



Gulf of Mexico

Origin, Waters, and Biota

Volume 1: **Biodiversity**

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and **David K. Camp**



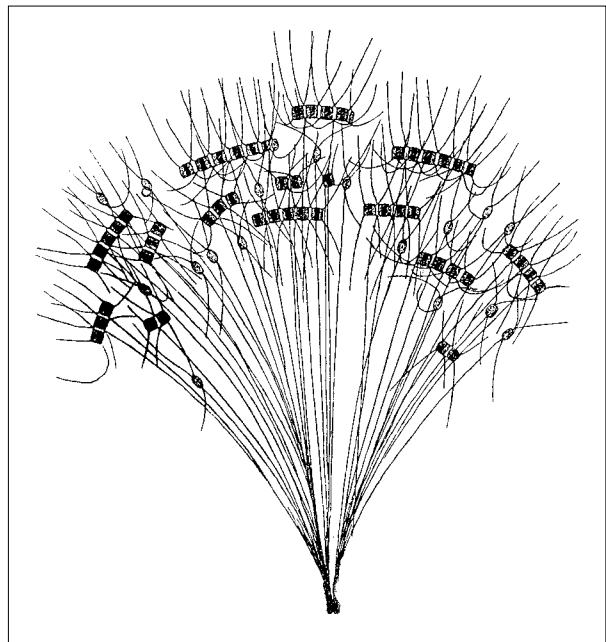
Diatoms (Bacillariophyta) of the Gulf of Mexico

David M. Krayesky, Esther Meave del Castillo, Eugenia Zamudio, James N. Norris, and Suzanne Fredericq

The Bacillariophyta (Diatoms) represent a very large group of unicellular algae present in marine, freshwater, terrestrial, and aerial ecosystems. Although long studied in fossil and living environs, their diversity is still not completely known. Small-subunit ribosomal RNA (ssRNA) sequence data support the premise that the Bacillariophyta are a monophyletic group within the chromophyte or brown algal lineage (Medlin, Williams, and Sims 1993). More recently, Adl et al. (2005, 423) recognized 20 groups within the Chromalveolata, one of 6 clusters of eukaryotes that are considered to be evolutionarily related and represent the basic groups (or traditional kingdoms) in their nameless ranked higher-level classification.

The Chromalveolata are composed of: (1) the Alveolata (includes ciliates, dinoflagellates, and Apicomplexa); (2) the Stramenopiles (includes diatoms, Phaeophyceae [brown algae], many zoosporic fungi, and the opalinids, among others); and (3) the Haptophyta and Cryptophyceae. It has been argued that the Chromalveolata are derived from an alga, and that then some groups arose through plastid loss, or possibly they branched off before the appearance of plastids within the group. Plastid reduction as well as reacquisition has also occurred in some (Adl et al. 2005). It has been argued that the chromalveolates are derived from a single symbiosis of a phagotrophic heterotrophic eukaryote with a photosynthetic red algal eukaryote, and that the plastid was secondarily lost in several lineages (Adl et al. 2005).

As is the case for all taxa previously referred to as “Protists,” we have here followed a hierarchical system with-



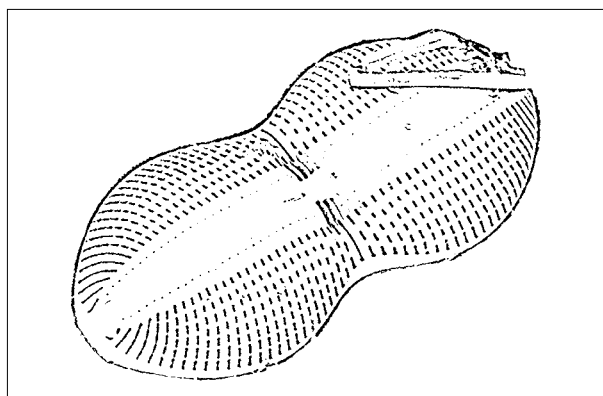
Bacillariophyta (Diatoms). After Mangin 1908.

out formal rank designations such as class, subclass, super order, or order, as this approach is currently the preferred decision—primarily motivated by utility—to avoid the common problem of a single change causing a cascade of changes to the system (Adl et al. 2005).

At present there are over 250 genera of living diatoms, with 10,000–12,000 species recognized and an estimated diversity of 100,000–10,000,000 species (Round, Mann, and Crawford 1990, Norton, Melkonian, and Andersen

1996). Traditionally, diatoms have been classified into “centric” and “pennate” on the basis of pattern (radial organization versus bilateral organization), pattern center (ringlike annulus versus elongate sternum), and sexual reproduction (oogamy versus morphological isogamy), diatom shape/symmetry, and plastid structure and number (Round, Mann, and Crawford 1990). Molecular data show the centrics as a whole to be paraphyletic, but relationships between the principal groups, and whether particular groups are monophyletic or paraphyletic, is currently unclear (Adl et al. 2005); furthermore, several major clades are cryptic, with no or few morphological or life history traits that can be convincingly argued to be synapomorphies. In order to reflect the historical treatment of diatom taxonomy, we have opted for the conservative approach that follows the subdivision of the Bacillariophyta into the Bacillariophyceae (pennates), Fragilariophyceae (araphid pennates), and Coscinodiscophyceae (centrics; Round, Mann, and Crawford 1990). The more phylogenetically correct treatment (Adl et al. 2005) divides the Diatoms into Coscinodiscophytina and Bacillariophytina.

Diatoms are reported to be ubiquitous in all waters worldwide except for regions of extreme heat and salinity. Both planktonic and benthic taxa occur within the Bacillariophyta, as well as epipelagic, epipsammic, epilithic, epiphytic, and epizoid individuals/communities (Round, Mann, and Crawford 1990). Of great ecological and commercial significance, diatoms are a major component of the marine phytoplankton and represent the base of the food web for many marine organisms. Furthermore, marine diatoms, due to their abundance and productivity, are responsible for approximately 25% of the world's



Bacillariophyta (Diatoms). Modified by F. Moretzsohn after a photograph from <http://www.ualg.pt/adiac/pubdat/pubdat.html>

carbon fixation contribution (Werner 1977, Tréguer et al. 1995). Commercially, diatomaceous earth (fossilized diatoms) has industrial uses, as it is made into abrasives and filtering aids. Recently, diatoms have been used as model organisms for biofuels, as they are triglyceride-rich, with triglycerides accounting for approximately half of their mass (Danielo 2005).

Since the treatment by Conger (1954) of the Diatoms in the Gulf of Mexico, many regional studies have been conducted (Curl 1959, Simmons and Thomas 1962, Wood 1963, Ivanov 1966, Saunders and Glenn 1969, Sullivan 1978, Sullivan 1981, Stowe 1982, Prasad 1987, Prasad, Nienow, and Livingston et al. 1990, Prasad, Fryxell, and Livingston 1993, Prasad and Livingston 1993, Lehman and Wood 1996, Prasad, Nienow, and Riddle 2001, Gallegos et al. 2004, Prasad and Livingston 2005, Prasad and Nienow 2006). A second checklist of the Bacillariophyta was accomplished by Conger et al. (1972), which was predominantly a compilation of names of taxa along with some information on the environmental implications of 14 species occurring in particular regions of the study area. This list reported over 700 species, including alphabetized intraspecific taxa, but did not indicate in which families the taxa belonged, nor how many families occurred throughout the Gulf of Mexico. In the past 35 years the systematics of the Bacillariophyta has changed significantly, and there has been the addition of species previously unreported from the Gulf of Mexico. The present study reports about 1000 diatom species, including previously reported species, updates the nomenclature of reported species names, and is the first attempt to group them into families for the region. As this chapter reports the biodiversity of a group that falls within the confines of botany, the species names and authors reported herein follow the rules of the International Code of Botanical Nomenclature (McNeill et al. 2006); author(s) of species names follow Brummitt and Powell (1992).

The checklist furnished here for Gulf of Mexico diatoms is in several ways unique to this volume. Rather than representing a thorough review of regional vouchers, it is a compilation of species putatively occurring in Gulf of Mexico waters. As such, we must acknowledge that not all records are equally verifiable or based upon accessible vouchers. For example, many of the records reported here are based on the work of Conger et al. (1972), a study that listed the known diversity of the group in the Gulf of Mexico up until that time. A large number of the species listed therein were based on personal identifications by the authors or were “compiled from old literature” (with



Bacillariophyta (Diatoms). After Mangin 1908.

ambiguity as to which was the case); none of these records included information on habitat and distribution and no reference was made to vouchers. Short of tracking down everything that could qualify as old literature and deducing from this which were new records, there is no way to verify the sources. With the lack of habitat and distributional information in that aforementioned major Gulf of Mexico summary, and our concern regarding possible overvaluation of reports from the Gulf of Mexico that should themselves require better documentation in years to come, we elected to not treat habitats and distributions to the same extent as in other chapters of this volume. Although a modern species nomenclator for the Bacillariophyta does exist, namely the Catalogue of the Fossil and Recent Genera and Species of Diatoms and their Synonyms (Van Landingham 1967, 1968, 1971, 1975, 1978a, 1978b, 1979), online sources such as Index Nominum Algarum (Silva 2006), AlgaeBase (Guiry and Guiry 2007), and the California Academy of Sciences Diatom Names (Fourtanier and Kociolek 2006) provide additional information on the diversity of this group. Therefore, these online sources are being used to confirm reported species as distinct.

We envision that taxonomic treatments, along with ecological (temporal and spatial), distributional accounts, as well as phylogenetic analyses will elucidate the composition of the Gulf of Mexico diatoms. The most tractable approach will be on a regional basis within the Gulf of Mexico. Toward such ends, our present effort provides a baseline of diatom taxa reported from the Gulf of Mexico for future workers.

Abbreviations

All abbreviations for Habitat-Biology used in this checklist are given with their definitions in the following. We realize that some benthic species are at certain points in time found in the water column and are regarded as tycho-planktonic. In the checklist, habitat data are reported under the ecological term(s) that best fits specimen collection information. The Habitat-Biology terms herein reflects the Habitat-Biology information as reported from Gulf of Mexico literature. Although diatoms can be epilithic (i.e., growing on a hard substratum—hsb), investigators have not focused on this habitat in the Gulf of Mexico.

The following terminology is used for this chapter's checklist. Ecological habitat: ben = benthic; plk = planktonic; epi = epibiotic. General depth/strata: bns = bay and nearshore; osp = oceanic surface and epipelagic. Substrate/biotic associations: sft = soft substrates (mud, sand, clay); hsb = hard substrate.

Acknowledgments

We thank Darryl Felder and Sherry Krayesky for their input on this checklist.

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Submitted: March 2007

Accepted: April 2007

Taxonomic summary for diatoms (Bacillariophyta) of the Gulf of Mexico.

Component subgroups	Total species	Component subgroups	Total species
Bacillariophyceae	548	Bellerocheaceae	2
Achnantheaceae	13	Biddulphiaceae	26
Achnanthidiaceae	1	Chaetocerotaceae	61
Amphipleuraceae	11	Corethraceae	1
Anomooneidaceae	3	Coscinodiscaceae	38
Bacillariaceae	99	Cymatosiraceae	4
Berkeleyaceae	1	Endictyaceae	1
Catenulaceae	66	Gossleriellaceae	1
Cavinulaceae	1	Heliopeltaceae	6
Cocconeidaceae	18	Hemiaulaceae	9
Cosmioneidaceae	2	Hemidiscaceae	8
Cymbellaceae	5	Hyalodiscaceae	3
Diadesmidaceae	2	Lauderiaceae	1
Dictyoneidaceae	3	Leptocylindraceae	3
Diploneidaceae	27	Lithodesmiaceae	4
Entomoneidaceae	1	Melosiraceae	12
Eunotiaceae	4	Paraliaceae	1
Gomphonemataceae	1	Plagiogrammaeae	17
Lyrellaceae	15	Pyxidiculaceae	2
Mastogloiaceae	30	Rhizosoleniaceae	25
Naviculaceae	125	Skeletonemaceae	2
Neidiaceae	1	Stephanodiscaceae	14
Pinnulariaceae	5	Stephanopyxidaceae	4
Plagiotropidaceae	3	Stictodiscaceae	1
Pleurosigmataceae	28	Thalassiosiraceae	23
Proschkiniaceae	1	Triceratiaceae	45
Rhopalodiaceae	5		
Scolioneidaceae	1	Fragilariophyceae	70
Scoliotropidaceae	1	Climacospheniaceae	2
Sellaphoraceae	15	Fragilariaceae	37
Surirellaceae	55	Licmophoraceae	2
Stauroneidaceae	4	Protoraphidaceae	1
Thalassioophysaceae	1	Psammodiscaceae	1
		Rhabdonemataceae	2
Coscinodiscophyceae	330	Rhaphoneidaceae	7
Anaulaceae	5	Striatellaceae	8
Asterolampraceae	9	Thalassionemataceae	8
Aulacodiscaceae	1	Toxariaceae	2
Aulacoseiraceae	1		
		Total	948

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico.

Taxon	Habitat-Biology	References/Endnotes
Bacillariophyta		
Class: Bacillariophyceae		
Family: Achnantheaceae		
<i>Achnanthes brevipes</i> C. Agardh, 1824	plk, ben, bns	4, 8, 11, 27 ¹ , 28
<i>Achnanthes coarctata</i> (Bréb. ex W. Sm.) Grunow, 1880		28
<i>Achnanthes curvirostrum</i> J. Brun, 1895	ben, bns	4, 11, 28
<i>Achnanthes danica</i> (Flögel) Grunow in Cleve & Grunow, 1880		4
<i>Achnanthes delicatula</i> (Kütz.) Grunow, 1880	ben, bns, sft	4, 11, 27 ² , 28 ³
<i>Achnanthes exilis</i> Kütz., 1833	ben, bns	4, 11
<i>Achnanthes hungarica</i> (Grunow) Grunow, 1880	ben, bns	4, 11
<i>Achnanthes lanceolata</i> (Bréb. ex Kütz.) Grunow, 1880	ben, bns, sft	27, 28
<i>Achnanthes lemmermannii</i> Hustedt, 1933		4, 28
<i>Achnanthes longipes</i> C. Agardh, 1824	plk, bns	4, 11
<i>Achnanthes manifera</i> Brun, 1895	plk, bns	4, 8
<i>Achnanthes temperei</i> M. Perag. in Tempère & Peragallo, 1908	ben, bns, sft	27, 28
<i>Achnanthes tenera</i> Hustedt, 1955	ben, bns	4, 11
Family: Achnantheidiaceae		
<i>Achnantheidium biasolettianum</i> (Grunow) Round & Bukhtiyarova, 1996	ben, bns	4 ⁴ , 11 ⁵ , 28 ⁶
Family: Amphipleuraceae		
<i>Amphiprora alata</i> (Ehrenb.) Kütz., 1844		4
<i>Amphiprora decussata</i> Grunow, 1880	ben, bns, sft	27
<i>Amphiprora gigantea</i> Grunow, 1860	plk, osp	4, 24, 28
<i>Amphiprora pulchra</i> Bailey, 1851	ben, bns, sft	27, 28
<i>Amphiprora similis</i> Hustedt, 1955	ben, bns, sft	27, 28
<i>Cistula lorenziana</i> (Grunow) Cleve, 1894		4
<i>Frustulia asymmetrica</i> (Cleve) Hustedt, 1954	ben, bns, sft	27, 28
<i>Frustulia creuzburgensis</i> (Krasske) Hustedt, 1957	ben, bns, sft	27 ⁷ , 28 ⁸
<i>Frustulia interposita</i> (F. W. Lewis) De Toni, 1891	ben, plk, bns	4, 8, 11
<i>Frustulia rhomboides</i> (Ehrenb.) De Toni, 1891	ben, plk, bns	4, 8, 11, 28
<i>Frustulia similis</i> Hustedt, 1954		28
Family: Anomoeoneidaceae		
<i>Anomoeoneis vitrea</i> (Grunow) R. Ross, 1966		28
<i>Staurophora amphioxys</i> (W. Greg.) D. G. Mann, 1990	ben, bns, sft	27 ⁹ , 28 ¹⁰
<i>Staurophora salina</i> (W. Smith) Mereschk., 1903	ben, bns, sft	27 ¹¹ , 28 ¹²
Family: Bacillariaceae		
<i>Bacillaria longa</i> (Grunow in Cleve & Grunow) De Toni, 1892		4
<i>Bacillaria paxillifer</i> (O. F. Müller) Hendey, 1951	ben, plk, bns, osp	8, 11, 24 ¹³ , 27 ¹⁴ , 28
<i>Cylindrotheca closterium</i> (Ehrenb.) Reimann & Lewin, 1964	plk, bns, osp	8, 11 ¹⁵ , 24 ¹⁶ , 28 ¹⁷
<i>Cylindrotheca gracilis</i> (Bréb.) Grunow, 1882		28
<i>Denticula subtilis</i> Grunow, 1862	epi, ben, bns, sft	26, 27, 28
<i>Fragilariopsis doliolus</i> (G. C. Wall.) Medlin & P. A. Sims, 1993	plk, bns	4 ¹⁸ , 11 ¹⁹
<i>Hantzschia amphioxys</i> (Ehrenb.) Grunow, 1877	plk, bns	4, 8, 11 ²⁰
<i>Hantzschia distincte-punctata</i> Hustedt in Schmidt et al., 1921		28
<i>Hantzschia elongata</i> (Hantzsch) Grunow, 1877	plk, osp	8
<i>Hantzschia marina</i> (Donkin) Grunow, 1877	ben, bns	4, 11
<i>Nitzschia acicularis</i> (Kütz.) W. Sm., 1853	plk, osp	4, 8
<i>Nitzschia angularis</i> W. Sm., 1853	ben, bns, sft	4, 27, 28
<i>Nitzschia amphibia</i> Grunow, 1862	epi, bns	26
<i>Nitzschia bicapitata</i> Cleve, 1901	plk, osp	4, 8
<i>Nitzschia bifurcata</i> Kaczmarek & Licea, 1986	plk, osp	8
<i>Nitzschia bilobata</i> W. Sm., 1853	ben, plk, bns	4, 11, 27, 28
<i>Nitzschia braarudii</i> Hasle, 1960		4
<i>Nitzschia brevissima</i> Grunow, 1881	ben, bns, sft	27 ²¹ , 28

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Nitzschia brevistriata</i> Grunow, 1880		4
<i>Nitzschia communis</i> Rabenh., 1860	ben, bns, sft	27, 28
<i>Nitzschia commutata</i> Grunow, 1881	ben, bns, sft	27 ²² , 28 ²³
<i>Nitzschia constricta</i> (Kütz.) Ralfs, 1861	epi, ben, bns	4, 27 ²⁴ , 28, 28 ²⁵
<i>Nitzschia dietrichii</i> Simonsen, 1974	plk, osp	8
<i>Nitzschia dissipata</i> (Kütz.) Grunow, 1860	ben, bns, sft	27, 28
<i>Nitzschia distans</i> W. Greg., 1857	ben, plk, bns	4, 11
<i>Nitzschia dubia</i> W. Sm., 1853	ben, bns, sft	27, 28
<i>Nitzschia dubiiformis</i> Hustdet, 1939		28
<i>Nitzschia epithemoides</i> Grunow, 1880	ben, bns, sft	27, 28
<i>Nitzschia eximia</i> Grunow, 1880		4
<i>Nitzschia fasciculata</i> (Grunow) Grunow in Van Heurck, 1881		28
<i>Nitzschia filiformis</i> (W. Sm.) Hustedt, 1896	ben, bns, sft	27, 28
<i>Nitzschia fluminensis</i> Grunow, 1862		4
<i>Nitzschia frustulum</i> (Kütz.) Grunow, 1880	ben, plk, bns, osp	8, 26, 27
<i>Nitzschia gandersheimiensis</i> Krasske, 1927		28
<i>Nitzschia gracilis</i> Hantzsch, 1860	ben, bns	4, 11
<i>Nitzschia grana</i> M. H. Hohn & Hellerman, 1966	ben, bns, sft	27, 28
<i>Nitzschia gruendleri</i> Grunow, 1878		4
<i>Nitzschia hustediana</i> Salah, 1953	ben, bns, sft	27, 28
<i>Nitzschia insignis</i> W. Greg., 1857		4
<i>Nitzschia kolaizeckii</i> Grunow, 1877		4 ²⁶
<i>Nitzschia lanceolata</i> W. Sm., 1853	epi, plk, bns	8, 26
<i>Nitzschia levidensis</i> (W. Sm.) Grunow, 1856	ben, bns, sft	27, 28
<i>Nitzschia longa</i> Grunow in Cleve & Grunow, 1880	plk, bns	8
<i>Nitzschia longissima</i> (Bréb. ex Kütz.) Grunow, 1862	ben, plk, bns, osp	4, 8, 11, 24
<i>Nitzschia lorenziana</i> Grunow, 1880	ben, plk, bns	4, 8, 11, 27, 28
<i>Nitzschia macilenta</i> W. Greg., 1859		4
<i>Nitzschia major</i> Grunow in Van Heurck, 1881		4
<i>Nitzschia majuscula</i> Grunow, 1880		4
<i>Nitzschia marina</i> Grunow, 1880		4
<i>Nitzschia microcephala</i> Grunow, 1880	ben, bns, sft	27, 28
<i>Nitzschia minutula</i> (Grunow) Grunow, 1881		28
<i>Nitzschia obsidialis</i> Hustedt, 1949	ben, bns, sft	27, 28
<i>Nitzschia obtusa</i> W. Sm., 1853	ben, plk, bns	4, 8, 11, 27, 28
<i>Nitzschia ovalis</i> Arn., 1880	plk, osp	8
<i>Nitzschia pacifica</i> Cupp, 1943	plk, bns, osp	4, 8, 11
<i>Nitzschia palea</i> (Kütz.) W. Sm., 1856	ben, bns	4, 11, 28
<i>Nitzschia paleacea</i> (Grunow) Grunow, 1881	epi, bns	28
<i>Nitzschia plana</i> W. Sm., 1853	ben, bns, sft	4, 11, 27, 28
<i>Nitzschia pulcherrima</i> (Grunow ex Kitton) Grunow in Cleve & Möller, 1878		4
<i>Nitzschia punctata</i> (W. Sm.) Grunow, 1878	ben, bns	4, 11
<i>Nitzschia recta</i> Hantzsch in Rabenh., 1862	ben, bns, sft	27, 28
<i>Nitzschia romana</i> Grunow, 1881		28
<i>Nitzschia romanooides</i> Manguin, 1952		28
<i>Nitzschia scalaris</i> (Ehrenb.) W. Sm., 1853	ben, bns, sft	27, 28
<i>Nitzschia scaligera</i> Grunow, 1880		4
<i>Nitzschia semicostata</i> Boyer, 1920		4
<i>Nitzschia sicula</i> (Castrac.) Hustedt, 1958		4
<i>Nitzschia sigma</i> (Kütz.) W. Sm., 1853	ben, plk, bns, osp	4, 8, 11, 27, 28
<i>Nitzschia sigmaformis</i> Hustedt, 1955	plk, bns	4, 11
<i>Nitzschia sigmoidea</i> (Nitzsch) W. Sm., 1853	plk, bns, osp	4, 8
<i>Nitzschia silicula</i> Hustedt, 1955	ben, bns	4, 11
<i>Nitzschia socialis</i> W. Greg., 1857	ben, plk, bns, osp	8, 27, 28

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Nitzschia tenuirostris</i> Manguin, 1952		4
<i>Nitzschia tryblionella</i> Hantzsch, 1860	epi, ben, plk, bns	4, 8, 11, 26, 27, 28
<i>Nitzschia valida</i> Cleve & Grunow, 1878		4
<i>Nitzschia visurgis</i> Hustedt, 1957		28
<i>Nitzschia vitrea</i> G. Norman, 1860	ben, bns, sft	27, 28
<i>Nitzschia weissflogii</i> Grunow, 1878		4
<i>Psammodictyon constrictum</i> (W. Greg.) D. G. Mann, 1990	plk, osp	8
<i>Psammodictyon mediterraneum</i> (Hustedt) D. G. Mann, 1990	ben, bns	4 ²⁷ , 11 ²⁸
<i>Psammodictyon panduriforme</i> (W. Greg.) D. G. Mann, 1990	ben, plk, bns, osp	4 ²⁹ , 8, 11 ³⁰ , 27 ³¹ , 28 ³²
<i>Pseudo-nitzschia delicatissima</i> (Cleve) Heiden in Heiden & Kolbe, 1928	plk, bns, osp	8, 11 ³³
<i>Pseudo-nitzschia prolongatoides</i> (Hasle) Hasle, 1993	plk, osp	8
<i>Pseudo-nitzschia pseudodelicatissima</i> (Hasle) Hasle, 1993	plk, osp	4 ³⁴ , 8
<i>Pseudo-nitzschia pungens</i> (Grunow ex Cleve) Hasle, 1993	plk, osp	8, 11 ³⁵ , 24 ³⁶
<i>Pseudo-nitzschia multiseriata</i> (Hasle) Hasle, 1995		4 ³⁷
<i>Pseudo-nitzschia subfraudulenta</i> (Hasle) Hasle, 1993		4 ³⁸
<i>Pseudo-nitzschia subpacificata</i> (Hasle) Hasle, 1993	plk, bns	8 ³⁹
<i>Pseudo-nitzschia seriata</i> (Cleve) H. Perag., 1908	plk, bns, osp	4 ⁴⁰ , 8, 11 ⁴¹
<i>Tryblionella acuta</i> (Cleve) D. G. Mann, 1990	plk, bns, osp	8 ⁴²
<i>Tryblionella brightwellii</i> (Kitton in A. Pritch.) D. G. Mann, 1990		4 ⁴³
<i>Tryblionella calida</i> (Grunow in Cleve & Grunow) D. G. Mann, 1990		28 ⁴⁴
<i>Tryblionella campechiana</i> (Grunow) D. G. Mann, 1990		4 ⁴⁵
<i>Tryblionella constricta</i> W. Greg., 1855		4 ⁴⁶
<i>Tryblionella granulata</i> (Grunow) D. G. Mann, 1990	ben, plk, bns	4 ⁴⁷ , 8 ⁴⁸ , 11 ⁴⁹ , 27 ⁵⁰ , 28 ⁵¹
<i>Tryblionella hungarica</i> (Grunow) Freng., 1942	ben, bns	4 ⁵² , 11 ⁵³ , 27 ⁵⁴ , 28 ⁵⁵
<i>Tryblionella marginulata</i> (Grunow) Freng., 1945		4 ⁵⁶
<i>Tryblionella perversa</i> (Grunow) D. G. Mann, 1990	ben, bns, sft	27 ⁵⁷ , 28 ⁵⁸
<i>Tryblionella visurgis</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ⁵⁹
Family: Berkeleyaceae		
<i>Berkeleya rutilans</i> (Trentep.) Cleve, 1880		28
Family: Catenulaceae		
<i>Amphora acuta</i> W. Greg., 1857		4
<i>Amphora alata</i> H. Perag., 1888		4
<i>Amphora angularis</i> W. Greg., 1855	ben, bns	4, 11
<i>Amphora angusta</i> W. Greg., 1857	epi, ben, bns	4, 11, 26, 27, 28
<i>Amphora arcuata</i> A. Schmidt, 1875	ben, bns	11
<i>Amphora arenaria</i> Donkin, 1858	ben, bns	4, 11
<i>Amphora areolata</i> Grunow, 1876		4
<i>Amphora aspera</i> Petit, 1877	ben, bns	4, 11
<i>Amphora bigibba</i> Grunow ex A. Schmidt, 1875		4
<i>Amphora bigibbosa</i> Cleve, 1895		4
<i>Amphora binodis</i> W. Greg., 1857		4
<i>Amphora capensis</i> A. Schmidt, 1875		4
<i>Amphora caroliniana</i> Giffen, 1980		28
<i>Amphora cingulata</i> Cleve, 1875		4
<i>Amphora clevei</i> Grunow, 1875		4
<i>Amphora coffeaformis</i> (C. Agardh) Kütz., 1844	ben, epi, bns	4, 11, 26, 27, 28
<i>Amphora contracta</i> Grunow, 1875		4
<i>Amphora costata</i> W. Sm., 1853		4
<i>Amphora crassa</i> W. Greg., 1857		4
<i>Amphora cymbifera</i> W. Greg., 1857		4
<i>Amphora cymbiformis</i> Cleve, 1895	epi, bns	28
<i>Amphora decussata</i> Grunow, 1867	plk, osp	4, 24
<i>Amphora delphinea</i> L. W. Bailey, 1895		4

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Amphora dubia</i> W. Greg., 1857	ben, bns	4, 11
<i>Amphora egregia</i> Ehrenb., 1861	ben, bns	4, 11
<i>Amphora elegantula</i> Hustedt, 1955	plk, bns	11
<i>Amphora exigua</i> W. Greg., 1857	ben, bns, sft	27, 28
<i>Amphora exsecta</i> Grunow, 1875		4
<i>Amphora farcimen</i> Grunow, 1875		4
<i>Amphora flexuosa</i> Grev., 1863		4
<i>Amphora fluminensis</i> Grunow, 1863		4
<i>Amphora formosa</i> Cleve, 1875		4
<i>Amphora fusca</i> A. Schmidt, 1875		4
<i>Amphora gibba</i> A. Schmidt, 1876		4
<i>Amphora gigantea</i> Grunow, 1875		4
<i>Amphora graeffii</i> (Grunow) Cleve 1895	ben, bns	4, 11
<i>Amphora granulata</i> W. Greg., 1857	ben, plk, bns	4, 11, 27
<i>Amphora grevilleana</i> W. Greg., 1857		4
<i>Amphora gruendleri</i> Grunow, 1875		4
<i>Amphora hyalina</i> Kütz., 1844	ben, bns	4, 11
<i>Amphora inflata</i> Grunow, 1875		4
<i>Amphora janischii</i> A. Schmidt, 1875		4
<i>Amphora javanica</i> A. Schmidt, 1875	ben, bns	4, 11
<i>Amphora laevis</i> W. Greg., 1857	ben, bns	4, 11, 28
<i>Amphora libyca</i> Ehrenb., 1840		28
<i>Amphora lyrata</i> W. Greg., 1857		4
<i>Amphora marina</i> W. Sm., 1857		4
<i>Amphora mexicana</i> A. Schmidt, 1857	ben, bns	4, 11
<i>Amphora micans</i> A. Schmidt, 1857		4
<i>Amphora obtusa</i> W. Greg., 1857	plk, bns	4, 11
<i>Amphora ocellata</i> Donkin, 1861		4
<i>Amphora oculus</i> A. Schmidt, 1875		4
<i>Amphora ovalis</i> (Kütz.) Kütz., 1844		4
<i>Amphora pediculus</i> (Kütz.) Grunow, 1875	epi, bns	28
<i>Amphora proteus</i> W. Greg., 1857	ben, bns	4, 11, 28
<i>Amphora rhombica</i> Kitton, 1876		4
<i>Amphora robusta</i> W. Greg., 1857	ben, epi, bns	4, 11, 28
<i>Amphora sabyii</i> Salah, 1955	ben, bns, sft	27, 28
<i>Amphora schmidtii</i> Grunow, 1875		4
<i>Amphora spectabilis</i> W. Greg., 1857	ben, plk, bns	4, 11
<i>Amphora tenerrima</i> Aleem & Hustedt, 1951	ben, bns, sft	27, 28
<i>Amphora tenuissima</i> Hustedt, 1955		28
<i>Amphora terroris</i> Ehrenb., 1853	ben, bns	4, 11
<i>Amphora truncata</i> W. Greg., 1857		4
<i>Amphora turgida</i> W. Greg., 1857	ben, bns	11
<i>Amphora weissflogii</i> A. Schmidt, 1857	ben, bns	4, 11
Family: Cavinulaceae		
<i>Cavinula cocconeiformis</i> (W. Greg ex Grunow) D. G. Mann & Stickle, 1990		28 ⁶⁰
Family: Cocconeidaceae		
<i>Cocconeis apiculata</i> A. Schmidt, 1895	ben, bns	4, 11
<i>Cocconeis campechiana</i> Cleve, 1894		4
<i>Cocconeis costata</i> W. Greg., 1855		4
<i>Cocconeis deperdita</i> Giffen, 1975		28
<i>Cocconeis dirupta</i> W. Greg., 1857	plk, bns	8
<i>Cocconeis discrepans</i> A. Schmidt, 1894		4
<i>Cocconeis discoloides</i> Hustedt, 1955	ben, plk, bns, sft	4, 11, 27, 28
<i>Cocconeis disculus</i> (Schumann) Cleve, 1882	ben, bns	4, 11

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Cocconeis distans</i> W. Greg., 1855	ben, plk, bns	4, 8, 11
<i>Cocconeis grata</i> A. Schmidt, 1894		4
<i>Cocconeis heteroidea</i> Hantzsch, 1863		4
<i>Cocconeis maxima</i> (Grunow) H. Perag. & Perag., 1897		4
<i>Cocconeis neodiminuta</i> Krammer, 1991		4 ⁶¹
<i>Cocconeis pensacolae</i> A. Schmidt, 1894	ben, bns	4, 11
<i>Cocconeis placentula</i> Ehrenb., 1838	epi, ben, bns	4, 11, 26, 28
<i>Cocconeis pseudomarginata</i> W. Greg., 1857		4
<i>Cocconeis scutellum</i> Ehrenb., 1835	epi, ben, plk, bns	4, 8, 11, 26, 27, 28
<i>Cocconeis stauroneiformis</i> (Van Heurck) Okuno, 1957	ben, bns	4 ⁶² , 11 ⁶³
Family: Cosmioneidaceae		
<i>Cosmioneis delawarensis</i> (Grunow ex Cleve) D. G. Mann, 1990	ben, bns	4 ⁶⁴ , 11 ⁶⁵
<i>Cosmioneis pusilla</i> (W. Sm.) D. G. Mann & Stickle, 1990		28 ⁶⁶
Family: Cymbellaceae		
<i>Brebissonia weissflogii</i> Grunow, 1878		4
<i>Cymbella cistula</i> (Hemprich & Ehrenb.) Kirchner, 1878	ben, bns	4, 11
<i>Cymbella pusilla</i> Grunow, 1875	ben, bns, sft	27, 28
<i>Cymbella turgida</i> (Ehrenb.) Hassall, 1845	plk, bns	8
<i>Cymbella yarrensis</i> (A. Schmidt) Cleve, 1894	ben, bns	4, 11
Family: Diadesmidaceae		
<i>Luticola dismutica</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ⁶⁷
<i>Luticola mutica</i> (Kütz.) D. G. Mann, 1990	epi, bns	28 ⁶⁸ , 26 ⁶⁹
Family: Dictyoneidaceae		
<i>Dictyoneis marginata</i> (F. W. Lewis) Cleve, 1890		4
<i>Dictyoneis spectatissima</i> (Grev.) Cleve, 1890		4
<i>Dictyoneis subconstricta</i> Cleve, 1894		4
Family: Diploneidaceae		
<i>Diploneis aestuarii</i> Hustedt, 1939		28
<i>Diploneis bomboides</i> (A. Schmidt) Cleve, 1894		4 ⁷⁰
<i>Diploneis bombus</i> (Ehrenb.) Ehrenb., 1853	ben, plk, bns, osp	4, 8, 11
<i>Diploneis chersonensis</i> (Grunow) Cleve, 1894	ben, bns	4 ⁷¹ , 11
<i>Diploneis constricta</i> (Grunow) Cleve, 1894		4 ⁷²
<i>Diploneis contigua</i> (A. Schmidt) Cleve, 1894		4 ⁷³
<i>Diploneis crabro</i> (Ehrenb.) Ehrenb., 1856	plk, bns	4, 8
<i>Diploneis cynthia</i> (A. Schmidt) Cleve, 1894	ben, bns	4, 11
<i>Diploneis elliptica</i> (Kütz.) Cleve, 1894	ben, bns, sft	27, 28
<i>Diploneis fusca</i> (W. Greg.) Cleve, 1894	ben, bns	4, 11
<i>Diploneis gemmatula</i> (Grunow) Cleve, 1894	ben, bns	4, 11
<i>Diploneis gruendleri</i> (A. Schmidt) Cleve, 1894		28
<i>Diploneis hudsonis</i> (Grunow) Cleve, 1894		28 ⁷⁴
<i>Diploneis interrupta</i> (Kütz.) Cleve, 1894	epi, bns	4, 26
<i>Diploneis littoralis</i> (Donkin) Cleve, 1894		4 ⁷⁵
<i>Diploneis mediterranea</i> (Grunow) Cleve, 1894	ben, bns, sft	27, 28
<i>Diploneis nitescens</i> (W. Greg.) Cleve, 1894		4 ⁷⁶
<i>Diploneis notabilis</i> (Grev.) Cleve, 1894		4 ⁷⁷
<i>Diploneis obliqua</i> (Brun) Hustedt, 1937	epi, bns	28
<i>Diploneis ovalis</i> (Hilse) Cleve, 1894	ben, bns	4, 11
<i>Diploneis papula</i> (A. Schmidt) Cleve, 1894	ben, bns	4 ⁷⁸ , 11
<i>Diploneis pseudovalis</i> Hustedt, 1930	ben, bns, sft	27, 28
<i>Diploneis puella</i> (Schum.) Cleve, 1894		28
<i>Diploneis smithii</i> (Bréb.) Cleve, 1894	ben, bns	4, 11, 28
<i>Diploneis suborbicularis</i> (W. Greg.) Cleve, 1894		4 ⁷⁹
<i>Diploneis splendida</i> (W. Greg.) Cleve, 1894	ben, bns	4, 11

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Diploneis vacillans</i> (A. Schmidt) Cleve, 1894		4
<i>Diploneis weissflogii</i> (A. Schmidt) Cleve, 1894	ben, plk, bns, osp	4, 8, 11
Family: Entomoneidaceae		
<i>Entomoneis paludosa</i> (W. Sm.) Reimer, 1975		28 ⁸⁰
Family: Eunotiaceae		
<i>Colliculoamphora reichardtiana</i> (Grunow) D. M. Williams & G. Reid, 2006		4 ⁸¹
<i>Eunotia hebridica</i> Åke Berg, 1939		4
<i>Eunotia naegelii</i> Migula, 1907		28
<i>Euodia barbadensis</i> Grev., 1861		4
Family: Gomphonemataceae		
<i>Gomphonema parvulum</i> Kütz., 1849	plk, bns	8
Family: Lyrellaceae		
<i>Lyrella approximata</i> (Grev.) D. G. Mann, 1990		4 ⁸²
<i>Lyrella californica</i> (Grev.) D. G. Mann, 1990		4 ⁸³
<i>Lyrella clavata</i> (W. Greg.) D. G. Mann, 1990	plk, bns	4 ⁸⁴ , 11 ⁸⁵
<i>Lyrella diffluens</i> (A. Schmidt) D. G. Mann, 1990	plk, bns	4 ⁸⁶ , 11 ⁸⁷
<i>Lyrella excavata</i> (Grev.) D. G. Mann, 1990		4 ⁸⁸
<i>Lyrella exsul</i> (A. Schmidt) D. G. Mann, 1990		4 ⁸⁹
<i>Lyrella hennedyi</i> (W. Sm.) Stickle & D. G. Mann, 1990		4 ⁹⁰
<i>Lyrella irrorata</i> (Grev.) D. G. Mann, 1990		4 ⁹¹ , 8
<i>Lyrella lyra</i> (Ehrenb.) Karajeva, 1978	plk, bns	4 ⁹² , 8
<i>Lyrella praetexta</i> (Ehrenb.) D. G. Mann, 1990		4 ⁹³
<i>Lyrella spectabilis</i> (W. Greg.) D. G. Mann, 1990		4 ⁹⁴
<i>Petroneis granulata</i> (Bailey) D. G. Mann, 1990	ben, bns	4 ⁹⁵ , 11 ⁹⁶
<i>Petroneis punctigera</i> (Hustedt) D. G. Mann, 1990		4 ⁹⁷
<i>Petroneis marina</i> (Ralfs in A. Pritch.) D. G. Mann, 1990		4 ⁹⁸
<i>Petroneis subdiffusa</i> (Hustedt) D. G. Mann, 1990	ben, bns	4 ⁹⁹ , 11 ¹⁰⁰
Family: Mastogloiaceae		
<i>Mastogloia acutiuscula</i> Grunow in Cleve, 1883	ben, bns	4, 11
<i>Mastogloia angulata</i> F. W. Lewis, 1861	ben, plk, bns	4, 8, 11
<i>Mastogloia apiculata</i> W. Sm., 1856	plk, bns	4, 8
<i>Mastogloia asperula</i> Grunow in Cleve, 1892	ben, bns	4, 11
<i>Mastogloia baldjikianiana</i> Grunow in Schmidt et al., 1893	ben, bns	4, 11
<i>Mastogloia binotata</i> (Grunow) Cleve, 1895		4
<i>Mastogloia braunii</i> Grunow, 1863	ben, bns	4, 11
<i>Mastogloia capitata</i> (Brun) Cleve, 1895		4
<i>Mastogloia chersonensis</i> A. Schmidt, 1893	ben, bns	4, 11
<i>Mastogloia cocconeiformis</i> Grunow, 1860	ben, bns	4, 11
<i>Mastogloia cribrosa</i> Grunow, 1860	ben, plk, bns	4, 8, 11
<i>Mastogloia crucicula</i> (Grunow) Cleve, 1895	ben, bns	4, 11
<i>Mastogloia erythraea</i> Grunow, 1860	ben, plk, bns	4, 8, 11
<i>Mastogloia exigua</i> F. W. Lewis, 1861		28
<i>Mastogloia fimbriata</i> (Brightw.) Grunow, 1863		4 ¹⁰¹
<i>Mastogloia goesii</i> (Cleve) Cleve, 1892		4
<i>Mastogloia gruendleri</i> A. Schmidt, 1893		4
<i>Mastogloia horvathiana</i> Grunow, 1860	ben, bns	4, 11
<i>Mastogloia labuensis</i> Cleve, 1893	ben, bns	4, 11
<i>Mastogloia lanceolata</i> Thwaites ex. W. Sm., 1856	ben, bns	4, 11
<i>Mastogloia latericia</i> (A. Schmidt) Cleve, 1895	ben, bns	4, 11
<i>Mastogloia pumila</i> (Grunow) Cleve, 1895	ben, bns, sft	4, 11, 27, 28
<i>Mastogloia pusilla</i> Grunow, 1878	ben, epi, bns	4, 11, 28
<i>Mastogloia quinquecostata</i> Grunow, 1860		4
<i>Mastogloia rhombica</i> Cleve, 1883		4
<i>Mastogloia rostellata</i> Grunow, 1867		4

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Mastogloia rostrata</i> Hustedt, 1933	plk, osp	4, 8
<i>Mastogloia smithii</i> Thwaites ex. W. Sm., 1856	ben, plk, bns	4, 8, 11
<i>Mastogloia subaffirmata</i> Hustedt, 1927		4
<i>Mastogloia submarginata</i> Cleve & Grunow in Cleve, 1881		4
Family: Naviculaceae		
<i>Caloneis hardmaniana</i> Cleve, 1894		4
<i>Caloneis latiuscula</i> (Kütz.) Cleve, 1894	plk, bns	4, 11
<i>Caloneis linearis</i> (Grunow) Boyer, 1927		4 ¹⁰²
<i>Caloneis liber</i> (W. Sm.) Cleve, 1894	plk, bns	4, 11
<i>Caloneis mexicana</i> Heiden, 1906		4
<i>Caloneis permagna</i> (Bailey) Cleve, 1894	plk, bns	4, 11
<i>Caloneis probabilis</i> (A. Schmidt) Cleve, 1894	plk, bns	4, 11
<i>Caloneis westii</i> (W. Sm.) Hendey, 1964	ben, plk, bns	4, 8 ¹⁰³ , 27, 28
<i>Capartogramma crucicula</i> (Grunow) R. Ross, 1963		28
<i>Cymatoneis sulcata</i> (Grev.) Cleve, 1894		4
<i>Haslea frauenfeldii</i> (Grunow) Simonsen, 1974	plk, osp	8
<i>Haslea wawriakae</i> (Hustedt) Simonsen, 1974	plk, osp	8, 24 ¹⁰⁴
<i>Navicula abunda</i> Hustedt, 1955	ben, plk, bns, osp	8, 27, 28
<i>Navicula algida</i> Grunow, 1844	plk, bns	8
<i>Navicula alpha</i> Cleve, 1893	ben, bns, sft	27, 28
<i>Navicula ammophila</i> Grunow, 1882		
<i>Navicula antillarum</i> (Cleve & Grunow) Mann, 1907		4
<i>Navicula apiculata</i> Bréb., 1854		4
<i>Navicula bifissa</i> A. Schmidt, 1897		4
<i>Navicula binodulosa</i> M. J. Sullivan & Reimer, 1975	ben, bns, sft	27, 28
<i>Navicula brasiliensis</i> Grunow, 1863	plk, bns	4, 8
<i>Navicula campylodiscus</i> Grunow, 1875		4
<i>Navicula cancellata</i> Donkin, 1873		4, 11
<i>Navicula capitata</i> Ehrenb., 1836		28
<i>Navicula caribaea</i> Cleve, 1874		4
<i>Navicula carinifera</i> Grunow, 1874	plk, bns	4, 11
<i>Navicula circumtexta</i> F. Meister in Schmidt et al., 1934	ben, bns, sft	27, 28
<i>Navicula clamans</i> Hustdet, 1939		28
<i>Navicula clementis</i> Grunow, 1882		28
<i>Navicula coarctata</i> A. Schmidt, 1875		4
<i>Navicula confecta</i> A. Schmidt, 1875		4
<i>Navicula couperi</i> (Bailey) Ralfs, 1861		4
<i>Navicula crabroniformis</i> Grunow, 1875		4
<i>Navicula cuspidata</i> (Kütz.) Kütz., 1844	plk, bns	8
<i>Navicula dalmatica</i> Grunow, 1860		4
<i>Navicula didyma</i> (Ehrenb.) Kütz., 1844		4
<i>Navicula diffusa</i> A. Schmidt, 1874		4
<i>Navicula digito-radiata</i> (W. Greg.) Ralfs, 1861		28
<i>Navicula diplosticta</i> Grunow, 1875		4
<i>Navicula directa</i> (W. Sm.) Ralfs, 1861	ben, plk, bns	4, 8, 11
<i>Navicula dirrhombus</i> A. Schmidt, 1875		4
<i>Navicula discrepans</i> A. Schmidt, 1875		4
<i>Navicula diserta</i> Hustedt, 1939	ben, bns, sft	27, 28
<i>Navicula distans</i> (W. Sm.) Ralfs, 1861	ben, plk, bns	4, 11
<i>Navicula diversistriata</i> Hustedt, 1955	ben, bns	4, 11
<i>Navicula egena</i> A. Schmidt, 1890		4
<i>Navicula fauta</i> Hustedt, 1954		28
<i>Navicula flanatica</i> Grunow, 1860	ben, bns, sft	27, 28

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Navicula formentariae</i> Cleve, 1881		4
<i>Navicula formicina</i> Grunow in Cleve, 1878		4
<i>Navicula gemmata</i> Grev., 1859		4
<i>Navicula gemmatula</i> Grunow, 1875		4
<i>Navicula giebelii</i> A. Schmidt, 1875		4
<i>Navicula graeffii</i> Grunow, 1875		4
<i>Navicula gregaria</i> Donkin, 1861	epi, bns	26, 28
<i>Navicula grevilleana</i> Hendey, 1964	ben, bns	4 ¹⁰⁵ , 11 ¹⁰⁶
<i>Navicula gruendleri</i> (Cleve & Grunow) Cleve, 1895		4
<i>Navicula halophila</i> (Grunow) Cleve, 1894	plk, bns	8
<i>Navicula hanseni</i> H. Moeller, 1950		28
<i>Navicula impressa</i> Grunow, 1875	ben, bns	4, 11
<i>Navicula incerta</i> Grunow ex Van Heurck, 1885	ben, bns, sft	27, 28
<i>Navicula incomposita</i> Hagelst., 1939		28
<i>Navicula intercedens</i> A. Schmidt, 1890		4
<i>Navicula lacrimans</i> A. Schmidt, 1875		4
<i>Navicula lanceolata</i> (C. Agardh) Kütz., 1844	ben, bns, sft	27 ¹⁰⁷ , 28 ¹⁰⁸
<i>Navicula longa</i> (W. Greg.) Ralfs ex A. Pritch., 1861	ben, bns	4, 11
<i>Navicula maculata</i> (Bailey) A. M. Edwards, 1859		28
<i>Navicula margarita</i> A. Schmidt, 1892		4
<i>Navicula mendotia</i> Van Land., 1975		27 ¹⁰⁹ , 28
<i>Navicula menisculus</i> Schum., 1867	ben, bns, sft	27
<i>Navicula muscaeformis</i> Grunow, 1875		4
<i>Navicula nolens</i> Simonsen, 1959	ben, bns, sft	27, 28
<i>Navicula obsoleta</i> Hustedt, 1942	ben, bns, sft	27, 28
<i>Navicula orbiculata</i> Patrick, 1959		28
<i>Navicula parca</i> A. Schmidt, 1875		4
<i>Navicula pavillardii</i> Hustedt, 1939	epi, bns	26, 28
<i>Navicula pelagi</i> A. Schmidt, 1875		4
<i>Navicula pennata</i> A. Schmidt, 1876		4
<i>Navicula peregrina</i> (Ehrenb.) Kütz., 1844	ben, bns, sft	4, 11, 27, 28
<i>Navicula permagna</i> (Bailey) A. M. Edwards, 1859		4
<i>Navicula platyventris</i> F. Meister, 1935	epi, bns	26
<i>Navicula praestes</i> A. Schmidt, 1875		4
<i>Navicula probabilis</i> A. Schmidt, 1877		4
<i>Navicula pseudobacillum</i> Grunow, 1880		4
<i>Navicula pseudocrassirostris</i> Hustedt, 1961	ben, bns, sft	27, 28
<i>Navicula quarnerensoides</i> Hustedt, 1961		4
<i>Navicula radiostriata</i> Hustedt, 1936		28
<i>Navicula regularis</i> Hustedt, 1955	ben, bns, sft	27, 28
<i>Navicula rhynchocephala</i> Kütz., 1844		4, 28
<i>Navicula rostellata</i> Kütz., 1844	ben, bns	4, 11
<i>Navicula ruttneri</i> Hustedt, 1937	ben, bns	4, 11
<i>Navicula salinarum</i> Grunow, 1880	ben, bns, sft	27, 28
<i>Navicula salinicola</i> Hustedt, 1939	ben, bns, sft	27, 28
<i>Navicula salva</i> A. Schmidt, 1876		4
<i>Navicula schmidtiana</i> Grunow, 1876		4
<i>Navicula schroeteri</i> F. Meister, 1932		28
<i>Navicula schultzei</i> Kain, 1889		4
<i>Navicula scintillans</i> A. Schmidt, 1881		4
<i>Navicula scoliopleura</i> A. Schmidt, 1876		4
<i>Navicula sectilis</i> A. Schmidt, 1877		4
<i>Navicula seductilis</i> A. Schmidt, 1874	ben, bns	4, 11
<i>Navicula sejuncta</i> A. Schmidt, 1874		4

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Navicula semitecta</i> A. Schmidt, 1874		4
<i>Navicula separabilis</i> A. Schmidt, 1875		4
<i>Navicula serratula</i> Grunow, 1875		4
<i>Navicula simplex</i> Krasske, 1925		4
<i>Navicula specula</i> (Hickie) Cleve, 1894		28
<i>Navicula spuria</i> Cleve, 1895	ben, plk, bns	4, 11
<i>Navicula subapiculata</i> (Grunow) Hustdet, 1939	plk, bns	11
<i>Navicula subcarinata</i> (W. Greg. ex. A. Schmidt) Hendey, 1951		4
<i>Navicula subirritans</i> Giffen, 1970	ben, bns, sft	27, 28
<i>Navicula suspecta</i> A. Schmidt, 1875		4
<i>Navicula taraxa</i> M. H. Hohn & Hellerman, 1966	ben, bns, sft	27, 28
<i>Navicula tripunctata</i> (O. F. Müller) Bory, 1827	epi, ben, bns	4 ¹¹⁰ , 26, 27, 28
<i>Navicula triundulata</i> Grunow, 1867		4
<i>Navicula vacillans</i> A. Schmidt, 1875		4
<i>Navicula vidovichii</i> Grunow, 1863		4
<i>Navicula viridula</i> (Kütz.) Kütz., 1844	ben, bns	4, 11
<i>Navicula weissflogii</i> A. Schmidt, 1875	ben, bns	4, 11
<i>Navicula yarrensii</i> Grunow, 1876	ben, plk, bns	4, 8, 11, 27, 28
<i>Navicula zostreti</i> Grunow, 1860	ben, epi, bns	4, 11, 27, 28
<i>Meuniera membranacea</i> (Cleve) P. C. Silva, Hasle, & Syvertsen, 1996	plk, bns, osp	8, 11 ¹¹¹ , 24 ¹¹²
<i>Seminavis cymbelloides</i> (Grunow) D. G. Mann, 1990	epi, bns	28 ¹¹³
<i>Trichyneis antillarum</i> (Cleve and Grunow in Cleve) Cleve, 1884		4 ¹¹⁴
<i>Trichyneis aspera</i> (Ehrenb.) Cleve, 1894	epi, plk, bns	4, 8, 28
Family: Neidiaceae		
<i>Neidium affine</i> (Ehrenb.) Pfitzer, 1871		4
Family: Pinnulariaceae		
<i>Oestrupia musca</i> (W. Greg.) Hustedt, 1935		4 ¹¹⁵
<i>Oestrupia powellii</i> (F. W. Lewis) Heiden ex. Hustedt, 1935	plk, bns	4 ¹¹⁶ , 8
<i>Pinnularia elegans</i> (W. Sm.) Krammer, 1992	ben, bns	4 ¹¹⁷ , 11 ¹¹⁸
<i>Pinnularia rectangulata</i> (W. Greg.) Rabenh., 1864		4 ¹¹⁹
<i>Pinnularia viridis</i> (Nitzsch) Ehrenb., 1841		4
Family: Plagiotropidaceae		
<i>Plagiotropis lepidoptera</i> (W. Greg.) Kuntze, 1898	ben, plk, bns, osp	11 ¹²⁰ , 24 ¹²¹ , 27, 28 ¹²²
<i>Tropidoneis maxima</i> (W. Greg.) Cleve, 1894	plk, bns	4, 11, 28
<i>Tropidoneis vitrea</i> (W. Sm.) Cleve, 1894	ben, bns, sft	27
Family: Pleurosigmaaceae		
<i>Gyrosigma acuminatum</i> (Kütz.) Rabenh., 1853	plk, bns	11
<i>Gyrosigma balticum</i> (Ehrenb.) Rabenh., 1853	ben, plk, bns, osp	4 ¹²³ , 11, 24, 28
<i>Gyrosigma beaufortianum</i> Hustdet, 1955		28
<i>Gyrosigma delicatulum</i> (W. Sm.) J. W. Griff. & Henfr., 1856		28 ¹²⁴
<i>Gyrosigma distortum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	ben, bns	4 ¹²⁵ , 11 ¹²⁶
<i>Gyrosigma elongatum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	ben, plk, bns	8 ¹²⁷ , 4 ¹²⁸ , 11 ¹²⁹
<i>Gyrosigma fasciola</i> (Ehrenb.) J. W. Griff. & Henfr., 1856	ben, bns	4 ¹³⁰ , 8, 11 ¹³¹
<i>Gyrosigma formosum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	ben, plk, bns, osp	4 ¹³² , 8 ¹³³ , 11 ¹³⁴
<i>Gyrosigma intermedium</i> (W. Sm.) J. W. Griff. & Henfr., 1856	plk, bns	8 ¹³⁵
<i>Gyrosigma macrum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	ben, bns, sft	27, 28
<i>Gyrosigma obliquum</i> (Grunow) Boyer, 1927	ben, plk, bns	8, 27, 28
<i>Gyrosigma obscurum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	ben, bns, sft	27, 28
<i>Gyrosigma peisonis</i> (Grunow) Hustedt, 1930	ben, bns, sft	4 ¹³⁶ , 27, 28
<i>Gyrosigma prolongatum</i> (W. Sm.) J. W. Griff. & Henfr., 1856	plk, bns	8
<i>Gyrosigma spencerii</i> (Bailey ex E. J. Quekett) J. W. Griff. & Henfr., 1856	plk, bns	4, 8
<i>Gyrosigma strigosum</i> (W. Sm.) J. W. Griff. & Henfr., 1856		4 ¹³⁷ , 28 ¹³⁸
<i>Gyrosigma tenuissimum</i> (W. Sm.) J. W. Griff. & Henfr., 1856		4

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Pleurosigma angulatum</i> (E. J. Quekett) W. Sm., 1852	ben, plk, bns	4, 11
<i>Pleurosigma decorum</i> W. Sm., 1853	plk, bns	4, 8, 11
<i>Pleurosigma distinguendum</i> Hustedt, 1955	ben, bns, sft	4, 27, 28
<i>Pleurosigma grunowii</i> Grunow, 1880		4
<i>Pleurosigma longinum</i> W. Sm. ex. Brightw., 1859		4
<i>Pleurosigma naviculaceum</i> Bréb., 1854	ben, bns	4, 11
<i>Pleurosigma normanii</i> Ralfs, 1861	plk, bns, osp	4, 8
<i>Pleurosigma reticulatum</i> (Norman) Hustedt, 1955		4
<i>Pleurosigma rostratum</i> Hustedt, 1955		4
<i>Pleurosigma salinarum</i> (Grunow) Grunow, 1880	ben, bns, sft	27, 28
<i>Pleurosigma simile</i> Grunow, 1880	ben, bns	4, 11
Family: Proschkiniaceae		
<i>Proschkinia longirostris</i> (Hustedt) D. G. Mann, 1990		28 ¹³⁹
Family: Rhopalodiaceae		
<i>Epithemia argus</i> (Ehrenb.) Kütz., 1844		4
<i>Epithemia zebra</i> (Ehrenb.) Kütz., 1844		4
<i>Rhopalodia gibba</i> (Ehrenb.) O. F. Müller, 1895		4 ¹⁴⁰
<i>Rhopalodia gibberula</i> (Ehrenb.) O. F. Müller, 1899	ben, bns, sft	4, 27, 28
<i>Rhopalodia musculus</i> (Kütz.) O. F. Müller, 1899		4
Family: Scolioneidaceae		
<i>Scolioneis tumida</i> (Bréb. ex Kütz.) D. G. Mann, 1990	plk, bns	8 ¹⁴¹
Family: Scoliotropidaceae		
<i>Biremis ambigua</i> (Cleve) D. G. Mann, 1990		4 ¹⁴²
Family: Sellaphoraceae		
<i>Fallacia aequorea</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ¹⁴³ , 28 ¹⁴⁴
<i>Fallacia amphipleuroides</i> (Hustedt) D. G. Mann, 1990	epi, bns	28 ¹⁴⁵
<i>Fallacia auriculata</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ¹⁴⁶
<i>Fallacia bioculata</i> (Grunow ex A. Schmidt) D. G. Mann, 1990		4 ¹⁴⁷
<i>Fallacia fenestrella</i> (Hustedt) D. G. Mann, 1990		28 ¹⁴⁸
<i>Fallacia floriniae</i> (H. Moeller) Witkowski, 1993		28 ¹⁴⁹
<i>Fallacia forcipata</i> (Grev.) Stickle & D. G. Mann, 1990	ben, bns	4 ¹⁵⁰ , 11 ¹⁵¹
<i>Fallacia hudsonis</i> (Grunow ex Cleve) Stickle & D. G. Mann, 1990	ben, bns, sft	27 ¹⁵²
<i>Fallacia hummii</i> (Hustedt) D. G. Mann, 1990	ben, bns	4 ¹⁵³ , 11 ¹⁵⁴
<i>Fallacia nummularia</i> (Greville) D. G. Mann, 1990		4 ¹⁵⁵
<i>Fallacia pseudony</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ¹⁵⁶ , 28 ¹⁵⁷
<i>Fallacia pygmaea</i> (Kütz.) A. J. Stickle & D. G. Mann, 1990		4 ¹⁵⁸
<i>Fallacia subforcipata</i> (Hustedt) D. G. Mann, 1990		28 ¹⁵⁹
<i>Fallacia tenera</i> (Hustedt) D. G. Mann, 1990		28 ¹⁶⁰
<i>Fallacia teneroides</i> (Hustedt) D. G. Mann, 1990		28 ¹⁶¹
Family: Surirellaceae		
<i>Campylodiscus adornatus</i> A. Schmidt, 1877		4
<i>Campylodiscus ambiguus</i> Grev., 1860		4
<i>Campylodiscus biangulatus</i> Grev., 1862	ben, bns	4, 11
<i>Campylodiscus bifurcatus</i> A. Schmidt, 1877		4
<i>Campylodiscus bimarginatus</i> A. Schmidt, 1875		4
<i>Campylodiscus birostratus</i> Deby, 1891		4
<i>Campylodiscus biseriatus</i> Deby, 1891		4
<i>Campylodiscus browneanus</i> Grev., 1862		4
<i>Campylodiscus campecheanus</i> Deby, 1891		4
<i>Campylodiscus concinnus</i> Grev., 1860		4
<i>Campylodiscus crebrecostratus</i> Grev., 1863		4
<i>Campylodiscus ecclesianus</i> Grev., 1857		4
<i>Campylodiscus echeneis</i> Ehrenb. ex Kütz., 1844	plk, bns	4, 11
<i>Campylodiscus greenleafianus</i> Grunow, 1875		4

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Campylodiscus gruendleri</i> Grunow, 1875		4
<i>Campylodiscus hibernicus</i> Ehrenb., 1842	ben, bns	4, 11
<i>Campylodiscus hodgsonii</i> W. Sm., 1853		4
<i>Campylodiscus imperialis</i> Grev., 1860		4
<i>Campylodiscus incertus</i> A. Schmidt, 1875	plk, bns	8
<i>Campylodiscus intermedius</i> Grunow, 1875		4
<i>Campylodiscus lineatus</i> Grunow, 1875		4
<i>Campylodiscus muelleri</i> A. Schmidt, 1875		4
<i>Campylodiscus phalangium</i> A. Schmidt, 1875		4
<i>Campylodiscus punctulatus</i> Grunow, 1875		4
<i>Campylodiscus ralfsii</i> W. Sm., 1853		4
<i>Campylodiscus rotula</i> Grunow, 1875		4
<i>Campylodiscus samoensis</i> Grunow, 1875		4
<i>Campylodiscus sauerbeckii</i> Gründler, 1877		4
<i>Campylodiscus schmidtii</i> Grunow, 1875		4
<i>Campylodiscus simulans</i> W. Greg., 1857		4
<i>Campylodiscus tabulatus</i> A. Schmidt, 1877		4
<i>Campylodiscus triumphans</i> A. Schmidt, 1875		4
<i>Campylodiscus weissflogii</i> Deby, 1891		4
<i>Stenopterobia intermedia</i> (F. W. Lewis) Van Heurck, 1933	plk, bns	4, 8
<i>Surirella angustemarginata</i> Hustedt, 1927		4
<i>Surirella atomus</i> Hustedt, 1955		28
<i>Surirella biseriata</i> Bréb., 1835		4
<i>Surirella campechiana</i> Hustedt, 1925		4
<i>Surirella comis</i> A. Schmidt, 1874		4
<i>Surirella fastuosa</i> (Ehrenb.) Ehrenb., 1843	ben, plk, bns, osp	4, 8, 11
<i>Surirella febigerii</i> F. W. Lewis, 1862	plk, bns	8
<i>Surirella fluminensis</i> Grunow, 1862		4
<i>Surirella gemma</i> (Ehrenb.) Kütz., 1844	plk, bns	4, 8, 11
<i>Surirella incerta</i> Hustedt, 1927		4
<i>Surirella litoralis</i> Hustedt, 1955		28
<i>Surirella mexicana</i> A. Schmidt, 1874		4
<i>Surirella ovalis</i> Bréb., 1838		28
<i>Surirella ovata</i> Kütz., 1844		4
<i>Surirella patella</i> Kütz., 1844	ben, bns	4, 11
<i>Surirella recedens</i> A. Schmidt, 1875	plk, bns, osp	4, 8
<i>Surirella regina</i> C. Janisch, 1875		4
<i>Surirella reniformis</i> Kitton, 1877		4
<i>Surirella sentis</i> A. Schmidt, 1875		4
<i>Surirella striatula</i> Turpin, 1828	ben, bns, sft	4, 27, 28
<i>Tabellaria fenestrata</i> (Lyngb.) Kütz., 1844		4
Family: Stauroneidaceae		
<i>Craticula accomoda</i> (Hustedt) D. G. Mann, 1990	ben, bns, sft	27 ¹⁶² , 28 ¹⁶³
<i>Craticula ambigua</i> (Ehrenb.) D. G. Mann, 1990	ben, bns	4 ¹⁶⁴ , 11 ¹⁶⁵
<i>Stauroneis anceps</i> Ehrenb., 1841		4
<i>Stauroneis brevis</i> (Dippel) Metzeltin & Lange-Bert., 1998		4 ¹⁶⁶
Family: Thalassiophysaceae		
<i>Thalassiophysa rhipidis</i> Conger, 1954	plk, osp	4, 24
Class: Coscinodiscophyceae		
Family: Anaulaceae		
<i>Anaulus balticus</i> Simonsen, 1959	ben, bns, sft	27, 28
<i>Eunotogramma debile</i> Grunow, 1883		4
<i>Eunotogramma laeve</i> Grunow, 1883		4, 28

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Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Eunotogramma marinum</i> (W. Sm.) H. Perag. & Peragallo, 1908		4
<i>Porpeia quadriceps</i> Bailey, 1861		4
Family: Asterolampraceae		
<i>Asterolampra grevillei</i> (G. C. Wall.) Grev., 1860		4
<i>Asterolampra marylandica</i> Ehrenb., 1844		4
<i>Asteromphalus brookei</i> Bailey, 1856		4
<i>Asteromphalus flabellatus</i> (Bréb.) Grev., 1859	ben, bns, osp	4, 8, 11
<i>Asteromphalus heptactis</i> (Bréb.) Ralfs, 1861	plk, bns	4, 11
<i>Asteromphalus hookerii</i> Ehrenb., 1844	plk, osp	24
<i>Asteromphalus regularis</i> G. Karst., 1905		4
<i>Asteromphalus sarcophagus</i> G. C. Wall., 1860		4
<i>Asteromphalus shadboltianus</i> (Grev.) Ralfs, 1861		4
Family: Aulacodiscaceae		
<i>Aulacodiscus argus</i> (Ehrenb.) A. Schmidt, 1886		24
Family: Aulacoseiraceae		
<i>Aulacoseira granulata</i> (Ehrenb.) Simonsen, 1979	ben, plk, bns	4 ¹⁶⁷ , 8 ¹⁶⁸ , 11 ¹⁶⁹
Family: Bellerucheaceae		
<i>Belleruche malleus</i> (Brightw.) Van Heurck, 1885	plk, osp	24
<i>Streptothea tamesis</i> Shrubsole, 1891	plk, osp	24
Family: Biddulphiaceae		
<i>Biddulphia alternans</i> (Bailey) Van Heurck, 1885	plk, bns, osp	8, 24
<i>Biddulphia antediluviana</i> (Ehrenb.) Van Heurck, 1883		4 ¹⁷⁰
<i>Biddulphia balaena</i> (Ehrenb.) Brightw., 1859		4
<i>Biddulphia biddulphiana</i> (J. E. Smith) Boyer, 1901	ben, plk, bns	4 ¹⁷¹ , 8, 11 ¹⁷²
<i>Biddulphia dubia</i> (Brightw.) Cleve, 1883		4
<i>Biddulphia granulata</i> Roper, 1859		4
<i>Biddulphia interrupta</i> Boyer, 1898		4
<i>Biddulphia obtusa</i> (Kütz.) Grunow, 1868		4
<i>Biddulphia pentacrinus</i> (Ehrenb.) Boyer, 1901		4
<i>Biddulphia reticulum</i> (Ehrenb.) Boyer, 1901		4 ¹⁷³
<i>Biddulphia sculpta</i> (Shadbolt) Van Heurck, 1885		4
<i>Biddulphia spinosa</i> (Bailey) Boyer, 1901		4 ¹⁷⁴
<i>Biddulphia subaequa</i> (Kütz.) Ralfs, 1861	ben, bns	4, 11
<i>Biddulphia tridens</i> (Ehrenb.) Ehrenb., 1840	plk, bns	8
<i>Biddulphia tripartita</i> (Grunow) Van Heurck		4
<i>Biddulphia tuomeyi</i> (Bailey) Roper, 1859	plk, osp	24
<i>Isthmia capensis</i> Grunow, 1880		4
<i>Isthmia enervis</i> Ehrenb., 1836		4
<i>Neohuttonia reichardtii</i> (Grunow) Kuntze, 1898		4 ¹⁷⁵
<i>Terpsinoë americana</i> (Bailey) Ralfs, 1868		4
<i>Terpsinoë intermedia</i> Pantocsek		4
<i>Terpsinoë musica</i> Ehrenb., 1841	plk, bns	4, 8
<i>Trigonium arcticum</i> (Brightw.) Cleve, 1868		4 ¹⁷⁶
<i>Trigonium cinnamomeum</i> (Grev.) Mann, 1907		4 ¹⁷⁷
<i>Trigonium latum</i> (Grev.) A. Mann, 1925		4 ¹⁷⁸
<i>Trigonium reticulum</i> (Ehrenb.) Simonsen, 1974	ben, plk, bns	4 ¹⁷⁹ , 8, 11 ¹⁸⁰
Family: Chaetocerotaceae		
<i>Bacteriastrum biconicum</i> Pavill., 1916	plk, osp	4, 24
<i>Bacteriastrum comosum</i> Pavill., 1916		4
<i>Bacteriastrum delicatulum</i> Cleve, 1897	plk, bns, osp	4, 8, 24
<i>Bacteriastrum elegans</i> Pavill., 1916		4
<i>Bacteriastrum elongatum</i> Cleve, 1897	plk, osp	4, 8, 24
<i>Bacteriastrum furcatum</i> Shadbolt, 1854	plk, osp	4 ¹⁸¹ , 8
<i>Bacteriastrum hyalinum</i> Lauder, 1864	plk, bns, osp	4, 8, 24

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Bacteriastrum mediterraneum</i> Pavill., 1916		4
<i>Bacteriastrum minus</i> G. Karst., 1906		4
<i>Chaetoceros affine</i> Lauder, 1864	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros anastomosans</i> Grunow, 1882	plk, osp	4, 8, 24
<i>Chaetoceros atlanticum</i> Cleve, 1873	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros boreale</i> Bailey, 1854	plk, osp	4, 24
<i>Chaetoceros breve</i> F. Schütt, 1895	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros castracanei</i> G. Karst., 1905		4
<i>Chaetoceros cinctum</i> Gran, 1897	plk, osp	4, 8, 24
<i>Chaetoceros coarctatum</i> Lauder, 1864	plk, osp	4, 8, 11, 24
<i>Chaetoceros concavicornis</i> L. Mangin, 1917	plk, osp	4, 8
<i>Chaetoceros constrictum</i> Gran, 1897	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros contortum</i> F. Schütt, 1895	plk, bns, osp	8 ¹⁸² , 11 ¹⁸³ , 24 ¹⁸⁴
<i>Chaetoceros convolutum</i> Castrac., 1886	plk, osp	4, 24
<i>Chaetoceros costatum</i> Pavill., 1911	plk, osp	4, 24
<i>Chaetoceros curvisetum</i> Cleve, 1896	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros dadayi</i> Pavill., 1913		4
<i>Chaetoceros danicum</i> Cleve, 1889	plk, bns, osp	4, 11, 24
<i>Chaetoceros debile</i> Cleve, 1894	plk, bns, osp	4, 11, 24
<i>Chaetoceros decipiens</i> Cleve, 1873	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros delicatulum</i> Ostenf., 1901		4
<i>Chaetoceros densum</i> (Cleve) Cleve, 1899	plk, osp	4, 8, 24
<i>Chaetoceros diadema</i> (Ehrenb.) Gran, 1897		4 ¹⁸⁵
<i>Chaetoceros dicaeta</i> Ehrenb., 1844	plk, osp	4, 8
<i>Chaetoceros didymum</i> Ehrenb., 1845	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros difficilis</i> Cleve, 1900	plk, osp	4, 8
<i>Chaetoceros diversum</i> Cleve, 1873	plk, osp	4, 8
<i>Chaetoceros eibenii</i> (Grunow) Meunier, 1882	plk, osp	4, 8, 24
<i>Chaetoceros fragile</i> Meunier, 1910		4
<i>Chaetoceros galvestonensis</i> Collier & A. Murphy, 1962		4
<i>Chaetoceros glandazii</i> L. Mangin, 1910	plk, osp	4, 24
<i>Chaetoceros laciniosum</i> F. Schütt, 1895	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros laeve</i> Leud.-Fortm., 1892	plk, osp	4, 24
<i>Chaetoceros lauderi</i> Ralfs ex Lauder, 1864	plk, bns, osp	4, 11, 24
<i>Chaetoceros lorenzianum</i> Grunow, 1863	plk, bns, osp	4, 8, 24
<i>Chaetoceros messanense</i> Castrac., 1875	plk, osp	4, 8
<i>Chaetoceros neogracile</i> Van Land., 1968	plk, bns, osp	4 ¹⁸⁶ , 8 ¹⁸⁷ , 11 ¹⁸⁸
<i>Chaetoceros pelagicum</i> Cleve, 1873	plk, osp	4, 8, 24
<i>Chaetoceros pendulus</i> Karsten, 1905	plk, osp	4, 8
<i>Chaetoceros peruvianum</i> Brightw., 1856	plk, bns, osp	4, 8, 11, 24
<i>Chaetoceros protuberans</i> Lauder, 1864		4
<i>Chaetoceros pseudocurvisetum</i> L. Mangin, 1910	plk, osp	4, 8, 24
<i>Chaetoceros radicans</i> F. Schütt, 1895	plk, bns, osp	4, 11, 24
<i>Chaetoceros reichelti</i> Hustedt, 1912		4
<i>Chaetoceros rostratus</i> Ralfs in Lauder, 1864		4
<i>Chaetoceros similis</i> Cleve, 1896		4
<i>Chaetoceros sociale</i> Lauder, 1864	plk, bns, osp	4, 11, 24
<i>Chaetoceros subtilis</i> Cleve, 1896		4
<i>Chaetoceros teres</i> Cleve, 1896	plk, bns, osp	4, 8
<i>Chaetoceros tetrastichon</i> Cleve, 1897	plk, osp	4, 24
<i>Chaetoceros tortissimus</i> Gran, 1900	plk, osp	4, 8, 24
<i>Chaetoceros vanheurckii</i> Gran, 1897		4
<i>Chaetoceros vistulae</i> Apstein, 1909		4

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Chaetoceros wighamii</i> Brightw., 1856	plk, osp	4, 8, 24
Family: Corethraceae		
<i>Corethron criophilum</i> Castrac., 1886	plk, bns, osp	4, 8, 11, 24
Family: Coscinodiscaceae		
<i>Cestodiscus denarius</i> (A. Schmidt in Schmidt et al.) Streln. & E. Fourtanier, 2001		4 ¹⁸⁹
<i>Coscinodiscus argus</i> Ehrenb., 1839	ben, bns	4, 11
<i>Coscinodiscus aphrastos</i> Rattray, 1890		4
<i>Coscinodiscus asteromphalus</i> Ehrenb., 1844	ben, plk, bns	4, 11
<i>Coscinodiscus centralis</i> Ehrenb., 1844	plk, bns, osp	11, 24
<i>Coscinodiscus concavus</i> Ehrenb., 1841	ben, bns	4, 11 ¹⁹⁰
<i>Coscinodiscus concinnus</i> W. Sm., 1856	plk, bns, osp	8, 11, 24
<i>Coscinodiscus confusus</i> Rattray, 1890		4
<i>Coscinodiscus curvatus</i> Grunow ex A. Schmidt, 1874	plk, bns	4, 11
<i>Coscinodiscus decrescens</i> Grunow, 1878		4
<i>Coscinodiscus elegans</i> Grev., 1866	ben, bns	4, 11
<i>Coscinodiscus excentricus</i> Ehrenb., 1840	ben, plk, bns, osp	11, 24
<i>Coscinodiscus exiguus</i> Rattray, 1890		4
<i>Coscinodiscus gemmifer</i> Ehrenb., 1844		4
<i>Coscinodiscus gigas</i> Ehrenb., 1841		4
<i>Coscinodiscus granii</i> L. F. Gough, 1905	plk, bns, osp	8, 11, 24
<i>Coscinodiscus janischii</i> A. Schmidt, 1878		4
<i>Coscinodiscus jonesianus</i> (Grev.) Ostenf., 1915		4
<i>Coscinodiscus kuetzingii</i> A. Schmidt, 1878	ben, bns	4, 11
<i>Coscinodiscus kurzii</i> Grunow, 1888	plk, bns, osp	8
<i>Coscinodiscus marginato-lineatus</i> A. Schmidt, 1878		4
<i>Coscinodiscus marginatus</i> Ehrenb., 1841	ben, plk, bns	4, 8, 11
<i>Coscinodiscus nitidulus</i> Grunow, 1876		4
<i>Coscinodiscus obscurus</i> A. Schmidt, 1876		4
<i>Coscinodiscus oculus-iridis</i> (Ehrenb.) Ehrenb., 1840	plk, bns, osp	4, 8
<i>Coscinodiscus oppositus</i> G. Karst., 1905		4
<i>Coscinodiscus perforatus</i> Ehrenb., 1844	plk, bns	8
<i>Coscinodiscus perminutus</i> Rattray, 1850		4
<i>Coscinodiscus radiatus</i> Ehrenb., 1839	plk, bns, osp	8, 11, 24
<i>Coscinodiscus rothii</i> (Ehrenb.) Grunow, 1878	ben, bns	4, 11
<i>Coscinodiscus rotula</i> Grunow, 1878		4
<i>Coscinodiscus subtilis</i> Ehrenb., 1843	plk, bns, osp	4, 8
<i>Coscinodiscus symmetricus</i> Grev., 1861		4
<i>Coscinodiscus wailesii</i> Gran & Angst, 1931	plk, osp	4, 8
<i>Cylindropyxis profunda</i> Hendey, 1964		4
<i>Ehrenbergiulva granulosa</i> (Grunow) Witkowski, Lange-Bert., & Metzeltin, 2004		4 ¹⁹¹
<i>Palmerina hardmaniana</i> (Grev.) Hasle, 1995	plk, bns, osp	11, 24 ¹⁹²
<i>Stellarima stellaris</i> (Roper) Hasle & P. A. Sims, 1986		4 ¹⁹³
Family: Cymatosiraceae		
<i>Campylosira alexandrica</i> Salah, 1995	ben, bns, sft	27, 28
<i>Campylosira cymbelliformis</i> (A. Schmidt) Grunow ex Van Heurck, 1885	ben, plk, bns	4, 8, 27, 28
<i>Cymatosira belgica</i> Grunow, 1881	ben, plk, bns, osp	4, 24, 27, 28
<i>Cymatosira lorenziana</i> Grunow, 1862	plk, bns, osp	4, 8
Family: Endictyaceae		
<i>Endictya campechiana</i> (Grunow in Schmidt et al.) De Toni, 1894		4
Family: Gossleriellaceae		
<i>Gossleriella tropica</i> F. Schütt, 1892		4
Family: Heliopeltaceae		
<i>Actinoptychus campanulifer</i> A. Schmidt, 1875	plk, ben, bns	4, 8, 11
<i>Actinoptychus senarius</i> (Ehrenb.) Ehrenb., 1838	plk, bns, osp	4, 8, 11 ¹⁹⁴ , 24 ¹⁹⁵

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Actinoptychus splendens</i> (Shadbolt) Ralfs ex A. Pritch., 1861	ben, plk, bns, osp	8, 24
<i>Actinoptychus taeniatus</i> Hustedt, 1955	ben, bns	4, 11
<i>Actinoptychus trigonus</i> A. Schmidt, 1874		4
<i>Actinoptychus turgidus</i> (Temp. & Brun) Temp. & Brun, 1892	plk, bns	8
Family: Hemiaulaceae		
<i>Bicornis kittonii</i> (Grunow) J. Fenner, 1994		4 ¹⁹⁶
<i>Cerataulina pelagica</i> (Cleve) Hendey, 1837	plk, osp	4, 8, 24
<i>Climacodium biconcavum</i> Cleve, 1897		4
<i>Climacodium frauenfeldianum</i> Grunow, 1868	plk, osp	8, 24
<i>Eucampia cornuta</i> (Cleve) Grunow, 1882	plk, osp	8, 24
<i>Eucampia zodiacus</i> Ehrenb., 1839	plk, osp	8, 24
<i>Hemiaulus hauckii</i> Grunow ex Van Heurck, 1882	plk, bns, osp	4, 8, 11
<i>Hemiaulus membranaceus</i> Cleve, 1873	plk, bns, osp	8, 11, 24
<i>Hemiaulus sinensis</i> Grev., 1894	plk, bns, osp	8, 11, 24
Family: Hemidiscaceae		
<i>Actinocyclus complanatus</i> Castrac., 1886		4
<i>Actinocyclus divisus</i> (Grunow) Hustedt, 1958		4 ¹⁹⁷
<i>Actinocyclus octonarius</i> Ehrenb., 1837	plk, osp	4 ¹⁹⁸ , 8
<i>Actinocyclus octodenarius</i> Ehrenb., 1839	ben, bns	4, 11
<i>Azpeitia africana</i> (C. Janisch ex A. Schmidt) G. A. Fryxell & Watkins, 1986		4 ¹⁹⁹
<i>Azpeitia neocrenulata</i> (VanLand.) G. A. Fryxell & Watkins, 1986		4 ²⁰⁰
<i>Azpeitia nodulifera</i> (A. Schmidt) G. A. Fryxell & P. A. Sims, 1986	ben, plk, bns	4 ²⁰¹ , 11 ²⁰²
<i>Hemidiscus cuneiformis</i> G. C. Wall., 1860	plk, bns	4, 11
Family: Hyalodiscaceae		
<i>Hyalodiscus subtilis</i> Bailey, 1854		4
<i>Podosira hormoides</i> (Mont.) Kütz., 1844	ben, bns	4, 11
<i>Podosira stelliger</i> (Bailey) A. Mann, 1907	plk, bns, osp	8 ²⁰³ , 24
Family: Lauderiacae		
<i>Lauderia annulata</i> Cleve, 1873	plk, osp	24 ²⁰⁴
Family: Leptocylindraceae		
<i>Leptocylindrus danicus</i> Cleve, 1889	plk, bns, osp	4, 8, 11, 24
<i>Leptocylindrus mediterraneus</i> (H. Perag.) Hasle, 1975	plk, osp	24 ²⁰⁵
<i>Leptocylindrus minimus</i> Gran, 1915	plk, bns, osp	4, 8, 11, 24
Family: Lithodesmiaceae		
<i>Ditylum brightwellii</i> (T. West) Grunow, 1885	plk, bns, osp	4, 8, 11
<i>Ditylum sol</i> (Grunow) De Toni, 1894		4
<i>Helicotheca tamesis</i> (Shrubsole) Ricard, 1987	plk, osp	8
<i>Lithodesmium undulatum</i> Ehrenb., 1839	ben, plk, bns, osp	8, 11, 24
Family: Melosiraceae		
<i>Melosira ambigua</i> (Grunow) O. F. Müller, 1903		4
<i>Melosira crenulata</i> (Ehrenb.) Rabenh., 1853	plk, bns	8
<i>Melosira distans</i> (Ehrenb.) Kütz., 1844		4
<i>Melosira dubia</i> Kütz., 1844		4, 28
<i>Melosira islandica</i> O. F. Müller, 1906		4
<i>Melosira lineata</i> (Dillwyn) C. Agardh, 1824		28
<i>Melosira moniliformis</i> (O. F. Müller) C. Agardh, 1824	plk, bns, osp	4, 8, 11, 28
<i>Melosira nummuloides</i> C. Agardh, 1824	epi, ben, plk, bns	4, 11, 26, 28
<i>Melosira ornata</i> Grunow in Van Heurck, 1882	ben, bns	4, 11
<i>Melosira selecta</i> A. Schmidt, 1892		4
<i>Melosira setosa</i> Grev., 1866	ben, bns	4, 11
<i>Melosira westii</i> W. Sm., 1856		28
Family: Paraliaceae		
<i>Paralia sulcata</i> (Ehrenb.) Cleve, 1873	ben, plk, bns, osp	8, 11 ²⁰⁶ , 24 ²⁰⁷ , 27 ²⁰⁸ , 28

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
Family: Plagiogrammaceae		
<i>Dimeregramma hyalinum</i> Hustedt, 1955		28
<i>Dimeregramma intermedium</i> C. S. Boyer, 1920		4
<i>Dimeregramma marinum</i> (W. Greg.) Ralfs, 1861	ben, bns	4, 11
<i>Dimeregramma minor</i> (W. Greg.) Ralfs, 1861	ben, bns, sft	4, 11, 27, 28
<i>Glyphodesmis campechiana</i> C. S. Boyer, 1920		4
<i>Glyphodesmis eximia</i> Grev., 1862		4
<i>Glyphodesmis tumida</i> C. S. Boyer, 1920		4
<i>Plagiogramma caribaeum</i> Cleve, 1878		4
<i>Plagiogramma inaequale</i> Grev., 1859		4
<i>Plagiogramma informe</i> A. Schmidt, 1897		4
<i>Plagiogramma mutuuum</i> A. Schmidt, 1897		4
<i>Plagiogramma obesum</i> Grev., 1859	ben, bns	4, 11
<i>Plagiogramma tenuistriatum</i> Cleve, 1883		28
<i>Plagiogramma tessellatum</i> Grev., 1859		4
<i>Plagiogramma validum</i> Grev., 1859		4
<i>Plagiogramma vanheurckii</i> Grunow in Van Heurck, 1884	plk, bns	4
<i>Plagiogramma wallichianum</i> Grev., 1865	ben, bns	4, 11
Family: Pyxidiculaceae		
<i>Pyxidicula cruciata</i> Ehrenb., 1841		4
<i>Pyxidicula moelleri</i> (A. Schmidt) Streln. & V. A. Nikolaev, 1986	ben, bns	4 ²⁰⁹ , 11 ²¹⁰
Family: Rhizosoleniaceae		
<i>Dactyliosolen antarcticus</i> Castrac., 1886	plk, osp	4, 8
<i>Dactyliosolen blavyanus</i> (H. Perag.) Hasle, 1975	plk, osp	24 ²¹¹
<i>Dactyliosolen fragilissimus</i> (Bergon) Hasle, 1996	plk, bns, osp	8, 11 ²¹² , 24 ²¹³
<i>Guinardia cylindrus</i> (Cleve) Hasle, 1996	plk, bns, osp	8 ²¹⁴ , 24 ²¹⁵
<i>Guinardia delicatula</i> (Cleve) Hasle, 1996	plk, bns, osp	8, 11 ²¹⁶ , 24 ²¹⁷
<i>Guinardia flaccida</i> (Castrac.) H. Perag., 1892	plk, bns, osp	4, 8, 11
<i>Guinardia striata</i> (Stolterfoth) Hasle, 1996	plk, bns, osp	8, 11 ²¹⁸ , 24 ²¹⁹
<i>Neocalyptrella robusta</i> (G. Norman ex Ralfs) Hernández-Becerril & Meave, 1997	plk, bns, osp	8, 11 ²²⁰ , 24 ²²¹
<i>Proboscia alata</i> (Brightwell) Sündstrom, 1986	plk, bns, osp	8, 11 ²²² , 24 ²²³
<i>Proboscia eumorpha</i> K. Takah., R. Jordan, & J. Priddle, 1994		4 ²²⁴
<i>Pseudosolenia calcar-avis</i> (M. Schultze) Sundström, 1986	plk, bns, osp	8, 11 ²²⁵ , 24 ²²⁶
<i>Rhizosolenia acuminata</i> (H. Perag.) H. Perag., 1892	plk, bns, osp	4, 8, 11, 24
<i>Rhizosolenia bergonii</i> H. Perag., 1892	plk, osp	4, 8, 24
<i>Rhizosolenia castracanei</i> Peragallo, 1888	plk, osp	4, 8
<i>Rhizosolenia clevei</i> Ostenf., 1903	plk, osp	4, 8
<i>Rhizosolenia cochlea</i> Brunel, 1891		4
<i>Rhizosolenia crassa</i> Schimper, 1905		4
<i>Rhizosolenia debyana</i> H. Perag., 1892		4
<i>Rhizosolenia faeroensis</i> Ostenf., 1903		4
<i>Rhizosolenia formosa</i> H. Perag., 1890		4 ²²⁷
<i>Rhizosolenia hebetata</i> Bailey, 1856	plk, bns, osp	4, 8, 11, 24
<i>Rhizosolenia imbricata</i> Brightw., 1858	plk, bns, osp	4, 8, 11, 24
<i>Rhizosolenia pungens</i> Cleve-Euler, 1937	plk, osp	8
<i>Rhizosolenia setigera</i> Brightw., 1858	plk, bns, osp	4, 8, 11, 24
<i>Rhizosolenia styliformis</i> Brightw., 1858	plk, bns, osp	4, 8, 11
Family: Skeletonemaceae		
<i>Detonula pumila</i> (Castrac.) Gran, 1900		4 ²²⁸
<i>Skeletonema costatum</i> (Grev.) Cleve, 1866	plk, bns, osp	8, 11, 24
Family: Stephanodiscaceae		
<i>Cyclotella antiqua</i> W. Sm., 1853		4
<i>Cyclotella atomus</i> Hustedt, 1937		4
<i>Cyclotella caspia</i> Grunow, 1878	ben, bns, osp	4, 8, 27, 28

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Cyclotella choctawhatcheeana</i> A. K. S. Prasad, 1990	plk, bns	20
<i>Cyclotella desikacharyi</i> A. K. S. Prasad, 2006	plk, bns	19
<i>Cyclotella kuetzingiana</i> Thwaites, 1848	ben, bns	4, 11
<i>Cyclotella meneghiniana</i> Kütz., 1844	ben, plk, bns	4, 11, 27, 28
<i>Cyclotella operculata</i> (C. Agardh) Kütz., 1838		4
<i>Cyclotella stelligera</i> Cleve & Grunow in Van Heurck, 1881	plk, bns	20
<i>Cyclotella striata</i> (Kütz.) Grunow, 1880	epi, ben, plk, bns	4, 8, 11, 26
<i>Cyclotella stylorum</i> Brightw., 1860	ben, plk, bns	4, 11, 27, 28
<i>Cyclostephanos dubius</i> (Hustedt) Round, 1982	ben, bns	4 ²²⁹ , 11 ²³⁰
<i>Puncticulata bodanica</i> (Eulenstein ex Grunow) Håk., 2002		4 ²³¹
<i>Puncticulata comta</i> (Kütz.) Håk., 2002	ben, bns	4 ²³² , 11 ²³³
Family: Stephanopyxidaceae		
<i>Stephanopyxis campechiana</i> Grunow, 1881		4
<i>Stephanopyxis palmeriana</i> (Grev.) Grunow, 1884	plk, bns, osp	8, 11, 24
<i>Stephanopyxis turgida</i> (Grev.) Ralfs, 1861		4
<i>Stephanopyxis turris</i> (Arn. in Grev.) Ralfs in A. Pritch., 1861	plk, osp	4, 8
Family: Stictodiscaceae		
<i>Stictodiscus californicus</i> Grev., 1861		4
Family: Thalassiosiraceae		
<i>Mimidiscus trioculatus</i> (F. J. R. Taylor) Hasle, 1973		4 ²³⁴
<i>Planktoniella blanda</i> (A. Schmidt) Syvertsen & Hasle, 1993	plk, bns	4 ²³⁵ , 11 ²³⁶
<i>Planktoniella sol</i> (G. C. Wall.) F. Schütt, 1892		4
<i>Thalassiosira aestivalis</i> Gran, 1931	plk, osp	24
<i>Thalassiosira anguste-lineata</i> (A. Schmidt) G. A. Fryxell & Hasle, 1977	plk, bns	4 ²³⁷ , 11 ²³⁸
<i>Thalassiosira antiqua</i> (Grunow) Cleve-Euler, 1941		4
<i>Thalassiosira angulata</i> (W. Greg.) Hasle, 1978	plk, bns, osp	8 ²³⁹ , 11 ²⁴⁰ , 24 ²⁴¹
<i>Thalassiosira cedarkeyensis</i> A. K. S. Prasad, 1993	ben, osp	16
<i>Thalassiosira eccentrica</i> (Ehrenb.) Cleve, 1904	plk, osp	4, 8, 27, 28
<i>Thalassiosira elsayedii</i> G. A. Fryxell, 1975	plk, osp	8
<i>Thalassiosira leptopus</i> (Grunow ex Van Heurck) Hasle & G. A. Fryxell, 1977	ben, plk, bns	8, 4 ²⁴² , 11 ²⁴³
<i>Thalassiosira lineata</i> Josué, 1968	plk, osp	8
<i>Thalassiosira mala</i> Takano, 1965		4
<i>Thalassiosira mediterranea</i> (Schröd.) Hasle, 1972		4 ²⁴⁴
<i>Thalassiosira minima</i> Gaarder, 1951		4 ²⁴⁵
<i>Thalassiosira oestrupii</i> (Ostenf.) Hasle, 1972		4
<i>Thalassiosira oliveriana</i> (O'Meara) I. V. Makarova & V. A. Nikolajev, 1983		4 ²⁴⁶
<i>Thalassiosira parva</i> Proshk.-Lavr., 1955		4
<i>Thalassiosira pseudonana</i> Hasle & Heimdal, 1970		4
<i>Thalassiosira rotula</i> Meunier, 1910	plk, bns	4, 11
<i>Thalassiosira subtilis</i> (Ostenf.) Gran, 1900	plk, bns, osp	4, 8, 11
<i>Thalassiosira tcherniai</i> Manguin, 1957	plk, bns	11 ²⁴⁷
<i>Thalassiosira tubifera</i> G. A. Fryxell, 1975	plk, osp	8
Family: Triceratiaceae		
<i>Auliscus clevei</i> Grunow, 1875		4
<i>Auliscus confluens</i> Grunow, 1875		4
<i>Auliscus pruinosus</i> Bailey, 1854		4, 24
<i>Auliscus punctatus</i> Bailey, 1854		4
<i>Auliscus reticulatus</i> Grev., 1863		4
<i>Auliscus schmidtii</i> Grunow, 1875		4
<i>Auliscus sculptus</i> (W. Sm.) Ralfs ex A. Pritch., 1860		4, 24
<i>Cerataulus smithii</i> Ralfs ex A. Pritch., 1861		4 ²⁴⁸ , 8 ²⁴⁹
<i>Eupodiscus ovalis</i> G. Norman, 1861		4
<i>Eupodiscus radiatus</i> Bailey, 1851	plk, bns, osp	4, 8, 24

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Odontella aurita</i> (Lyngb.) C. Agardh, 1832	ben, plk, bns, osp	8, 11 ²⁵⁰ , 24 ²⁵¹
<i>Odontella dubia</i> (Brightw.) Cleve, 1901		8
<i>Odontella longicuris</i> (Greville) Hoban, 1983	ben, bns	4 ²⁵² , 11 ²⁵³
<i>Odontella mobiliensis</i> (Bailey) Grunow, 1884	plk, bns, osp	8, 11, 24 ²⁵⁴
<i>Odontella regia</i> (Schultze) Simonsen, 1974	plk, bns, osp	8, 11, 24 ²⁵⁵
<i>Odontella rhombus</i> (Ehrenb.) Kütz., 1849	plk, bns, osp	8, 11, 24 ²⁵⁶
<i>Odontella sinensis</i> (Grev.) Grunow, 1884	plk, bns, osp	8, 4 ²⁵⁷ , 11
<i>Pleurosira laevis</i> (Ehrenb.) Compère, 1982		4 ²⁵⁸
<i>Pseudauliscus radiatus</i> (Bailey) A. Schmidt in Schmidt et al., 1975		4
<i>Triceratium antillarum</i> Cleve, 1878		4
<i>Triceratium broeckii</i> Leud.-Fortm., 1879		4
<i>Triceratium bullosum</i> O. N. Witt, 1873		4
<i>Triceratium campechianum</i> Grunow, 1878		4
<i>Triceratium consimile</i> Grunow in Van Heurck, 1883		4
<i>Triceratium convexiusculum</i> Grunow, 1890		4
<i>Triceratium dictyotum</i> P. A. Sims & R. Ross, 1990		4 ²⁵⁹
<i>Triceratium dubium</i> Brightw., 1859		4, 24
<i>Triceratium elegans</i> (Grev.) Grunow, 1883		4
<i>Triceratium favus</i> Ehrenb., 1839	plk, bns, osp	8, 24
<i>Triceratium firmum</i> Grev., 1864		4
<i>Triceratium harrisonianum</i> Norman & Grev. in Grev., 1861		4
<i>Triceratium heterostictum</i> A. Schmidt, 1890		4
<i>Triceratium jucatense</i> Grunow, 1882		4
<i>Triceratium ornatum</i> Grev., 1861		4
<i>Triceratium parallelum</i> (Ehrenb.) Grev., 1865		4
<i>Triceratium pentacrinus</i> G. C. Wall., 1858	plk, bns, osp	4, 8
<i>Triceratium pileatum</i> Grunow in Van Heurck, 1883		4
<i>Triceratium robertsonianum</i> Grev., 1866		4
<i>Triceratium scitulum</i> Brightw., 1853		4
<i>Triceratium shadboltii</i> Bailey, 1861		4
<i>Triceratium subcornutum</i> Grunow, 1886		4
<i>Triceratium tabellarium</i> Brightw., 1856		4
<i>Triceratium tripartitum</i> Grunow in Van Heurck, 1883		4
<i>Triceratium trisulcum</i> Bailey, 1861		4
<i>Triceratium venulosum</i> Grev., 1864		4
Class: Fragilariophyceae		
Family: Climacospheniaceae		
<i>Climacosphenia elongata</i> Bailey, 1853	plk, bns	8
<i>Climacosphenia moniligera</i> Ehrenb., 1841	plk, bns, osp	4, 8, 11, 24
Family: Fragilariaceae		
<i>Asterionella formosa</i> Hassall, 1855	plk, osp	8
<i>Asterionella gracillima</i> (Hantzsch in Rabenhorst) Heiberg, 1863	ben, bns	4
<i>Asterionella notata</i> Grunow ex Van Heurck, 1881	plk, osp	4, 24
<i>Asterionellopsis glacialis</i> (Castrac.) Round, 1990	plk, osp	4 ²⁶⁰ , 8, 11 ²⁶¹ , 24 ²⁶²
<i>Catacombas gaillonii</i> (Bory) D. M. Williams & Round, 1986	plk, bns	4 ²⁶³ , 8 ²⁶⁴
<i>Desikaneis gessneri</i> (Hustedt) A. K. S. Prasad, 1993	ben, plk, bns	17, 27 ²⁶⁵ , 28 ²⁶⁶
<i>Desikaneis howellii</i> A. K. S. Prasad, 1993	bns	17
<i>Desikaneis riesgoviensis</i> (Schauderna) A. K. S. Prasad, 1993		17
<i>Desikaneis stauroneiformis</i> (Woodhead & Tweed) A. K. S. Prasad, 1993		17
<i>Diatoma hiemale</i> (Lyngb.) Heiberg, 1863	ben, bns	4, 11
<i>Diatoma vulgare</i> Bory, 1824		4
<i>Fragilaria capucina</i> Desmazières, 1825	ben, bns	4, 11
<i>Fragilaria construens</i> (Ehrenb.) Grunow, 1862	ben, bns	4, 11
<i>Fragilaria crotonensis</i> Kitton, 1869		4

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Fragilaria granulata</i> G. Karst., 1907		4
<i>Fragilaria hyalina</i> (Kütz.) Grunow ex Van Heurck, 1862	bns	4, 28
<i>Fragilaria obtusa</i> Hustedt, 1956		28
<i>Fragilariforma virescens</i> (Ralfs) D. M. Williams & Round, 1988		4 ²⁶⁷
<i>Hyalosynedra laevigata</i> Grunow D. M. Williams & Round, 1986	plk, bns	8 ²⁶⁸
<i>Martyana atomus</i> (Hustedt) Snoeijs, 1991		28 ²⁶⁹
<i>Martyana schulzii</i> (C. Brockmann) Snoeijs, 1991		28 ²⁷⁰
<i>Pseudostaurosira brevistriata</i> (Grunow) D. M. Williams & Round, 1987	ben, bns	4 ²⁷¹ , 11 ²⁷²
<i>Opephora mutabilis</i> (Grunow) Sabbe & Wyverman, 1995	ben, bns, sft	27 ²⁷³ , 28 ²⁷⁴
<i>Opephora pacifica</i> (Grunow) Petit, 1889	ben, plk, bns	4, 8, 27, 28
<i>Opephora schwartzii</i> (Grunow) Petit ex Pelletan, 1889	ben, bns, sft	4, 27, 28
<i>Reimerothrix floridensis</i> A. K. S. Prasad, 2001	epi, ben, bns	21
<i>Staurosirella pinnata</i> (Ehrenb.) D. M. Williams & Round, 1987	ben, bns	4 ²⁷⁵ , 11, 27 ²⁷⁶ , 28 ²⁷⁷
<i>Synedra actinastroides</i> (Lemmerm.) Lemmerm., 1900		4
<i>Synedra crystallina</i> (C. Agardh) Kütz., 1844	plk, bns	4, 8
<i>Synedra fasciculata</i> (C. Agardh) Kütz., 1844	epi, plk, bns	8 ²⁷⁸ , 26 ²⁷⁹ , 28
<i>Synedra formosa</i> Hantzsch, 1863	ben, bns	4, 11
<i>Synedra fulgens</i> (Grev.) W. Sm., 1853	plk, bns	4, 8
<i>Synedra superba</i> Kütz., 1844	ben, bns	4, 11
<i>Synedra ulna</i> (Nitzsch) Ehrenb., 1832	ben, plk, bns	4, 8, 11
<i>Synedropsis karsteteri</i> A. K. S. Prasad & R. J. Livingston, 2005	plk, bns	18
<i>Tabularia investiens</i> (W. Smith) D. M. Williams & Round, 1986		27 ²⁸⁰
<i>Trachysphenia acuminata</i> M. Perag. in Tempère & Peragallo, 1910	epi, ben, bns	4, 11, 28
<i>Ulnaria acus</i> (Kütz.) Aboal, 2003	ben, bns	4 ²⁸¹ , 11 ²⁸²
Family: Licmophoraceae		
<i>Licmophora flabellata</i> (Grev.) C. Agardh, 1831	ben, bns, osp	4, 11, 8
<i>Licmophora lyngbyei</i> (Kütz.) Grunow ex Van Heurck, 1867	epi, plk, bns, osp	8 ²⁸³ , 11 ²⁸⁴ , 24 ²⁸⁵ , 28 ²⁸⁶
Family: Ptoraphidaceae		
<i>Pseudohimantidium pacificum</i> Hustedt & Krasske, 1941	plk, osp	8
Family: Psammodiscaeae		
<i>Psammodiscus nitidus</i> (W. Greg.) Round & D. G. Mann, 1980	plk, bns	4 ²⁸⁷ , 8, 11 ²⁸⁸
Family: Rhabdonemataceae		
<i>Rhabdonema adriaticum</i> Kütz., 1844	ben, plk, bns, osp	4, 8, 11, 24
<i>Rhabdonema mirificum</i> W. Sm., 1856		4
Family: Rhaphoneidaceae		
<i>Delphineis livingstonii</i> A. K. S. Prasad, 1986	plk, bns	15
<i>Delphineis surirella</i> (Ehrenb.) G. W. Andrews, 1981	plk, osp	24 ²⁸⁹
<i>Neodelphineis pelagica</i> Takano, 1982	plk, bns	15
<i>Rhaphoneis amphicerus</i> (Ehrenb.) Ehrenb., 1844	ben, bns	4, 11
<i>Rhaphoneis cocconeis</i> Ehrenb., 1869		4
<i>Rhaphoneis castracanii</i> Grunow, 1881	ben, bns	4, 11
Family: Striatellaceae		
<i>Grammatophora angulosa</i> Ehrenb., 1840	plk, bns, osp	4, 8, 11
<i>Grammatophora macilenta</i> W. Sm., 1856		4
<i>Grammatophora marina</i> (Lyngb.) Kütz., 1844	ben, plk, bns, osp	4, 8, 11
<i>Grammatophora maxima</i> Grunow, 1862		4
<i>Grammatophora oceanica</i> Ehrenb., 1840	ben, plk, bns, osp	4, 8, 11, 28
<i>Striatella delicatula</i> (Kütz.) Grunow, 1881		4
<i>Striatella interrupta</i> (Ehrenb.) Grunow., 1862		4
<i>Striatella unipunctata</i> (Lyngb.) C. Agardh, 1832	epi, plk, bns, osp	4, 8, 11, 24, 28
Family: Thalassionemataceae		
<i>Lioloma delicatulum</i> (Cupp) Hasle, 1996	plk, bns	4 ²⁹⁰ , 11 ²⁹¹
<i>Lioloma pacificum</i> (Cupp) Hasle, 1996	plk, osp	4 ²⁹² , 8, 11 ²⁹³

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

Taxon	Habitat-Biology	References/Endnotes
<i>Thalassionema bacillare</i> (Heiden in Heiden & Kolbe) Kolbe, 1955	plk, bns	4, 8
<i>Thalassionema frauenfeldii</i> (Grunow) Hallegr., 1986	plk, bns, osp	8, 11 ²⁹⁴ , 24 ²⁹⁵
<i>Thalassionema nitzschioides</i> (Grunow) Mereschk., 1902	plk, bns, osp	4, 8, 11, 24
<i>Thalassiothrix longissima</i> Cleve & Grunow, 1880	plk, bns, osp	4, 8, 11
<i>Thalassiothrix mediterranea</i> Pavill., 1916	plk, bns, osp	4, 11, 24
<i>Thalassiothrix nitzschioides</i> (Grunow) Grunow, 1881		4
Family: Toxariaceae		
<i>Toxarium hennedyanum</i> (W. Greg.) Pelletan, 1889	ben, plk, bns	4 ²⁹⁶ , 8, 11 ²⁹⁷
<i>Toxarium undulatum</i> Bailey, 1854	plk, bns	4 ²⁹⁸ , 11 ²⁹⁹

¹ Reported as *Achnanthes subsessilis* Kütz.

² Reported as *Achnanthes hauckiana* Grunow.

³ Reported as *Achnanthes hauckiana* Grunow.

⁴ Reported as *Achnanthes biasolettiana* Grunow.

⁵ Reported as *Achnanthes biasolettiana* Grunow.

⁶ Reported as *Achnanthes biasolettiana* Grunow.

⁷ Reported as *Navicula creuzburgensis* Krasske.

⁸ Reported as *Navicula creuzburgensis* Krasske.

⁹ Reported as *Stauroneis amphioxys* W. Greg.

¹⁰ Reported as *Stauroneis amphioxys* W. Greg.

¹¹ Reported as *Stauroneis salina* W. Sm.

¹² Reported as *Stauroneis salina* W. Sm.

¹³ Reported as *Bacillaria paradoxa* O. F. Müller.

¹⁴ Reported as *Bacillaria paradoxa* O. F. Müller.

¹⁵ Reported as *Nitzschia closterium* (Ehrenb.) W. Sm.

¹⁶ Reported as *Nitzschia closterium* (Ehrenb.) W. Sm.

¹⁷ Reported as *Nitzschia closterium* (Ehrenb.) W. Sm.

¹⁸ Reported as *Pseudoeunotia doliolus* (G. C. Wall.) Grunow.

¹⁹ Reported as *Pseudoeunotia doliolus* (G. C. Wall.) Grunow.

²⁰ Reported as *Nitzschia amphioxys* Ehrenb.

²¹ Reported as *Nitzschia parvula* F. W. Lewis.

²² Reported as *Nitzschia pseudoamphioxys* Hustedt.

²³ Reported as *Nitzschia pseudoamphioxys* Hustedt.

²⁴ Reported as *Nitzschia apiculata* (W. Greg.) Grunow.

²⁵ Reported as *Nitzschia apiculata* (W. Greg.) Grunow.

²⁶ Reported as *Nitzschia kolaczekii* Grunow.

²⁷ Reported as *Nitzschia mediterranea* Hustedt.

²⁸ Reported as *Nitzschia mediterranea* Hustedt.

²⁹ Reported as *Nitzschia panduriformis* W. Greg.

³⁰ Reported as *Nitzschia panduriformis* W. Greg.

³¹ Reported as *Nitzschia panduriformis* W. Greg.

³² Reported as *Nitzschia panduriformis* W. Greg.

³³ Reported as *Nitzschia delicatissima* Cleve.

³⁴ Reported as *Nitzschia delicatula* Grunow.

³⁵ Reported as *Nitzschia pungens* Grunow var. *pungens* Grunow.

³⁶ Reported as *Nitzschia pungens* Grunow var. *pungens* Grunow.

³⁷ Reported as *Nitzschia pungens* f. *multiseries* Hasle.

³⁸ Reported as *Nitzschia subfraudulenta* Hasle.

³⁹ Reported as *Nitzschia subpacificica* Hasle.

⁴⁰ Reported as *Nitzschia seriata* Cleve.

⁴¹ Reported as *Nitzschia seriata* Cleve.

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

- ⁴² Reported as *Nitzschia acuta* (Cleve) D. G. Mann.
- ⁴³ Reported as *Nitzschia brightwellii* Kitton.
- ⁴⁴ Reported as *Nitzschia calida* Grunow in Cleve & Grunow.
- ⁴⁵ Reported as *Nitzschia campechiana* Grunow.
- ⁴⁶ Reported as *Nitzschia constricta* (W. Greg.) Grunow.
- ⁴⁷ Reported as *Nitzschia granulata* Grunow.
- ⁴⁸ Reported as *Nitzschia granulata* Grunow.
- ⁴⁹ Reported as *Nitzschia granulata* Grunow.
- ⁵⁰ Reported as *Nitzschia granulata* Grunow.
- ⁵¹ Reported as *Nitzschia granulata* Grunow.
- ⁵² Reported as *Nitzschia hungarica* Grunow.
- ⁵³ Reported as *Nitzschia hungarica* Grunow.
- ⁵⁴ Reported as *Nitzschia hungarica* Grunow.
- ⁵⁵ Reported as *Nitzschia hungarica* Grunow.
- ⁵⁶ Reported as *Nitzschia marginulata* Grunow.
- ⁵⁷ Reported as *Nitzschia perversa* Grunow.
- ⁵⁸ Reported as *Nitzschia perversa* Grunow.
- ⁵⁹ Reported as *Nitzschia visurgis* Hustedt.
- ⁶⁰ Reported as *Navicula cocconeiformis* W. Greg ex Grunow.
- ⁶¹ Reported as *Cocconeis diminuta* Pant.
- ⁶² Reported as *Cocconeis scutellum* var. *stauroneiformis* W. Sm.
- ⁶³ Reported as *Cocconeis scutellum* var. *stauroneiformis* W. Sm.
- ⁶⁴ Reported as *Navicula delawarensis* Grunow.
- ⁶⁵ Reported as *Navicula delawarensis* Grunow.
- ⁶⁶ Reported as *Navicula pusilla* W. Sm.
- ⁶⁷ Reported as *Navicula mutica* var. *cohnii* (Hilse) Grunow.
- ⁶⁸ Reported as *Navicula mutica* Kütz.
- ⁶⁹ Reported as *Navicula mutica* var. *stigma* Patrick.
- ⁷⁰ Reported as *Navicula bomboides* A. Schmidt.
- ⁷¹ Reported as *Navicula apis* Ehrenb. and *Navicula chersonensis* Grunow.
- ⁷² Reported as *Navicula donkinii* A. Schmidt.
- ⁷³ Reported as *Navicula eugenia* A. Schmidt.
- ⁷⁴ Reported as *Navicula hudsonis* Grunow.
- ⁷⁵ Reported as *Navicula littoralis* Donkin.
- ⁷⁶ Reported as *Navicula nitescens* W. Greg.
- ⁷⁷ Reported as *Navicula notabilis* Grev.
- ⁷⁸ Reported as *Navicula papula* A. Schmidt.
- ⁷⁹ Reported as *Navicula suborbicularis* W. Greg.
- ⁸⁰ Reported as *Amphiprora paludosa* W. Sm.
- ⁸¹ Reported as *Amphora reichardtiana* Grunow.
- ⁸² Reported as *Navicula approximata* Grev.
- ⁸³ Reported as *Navicula californica* Grev.
- ⁸⁴ Reported as *Navicula clavata* W. Greg.
- ⁸⁵ Reported as *Navicula clavata* W. Greg.
- ⁸⁶ Reported as *Navicula diffluens* A. Schmidt.
- ⁸⁷ Reported as *Navicula diffluens* A. Schmidt.
- ⁸⁸ Reported as *Navicula excavata* Grev.
- ⁸⁹ Reported as *Navicula exsul* A. Schmidt.
- ⁹⁰ Reported as *Navicula hennedyi* W. Sm.
- ⁹¹ Reported as *Navicula irrorata* Grev.

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

- ⁹² Reported as *Navicula lyra* Ehrenb.
⁹³ Reported as *Navicula praetexta* Ehrenb.
⁹⁴ Reported as *Navicula spectabilis* W. Greg. var. *emarginata* Cleve.
⁹⁵ Reported as *Navicula granulata* Bailey.
⁹⁶ Reported as *Navicula granulata* Bailey.
⁹⁷ Reported as *Navicula punctigera* Hustedt.
⁹⁸ Reported as *Navicula punctulata* W. Sm. and *Navicula marina* Ralfs ex A. Pritch.
⁹⁹ Reported as *Navicula subdiffusa* Hustedt.
¹⁰⁰ Reported as *Navicula subdiffusa* Hustedt.
¹⁰¹ Reported as *Orthonais fimbriata* (Brightw.) Grunow.
¹⁰² Reported as *Navicula linearis* Grunow.
¹⁰³ Reported as *Caloneis formosa* (W. Greg.) Cleve.
¹⁰⁴ Reported as *Navicula wawrikan* Hustedt.
¹⁰⁵ Reported as *Navicula grevillei* (C. Agardh) Cleve.
¹⁰⁶ Reported as *Navicula grevillei* (C. Agardh) Cleve.
¹⁰⁷ Reported as *Navicula phyllepta* Kütz.
¹⁰⁸ Reported as *Navicula phyllepta* Kütz.
¹⁰⁹ Reported as *Navicula dulcis* R. M. Patrick
¹¹⁰ Reported as *Navicula gracilis* Ehrenb.
¹¹¹ Reported as *Navicula membranacea* Cleve.
¹¹² Reported as *Stauroneis membranacea* (Cleve) Hustedt.
¹¹³ Reported as *Amphora cymbelloides* Grunow.
¹¹⁴ Reported as *Alloioneis antillarum* Cleve & Grunow in Cleve.
¹¹⁵ Reported as *Navicula musca* W. Greg.
¹¹⁶ Reported as *Navicula powellii* F. W. Lewis.
¹¹⁷ Reported as *Navicula elegans* W. Sm.
¹¹⁸ Reported as *Navicula elegans* W. Sm.
¹¹⁹ Reported as *Navicula regula* Grunow & Cleve.
¹²⁰ Reported as *Tropidoneis lepidoptera* (W. Greg.) Cleve.
¹²¹ Reported as *Tropidoneis lepidoptera* (W. Greg.) Cleve.
¹²² Reported as *Tropidoneis lepidoptera* (W. Greg.) Cleve.
¹²³ Reported as *Pleurosigma balticum* (Ehrenb.) W. Sm.
¹²⁴ Reported as *Pleurosigma delicatulum* W. Sm.
¹²⁵ Reported as *Pleurosigma distortum* W. Sm.
¹²⁶ Reported as *Pleurosigma distortum* W. Sm.
¹²⁷ Reported as *Pleurosigma elongatum* W. Sm.
¹²⁸ Reported as *Pleurosigma elongatum* W. Sm.
¹²⁹ Reported as *Pleurosigma elongatum* W. Sm.
¹³⁰ Reported as *Pleurosigma fasciola* (Ehrenb.) W. Sm.
¹³¹ Reported as *Pleurosigma fasciola* (Ehrenb.) W. Sm.
¹³² Reported as *Pleurosigma formosum* W. Sm.
¹³³ Reported as *Pleurosigma formosum* W. Sm.
¹³⁴ Reported as *Pleurosigma formosum* W. Sm.
¹³⁵ Reported as *Pleurosigma nubecula* W. Sm.
¹³⁶ Reported as *Pleurosigma peisonis* Grunow.
¹³⁷ Reported as *Pleurosigma strigosum* W. Sm.
¹³⁸ Reported as *Pleurosigma strigosum* W. Sm.
¹³⁹ Reported as *Navicula longirostris* Hustedt.
¹⁴⁰ Reported as *Epithemia gibba* (Ehrenb.) Kütz.
¹⁴¹ Reported as *Navicula tumida* Bréb. ex Kütz.
¹⁴² Reported as *Pinnularia ambigua* Cleve.

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

- ¹⁴³ Reported as *Navicula aequorea* Hustedt.
¹⁴⁴ Reported as *Navicula aequorea* Hustedt.
¹⁴⁵ Reported as *Navicula amphipleuroides* Hustedt.
¹⁴⁶ Reported as *Navicula auriculata* Hustedt.
¹⁴⁷ Reported as *Navicula bioculata* Grunow ex A. Schmidt.
¹⁴⁸ Reported as *Navicula fenestrella* Hustedt.
¹⁴⁹ Reported as *Navicula florinae* H. Moeller.
¹⁵⁰ Reported as *Navicula forcipata* Grev.
¹⁵¹ Reported as *Navicula forcipata* Grev.
¹⁵² Reported as *Navicula hudsonis* Grunow.
¹⁵³ Reported as *Navicula hummii* Hustedt.
¹⁵⁴ Reported as *Navicula hummii* Hustedt.
¹⁵⁵ Reported as *Navicula nummularia* Grev.
¹⁵⁶ Reported as *Navicula pseudony* Hustedt.
¹⁵⁷ Reported as *Navicula pseudony* Hustedt.
¹⁵⁸ Reported as *Navicula pygmaea* Kütz. var. (Schm. At. 100/6).
¹⁵⁹ Reported as *Navicula subforcipata* Hustedt.
¹⁶⁰ Reported as *Navicula tenera* Hustedt.
¹⁶¹ Reported as *Navicula teneroides* Hustedt.
¹⁶² Reported as *Navicula accomoda* Hustedt.
¹⁶³ Reported as *Navicula accomoda* Hustedt.
¹⁶⁴ Reported as *Navicula ambigua* Ehrenb.
¹⁶⁵ Reported as *Navicula ambigua* Ehrenb.
¹⁶⁶ Reported as *Stauroneis phoenicenteron* Dippel.
¹⁶⁷ Reported as *Melosira granulata* (Ehrenb.) Ralfs.
¹⁶⁸ Reported as *Melosira granulata* (Ehrenb.) Ralfs.
¹⁶⁹ Reported as *Melosira granulata* (Ehrenb.) Ralfs.
¹⁷⁰ Reported as *Amphitetras antediluviana* Ehrenb.
¹⁷¹ Reported as *Biddulphia pulchella* Gray.
¹⁷² Reported as *Biddulphia pulchella* Gray.
¹⁷³ Reported as *Triceratium sculptum* Shadbolt.
¹⁷⁴ Reported as *Triceratium spinosum* Bailey.
¹⁷⁵ Reported as *Huttonia reichardtii* (Grunow) Grunow.
¹⁷⁶ Reported as *Triceratium arcticum* Brightw.
¹⁷⁷ Reported as *Cestodiscus cinnamomeus* (Greville) Grunow and *Triceratium cinnamomeum* Grev.
¹⁷⁸ Reported as *Triceratium dissimile* Grunow ex A. Schmidt.
¹⁷⁹ Reported as *Triceratium reticulum* Ehrenb.
¹⁸⁰ Reported as *Triceratium reticulum* Ehrenb.
¹⁸¹ Reported as *Bacteriastrum varians* Lauder.
¹⁸² Reported as *Chaetoceros compressum* Lauder.
¹⁸³ Reported as *Chaetoceros compressum* Lauder.
¹⁸⁴ Reported as *Chaetoceros compressum* Lauder.
¹⁸⁵ Reported as *Chaetoceros subsecundus* (Grunow) Hustedt.
¹⁸⁶ Reported as *Chaetoceros gracile* F. Schütt.
¹⁸⁷ Reported as *Chaetoceros gracile* F. Schütt.
¹⁸⁸ Reported as *Chaetoceros gracile* F. Schütt.
¹⁸⁹ Reported as *Coscinodiscus denarius* A. Schmidt.
¹⁹⁰ Reported as *Endictya oceanica* Ehrenb.
¹⁹¹ Reported as *Coscinodiscus granulosus* Grunow.
¹⁹² Reported as *Hemidiscus hardmanianus* (Grev.) Mann.

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

- 193 Reported as *Coscinodiscus stellaris* Roper.
- 194 Reported as *Actinoptychus undulatus* (Bailey) Ralfs in Pritchard.
- 195 Reported as *Actinoptychus undulatus* (Bailey) Ralfs in Pritchard.
- 196 Reported as *Hemiaulus kittonii* Grunow.
- 197 Reported as *Coscinodiscus divisus* Grunow.
- 198 Reported as *Actinocyclus ehrenbergii* Ralfs.
- 199 Reported as *Coscinodiscus africanus* C. Janisch.
- 200 Reported as *Coscinodiscus crenulatus* Grunow.
- 201 Reported as *Coscinodiscus nodulifer* A. Schmidt.
- 202 Reported as *Coscinodiscus nodulifer* A. Schmidt.
- 203 Reported as *Hyalodiscus stelliger* Bailey.
- 204 Reported as *Lauderia borealis* Gran.
- 205 Reported as *Dactyliosolen mediterraneus* (H. Perag.) H. Perag.
- 206 Reported as *Melosira sulcata* (Ehrenb.) Kütz.
- 207 Reported as *Melosira sulcata* (Ehrenb.) Kütz.
- 208 Reported as *Melosira sulcata* (Ehrenb.) Kütz.
- 209 Reported as *Coscinodiscus moelleri* A. Schmidt.
- 210 Reported as *Coscinodiscus moelleri* A. Schmidt.
- 211 Reported as *Guinardia blavyana* H. Perag.
- 212 Reported as *Rhizosolenia fragilissima* Bergon.
- 213 Reported as *Rhizosolenia fragilissima* Bergon.
- 214 Reported as *Rhizosolenia cylindrus* Cleve.
- 215 Reported as *Rhizosolenia cylindrus* Cleve.
- 216 Reported as *Rhizosolenia delicatula* Cleve.
- 217 Reported as *Rhizosolenia delicatula* Cleve.
- 218 Reported as *Rhizosolenia stouterfothii* H. Perag.
- 219 Reported as *Rhizosolenia stouterfothii* H. Perag.
- 220 Reported as *Rhizosolenia robusta* G. Norman.
- 221 Reported as *Rhizosolenia robusta* G. Norman.
- 222 Reported as *Rhizosolenia alata* Brightw.
- 223 Reported as *Rhizosolenia alata* Brightw.
- 224 Reported as *Rhizosolenia obtusa* Hensen.
- 225 Reported as *Rhizosolenia calcar-avis* M. Schultze.
- 226 Reported as *Rhizosolenia calcar-avis* M. Schultze.
- 227 Reported as *Rhizosolenia styliiformis* var. *latissima* Brightw.
- 228 Reported as *Schroederella delicatula* (H. Perag.) Pavill.
- 229 Reported as *Stephanodiscus dubius* Hustedt.
- 230 Reported as *Stephanodiscus dubius* Hustedt.
- 231 Reported as *Cyclotella bodanica* Eulenstein ex Grunow.
- 232 Reported as *Cyclotella comta* (Ehrenb.) Kütz.
- 233 Reported as *Cyclotella comta* (Ehrenb.) Kütz.
- 234 Reported as *Coscinodiscus trioculatus* F. J. R. Taylor.
- 235 Reported as *Coscinodiscus blandus* A. Schmidt.
- 236 Reported as *Coscinodiscus blandus* A. Schmidt.
- 237 Reported as *Thalassiosira polychorda* (Gran) Jörg.
- 238 Reported as *Coscosira polychorda* (Gran) Gran.
- 239 Reported as *Thalassiosira decipiens* (Grunow) Jörg.
- 240 Reported as *Thalassiosira decipiens* (Grunow) Jörg.
- 241 Reported as *Thalassiosira decipiens* (Grunow) Jörg.
- 242 Reported as *Coscinodiscus lineatus* Ehrenb.
- 243 Reported as *Coscinodiscus lineatus* Ehrenb.

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

- 244 Reported as *Coscosira mediterranea* Schröd.
 245 Reported as *Thalassiosira floridana* (I. C. G. Cooper) Hasle.
 246 Reported as *Micropodiscus oliveranus* (O'Meara) Grunow and *Actinocyclus bonatus* Castrac.
 247 Reported as *Thalassiosira gravida* Cleve.
 248 Reported as *Biddulphia smithii* (Ralfs) Van Heurck.
 249 Reported as *Biddulphia smithii* (Ralfs) Van Heurck.
 250 Reported as *Biddulphia aurita* (Lyngb.) Bréb. & Godey.
 251 Reported as *Biddulphia aurita* (Lyngb.) Bréb. & Godey.
 252 Reported as *Biddulphia longicuris* Grev.
 253 Reported as *Biddulphia longicuris* Grev.
 254 Reported as *Biddulphia mobiliensis* (Bailey) Grunow.
 255 Reported as *Biddulphia regia* (Schultze) Ostenf.
 256 Reported as *Biddulphia rhombus* (Ehrenb.) W. Sm.
 257 Reported as *Biddulphia sinensis* Grev. and *Biddulphia chinensis* Grev.
 258 Reported as *Biddulphia laevis* Ehrenb.
 259 Reported as *Biddulphia reticulata* Roper.
 260 Reported as *Asterionella glacialis* Castrac. and *Asterionella japonica* Cleve.
 261 Reported as *Asterionella japonica* Cleve.
 262 Reported as *Asterionella japonica* Cleve.
 263 Reported as *Synedra gailloni* (Bory) Ehrenb.
 264 Reported as *Synedra gailloni* (Bory) Ehrenb.
 265 Reported as *Fragilaria gessneri* Hustedt.
 266 Reported as *Fragilaria gessneri* Hustedt.
 267 Reported as *Fragilaria virescens* Ralfs.
 268 Reported as *Synedra laevigata* Grunow.
 269 Reported as *Fragilaria atomus* Hustedt.
 270 Reported as *Fragilaria schulzii* C. Brockmann.
 271 Reported as *Fragilaria brevistriata* Grunow.
 272 Reported as *Fragilaria brevistriata* Grunow.
 273 Reported as *Opephora parva* (Grunow) Krasske.
 274 Reported as *Opephora parva* (Grunow) Krasske.
 275 Reported as *Fragilaria pinnata* Ehrenb.
 276 Reported as *Fragilaria pinnata* Ehrenb.
 277 Reported as *Fragilaria pinnata* Ehrenb.
 278 Reported as *Synedra affinis* Kütz.
 279 Reported as *Synedra affinis* Kütz.
 280 Reported as *Synedra investiens* W. Sm.
 281 Reported as *Synedra acus* Kütz.
 282 Reported as *Synedra acus* Kütz.
 283 Reported as *Licmophora abbreviata* C. Agardh.
 284 Reported as *Licmophora abbreviata* C. Agardh.
 285 Reported as *Licmophora abbreviata* C. Agardh.
 286 Reported as *Licmophora abbreviata* C. Agardh.
 287 Reported as *Coscinodiscus nitidus* W. Greg.
 288 Reported as *Coscinodiscus nitidus* W. Greg.
 289 Reported as *Rhaphoneis surirella* (Ehrenb.) Grunow.
 290 Reported as *Thalassiothrix delicatula* Cupp.
 291 Reported as *Thalassiothrix delicatula* Cupp.
 292 Reported as *Thalassiothrix mediterranea* var. *pacifica* Cupp.
 293 Reported as *Thalassiothrix mediterranea* var. *pacifica* Cupp.

(continued)

Checklist of diatoms (Bacillariophyta) from the Gulf of Mexico. (continued)

²⁹⁴ Reported as *Thalassiothrix frauenfeldii* (Grunow) Grunow in Cleve & Grunow.

²⁹⁵ Reported as *Thalassiothrix frauenfeldii* (Grunow) Grunow in Cleve & Grunow.

²⁹⁶ Reported as *Synedra hennedyana* W. Greg.

²⁹⁷ Reported as *Synedra hennedyana* W. Greg.

²⁹⁸ Reported as *Synedra undulata* (Bailey) W. Greg.

²⁹⁹ Reported as *Synedra undulata* (Bailey) W. Greg.