

Supplementary Table 1. Species list of microfossils present in the upper 30 ambsf of Integrated Ocean Drilling Program Expedition 347 core M0063D, with their author names and year of publication. life-forms (B = benthic; P = pelagic) and salinity distribution (F = Freshwater; B = Brackish; BF = Brackish to freshwater; BM = Brackish-marine; U = unknown).

Name	Author	Publication Year	Life-form	Salinity Distribution
Dinoflagellate cysts				
<i>Operculodinium centrocarpum</i>	(Deflandre & Cookson) Wall	1967	P	BM
<i>Spiniferites</i> spp.	G.A. Mantell	1850	P	BM
Radiosperma				
<i>Radiosperma corbiferum</i>	Meunier	1910	P	BM
Foraminifera				
<i>Elphidium clavatum</i>	Cushman	1930	B	BM
Ebridia				
<i>Ebria tripartita</i>	(J. Schumann) Lemmermann	1899	P	BM
Silicoflagellates				
<i>Octactis speculum</i>	(Ehrenberg) F.H. Chang, J.M. Grieve & J.E. Sutherland	2017	P	BM
Diatoms				
<i>Achnanthes lemmermannii</i>	Hustedt	1933	B	BM
<i>Actinocyclus normanii</i>	(W.Gregory ex Greville) Hustedt	1957	P	F
<i>Actinocyclus octonarius</i>	Ehrenberg	1837	P	BF
<i>Actinocyclus octonarius</i> var. <i>crassus</i>	(W. Smith) Hendey	1954	P	BF
<i>Actinocyclus octonarius</i> var. <i>tenellus</i>	(Brébisson) Hendey	1954	P	F
<i>Amphora pediculus</i>	(Kützing) Grunow	1875	B	BF
<i>Amphora</i> spp.	Ehrenberg ex Kützing	1844	B	U
<i>Astartiella bremeyeri</i>	(Lange-Bertalot) Witkowski & Lange-Bertalot	1998	B	BM
<i>Aulacoseira ambigua</i>	(Grunow) Simonsen	1979	P	F
<i>Aulacoseira ambigua</i>	(Ehrenberg) Simonsen	1979	P	F
<i>Aulacoseira islandica</i>	(Otto Müller) Simonsen	1979	P	F
<i>Aulacoseira subarctica</i>	(Otto Müller) E.Y. Haworth	1990	P	F
<i>Caloneis aemula</i>	(Grunow) Cleve	1894	B	BM
<i>Caloneis amphibaena</i> var. <i>subsalina</i>	(Donkin) Cleve	1894	B	BM
<i>Caloneis crassa</i>	(Gregory) R. Ross	1986	B	BM
<i>Chaetoceros mitra</i> resting spore	(Bailey) Cleve	1896	P	BM
<i>Chaetoceros</i> spp.	Ehrenberg	1844	P	BM
<i>Cocconeis disculus</i>	(Schumann) Cleve	1882	B	F
<i>Cocconeis neothumensis</i>	Krammer	1990	B	BM
<i>Cocconeis pediculus</i>	Ehrenberg	1838	B	BF
<i>Cocconeis placentula</i>	Ehrenberg	1838	B	BF
<i>Cocconeis placentula</i> var. <i>euglypta</i>	(Ehrenberg) Grunow	1884	B	BM
<i>Cocconeis scutellum</i>	Ehrenberg	1838	B	BM
<i>Cocconeis speciosa</i>	W. Gregory	1855	B	BM
<i>Cocconeis</i> spp.	Ehrenberg	1836	B	U
<i>Coscinodiscus granii</i>	L.F. Gough	1905	P	BM
<i>Cyclostephanos dubius</i>	(Hustedt) Round	1988	P	F
<i>Cyclotella atomus</i>	Hustedt	1937	P	F
<i>Cyclotella choctawhatcheeana</i>	Prasad	1990	P	BM
<i>Cyclotella cretica</i> var. <i>cyclopuncta</i>	(H. Håkansson & J.R. Carter) R. Schmidt	1993	P	F
<i>Cyclotella radiosa</i>	(Grunow) Lemmermann	1900	P	F
<i>Cyclotella</i> spp.	(Kützing) Brébisson	1838	B	U
<i>Diploneis decipiens</i> var. <i>parallela</i>	Cleve-Euler	1915	B	BM
<i>Diploneis didyma</i>	(Ehrenberg) Ehrenberg	1839	B	BM
<i>Diploneis smithii</i>	(Brébisson) Cleve	1894	B	BF
<i>Diploneis</i> spp.	Ehrenberg ex Cleve	1894		U
<i>Diploneis stroemii</i>	Hustedt	1937	B	BM
<i>Epithemia sorex</i>	Kützing	1844	B	BF
<i>Epithemia</i> spp.	Kützing	1844	B	U
<i>Epithemia turgida</i>	(Ehrenberg) Kützing	1844	B	BF
<i>Epithemia turgida</i> var. <i>westermanni</i>	(Ehrenberg) Grunow	1862	B	BF
<i>Fallacia clepsidroides</i>	Witkowski	1994	B	BM
<i>Fragilariopsis cylindrus</i>	(Grunow ex Cleve) Helmcke & Krieger	1954	P	BM
<i>Gomphonema angustum</i>	C. Agardh	1831	B	BF
<i>Grammatophora marina</i>	(Lyngbye) Kützing	1844	B	BM
<i>Grammatophora oceanica</i>	Ehrenberg	1840	B	BM
<i>Gyrosigma</i> spp.	Hassall	1845		U
<i>Hyalodiscus scoticus</i>	(Kützing) Grunow	1879	P	BM

Supplementary Table 1 continued. Species list of microfossils present in the upper 30 ambsf of Integrated Ocean Drilling Program Expedition 347 core M0063D, with their author names and year of publication. life-forms (B = benthic; P = pelagic) and salinity distribution (F = Freshwater; B = Brackish; BF = Brackish to freshwater; BM = Brackish-marine; U = unknown).

Name	Author	Publication Year	Life-form	Salinity Distribution
<i>Mastogloia albertii</i>	A. Pavlov, E. Jovanovska, C.E. Wetzel, L. Ector & Z. Levkov	2016	B	BM
<i>Mastogloia</i> spp.	Thwaites ex W.Smith	1856		U
<i>Melosira arctica</i>	Dickie	1852	P	BM
<i>Melosira lineata</i>	(Dillwyn) C. Agardh	1824	B	BM
<i>Melosira moniliformis</i>	(O.F. Müller) C. Agardh	1824	B	BM
<i>Navicula cryptocephala</i>	Kützing	1844	B	F
<i>Navicula peregrina</i>	(Ehrenberg) Kützing	1844	B	BM
<i>Navicula</i> spp.	Bory	1822	B	U
<i>Navicymbula pusilla</i>	(Grunow) Krammer	2003	B	BF
<i>Nitzschia elegantula</i>	Grunow	1881	B	BM
<i>Nitzschia inconspicua</i>	Grunow	1862	B	BF
<i>Nitzschia</i> spp.	Hassall	1845		U
<i>Nizschia pusilla</i>	Grunow	1862	B	BM
<i>Opephora guenter-grassii</i>	(Witkowski & Lange-Bertalot) Sabbe & Vyverman	1995	B	BM
<i>Pantocsekiella comensis</i>	(Grunow) K.T. Kiss & E. Ács	2016	P	F
<i>Pantocsekiella rossii</i>	(H. Håkansson) K.T. Kiss & E. Ács	2016	P	F
<i>Pantocsekiella schumannii</i>	(Grunow) K.T. Kiss & E. Ács	2016	P	F
<i>Pauliella taeniata</i>	(Grunow) F.E. Round & Basson	1997	P	BM
<i>Petroneis humerosa</i>	(Brébisson ex W. Smith) Stickle & D.G. Mann	1990	B	BM
<i>Planothidium delicatulum</i>	(Kützing) Round & Bukhtiyarova	1996	B	BF
<i>Planothidium oestrupii</i>	(Clev-Euler) M.B. Edlund	2001	B	BF
<i>Planothidium</i> spp.	Round & L.Bukhtiyarova	1996		U
<i>Pseudosolenia calcar-avis</i>	(Schultze) B.G. Sundström	1986	P	BM
<i>Rhabdonema minutum</i>	Kützing	1844	B	BM
<i>Rhoicosphenia abbreviata</i>	(C. Agardh) Lange-Bertalot	1980	B	BM
<i>Rhopalodia gibba</i>	(Ehrenberg) Otto Müller	1895	B	BF
<i>Shionodiscus oestrupii</i>	(Ostenfeld) A.J. Alverson, S.-H. Kang & E.C. Theriot	2006	P	BM
<i>Skeletonema marinoi</i>	Sarno & Zingone	2005	P	BM
<i>Stephanodiscus neoastreae</i>	Håkansson & Hickel	1986	P	F
<i>Stephanodiscus alpinus</i>	Hustedt	1942	P	F
<i>Stephanodiscus medius</i>	Håkansson	1986	P	F
<i>Stephanodiscus</i> spp.	Ehrenberg	1845	P	F
<i>Surirella</i> spp.	Turpin	1828		U
<i>Tabellaria</i> spp.	Ehrenberg ex Kützing	18444		U
<i>Tabularia fasciculata</i>	(C. Agardh) D.M. Williams & Round	1986	B	BM
<i>Tabularia laevis</i>	Kützing		B	BF
<i>Tabularia</i> spp.	(Kützing) D.M.Williams & Round	1986	B	U
<i>Tabularia waernii</i>	P. Snoeijs	1991	B	BM
<i>Thalassionema nitzschioides</i>	(Grunow) Mereschowsky	1902	P	BM
<i>Thalassiosira angustelineata</i>	(A.W.F. Schmidt) G. Fryxell & Hasle	1977	P	BM
<i>Thalassiosira baltica</i>	(Grunow) Ostenfeld	1901	P	BF
<i>Thalassiosira eccentrica</i>	(Ehrenberg) Cleve	1904	P	BM
<i>Thalassiosira hyperborea</i> var. <i>lacunosa</i>	G.R. Hasle	1989	P	BM
<i>Thalassiosira hyperborea</i> var. <i>pelagica</i>	(A. Cleve) G.R. Hasle	1989	P	BF
<i>Thalassiosira levanderi</i>	Van Goor	1924	P	BM
<i>Tryblionella levidensis</i>	W. Smith	1856	B	BM
<i>Tryblionella</i> spp.	W. Smith	1853		U