

Biovolume and biomass estimates of key diatoms in the Southern Ocean

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Appendix 1. A list of taxonomic literature relevant to the species described in this work. We suggest using Hasle & Syvertsen (1997) as a starting point for all species listed, other references listed are those that provide good illustrations of the species or genera in question. This amended taxonomic list was originally reported in Armand (1997) under Appendix A1. Floral List. Additional references are given at the end of the list

***Asteromphalus hookeri* Ehrenberg (1844)**

References used: Fenner et al. 1976 Pl. 4 fig. 24; Akiba 1982 Pl. 1 fig.1; Pichon 1985 Pl. 1 fig. 7; Zielinski 1993 Pl. 1 fig. 4.

***Asteromphalus hyalinus* Karsten (1905)**

References used: Abbott 1973 Pl. 2 fig. B; Fenner et al. 1976 Pl. 4 figs 17-19; Schrader 1976 Pl. 8 figs 5,7; Akiba 1982 Pl. 1 fig. 4; Pichon 1985 Pl. 1 fig. 8; Zielinski 1993 Pl. 1 fig. 5

***Azpeitia tabularis* (Grunow) Fryxell Et Sims (1986)**

Synonyms: *Coscinodiscus tabularis* in Hustedt 1930, Abbott 1973, Fenner et al. 1976, Schrader 1976, Akiba 1982, Pichon 1985.

T. antarctica, in Pichon 1985 Pl. 4 fig. 4.

References used: Hustedt 1930 fig. 230a; Abbott 1973 Pl. 3 figs A-C; Fenner et al. 1976 Pl. 7 figs 10-13; Akiba 1982 Pl. 2 figs 6-9; Pichon 1985 Pl. 2 figs 11-14; Fryxell et al. 1986 Pl. XXX fig. 1; Zielinski 1993 Pl. 2 figs 1,4.

***Chaetoceros bulbosum* complex (Ehrenberg) Heiden**

References used: Hustedt 1930 figs 363-366; Abbott 1973 Pl. 10 fig. E; Akiba 1982 Pl. 7 fig. 9; Pichon 1985 Pl. 2 fig. 5.

***Chaetoceros* resting spores.**

References used: Castracane 1886 Pl. XIX figs 7-8; Hustedt 1930 figs 384b, 385e-f, 386, 387, 396, 397, 400d, 404, 405b-d, 406a-b, 407c-e, 411a, 417d, 423, 430b, 432b, 436, 437, 439, 442, 440; Barde-Labayle-Bounés 1980 Pl. II figs 8-18, Pl. VX fig. 1-3; Riaux-Gobin and Descolas-Gros 1992 figs 1.1, Pl. I fig. 5-6, Pl. II figs 1-4; Zielinski 1993 Pl. 7 figs 6-12.

***Chaetoceros Hyalochaetae* Gran (1897).**

This includes principally the species *C. socialis*, *C. neglectus* and *C.*

References used: Hasle and Syvertsen 1997 pg 192-193, 204-225.

***Corethron inerme* Karsten**

References used: Tomas and Bonham 1990 pg 105-107, Crawford et al. 1998 pg 1-28.

***Cylindrotheca closterium* (Ehrenberg) Lewin and Reimann**

Synonyms: *Nitzschia closterium* (Ehrenberg) W. Smith.

References used: Hasle and Syvertsen 1997 pg 294 with emended description.

***Dactyliosolen antarctica* Castracane (1886)**

References used: Castracane 1886 Pl. IX fig. 7, Hasle 1975 Pl. 80 figs 90-100, Fenner et al. 1976 Pl. 11 fig. 11, Harwood and Maruyama 1992 Pl. 18 fig. 12.

***Eucampia antarctica* (Castracane) Manguin**

Synonyms: *E. balaustium* Castracane

in Castracane 1886, Abbott 1973, Fenner et al. 1976, Schrader 1976, Akiba 1982

References used: Castracane 1886 Pl. XVIII figs 5-6, Fenner et al. 1976 Pl. 5 figs 8-9, Akiba 1982 figs 1-9, Krebs 1983 Pl. 3 figs 3a-b, Burckle 1984 figs 1-7, Fryxell and Prasad 1990 figs 2-18.

***Fragilariopsis kerguelensis* (O'Meara) Hustedt (1952)**

Synonyms: *Nitzschia kerguelensis* (O'Meara) Hasle, *Fragilaria antarctica* Castracane, *Nitzschia lanceolata* in Abbott 1973.

References used: Hustedt 1958 Pl. 10 figs 121-127. Hasle 1965b Pl. 4 figs 11-18, Pl. 5 figs 1-11, Pl. 7 fig. 9, Fenner et al. 1976 Pl. 2 figs 19-30, Akiba 1982 Pl. 9 figs 1a-4.

***Fragilariopsis rhombica* (O'Meara) Hustedt (1952)**

Synonyms: *Nitzschia angulata* Hasle, *Diatoma rhombica* O'Meara, *Nitzschia rhombica* in Abbott 1973.

References used: Hustedt 1958 Pl. 10 figs 113-120, Hasle 1965b Pl. 10 figs 2-6, Pl. 9 figs 1-6, Pl. 4 fig. 19, Pl. 1 fig. 6, Abbott 1973 Pl. 7 figs D-E, Fenner et al. 1976 Pl. 1 figs 17-39, Akiba 1982 Pl. 10 figs 6-8.

***Fragilariopsis separanda* Hustedt (1958)**

Synonyms: *Nitzschia seperanda* (Hustedt) Hasle

References used: Hustedt 1958 Pl. 10 figs 108-112, Hasle 1965b Pl. 9 figs 7-10, Pl. 10 fig. 1, Fenner et al. 1976 Pl. 1 figs 1-16, Akiba 1982 Pl.10 figs 3-5b, 9-11, Zielinski 1993 Pl. 5 figs 8-10.

***Fragilariopsis pseudonana* (Hasle) Hasle (1993)**

Synonyms: *Nitzschia pseudonana* Hasle

References used: Hasle 1965b Pl. 1 figs 7-14, Pl. 4 figs 20-21, Fenner et al. 1976 Pl. 2 figs 6-11, Hasle and Booth 1984 figs 29-31.

***Guinardia cylindrus* (Cleve) Hasle**

Basionym: *Rhizosolenia cylindrus* Cleve (1897)

References used: Hasle and Syvertsen (1997) pg 340, 161-162.

Appendix 1 (continued)

***Haslea trompii* (Cleve) Simonsen**

Basionym: *Navicula trompii* Cleve

References used: Simonsen (1974) pg 47, Hasle and Syvertsen (1997) pg 278

***Leptocylindrus danicus* Cleve**

References used: Hasle and Syvertsen (1997) pg 93-95.

***Membraneis* spp.**

These are former *Tropidoneis* spp. and include species in the genera *Banquisia*, *Membraneis*, *Manguinea* and *Plagiotropis* as described by Paddock (1988, 1990) and Paddock and Sims (1981).

References used: Paddock (1990), pg 151-155, Hasle and Syvertsen (1997) pg 286-289.

Genus *Navicula* Bory De St-Vincent (1822).

***Navicula directa* (Smith) Ralis in Pritchard (1861)**

References used: Abbott 1973 Pl. 7 fig. M, Fenner et al. 1976 Pl. 14 fig. 7, Akiba 1982 Pl. 8 fig. 14, Krebs 1983 Pl. 3 fig. 7.

***Nitzschia sicula* var. *rostrata* Hustedt (1958)**

References used: Hustedt 1958 Pl. 11 figs 128-132, Hasle 1964 text fig. 13, Pl. 16, figs 2,4, Fenner et al. 1976 Pl. 3 figs 13-14.

***Odontella weissflogii* (Janisch) Grunow**

Synonyms: *Biddulphia weissflogii* (Grunow in Van Heurck) 1882

References used: Hoban et al. 1980 figs 15-26

***Proboscia alata* (Brightwell) Sundström (1986)**

Synonyms: *Rhizosolenia alata* (Brightwell)

References used: Sundström 1986, Priddle et al. 1990, Jordan et al. 1991 figs 1-9, Takahashi et al. 1994 figs 2-7.

***Proboscia inermis* (Castracance) Jordan and Ligowski**

References used: Sundström 1986, Priddle et al. 1990, Jordan et al. 1991 figs 10-18.

Genus *Pseudo-nitzschia* H. Pergallo in H. et M. Pergallo (1900)

***Pseudo-nitzschia* spp. (<5 µm transapical axis) - this category includes the species *P. lineola*, *P. turgidula* and *P. subcurvata*.**

References used: Hasle 1965a, Hasle and Syvertsen (1997) and Ferrario and Licea (2006).

***Pseudo-nitzschia* spp. (>5 µm transapical axis) - this category represents principally *P. heimii*.**

***Pseudonitzschia heimii* Manguin (1957)**

Synonyms: *Nitzschia heimii* (Manguin) Hasle

References used: Hasle 1965a Pl. 10 figs 9-13, Simonsen 1974 Pl. 36, figs 4-5, Hasle and Syvertsen (1997) and Ferrario and Licea (2006).

***Rhizosolenia chunii* Karsten**

References used: Sundström (1986), Priddle et al. (1990) and Armand and Zielinski (2001).

***Thalassionema nitzschioides* var. *nitzschioides* - this species includes both *T. nitz.* sensu stricto and the forma 1 described by Zielinski and Gersonde both descriptions are given below.**

***Thalassionema nitzschioides* Grunow**

References used: Hustedt 1930 fig. 725, Abbott 1973 Pl. 11 fig. C, Fenner et al. 1976 Pl. 14 fig. 11, Barde-Labayle-Bounés 1980 Pl. XII figs 5-7, Akiba 1982 Pl. 8 figs 15-16, Zielinski 1993 Pl. 6 figs 5-6, Moreno-Ruiz and Licea 1995 figs 1-3.

***Thalassionema nitzschioides* forma 1 (sensu Zielinski et Gersonde 1997)**

Illustration: Pl. 12. figs 3-4.

Reference used: Zielinski and Gersonde 1997 fig. 3.

***Thalassionema nitzschioides* var. *lanceolata* (Grunow) Pergallo et Pergallo (1897-1908)**

Synonyms: *Thalassiothrix nitzschioides* var. *lanceolata* Grunow, *Spinigera lanceolata* Heiden, *T. nitzschioides* var. *capitulata* in Zielinski 1993

References used: Zielinski 1993 Pl. 6 fig. 1-2 (as *T. n.* var. *capitulata*), Simonsen 1992 Pl. 22 figs 16-17, Moreno-Ruiz and Licea 1995 figs 23-24.

***Thalassiosira gracilis* var. *gracilis* (Karsten) Hustedt (1958)**

References used: Hustedt 1958 Pl. 3 figs 4-7, Ramirez 1981 Pl. 66-67 figs 411-420, Johansen and Fryxell 1985 figs 58-59, Fryxell 1990 Pl. 2 figs 5-9

- See Fryxell 1990 Pl. 2 figs 5-13, for photographic illustration of graduation of var. *gracilis* to var. *expecta*.

***Thalassiosira gracilis* var. *expecta* (Van Ledingham) Fryxell et Hasle (1979b)**

Synonyms: *Thalassiosira delicatula* (Hustedt), *Thalassiosira delicatula*

References used: Hustedt 1958 Pl. 3. figs 8-10, Hasle and Heimdal 1970 fig. 1-4, Fryxell and Hasle 1979 figs 23-28, Ramirez 1981 Pl. 68 figs 421-424, Hallegraeff 1984 fig. 24a-b, Johansen and Fryxell 1985 figs 60-63, Fryxell 1990 Pl. 2 figs 9-13;

***Thalassiosira lentiginosa* (Janisch) Fryxell (1977)**

Synonyms: *Coscinodiscus lentiginosus* Janisch in Schmidt 1878, in Abbott 1973, Fenner et al. 1976, Akiba 1982.

References used: Hustedt 1958 Pl. 4 figs 22-25, Abbott 1973 Pl. 3 figs D-F, Fenner et al. 1976 Pl. 7 figs 4-6, Fryxell 1977 figs 13-14, Johansen and Fryxell 1985 figs 49-50.

***Thalassiothrix antarctica* Schimper Ex Karsten (1905)**

Illustration: Pl. 16, figs 9-11.

References used: Hasle and Semina 1987 figs 26-59, Hasle 1990 Pl. 17.1 figs 4-6.

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