

Online supplemental materials for Strecker et al. (2008)

Table S1. Chemical, biological, and morphological characteristics of study lakes in northern Ellesmere Island. Official lake names follow site names in brackets. Chl *a* = chlorophyll *a*, TN = total nitrogen, TP = total phosphorus, DOC = dissolved organic carbon.

Site	Latitude (N)	Longitude (W)	Conductivity ($\mu\text{S}\cdot\text{cm}^{-1}$)	Calcium ($\text{mg}\cdot\text{L}^{-1}$)	Chl <i>a</i> ($\mu\text{g}\cdot\text{L}^{-1}$)	TN ($\text{mg}\cdot\text{L}^{-1}$)	TP ($\mu\text{g}\cdot\text{L}^{-1}$)	DOC ($\text{mg}\cdot\text{L}^{-1}$)	Elevation (m)	Surface area (ha)	Surface temp ($^{\circ}\text{C}$)	Ice cover
EPA (Craig L.)	81° 50.34′	68° 51.13′	296	44.7	0.1	0.19	2.3	3.1	152	1455.00	12.5	0.75
EPB (Appleby L.)	81° 50.90′	68° 15.49′	232	30.1	0.1	0.36	2.2	4.7	366	48.80	7.5	0.75
EPC (Brainard L.)	81° 45.81′	68° 10.32′	169	26.5	0.1	0.33	3.3	3.6	640	18.00	5.0	0.85
EPD	81° 46.78′	64° 32.96′	172	31.1	0.7	0.29	2.9	3.3	274	49.10	7.5	0.80
EPE	81° 42.84′	70° 05.33′	379	19.1	0.6	0.75	5.8	12.6	259	1.07	15.0	0
EPF	82° 25.20′	68° 12.77′	110	18.3	0.1	0.08	1.6	1.5	91	125.00	2.5	0
EPG	82° 36.21′	68° 12.25′	122	20.5	0.1	0.10	2.1	0.8	91	14.70	7.5	0.85
EPI	82° 55.11′	66° 51.88′	75	12.3	0.7	0.18	2.3	2.6	15	2.41	5.5	0.50
EPJ (Ward Hunt L.)	83° 05.30′	74° 09.87′	45	5.5	0.6	0.22	3.8	1.0	61	35.44	4.0	1
EPK (Lake A)	83° 00.74′	75° 23.28′	69	4.9	0.6	0.09	2.2	1.3	30	490.00	6.0	0.99
EPL	82° 58.60′	75° 24.70′	56	10.3	0.6	0.18	3.0	1.4	46	99.00	5.5	0.99
EPM	82° 58.54′	75° 11.44′	102	21.8	1.0	0.41	5.1	4.3	213	0.25	15.0	0
EPN (Lake C2)	82° 49.59′	77° 56.24′	30	3.2	0.6	0.07	2.2	2.4	30	165.00	4.5	0
EPO	82° 16.00′	77° 53.32′	45	4.1	0.5	0.13	1.4	0.7	1006	6.28	0.5	0
EPP	81° 36.17′	73° 53.11′	102	19.4	1.4	0.41	3.8	4.7	686	5.97	14.0	0
EPQ	81° 27.28′	67° 22.21′	138	30.0	0.7	1.01	6.8	12.3	579	2.40	12.5	0
EPR	81° 18.71′	65° 34.92′	118	24.3	0.1	0.06	1.6	1.1	183	14.7	2.5	0.75
EPS	81° 19.41′	66° 25.08′	131	28.3	0.5	0.11	1.5	2.2	335	2.55	7.5	0
EPT	81° 47.53′	70° 26.77′	135	26.7	0.1	0.41	1.4	0.9	457	0.24	10.5	0
EPU (Carolyn L.)	81° 17.96′	70° 43.48′	119	19.9	0.6	0.06	1.0	0.9	305	161.00	6.0	0.90
EPV (Nan L.)	81° 13.15′	72° 19.46′	409	25.9	0.1	0.41	3.6	5.0	305	6.70	12.5	0
EPW	81° 04.89′	74° 20.67′	109	18.7	0.1	0.16	1.3	0.6	518	114.00	7.5	0.95
EPX	80° 55.91′	76° 32.69′	154	28.4	0.1	0.10	2.2	0.9	396	61.40	8.5	0
EPY	80° 36.43′	79° 42.96′	1500	451.0	0.2	0.16	3.7	2.2	1	0.05	16.0	0
EPZ	81° 00.50′	78° 13.03′	160	27.3	0.1	0.18	1.9	2.3	244	4.07	14.0	0
EPAA (Kettle L.)	81° 23.80′	76° 47.14′	500	30.0	0.5	0.40	4.7	4.8	70	7.70	15.0	0
EPAB	81° 58.49′	80° 04.14′	58	6.4	1.6	0.08	1.0	1.7	122	0.63	6.0	0.50
EPAC	82° 05.44′	81° 50.39′	200	33.9	0.1	0.18	1.1	1.0	76	98.20	6.0	0.35
EPAD	82° 05.79′	82° 34.70′	325	38.7	0.6	0.35	3.6	4.7	75	0.06	19.0	0
EPAE	81° 42.78′	82° 17.04′	1200	248.0	1.5	0.88	8.3	11.5	808	0.46	12.0	0

Table S1 cont'd. Lake Hazen area.

Site	Latitude (N)	Longitude (W)	Conductivity ($\mu\text{S}\cdot\text{cm}^{-1}$)	Calcium ($\text{mg}\cdot\text{L}^{-1}$)	Chl <i>a</i> ($\mu\text{g}\cdot\text{L}^{-1}$)	TN ($\text{mg}\cdot\text{L}^{-1}$)	TP ($\mu\text{g}\cdot\text{L}^{-1}$)	DOC ($\text{mg}\cdot\text{L}^{-1}$)	Elevation (m)	Surface area (ha)	Surface temp ($^{\circ}\text{C}$)	Ice cover
EP1 (Skeleton L.)	81° 49.80′	71° 28.48′	175	38.8	0.6	0.35	5.2	5.8	390	1.84	6.0	0.60
EP2	81° 49.85′	71° 28.35′	180	41.7	0.6	0.35	3.6	4.6	390	1.00	13.5	0
EP3	81° 49.88′	71° 28.05′	187	44.3	0.9	0.28	3.2	4.1	390	0.24	12.0	0
EP4	81° 50.72′	71° 23.93′	235	35.0	1.1	1.94	9.3	31.1	420	0.06	18.0	0
EP5	81° 50.75′	71° 23.85′	443	51.2	0.1	1.82	7.1	29.6	420	0.16	19.0	0
EP6	81° 50.77′	71° 24.82′	90	15.0	0.5	0.32	5.5	5.6	460	0.06	19.0	0
EP7	81° 50.34′	71° 20.06′	700	29.6	1.5	0.75	5.2	12.5	210	1.40	17.5	0
EP8	81° 50.47′	71° 19.19′	650	83.2	0.7	1.91	8.5	40.1	220	0.02	20.5	0
EP9	81° 50.10′	71° 18.54′	1650	344.0	0.1	1.99	9.6	35.9	180	0.34	22.0	0
EP10	81° 48.97′	71° 25.00′	362	60.3	0.6	0.33	5.6	8.1	160	0.05	14.5	0
EP11	81° 48.65′	71° 26.92′	172	29.7	1.1	0.57	6.4	9.1	160	0.76	11.0	0
EP12	81° 48.59′	71° 34.73′	1300	234.0	0.5	1.47	10.5	36.0	180	0.13	18.5	0
EP13	81° 48.71′	71° 33.61′	355	59.8	0.1	1.38	5.8	27.2	180	0.02	18.0	0
EP14	81° 49.24′	71° 32.28′	390	67.2	0.1	1.61	7.1	31.8	230	0.01	19.0	0
EP15	81° 49.90′	71° 31.63′	560	41.0	0.1	0.65	4.6	9.2	127	0.14	15.0	0
EP16	81° 49.74′	71° 32.25′	1000	107.0	1.0	1.21	6.9	18.2	222	0.50	17.5	0
EP17	81° 49.78′	71° 30.86′	520	90.5	0.1	1.43	6.1	24.1	320	0.05	18.5	0
EP18	81° 49.31′	71° 21.05′	470	64.9	0.5	0.93	7.0	13.4	160	0.05	17.5	0
EP19 (Lake Hazen)	81° 49.37′	71° 20.18′	68	13.3	0.1	0.06	2.1	1.1	160	54200	5.5	0
EP20	81° 49.53′	71° 20.00′	880	191.0	1.0	n/a	6.1	21.6	160	0.09	18.5	0
EP21	81° 49.53′	71° 20.00′	690	148.0	1.1	0.91	6.4	23.3	160	0.07	18.5	0
EP22	81° 49.26′	71° 45.04′	115	22.4	0.6	0.18	2.4	3.9	853	1.60	8.5	0
EP23	81° 49.30′	71° 45.16′	91	18.3	0.1	0.21	2.4	2.3	820	0.11	13.5	0
EP24	81° 49.04′	71° 46.89′	45	8.9	0.5	0.11	2.0	0.7	890	2.80	5.0	0.80

Table S2 cont'd. Relative abundance of taxa in lakes in the Lake Hazen area.

	<u>Anostraca</u>			<u>Cladocera</u>			<u>Notostraca</u>		<u>Calanoida</u>		<u>Cyclopoida</u>			<u>Harpacticoida</u>			<u>Ostracoda</u>				
	<i>B.palud</i>	<i>A.stefan</i>	juv Anostr	<i>D.mnd/ten</i>	<i>D.umbra</i>	<i>B.fr/idi</i>	Chydorid	<i>H. gibber</i>	<i>L.arct</i>	juv Notostr	<i>L.macru</i>	cala cpd	nauplii	<i>C.scutifer</i>	<i>E.agilis</i>	<i>M.magnus</i>	cycl cpd	<i>A.norden</i>	<i>T.discip</i>	harp cpd	Ostracod
EP1			0.01	0.05		0.01			0.00			0.74	0.11	0.04	0.00	0.03					0.00
EP2			0.01	0.08		0.11	0.03		0.04			0.20	0.32	0.06	0.01	0.13	0.00			0.00	
EP3			0.03	0.07		0.44	0.02		0.00			0.13	0.19	0.03		0.08	0.00			0.01	
EP4	0.10			0.50			0.22					0.03	0.03	0.08	0.01	0.03				0.01	
EP5	0.01			0.90			0.08				0.00	0.00			0.00	0.01				0.00	
EP6				0.01			0.51					0.10		0.17	0.02	0.19	0.01				
EP7			0.01	0.91					0.00			0.07		0.00		0.00					0.00
EP8	0.00			0.92		0.00	0.03					0.00		0.00	0.00	0.03	0.00			0.00	0.01
EP9	0.01			0.64			0.01	0.01				0.02				0.14					0.17
EP10	0.06			0.84								0.05		0.01		0.01					0.03
EP11	0.01			0.88			0.07		0.00			0.00		0.00	0.00	0.04					
EP12	0.01			0.89								0.01		0.00		0.05					0.04
EP13	0.03			0.89			0.02				0.00	0.02		0.01	0.00	0.02				0.00	0.00
EP14	0.00			0.93			0.04					0.01		0.00	0.00	0.00					0.00
EP15	0.51			0.33			0.09					0.04	0.01	0.01		0.01					
EP16	0.15			0.78			0.07														
EP17	0.00			0.80			0.14		0.00					0.00		0.05				0.00	
EP18	0.02			0.82			0.07							0.01	0.01	0.07					0.00
EP19				0.01			0.00					0.00	0.02			0.96					
EP20	0.05			0.45			0.10						0.01	0.01		0.36					0.03
EP21	0.00			0.77			0.09					0.08			0.00	0.07	0.00				0.00
EP22			0.88	0.08								0.01	0.01			0.01					
EP23		0.05		0.21								0.42				0.32					
EP24				0.25								0.50				0.25					