.* 26, p. 80, pl. 1: fig. 18 (1895). [*Hygropetra balfouriana* is the type of the name of the genus *HYGROPETRA*.]

***Hyalosira parietina*** Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 62, 429, pl. 21: figs 18-20 (2000).

***Hygropetra elongata*** Krammer et Lange-Bert., *Diatoms of Europe* 1, p. 207, 240, pl. 216: figs 10-13, 18 (2000). [Comment: on p. 692 (= caption of pl. 216: figs 10-13) the authors are cited as "Lange-Bert. et Krammer", *Hygropetra elongata* on p. 692 (= caption of pl. 216: fig. 18) as "*Hygropetra balfouriana* (Grunow ex Cleve) Krammer et Lange-Bert.".]

***KOBAYASIA*** Lange-Bert., **nom. illeg.**, *Iconogr. Diatomol.* 4, p. 279. [Intended type of the name of the genus: *Kobayasias bicuneus* Lange-Bert. *Iconogr. Diatomol.* 4, p. 279 (1996). [Comment: *KOBAYASIA* Lange-Bert. is a later homonym of *KOBAYASIA* Imai et A. Kkawamura, hence illegitimate. See: *KOBAYASIELLA* Lange-Bert. 1999.]

***Kobayasias bicuneus*** Lange-Bert., *Iconogr. Diatomol.* 4, p. 280-281, pl. 1: fig. 1-10 (1996) [Comment: *Kobayasias bicuneus* was the intended type of the name of the genus *KOBAYASIA* Lange-Bert., **nom. illeg.**, see *Kobayasiella bicuneus*.]

***Kobayasias grandis*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 134, pl. 94: figs 1-5 (1998). [Comment: see *Kobayasiella grandis*.]

***Kobayasias krasskei*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 135, pl. 94: figs 13-15 (1998). [Comment: see *Kobayasiella krasskei*.]

***Kobayasia neocaledonica*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 196-197, pl. 29: figs 9-14 (1998).

***KOBAYASIELLA*** Lange-Bert., Iconogr. Diatomol. 6, p. 266 (1999). [Typus generis: *Kobayasiella bicuneus* (Lange-Bert.) Lange-Bert. Iconogr. Diatomol. 6, p. 266 (1999). Comment: new name for *KOBAYASIA* Lange-Bert. 1996, nom. illeg. In Iconogr. Diatomol. 6 (2<sup>nd</sup> edition) on p. 272 (1999) again marked as new.]

***Kobayasiella bicuneus*** (Lange-Bert.) Lange-Bert., Iconogr. Diatomol. 6, p. 266 (1999).

Basionym: *Kobayasia bicuneus* Lange-Bert., Iconogr. Diatomol. 4, p. 280, figs 1-10 (1996). [*Kobayasiella bicuneus* is the type of the name of the genus *KOBAYASIELLA*.]

***KRASSKELLA*** R.Ross et P.A.Sims

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=230](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=230)].

***Krasskella manguinii*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 144, pl. 90: figs 4-5, ?6 (2000).

***KURPISZIA*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 227, 429 (2000). [Typus generis: *Kurpiszia semiaperta* (Hustedt) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 228 (2000).]

***LECOHUIA*** Lange-Bert., Iconogr. Diatomol. 9, p. 146 (2000). [Typus generis: *Lecohuia riverae* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 147 (2000).]

***Lecohuia riverae*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 147, pl. 64: figs 3-10 (2000). [*Lecohuia riverae* is the type of the name of the genus *LECOHUIA* Lange-Bert.]

***LUNELLA*** P.Snoeij

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=616](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=616)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?LUNELLAPSNOEIJ1996>]

***Lunella ghalebii*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 229, 430, pl. 163: figs 5-10 (2000).

***LUTICOLA*** D.G.Mann

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=368](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=368)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?LUTICOLADGMANN1990>].

***Luticola acidoclinata*** Lange-Bert., Iconogr. Diatomol. 2, p. 76, pl. 24: figs 24-26, pl. 104: figs 10-16 (1996).

***Luticola clagesii*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 197-198, pl. 30: figs 5-9 (1998).

***Luticola costei*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 136, pl. 87: fig. 13 (1998). [Comment: *Luticola costei* is not documented on pl. 87: fig. 12 as cited on p. 136; caption of pl. 87 on p. 408 is correct.]

***Luticola frenguelli*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 137, pl. 88: figs 1-6 (1998).

***Luticola incoactoides*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 149, pl. 61: figs 1-4 (2000).

***Luticola mollis*** Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 149-150, pl. 61: figs 5-6 (2000).

***Luticola tomesii*** Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 198-199, pl. 30: figs 1-4 (1998).

***LYRELLA*** N.I.Karayeve

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=830](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=830)].

***Lyrella fogedii*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 233, 430, pl. 99: figs 4-7, pl. 100: figs 1-3 (2000).

***MASTOGLIOIA*** Thwaites

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=973](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=973)].

***Mastogloia urveae*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 263, 431, pl. 84: figs 22-23 (2000).

***MAYAMAEA*** Lange-Bert., Arch. Protistenk 148, p. 71 (1997). [Typus generis: *Mayamaea atomus* (Kütz.) Lange-Bert., Arch. Protistenk 148, p. 71 (1997).]

***Mayamaea atomus*** (Kütz.) Lange-Bert. var. *atomus*, Arch. Protistenk. 148, p. 72 (1997).

Basionym: *Amphora atomus* Kützing, Kieselschalige Bacillarien, p. 108, pl. 30: fig. 70 (1844). [*Mayamaea atomus* is the type of the name of the genus *MAYAMAEA*.]

***MICROCOSTATUS*** J.R.Johans. et J.C.Sray

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=1026](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=1026)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?MICROCOSTATUSJRJOHANSENJCSRAY1998>].

*Microcostatus andinus* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 151, pl. 76: figs 1-10 (2000).

*Microcostatus maceria* (H.Schimanski) Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Navicula maceria* H.Schimanski, Nova Hedwigia 30, p. 586, pl. 11: figs 2, 9 (1978).

[– *Microcostatus maceria* (H.Schimanski) Lange-Bert., nom. inval., Iconogr. Diatomol. 6 (2<sup>nd</sup> edition), p. 290 (1999).]

*MIOSIRA* Krammer, Lange-Bert. et W.Schiller, Paläontol. Z. 71, p. 10 (1997). [Typus generis: *Miosira rhoenana* Krammer, Lange-Bert. et W.Schiller, Paläontol. Z. 71, p. 10, 17 (1997).]

*Miosira rhoenana* Krammer, Lange-Bert. et W.Schiller, Paläontol. Z. 71, p. 10, 17, figs 1-27, 29 (1997). [*Miosira rhoenana* is the type of the name of the genus *MIOSIRA* Krammer, Lange-Bert. et W.Schiller.]

*NAVICELLA* Krammer, Biblioth. Diatomol. 36, p. 157, (1997). [Typus generis: *Cymbella pusilla* Grunow, A. Schmidt's Atlas der Diatomaceenkunde, pl. 9: figs 36-37 (1875).]

*NAVICULA* Bory

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=799](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=799)].

*NAVICULA* sect. *ALINEA* [see *ALINEA*].

*NAVICULA* subsect. *NAVISANTIQUA* [see *NAVISANTIQUA*].

*Navicula acidobionta* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 160-161, pl. 98: figs 28-44, pl. 99: figs 1-10 (1989). [Comment: lacking a type and a Latin diagnosis, this name is not validly published.]

*Navicula agathae* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 7, p. 265, 431, pl. 146: figs 1-8 (2000).

*Navicula aggerica* E.Reichardt, Ber. Bayer. Bot. Ges. 53, p. 101, pl. 1: figs 25-33, pl. 4: figs 9-11 (1982).

*Navicula alineae* Lange-Bert. in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 268, pl. 22: figs 175-178 (2000). [*Navicula alineae* is the type of the name of the section *ALINEA* Lange-Bert.]

*Navicula altiplanensis* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 152, pl. 55: figs 21-27, cf. pl. 53: figs 8-11, 13-15 (2000).

*Navicula amphiceropsis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 153, pl. 42: figs 1-12 (2000).

*Navicula aquaedurae* Lange-Bert., Biblioth. Diatomol. 27, p. 95, pl. 46: figs 14-19, pl. 47: figs 1-2 (1993). [Validation of *Navicula aquaedurae* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 386, pl. 69: figs 1-10 (1991).]

*Navicula arctotenelloides* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 3, p. 97-98, pl. 9: figs 20-23 (1996). [Comment: *Navicula arctotenelloides* on p. 220 (= caption of pl. 9: figs 20-23) cited as "*Navicula tenelloides* Hustedt sensu Krasske".]

*Navicula arenaria* var. *rostellata* Lange-Bert., Biblioth. Diatomol. 9, p. 56, pl. 22: fig. 1 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 39: fig. 2 is cited.]

*Navicula arkona* Lange-Bert. et Witkowski, Diatoms of Europe 2, p. 17-18, 223, pl. 8: figs 8-11, pl. 73: fig. 5 (2001).

*Navicula arkona* Lange-Bert. et Witkowski, Diatoms of Europe 2, p. 17-18, 223-224, pl. 8: figs 8-11, pl. 73: fig. 5 (2001).

*Navicula arvensis* var. *major* Lange-Bert., Biblioth. Diatomol. 9, p. 56, pl. 25: figs 1-3 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 80: figs 21, 22, 32 is cited. Comment: "fig. 32" is erroneously cited for fig. 22'.]

*Navicula athenae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 267, 431-432, pl. 129: figs 15-16 (2000).

*Navicula australomediocris* Lange-Bert. et Rol.Schmidt, J. Paleolimnol. 3, p. 65, figs 7 i-k (1990).

*Navicula austrocollegarum* Lange-Bert. et R.Voigt, Diatoms of Europe 2, p. 224, pl. 9: figs 14-19, pl. 67: fig. 5 (2001).

*Navicula bicuneolus* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 139, pl. 76: figs 12-13, pl. 77: figs 5-6 (1998).

*Navicula bjoernoeyaensis* Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 4, p. 19, pl. 2: figs 14-18 (1996).

*Navicula borowkae* Witkowski, Lange-Bert. et Metzeltin Iconogr. Diatomol. 7, p. 269, 432, pl. 145: figs 1-5 (2000).

*Navicula bourrellyivera* Lange-Bert., Witkowski et Stachura, Cryptog. Algal. 19, p. 87, fig. 1-6 (1998).

*Navicula breitenbuchii* Lange-Bert., Diatoms of Europe 2, p. 224-225, pl. 37: figs 8-15 (2001).

*Navicula broetzii* Lange-Bert. et E.Reichardt, Iconogr. Diatomol. 2, p. 77, pl. 81: figs 1-7 (1996).

*Navicula canariana* Lange-Bert., Biblioth. Diatomol. 27, p. 96-97, pl. 54: figs 10-11, pl. 55: figs 1-13 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1991b), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 67: figs 12-18.] [Comment: in Krammer & Lange-Bertalot (1991b) *Navicula canariana* was documented as "*Navicula* species von Tenerife aff. *radiosafallax*".]

*Navicula cantonatii* Lange-Bert., Diatoms of Europe 2, p. 225, pl. 19: figs 1-8 (2001).

*Navicula cari* var. *recens* Lange-Bert., Cryptog. Algol. 1, p. 37, pl. 6: figs 8-14 (1980).

*Navicula cariocincta* Lange-Bert. in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 271, pl. 23: figs 203-207 (2000). [Comment: Validation of *Navicula cariocincta* Lange-Bert., nom. inval., in Biblioth. Diatomol. 27, p. 97, pl. 44: figs 1-5. (1993).]

*Navicula catalanogermanica* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 98, pl. 64: figs 16-20 (1993). [Comment: validation of *Navicula catalanogermanica* Lange-Bert. et G.Hofmann, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 370, pl. 61: figs 5-9 (1991).]

*Navicula cataracta-rheni* Lange-Bert., Biblioth. Diatomol. 27, p. 99-100, pl. 59: figs 13-15 (1993). [Validation of *Navicula cataractarheni* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 390, pl. 71: figs 1-6 (1991).]

*Navicula celinei* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 20, pl. 59: figs 17-22, pl. 83: fig. 1, pl. 84: figs 6, 8 (1996).

*Navicula chiarae* Lange-Bert. et Genkal, Iconogr. Diatomol. 6, p. 63-64, pl. 11: figs 12-15, pl. 18: figs 1-2 (1999).

*Navicula chilena* Lange-Bert., nom. inval., Diatom Res. 11, p. 120, figs 69-70, 160 (1996). [Comment: lacking a type and a Latin description, this name was published invalidly. Erroneously fig. 159 was cited on p. 120 and p. 139 (= caption of figs 159 and 160).]

*Navicula clagesii* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 200, pl. 19: figs 17-20 (1998).

*Navicula cloacina* Lange-Bert. et Bonik, Arch. Hydrobiol. Suppl. 49 (Algol. Stud. 16), p. 313, 315, figs 1d, 14-15 (1976).

*Navicula coraliana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 140, pl. 76: figs 8-11 (1998).

*Navicula crassulexigua* E.Reichardt, Ber. Bayer. Bot. Ges. 64, p. 130, pl. 3: figs 4-11, figs 28-29 (1994).

*Navicula cryptocephala* Lange-Bert., Biblioth. Diatomol. 27, p. 101, pl. 60: figs 1-2, pl. 61: figs 13-14 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1991b), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 64: figs 1-8.] [Comment: in Krammer & Lange-Bertalot (1991b) *Navicula cryptocephala* is documented as "*Navicula cryptocephala* Kützinger".]

*Navicula cryptofallax* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 103, pl. 47: fig. 11, pl. 48: figs 1-4 (1993). [Comment: validation of *Navicula cryptofallax* Lange-Bert. et G.Hofmann, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 384 pl. 68: figs 5-9 (1991).]

*Navicula cryptotenella* Lange-Bert., Biblioth. Diatomol. 9, p. 62-63, pl. 18: figs 22-23, pl. 19: figs 1-10, pl. 27: fig. 1 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 33: figs 9-11, 13-17 is cited.]

*Navicula cryptotenelloides* Lange-Bert., Biblioth. Diatomol. 27, p. 105, pl. 50: figs 9-12, pl. 51: figs 1-2 (1993).

*Navicula curtisterna* Lange-Bert., Diatoms of Europe 2, p. 225, pl. 18: figs 1-8 (2001).

*Navicula dealpina* Lange-Bert., Biblioth. Diatomol. 27, p. 106, pl. 44: figs 16-19 (1993). [Comment: validation of *Navicula dealpina* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 366, pl. 59: figs 1-3 (1991). As a part of the protologue is cited: Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 27: fig. 15.] [Comment: in Krammer & Lange-Bertalot (1986) *Navicula dealpina* is documented as "*Navicula cari* Ehrenberg als *Navicula graciloides* in Coll. Hustedt".]

*Navicula digitoconvergens* Lange-Bert., Iconogr. Diatomol. 6, p. 64-65, pl. 15: figs 1-9, pl. 16: figs 4-5 (1999). [Comment: name and diagnosis on p. 65 only in the 2<sup>nd</sup> edition.]

*Navicula doehleri* Lange-Bert., Diatoms of Europe 2, p. 226, pl. 16: figs 35-39 (2001).

*Navicula ehrlichiae* Lange-Bert. et E.Reichardt in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 275, pl. 23: figs 191-197 (2000).

- Navicula electrolytifuga* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 155-156, pl. 57: figs 1-5 (2000).
- Navicula exiliformis* E.Reichardt, Diatom Res. 3, p. 238, figs 11-21 (1988).
- Navicula germanopolonica* Witkowski et Lange-Bert., Biblioth. Diatomol. 27, p. 110, pl. 45: figs 1-8 (1993).
- Navicula globuliferiformis* Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).  
Replaced name: *Navicula globulifera* var. *robusta* Hust., Arch. Hydrobiol. Suppl. 15, p. 266, pl. 19: figs 3-4 (1937).  
[– *Navicula globulifera* var. *robusta* Hustedt, nom. inval., A. Schmidt's Atlas der Diatomaceenkunde, pl. 405: figs 20-22 (1936).]  
[– *Navicula globuliferiformis* Lange-Bert., nom. inval., Biblioth. Diatomol. 27, p. 93 (1993).]
- Navicula gondwana* Lange-Bert., Biblioth. Diatomol. 27, p. 111, pl. 57: figs 1-6 (1993).
- Navicula grasmueckii* Lange-Bert., Biblioth. Diatomol. 27, p. 112, pl. 54: figs 1-9 (1993).
- Navicula halinae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 281, 432-433, pl. 130: figs 1-4 (2000).
- Navicula hamiltonii* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 282, 433, pl. 130: figs 5-11 (2000).  
[Comment: *Navicula hamiltonii* is not documented on pl. 130: fig. 12 as cited on p. 282.]
- Navicula hanseatica* Lange-Bert. et Stachura, Cryptog. Algol. 19, p. 87-88, fig. 23-27 (1998).
- Navicula hanseatica* ssp. *circumartica* Lange-Bert., Iconogr. Diatomol. 7, p. 282, 433, pl. 120: figs 7-10 (2000).  
[Comment: *Navicula hanseatica* ssp. *circumartica* is not documented on pl. 120: figs 1-6 as cited on p. 433.]
- Navicula hastatula* Lange-Bert. et Miho, Diatoms of Europe 2, p. 226, pl. 56: figs 1-8 (2001).
- Navicula heimansioides* Lange-Bert., Biblioth. Diatomol. 27, p. 113, pl. 62: figs 7-10 (1993). [Comment: validation of *Navicula heimansioides* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 388, pl. 70: figs 1-8 (1991). As a part of the protologue is cited: Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 29: figs 9-11.] [Comment: in Krammer & Lange-Bertalot (1986) *Navicula heimansioides* is documented as "*Navicula cari* Ehrenberg als *Navicula leptostriata* Jørgensen = *Navicula heimansii* Van Dam et Kooyman".]
- Navicula herbstiae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 141, pl. 76: figs 4-7, pl. 77: fig. 8 (1998).
- Navicula hintzii* Lange-Bert., Biblioth. Diatomol. 27, p. 114-115, pl. 61: figs 15-18 (1993). [Comment: validation of *Navicula hintzii* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 374, pl. 63: figs 9-12 (1991).
- Navicula hofmanniae* Lange-Bert., Biblioth. Diatomol. 27, p. 116, pl. 48: figs 12-18, pl. 49: figs 1-2 (1993).
- Navicula humboldtiana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 156, pl. 54: figs 1-6 (2000).
- Navicula incarum* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 158, pl. 49: figs 7-16 (2000). [Comment: in Metzeltin & Kusber (2001) the authors are erroneously cited as "Lange-Bert. et U.Rumrich".]
- Navicula ingapirca* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 159, pl. 52: figs 3-8 (2000).
- Navicula insulsa* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 142, pl. 75: figs 4-6 (1998).
- Navicula irmengardis* Lange-Bert., Iconogr. Diatomol. 2, p. 78, pl. 80: figs 18-23 (1996).
- Navicula iserentantii* Lange-Bert. et Witkowski, Iconogr. Diatomol. 7, p. 284, 433-434, pl. 115: figs 1-5 (2000).
- Navicula kohlenbachii* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 160, pl. 53: figs 1-7 (2000).
- Navicula kohlmaieri* Lange-Bert., Iconogr. Diatomol. 6, p. 66-67, pl. 17: figs 1-6 (1999).
- Navicula korzeniewskii* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 287, 434, pl. 141: figs 30-33 (2000).
- Navicula krammerae* Lange-Bert., Iconogr. Diatomol. 2, p. 79, pl. 80: figs 3-8 (1996). [Comment: *Navicula krammerae* on p. 79, and 278 is misspelled as "*Navicula krammeriae*".]
- Navicula kuelbsii* Lange-Bert., Biblioth. Diatomol. 9, p. 77, pl. 25: figs 4-7 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 78: fig. 29 and pl. 80: figs 33-35 are cited. Comment: "pl. 80: figs 33-35" is erroneously cited for pl. 80: figs 32-34.]
- Navicula kuseliana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 161, pl. 43: figs 1-8 (2000).
- Navicula lacunolaciniata* Lange-Bert. et Bonik, Arch. Hydrobiol. Suppl. 49 (Algol. Stud. 16), p. 313, figs 1e, 12-13 (1976).

- Navicula lange-bertalotii* E.Reichardt, Ber. Bayer. Bot. Ges. 56, p. 176, pl. 1: figs 18-28, pl. 5: figs 1-3 (1985).
- Navicula lauca* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 162, pl. 51: figs 1-17, 20-23, pl. 52: figs 1-2 (2000).
- Navicula leistikowii* Lange-Bert., Biblioth. Diatomol. 27, p. 118, pl. 50: figs 1-8 (1993). [Comment: validation of *Navicula leistikowii* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 374, pl. 63: figs 14-20 (1991).]
- Navicula lohmannii* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 163, pl. 36: figs 1-8, pl. 37: figs 1-4 (2000).
- Navicula loibl-sittlerii* E.Reichardt, Nova Hedwigia 47, p. 97, pl. 4: figs 21-26 (1988).
- Navicula longicephala* var. *vilaplanii* Lange-Bert. et Sabater, Nova Hedwigia 51, p. 180, pl. 3: figs 24-28; pl. 6: figs 7-10 (1990).
- Navicula luciae* Witkowski et Lange-Bert., Iconogr. Diatomol. 6, p. 68, pl. 16: fig. 20, pl. 17: figs 7-10 (1999). [Comment: *Navicula luciae* is not documented on pl. 16: fig. 19 as cited in the 1<sup>st</sup> edition, reference corrected in the 2<sup>nd</sup> edition.]
- Navicula madeirensis* Lange-Bert., Biblioth. Diatomol. 27, p. 119, pl. 52: figs 15-19 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 67: figs 5-10 (1991). [Comment: in Krammer & Lange-Bertalot (1991b) *Navicula madeirensis* is cited as "*Navicula* species von Madeira aff. *radiosafallax*".]
- Navicula mahoodii* Witkowski et E.Witon, Iconogr. Diatomol. 7, p. 289, 434-435, pl. 145: figs 23-25 (2000). [Comment: in the protologue (p. 289 and p. 434) pl. 145: figs 24-26 is erroneously referred to.]
- Navicula maidanae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 142-143, pl. 76: figs 14-15 (1998).
- Navicula margalithii* Lange-Bert., Biblioth. Diatomol. 9, p. 79-80, pl. 17: figs 1-3, pl. 28: figs 1-4 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 26: figs 3-4, pl. 27: 4-6 is cited.]
- Navicula margaritiana* Witkowski, Biblioth. Diatomol. 28, p. 151, pl. 37: figs 1-9 (1994).
- Navicula mediocostata* E.Reichardt, Diatom Res. 3, p. 241, figs 22-29 (1988).
- Navicula melanesica* Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 119-120, pl. 61: figs 1-7, 11-13 (1995).
- Navicula menisculus* var. *grunowii* Lange-Bert., Biblioth. Diatomol. 27, p. 120, pl. 64: figs 1-11 (1993). [Validation of *Navicula menisculus* var. *grunowii* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 370, pl. 61: figs 10-16 (1991).]
- Navicula microcari* Lange-Bert., Biblioth. Diatomol. 27, p. 121-122, pl. 58: figs 1-5 (1993). [Validation of *Navicula microcari* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 366, pl. 59: figs 4-7 (1991).]
- Navicula moenofranconica* Lange-Bert., Biblioth. Diatomol. 27, p. 123-124, pl. 59: figs 9-12 (1993). [Validation of *Navicula moenofranconica* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 370, pl. 61: figs 1-4 (1991).]
- Navicula moskalii* Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 4, p. 20-21, pl. 5: figs 7-11 (1996).
- Navicula namibica* Lange-Bert. et U.Rumrich, Biblioth. Diatomol. 27, p. 124-125, pl. 58: figs 16-24 (1993). [Comment: the authors on p. 280 (= caption of pl. 58) are cited as "Rumrich et Lange-Bert."].
- Navicula novaesiberica* Lange-Bert., Biblioth. Diatomol. 27, p. 126-127, pl. 61: figs 1-8 (1993). [Validation of *Navicula novaesiberica* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 380, pl. 66: figs 5-8 (1991).]
- Navicula oligotraphenta* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 128, pl. 48: figs 6-11, pl. 49: figs 3-4 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1991b), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), pl. 60: figs 16-21.] [Comment: in Krammer & Lange-Bertalot (1991b) *Navicula oligotraphenta* was documented as "*Navicula trivialis* var. *oligotraphenta* Lange-Bert. et G.Hofmann".]
- Navicula paracari* Lange-Bert., nom. inval., Biblioth. Diatomol. 27, p. 129, pl. 43: figs 11-24 (1993). [Comment: lacking a type and a Latin diagnosis this name is invalidly published.]
- Navicula parahasta* Lange-Bert. et Miho, Diatoms of Europe 2, p. 226-227, pl. 55: figs 1-9 (2001).
- Navicula parinacota* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 164, pl. 50: figs 1-11 (2000).

- Navicula paul-schulzii* Witkowski et Lange-Bert., Biblioth. Diatomol. 28, p. 154, pl. 33: figs 14-17, pl. 36: figs 1, 3-4 (1994).
- Navicula paupercula* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 165, pl. 55: figs 1-9 (2000).
- Navicula peregrinopsis* Lange-Bert. et Witkowski, Iconogr. Diatomol. 7, p. 297, 435, pl. 112: figs 5-7 (2000).
- Navicula perfidissima* Lange-Bert., Biblioth. Diatomol. 18, p. 162-163, pl. 70: figs 22-25', ?26-27 (1989).
- Navicula phylleptosoma* Lange-Bert., Iconogr. Diatomol. 6, p. 69-70, pl. 13: figs 1-5 (1999).
- Navicula podzorskii* Lange-Bert., Biblioth. Diatomol. 27, p. 129-130, pl. 59: figs 1-7, pl. 60: figs 3-6 (1993).
- Navicula pseudanglica* Lange-Bert. var. *pseudanglica*, Biblioth. Diatomol. 9, p. 86-87, pl. 23: figs 8-12 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 46: figs 13-15 is cited. Comment: "fig. 15" is cited erroneously on p. 86.]
- Navicula pseudokotschy* Lange-Bert., Biblioth. Diatomol. 9, p. 88, pl. 23: figs 13-14 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), figs 16-19 is cited. Comment: This is an incomplete citation for pl. 60: figs 16-19.]
- Navicula pseudolanceolata* Lange-Bert., Cryptog. Algol. 1, p. 32, pl. 2: figs 1-8 (1980).
- Navicula pseudolanceolata* var. *denselineolata* Lange-Bert., Biblioth. Diatomol. 9, p. 89, pl. 18: figs 18-20 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 36: fig. 8' is cited.]
- Navicula pseudoppugnata* Lange-Bert. et Miho, Diatoms of Europe 2, p. 227, pl. 30: figs 1-7 (2001).
- Navicula quasidisjuncta* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 166, pl. 45: figs 9-13, pl. 49: figs 1-6 (2000).
- Navicula quechua* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 168, pl. 46: figs 30-33 (2000).
- Navicula radiosiola* Lange-Bert., Biblioth. Diatomol. 27, p. 132, pl. 53: figs 4-8 (1993).
- Navicula rajmundii* Witkowski, Lange-Bert. et Metzeltin, p. 300, 435-436, pl. 138: figs 16-20, pl. 139: figs 1-4 (2000).
- Navicula rakowskiae* Lange-Bert., Diatoms of Europe 2, p. 227-228, pl. 57: figs 1-6 (2001).
- Navicula reichardtiana* Lange-Bert. var. *reichardtiana*, Biblioth. Diatomol. 18, p. 163-164, pl. 98: figs 19-27 (1989).
- Navicula reichardtiana* var. *crassa* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 133, pl. 47: figs 4-10 (1993). [Comment: validation of *Navicula reichardtiana* var. *crassa* Lange-Bert. et G.Hofmann, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 384 pl. 68: figs 16-19 (1991).]
- Navicula rhynchotella* Lange-Bert., Biblioth. Diatomol. 27, p. 135, pl. 62: figs 4-6, pl. 63: figs 1-4 (1993). [Comment: validation of *Navicula rhynchotella* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 378, 380 pl. 65: figs 3-4, pl. 66: figs 3-4 (1991).]
- Navicula ricardae* Lange-Bert., Diatoms of Europe 2, p. 228, pl. 37: figs 1-7 (2001).
- Navicula riediana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 169, pl. 43: figs 9-14 (2000).
- Navicula riotecensis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 143, pl. 76: figs 1-3, pl. 77: fig. 7 (1998).
- Navicula rivulorum* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 170, pl. 55: figs 15-20 (2000).
- Navicula rolandii* Wunsam, Witkowski et Lange-Bert., Cryptog. Algol. 19, p. 88, fig. 88-93.
- Navicula saprophila* Lange-Bert. et Bonik, Arch. Hydrobiol. Suppl. 49 (Algol. Stud. 16), p. 312, figs 1c, 8-9, 29 (1976).
- Navicula seibigiana* Lange-Bert., Biblioth. Diatomol. 27, p. 137, pl. 44: figs 6-15 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1991b), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 374, pl. 63: figs 1-6.] [Comment: in Krammer & Lange-Bertalot (1991b) *Navicula seibigiana* was documented as "*Navicula seibigii* Lange-Bert.".]
- Navicula seibigii* Lange-Bert. nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 374, pl. 63: figs 1-6. [Comment: lacking a type and a Latin diagnosis this name was invalidly published. Later published as *Navicula seibigiana* Lange-Bert.]
- Navicula siamexilis* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 138, pl. 53: figs 39-42 (1989). [Comment: lacking a type and a Latin diagnosis, this name is not validly published.]

*Navicula siamlinearis* Lange-Bert., nom. inval., Biblioth. Diatomol. 18, p. 138, pl. 68: figs 39-46 (1989). [Comment: lacking a type and a Latin diagnosis, this name is not validly published.]

*Navicula sieminskiae* Lange-Bert. et Witkowski, Diatoms of Europe 2, p. 228, pl. 18: figs 8-13 (2001).

*Navicula silvahercynia* Lange-Bert., Biblioth. Diatomol. 18, p. 164-165, pl. 56: figs 11-12', pl. 98: figs 45-50 (1989). [Comment: erroneously pl. 56: fig. 13 is cited on p. 164.]

*Navicula speculum* Witkowski, Biblioth. Diatomol. 28, p. 159, pl. 36: figs 5-12 (1994).

*Navicula stachurae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 306, 436, pl. 142: figs 6-9 (2000).

*Navicula starmachii* Witkowski et Lange-Bert., Biblioth. Diatomol. 28, p. 160, pl. 33: figs 18-24 (1994).

*Navicula streckeriae* Lange-Bert. et Witkowski, Iconogr. Diatomol. 7, p. 307, 436-437, pl. 118: figs 8-15 (2000).

*Navicula structa* Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 126-127, pl. 60: figs 1-5, 7-10, pl. 62: figs 11, 27 (1995). [Comment: *Navicula structa* on p. 276 (= caption of pl. 62: fig. 7) is cited as "*Navicula spec. 10*".]

*Navicula subalpina* E.Reichardt, Diatom Res. 3, p. 241, figs 30-41 (1988).

*Navicula subconcentrica* Lange-Bert., Diatoms of Europe 2, p. 229, pl. 30: figs 8-13 (2001).

*Navicula supergregaria* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 171, pl. 45: figs 4-8 (2000).

*Navicula suprinii* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 201, pl. 19: figs 12-16 (1998).

*Navicula syvertsenii* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 21, pl. 61: figs 33-36, pl. 82: figs 5, 7 (1996). [Comment (not included in Metzeltin & Kusber (2001): pl. 61: fig. 37 is erroneously cited in the protologue. *Navicula syvertsenii* is not documented on pl. 82: fig. 6 as cited on p. 21 (see *Navicula wasmundii*).]

*Navicula trivialis* Lange-Bert., Cryptog. Algal. 1, p. 31, pl. 1: figs 5-9, pl. 9: figs 1-2 (1980).

*Navicula trivialis* var. *oligotraphenta* Lange-Bert. et G.Hofmann, nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 368, pl. 60: figs 16-21 (1991). [Comment: lacking a type and a Latin diagnosis this name was invalidly published. New name and rank as *Navicula oligotraphenta* Lange-Bert. et G.Hofmann.]

*Navicula trophicatrix* Lange-Bert., Iconogr. Diatomol. 2, p. 80-81, pl. 103: figs 28-31 (1996).

*Navicula tropicoidea* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 22, pl. 59: figs 23-27, pl. 60: figs 6-16, pl. 83: figs 2, 4, pl. 84: figs 1-3, 5, 7 (1996). [Comment: *Navicula tropicoidea* is not documented on pl. 83: figs 1, 3, 5, 7 as cited on p. 22.]

*Navicula ultratenelloides* Lange-Bert., Iconogr. Diatomol. 2, p. 81-82, pl. 109: figs 12-13' (1996). [Comment: *Navicula ultratenelloides* on p. 336 (caption of pl. 109) is misspelled as "*N. subtenelloides*".]

*Navicula vandamii* var. *mertensiae* Lange-Bert., Iconogr. Diatomol. 7, p. 313, 437, pl. 124: figs 1-7 (2000).

*Navicula vaneii* Lange-Bert., Cryptog. Algal. 19, p. 89, fig. 28-32 (1998).

*Navicula vekhovii* Lange-Bert. et Genkal, p. 71, pl. 14: figs 1-7 (1999).

*Navicula ventraloconfusa* Lange-Bert., Biblioth. Diatomol. 18, p. 165, pl. 79: figs 36-39 (1989).

*Navicula viridula* var. *denselineolata* E.Reichardt, Nova Hedwigia 47, p. 100, pl. 4: figs 16-18 (1988).

*Navicula viridulacalcis* Lange-Bert. ssp. *viridulacalcis*, Iconogr. Diatomol. 9, p. 174-175, pl. 38: fig. 5 (2000). [Comment: pl. 37: figs 5-8, pl. 38: figs 1-5 are cited for *Navicula viridulacalcis* Lange-Bert. on p. 174.]

*Navicula viridulacalcis* ssp. *neomundana* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 175, pl. 37: figs 5-8, pl. 38: figs 1-4 (2000). [Comment: *Navicula viridulacalcis* ssp. *neomundana* is erroneously cited on p. 314 (= caption of pl. 37: figs 5-8) as *Navicula viridulacalcis* Lange-Bert. ssp. *viridulacalcis* but the type locality for *Navicula viridulacalcis* ssp. *neomundana* Lange-Bert. et U.Rumrich is given. The author on p. 316 (= caption of pl. 38: figs 1-4) is cited as "Lange-Bert." only.]

*Navicula wasmundii* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 22-23, pl. 61: figs 27-28, pl. 82: figs 4, 6 (1996). [Comment (not included in Metzeltin & Kusber (2001): *Navicula wasmundii* is not documented on pl. 82: fig. 5 as cited on p. 22 whereas pl. 82: fig. 6 is missing on p.22 (see *Navicula syvertsenii*).]

*Navicula wellneri* Lange-Bert., Biblioth. Diatomol. 15, p. 123-124, pl. 40: figs 28-31 (1987).

- Navicula wiesneri* Lange-Bert., Biblioth. Diatomol. 27, p. 140, pl. 41: figs 23-37, pl. 42: figs 3-6 (1993).
- Navicula wiktoriae* Witkowski et Lange-Bert., Biblioth. Diatomol. 28, p. 162-163, pl. 34: figs 1-13 (1994).
- Navicula wildii* Lange-Bert., Biblioth. Diatomol. 27, p. 141-142, pl. 46: figs 9-13 (1993). [Validation of *Navicula wildii* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (4), p. 372 pl. 62: figs 1-10 (1991).
- Navicula witkowskii* Lange-Bert., Iserentant et Metzeltin, Cryptog. Algol. 19, p. 89-90, fig. 7-11 (1998).
- Navicula wunsamiae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 317, 437, pl. 138: figs 9-12 (2000).
- Navicula wygaschii* Lange-Bert., Diatoms of Europe 2, p. 229, pl. 27: figs 1-9, pl. 69: fig. 6 (2001).
- NAVICULADICTA** Lange-Bert., Biblioth. Diatomol. 29, p. 83-84 (1994). [Typus generis: *Naviculadicta vaucheriae* (J.B.Petersen) Lange-Bert., Biblioth. Diatomol. 29, p. 83 (1994).]
- Naviculadicta ambiguissima* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 202, pl. 20: figs 1-7 (1998).
- Naviculadicta bremensisformis* Lange-Bert., Iconogr. Diatomol. 2, p. 82, pl. 28: figs 21-23, 24-26 (1996). [Comment: *Naviculadicta bremensisformis* on p. 174 (caption of pl. 28: figs 21-23) is cited as "*Naviculadicta* (?nov.) spec. Nr. 3 Julma Ölkky".]
- Naviculadicta circumborealis* Lange-Bert., Biblioth. Diatomol. 29, p. 84-85, pl. 52: figs 29-36 (1994).
- Naviculadicta digituloides* Lange-Bert., Iconogr. Diatomol. 2, p. 83, pl. 109: figs 8-11, pl. 115: fig. 4 (1996).
- Naviculadicta digitulus* (Hust.) Lange-Bert. et Metzeltin, nom. inval., Iconogr. Diatomol. 2, p. 84 (1996). [Comment: lacking a full and direct reference this name is invalidly published.]
- Naviculadicta elorantana* Lange-Bert., Iconogr. Diatomol. 2, p. 84, pl. 28: figs 15-20, pl. 116: figs 3-4 (1996).
- Naviculadicta kaiseri* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 85, pl. 26: figs 14-18 (1996).
- Naviculadicta lepida* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 203, pl. 21: figs 8-11 (1998).
- Naviculadicta moratoria* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 204, pl. 22: figs 1-3 (1998).
- Naviculadicta multiconfusa* Lange-Bert., Biblioth. Diatomol. 29, p. 86-87, pl. 52: figs 39-43 (1994). [*Naviculadicta multiconfusa* was documented already in Lange-Bertalot & Krammer (1989), Bibl. Diatomol. 18, pl. 79: figs 36, 39 as "*Navicula ventraloconfusa* Lange-Bert.".]
- Naviculadicta nagumoi* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 205, pl. 21: figs 12-15 (1998).
- Naviculadicta nanogomphonema* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 178, pl. 67: figs 1-13 (2000).
- Naviculadicta parabryophila* Lange-Bert., Iconogr. Diatomol. 2, p. 86, pl. 27: figs 11-15, pl. 117: figs 5-7 (1996).
- Naviculadicta parasemen* Lange-Bert., Iconogr. Diatomol. 6, p. 72, pl. 25: figs 1-5, pl. 26: figs 1-4 (1999).
- Naviculadicta pseudofallacia* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 23, pl. 50: figs 20-21, pl. 76: figs 9-12 (1996). [Comment: *Naviculadicta pseudofallacia* is not documented on pl. 76: fig. 8 as cited on p. 23. *Naviculadicta pseudofallacia* on p. 132 (caption of pl. 50: 20-21) is misprinted as "*Achnanthes* cf. *pygmaea* (Schum.) Cleve".]
- Naviculadicta pseudofusticulus* Lange-Bert. et Steindorf, Biblioth. Diatomol. 38, p. 205-206, pl. 21: figs 5-7 (1998). [Comment: validation of *Naviculadicta pseudofusticulus* Lange-Bert. et Steindorf, nom. inval., Biblioth. Diatomol. 32, p. 132, pl. 54: figs 14-15 (1995).]
- Naviculadicta pseudostauron* Lange-Bert., Iconogr. Diatomol. 2, p. 87, pl. 35: figs 11-18, pl. 117: figs 1-2 (1996).
- Naviculadicta raederae* Lange-Bert., Iconogr. Diatomol. 2, p. 88, pl. 83: figs 37-40, pl. 116: figs 5-6 (1996). [Comment: *Naviculadicta raederae* on p. 88, 284, and 350 is misspelled as "*Naviculadicta raederiae*".]
- Naviculadicta rionautensis* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 179-180, pl. 70: 14-18; pl. 79: fig. 8 (2000).
- Naviculadicta sassiana* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 144-145, pl. 75: figs 9-12 (1998).
- Naviculadicta schneckenburgeri* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 207, pl. 22: figs 7-11 (1998).
- Naviculadicta stauroneioides* Lange-Bert., Iconogr. Diatomol. 2, p. 89, pl. 109: figs 22-27 (1996).

*Naviculadicta tomesii* Gerd Moser, Lange-Bert. et Metzeltin var. *tomesii*, Biblioth. Diatomol. 38, p. 208, pl. 21: figs 1-2 (1998).

*Naviculadicta tomesii* var. *clagesii* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 209, pl. 21: figs 3-4 (1998).

*Naviculadicta vaucheriae* (J.B.Petersen) Lange-Bert., Biblioth. Diatomol. 29, p. 83 (1994).

Basionym: *Navicula vaucheriae* J.B.Petersen, Kongel. Danske Vidensk.-Selsk. Skr. (Afd. 12) 7, p. 291, fig. 13 (1915).

[*Naviculadicta vaucheriae* is the type of the name of the genus *NAVICULADICTA*.]

*Naviculadicta vekhovii* Lange-Bert. et Genkal, Iconogr. Diatomol. 6, p. 74, pl. 20: figs 20-21 (1999).

*Naviculadicta ventraloconfusa* (Lange-Bert.) Lange-Bert., Biblioth. Diatomol. 29, p. 87 (1994).

Basionym: *Navicula ventraloconfusa* Lange-Bert., partim, Biblioth. Diatomol. 18, p. 165, pl. 79: figs 37, 38, nec 36 (1989).

[According to Metzeltin & Lange-Bertalot (1998) this is synonym to *Sellaphora ventraloconfusa* (Lange-Bert.) Metzeltin et Lange-Bert.]

*Naviculadicta witkowski* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 89-90, pl. 28: figs 31-35, pl. 115: fig. 2 (1996).

**NAVISANTIQUA** Lange-Bert. (subsection within the genus *NAVICULA* s. str.), Diatoms of Europe 2, p. 223, (2001). [Typus subsectionis: *Navicula perturbata* Jurilj, Prirodosl. Istraz. 26, p. 141, fig. 43e (1954).]

**NEIDIOPSIS** Lange-Bert. et Metzeltin, Diatoms of Europe 2, p. 130 (2001). [Typus generis: *Neidiopsis vekhovii* Lange-Bert. et Genkal, Diatoms of Europe 2, p. 230 (2001). Comment: the genus *NEIDIOPSIS* Lange-Bert. et Metzeltin was invalidly published in Iconogr. Diatomol. 6, p. 76. (1999), *NEIDIOPSIS* was based on *Neidium vekhovii* and *Neidiopsis vekhovii*, both names invalid at the time of publication. The genus *NEIDIOPSIS* in Iconogr. Diatomol. 6 was originally described with a Latin diagnosis. Since the genus was not intended to be monotypic, this diagnosis was not available for validating *Neidiopsis vekhovii* in 1999.]

*Neidiopsis levanderi* (Hust.) Lange-Bert. et Metzeltin in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Navicula levanderi* Hustedt, Int. Rev. Gesamten Hydrobiol. Hydrogr. 43, p. 174 (1943).

Synonym: *Neidium levanderi* (Hust.) Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 91 (1996)

[– *Navicula levanderi* Hust., nom. inval., A. Schmidt's Atlas der Diatomaceenkunde, pl. 397: figs 30-32 (1934);

*Navicula levanderi* Hust., nom. inval., Bot. Arch. 38, p. 195 (1937).]

[– *Neidiopsis levanderi* (Hust.) Lange-Bert. et Metzeltin, nom. inval., Iconogr. Diatomol. 6, p. 77 (1999);

*Neidiopsis levanderi* (Hust.) Lange-Bert. et Metzeltin, nom. inval. (Art. 33.3, St. Louis Code), Diatoms of Europe 2, p. 131 (2001).]

*Neidiopsis vekhovii* Lange-Bert. et Genkal, Diatoms of Europe 2, p. 230, pl. 101: fig. 22, pl. 102: figs 2-8 (2001) [Comment: validation of *Neidiopsis vekhovii* Lange-Bert. et Genkal, nom. inval., Iconogr. Diatomol. 6, p. 78 (1999). *Neidiopsis vekhovii* is the type of the genus *NEIDIOPSIS* Lange-Bert. et Metzeltin. Since *Neidiopsis vekhovii* was not validly published before 2001, the genus *NEIDIOPSIS* also was not validly published before 2001.]

*Neidiopsis wulffii* (J.B.Petersen) Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Navicula wulffii* J.B. Petersen, Meddel. Grønland 64, p. 312, fig. 1 (1924).

[– *Neidiopsis wulffii* (J.B.Petersen) Lange-Bert., nom. inval., Iconogr. Diatomol. 6, p. 78 (1999); *Neidiopsis wulffii* (J.B.Petersen) Lange-Bert., nom. inval. (Art. 33.3, St. Louis Code), Diatoms of Europe 2, p. 133 (2001).]

#### **NEIDIUM** Pfitzer

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=826](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=826)].

*Neidium andinum* Lange-Bert., Iconogr. Diatomol. 9, p. 180-181, pl. 102: figs 5-7 (2000).

*Neidium binodeforme* Krammer, Biblioth. Diatomol. 9, p. 102-103, pl. 5: figs 14-15, pl. 43: figs 1-5 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 100: figs 6-8 is cited. Comment: in Krammer & Lange-Bertalot (1986), p. 640 (= caption of pl. 100: figs 6-8) *Neidium binodeforme* is cited as "*Neidium binodeformis*".]

*Neidium carteri* Krammer, Biblioth. Diatomol. 9, p. 104, pl. 4: figs 1-8 (1985). [Comment: *Neidium carteri* on p. 104 and p. 138 misspelled as "*Neidium carterii*".]

*Neidium coralieae* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 145, pl. 121: figs 11-12 (1998).

*Neidium cuneatum* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 146, pl. 124: fig. 6, pl. 127: fig. 2 (1998).

*Neidium demerariense* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 147, pl. 120: figs 2-7 (1998).

*Neidium dubiforme* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 148, pl. 124: figs 10-13 (1998).

*Neidium essequiboanum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 149, pl. 120: figs 13-16 (1998).

*Neidium excisum* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 149-150, pl. 123: figs 5-6, 8, pl. 126: figs 5-6 (1998).

*Neidium gracile* f. *simplex* Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 32, p. 137, pl. 79: fig. 2 (1995).

*Neidium hamatum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 151, pl. 121: figs 1-2 (1998).

*Neidium infirmum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 152, pl. 118: figs 1-8 (1998).

*Neidium latum* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 153, pl. 119: figs 1-3, pl. 126: figs 1-4 (1998).

*Neidium obliquum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 154-155, pl. 124: figs 4-5, pl. 127: figs 3-4 (1998).

*Neidium subamphigomphus* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 155, pl. 120: figs 10-12 (1998).

*Neidium subdubium* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 156, pl. 119: figs 6-9 (1998).

#### **NITZSCHIA** Hassall

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=823](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=823)].

**NITZSCHIA** subgen. **DENTICULOIDEA** [see **DENTICULOIDEA**].

**NITZSCHIA** subgen. **GRUNOWINITZSCHIA** [see **GRUNOWINITZSCHIA**].

*Nitzschia acidoclinata* Lange-Bert., Nova Hedwigia 28, p. 277-278, pl. 7: figs 19-21, pl. 10: figs 1-2 (1977).

*Nitzschia alpinobacillum* Lange-Bert., Biblioth. Diatomol. 27, p. 143, pl. 114: figs 2-6, pl. 115: fig. 5 (1993). [As a part of the protologue is cited: Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 78: figs 10-12.] [Comment: in Krammer & Lange-Bertalot (1988) *Nitzschia alpinobacillum* was documented as "*Nitzschia bacillum* Hustedt".]

*Nitzschia andicola* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 193, pl. 158: figs 3-9, pl. 159: figs 1-6 (2000). [*Nitzschia andicola* is the type of the name of the subgenus **GRUNOWINITZSCHIA** Lange-Bert. et U.Rumrich.]

*Nitzschia angustatula* Lange-Bert., Biblioth. Diatomol. 15, p. 6-7, pl. 18: figs 1-4, ?5 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 3: fig. 6, pl. 36: figs 6-10 is cited.]

*Nitzschia angusteforaminata* Lange-Bert., Bacillaria 3, p. 43, pl. 2: figs 44-51, pl. 9: figs 127-132 (1980).

*Nitzschia aniae* Lange-Bert., Biblioth. Diatomol. 27, p. 144, pl. 116: figs 1-10 (1993).

*Nitzschia archibaldii* Lange-Bert., Bacillaria 3, p. 44, pl. 1: figs 14-18, pl. 7: figs 115-121 (1980).

*Nitzschia blankaartensis* Denys et Lange-Bert., Nova Hedwigia 67, p. 248, 250, fig. 1-18 (1998).

*Nitzschia brunoi* Lange-Bert., Iconogr. Diatomol. 2, p. 92, pl. 101: figs 11-15, pl. 102: fig. 1 (1996).

*Nitzschia chungara* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 182, pl. 166: figs 1-10 (2000).

*Nitzschia commutatoides* Lange-Bert., Biblioth. Diatomol. 15, p. 11, pl. 21: figs 5-7 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 34: figs 1-4 is cited. Comment: "pl. 34: figs 1-4" is erroneously cited for pl. 43: figs 1-4.]

*Nitzschia compressa* var. *pararostrata* Lange-Bert., Iconogr. Diatomol. 3, p. 164, pl. 48: figs 6, 6' (1996).

*Nitzschia dealpina* Lange-Bert. et G.Hofmann, Biblioth. Diatomol. 27, p. 146, pl. 114: figs 8-13, pl. 115: figs 1-4 (1993).

*Nitzschia dissipata* ssp. *oligotraphenta* Lange-Bert., Iconogr. Diatomol. 2, p. 93, pl. 99: figs 13-16 (1996).

*Nitzschia eglei* Lange-Bert., Biblioth. Diatomol. 15, p. 15, pl. 28: figs 1-3 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 10: figs 6-9 is cited.]

*Nitzschia epithemiformis* Lange-Bert., Bacillaria 3, p. 45, pl. 5: figs 105-109 (1980).

*Nitzschia fibula-fissa* Lange-Bert., Bacillaria 3, p. 46-47, pl. 3: figs 63-66, pl. 12: figs 146-148 (1980).

*Nitzschia gaertnerae* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 94, pl. 68: figs 6-11 (1996). [Comment: *Nitzschia gaertnerae* on p. 94-95 and 254 is misspelled as "*Nitzschia gaertneriae*".]

*Nitzschia gisela* Lange-Bert., Biblioth. Diatomol. 15, p. 21, pl. 20: figs 1-6 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 2: figs 2-3, pl. 42: figs 7-8 is cited.]

- Nitzschia hamburgensis* Lange-Bert., Nova Hedwigia 30, p. 650-651, pl. 3: figs 27-28, pl. 4: figs 40-41 (1978).
- Nitzschia kahlui* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 183, pl. 165: figs 3-10 (2000).
- Nitzschia labella* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 210, pl. 59: figs 6-11 (1998).
- Nitzschia lacuum* Lange-Bert., Bacillaria 3, p. 49, pl. 5: figs 91-97, pl. 11: figs 138-141 (1980).
- Nitzschia leistikowii* Lange-Bert., Bacillaria 3, p. 50, pl. 1: figs 19-27, pl. 8: figs 122-126 (1980).
- Nitzschia lorenziana* var. *musciicola* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 211, pl. 59: figs 1-2 (1998).
- Nitzschia macaronesica* Lange-Bert., Biblioth. Diatomol. 27, p. 148, pl. 112: figs 6-10, pl. 113: fig. 6 (1993).
- Nitzschia machardyae* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 184, pl. 155: figs 1-3 (2000).
- Nitzschia metzeltinii* Lange-Bert., Iconogr. Diatomol. 6, p. 78-79, pl. 72: figs 1-7 (1999).
- Nitzschia monachorum* Lange-Bert., Biblioth. Diatomol. 15, p. 35-36, pl. 6: figs 1-6 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 1: figs 6-7, pl. 57: figs 5-8 is cited.]
- Nitzschia neotropica* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 185, pl. 167: figs 4-8 (2000).
- Nitzschia novae-guineensis* E.Reichardt, Nova Hedwigia 47, p. 110, pl. 7: figs 16-22 (1988).
- Nitzschia oberheimiana* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 186, pl. 168: figs 1-17 (2000).
- Nitzschia retusa* Lange-Bert. et Bonik, Arch. Hydrobiol. Suppl. 49 (Algol. Stud. 16), p. 322, figs 1n, 22-23, 30-31 (1976).
- Nitzschia rosenstockii* Lange-Bert., Bacillaria 3, p. 52-53, pl. 2: figs 30-33, pl. 10: figs 133-136 (1980).
- Nitzschia semirobusta* Lange-Bert., Biblioth. Diatomol. 27, p. 149, pl. 120: figs 3-21, pl. 122: fig. 7, pl. 123: figs 1-7 (1993). [*Nitzschia semirobusta* is the type of the name of the subgenus *DENTICULOIDEA*.]
- Nitzschia serpentiraphe* Lange-Bert., Biblioth. Diatomol. 27, p. 151, pl. 125: figs 2-6, pl. 126: figs 1-9, pl. 127: figs 1-6, pl. 128: figs 1-2 (1993). [Comment: *Nitzschia serpentiraphe* is not documented on pl. 125: fig. 1 and pl. 128: figs 3-6 as suggested on p. 151.]
- Nitzschia spinarum* Lange-Bert., Iconogr. Diatomol. 2, p. 96, pl. 70: figs 34-35 (1996).
- Nitzschia strelnikovae* Lange-Bert., Genkal et Vekhov, nom. inval., Iconogr. Diatomol. 6, p. 79, pl. 70: figs 6-11 (1999). [Comment: lacking a type and a Latin diagnosis, this name is invalidly published.]
- Nitzschia supralitorae* Lange-Bert., Arch. Hydrobiol. Suppl. 56,2 (Algol. Stud. 23), p. 215, figs 25-27, 76-78 (1979).
- Nitzschia tenerifa* Lange-Bert., Biblioth. Diatomol. 27, p. 153, pl. 112: figs 1-5, pl. 113: figs 1-5 (1993). [Comment: validation of *Nitzschia tenerifa* Lange-Bert., nom. inval., Biblioth. Diatomol. 15, p. 55, pl. 36: figs 11-19 (1987).]
- Nitzschia tsarenkoi* Lange-Bert. in Nevo & Wasser, Biodiversity of cyanoprocaryotes and algae of continental Israel, p. 325, pl. 25: figs 215-217 (2000).
- Nitzschia valdecostata* Lange-Bert. et Simonsen, Bacillaria 1, p. 58, pl. 16: figs 260-263; pl. 18: figs 269-270 (1978). [Comment: "Simonsen" is missing in Metzeltin & Kusber (2001).]
- Nitzschia vermicularoides* Lange-Bert., Iconogr. Diatomol. 9, p. 187-188, pl. 157: figs 1-4 (2000).
- Nitzschia vildaryana* U.Rumrich et Lange-Bert., Iconogr. Diatomol. 9, p. 189, pl. 169: figs 1-9 (2000).
- Nitzschia vixnegligenda* Lange-Bert. et G.Hofmann, p. 190, pl. 173: figs 1-13 (2000).
- Nitzschia witkowskii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 157, pl. 206: fig. 7 (1998).
- Nitzschia wuellerstorffii* Lange-Bert., Biblioth. Diatomol. 15, p. 61, pl. 1: figs 1-4 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 4: fig. 3, pl. 6: figs 1-6 is cited.]
- NUPELA Vyverman et Compère**  
[\[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=976\]](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=976)  
[\[http://128.32.109.44/cgi-bin/porp CGI.pl?NUPELAWVYVERMANPCOMPERE1991\]](http://128.32.109.44/cgi-bin/porp CGI.pl?NUPELAWVYVERMANPCOMPERE1991).
- Nupela astartiella* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 157-158, pl. 72: figs 46-55 (1998).

*Nupela brachysirioides* Lange-Bert., Biblioth. Diatomol. 27, p. 154-155, pl. 39: figs 1-5 (1993).

*Nupela comperei* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 211-212, pl. 31: figs 1-4 (1998).

*Nupela cymbelloidea* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 158, pl. 72: figs 38-41, pl. 73: fig. 5 (1998). [Comment: *Nupela cymbelloidea* is not documented on pl. 72: figs 39-42 as cited on p. 158. *Nupela cymbelloidea* on page 380 (= caption of pl. 73: fig. 5) is cited as "*Nupela* (?nov.) spec. Nr. 72/1".]

*Nupela deformis* Lange-Bert., Biblioth. Diatomol. 29, p. 76, pl. 49: figs 23-24, pl. 51: fig. 6 (1994).

*Nupela encyonopsis* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 159, pl. 72: figs 35-37, pl. 74: figs 3-4 (1998).

*Nupela jahniae-reginae* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 9, p. 194-195, pl. 34: figs 1-8 (2000). [Comment: the author on p. 308 (= caption of pl. 34: figs 1-8) is cited as "Lange-Bert." only.]

*Nupela neotropica* Lange-Bert., Biblioth. Diatomol. 29, p. 77, pl. 49: figs 7-9, pl. 51: figs 1-3 (1994).

*Nupela obliqua* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 160, pl. 72: figs 42-45, pl. 73: figs 2-4 (1998).

*Nupela rumrichorum* Lange-Bert., Biblioth. Diatomol. 29, p. 79, pl. 49: figs 14-22, pl. 50: figs 1-6 (1994).

*Nupela schoemania* Lange-Bert., Biblioth. Diatomol. 27, p. 156, pl. 36: figs 1-9, pl. 37: figs 1-6 (1993).

*Nupela subpallavicinii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 161, pl. 72: figs 23-24, pl. 73: fig. 1, pl. 74: fig. 5 (1998).

*Nupela tenuistriata* (Hust.) Metzeltin et Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Achnanthes tenuistriata* Hustedt, Bot. Not. 1952, p. 384, figs 57-59 (1952).

[– *Achnanthes tenuistriata* Hustedt, nom. inval., A. Schmidt's Atlas der Diatomaceenkunde, pl. 410: figs 8-9 (1937).]

[– *Nupela tenuistriata* (Hustedt) Metzeltin et Lange-Bert., nom. inval., Iconogr. Diatomol. 5, p. 161 (1998).]

*Nupela vyvermanii* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 213, pl. 31: figs 7-10 (1998).

*Nupela zizkae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 162, pl. 71: figs 11-19 (1998).

#### **OPEPHORA P. Petit**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=641](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=641)].

*Opephora burchardiae* Witkowski, Metzeltin et Lange-Bert., Biblioth. Diatomol. 38, p. 214, 355-356, pl. 71: fig. 3, pl. 78: figs 1-13 (1998). [Comment: *Opephora burchardiae* is not documented on pl. 71: fig. 2 as cited on p. 214 and 355.]

*Opephora horstiana* Witkowski, Biblioth. Diatomol. 28, p. 173, pl. 12: figs 1-8 (1994).

*Opephora krumbeinii* Witkowski, Witak et Stachura, Iconogr. Diatomol. 6, p. 80, pl. 3: figs 1-17, pl. 4: figs 1-3 (1999).

**PARADIADESMIS** Lange-Bert. et Le Cohu (subgenus within **DIADESMIS**), Iconogr. Diatomol. 9, p. 108 (2000). [Typus subgeneris: *Diadensis corrugata* Lange-Bert. in Biblioth. Diatomol. 38, p. 140 (1998).]

#### **PARLIBELLUS E.J. Cox**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=672](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=672)].

*Parlibellus bennikei* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 319, 437-438, pl. 104: figs 11-15 (2000).

*Parlibellus calvus* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 4, p. 24, pl. 54: figs 10-14 (1996).

*Parlibellus coxiae* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 4, p. 24, pl. 54: figs 27-31, pl. 79: figs 1-2 (1996).

*Parlibellus hendeyi* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 323, 438, pl. 104: figs 21-23 (2000).

*Parlibellus perytii* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 323, 438-439, pl. 105: figs 14-16 (2000).

*Parlibellus phoebeae* Witkowski, Metzeltin et Lange-Bert., Iconogr. Diatomol. 7, p. 324, 439, pl. 105: figs 1-9 (2000).

#### **PINNULARIA Ehrenb.**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=790](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=790)].

*Pinnularia acidophila* G. Hofmann et Krammer, Diatoms of Europe 1, p. 213, pl. 14: figs 1-22 (2000).

*Pinnularia acorica* Krammer et Metzeltin, Diatoms of Europe 1, p. 236-237, pl. 183: figs 1-2 (2000).

*Pinnularia acrosphaeria* var. *parva* Krammer, Diatoms of Europe 1, p. 213, pl. 22: figs 3-6 (2000).

*Pinnularia acrosphaeria* var. *tumidula* Krammer, Diatoms of Europe 1, p. 214, pl. 21: figs 8-9 (2000). [Comment: on p. 300 (= caption of pl.21: figs 8-9) *Pinnularia acrosphaeria* var. *tumidula* erroneously is cited as "*Pinnularia acrosphaeria* var. *turgidula* Grunow ex Cleve".]

*Pinnularia acuminata* var. *carteri* Krammer, Diatoms of Europe 1, p. 232, pl. 145: fig. 1 (2000).

*Pinnularia acuminata* var. *novaezealandiae* Krammer, Diatoms of Europe 1, p. 232, pl. 148: figs 1-5 (2000).

*Pinnularia alabamae* Krammer, Diatoms of Europe 1, p. 239, pl. 212: figs 1-3 (2000). [Comment: on p. 239 erroneously pl. 212: figs 4-5 is cited (pl. 212: figs 4-5 shows *Pinnularia pulchella* var. *canadensis*).]

*Pinnularia alta* Krammer, Diatoms of Europe 1, p. 218, pl. 57: fig. 7 (2000).

*Pinnularia altiplanensis* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 197, pl. 145: figs 20-26 (2000).

*Pinnularia amabilis* Krammer, Diatoms of Europe 1, p. 224 pl. 86: figs 1-9 (2000). [Taxonomic comment: *Pinnularia amabilis* is discussed by Idei & Mayama (2001) with respect to *Pinnularia acidojaponica* M.Idei et H.Kobayasi in Jahn et al.: Lange-Bertalot-Festschrift, p. 266, figs 1-29 (2001).]

*Pinnularia amazonica* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 163, pl. 176: figs 4-7 (1998).

*Pinnularia anglica* Krammer, Biblioth. Diatomol. 26, p. 171, pl. 40: figs 21-23 (1992).

*Pinnularia angusta* var. *rostrata* Krammer, Diatoms of Europe 1, p. 222, pl. 83: figs 21-23 (2000).

*Pinnularia angustiborealis* Krammer et Lange-Bert. emend. Krammer et Lange-Bert., Diatoms of Europe 3, p. 174-175 (2002). [Comment: intended validation of *Pinnularia angustiborealis* Krammer et Lange-Bert., Diatoms of Europe 1, p. 24, 209, pl. 9: figs 5-6 (2000). The Latin diagnosis is rewritten, the name is marked again as new.]

*Pinnularia angustiborealis* Krammer et Lange-Bert., Diatoms of Europe 1, p. 24, 209, pl. 9: figs 5-6 (2000). [Comment: emended diagnosis in: Diatoms of Europe 3, p. 174-175 (2002).]

*Pinnularia angustistriata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 164-165, pl. 190: figs 7-9 (1998) [Comment: on p. 164 "pl. 190: figs 6-8" is erroneously cited.]

*Pinnularia angustivalva* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 164, pl. 190: figs 10-11 (1998).

*Pinnularia appendiculata* var. *amaniana* Krammer, Diatoms of Europe 1, p. 225, pl. 91: figs 10-11 (2000).

*Pinnularia appendiculata* var. *brevistriata* Krammer, Diatoms of Europe 1, p. 225, pl. 91: fig. 33 (2000).

*Pinnularia araucanensis* Lange-Bert., U.Rumrich et Krammer, Iconogr. Diatomol. 9, p. 198, pl. 150: figs 1-18 (2000).

*Pinnularia bacilliformis* Krammer, Biblioth. Diatomol. 26, p. 171, pl. 50: figs 7-12 (1992).

*Pinnularia bertrandii* Krammer var. *bertrandii*, Diatoms of Europe 1, p. 226, pl. 91: figs 22-28 (2000).

*Pinnularia bertrandii* var. *angustefasciata* Krammer, Diatoms of Europe 1, p. 226, pl. 91: figs 29-30 (2000).

*Pinnularia bertrandii* var. *orleansiana* Krammer, Diatoms of Europe 1, p. 226, pl. 91: figs 31-32, 34-35 (2000).

*Pinnularia bleischii* Krammer, Diatoms of Europe 1, p. 235, pl. 174: figs 1-5 (2000).

*Pinnularia borealis* var. *islandica* Krammer, Diatoms of Europe 1, p. 209, pl. 6: fig. 5, pl. 7: figs 1-5 (2000).

*Pinnularia borealis* var. *subislandica* Krammer, Diatoms of Europe 1, p. 209, pl. 8: figs 1-5, ?6 (2000).

*Pinnularia borealis* var. *sublinearis* Krammer, Diatoms of Europe 1, p. 210, pl. 7: figs 14-19 (2000).

*Pinnularia borealis* var. *tenuistriata* Krammer, Diatoms of Europe 1, p. 210, pl. 6: figs 7-10 (2000).

*Pinnularia boyeriformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 165, pl. 184: figs 4-6 (1998).

*Pinnularia brandeliformis* Krammer, Biblioth. Diatomol. 26, p. 171, pl. 21: figs 1-4 (1992).

*Pinnularia brandeliformis* var. *linearis* Krammer, Diatoms of Europe 1, p. 227, pl. 98: fig. 4 (2000).

*Pinnularia brebissonii* var. *lancarea* Krammer, Diatoms of Europe 1, p. 216, pl. 47: fig. 6 (2000).

*Pinnularia brebissonii* var. *minuta* Krammer, Diatoms of Europe 1, p. 216-217, pl. 47: figs 7-9 (2000).

*Pinnularia brebissoniiformis* Krammer, Diatoms of Europe 1, p. 217, pl. 46: figs 1-5 (2000).

*Pinnularia bullacostae* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 82, pl. 50: figs 1-5 (1999). [Comment: *Pinnularia bullacostae* is also documented on pl. 50: fig. 5 although not cited in the 1<sup>st</sup> edition, reference corrected in the 2<sup>nd</sup> edition].

*Pinnularia canadensis* Krammer, Diatoms of Europe 1, p. 214, pl. 27: figs 3-7 (2000).

*Pinnularia carteri* Krammer, Diatoms of Europe 1, p. 213, pl. 15: figs 3-4 (2000).

*Pinnularia castraregina* Krammer, Diatoms of Europe 1, p. 211, pl. 10: figs 9-13 (2000).

*Pinnularia certa* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 166, pl. 178: figs 12-17 (1998).

*Pinnularia cherryfieldiana* Krammer, Diatoms of Europe 1, p. 237, pl. 199: figs 1-5, pl. 200: fig. 1 (2000).

*Pinnularia claviculiformis* Metzeltin et Krammer, Diatoms of Europe 1, p. 227, pl. 99: figs 1-3 (2000).

*Pinnularia clevei* var. *angusta* Krammer, Diatoms of Europe 1, p. 231, pl. 131: fig. 5 (2000).

*Pinnularia cleveiformis* Krammer, Biblioth. Diatomol. 26, p. 171, pl. 72: figs 1-2 (1992).

*Pinnularia complexa* Krammer var. *complexa*, Diatoms of Europe 1, p. 230, pl. 129: figs 1-8 (2000).

*Pinnularia complexa* var. *minor* Krammer, Diatoms of Europe 1, p. 230-231, pl. 130: figs 1-3 (2000).

*Pinnularia confirma* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 166-167, pl. 180: figs 11-13 (1998).

*Pinnularia copulata* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 83, pl. 54: figs 1-2 (1999).

*Pinnularia cruxarea* Krammer, Diatoms of Europe 1, p. 230, pl. 123: figs 1-7 (2000).

*Pinnularia cuneatiformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 167, pl. 191: figs 3-4, pl. 195: fig. 3 (1998).

*Pinnularia cuneola* E.Reichardt, Nova Hedwigia 34, p. 501, pl. 2: figs 15-20, pl. 6: fig. 23 (1981).

*Pinnularia curtispinulosa* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 199, pl. 146: figs 12-21, pl. 148: figs 5-7 (2000).

*Pinnularia decrescens* var. *rhombarea* Krammer, Diatoms of Europe 1, p. 216, pl. 39: figs 1-3 (2000).

*Pinnularia denotata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 168, pl. 190: figs 1-3, 74, 5 (1998).

*Pinnularia discrepantia* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 169, pl. 191: figs 1-2 (1998).

*Pinnularia dispar* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 170, pl. 183: figs 9-10 (1998).

*Pinnularia distinguenda* var. *obtusa* Krammer, Diatoms of Europe 1, p. 237, pl. 193: figs 1-5 (2000).

*Pinnularia divergens* var. *ignorata* Krammer, Biblioth. Diatomol. 26, p. 172, pl. 28: figs 7-8 (1992).

*Pinnularia divergens* var. *media* Krammer, Diatoms of Europe 1, p. 215, pl. 34: figs 1-5 (2000).

*Pinnularia divergens* var. *mesoleptiformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 170, pl. 173: figs 1-4 (1998).

*Pinnularia divergens* var. *perundulata* Krammer, Diatoms of Europe 1, p. 215, pl. 32: figs 2-3 (2000).

*Pinnularia divergens* var. *protracta* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 171, pl. 172: figs ?1, 2-3 (1998).

*Pinnularia divergens* var. *rhombica* Krammer, nom. inval., Diatoms of Europe 1, p. 215, pl. 35: figs 5-8 (2000). [Comment: the var. *rhomica* is combined with *Pinnularia divergens* on p. 215 and *Pinnularia ovata* on p. 64, hence both combinations are invalidly published.]

*Pinnularia divergens* var. *rhombundulata* Krammer, Diatoms of Europe 1, p. 215, pl. 39: figs 4-5 (2000).

*Pinnularia divergens* var. *rostrata* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 172, pl. 171: fig. 5 (1998).

*Pinnularia divergens* var. *subbacillaris* Krammer, Diatoms of Europe 1, p. 215, pl. 34: figs 7, 11-12 (2000).

*Pinnularia divergens* var. *subcuneata* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 172, pl. 171: figs 2-4 (1998).

*Pinnularia divergens* var. *sublineariformis* Krammer, Diatoms of Europe 1, p. 215, pl. 34: fig. 9 (2000).

*Pinnularia divergentissima* var. *ardnamurchan* Krammer, Diatoms of Europe 1 (corrected issue), p. 212 pl. 11: fig. 31 (2001, "2000"). [Comment: *Pinnularia divergentissima* var. *ardnamurchan* is not documented on pl. 11: fig. 31, as cited on p. 212 in the original issue of Diatoms of Europe 1. The given figure (pl. 11: fig. 31) is published in Diatoms of Europe 1,

corrected issue (2001 "2000"), as cited on p. 212 in both issues. *Pinnularia divergentissima* var. *ardnamurchan* on p. 280 (= caption of pl. 11) erroneously is cited as "*Pinnularia divergentissima* var.".]

*Pinnularia divergentissima* var. *minor* Krammer, Biblioth. Diatomol. 26, p. 172, pl. 12: figs 11-13 (1992).

*Pinnularia divergentissima* var. *triundulata* Krammer, Diatoms of Europe 1, p. 212, pl. 11: figs 26-30 (2000). [Comment: the given figures were published in Diatoms of Europe 1, corrected issue (2001 "2000").]

*Pinnularia diversa* var. *subcapitata* Krammer et Lange-Bert., Diatoms of Europe 1, p. 46, 212, pl. 14: fig. 27 (2000).

*Pinnularia diversarea* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 173, pl. 174: figs 2-5 (1998).

*Pinnularia doloma* var. *fasciata* Krammer, Diatoms of Europe 1, p. 211, pl. 58: figs 13-15 (2000). [Comment: *Pinnularia doloma* var. *fasciata* is not documented on pl. 58: figs 1-3 as cited on p. 211.]

*Pinnularia dornii* Metzeltin, Iconogr. Diatomol. 2, p. 97, pl. 45: figs 19-21 (1996).

*Pinnularia dubitabilis* var. *minor* Krammer, Diatoms of Europe 1, p. 210, pl. 7: fig. 20 (2000).

*Pinnularia egregia* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 173, pl. 179: figs 1-8 (1998).

*Pinnularia episcopalis* var. *perelliptica* Krammer, Diatoms of Europe 1, p. 216, pl. 41: fig. 6 (2000).

*Pinnularia erratica* var. *fossilis* Krammer, Diatoms of Europe 1, p. 221, pl. 73: fig. 8 (2000).

*Pinnularia esoxiformis* var. *angusta* Krammer, Diatoms of Europe 1, p. 232, pl. 141: fig. 5 (2000).

*Pinnularia esoxiformis* var. *eifeliana* Krammer, Biblioth. Diatomol. 26, p. 172, pl. 58: figs 5-9 (1992).

*Pinnularia falaiseana* Krammer, Biblioth. Diatomol. 26, p. 172, pl. 41: fig. 6 (1992).

*Pinnularia ferrophila* Krammer, Diatoms of Europe 1, p. 222-223, pl. 81: figs 1-9 (2000).

*Pinnularia fossilis* Krammer, Diatoms of Europe 1, p. 231, pl. 133: fig. 9 (2000).

*Pinnularia frauenbergiana* E.Reichardt, Ber. Bayer. Bot. Ges. 56, p. 182, pl. 2: figs 5-10 (1985).

*Pinnularia frequentis* Krammer, Diatoms of Europe 1, p. 227, pl. 104: figs 1-8 (2000).

*Pinnularia genkalii* Krammer et Lange-Bert., Diatoms of Europe 1, p. 182, 238, pl. 203: figs 1-4 (2000).

*Pinnularia gibbiformis* Krammer, Biblioth. Diatomol. 26, p. 172, pl. 48: figs 1-7 (1992).

*Pinnularia gigaformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 175, pl. 201: figs 1-3 (1998).

*Pinnularia globiceps* var. *angustefasciata* Krammer, Diatoms of Europe 1, p. 221, pl. 74: figs 14-15 (2000).

*Pinnularia globiceps* var. *linearis* Krammer, Diatoms of Europe 1, p. 221, pl. 72: fig. 1, pl. 74: figs 10-13 (2000). [Comment: on p. 402 (= caption of p. 72: fig. 1) *Pinnularia globiceps* var. *linearis* is erroneously cited as "*Pinnularia lundii* var. *linearis*".]

*Pinnularia graciloides* var. *latecapitata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 176, pl. 180: figs 5-8 (1998).

*Pinnularia graciloides* var. *rumrichae* Krammer, Diatoms of Europe 1, p. 226-227, pl. 99: fig. 4 (2000).

*Pinnularia grunowii* Krammer, Diatoms of Europe 1, p. 222, pl. 77: figs 7-14, pl. 81: figs 10-17, pl. 82: figs 7-8 (2000).

*Pinnularia halophila* Krammer, Biblioth. Diatomol. 26, p. 172-173, pl. 57: figs 1-2 (1992).

*Pinnularia hemiptera* var. *brevistriata* Krammer, Iconogr. Diatomol. 5, p. 176, pl. 190: figs 12-14 (1998).

*Pinnularia hemipteriformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 177, pl. 174: figs 6-7 (1998).

*Pinnularia humilis* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 84-85, pl. 52b: figs 8-14 (1999).

*Pinnularia ilkaschoenfelderae* Krammer, Diatoms of Europe 1, p. 238, pl. 204: figs 2-6 (2000). [Comment: on p. 238 pl. 204: fig. 1 is cited (pl. 204: fig. 1 shows *P. genkalii*).]

*Pinnularia infirma* Krammer, Biblioth. Diatomol. 9, p. 109-110, pl. 10: figs 16-17 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 183: figs 14-17 is cited.]

*Pinnularia instabiliformis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 177, pl. 174: figs 8-12 (1998).

*Pinnularia ivaloensis* Krammer, Diatoms of Europe 1, p. 229-230, pl. 121: figs 2-6 (2000).

- Pinnularia julma* Krammer et Metzeltin, Iconogr. Diatomol. 2, p. 98, pl. 45: figs 10-13 (1996).
- Pinnularia jungii* Krammer, Diatoms of Europe 1, p. 212, pl. 58: figs 18-21 (2000).
- Pinnularia kanakarum* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 214-215, pl. 55: figs 1-5 (1998).
- Pinnularia kittelii* Krammer, Diatoms of Europe 1, p. 221, pl. 71: figs 1-6 (2000).
- Pinnularia krammeri* Metzeltin, Iconogr. Diatomol. 2, p. 98-99, pl. 57: figs 3-8 (1996).
- Pinnularia krookiformis* Krammer, Biblioth. Diatomol. 26, p. 173, pl. 18: figs 18-21 (1992).
- Pinnularia kuetzingii* Krammer, Biblioth. Diatomol. 26, p. 173, pl. 36: figs 26-35 (1992).
- Pinnularia latarea* Krammer var. *latarea*, Diatoms of Europe 1, p. 224, pl. 84: fig. 13-15 (2000). [Comment: erroneously pl. 80: figs 1-6 is cited on p. 224. These figures show *Pinnularia latarea* var. *thermophila*.]
- Pinnularia latarea* var. *thermophila* Krammer, Diatoms of Europe 1, p. 224, pl. 80: figs 1-6 (2000).
- Pinnularia laucensis* Lange-Bert., U.Rumrich et Krammer, Iconogr. Diatomol. 9, p. 200-201, pl. 145: figs 14-19 (2000).
- Pinnularia legumiformis* Krammer, Biblioth. Diatomol. 26, p. 173, pl. 29: figs 1-4 (1992).
- Pinnularia lokana* Krammer, Diatoms of Europe 1, p. 221, pl. 70: figs 1-6a (2000).
- Pinnularia lunata* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 85, pl. 52a: figs 9-13 (1999).
- Pinnularia lundii* var. *baltica* Krammer, Biblioth. Diatomol. 26, p. 173, pl. 16: figs 5-8 (1992).
- Pinnularia lundii* var. *linearis* Krammer, Diatoms of Europe 1, p. 222, pl. 75: figs 1-6 (2000).
- Pinnularia maculata* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 179, pl. 177: figs ?2, 3-5 (1998).
- Pinnularia magnacuneata* Krammer, Diatoms of Europe 1, p. 236, pl. 181: figs 3-5 (2000).
- Pinnularia marchica* Ilka Schönfelder var. *marchica*, Diatoms of Europe 1, p. 218-219, pl. 12: figs 11-17 (2000). [Comment: *Pinnularia marchica* var. *marchica* is not documented on pl. 90: figs 4-5 as cited on p. 218.]
- Pinnularia marchica* var. *subrostrata* Krammer, Diatoms of Europe 1, p. 219, pl. 90: figs 4-5 (2000). [Comment: authorship according to p. 700.]
- Pinnularia mayeri* var. *similis* Krammer, Biblioth. Diatomol. 26, p. 173, pl. 42: fig. 1 (1992).
- Pinnularia meridiana* Metzeltin et Krammer var. *meridiana*, Iconogr. Diatomol. 5, p. 180, pl. 181: figs 1-2, 4-5 (1998).
- Pinnularia meridiana* var. *concava* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 180, pl. 181: figs 6-7 (1998). [Comment: *Pinnularia meridiana* var. *concava* is not documented on pl. 18 as referred to on p. 180.]
- Pinnularia meridiana* var. *parallela* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 181, pl. 181: fig. 3 (1998).
- Pinnularia metzeltinii* Krammer, Diatoms of Europe 1, p. 219, pl. 59: figs 8-16 (2000).
- Pinnularia microstauron* var. *angusta* Krammer, Diatoms of Europe 1, p. 217, pl. 51: figs 4-7 (2000).
- Pinnularia microstauron* var. *brasiliensis* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 181, pl. 179: figs 9-15 (1998).
- Pinnularia microstauron* var. *nonfasciata* Krammer, Diatoms of Europe 1, p. 217, pl. 52: figs 1-13, pl. 55: figs 1-2 (2000).
- Pinnularia microstauron* var. *rostrata* Krammer, Diatoms of Europe 1, p. 217, pl. 51: figs 8-18 (2000).
- Pinnularia minutiformis* Krammer, Diatoms of Europe 1, p. 210, pl. 9: figs 18-19 (2000) [non *Pinnularia minutiformis* Krammer, nom. illeg., Diatoms of Europe 1, p. 29 which was renamed as *Pinnularia minoricapitata* Krammer, Diatoms of Europe 3, p. 175 (2002).]
- Pinnularia montgomeryana* Krammer, Diatoms of Europe 1, p. 228, pl. 110: figs 6-8 (2000).
- Pinnularia neglectiformis* Krammer, Diatoms of Europe 1, p. 233, pl. 158: figs 1-8 (2000).
- Pinnularia neomajor* Krammer, Biblioth. Diatomol. 26, p. 174, pl. 62: fig. 2 (1992).
- Pinnularia neomajor* var. *cuneata* Krammer, Diatoms of Europe 1, p. 234, pl. 152: figs 1-2, 6 (2000).
- Pinnularia neomajor* var. *frequentis* Krammer, Diatoms of Europe 1, p. 234, pl. 137: figs 2-5 (2000).
- Pinnularia neomajor* var. *inflata* Krammer, Diatoms of Europe 1, p. 233-234, pl. 171: figs 1-5 (2000).

- Pinnularia nitzschiofila* U.Rumrich, Metzeltin et Lange-Bert., Iconogr. Diatomol. 9, p. 201, pl. 144: figs 1-6 (2000).
- Pinnularia nobilefasciata* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 182, pl. 176: figs 8-9, 11-16 (1998).
- Pinnularia nobilis* var. *inarensis* Krammer, Diatoms of Europe 1, p. 239, pl. 170: fig. 4 (2000).
- Pinnularia nobilis* var. *regularis* Krammer, Diatoms of Europe 1, p. 239, pl. 207: figs 1-8, pl. 208: figs 1-5, pl. 209: figs 1-6 (2000).
- Pinnularia nodosa* var. *percapitata* Krammer, Diatoms of Europe 1, p. 214, pl. 26: figs 9-12, pl. 27: figs 9-10 (2000).
- Pinnularia nodosiformis* Krammer, Diatoms of Europe 1, p. 214, pl. 27: figs 1-2 (2000).
- Pinnularia normandiana* Krammer, Diatoms of Europe 1, p. 235, pl. 176: figs 1-5 (2000).
- Pinnularia notabilis* Krammer, Biblioth. Diatomol. 9, p. 110-111, pl. 11: figs 1-5 (1985).
- Pinnularia novaezealandiae* Krammer, Diatoms of Europe 1, p. 216, pl. 43: figs 3-7 (2000).
- Pinnularia obscuriformis* var. *subrostrata* Krammer, Diatoms of Europe 1, p. 213, pl. 13: fig. 37 (2000).
- Pinnularia obtusicuneata* Lange-Bert., Krammer et U.Rumrich, Iconogr. Diatomol. 9, p. 202, pl. 145: figs 9-12 (2000).
- Pinnularia oriunda* Krammer, Biblioth. Diatomol. 26, p. 174, pl. 60: figs 5-6, pl. 61: figs 1-6 (1992).
- Pinnularia oriundiformis* Krammer, Diatoms of Europe 1, p. 228, pl. 113: figs 1-4 (2000).
- Pinnularia ovata* var. *rhombica* Krammer, nom. inval., Diatoms of Europe 1, p. 64, pl. 35: figs 5-8 (2000). [Comment: the var. *rhomica* is combined with *Pinnularia ovata* on p. 64 and *Pinnularia divergens* on p. 215, hence both combinations are invalidly published.]
- Pinnularia parvulissima* Krammer, Diatoms of Europe 1, p. 220, pl. 65: figs 9-10, pl. 69: figs 7-11 (2000).
- Pinnularia patagonensis* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 9, p. 203, pl. 138: figs 4-5 (2000).
- Pinnularia percuneata* Krammer var. *percuneata*, Diatoms of Europe 1, p. 232, pl. 139: figs 1-7 (2000).
- Pinnularia percuneata* var. *constricta* Krammer, Diatoms of Europe 1, p. 232, pl. 137: fig. 1 (2000).
- Pinnularia percuneata* var. *minor* Krammer, Diatoms of Europe 1, p. 232, pl. 140: figs 1-8 (2000).
- Pinnularia perinarensis* Krammer, Diatoms of Europe 1, p. 230, pl. 126: figs 4-5 (2000).
- Pinnularia perinstabilis* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 183, pl. 193: figs 1-3 (1998).
- Pinnularia perinterrupta* Krammer, Diatoms of Europe 1, p. 219, pl. 60: figs 7-14, pl. 61: fig. 7 (2000).
- Pinnularia perirrorata* Krammer, Diatoms of Europe 1, p. 211, pl. 17: figs 11-22 (2000).
- Pinnularia permontana* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 183, pl. 198: fig. 1 (1998).
- Pinnularia perspicua* Krammer, Diatoms of Europe 1, p. 229, pl. 120: figs 1-5 (2000).
- Pinnularia persudetica* Krammer var. *persudetica*, Diatoms of Europe 1, p. 227-228, pl. 108: figs 1-6, pl. 109: fig. 3 (2000).
- Pinnularia persudetica* var. *silvatica* Krammer, Diatoms of Europe 1, p. 228, pl. 109: figs 1-2, (2000). [Comment: on p. 228 pl. 109: fig. 3 is erroneously cited (pl. 109: fig. 3 shows *Pinnularia persudetica* var. *persudetica*).]
- Pinnularia petersenii* Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 86, pl. 52b: figs 4-7 (1999).
- Pinnularia pisciculus* var. *angusta* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 184, pl. 175: figs 6-12, pl. 194: figs 5-6 (1998).
- Pinnularia pluvianiformis* Krammer, Diatoms of Europe 1, p. 222, pl. 83: figs 10-12 (2000).
- Pinnularia podzorskii* Krammer, Diatoms of Europe 1, p. 219-220, pl. 61: figs 1-6 (2000).
- Pinnularia polyonca* var. *stidolphii* Krammer, Diatoms of Europe 1, p. 220, pl. 95: figs 8-11 (2000).
- Pinnularia polyonca* var. *sumatrana* Krammer, Diatoms of Europe 1, p. 220, pl. 96: figs 4-7 (2000).
- Pinnularia problematica* Ant.Mayer var. *problematica*, Denkschriften Bayerischen Bot. Ges. Regensburg 22, p. 152, pl. 10: figs 4-6 (1946). [Comment: Krammer (1992) Biblioth. Diatomol. 26, p. 170, 174 intended to validate *Pinnularia problematica* Ant.Mayer. Since *Pinnularia problematica* was already validly published, Krammer typified *Pinnularia*

*problematica* by designating a lectotype, as "holotype", documented on pl. 75: figs 1-3. A Latin diagnosis by Krammer (1992), p. 73 is treated as additional information which does not emend Mayer's German diagnosis.]

***Pinnularia problematica* var. *subundulata*** Ant.Mayer, Denkschriften Bayerischen Bot. Ges. Regensburg 22, p. 152, pl. 11: fig. 1 (1946). [Taxonomic comment: Krammer (1992) Biblioth. Diatomol. 26, p. 170, mentioned *Pinnularia problematica* var. *subundulata* Ant. Mayer. as a synonym of *Pinnularia problematica* var. *problematica*.]

***Pinnularia procera*** Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 184-185, pl. 178: figs 7-11 (1998).

***Pinnularia pseudacuminata*** Metzeltin et Krammer, Iconogr. Diatomol. 2, p. 99-100, pl. 53: figs 1-4 (1996).

***Pinnularia pseudocardinalis*** E.Reichardt, Iconogr. Diatomol. 1, p. 16-17, pl. 15: figs 1-2 (1995). [*Pinnularia pseudocardinalis* E.Reichardt, Iconogr. Diatomol. 1, (second edition), p. 33, pl. 15: figs 1-2 (1995). In the second edition *Pinnularia pseudocardinalis* E.Reichardt was again marked as new.]

***Pinnularia pseudogibba*** Krammer var. *pseudogibba*, Biblioth. Diatomol. 26, p. 174, pl. 48: figs 8-14 (1992).

***Pinnularia pseudogibba* var. *rostrata*** Krammer, Biblioth. Diatomol. 26, p. 174, pl. 52: fig. 1 (1992).

***Pinnularia pseudoparva*** Krammer et Lange-Bert., Iconogr. Diatomol. 6, p. 87, pl. 54: fig. 7 (1999).

***Pinnularia pseudosimilis*** Krammer, Biblioth. Diatomol. 26, p. 174-175, pl. 13: figs 3-5 (1992).

***Pinnularia pulchella* var. *canadensis*** Krammer, Diatoms of Europe 1, p. 239, pl. 212: figs 4-5 (2000).

***Pinnularia pulchra* var. *subtilis*** Schim., Biblioth. Diatomol. 9, p. 112, pl. 10: fig. 14 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 184: figs 7-8 is cited.]

***Pinnularia rabenhorstii* var. *cuneata*** Krammer et Lange-Bert., p. 22, 209, pl. 5: figs 10-11 (2000).

***Pinnularia rabenhorstii* var. *franconia*** Krammer, Diatoms of Europe 1, p. 209, pl. 5: figs 5-9, pl. 6: figs 1-4 (2000).

***Pinnularia rathsbergiana*** Krammer, Diatoms of Europe 1, p. 235-236, pl. 1: figs 5-8, pl. 178: figs 1-6 (2000).

***Pinnularia reichardtii*** Krammer, Diatoms of Europe 1, p. 231, pl. 130: figs 4-7 (2000).

***Pinnularia renata*** Krammer, Biblioth. Diatomol. 26, p. 175, pl. 52: figs 2-8 (1992).

***Pinnularia renatiformis*** Krammer, Diatoms of Europe 1, p. 218, pl. 59: fig. 25 (2000).

***Pinnularia rhenohassiaca*** Krammer, Diatoms of Europe 1, p. 172, 236, pl. 180: figs 1-3. (2000). [Comment: *Pinnularia rhenohassiaca* is cited in the corrected issue as "*Pinnularia rhenohassiaca* Krammer et Lange-Bert.".]

***Pinnularia rhenohassiaca*** Krammer, Diatoms of Europe 1, p. 236, pl. 180: figs 1-3 (2000).

***Pinnularia rhombarea*** Krammer var. *rhombarea*, Iconogr. Diatomol. 5, p. 185, pl. 175: figs 1-5 (1998).

***Pinnularia rhombarea* var. *brevicapitata*** Krammer, Diatoms of Europe 1, p. 218, pl. 56: figs 7-11 (2000).

***Pinnularia rhombarea* var. *halophila*** Krammer, Diatoms of Europe 1, p. 217, pl. 54: figs 6-11 (2000).

***Pinnularia rhombarea* var. *undulata*** Krammer, Diatoms of Europe 1, p. 217, pl. 56: figs 1-3 (2000).

***Pinnularia rhombarea* var. *variarea*** Krammer, Diatoms of Europe 1, p. 218, pl. 56: figs 4-6 (2000).

***Pinnularia rhomboelliptica*** Krammer var. *rhomboelliptica*, Diatoms of Europe 1, p. 233, pl. 149: figs 4-9, pl. 159: figs 1-5, pl. 194: fig. 2 (2000). [Comment: on p. 233 erroneously pl. 151: figs 1-3 is cited (pl. 151: figs 1-3 shows *Pinnularia rhomboelliptica* var. *rhombica*).]

***Pinnularia rhomboelliptica* var. *inflata*** Krammer, Diatoms of Europe 1, p. 233, pl. 152: figs 3-5, pl. 153: figs 1-4 (2000). [Comment: on p. 233 erroneously pl. 159: fig. 1 is cited (pl. 159: fig. 1 shows *Pinnularia rhomboelliptica* var. *rhomboelliptica*).]

***Pinnularia rhomboelliptica* var. *novazealandiae*** Krammer, Diatoms of Europe 1, p. 233, pl. 149: figs 1-3, pl. 150: figs 1-3 (2000). [Comment: on p. 233 the name is misprinted as "var. *novazealandia*".]

***Pinnularia rhomboelliptica* var. *rhombica*** Krammer, nom. inval., Diatoms of Europe 1, p. 161, pl. 151: 1-3 (2000). [Comment: lacking a Latin diagnosis, the name is invalidly published.]

***Pinnularia rhomboelliptica* var. *zuricana*** Krammer, Diatoms of Europe 1, p. 233, pl. 150: fig. 4 (2000).

***Pinnularia rhombofasciata*** Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 174, pl. 168: figs 8-11 (1998).

- Pinnularia rostratissima* var. *parva* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 186, pl. 169: figs 6-9, pl. 203: figs 3, 6 (1998).
- Pinnularia rostratissima* var. *ventricosa* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 186-187, pl. 169: figs 1-5, pl. 203: figs 1, 4 (1998).
- Pinnularia rumrichae* Krammer, Diatoms of Europe 1, p. 223, pl. 84: figs 9-12 (2000).
- Pinnularia rupestris* var. *cuneata* Krammer, Biblioth. Diatomol. 26, p. 175, pl. 56: figs 1-3 (1992).
- Pinnularia santafiorana* Krammer, Diatoms of Europe 1, p. 234, pl. 169: figs 5-6 (2000).
- Pinnularia saphrophila* Lange-Bert. et Krammer, Diatoms of Europe 1, p. 109, 223, pl. 85: figs 10-18 (2000). [Comment: on p. 428 (caption of pl. 85 in the original issue) the authors are cited as "Kobayashi, Lange-Bert. et Krammer", on p. 109 (corrected issue) and p. 428 (caption of pl. 85 in the corrected issue) the authors are cited as "Lange-Bert., Kobayasi et Krammer". Taxonomic comment: *Pinnularia saphrophila* is discussed by Idei & Mayama (2001) with respect to *Pinnularia valdetolerans* Mayama et H.Kobayasi in Jahn et al.: Lange-Bertalot-Festschrift, p. 270, figs 30-53 (2001).]
- Pinnularia savona* Krammer, Diatoms of Europe 1, p. 236, pl. 182: figs 1-4 (2000).
- Pinnularia schimanskii* Krammer, Diatoms of Europe 1, p. 210, pl. 9: figs 10-13 (2000).
- Pinnularia schoenfelderi* Krammer, Biblioth. Diatomol. 26, p. 175, pl. 15: figs 1-2, 4-9 (1992).
- Pinnularia schroeterae* Krammer var. *schroeterae*, Diatoms of Europe 1, p. 225, pl. 88: figs 1-15, 27-29; pl. 89: fig. 1 (2000). [Comment: on p. 225 erroneously all figures for *Pinnularia schroeterae* var. *schroeterae* and *Pinnularia schroeterae* var. *elliptica* are cited (pl. 88: figs 1-30, pl. 89: figs 1-6).]
- Pinnularia schroeterae* var. *elliptica* Krammer, Diatoms of Europe 1, p. 225, pl. 88: figs 16-26, 30; pl. 89: figs 2-6 (2000). [Comment: on p. 225 erroneously pl. 88: figs 27-29 is cited (pl. 88: figs 27-29 shows *Pinnularia schroeterae* var. *schroeterae*).]
- Pinnularia scotica* Krammer, Diatoms of Europe 1, p. 214-215, pl. 22: figs 7-14 (2000).
- Pinnularia septentrionalis* var. *americana* Krammer, Diatoms of Europe 1, p. 222, pl. 83: fig. 7 (2000).
- Pinnularia siebenkittlii* Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 142-143, pl. 69: figs 1-2 (1995).
- Pinnularia similiformis* Krammer, Biblioth. Diatomol. 26, p. 175, pl. 13: figs 9-13 (1992).
- Pinnularia similiformis* var. *koreana* Metzeltin et Krammer, Diatoms of Europe 1, p. 212-213, pl. 16: figs 3-9 (2000).
- Pinnularia sinistra* Krammer, Biblioth. Diatomol. 26, p. 175-176, pl. 37: figs 1-16 (1992).
- Pinnularia spinosissima* Lange-Bert., U.Rumrich et Krammer, Iconogr. Diatomol. 9, p. 204-205, pl. 146: figs 1-8, pl. 147: figs 1-6, pl. 148: figs 1-4 (2000).
- Pinnularia stidolphii* Krammer, Diatoms of Europe 1, p. 231, pl. 134: figs 1-7, pl. 183: fig. 3 (2000).
- Pinnularia stomatophora* var. *irregularis* Krammer, Diatoms of Europe 1, p. 226, pl. 101: figs 4-10 (2000).
- Pinnularia stomatophora* var. *salina* Krammer, Diatoms of Europe 1, p. 226, pl. 99: figs 7-9 (2000).
- Pinnularia streckeriae* Krammer, Diatoms of Europe 1, p. 225, pl. 88: figs 31-41, pl. 89: figs 7-9 (2000).
- Pinnularia streptoraphe* var. *parva* Krammer, Biblioth. Diatomol. 26, p. 176, pl. 74: figs 4-5 (1992).
- Pinnularia streptoraphe* var. *savona* Krammer, Diatoms of Europe 1, p. 238, pl. 205: fig. 1 (2000).
- Pinnularia subacuminata* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 187, pl. 180: figs 9-10 (1998).
- Pinnularia subacuta* var. *cuneata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 188, pl. 192: figs 1-2 (1998).
- Pinnularia subanglica* Krammer, Diatoms of Europe 1, p. 223, pl. 78: fig. 7, pl. 84: figs 1-7 (2000).
- Pinnularia subbacillum* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 188, pl. 180: figs 1-4 (1998).
- Pinnularia subboyeri* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 189, pl. 183: figs 11-12, pl. 199: fig. 4 (1998). [Comment: on p. 632 (= caption of pl. 199) the authors are cited as "Krammer et Metzeltin".]
- Pinnularia subcapitata* var. *elongata* Krammer, Biblioth. Diatomol. 26, p. 108, 176, pl. 38: figs 1-11, pl. 39: figs 1-15 (1992).

- Pinnularia subcapitata* var. *semicrucata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 190, pl. 173: figs 5-13 (1998).
- Pinnularia subcapitata* var. *subrostrata* Krammer, nom. inval., Biblioth. Diatomol. 26, p. 177, pl. 38: figs 12-18 (1992). [Comment: the Latin description can not be treated as a diagnosis.]
- Pinnularia subcommutata* var. *nonfasciata* Krammer, Diatoms of Europe 1, p. 229, pl. 120: figs 6-11 (2000).
- Pinnularia subdivergens* Krammer, Biblioth. Diatomol. 26, p. 176, pl. 29: figs 5-7 (1992).
- Pinnularia subfalaiseana* Krammer, Diatoms of Europe 1, p. 224, pl. 78: figs 8-12 (2000).
- Pinnularia subflamma* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 190, pl. 189: figs 4-7 (1998).
- Pinnularia subgibba* Krammer var. *subgibba*, Biblioth. Diatomol. 26, p. 176, pl. 46: figs 1-4 (1992).
- Pinnularia subgibba* var. *angustarea* Krammer et Metzeltin, Iconogr. Diatomol. 5, p. 191, pl. 184: figs 1-3 (1998).
- Pinnularia subgibba* var. *capitata* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 191-192, pl. 168: fig. 7, pl. 176: figs 1-2, ?3 (1998).
- Pinnularia subgibba* var. *hustedtii* Krammer, Biblioth. Diatomol. 26, p. 177, pl. 47: fig. 1 (1992).
- Pinnularia subgibba* var. *sublinearis* Krammer, Diatoms of Europe 1, p. 220, pl. 65: fig. 14 (2000).
- Pinnularia subgibba* var. *tirolensis* Metzeltin et Krammer, Iconogr. Diatomol. 2, p. 100, pl. 86: figs 7-8 (1996).
- Pinnularia subgibba* var. *undulata* Krammer, Biblioth. Diatomol. 26, p. 176-177, pl. 46: fig. 5 (1992).
- Pinnularia subgigas* Krammer, Diatoms of Europe 1, p. 237-238, pl. 200: figs 2-5 (2000). [Comment: on p. 237 erroneously pl. 200: fig. 1 is cited (pl. 200: fig. 1 shows *Pinnularia cherryfieldiana*).]
- Pinnularia submicrostauron* S.Schroet. in Krammer, Biblioth. Diatomol. 26, p. 177, pl. 39: figs 16-25 (1992).
- Pinnularia subrhombica* Krammer var. *subrhombica*, Diatoms of Europe 1, p. 229, pl. 119: figs 8-11, pl. 154: figs 5-7 (2000).
- Pinnularia subrhombica* var. *angusta* Krammer, Diatoms of Europe 1, p. 229, pl. 119: fig. 7 (2000).
- Pinnularia subrupestris* Krammer var. *subrupestris*, Biblioth. Diatomol. 26, p. 177, pl. 53: figs 8-13 (1992).
- Pinnularia subrupestris* var. *cruciata* Krammer, Diatoms of Europe 1, p. 228, pl. 115: figs 3-5 (2000).
- Pinnularia subrupestris* var. *cuneata* Krammer, Diatoms of Europe 1, p. 228, pl. 102: figs 15-17, pl. 147: figs 6-10 (2000).
- Pinnularia subrupestris* var. *parva* Krammer, Biblioth. Diatomol. 26, p. 177, pl. 59: figs 8-9 (1992).
- Pinnularia subsilvatica* Krammer et Lange-Bert., Diatoms of Europe 1, p. 43, 212, pl. 17: figs 27-29 (2000).
- Pinnularia substreptoraphe* var. *bornholmiana* Krammer, Diatoms of Europe 1, p. 238, pl. 201: figs 1-3 (2000). [Comment: on p. 238 erroneously pl. 202: figs 1-6 is cited (pl. 202: figs 1-6 shows *Pinnularia substreptoraphe* var. *substreptoraphe*).]
- Pinnularia subumbrosa* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 192, pl. 182: figs 1-3, ?4, 5-6 (1998).
- Pinnularia tirolensis* var. *julma* Krammer, Diatoms of Europe 1, p. 220, pl. 65: figs 6, 11-13 (2000). [Comment: on p. 388 (= caption of pl. 65: figs 6, 11-13 the authors are cited as "Krammer & Metzeltin").]
- Pinnularia toscana* Krammer, Diatoms of Europe 1, p. 235, pl. 175: figs 1-4 (2000).
- Pinnularia transversiformis* Krammer, Diatoms of Europe 1, p. 237, pl. 188: figs 1-7, pl. 189: figs 1-5 (2000).
- Pinnularia tsoneka* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 9, p. 205, fig. 137: 3-4, pl. 138: figs 1-3 (2000).
- Pinnularia tumescens* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 193, pl. 186: figs 1-5 (1998).
- Pinnularia tynnii* Krammer, Diatoms of Europe 1, p. 216, pl. 40: figs 4-6 (2000).
- Pinnularia umbrosa* var. *tropica* Metzeltin et Krammer, Iconogr. Diatomol. 5, p. 194, pl. 182: figs 7-9 (1998).
- Pinnularia undula* var. *mesoleptiformis* Krammer, Diatoms of Europe 1, p. 226, pl. 93: fig. 1 (2000).
- Pinnularia vaetterana* Krammer, Diatoms of Europe 1, p. 211, pl. 10: figs 6-7 (2000).

***Pinnularia vangariana*** Krammer, *Diatoms of Europe* 1, p. 234, pl. 170: fig. 2 (2000). [On p. 600 (= caption of pl. 170: fig. 2 as "*Pinnularia spec.*", slide Zt2/64 HB is cited whereas slide Zt1/64 HB is indicated as the type.]

***Pinnularia variarea*** Metzeltin et Krammer, *Iconogr. Diatomol.* 5, p. 194, pl. 181: figs 8-10, pl. 193: fig. 5 (1998).

***Pinnularia viridiformis* var. *minor*** Krammer, *Diatoms of Europe* 1, p. 234, pl. 138: figs 1-5 (2000).

**PLACONEIS** Mereschk.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=139](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=139)].

***Placoneis chilensis*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 206, pl. 59: figs 8-9 (2000).

***Placoneis dacostae*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 196, pl. 77: fig. 1, pl. 90: figs 4-8 (1998). [Comment: *Placoneis dacostae* on p. 388 is misspelled as "*P. dacostei*".]

***Placoneis molesta*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 197, pl. 89: figs 6-9 (1998).

***Placoneis neotropica*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 198-199, pl. 89: figs 1-5 (1998).

***Placoneis paraelginensis*** Lange-Bert., *Iconogr. Diatomol.* 9, p. 208, pl. 60: figs 17-20 (2000).

***Placoneis pellaifa*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 210, pl. 60: figs 9-10 (2000).

***Placoneis santaremensis*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 199, pl. 75: figs 18-24 (1998).

***Placoneis scharfii*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 211, pl. 59: figs 5-7 (2000).

***Placoneis zimmermannii*** Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 5, p. 201, pl. 89: figs 10-13 (1998).

**PLAGIOGRAMMOPSIS** Hasle, Stosch et Syvertsen

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=237](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=237)].

***Plagiogrammopsis crawfordii*** Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 39, 439, pl. 10: figs 37-39, pl. 12: figs 15-18 (2000).

**PLANOTHIDIUM** Round et L.Bukhtiyarova

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=661](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=661)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?PLANOTHIDIUMFEROUNDLBUKHTIYAROVA1996>].

***Planothidium infrequens*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 212-213, pl. 27: figs 3-9 (2000).

***Planothidium neglectum*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 213, pl. 30: figs 7-10 (2000).

***Planothidium rhombicuneatum*** Lange-Bert. et U.Rumrich, *Iconogr. Diatomol.* 9, p. 214-215, pl. 29: figs 1-12 (2000).

***PRAVIFUSUS*** Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 73, 439-440 (2000). [Typus generis:

*Pravifusus hyalinus* Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 73, 440 (2000).]

***Pravifusus hyalinus*** Witkowski, Lange-Bert. et Metzeltin, *Iconogr. Diatomol.* 7, p. 73, 440, pl. 12: figs 13-14, pl. 27: figs 18-23 (2000). [*Pravifusus hyalinus* is the type of the name of the genus *PRAVIFUSUS* Witkowski, Lange-Bert. et Metzeltin.]

***PSEUDENCYONEMA*** Krammer, *Biblioth. Diatomol.* 36, p. 156, (1997). [Typus generis: *Cymbella rossii* Krammer et Lange-Bert., *Nova Hedwigia Beih.* 106, p. 93-99 (1993).]

**PSEUDOGOMPHONEMA** Medlin

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=248](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=248)].

***Pseudogomphonema monicae*** Witkowski, Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 4, p. 25, pl. 58: figs 11-22, pl. 80: figs 1-4, pl. 81: fig. 2 (1996).

***Pseudogomphonema plinskii*** Witkowski, Metzeltin et Lange-Bert., *Iconogr. Diatomol.* 4, p. 26, pl. 58: figs 7-10, pl. 80: fig. 5, pl. 81: figs 3-6 (1996). [Comment: *Pseudogomphonema plinskii* on p. 192 (= caption of pl. 80) is cited as "(?) *Pseudogomphonema spec.*", *P. plinskii* on p. 194 (= caption of pl. 81: figs 5-6) is cited as "*Pseudogomphonema spec.*".]

***PULCHELLA*** Krammer, *Diatoms of Europe* 1, p. 240 (2000). [Typus generis: *Pinnularia kriegeriana* Krasske, *Ber. Deutsch. Bot. Ges.* 61, p. 86, fig. 17 (1943).]

***RHOICOSPHENULA*** Lange-Bert. (subgenus within *GOMPHOSPHENIA*), *Nova Hedwigia* 60, p. 244, 246, pl. 1-3. Typus subgeneris: *Gomphosphenia paradoxa* Lange-Bert., *Nova Hedwigia* 60, p. 246, 248 (1995).

**RHOPALODIA** O.Müll.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=907](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=907)].

***Rhopalodia brebissonii*** Krammer, Biblioth. Diatomol. 15, p. 76, pl. 48: figs 7-10 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 113: figs 7-13, pl. 113A: figs 7-12 is cited.]

***Rhopalodia gibba* var. *minuta*** Krammer, Biblioth. Diatomol. 15, p. 79-80, pl. 45: figs 1-6 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 111A: figs 2-7 is cited.]

***Rhopalodia pacifica*** Krammer, Biblioth. Diatomol. 15, p. 82-83, pl. 61: figs 9-13 (1987).

***Rhopalodia rumrichiae*** Krammer, Biblioth. Diatomol. 15, p. 83-84, pl. 62: figs 5-12 (1987). [Comment: on p. 83 pl. 62: fig. 5 is not referred to. *Rhopalodia rumrichiae* on p. 83 and 270 misspelled as "*Rhopalodia rumrichae*".]

***Rhopalodia sculpta*** Krammer, Biblioth. Diatomol. 15, p. 84, pl. 62: figs 1-4 (1987).

***Rhopalodia sterrenburgii*** Krammer, Biblioth. Diatomol. 15, p. 85, pl. 61: figs 5-8 (1987).

#### **SELLAPHORA** Mereschk.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=732](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=732)].

***Sellaphora amoena*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 202, pl. 84: fig. 4, pl. 85: figs 10-12 (1998).

***Sellaphora costei*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 203, pl. 85: figs 1-3 (1998).

***Sellaphora gibbula*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 204, pl. 85: figs 6-7 (1998).

***Sellaphora guyanensis*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 205, pl. 100: figs 9-14, pl. 164: fig. 1 (1998).

***Sellaphora illustris*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 205-206, pl. 82: figs 1-2, pl. 84: figs 5-6 (1998). [Comment: *Sellaphora illustris* is not documented on pl. 82: figs 8-9 as cited on p. 205.]

***Sellaphora lambda* var. *densistriata*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 207, pl. 82: figs 3-4, pl. 84: fig. 7 (1998).

***Sellaphora laterostellata*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 208, pl. 82: figs 5-6 (1998).

***Sellaphora laterostrata*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 208-209, pl. 81: figs 21-23 (1998).

***Sellaphora pupula* var. *densistriata*** Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 102, pl. 25: fig. 9 (1996).

***Sellaphora reviersii*** Lange-Bert. et Gerd Moser, Biblioth. Diatomol. 32, p. 135-136, pl. 63: figs 5-8 (1995).

***Sellaphora sublinearis*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 209, pl. 81: figs 7-8 (1998).

***Sellaphora tapajosensis*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 210, pl. 81: figs 5-6 (1998).

***Sellaphora tenerrima*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 211, pl. 81: figs 13-15 (1998).

***Sellaphora triundulata*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 212, pl. 81: figs 16-19 (1998).

***Sellaphora verecundiae*** Lange-Bert., Biblioth. Diatomol. 29, p. 93, pl. 52: figs 19-28 (1994).

#### **SEMINAVIS** D.G.Mann

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=374](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=374)]

[<http://128.32.109.44/cgi-bin/porp.cgi.pl?SEMINAVISDGMANN1990>].

***Seminavis barbara*** Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 348, 440, pl. 166: figs 1-4 (2000).

***SIEMINSKIA*** Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 213-214 (1998). [Typus generis: *Sieminskia wohlenbergii* (C.Brockmann) Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 215 (1998).]

***SIMONSENIA*** Lange-Bert., Bacillaria 2, p. 131. [Typus generis: *Simonsenia delognei* (Grunow) Lange-Bert., Bacillaria 2, p. 132 (1979).]

***Simonsenia delognei* ssp. *rossii*** Lange-Bert. et Krammer, Nova Hedwigia Beih. 106, p. 122, figs 1-10 (1993).

#### **STAURONEIS** Ehrenb.

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=179](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=179)].

***Stauroneis angustilancea*** Metzeltin et Lange-Bert., nom. inval., Iconogr. Diatomol. 5, p. 216, pl. 98: fig. 4 (1998). [Comment: *Stauroneis angustilancea* is lacking a type and a Latin diagnosis, hence the name is invalidly published.

*Stauroneis angustilancea* was documented already in Lange-Bertalot & Metzeltin (1996), Iconogr. Diatomol. 2, p. 105 pl. 34: figs 1-3 as "*Stauroneis* (?nov.) spec. Nr. 3 Julma Ölkky".]

*Stauroneis cataractae* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 215-216, pl. 31: figs 11-14 (1998).

*Stauroneis circumborealis* Lange-Bert. et Krammer, Iconogr. Diatomol. 6, p. 90, pl. 34: figs 1-4 (1999).

*Stauroneis conspicua* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 216, pl. 98: fig. 5 (1998).

*Stauroneis dubitabilior* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 217, pl. 98: figs 16-19 (1998).

*Stauroneis heinii* Lange-Bert. et Krammer, Iconogr. Diatomol. 6, p. 91, pl. 27: figs 1-4 (1999).

*Stauroneis koeltzii* Metzeltin, Witkowski et Lange-Bert., Iconogr. Diatomol. 4, p. 26-27, pl. 10: figs 5-7 (1996).

*Stauroneis leguminiformis* Lange-Bert. et Krammer, Iconogr. Diatomol. 6, p. 93, pl. 33: figs 1-3 (1999).

*Stauroneis neofossilis* Lange-Bert. et Metzeltin, Iconogr. Diatomol. 2, p. 103, pl. 34: figs 4-5 (1996).

*Stauroneis punensis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 217, pl. 88: figs 1-4, (?) (2000).

*Stauroneis resoluta* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 217, pl. 31: fig. 15, pl. 32: figs 1-6 (1998).

*Stauroneis schimanskii* Krammer, Biblioth. Diatomol. 9, p. 115-116, pl. 5: figs 1-6 (1985). [As a part of the protologue, Krammer & Lange-Bertalot (1986), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (1), pl. 90: figs 7-9 is cited.]

*Stauroneis subgracilis* Lange-Bert. et Krammer, Iconogr. Diatomol. 6, p. 96, pl. 29: figs 1-7 (1999).

*Stauroneis tackei* (Hust.) Krammer et Lange-Bert. in Jahn et al., Lange-Bertalot-Festschrift, p. 633 (2001).

Basionym: *Navicula tackei* Hust., Abh. Naturwiss. Vereine Bremen 32, p. 194, figs 6-7 (1942).

[– *Stauroneis tackei* (Hust.) Krammer et Lange-Bert., nom. inval., Biblioth. Diatomol. 9, p. 116 (1985).]

[Comment: according to Simonsen, 1987, Atlas and Catalogue of the Diatom Types of Friedrich Hustedt 1, p. 305 the holotype is N10/84.]

*Stauroneis valderostrata* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 218-219, pl. 95: fig. 1, pl. 98: figs 11-15 (1998).

*Stauroneis ventriosus* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 219, pl. 98: figs 1-2 (1998).

*Stauronella indubitabilis* Lange-Bert. et Genkal, Iconogr. Diatomol. 6, p. 100, pl. 36: figs 1-8 (1999).

*Staurophora anuschkae* Witkowski, Iconogr. Diatomol. 7, p. 440-441, pl. 150: figs 1-15 (2000).

*Staurosira altiplanensis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 220, pl. 14: figs 1-8 (2000).

*Staurosira aventralis* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 221, pl. 11: figs 1-8 (2000).

*Staurosira laucensis* Lange-Bert. et U.Rumrich var. *laucensis*, Iconogr. Diatomol. 9, p. 222-223, pl. 13: figs 10-20, 22-23 (2000).

*Staurosira laucensis* var. *vulpina* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 223, pl. 10: figs 1-11 (2000).

*Staurosira mercedes* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 224, pl. 10: figs 12-14 (2000). [Comment: valid name on species rank for *Fragilaria brevistriata* var. *trigona* Lange-Bert., nom. inval., in Krammer & Lange-Bertalot, Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (3), p. 464, pl. 117: fig. 7b (1991).]

*Staurosira proboscoidea* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 226, pl. 10: figs 15-19 (2000).

*Staurosira punctiformis* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 78, 441, pl. 24: figs 51-58, pl. 26: figs 1-2 (2000). [Comment: on p. 78 and 490 (caption of pl. 24) and 494 (caption of pl. 26) the authors are cited as "Witkowski, Metzeltin et Lange-Bert.".]

#### **STENONEIS** Cleve

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=849](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=849)].

*Stenoneis wojtek-kowalskii* Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 353, 441, pl. 156: figs 20-21 (2000).

#### **STENOPTEROBIA** Bréb. ex VanHeurck

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=749](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=749)].

*Stenopterobia eximia* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 218-219, pl. 68: figs 2-4, (5?) (1998).

*Stenopterobia krammeri* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 220, pl. 217: figs 1-6 (1998).

*Stenopterobia minuscula* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 219-220, pl. 67: figs 3-5 (1998).

*Stenopterobia planctonica* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 221, pl. 210: fig. 4, pl. 219: fig. 3 (1998).

*Stenopterobia pumila* Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 227, pl. 196: figs 1-7, pl. 197: figs 8-9 (2000).

*Stenopterobia ruppeliana* Gerd Moser, Lange-Bert. et Steindorf, Biblioth. Diatomol. 32, p. 147-148, pl. 74: figs 1-8 (1995).

*Stenopterobia scolopendra* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 220-221, pl. 69: figs 3-4 (1998).

### **SURIPELLA Turpin**

[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=152](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=152)].

*Surirella brebissonii* Krammer et Lange-Bert. var. *brebissonii*, Diatom Res. 2, p. 82, 85, figs 1, 4-5, 9, 21-33 (1987).

*Surirella brebissonii* var. *kuetzingii* Krammer et Lange-Bert., Diatom Res. 2, p. 85-86, figs 52-68 (1987).

*Surirella brebissonii* var. *punctata* Krammer, Biblioth. Diatomol. 15, p. 95, pl. 55: figs 1-10 (1987). [As a part of the protologue, Krammer & Lange-Bertalot (1988), Süßwasserflora von Mitteleuropa, Bacillariophyceae 2 (2), pl. 127: figs 9-13 is cited.]

*Surirella citrus* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 222, pl. 213: fig. 1 (1998). [Comment: *Surirella citrus* on p. 660 is cited as "*S. citreus*" (caption of pl. 213: fig. 1).]

*Surirella desikacharyi* Lange-Bert. et Metzeltin, Nova Hedwigia Beih. 112, p. 322, figs 1-12 (1996).

*Surirella gotohiana* Gerd Moser, Lange-Bert. et Metzeltin, Biblioth. Diatomol. 38, p. 221-222, pl. 70: figs 1-3 (1998).

*Surirella lacus-vulcani* Metzeltin, Lange-Bert. et Krammer, Iconogr. Diatomol. 2, p. 107, pl. 106: figs 17-18 (1996).

*Surirella marina* Krammer, Biblioth. Diatomol. 15, p. 98-99, pl. 54: figs 1-9 (1987).

*Surirella patrimonii* Sterrenburg, Biblioth. Diatomol. 15, p. 101-102, pl. 57: figs 1, 4-5 (1987).

*Surirella rottii* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 223, pl. 208: figs 1-3, pl. 211: fig. 2 (1998).

*Surirella rumrichorum* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 224, pl. 219: fig. 7, pl. 216: figs 2-3 (1998).

*Surirella schuwerkii* E.Reichardt, Mem. Calif. Acad. Sci. 17, p. 130: figs 15-26 (1994).

*Surirella susanae* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 226, pl. 220: figs 1-3 (1998).

*Surirella tenerisilex* Metzeltin et Lange-Bert., Iconogr. Diatomol. 5, p. 225, pl. 209: figs 4-6 (1998).

*Surirella terricola* Lange-Bert. et Alles, Iconogr. Diatomol. 2, p. 107-108, pl. 106: fig. 16 (1996). [Comment: validation of *Surirella terricola* Lange-Bert. et Alles, nom. inval., Biblioth. Diatomol. 27, p. 159, pl. 53: figs 1-2" (1993).]

*Surirella turkanensis* E.Reichardt, Mem. Calif. Acad. Sci. 17, p. 129-130: figs 1-14 (1994).

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[[http://www.calacademy.org/research/diatoms/hanna\\_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=980](http://www.calacademy.org/research/diatoms/hanna_db/DtmBrwsRecs.asp?Obj=vGenRef&Atr=GenusID&Val=980)].

*Tabellaria flocculosa* var. *andina* Lange-Bert., Biblioth. Diatomol. 27, p. 160, pl. 11: figs 1-9 (1993).

**ULNARIA (Kütz.) Lange-Bert. et Compère (subgenus within FRAGILARIA)**, Diatom Res. 16, p. 103 (2001).

Basionym: *SYNEDRA* [unranked] *ULNARIA* Kütz., Die kieselschaligen Bacillarien oder Diatomeen, p.65 (1844). [*Synedra ulna* (Nitzsch) Ehrenberg is the type of the name of the subgenus.]

**ULNARIA (Kütz.) Compère** in Jahn et al., Lange-Bertalot-Festschrift, p. 100 (2001).

Basionym: *SYNEDRA* [unranked] *ULNARIA* Kütz., Die kieselschaligen Bacillarien oder Diatomeen, p.65 (1844). [*Synedra ulna* (Nitzsch) Ehrenberg is the type of the name of the genus.]

**VEIGALUDWIGIA Lange-Bert. et U.Rumrich**, Iconogr. Diatomol. 9, p. 228-229 (2000).

[Typus generis: *Veigaludwigia urbana* (Krasske) Lange-Bert. et U.Rumrich, Iconogr. Diatomol. 9, p. 228 (2000).]

**VIKINGEA Witkowski, Lange-Bert. et Metzeltin**, Iconogr. Diatomol. 7, p. 125, 442 (2000). [Typus generis: *Vikingea gibbocalyx* (Brun) Witkowski, Lange-Bert. et Metzeltin, Iconogr. Diatomol. 7, p. 125 (2000).]

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