Limnol. Oceanogr., 51(4), 2006, 1602–1613

Relative importance of CO_2 recycling and CH_4 pathways in lake food webs along a dissolved organic carbon gradient

Jay T. Lennon, Anthony M. Faiia, Xiahong Feng, and Kathryn L. Cottingham

Web Appendix 1. Name, location, and limnological characteristics of the lakes in our study. TN and TP were measured spectrophotometrically after persulfate digestion (APHA 1998), and chlorophyll *a* was measured on lake water retentate (Whatman GF/C) after cold methanol extraction (APHA 1998). Lake Morey, Childs Pond, and N. of Hamilton Pond were used as the low, medium, and high DOC lakes, respectively, for our intensive three-lake evaluation of whole water column conditions (Figs. 5 and 6). DOC, TN, TP, chlorophyll *a*, and pH data represent epilimnetic conditions. Adapted from APHA (1998). DOC = dissolved organic carbon, TN = total nitrogen, TP = total phosphorus.

Lake name	State	Year sampled	Latitude-longitude	pH	Secchi depth (m)	Anoxic hypolimnion	DOC (μmol L^{-1})	TN (μmol L^{-1})	TP (μmol L^{-1})	Chlorophyll *a* (μg L^{-1})
OMM Pond	CT	2002	N41.95869 W73.25067	4.4	0.8	N	665.2	30.5	0.39	6.30
Big Rock Lake	ME	2002	N43.61009 W70.69000	6.2	1.0	Y	757.8	23.2	0.45	7.01
Little Long Pond	ME	2002	N43.40632 W70.75711	5.9	0.4	N	1,174.2	31.3	1.05	15.9
Joe Pond	ME	2002	N44.40719 W69.82319	4.3	0.6	N	895.0	28.7	0.49	12.0
York Pond	ME	2002	N44.62397 W70.97177	6.5	0.8	N	945.8	30.9	0.55	8.6
N. of Hamilton Pond	ME	2002	N44.47950 W69.84020	4.3	1.0	Y	1,015.8	18.6	0.36	5.2
Wadley's Pond	ME	2003	N43.53474 W70.64081	6.6	0.8	Y	717.9	15.0	0.57	2.4
N. of Hamilton Pond	ME	2003	N44.47950 W69.84020	4.4	1.6	Y	961.8	19.6	0.53	1.4
Skatutakee Lake	NH	2002	N42.93786 W72.07532	—	—	—	189.4	13.4	0.29	6.0
Chesham Pond	NH	2002	N42.93929 W72.13356	—	—	—	259.2	18.6	0.35	3.6
Post Pond	NH	2002	N43.82709 W72.14785	7.7	3.3	N	271.4	15.0	0.21	1.5
Mill Pond	NH	2002	N42.88759 W71.08380	5.8	2.1	N	491.9	18.6	0.27	3.2
Black Pond	NH	2002	N43.11089 W72.01942	6.2	0.9	Y	540.8	23.6	0.51	10.2
North Pond	NH	2002	N43.24118 W72.10161	5.5	—	N	562.4	19.8	0.18	1.9
Nubansuit	NH	2002	N42.98930 W72.05578	6.1	10.0	N	119.9	7.9	0.10	0.9
Norway Pond	NH	2002	N42.97615 W71.98466	6.2	3.5	N	290.6	16.6	0.28	2.8
Sip Pond	NH	2002	N42.73341 W72.10089	5.4	1.3	N	457.8	31.3	0.46	4.5
Stone Pond	NH	2002	N42.75730 W72.12810	6.2	0.7	Y	634.7	28.3	0.35	1.1
Lily Pond	NH	2002	N43.26912 W70.89547	6.7	1.0	N	643.2	23.6	23.6	4.09
Bellamy Reservoir	NH	2002	N43.19357 W70.95294	6.5	1.0	Y	729.7	29.6	29.6	14.21
Tewksbury Pond	NH	2002	N43.60950 W71.97176	7.1	4.8	Y	208.9	16.6	16.6	1.02
Mirror Lake	NH	2002	N43.63986 W71.99771	7.3	1.4	Y	526.1	18.6	18.6	3.64
George Pond	NH	2002	N43.57439 W72.09959	6.9	1.0	Y	563.0	21.5	21.5	1.66
Craney Pond	NH	2002	N43.14414 W71.79238	6.0	3.0	N	412.3	23.2	23.2	0.62
Long Pond	NH	2002	N43.20323 W71.80600	6.2	1.5	N	594.4	32.2	32.2	18.46
Upper Pond	NH	2002	N43.20410 W71.79469	6.4	0.8	Y	734.3	27.8	27.8	16.95
Goose Pond	NH	2003	N44.30858 W74.35548	7.4	3.3	Y	297.7	23.9	23.9	5.5
Black Pond	NH	2003	N43.11089 W72.01942	6.8	1.1	Y	548.2	28.5	28.5	12.3
White Pond	NH	2003	N43.12303 W72.03368	7.3	3.0	Y	301.6	31.8	31.8	6.9
Storrs Pond	NH	2003	N43.72686 W72.26321	8.1	4.6	N	255.9	15.0	15.0	2.8
Reservoir Pond	NH	2003	N43.78560 W72.04230	7.2	3.8	N	313.1	21.4	21.4	4.4
Cummins Pond	NH	2003	N43.78386 W72.01045	7.3	3.3	N	290.5	7.8	7.8	4.9
Indian Pond	NH	2003	N43.93089 W72.04913	7.5	3.9	N	339.8	10.0	10.0	3.2
Lower Baker Pond	NH	2003	N43.89496 W71.97572	7.5	2.6	Y	374.0	17.8	17.8	8.6
Lake Armington	NH	2003	N43.95640 W71.97062	7.2	5.5	N	252.9	16.0	16.0	2.5
Bellamy Reservoir	NH	2003	N43.19357 W70.95294	7.1	1.2	Y	607.1	28.5	28.5	21.0
Long Pond	NH	2003	N43.20323 W71.80600	7.2	1.8	Y	653.8	18.9	0.62	6.5
Mirror Lake	NH	2003	N43.63986 W71.99771	7.3	1.1	Y	969.6	23.5	0.66	8.2

Web Appendix 1. Name, location, and limnological characteristics of the lakes in our study. TN and TP were measured spectrophotometrically after persulfate digestion (APHA 1998), and chlorophyll *a* was measured on lake water retentate (Whatman GF/C) after cold methanol extraction (APHA 1998). Lake Morey, Childs Pond, and N. of Hamilton Pond were used as the low, medium, and high DOC lakes, respectively, for our intensive three-lake evaluation of whole water column conditions (Figs. 5 and 6). DOC, TN, TP, chlorophyll *a*, and pH data represent epilimnetic conditions. Adapted from APHA (1998). DOC = dissolved organic carbon, TN = total nitrogen, TP = total phosphorus.

Lake name	State	Year sampled	Latitude-longitude	pH	Secchi depth (m)	Anoxic hypolimnion	DOC (μmol L^{-1})	TN (μmol L^{-1})	TP (μmol L^{-1})	Chlorophyll *a* (μg L^{-1})
Spruce Pond	NH	2003	N43.11221 W71.33310	5.2	1.1	Y	584.2	16.4	0.52	4.0
Catamount Pond	NH	2003	N43.16684 W71.38832	6.7	1.1	Y	673.8	20.8	0.66	18.5
Purgatory Pond	NH	2003	N43.06801 W71.53478	5.9	1.2	Y	679.2	29.7	0.64	4.5
Colcord Pond	NH	2003	N42.98571 W70.97057	7.2	1.8	N	938.3	32.6	1.07	6.5
Powwow Pond	NH	2003	N42.91665 W71.03763	7.1	2.1	N	615.8	27.9	0.47	6.1
Mill Pond	NH	2003	N42.88759 W71.08380	7.2	0.9	Y	927.4	16.1	1.22	10.7
Phillips Pond	NH	2003	N42.91722 W71.18918	7.2	1.9	Y	776.7	29.7	0.37	4.1
Sportsman Pond	NH	2003	N42.72792 W72.16826	6.2	0.6	N	1,027.5	23.3	0.66	5.2
Damon Reservoir	NH	2003	N42.72762 W72.07768	6.7	0.6	Y	1,018.9	24.4	1.01	7.1
Cheshire Pond	NH	2003	N42.82090 W72.00997	7.0	1.3	Y	559.9	19.4	0.76	6.1
Gustin Pond	NH	2003	N43.14648 W72.24393	6.9	2.5	Y	436.0	17.6	0.33	5.1
Little Turkey Pond	NH	2002	N43.17710 W71.58331	6.2	1.4	N	699.4	32.2	0.41	2.77
E. Caroga Lake	NY	2003	N43.12651 W74.47942	7.7	2.5	Y	385.1	17.8	0.48	11.2
County Line Flow	NY	2003	N42.98571 W70.97057	7.2	0.6	N	786.4	29.6	0.83	11.6
Echo Pond	NY	2003	N44.30858 W74.35548	7.2	4.0	Y	344.1	27.5	0.35	5.4
Little Hope Pond	NY	2003	N44.51709 W74.12591	6.7	1.1	Y	870.2	26.0	0.48	10.8
Burr Pond	VT	2002	N43.76626 W73.18382	—	—	Y	210.0	21.1	0.41	5.45
Hough Pond	VT	2002	N43.78501 W73.18010		—	Y	323.3	30.5	0.26	2.97
Norford Lake	VT	2002	N43.80109 W72.30460	7.3	—	Y	196.7	—	—	2.88
Maidstone Lake	VT	2002	N44.64400 W71.65008	7.1	—	N	268.8	11.0	0.12	1.45
Island Pond	VT	2002	N44.80368 W71.86559	7.6	4.5	N	274.1	24.4	0.24	2.11
Nulhegun Pond	VT	2002	N44.79146 W71.81860	7.0	1.6	Y	408.8	20.7	0.35	8.50
Dennis Pond	VT	2002	N44.72988 W71.66044	6.6	—	Y	476.2	24.9	0.37	3.56
Wheeler Pond	VT	2002	N44.70949 W71.64094	6.9	3.5	N	712.1	34.9	0.41	9.53
Norford Lake	VT	2002	N43.80109 W72.30460	7.0	—	N	278.8	—	—	5.12
Lake Morey	VT	2002	N43.92350 W72.15118	8.1	4.0	Y	190.1	15.0	0.23	5.54
Lake Fairlee	VT	2002	N43.88360 W72.23126	7.8	5.1	Y	239.8	17.0	0.20	2.01
Childs Pond	VT	2003	N43.81885 W72.19091	6.6	2.2	Y	586.4	23.9	0.62	12.04
Burr Pond	VT	2003	N43.76626 W73.18382	8.7	3.0	Y	247.1	28.2	0.39	4.72
Black Pond	VT	2003	N43.70355 W73.22424	8.8	5.5	Y	245.7	24.6	0.33	2.57
Lake Morey	VT	2003	N43.92350 W72.15118	8.5	7.4	Y	229.0	22.8	0.24	3.26
Harveys Lake	VT	2003	N44.29344 W72.13854	8.4	6.5	Y	381.2	22.3	0.23	1.44
Peacham Pond	VT	2003	N44.32952 W72.25856	8.3	3.5	Y	384.7	25.1	0.38	2.23
Marshfield Pond	VT	2003	N44.32548 W72.32954	7.7	1.3	Y	778.2	30.8	0.69	7.23