

## Plankton studies in Buzzards Bay, Massachusetts, USA. VI. Phytoplankton and water quality, 1987 to 1998

Jefferson T. Turner\*, David G. Borkman, Jean A. Lincoln, David A. Gauthier, Christian M. Petitpas

School for Marine Science and Technology, University of Massachusetts Dartmouth, 706 South Rodney French Boulevard,  
New Bedford, Massachusetts 02744, USA

\*Email: jturner@umassd.edu

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**Appendix 1.** Cruise numbers and dates for Buzzards Bay monitoring

Cruise	Date	Cruise	Date	Cruise	Date
01	01 Oct 87	48	11 Dec 90	95	16 Nov 94
02	20 Oct 87	49	03 Jan 91	96	13 Dec 94
03	24 Nov 87	50	05 Feb 91	97	10 Jan 95
04	16 Dec 87	51	05 Mar 91	98	18 Feb 95
05	08 Jan 88	52	02 Apr 91	99	07 Mar 95
06	02 Feb 88	53	02 May 91	100	15 Apr 95
07	01 Mar 88	54	18 Jun 91	101	20 May 95
08	05 Apr 88	55	09 Jul 91	102	29 Jun 95
09	03 May 88	56	27 Aug 91	103	14 Jul 95
10	07 Jun 88	57	24 Sep 91	104	09 Aug 95
11	21 Jun 88	58	22 Oct 91	105	12 Sep 95
12	13 Jul 88	59	21 Nov 91	106	03 Oct 95
13	27 Jul 88	60	18 Dec 91	107	07 Nov 95
14	10 Aug 88	61	09 Jan 92	108	05 Dec 95
15	23 Aug 88	62	04 Feb 92	109	18 Jan 96
16	06 Sep 88	63	03 Mar 92	110	19 Feb 96
17	20 Sep 88	64	14 Apr 92	111	15 Mar 96
18	04 Oct 88	65	07 May 92	112	04 Apr 96
19	18 Oct 88	66	09 Jun 92	113	09 May 96
20	08 Nov 88	67	07 Jul 92	114	20 Jun 96
21	06 Dec 88	68	13 Aug 92	115	12 Jul 96
22	03 Jan 89	69	01 Sep 92	116	15 Aug 96
23	07 Feb 89	70	06 Oct 92	117	12 Sep 96
24	09 Mar 89	71	05 Nov 92	118	01 Oct 96
25	04 Apr 89	72	01 Dec 92	119	05 Nov 96
26	02 May 89	73	06 Jan 93	120	04 Dec 96
27	06 Jun 89	74	04 Feb 93	121	15 Jan 97
28	27 Jun 89	75	02 Mar 93	122	20 Feb 97
29	06 Jul 89	76	13 Apr 93	123	11 Mar 97
30	18 Jul 89	77	03 May 93	124	15 Apr 97
31	01 Aug 89	78	15 Jun 93	125	19 May 97
32	17 Aug 89	79	27 Jul 93	126	04 Jun 97
33	13 Sep 89	80	10 Aug 93	127	17 Jul 97
34	11 Oct 89	81	14 Sep 93	128	07 Aug 97
35	08 Nov 89	82	26 Oct 93	129	09 Sep 97
36	06 Dec 89	83	11 Nov 93	130	19 Oct 97
37	03 Jan 90	84	02 Dec 93	131	18 Nov 97
38	27 Feb 90	85	29 Jan 94	132	04 Dec 97
39	20 Mar 90	86	18 Feb 94	133	07 Jan 98
40	03 Apr 90	87	14 Mar 94	134	11 Feb 98
41	01 May 90	88	05 Apr 94	135	05 Mar 98
42	26 Jun 90	89	20 May 94	136	16 Apr 98
43	20 Jul 90	90	16 Jun 94	137	14 May 98
44	21 Aug 90	91	06 Jul 94	138	10 Jun 98
45	11 Sep 90	92	04 Aug 94	139	22 Jul 98
46	11 Oct 90	93	13 Sep 94	140	26 Aug 98
47	08 Nov 90	94	05 Oct 94	141	11 Sep 98

**Appendix 2.** Phytoplankton taxa recorded for Buzzards Bay. Taxonomic designations are according to Tomas (1997), and for some dinoflagellates, Dodge (1982)

**Diatoms**

<i>Acnanthes</i> spp.	<i>Licomophora</i> spp.
<i>Actinoptychus senarius</i> (Ehrenberg) Ehrenberg	<i>Melosira distans</i> (Ehrenberg) Kütz
<i>Amphiprora</i> spp.	<i>Melosira moniliformis</i> (O. F. Muller) Agardh
<i>Amphora</i> spp.	<i>Melosira nummuloides</i> C. A. Agardh
<i>Asterionellopsis glacialis</i> (Castracane) F. E. Round	<i>Navicula</i> spp.
<i>Attheya septentrionalis</i> (Østrup) Crawford	<i>Nitzschia longissima</i> (Brébisson, in Kützing)
<i>Bacillaria paxillifera</i> (O. F. Müller) Hendey	Ralfs in Pritchard
<i>Bacteriastrium delicatulum</i> Cleve	<i>Odontella aurita</i> (Lyngbye) C. A. Agardh
<i>Ceratulina pelagica</i> (Cleve) Hendey	<i>Odontella mobiliensis</i> (Bailey) Grunow
<i>Chaetoceros compressus</i> Lauder	<i>Odontella sinensis</i> (Greville) Grunow
<i>Chaetoceros coronatum</i> Gran	<i>Paralia sulcata</i> (Ehrenberg) Cleve
<i>Chaetoceros costatus</i> Pavillard	<i>Pleurosigma</i> spp.
<i>Chaetoceros curvisetus</i> Cleve	<i>Proboscia alata</i> (Brightwell) Sundström
<i>Chaetoceros danicus</i> Cleve	<i>Pseudo-nitzschia</i> spp.
<i>Chaetoceros debilis</i> Cleve	<i>Rhabdonema adriaticum</i> Kütz
<i>Chaetoceros decipiens</i> Cleve	<i>Rhizosolenia alata</i> Brightwell (= <i>Proboscia alata</i>
<i>Chaetoceros didymus</i> Ehrenberg	(Brightwell) Sandstrom)
<i>Chaetoceros difficile</i> Cleve	<i>Rhizosolenia delicatula</i> Cleve (= <i>Guinardia</i>
<i>Chaetoceros gracilis</i> Schütt	<i>delicatula</i> (Cleve) G. R. Hasle)
<i>Chaetoceros lacinosus</i> Schütt	<i>Rhizosolenia fragilissima</i> Bergon (= <i>Dactyliosolen</i>
<i>Chaetoceros lorenzianus</i> Grunow	<i>fragilissimus</i> (Bergon) G. R. Hasle)
<i>Chaetoceros pseudocurvisetus</i> Mangin	<i>Rhizosolenia hebetata</i> Bailey f. <i>hebetata</i>
<i>Chaetoceros socialis</i> Lauder	<i>Rhizosolenia imbricata</i> Brightwell
<i>Chaetoceros</i> spp.	<i>Rhizosolenia setigera</i> Brightwell
<i>Cocconeis scutellum</i> Ehrenberg	<i>Rhizosolenia stolterfothii</i> H. Peragallo (= <i>Guinardia striata</i>
<i>Corethron criophilum</i> Castracane	(Stolterfoth) G. R. Hasle)
<i>Coscinodiscus centralis</i> Ehrenberg	<i>Rhizosolenia styliformis</i> Brightwell
<i>Coscinodiscus marginatus</i> Ehrenberg	<i>Rhizosolenia</i> spp.
<i>Coscinodiscus oculus-iridis</i> Ehrenberg	<i>Skeletonema costatum</i> (Greville) Cleve
<i>Coscinodiscus radiatus</i> Ehrenberg	<i>Stephanopyxis palmeriana</i> (Greville) Grunow
<i>Coscinodiscus</i> spp.	<i>Stephanopyxis turris</i> (Arnott in Greville) Ralfs in Pritchard
<i>Cylindrotheca closterium</i> (Ehrenberg) Reimann & Lewin	<i>Streptotheca tamesis</i> (Shrubsole) Ricard
<i>Dactyliosolen fragilissimus</i> (Bergon) Hasle comb. nov.	<i>Striatella unipunctata</i> (Lyngbye) C. A. Agardh
<i>Detonula confervacea</i> (Cleve) Gran	<i>Suirella</i> spp.
<i>Detonula pumila</i> (Castracane) Gran	<i>Synedra</i> spp.
<i>Diploneis crabro</i> Ehrenberg	<i>Thalassionema nitzschoides</i> (Grunow) Mereschkowsky
<i>Diploneis smithii</i> (Breb.) Cleve	<i>Thalassionema</i> spp.
<i>Ditylum brightwellii</i> (West) Grunow in Van Heurck	<i>Thalassiosira decipiens</i> (Grunow) Jørgensen
<i>Eucampia zodiacus</i> Ehrenberg	<i>Thalassiosira gravida</i> Cleve
<i>Fragilaria</i> spp.	<i>Thalassiosira leptopus</i> (Grunow, in Ven Heurck)
<i>Grammatophora marina</i> (Lyngb) Kütz	Hasle & G. Fryxell
<i>Guinardia delicatula</i> (Cleve) Hasle comb. Nov.	<i>Thalassiosira nordenskiöldii</i> Cleve
<i>Guinardia flaccida</i> (Castracane) H. Peragallo	<i>Thalassiosira rotula</i> Meunier
<i>Guinardia striata</i> (Stolterforh) Hasle comb. nov.	<i>Thalassiosira subtilis</i> (Ostenfeld) Gran
<i>Gyrosigma</i> spp.	<i>Thalassiosira</i> spp.
<i>Hemiaulus hauckii</i> Grunow in Van Huerck	<i>Thalassiothrix longissima</i> Cleve & Grunow
<i>Leptocylindrus danicus</i> Cleve	<i>Thalassiothrix</i> spp.
<i>Leptocylindrus minimus</i> Gran	<i>Tropidoneis</i> spp.
<i>Licomophora abbreviata</i> Agardh	Unidentified centric diatoms
	Unidentified pennate diatoms

Appendix 2 (continued)

**Dinoflagellates**

*Alexandrium fundyense* (Lebour) Balech  
*Alexandrium* spp.  
*Amphidinium* spp.  
*Ceratium furca* (Ehrenberg) Claparède & Lachmann  
*Ceratium fusus* (Ehrenberg) Dujardin  
*Ceratium minutum* Jorgensen  
*Ceratium lineatum* (Ehrenberg) Cleve  
*Ceratium longipes* (Bailey) Gran  
*Ceratium tripos* (O. F. Müller) Nitzsch  
*Dinophysis acuminata* Claparède & Lachmann  
*Dinophysis acuta* Ehrenberg  
*Dinophysis norvegica* Claparède & Lachmann  
*Dinophysis ovum* Schutt  
*Dinophysis rotundata* Claparède & Lachmann  
*Gonyaulax spinifera* (Claparède & Lachmann) Diesing  
*Gonyaulax verior* Sournia  
*Gonyaulax* spp.  
*Gymnodinium sanguineum* Hirasaka  
*Gymnodinium* spp.  
*Gyrodinium estuariale* Hulburt  
*Gyrodinium spirale* (Bergh) Kofoid & Swezy  
*Gyrodinium* spp.  
*Heterocapsa triquetra* (Ehrenberg) Stein  
*Heterocapsa rotundatum* (Lohmann) G. Hansen  
*Oblea rotunda* (Lebour) Balech ex Sournia  
*Polykrikos kofoidii* Chatton  
*Polykrikos* spp.  
*Protoberidinium brevipes* (Paulsen) Balech  
*Protoberidinium claudicans* (Paulsen) Balech  
*Protoberidinium conicum* (Gran) Balech  
*Protoberidinium depressum* (Bailey) Balech  
*Protoberidinium leonis* (Pavillard) Balech  
*Protoberidinium pallidum* (Ostenfeld) Balech  
*Protoberidinium pellucidum* Bergh

*Protoberidinium pentagonum* (Gran) Balech  
*Protoberidinium steinii* (Jorgensen) Balech  
*Protoberidinium* spp.  
*Prorocentrum gracile* Schütt  
*Prorocentrum micans* Ehrenberg  
*Prorocentrum minimum* (Pavillard) Schiller  
*Prorocentrum scutellum* Schröder  
*Prorocentrum triestinum* Schiller  
*Prorocentrum* spp.  
*Scrippsiella trochoidea* (Stein) Balech  
Unidentified athecate dinoflagellates  
Unidentified thecate dinoflagellates

**Other**

Microflagellates  
Phytoflagellates  
Cryptomonads  
Euglenoids  
*Calycomonas wulfii* Conrad & Kufferath (*Paulinella ovalis*  
(A. Wulff) Johnson, Hargraves & Sieburth)  
*Chroomonas* spp.  
*Dictyocha fibula* Ehrenberg  
*Dictyocha speculum* Ehrenberg  
*Ebria tripartita* (Schumann) Lemmermann  
*Eutreptia* spp.  
*Eutreptiella* spp.  
*Heterosigma akashiwo* (Y. Hada) Y. Hada ex Y. Hara &  
M. Chihara  
*Phaeocystis pouchettii* (Hariot) Lagerheim  
*Pyramimonas* spp.  
*Mesodinium rubrum* (Lohmann) Hamburger &  
Buddenbrock (= *Myrionecta rubra* Jankowski)  
Aloricate ciliates  
Tintinnids (hyaline)  
Tintinnids (agglomerated)