

**Limnological Results from the 1980
Lake Enrichment Program**

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February 1982

**Canadian Manuscript Report of
Fisheries and Aquatic Sciences
No. 1635**



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Canadian Manuscript Report of Fisheries and Aquatic Sciences

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Canadian Manuscript Report of
Fisheries and Aquatic Sciences No. 1635

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LIMNOLOGICAL RESULTS FROM THE 1980
LAKE ENRICHMENT PROGRAM

by

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Cat. No. FS 97-4/1635 ISSN 0706-6473

ABSTRACT

Costella, A.C., B. Nidle, R. Bocking, and K.S. Shortreed. 1982. Limnological results from the 1980 Lake Enrichment Program. Can. MS Rep. Fish. Aquat. Sci. 1635: iv + 291 p.

Results of the 1980 Limnology subprogram of the Lake Enrichment Program (LEP) are presented. Twenty-seven stations in 18 lakes were sampled from near-isothermal conditions in spring until fall overturn. Data are presented for each station and date, and summarized in the Appendix Tables. Time-weighted means for the growing season are included.

Key words: Lake Enrichment Program (LEP), fertilization, dystrophic, oligotrophic, nutrients, bacteria, phytoplankton, zooplankton.

RÉSUMÉ

Costella, A. C., B. Nidle, R. Bocking, and K. S. Shortreed. 1982.
Limnological results from the 1980 Lake Enrichment Program. Can. MS
Rep. Fish. Aquat. Sci. 1635: iv + 291 p.

Les résultats de 1980 de sous-programme de limnologie du Programme d'enrichissement des lacs (PEL) sont présentés. Vingt-sept endroits dans les 18 lacs furent échantillonnés à partir du printemps, quand les conditions étaient presque isothermiques, jusqu'à l'inversion d'automne. Les données sont présentées pour chaque date, et résumées dans les tableaux de l'appendice. Les moyennes pondérées en fonction du temps pour la saison de croissance sont incluses.

Mots-clés: Programme d'enrichissement des lacs (PEL), fertilisation, dystrophe, oligotrophe, nutriments, bactéries, phytoplancton, zooplancton.

INTRODUCTION

The Lake Enrichment Program (LEP) of the Federal-Provincial Salmonid Enhancement Program (SEP) commenced in 1977 with the fertilization and study of six lakes and has since expanded with the fertilization of 14 lakes in 1980. In addition, two lakes were studied to obtain pre-fertilization data and Babine Lake was sampled as part of a commitment to the Babine Watershed Change Steering Committee. Earlier work on many of these lakes and the rationale and objectives of these continuing studies have been previously reported by Stockner (1979), Stockner and Shortreed (1979), Stockner et al. (1980), Shortreed and Stockner (1981) and MacIsaac et al. (1981).

Data in this report are the results of the Limnology subprogram of the 1980 LEP. Field sampling and data collation were conducted under contract by J.E. Sager and Associates, Burnaby, B.C.

DESCRIPTION OF STUDY LAKES

The 18 lakes sampled during 1980 represented a wide variety of morphometric and hydrologic features (Table 1A, Fig. 1-18). The Queen Charlotte Island lakes and the majority of coastal lakes are warm monomictic; Babine, Kitlope, Mohun and Morice lakes are dimictic with varying periods of ice cover; and Henderson Lake is ectogenically meromictic (Wetzel 1975). Water transparencies ranged from glacially turbid to clear to slightly or moderately dystrophic (humic stained). The lakes have relatively small littoral zones, low inorganic nutrient levels, low phytoplankton biomass (Shortreed and Stockner 1981), low bacterioplankton biomass (MacIsaac et al. 1981) and low zooplankton biomass (Rankin et al. 1979, Rankin and Ashton 1980).

METHODS

The lakes in this study were fertilized weekly with dissolved ammonium nitrate and ammonium phosphate throughout the growing season, except Mercer, Mohun and Long lakes which had been fertilized in previous years and Babine Lake which has never been fertilized. The fertilizer was applied using a DC-6B water bomber in 2-3 passes over the pelagic zone, however in Kitlope Lake the littoral zone was fertilized since the epilimnetic flushing rate is so rapid. Natural and fertilizer loads are summarized in Table 1B.

The main basins of each lake were sampled from near-isothermal conditions in spring until the onset of fall overturn. The lakes were sampled monthly with the exception of the Queen Charlotte Island lakes (Awun, Eden,

Ian and Mercer) which were sampled three times during the season and Babine Lake which was sampled twice only. A float-equipped de Havilland Beaver aircraft was used to sample all lakes except Mohun Lake which was sampled by boat. The physical, chemical and biological measurements collected at each station are summarized in Tables 1C and 1D.

Temperature profiles to a maximum depth of 50 m were obtained at each station using a Montedoro-Whitney temperature probe (Model TC-5C) or a bathythermograph calibrated with a surface thermometer and water stability indices were calculated (Turner 1973). Annual temperature isopleths are presented in Fig. 19-24. A Li-Cor light meter (Model 185A) was used to measure photosynthetically active radiation (PAR: 400-700 nm) from the surface to the compensation depth (1% of surface intensity) and vertical light extinction coefficients were calculated. A standard 22-cm white Secchi disc was used to measure water transparency.

Zooplankton were sampled at every station. A 100- μm mesh size SCOR-UNESCO net (mouth area = 0.25 m^2) was hauled vertically from 25 m for the northern lakes and 50 m for the southern lakes at approximately 0.5 $\text{m}\cdot\text{s}^{-1}$. Zooplankton hauls at Mohun Lake were from 35 m. Samples were preserved in a borax-buffered, 4% formalin-sucrose solution (Haney and Hall 1973). In the laboratory each sample was split in half using a Folsom plankton splitter. One portion was filtered onto a pre-weighed Whatman glass fiber filter, dried at 90°C for 24 h and weighed again. Biomass was expressed as mg dry weight m^{-3} . No corrections were made for possible algal contamination of the samples. The other portion of the sample was used for enumeration and identification. Only zooplankton biomass data are presented in this report.

A 4.5-L Van Dorn bottle rinsed with 95% ethanol was used to collect all water samples. Samples were usually collected between 0900 and 1200 h. An unfiltered portion of the sample was placed into a clean, rinsed test tube, stored in the dark at 4°C, and analyzed later for total phosphorus. Samples for the remaining nutrients and chlorophyll were stored for 2-4 h in 1-L or 2-L polyethylene bottles and kept dark and cold. At the field laboratory 55-mm Whatman GFF filters, which had been previously ashed and washed with 500 mL distilled water, were used to filter the nutrient samples. The filter was placed in a 47-mm Swinnex (Millipore Corp.) filtering unit. An additional 500 mL distilled water were passed through the filter followed by 50-mL aliquots from 20, 5, 3 and 1 mL. One filter was generally used to process the samples from each station unless high algal biomass inhibited filtering efficiency. A glass bottle was rinsed then filled with 100 mL filtered water, covered with aluminum foil and capped tightly. This sample was analyzed later for nitrate and dissolved organic nitrogen. Approximately 150 mL of sample was filtered into a rinsed, plastic bottle and analyzed later for soluble reactive silicon, ammonia and total dissolved solids. A 25-mL test tube was rinsed and filled with filtered sample for total dissolved phosphorus analysis and 5 mL of filtered sample for dissolved organic carbon (DOC) were placed into an ashed glass ampoule, 10 μL mercuric chloride solution ($65 \text{ g}\cdot\text{L}^{-1}$) were added then the ampoule capped with ashed aluminum foil. All samples except those for DOC analyses were stored cold in the dark and all chemical analyses were done according to the methods of Golterman (1969).

A 1-L sample was filtered through an ashed 55-mm diameter Whatman GFF filter. Filters were folded in half and frozen and analyzed later for particulate carbon and particulate nitrogen using a Perkin Elmer CHN Analyzer (Model 240). A 500-mL sample was filtered through a 47-mm diameter, 0.8 μm Millipore filter and a few drops of saturated MgCO_3 were added. At Great Central Lake, Station 2, an additional 500-mL sample was filtered through a 54 μm Nitex screen. All filters and screens were folded in half, stored frozen and analyzed later for total chlorophyll using a Turner fluorometer (Model 111) using the method of Strickland and Parsons (1972).

At each station glass jars were filled completely with water (generally from 2 m and 7.5 m), covered with parafilm and transported to the field laboratory. These samples were used to measure pH and total alkalinity according to the standard potentiometric method of APHA (1975). Dissolved inorganic carbon (DIC) was estimated indirectly from pH, temperature, total dissolved solids and bicarbonate alkalinity (APHA 1975). During the latter part of the season, additional DIC analyses were conducted (Stainton et al. 1977). Samples were collected from eight depths in 50-cc plastic syringes and 0.5 mL of 0.5 N H_2SO_4 was added in the field then transported to the field laboratory. Samples and standards for DIC were analyzed using a Carle Gas Chromatograph (Model 211 M). Standards were prepared daily from a stock solution ($1000 \text{ mg C}\cdot\text{L}^{-1}$) and deionized water. Duplicates of each standard were made (5, 2, 0.5 $\text{mg C}\cdot\text{L}^{-1}$ and a blank) and 0.5 mL of 0.5 N H_2SO_4 was added. To each standard and sample 30 mL of Helium gas were added then all agitated for approximately 15 s. Syringes were then placed into an ice bath for a minimum of 10 m prior to injection into the gas chromatograph.

A test tube rinsed with 95% ethanol was filled with sample and used for bacteria enumeration. In the field laboratory 5 mL were filtered onto a 25-mm diameter, 0.2 μm Nuclepore membrane filter counter-stained with Irgalan Black. Filters were removed when just dry and placed into a 9-cm divided petrie dish lined with Whatman filter paper, air dried at room temperature (approximately 20°C) and stored. Samples were counted later under epifluorescence using the acridine orange direct count (AOOC) method as described by MacIsaac et al. (1981). Results are expressed as numbers $\cdot\text{mL}^{-1}$.

Phytoplankton samples from 1, 5 and 20 m were collected in polyethylene bottles and fixed with a few drops of Lugols' acetate solution. Samples from 1 and 5 m were shaken and allowed to settle overnight in 27-mL settling chambers. One transect at 175 X and one at 700 X magnification were counted using a Wild M40 inverted microscope equipped with phase microscopy (Utermöhl 1958). Counts were converted to numbers ($\text{cells}\cdot\text{m}^{-3}$) and volume ($\text{mm}^3\cdot\text{m}^{-3}$).

Samples for ultraphytoplankton (<3 μm equivalent spherical diameter) biomass were collected from selected lakes from 1, 3, 5 and 20 m in dark, 125-mL polyethylene bottles and transported to the field laboratory where 15 mL of each sample were filtered onto a pre-stained (Irgalan Black), 25-mm diameter, 0.2 μm Nuclepore membrane filter in the same manner as for bacteria biomass. Filters were then stored in darkened petrie dishes until counts were made using a Zeiss compound microscope (Model KLSM) equipped for epifluorescence as described for bacteria biomass. Thirty random fields were counted and values

were converted to numbers ($\text{cells} \cdot \text{m}^{-3}$) and volume ($\text{mm}^3 \cdot \text{m}^{-3}$). Approximately 100 cells were counted per sample which represents 20% accuracy with 95% confidence limits according to Lund et al. (1958).

For a comparison of counting methods, ultraphytoplankton were also enumerated using the Utermöhl (1958) technique. One transect at 1750 X magnification was counted for most phytoplankton samples from 1 and 5 m. Counts by the Utermöhl technique were included in total phytoplankton numbers and volumes for all stations except Kennedy Lake, Station 2 (March to November) and Kitlope, Lake, Station 1 (September and October). For these stations, ultraphytoplankton counted under epifluorescence were included in total phytoplankton numbers and volume. A comparison of ultraphytoplankton counts using the Utermöhl and epifluorescence techniques is presented in Appendix Tables 25 and 26.

Total primary production and heterotrophic activity were measured at all stations (except Awun, Eden, Great Central, Henderson, Hobiton, Ian and Mercer lakes) at eight depths in the water column (Table 1C). Two 125-mL light bottles were filled from each depth plus one dark bottle from 1, 3, 5 and 20 m and an additional light bottle from 1, 3, 5 and 20 m to be used as blanks for tritiated glucose uptake. Each bottle except the blanks was inoculated with 1 mL of sterile dual-labelled radioisotope stock containing approximately 67 kBq ($1.8 \mu\text{Ci} \cdot \text{mL}^{-1}$) of ^{14}C -bicarbonate and approximately 15 kBq ($0.4 \mu\text{Ci} \cdot \text{mL}^{-1}$) of ^3H -glucose. Activity of the radioisotope stock was determined by inoculating 1 mL of the stock solution into each of three scintillation vials containing 15 mL of scintillation cocktail (14:1 Aquasol-2: phenethylamine). Samples were incubated at their respective depths for 2 h, generally between 0900 and 1200 h. After incubation, samples were retrieved, placed in light tight boxes and transported to the field laboratory where filtration started within 2 h after incubation stopped. Sterifil (Millipore Corp.) filtering units were used as follows: a wetted Sartorius or Nuclepore glass fiber filter was placed on the filter holder base and support screen to absorb any unassimilated radioisotope. A pool of water was put on top of the glass fiber filter and a 47-mm diameter, 0.2 μm Nuclepore membrane filter was placed on top. The funnel was then screwed down tightly and vacuum applied. A 50-mL aliquot of each sample was filtered (except blanks) at a vacuum not exceeding 20 cm Hg. With vacuum still on, the filter was removed and placed in a scintillation vial containing 15 mL of the scintillation cocktail. At stations where fractionated primary production was measured, 50-mL aliquots from 1, 3 and 5 m light and dark bottles were filtered in the same way using a 47-mm diameter, 8.0 μm Nuclepore membrane filter. After all samples had been filtered, the radioisotope stock solution was filtered twice through a 47-mm diameter, 0.2 μm Nuclepore membrane filter. One mL of the stock was added to each blank bottle and a 50-mL aliquot was immediately filtered in the same manner as the other samples. All vials were stored cold in the dark and counted later in a Packard Tri-Carb 460 C Liquid Scintillation system. Quench series for both ^{14}C -bicarbonate and ^3H -glucose were composed of the same cocktail and filters as used for samples. Strickland's (1960) equation was used to calculate carbon uptake as $\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$. Hourly volumetric production was converted to daily areal production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) using light data collected at the field laboratories with a Li-Cor printing integrator (Model 550) equipped with a Li-Cor quantum light sensor (Model 190S). Heterotrophic

activity was measured by calculating the turnover time of the tritiated glucose as described by MacIsaac et al. (1981). Results were expressed in hours on the raw data tables and as geometric means of the epilimnetic values on the summary tables.

RESULTS

Results are presented in the form of raw data tables (Tables 1-181) for each lake, station and date; in summary form (Appendix Tables 1-35) and as time-weighted means during the growing season (Appendix Tables 36-46). The growing season started when the surface water temperature reached 8°C and ended when the surface water temperature fell to 12°C.

ACKNOWLEDGMENTS

Many people gave their assistance to this program; most notably R. Brandstaetter, P. Russell and K. Stephens who conducted the nutrient and chlorophyll analyses and R. Brandstaetter, C. Kennedy and E. MacIsaac who assisted in the field surveys and data collation. E. MacIsaac enumerated the bacteria and ultraphytoplankton samples. The LEP is grateful to the pilots of Air B.C., McCully Aviation and especially to Fletcher Bennett of Trans Provincial Airlines for their expertise in flying in often inclement weather conditions. We also thank LEP staff for their critical review of the manuscript.

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Table 1A. Geographic, climatic and hydrologic data from the 1980 study lakes.

Lake	Latitude	Longitude	Elevation (m)	Lake area (km ²)	Mean depth (m)	Water residence time (y)
Awun ^a	53°36'	132°35'	51	4.9	47	0.9
Babine ^c	55°00'	123°00'	712	490.7	55	18.2
Bonilla ^a	53°31'	130°15'	10	2.3	34	1.0
Curtis ^a	53°30'	129°50'	10	3.0	34	0.6
Devon ^a	53°27'	129°45'	10	1.8	29	1.3
Eden ^a	53°51'	132°43'	70	5.9	43	0.9
Great Central ^a	49°22'	125°15'	82	51.0	212	7.3
Henderson ^a	49°05'	125°02'	15	15.0	109 (43) ^e	3.2 (1.3) ^e
Hobiton ^a	48°45'	124°49'	15	3.6	36	1.0
Ian ^a	53°45'	132°35'	116	20.0	50	1.1
Kennedy-Clayoquot ^b	49°08'	125°35'	12	17.0	51	1.7
Kennedy-Main ^b	49°04'	125°30'	12	47.0	27	0.9
Kitlope ^a	53°07'	127°13'	15	12.0	86	0.4
Long ^a	51°14'	127°10'	15	21.0	73	1.1
Lowe ^a	53°34'	129°33'	10	3.7	25	0.2
Mercer ^a	53°34'	132°53'	25	1.2	15	0.1
Mohun ^a	50°07'	125°30'	200	9.9	13	1.5
Morice ^d	54°00'	127°40'	797	96.1	100	3.8

^aData from Shortreed and Stockner (1981).

^bData from Stockner et al. (1980).

^cData from Stockner and Shortreed (1975).

^dData from Stockner and Shortreed (1979).

^eNumbers in brackets are the result of calculating lake volume using only the mixolimnion.

Table 1B. Natural and fertilizer loads to the 1980 study lakes.

Lake	L_p^a (mg P·m ⁻² ·wk ⁻¹)	F^b (mg P·m ⁻² ·wk ⁻¹)	Total P load ^c (mg P·m ⁻² ·wk ⁻¹)	L_c^d (mg P·m ⁻² ·wk ⁻¹)	% F $\frac{F}{L_p}$	% Total P $\frac{L_c}{L_p}$
Awun	5.79	3.90	9.69	14.49	67	67
Bonilla	2.12	13.50	15.62	7.82	637	200
Curtis	2.31	4.50	6.81	11.57	195	59
Devon	1.09	4.60	5.69	5.49	422	104
Eden	4.37	3.40	7.77	13.25	78	59
Great Central	0.77	2.74	3.51	7.03	356	50
Henderson	0.78	5.65	6.43	6.54	724	98
Hobiton	1.13	3.37	4.50	5.63	298	80
Ian	4.51	2.60	7.11	13.25	58	54
Kennedy-Clayoquot	1.17	5.08	6.25	5.85	434	107
Kennedy-Main	0.84	2.50	3.34	4.95	298	67
Kitlope	4.97(9.94) ^e	8.06	13.03(18.00)	33.15(66.30)	162(81)	39(27)
Lowe	3.54	6.77	10.31	20.80	191	50
Morice	0.74(1.47)	2.93	3.67(4.40)	7.33(14.66)	396(199)	50(30)

^a L_p = natural P loading using spring overturn values of P in Vollenweider's (1976) equation.

^b F = amount P added as fertilizer.

^cTotal P load = $L_p + F$

^d L_c = critical load (Vollenweider 1976)

^enumbers in brackets are the result of including glacial melt in the calculations of weekly P loadings which doubles the runoff, L_c and L_p per week during the fertilized period thereby reducing the effects of fertilization.

Table 1C. Physical, chemical and biological measurements collected at each station during the 1980 field season.

Lake and station	Measurements ^a	Depths sampled ^b	Number of sampling dates
Awun	A,D,F,I,M	1,3,5,20	3
Babine	A,C,F,I,J,K,M	0,1,2,3,5,7.5,10,20	2
Bonilla	A,C,E,F,I,K,M,O,P,Q	0,1,2,3,5,7.5,10,20	13
Curtis	A,C,E,F,I,K,M,O	0,1,2,3,5,7.5,10,20	7
Devon	A,C,E,F,I,K,M,O	0,1,2,3,5,7.5,10,20	6
Eden	A,D,F,I,M	1,3,5,20	3
Great Central-1	A,B,E,F,I,J,L	1,3,5,20	9
Great Central-2	A,B,E,F,G,H,I,J,L	1,3,5,20	9
Henderson-2	A,B,E,F,I,J,L	1,3,5,20	9
Hobiton	A,B,E,F,I,J,L	1,3,5,20	9
Ian-1	A,D,F,I,M	1,3,5,20	3
Ian-2	A,D,F,I,M	1,3,5,20	3
Kennedy-Clayoquot-2	A,C,E,F,I,K,L,O	0,1,3,5,7.5,10,20,30	9
Kennedy-Main-3	A,C,E,F,I,K,L,O	0,1,3,5,7.5,10,20,30	9
Kitlope	A,C,E,F,I,K,M,O,P,Q	0,1,2,3,5,7.5,10,20	11
Long-2	A,C,E,F,I,K,L,O,P,Q	0,1,2,3,5,7.5,10,20	9
Long-3	A,C,E,F,I,K,L,O	0,1,2,3,5,7.5,10,20	9
Lowe	A,C,E,F,I,K,M,O,P,Q	0,1,2,3,5,7.5,10,20	8
Mercer	A,D,F,I,M	1,3,5,20	3
Mikado	A,C,E,F,I,K,M,O	0,1,2,3,5,7.5,10,20	2
Mohun	A,C,E,F,I,J,N,O	0,1,3,5,7.5,10,20,30	9
Morice-1	A,C,E,F,I,K,M,O	0,1,2,3,5,7.5,10,20	6
Morice-2	A,C,E,F,I,K,M,O	0,1,2,3,5,7.5,10,20	6

^a Legend for measurements collected are on Table 1D.

^b Primary production was measured at 8 depths, nutrients at 1,3,5, and 20 m, and Total inorganic carbon generally at 1 and 7.5 m or 2 and 7.5 m.

Table 1D. Legend for measurements collected at the 1980 study lakes.

Symbol	Measurements collected
A	Physical measurements (Secchi depth, surface temperature, 0-50 m temperature profile, light profile to compensation depth)
B	Basic nutrient chemistry (Dissolved inorganic carbon, dissolved organic nitrogen, ammonia, nitrate, total phosphorus, total dissolved phosphorus, soluble reactive silicon) and pH.
C	Advanced nutrient chemistry (B above plus dissolved organic carbon, particulate carbon, particulate nitrogen, total dissolved solids).
D	Basic nutrient chemistry, pH and total dissolved solids.
E	Periphyton biomass (total chlorophyll and ash free dry weight) and species composition. (Results of periphyton data are not presented in this report).
F	Total chlorophyll analysis ($> 0.8 \mu\text{m}$).
G	Size fractionated chlorophyll analysis ($0.8 \mu\text{m} - 54 \mu\text{m}$).
H	Size fractionated chlorophyll analysis ($> 54 \mu\text{m}$).
I	Phytoplankton identification and enumeration at 1, 5 and 20 m and ultraphytoplankton counts at 1 and 5 m.
J	Bacteria biomass at 4 depths (1, 3, 5 and 20 m).
K	Bacteria biomass at 8 depths.
L	Zooplankton biomass analysis (vertical haul 0-50 m.)
M	Zooplankton biomass analysis (vertical haul 0-25 m.)
N	Zooplankton biomass analysis (vertical haul 0-30 m.)
O	Total primary production and heterotrophic activity.
P	Size fractionated primary production ($0.2 \mu\text{m} - 8.0 \mu\text{m}$).
Q	Size fractionated primary production ($> 8.0 \mu\text{m}$).

Table 1. Physical, chemical and biological data from Awun Lake, May 3, 1980.

Depth (m)	Compensation depth (m)	5.0	Surface temperature (°C)	5.6	Zooplankton biomass (mg dry wt.·m ⁻³)	7.3
	Extinction coefficient (k _e)	0.85				
Secchi depth (m)	4.5		1	3	5	20
pH			6.4		6.4	
Dissolved inorganic carbon (mg C·L ⁻¹)			2.39		3.03	
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)			119	90	67	67
Ammonia (μg N·L ⁻¹)			7	7	7	8
Nitrate (μg N·L ⁻¹)			31	33	33	33
Total phosphorus (μg P·L ⁻¹)			2	1	1	1
Total dissolved phosphorus (μg P·L ⁻¹)			2	<1	2	1
Soluble reactive silicon (μg Si·L ⁻¹)			1740	1680	1820	1790
Total dissolved solids (mg·L ⁻¹)						
Total chlorophyll (mg·m ⁻³)		0.63		0.38	0.22	0.14
Algal numbers (x10 ⁸ ·m ⁻³)		20			12	
Algal volume (mm ³ ·m ⁻³)		25			40	

Table 2. Physical, chemical and biological data from Awun Lake, June 24, 1980.

Depth (m)	Compensation depth (m) <u>6.1</u>			Surface temperature ($^{\circ}$ C) <u>16.2</u>			
	Extinction coefficient (k_e) <u>0.71</u>	Secchi depth (m) <u>5.0</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>59.3</u>	1	3	5	20
pH				6.3		6.2	
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)			2.69			2.24	
Dissolved kjeldahl nitrogen ($\mu g N \cdot L^{-1}$)	50			79		49	
Ammonia ($\mu g N \cdot L^{-1}$)	6			20		5	
Nitrate ($\mu g N \cdot L^{-1}$)	2			2		3	
Total phosphorus ($\mu g P \cdot L^{-1}$)			2		2		2
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)							
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)	2020		1880		2020		2060
Total dissolved solids (mg $\cdot L^{-1}$)							
Total chlorophyll (mg $\cdot m^{-3}$)	3.24						
Algal numbers ($\times 10^8 \cdot m^{-3}$)	69					54	
Algal volume ($mm^3 \cdot m^{-3}$)	192					175	

Table 3. Physical, chemical and biological data from Awun Lake, September 24, 1980.

Depth (m)	Compensation depth (m)		Surface temperature ($^{\circ}\text{C}$)		Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	
	4.8	0.92	14.5	25.4		
Secchi depth (m)	3.5					
pH			6.8	6.5		
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			1.61			
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	43		50	82		
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	5		5	5		
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	15		17	15		
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2		2	2		
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	3		2	2		
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	1790		1770	1780		
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)			40			
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	2.68		2.30	2.22		
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	580			336		
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	258			159		

Table 4. Physical, chemical and biological data from Babine Lake, Station 1, June 4, 1980.

Depth (m)	Compensation depth (m)	5.6	Surface temperature ($^{\circ}\text{C}$)	12.2	Einstiens $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$	4.83	a
	Extinction coefficient (k_e)	0.80	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	83.6	Einstiens $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	41.17	
Secchi depth (m)	4.0				Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	43	
0					0		
1					1		
2					2		
3					3		
5					5		
7.5					7.5		
10					10		
20					20		
pH					7.3		
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)					9.29		
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)					3.9		
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)					401	371	3.9
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)					132	143	201
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)					62	63	111
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)					13	11	40
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)					41	43	13
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)					3	4	75
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)					3	4	
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)					1960	2050	2050
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)						66	
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)						0.75	0.80
Glucose turnover time (h)						0.92	0.92
Dark bottle glucose turnover time (h)						171	110
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)						1.12	0.92
Total chlorophyll (mg m^{-3})						0.33	0.33
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)						0.14	0.14
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)						0.00	0.00
						4.60	5.20
						48	1.48
						82	
						2503	554

a during incubation period

Table 5. Physical, chemical and biological data from Babine Lake, Station 2, June 4, 1980.

Depth (m)	Compensation depth (m)		7.1		Surface temperature ($^{\circ}$ C)		5.8		Einstein $\cdot m^{-2} \cdot h^{-1}$		4.86	
	Extinction coefficient (k) ^e	0.62	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	18.1					Einstein $\cdot m^{-2} \cdot d^{-1}$	41.17	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	33 ✓
0					0	1	2	3	5	7.5	10	20
pH					7.1 ✓							
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)					10.70 ✓							
Dissolved organic carbon ($mg\ C\cdot L^{-1}$)						3.5	3.7	4.4				
Particulate carbon ($\mu g\ C\cdot L^{-1}$)						167	144	145 ✓				
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)						111	128	143				
Particulate nitrogen ($\mu g\ N\cdot L^{-1}$)						27	24	21 ✓				
Ammonia ($\mu g\ N\cdot L^{-1}$)						13	14	13 ✓				
Nitrate ($\mu g\ N\cdot L^{-1}$)						90	91	97 ✓				
Total phosphorus ($\mu g\ P\cdot L^{-1}$)						3	3	3 ✓				
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)						4	2	4 ✓				
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)						2080	2000	2060 ✓				
Total dissolved solids ($mg\ \cdot L^{-1}$)								73 ✓				
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)							1.04	0.81	0.99 ✓			
Glucose turnover time (h)						438	194	216	270	593	532	427
Dark bottle glucose turnover time (h)							238		480	646		1779
Total primary production ($mg\ C\cdot m^{-2} \cdot h^{-1}$)							1.36	1.02	0.89	0.53	1.10	0.09
Total chlorophyll (mg $\cdot m^{-3}$)							2.62				0.02	0.00
Algal numbers ($\times 10^8 \cdot m^{-3}$)							46				19	1.04
Algal volume ($mm^3 \cdot m^{-3}$)							39				110	

^aduring incubation period

Table 6. Physical, chemical and biological data from Babine Lake, Station 3, June 2, 1980.

Depth (m)	Compensation depth (m) <u>7.1 ✓</u>		Surface temperature (°C) <u>21.74 ✓</u>		Einstein·m ⁻² ·h ⁻¹ <u>2.72 a</u>	
	Extinction coefficient (k_e) <u>0.60 ✓</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>77.3 ✓</u>	Einstein·m ⁻² ·d ⁻¹ <u>21.74 ✓</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>138 ✓</u>	Einstein·m ⁻² ·h ⁻¹ <u>2.72 a</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>138 ✓</u>
pH					7.4 ✓	
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			4.4	4.0	4.1	3.9
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			271	333	195 ✓	224
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)			126	109	97	144
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			45	45	35 ✓	31
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			13	9	7 ✓	11
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)			73	76	78 ✓	85
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)			5	4	4 ✓	4
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			3	4	3 ✓	3
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			2030	2060	2030 ✓	2060
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)					72 ✓	
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)			1.13	0.93	0.30 ✓	0.99
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)			230	167	388	245
Glucose turnover time (h)			2533	245	216	245
Dark bottle glucose turnover time (h)			4.53	2.36	1.17	0.96 ✓
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)			4.00	3.60	4.22 ✓	0.00
Total chlorophyll (mg · m ⁻³)			51	61		2.44
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)			224	296		
Algal volume (mm ³ · m ⁻³)						

a during incubation period

Table 7. Physical, chemical and biological data from Babine Lake, Station 4, June 2, 1980.

Depth (m)	Compensation depth (m)			Surface temperature ($^{\circ}$ C)			Einstein $\cdot m^{-2} \cdot h^{-1}$			Einstein $\cdot m^{-2} \cdot d^{-1}$			Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)		
	5.5	5.5	5.5	6.8	6.8	6.8	2.71	2.71	2.71	21.74	21.74	21.74	124 ✓	124 ✓	124 ✓
pH				7.5 ✓											
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)				9.46 ✓											
Dissolved organic carbon (mg C $\cdot L^{-1}$)					4.2		4.0		3.9						4.0
Particulate carbon (μ g C $\cdot L^{-1}$)					198		238		227 ✓						237
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)					142		205		188						166
Particulate nitrogen (μ g N $\cdot L^{-1}$)					37		43 ✓		43 ✓						49
Ammonia (μ g N $\cdot L^{-1}$)					<4		5		10 ✓						9
Nitrate (μ g N $\cdot L^{-1}$)					81		80		79 ✓						80
Total phosphorus (μ g P $\cdot L^{-1}$)					6		4		5 ✓						3
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)					3		3		3 ✓						2
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)					2070		2060		2060 ✓						2080
Total dissolved solids (mg $\cdot L^{-1}$)							71 ✓								
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)						1.04		0.84	0.94 ✓						0.97
Glucose turnover time (h)					159	256	126	274	481	240					746
Dark bottle glucose turnover time (h)					424		158		358						235
Total primary production (mg C $\cdot m^{-2} \cdot h^{-1}$)					3.27	1.98	1.83	1.96	0.39	0.15	0.13	0.00			
Total chlorophyll (mg $\cdot m^{-3}$)						4.42			4.10	3.50 ✓					2.86
Algal numbers ($\times 10^8 \cdot m^{-3}$)						51				37					
Algal volume ($mm^3 \cdot m^{-3}$)						236				218					

a during incubation period

Table 8. Physical, chemical and biological data from Babine Lake, Station 5, June 3, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH	7.3 ✓	7.3 ✓	7.3 ✓	7.3 ✓	7.3 ✓	7.3 ✓	7.3 ✓	7.3 ✓
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	10.74 ✓	10.74 ✓	10.74 ✓	10.74 ✓	10.74 ✓	10.74 ✓	10.74 ✓	10.74 ✓
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	3.8	3.6	3.8	3.6	3.8	3.6	3.8	5.7
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	209	171	120 ✓	171	120 ✓	171	120 ✓	137
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	177	164	163	164	163	164	163	153
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	32	41	28 ✓	41	28 ✓	41	28 ✓	23
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	9	7	9 ✓	7	9 ✓	7	9 ✓	8
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	90	89	95 ✓	89	95 ✓	89	95 ✓	99
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	3	5	3 ✓	5	3 ✓	5	3 ✓	3
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	3	2	3 ✓	2	3 ✓	2	3 ✓	2
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	2140	2160	2190 ✓	2160	2190 ✓	2160	2190 ✓	2180
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)								
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.84	0.85	0.76 ✓	0.84	0.85	0.76 ✓	0.84	0.60
Glucose turnover time (h)	380	377	1278	982	373	320	439	1006
Dark bottle glucose turnover time (h)								
Total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	171	558	560	560	560	560	560	1202
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	2.03	0.84	0.85	0.46	0.49	0.06	0.02	0.00
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	3.22	2.42	1.50 ✓	3.22	2.42	1.50 ✓	3.22	1.22
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	50	50	50	50	50	50	50	50
	156	156	156	156	156	156	156	156

a during incubation period

Table 9. Physical, chemical and biological data from Babine Lake, Station 1, September 29, 1980.

Depth (m)	Compensation depth (m)	<u>6.3</u>	Surface temperature ($^{\circ}$ C)	<u>10.9</u>	Einstein $\cdot m^{-2} \cdot h^{-1}$	<u>2.33</u> ^a
	Extinction coefficient (k_e)	<u>0.67</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>24.8</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$	<u>16.88</u>
Secchi depth (m)	<u>4.5</u>				Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	<u>86</u>
0	7.7					
1	9.07					
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon ($mg \cdot L^{-1}$)						
Dissolved organic carbon ($mg \cdot L^{-1}$)						
Particulate carbon ($\mu g \cdot L^{-1}$)						
Dissolved kjeldahl nitrogen ($\mu g \cdot N \cdot L^{-1}$)						
Particulate nitrogen ($\mu g \cdot N \cdot L^{-1}$)						
Ammonia ($\mu g \cdot N \cdot L^{-1}$)						
Nitrate ($\mu g \cdot N \cdot L^{-1}$)						
Total phosphorus ($\mu g \cdot P \cdot L^{-1}$)						
Total dissolved phosphorus ($\mu g \cdot P \cdot L^{-1}$)						
Total dissolved solids ($\mu g \cdot L^{-1}$)						
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production ($mg \cdot m^{-3} \cdot h^{-1}$)						
Total chlorophyll (mg $\cdot m^{-3}$)						
Algal numbers ($\times 10^8 \cdot m^{-3}$)						
Algal volume ($mm^3 \cdot m^{-3}$)						

^a during incubation period

Table 10. Physical, chemical and biological data from Babine Lake, Station 2, September 29, 1980.

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Depth (m)	0	1	2	3	5	7.5	10	20
pH	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	9.23	9.23	9.23	9.23	9.23	9.23	9.23	9.23
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	>7.5	>7.5	>7.5	>7.5	>7.5	>7.5	>7.5	>7.5
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	243	239	239	239	239	239	239	228
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	104	121	121	121	121	121	121	113
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	34	35	35	35	35	35	35	31
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	6	5	5	5	5	5	5	5
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	56	54	54	54	54	54	54	55
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	2	2	2	2	2	2	2	1
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1	1	1	1	1	1	1	<1
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)	62	62	62	62	62	62	62	62
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	1.46	1.34	1.17	1.10	1.10	1.10	1.10	1.40
Glucose turnover time (h)	184	53	44	56	61	43	59	307
Dark bottle glucose turnover time (h)	102	50	50	67	67	67	67	90
Total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	2.63	3.42	3.50	2.66	1.13	0.38	0.22	0.00
Total chlorophyll 11 ($\text{mg}\cdot\text{m}^{-3}$)	2.52	2.34	2.46	2.46	2.46	2.46	2.46	1.96
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	71	71	71	71	71	71	71	104
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	221	221	221	221	221	221	221	178

^a during incubation period

Table 11. Physical, chemical and biological data from Babine Lake, Station 3, September 30, 1980.

Depth (m)	Compensation depth (m)	7.4 ✓	Surface temperature (°C)	10.9 ✓	Einstein·m ⁻² ·h ⁻¹	0.55 a
	Extinction coefficient (k _e)	0.56 ✓	Zooplankton biomass (mg dry wt.·m ⁻³)	52.5	Einstein·m ⁻² ·d ⁻¹	7.37 ✓
Secchi depth (m)	4.5 ✓		Daily primary production (mg C·m ⁻² ·d ⁻¹)	161 ✓		
0						
1						
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon (mg C·L ⁻¹)						
Dissolved organic carbon (mg C·L ⁻¹)						
Particulate carbon (µg C·L ⁻¹)						
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)						
Particulate nitrogen (µg N·L ⁻¹)						
Ammonia (µg N·L ⁻¹)						
Nitrate (µg N·L ⁻¹)						
Total phosphorus (µg P·L ⁻¹)						
Total dissolved phosphorus (µg P·L ⁻¹)						
Total dissolved solids (mg L ⁻¹)						
Bacteria numbers (x10 ⁶ ·mL ⁻¹)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production (mg C·m ⁻³ ·h ⁻¹)	4.03	2.93	1.70	0.84	0.55	0.36
Total chlorophyll (mg m ⁻³)	2.30					
Algal numbers (x10 ⁸ ·m ⁻³)						
Algal volume (mm ³ ·m ⁻³)						

a during incubation period

Table 12. Physical, chemical and biological data from Babine Lake, Station 4, September 30, 1980.

Depth (m)	Compensation depth (m)	6.9 ✓	Surface temperature (°C)	11.2 ✓	Einstiens·m ⁻² ·h ⁻¹	0.49 ^a
	Extinction coefficient (k _e)	0.62 ✓	Zooplankton biomass (mg dry wt. · m ⁻³)	48.7	Einstiens·m ⁻² ·d ⁻¹	7.37
Secchi depth (m)	4.5 ✓				Daily primary production (mg C·m ⁻² ·d ⁻¹)	171 ✓
0						
1						
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon (mg C·L ⁻¹)						
Dissolved organic carbon (mg C·L ⁻¹)						
Particulate carbon (µg C·L ⁻¹)						
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)						
Particulate nitrogen (µg N·L ⁻¹)						
Ammonia (µg N·L ⁻¹)						
Nitrate (µg N·L ⁻¹)						
Total phosphorus (µg P·L ⁻¹)						
Total dissolved phosphorus (µg P·L ⁻¹)						
Total dissolved solids (mg·L ⁻¹)						
Bacteria numbers (x10 ⁶ ·mL ⁻¹)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production (mg C·m ⁻³ ·h ⁻¹)	2.91	3.67	2.13	0.97	0.38	0.30
Total chlorophyll (mg·m ⁻³)	2.46			2.68	2.60 ✓	2.24
Algal numbers (x10 ⁸ ·m ⁻³)					83	
Algal volume (mm ³ ·m ⁻³)					568	

^a during incubation period

Table 13. Physical, chemical and biological data from Babine Lake, Station 5, September 30, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH					7.7		7.6 ✓	
Dissolved inorganic carbon (mg C·L ⁻¹)					9.09		9.25 ✓	
Dissolved organic carbon (mg C·L ⁻¹)					7.4	>7.5	>7.5	
Particulate carbon (µg C·L ⁻¹)	319				250	279 ✓		174
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	712				239	88		<5
Particulate nitrogen (µg N·L ⁻¹)	48				36	40 ✓		21
Ammonia (µg N·L ⁻¹)	4				5	6 ✓		<4
Nitrate (µg N·L ⁻¹)	39				39	39 ✓		100
Total phosphorus (µg P·L ⁻¹)	1				1	1 ✓		1
Total dissolved phosphorus (µg P·L ⁻¹)	1				1	2 ✓		2
Total dissolved solids (mg·L ⁻¹)						61 ✓		
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	1.31	1.20	1.29	1.29	1.50 ✓			
Glucose turnover time (h)	341	173	107	121	453	203	97	738
Dark bottle glucose turnover time (h)					99	131		2769
Total primary production (mg C·m ⁻³ ·h ⁻¹)	7.68	7.35	3.05	1.82	0.67	0.74	0.38	0.00
Total chlorophyll (mg·m ⁻³)	3.00				2.80	3.26 ✓		1.06
Algal numbers (x10 ⁸ ·m ⁻³)	96					94		
Algal volume (mm ³ ·m ⁻³)	316					621		

^a during incubation period

Table 14. Physical, chemical and biological data from Bonilla Lake, May 2, 1980.

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Depth (m)	4.9	6.0	6.0	5.81	^a
Extinction coefficient (k_e)	0.91	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	4.5	Einstein $\cdot m^{-2} \cdot d^{-1}$	41.23
Secchi depth (m)	4.5	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	4		
Depth (m)	0	1	2	3	5
pH					
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		0.72			
Dissolved organic carbon (mg C $\cdot L^{-1}$)		3.0	3.3	2.8	
Particulate carbon ($\mu g C \cdot L^{-1}$)	292	241	270		349
Dissolved kjeldahl nitrogen ($\mu g N \cdot L^{-1}$)	31	53	14		50
Particulate nitrogen ($\mu g N \cdot L^{-1}$)	32	31	30		29
Ammonia ($\mu g N \cdot L^{-1}$)	13	18	7		8
Nitrate ($\mu g N \cdot L^{-1}$)	8	7	8		8
Total phosphorus ($\mu g P \cdot L^{-1}$)	3	1	1		<1
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)	1	2	1		<1
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)	540	480	510		580
Total dissolved solids (mg $\cdot L^{-1}$)			28		
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.84	0.90	0.84	0.82	0.75
Glucose turnover time (h)	276	113	105	103	121
Dark bottle glucose turnover time (h)	311	138	152		390
Primary production > 0.2 μm (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.20	0.16	0.13	0.06	0.01
Primary production 0.2-8.0 μm (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.10	0.04	0.00		
Primary production > 8.0 μm (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.06	0.02	0.01		
Total chlorophyll (mg $\cdot m^{-3}$)	0.28	0.26	0.26		0.18
Algal numbers ($\times 10^8 \cdot m^{-3}$)	61	18			7
Algal volume ($mm^3 \cdot m^{-3}$)	116	149			60

^a during incubation period

Table 15. Physical, chemical and biological data from Bonilla Lake, May 29, 1980.

	Compensation depth (m)	5.8	Surface temperature ($^{\circ}$ C)	12.1	Einstein \cdot m $^{-2}\cdot$ h $^{-1}$	4.99	a
	Extinction coefficient (k_e)	0.75	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	6.9	Einstein \cdot m $^{-2}\cdot$ d $^{-1}$	49.27	
	Secchi depth (m)	4.5	Daily primary production (mg C \cdot m $^{-2}\cdot$ d $^{-1}$)	174			
	Depth (m)	0	1	2	3	5	7.5
pH							20
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)							
Dissolved organic carbon (mg C \cdot L $^{-1}$)			2.5	2.5	2.6		3.0
Particulate carbon (μ g C \cdot L $^{-1}$)		362	324	341			282
Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)		64	137	83			82
Particulate nitrogen (μ g N \cdot L $^{-1}$)		62	88	64			35
Ammonia (μ g N \cdot L $^{-1}$)		10	13	13			15
Nitrate (μ g N \cdot L $^{-1}$)		<1	<1	<1			6
Total phosphorus (μ g P \cdot L $^{-1}$)		3	4	4			3
Total dissolved phosphorus (μ g P \cdot L $^{-1}$)		1	1	1			1
Soluble reactive silicon (μ g Si \cdot L $^{-1}$)		570	560	560			600
Total dissolved solids (mg \cdot L $^{-1}$)				16			
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.96	1.00	1.12	0.98	1.07	1.04
Glucose turnover time (h)		34	46	44	45	50	31
Dark bottle glucose turnover time (h)			54	41			186
Primary production > 0.2 μ m (mg C \cdot m $^{-3}\cdot$ h $^{-1}$)		7.97	5.17	4.21	2.20	0.37	0.07
Primary production 0.2-8.0 μ m (mg C \cdot m $^{-3}\cdot$ h $^{-1}$)		4.04			1.66	0.25	
Primary production > 8.0 μ m (mg C \cdot m $^{-3}\cdot$ h $^{-1}$)		1.13			0.54	0.12	
Total chlorophyll ($\text{mg} \cdot m^{-3}$)		4.60			4.39	3.26	0.26
Algal numbers ($\times 10^8 \cdot m^{-3}$)		268			81		37
Algal volume ($mm^3 \cdot m^{-3}$)		1561			1585		138

a during incubation period

Table 16. Physical, chemical and biological data from Bonilla Lake, June 26, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)								
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	2.5	2.4	2.3					
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	545	539	572					
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	78	73	58					
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	91	90	98					
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	<4	<4	<4					
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	<1	<1	<1					
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	8	9	8					
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	2	1	3					
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	450	410	460					
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)				40				
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	2.72	2.56	2.62	2.70	2.74	2.33	1.06	1.16
Glucose turnover time (h)	34	34	25	39	54	222	153	530
Dark bottle glucose turnover time (h)		149		27	26			536
Primary production > 0.2 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	22.59	20.03	14.71	9.90	2.92	0.00	0.00	0.00
Primary production 0.2-3.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)		16.92		8.08	2.53			
Primary production 3.0-8.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	3.11		1.82	0.39				
Primary production > 8.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	1.93		0.00	0.00				
Total chlorophyll I ($\text{mg}\cdot\text{m}^{-3}$)	3.32		3.94	3.50				
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	116 ^b		240					
Algal volume ($\text{mm}^3\cdot\text{m}^{-3}$)	1338 ^b		1992					

^aduring incubation period
^bno count for ultraphytoplankton

Table 17. Physical, chemical and biological data from Bonilla Lake, July 23, 1980.

Depth (m)	Compensation depth (m)	4.6	Surface temperature ($^{\circ}$ C)	17.6	Einstеins \cdot m $^{-2}$ \cdot h $^{-1}$	3.29 ^a
	Extinction coefficient (k_e)	0.95	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	33.5	Einstеins \cdot m $^{-2}$ \cdot d $^{-1}$	30.57
Secchi depth (m)	3.5	Daily primary production (mg C \cdot m $^{-2}$ \cdot d $^{-1}$)	222			
	0	1	2	3	5	7.5
pH						
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)				0.51		
Dissolved organic carbon (mg C \cdot L $^{-1}$)			7.2	7.1	7.0	6.0
Particulate carbon (μ g C \cdot L $^{-1}$)	631			588	528	237
Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)	139			169	116	115
Particulate nitrogen (μ g N \cdot L $^{-1}$)	99			95	100	45
Ammonia (μ g N \cdot L $^{-1}$)	19			17	18	27
Nitrate (μ g N \cdot L $^{-1}$)	<1			<1	<1	8
Total phosphorus (μ g P \cdot L $^{-1}$)	6			5	5	1
Total dissolved phosphorus (μ g P \cdot L $^{-1}$)	2			1	2	<1
Soluble reactive silicon (μ g Si \cdot L $^{-1}$)	250			260	270	460
Total dissolved solids (mg \cdot L $^{-1}$)				20		
Bacteria numbers ($\times 10^6 \cdot$ mL $^{-1}$)	4.29	4.28	3.48	2.73	3.54	3.73
Glucose turnover time (h)	15	17	19	21	25	23
Dark bottle glucose turnover time (h)	84			38	49	1508
Primary production > 0.2 μ m (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)	18.40	8.19	3.60	1.65	0.40	0.02
Primary production 0.2-8.0 μ m (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)	4.83			0.94	0.22	
Primary production > 8.0 μ m (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)	3.36			0.71	0.18	
Total chlorophyll (mg \cdot m $^{-3}$)	7.68			7.30	6.64	0.66
Algal numbers ($\times 10^8 \cdot$ m $^{-3}$)	257			199		46
Algal volume (mm $^3 \cdot$ m $^{-3}$)	1028			838		134

^a during incubation period

Table 18. Physical, chemical and biological data from Bonilla Lake, August 24, 1980.

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Depth (m)	Compensation depth (m)	$\frac{4.1}{k_e}$	Surface temperature ($^{\circ}\text{C}$)	$\frac{16.0}{\text{mg dry wt.} \cdot \text{m}^{-3}}$	$\frac{\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}}{36.4}$	$\frac{1.31}{\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}}$	$\frac{25.75}{42.9}$
pH	Dissolved inorganic carbon (mg C·L ⁻¹)		6.2	0.90	5.9	0.75	5.6
	Dissolved organic carbon (mg C·L ⁻¹)		6.2				318
	Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)	650	681	654			68
	Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	85	83	51			33
	Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	92	90	91			9
	Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	8	7	7			12
	Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	1	1	<1			4
	Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	9	9	8			2
	Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	3	2	3			2
	Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	520	520	460			580
	Total dissolved solids (mg·L ⁻¹)			24			
	Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	3.30	2.66	2.48	3.08	2.78	3.08
	Glucose turnover time (h)	18	14	31	16	15	20
	Dark bottle glucose turnover time (h)		119	14	212		2523
	Primary production > 0.2 μm (mg C·m ⁻³ ·h ⁻¹)	11.54	8.56	4.17	1.40	0.29	0.18
	Primary production 0.2-8.0 μm (mg C·m ⁻³ ·h ⁻¹)		6.52		1.08	0.20	0.05
	Primary production > 8.0 μm (mg C·m ⁻³ ·h ⁻¹)		2.04		0.32	0.09	0.00
	Total chlorophyll (mg·m ⁻³)	5.72		5.48	5.22		0.64
	Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	410			685		
	Algal volume (mm ³ ·m ⁻³)	795		1193			

^aduring incubation period

Table 19. Nutrient data following fertilization of Bonilla Lake, August 24, 1980 at 1045 h.

Depth (m)	1	3	5	20
<u>Fertilization + 10 minutes</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	72	92	85	53
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	72	7	7	10
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	74	3	1	17
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	47	8	8	3
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	16	2	2	2
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	550	580	500	610
<u>Fertilization + 30 minutes</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	82	66	61	85
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	7	7	7	10
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	3	<1	<1	13
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	10	8	9	7
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	5	4	4	2
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	530	590	500	610

Table 20. Nutrient data following fertilization of Bonilla Lake, August 24, 1980 at 1045 h.

Depth (m)	1	3	5	20
<u>Fertilization + 1 hour</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	78	87	74	67
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	7	8	7	10
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	3	<1	2	13
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	10	10	11	5
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	5	6	3	1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	450	560	470	560
<u>Fertilization + 2 hours</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	115	73	81	53
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	17	7	7	11
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	22	2	<1	15
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	14	9	9	4
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	7	6	4	3
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	480	530	580	610

Table 21. Nutrient data following fertilization of Bonilla Lake, August 24, 1980 at 1045 h.

Depth (m)	1	3	5	20
<u>Fertilization + 4 hours</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	80	65	103	68
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	8	7	7	11
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	13	2	2	18
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	11	11	11	3
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	6	7	6	5
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	510	490	530	560
<u>Fertilization + 8 hours</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	79	87	86	76
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	6	6	6	10
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	1	<1	<1	12
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	9	9	9	3
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	6	6	3	3
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	580	540	450	610

Table 22. Zooplankton biomass data from five consecutive hauls from Bonilla Lake, August 24, 1980.

Haul No.	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)
1	101.0
2	103.4
3	97.9
4	85.9
5	110.5

Table 23. Physical, chemical and biological data from Bonilla Lake, August 25, 1980.

Depth (m)	Compensation depth (m) <u>2.8</u>			Surface temperature ($^{\circ}$ C) <u>15.8</u>			Einsteins.m $^{-2} \cdot h^{-1}$ <u>1.06</u> ^a		
	Extinction coefficient (k_e) <u>1.60</u>	Zooplankton biomass ($mg \text{ dry wt.} \cdot m^{-3}$) <u>179.1</u>	Daily primary production ($mg \text{ C} \cdot m^{-2} \cdot d^{-1}$) <u>108</u>	Einsteins.m $^{-2} \cdot d^{-1}$ <u>10.25</u>	Daily primary production ($mg \text{ C} \cdot m^{-2} \cdot d^{-1}$) <u>108</u>	Einsteins.m $^{-2} \cdot h^{-1}$ <u>1.06</u> ^a	Einsteins.m $^{-2} \cdot d^{-1}$ <u>10.25</u>	Daily primary production ($mg \text{ C} \cdot m^{-2} \cdot d^{-1}$) <u>108</u>	Einsteins.m $^{-2} \cdot h^{-1}$ <u>1.06</u> ^a
0	6.3	0.60	6.3	6.1	5.8	6.9	6.2	6.2	6.4
1			0.67						
2				711	751	788		305	
3				82	87	100		73	
10				103	111	112		38	
20				6	7	7		11	
pH				1	8	10		11	
Dissolved inorganic carbon ($mg \text{ C} \cdot L^{-1}$)				9	12	10		3	
Dissolved organic carbon ($mg \text{ C} \cdot L^{-1}$)				5	4	3		2	
Particulate carbon ($\mu g \text{ C} \cdot L^{-1}$)				530	530	510		620	
Dissolved kjeldahl nitrogen ($\mu g \text{ N} \cdot L^{-1}$)				2.73	2.42	2.39	2.23	2.30	1.20
Particulate nitrogen ($\mu g \text{ N} \cdot L^{-1}$)				54	29	20	14	22	89
Ammonia ($\mu g \text{ N} \cdot L^{-1}$)					27		79		207
Nitrate ($\mu g \text{ N} \cdot L^{-1}$)									
Total phosphorus ($\mu g \text{ P} \cdot L^{-1}$)									
Total dissolved phosphorus ($\mu g \text{ P} \cdot L^{-1}$)									
Soluble reactive silicon ($\mu g \text{ Si} \cdot L^{-1}$)									
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)									
Glucose turnover time (h)									
Dark bottle glucose turnover time (h)									
Total primary production ($mg \text{ C} \cdot m^{-3} \cdot h^{-1}$)	6.60	3.49	1.83	0.75	0.39	0.24	0.00	0.00	
Total chlorophyll (mg.m $^{-3}$)	5.64								0.60
Algal numbers ($\times 10^8 \cdot m^{-3}$)	855								
Algal volume ($mm^3 \cdot m^{-3}$)	1828								

^aduring incubation period

Table 24. Physical, chemical and biological data from Bonilla Lake, August 26, 1980.

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Compensation depth (m)	2.8	Surface temperature ($^{\circ}$ C)	16.1	Einstein $\cdot m^{-2} \cdot h^{-1}$	1.33 ^a
Extinction coefficient (k_e)	1.60	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	99.7	Einstein $\cdot m^{-2} \cdot d^{-1}$	14.23
Secchi depth (m)	2.5	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	130		
Depth (m)	0	1	2	3	5
pH					
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)					
Dissolved organic carbon (mg C $\cdot L^{-1}$)					
Particulate carbon (μ g C $\cdot L^{-1}$)	726	694	694	382	
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)	77	87	103	77	
Particulate nitrogen (μ g N $\cdot L^{-1}$)	117	112	107	53	
Ammonia (μ g N $\cdot L^{-1}$)	6	6	6	9	
Nitrate (μ g N $\cdot L^{-1}$)	2	3	2	13	
Total phosphorus (μ g P $\cdot L^{-1}$)	10	10	10	5	
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)	3	3	3	2	
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)	530	530	510	600	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	2.57	2.07	1.78	2.32	2.62
Glucose turnover time (h)	69	19	22	21	31
Dark bottle glucose turnover time (h)	24	22	22	33	56
Primary production > 0.2 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	7.23	4.89	2.02	0.74	0.10
Primary production 0.2-3.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	2.34	0.36	0.02	0.21	0.01
Primary production 3.0-8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	1.60	0.17	0.07	0.95	0.01
Primary production > 8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.95	0.95	0.95	6.56	6.98
Total chlorophyll (mg $\cdot m^{-3}$)	483	1012	1542	483	937
Algal numbers ($\times 10^8 \cdot m^{-3}$)					
Algal volume (mm $^3 \cdot m^{-3}$)					

^a during incubation period

Table 25. Physical, chemical and biological data from Bonilla Lake, August 27, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH	6.1	6.2						
Dissolved inorganic carbon (mg C·L ⁻¹)		0.71						
Dissolved organic carbon (mg C·L ⁻¹)	5.7		5.9	5.4				4.5
Particulate carbon (µg C·L ⁻¹)	755		237	716				382
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	86		74	85				76
Particulate nitrogen (µg N·L ⁻¹)	100		109	102				42
Ammonia (µg N·L ⁻¹)	7		7	6				8
Nitrate (µg N·L ⁻¹)	4		3	3				14
Total phosphorus (µg P·L ⁻¹)	10		9	9				3
Total dissolved phosphorus (µg P·L ⁻¹)	5		5	5				3
Soluble reactive silicon (µg Si·L ⁻¹)	510		480	550				570
Total dissolved solids (mg·L ⁻¹)					22			
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	1.99	2.48	2.70	2.04	2.69	2.10	2.10	0.92
Glucose turnover time (h)	39	42	27	24	43	108	127	845
Dark bottle glucose turnover time (h)	73		39	54				520
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	10.93	5.70	2.42	0.95	0.20	0.14	0.11	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	4.38		0.75	0.14				
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	1.32		0.20	0.06				
Total chlorophyll (mg·m ⁻³)	6.64		6.88	5.90				0.61
Algal numbers (x10 ⁸ ·m ⁻³)	506		804					
Algal volume (mm ³ ·m ⁻³)	768		1297					

^aduring incubation period

Table 26. Physical, chemical and biological data from Bonilla Lake, August 28, 1980.

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Depth (m)	Compensation depth (m)		Surface temperature ($^{\circ}$ C)		15.8		$Einsteins \cdot m^{-2} \cdot h^{-1}$		1.85 ^a		$Einsteins \cdot m^{-2} \cdot d^{-1}$	27.78		
	k_e	1.12	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	54.1	Daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$)	300	0	1	2	3	5	7.5	10	20
pH							6.1	6.1	6.1	6.1	6.1	6.1	6.1	
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)							0.79	0.79	0.79	0.79	0.79	0.79	0.79	
Dissolved organic carbon (mg $C \cdot L^{-1}$)							6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Particulate carbon (μ g $C \cdot L^{-1}$)							635	664	664	664	664	664	664	
Dissolved kjeldahl nitrogen (μ g $N \cdot L^{-1}$)							71	88	88	90	90	90	90	
Particulate nitrogen (μ g $N \cdot L^{-1}$)							100	103	103	98	98	98	98	
Ammonia (μ g $N \cdot L^{-1}$)							6	7	7	7	7	7	7	
Nitrate (μ g $N \cdot L^{-1}$)							1	2	2	2	2	2	2	
Total phosphorus (μ g $P \cdot L^{-1}$)							8	8	8	8	8	8	8	
Total dissolved phosphorus (μ g $P \cdot L^{-1}$)							4	4	4	4	4	4	4	
Soluble reactive silicon (μ g $Si \cdot L^{-1}$)							480	550	550	550	550	550	550	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)							2.53	2.35	2.36	2.47	2.20	2.27	2.27	
Glucose turnover time (h)							11	27	19	16	18	18	18	
Dark bottle glucose turnover time (h)							27	20	34	34	34	34	34	
Primary production > 0.2μ m (mg $C \cdot m^{-2} \cdot h^{-1}$)							9.60	7.86	3.28	1.30	0.40	0.28	0.12	0.00
Primary production $0.2\text{--}8.0 \mu$ m (mg $C \cdot m^{-2} \cdot h^{-1}$)							6.55	1.07	0.34	0.23	0.06	0.11	0.04	
Primary production > 8.0μ m (mg $C \cdot m^{-2} \cdot h^{-1}$)							1.31	5.72	6.14	6.80	0.49	0.49	0.49	
Total chlorophyll I (mg $\cdot m^{-3}$)							384	819	819	819	819	819	819	
Algal numbers ($\times 10^8 \cdot m^{-3}$)							724	940	940	940	940	940	940	

^a during incubation period

Table 27. Nutrient data from Bonilla Lake inlet streams and rainwater, August 28, 1980.

	Stream A	Stream B	Stream C	Rainwater
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	75	96	130	56
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	9	9	11	24
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	3	2	9	35
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	4	4	6	6
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1	5	4	1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	2540	2030	1910	30
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.27	0.43	0.31	

Table 28. Physical and biological data from Bonilla Lake, August 28, 1980.

	Station A	Station B	Station C	Station D
Compensation depth (m)	1.9	4.0	3.1	2.6
Extinction coefficient (k_e)	2.50	1.12	1.58	1.75
Secchi depth (m)	2.5	2.5	2.5	2.5
Surface temperature ($^{\circ}$ C)	16.2	15.7	15.6	15.8
Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	33.6	54.1	58.0	18.8
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	2.81	2.75	3.21	
Total chlorophyll (mg \cdot m $^{-3}$)				
Depth (m)				
1	8.40	6.60	5.14	4.60
3	9.20	6.60	5.40	5.80
5	6.80	6.00	6.00	5.00
20	0.58	0.46	0.52	0.48

Table 29. Physical, chemical and biological data from Bonilla Lake, August 29, 1980.

Depth (m)	Compensation depth (m)	2.4	Surface temperature (°C)	14.9	Einstiens·m ⁻² ·h ⁻¹	0.77	a
	Extinction coefficient (k _e)	1.95	Zooplankton biomass (mg dry wt.·m ⁻³)	23.5	Einstiens·m ⁻² ·d ⁻¹	16.68	
Secchi depth (m)	2.5	Daily primary production (mg C·m ⁻² ·d ⁻¹)	219				
Depth (m)	0	1	2	3	5	7.5	10
pH							
Dissolved inorganic carbon (mg C·L ⁻¹)							
Dissolved organic carbon (mg C·L ⁻¹)							
Particulate carbon (µg C·L ⁻¹)							
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)							
Particulate nitrogen (µg N·L ⁻¹)							
Ammonia (µg N·L ⁻¹)							
Nitrate (µg N·L ⁻¹)							
Total phosphorus (µg P·L ⁻¹)							
Total dissolved phosphorus (µg P·L ⁻¹)							
Soluble reactive silicon (µg Si·L ⁻¹)							
Bacteria numbers (x10 ⁶ ·mL ⁻¹)							
Glucose turnover time (h)							
Dark bottle glucose turnover time (h)							
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)							
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)							
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)							
Total chlorophyll (mg·m ⁻³)							
Algal numbers (x10 ⁸ ·m ⁻³)							
Algal volume (mm ³ ·m ⁻³)							

a during incubation period

Table 30. Physical, chemical and biological data from Bonilla Lake, September 26, 1980.

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Depth (m)	0	1	2	3	5	7.5	10	20
pH		5.8						
Dissolved inorganic carbon (mg C·L ⁻¹)		1.45						
Dissolved organic carbon (mg C·L ⁻¹)		6.7						
Particulate carbon (µg C·L ⁻¹)	637	640	578					279
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	90	110	214					293
Particulate nitrogen (µg N·L ⁻¹)	89	96	88					27
Ammonia (µg N·L ⁻¹)	<4	5	<4					7
Nitrate (µg N·L ⁻¹)	<1	<1	<1					9
Total phosphorus (µg P·L ⁻¹)	3	4	4					<1
Total dissolved phosphorus (µg P·L ⁻¹)	2	1	1					<1
Soluble reactive silicon (µg Si·L ⁻¹)	480	500	540					1080
Total dissolved solids (mg·L ⁻¹)		19						
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	1.65	2.20	2.26	2.47	2.56	2.59	2.29	1.16
Glucose turnover time (h)	16	22	30	23	21	28	34	82
Dark bottle glucose turnover time (h)		19	25	41				85
Primary production > 0.2 µm (mg C·m ⁻² ·h ⁻¹)	16.50	14.48	5.08	1.61	0.28	0.05	0.00	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻² ·h ⁻¹)	12.25			1.36	0.27			
Primary production > 8.0 µm (mg C·m ⁻² ·h ⁻¹)	2.23			0.25	0.01			
Total chlorophyll I (mg·m ⁻³)	6.38			7.04	5.64			1.04
Algal numbers (x10 ⁸ ·m ⁻³)	501			322				20
Algal volume (mm ³ ·m ⁻³)	402			420				45

^a during incubation period

Table 31. Physical, chemical and biological data from Bonilla Lake, October 22, 1980.

Depth (m)	3.5	Surface temperature ($^{\circ}\text{C}$)	10.9	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	0.40	a
	1.24	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	113.6	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$	7.61	
2.5	Daily primary production (mg $\text{C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	55				
0	1	2	3	5	7.5	10
20						
pH						
Dissolved inorganic carbon (mg $\text{C} \cdot \text{L}^{-1}$)						
Dissolved organic carbon (mg $\text{C} \cdot \text{L}^{-1}$)						
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)	416	504	374			398
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	103	110	108			139
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	58	74	52			59
Ammonia (µg $\text{N} \cdot \text{L}^{-1}$)	16	11	11			15
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	5	4	4			4
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	4	4	5			4
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2	1	2			<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	550	560	540			570
Total dissolved solids (mg $\cdot \text{L}^{-1}$)				22		
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	1.77	1.99	1.92	1.98	1.69	1.77
Glucose turnover time (h)	65	36	41	35	39	37
Dark bottle glucose turnover time (h)		31	43	45		51
Primary production > 0.2 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	1.92	0.77	0.33	0.17	0.09	0.08
Primary production 0.2-8.0 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	0.63		0.14	0.02		
Primary production > 8.0 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	0.14		0.03	0.07		
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	3.48		3.36	3.18		2.14
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	155		157			75
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	178		341			88

a during incubation period

Table 32. Physical, chemical and biological data from Bonilla Lake, December 16, 1980.

Compensation depth (m)	<u>3.5</u>	Surface temperature (°C)	<u>5.5</u>
Extinction coefficient (k_e)	<u>1.21</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>1.6</u>
Secchi depth (m)	<u>2.0</u>		
Depth (m)		0	1
Dissolved organic carbon (mg C $\cdot L^{-1}$)		7.9	6.8
Particulate carbon ($\mu g C \cdot L^{-1}$)	411	360	389
Dissolved kjeldahl nitrogen ($\mu g N \cdot L^{-1}$)	102	96	102
Particulate nitrogen ($\mu g N \cdot L^{-1}$)	4704	2032	1719
Ammonia ($\mu g N \cdot L^{-1}$)	6	6	9
Nitrate ($\mu g N \cdot L^{-1}$)	5	5	5
Total phosphorus ($\mu g P \cdot L^{-1}$)	3	3	3
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)	3	3	3
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)	510	500	500
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.81	1.92	1.44
Glucose turnover time (h)	35	56	41
Total chlorophyll (mg $\cdot m^{-3}$)	0.61	0.56	0.79
Algal numbers ($\times 10^8 \cdot m^{-3}$)	198	135	
Algal volume ($mm^3 \cdot m^{-3}$)	130	152	

Table 33. Physical, chemical and biological data from Curtis Lake, May 2, 1980.

Depth (m)	Compensation depth (m)	6.7	Surface temperature ($^{\circ}$ C)	5.5	Einstein \cdot m $^{-2}$ \cdot h $^{-1}$	4.02	a
	Extinction coefficient (k_e)	0.62	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	1.0	Einstein \cdot m $^{-2}$ \cdot d $^{-1}$	41.23	
Secchi depth (m)	6.5			Daily primary production (mg C \cdot m $^{-2}$ \cdot d $^{-1}$)	33		
0	0						
1	pH			5.9		6.0	
2	Dissolved inorganic carbon (mg C \cdot L $^{-1}$)			1.09	1.9	2.0	
3	Dissolved organic carbon (mg C \cdot L $^{-1}$)				1.57		1.9
4	Particulate carbon (μ g C \cdot L $^{-1}$)					229	
5	Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)			49	72	67	55
6	Particulate nitrogen (μ g N \cdot L $^{-1}$)			24	27	25	28
7	Ammonia (μ g N \cdot L $^{-1}$)			8	7	12	7
8	Nitrate (μ g N \cdot L $^{-1}$)			22	22	22	22
9	Total phosphorus (μ g P \cdot L $^{-1}$)			1	2	1	2
10	Total dissolved phosphorus (μ g P \cdot L $^{-1}$)			2	<1		<1
11	Soluble reactive silicon (μ g Si \cdot L $^{-1}$)			490	470	480	460
12	Total dissolved solids (mg \cdot L $^{-1}$)				12		
13	Bacteria numbers ($\times 10^6$ ·ml $^{-1}$)			0.74	0.72	0.75	0.63
14	Glucose turnover time (h)			301	112	214	191
15	Dark bottle glucose turnover time (h)			133	367	158	251
16	Total primary production (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)			0.53	0.41	0.72	0.62
17	Total chlorophyll (mg \cdot m $^{-3}$)			0.48		0.28	0.10
18	Algal numbers ($\times 10^8$ ·m $^{-3}$)			27		1.02	0.78
19	Algal volume (mm 3 ·m $^{-3}$)			103		74	79

a during incubation period

Table 34. Physical, chemical and biological data from Curtis Lake, May 31, 1980.

Depth (m)	Compensation depth (m)	Surface temperature ($^{\circ}$ C)	13.8	Einstein \cdot m $^{-2}$ \cdot h $^{-1}$	1.69	^a
	Extinction coefficient (k_e)	0.58	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	2.4	Einstein \cdot m $^{-2}$ \cdot d $^{-1}$	33.90
Secchi depth (m)	6.0			Daily primary production (mg C \cdot m $^{-2}$ \cdot d $^{-1}$)	413	
Depth (m)	0	1	2	3	5	7.5
					10	20
pH			5.6		5.8	
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)		1.16		1.16		
Dissolved organic carbon (mg C \cdot L $^{-1}$)	1.8		1.6	1.6		
Particulate carbon (μ g C \cdot L $^{-1}$)	276	268	341		207	
Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)	73	66	53		62	
Particulate nitrogen (μ g N \cdot L $^{-1}$)	45	41	55		23	
Ammonia (μ g N \cdot L $^{-1}$)	12	10	10		13	
Nitrate (μ g N \cdot L $^{-1}$)	<1	<1	<1		7	
Total phosphorus (μ g P \cdot L $^{-1}$)	2	3	3		3	
Total dissolved phosphorus (μ g P \cdot L $^{-1}$)	2	1	2		1	
Soluble reactive silicon (μ g Si \cdot L $^{-1}$)	470	500	460		510	
Total dissolved solids (mg \cdot L $^{-1}$)		11				
Bacteria numbers ($\times 10^6$ mL $^{-1}$)	0.99	0.97	0.94	0.61	0.69	0.65
Glucose turnover time (h)	121	57	53	59	49	99
Dark bottle glucose turnover time (h)	41	91	54		243	348
Total primary production (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)	7.27	5.13	4.10	2.62	1.26	0.30
Total chlorophyll (mg \cdot m $^{-3}$)	3.13	2.15	4.06		0.11	0.00
Algal numbers ($\times 10^8$ m $^{-3}$)	127				110	0.42
Algal volume (mm 3 \cdot m $^{-3}$)	516	565				

^aduring incubation period

Table 35. Physical, chemical and biological data from Curtis Lake, June 26, 1980.

Depth (m)	Surface temperature ($^{\circ}\text{C}$)					Einstiens $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$		2.07 ^a	
	0	1	2	3	5	7.5	10	20	
Compensation depth (m) <u>7.7</u>									
Extinction coefficient (k_e) <u>0.57</u>									
Secchi depth (m) <u>6.0</u>									
Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>4.7</u>									
Daily primary production <u>259</u>									
pH	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.6	
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	452	362	393	362	393	362	393	203	
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)	50	65	77	65	77	65	77	51	
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	68	60	69	60	69	60	69	36	
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	<4	5	5	5	5	5	5	6	
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	<1	<1	<1	<1	<1	<1	<1	21	
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	3	3	3	3	3	3	3	1	
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	<1	<1	<1	<1	<1	<1	<1	1	
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	390	340	340	340	340	340	340	430	
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)									
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)									
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	2.38	2.30	1.46	2.26	2.74	2.14	1.02	0.55	
Glucose turnover time (h)	36	19	18	19	21	46	112	375	
Dark bottle glucose turnover time (h)		23	31	24					
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	5.82	4.71	2.81	1.41	0.47	0.12	0.00	0.00	
Total chlorophyll (mg $\cdot \text{m}^{-3}$)		2.42	2.00	2.46					
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	116	116	240						
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	1338	1338	1992						

^aduring incubation period

Table 36. Physical, chemical and biological data from Curtis Lake, July 23, 1980.

Depth (m)	Surface temperature (°C)					Einstiens·m ⁻² ·h ⁻¹					Einstiens·m ⁻² ·h ⁻¹	
	0	1	2	3	5	7.5	10	20	Daily primary production (mg C·m ⁻² ·d ⁻¹)	108	3.37 ^a	
pH						6.6				6.3		
Dissolved inorganic carbon (mg C·L ⁻¹)					0.53	4.7	4.8		0.76		4.4	
Dissolved organic carbon (mg C·L ⁻¹)					4.5							
Particulate carbon (µg C·L ⁻¹)	503				508	475						
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	251				210	412					130	
Particulate nitrogen (µg N·L ⁻¹)	83				95	81						
Ammonia (µg N·L ⁻¹)	15				16	15					15	
Nitrate (µg N·L ⁻¹)	<1				<1	<1					16	
Total phosphorus (µg P·L ⁻¹)	2				3	2					<1	
Total dissolved phosphorus (µg P·L ⁻¹)	2				<1	<1					<1	
Soluble reactive silicon (µg Si·L ⁻¹)	270				300	320					370	
Total dissolved solids (mg·L ⁻¹)					27							
Bacteria numbers ($\times 10^6$ ·mL ⁻¹)	2.13	2.18	2.30	2.10	2.26	1.96	0.74	0.79				
Glucose turnover time (h)	66	16	26	30	32	21	111	162				
Dark bottle glucose turnover time (h)	39				81	31					317	
Total primary production (mg C·m ⁻³ ·h ⁻¹)	3.52	3.85	2.60	1.44	0.37	0.29	0.00	0.00				
Total chlorophyll (mg·m ⁻³)	4.12				4.22	3.72					0.51	
Algal numbers ($\times 10^8$ ·m ⁻³)	337				323							
Algal volume (mm ³ ·m ⁻³)	891				1036							

^a during incubation period

Table 37. Physical, chemical and biological data from Curtis Lake, August 20, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
	Compensation depth (m)	5.7	Surface temperature ($^{\circ}$ C)	17.3	Einstein $\cdot m^{-2} \cdot h^{-1}$	5.07 ^a		
Extinction coefficient (k_e)	0.76	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	11.4	Einstein $\cdot m^{-2} \cdot d^{-1}$	39.83			
Secchi depth (m)	4.0			Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	218			
pH						6.1		
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)			6.4					
Dissolved organic carbon (mg C $\cdot L^{-1}$)			0.73	5.5	5.2			
Particulate carbon (μ g C $\cdot L^{-1}$)				5.7	5.5	5.2		
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)				570	587	645	291	
Particulate nitrogen (μ g N $\cdot L^{-1}$)				84	105	88	57	
Ammonia (μ g N $\cdot L^{-1}$)				75	78	87	24	
Nitrate (μ g N $\cdot L^{-1}$)				11	10	8	13	
Total phosphorus (μ g P $\cdot L^{-1}$)				2	1	2	25	
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)				5	6	6	2	
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)				3	4	3	2	
Total dissolved solids (mg $\cdot L^{-1}$)				600	590	630	510	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)					18			
Glucose turnover time (h)				2.20	2.21	1.95	2.42	1.78
Dark bottle glucose turnover time (h)				35	18	17	17	18
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)				121	107	292		7627
Total chlorophyll (mg $\cdot m^{-3}$)				8.95	7.94	5.74	3.67	1.77
Algal numbers ($\times 10^8 \cdot m^{-3}$)				3.40	3.52	3.82	0.06	0.00
Algal volume ($mm^3 \cdot m^{-3}$)				434	470		0.52	
				1100	1443			

^aduring incubation period

Table 38. Physical, chemical and biological data from Curtis Lake, September 26, 1980.

Depth (m)	Compensation depth (m)	5.3	Surface temperature ($^{\circ}\text{C}$)	14.2	Einstains $\cdot\text{m}^{-2}\cdot\text{h}^{-1}$	1.99	^a
	Extinction coefficient (k_e)	0.82	Zooplankton biomass (mg dry wt. m^{-3})	11.3	Einstains $\cdot\text{m}^{-2}\cdot\text{d}^{-1}$	17.85	
Secchi depth (m)	4.0				Daily primary production ($\text{mg C}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$)	110	
Depth (m)	0	1	2	3	5	7.5	10
pH					6.2	6.0	
dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)				0.94	5.4	5.7	
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)		5.9					4.3
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	496		442	387			210
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)		58	48	52			53
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)		64	66	58			20
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)		<4	<4	<4			5
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)		2	<1	2			23
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)		3	3	2			<1
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)		2	1	4			2
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	560		580	590			470
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)			7				
Bacteria numbers ($\times 10^6\cdot\text{mL}^{-1}$)	1.71	1.44	1.37	1.61	1.77	1.59	0.88
Glucose turnover time (h)	17	12	24	14	18	27	40
Dark bottle glucose turnover time (h)		16	16	13			194
Total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	4.50	4.52	2.74	1.31	0.33	0.00	0.00
Total chlorophyll ($\text{mg}\cdot\text{m}^{-3}$)		7.62	6.54	4.85			0.82
Algal numbers ($\times 10^8\cdot\text{m}^{-3}$)	246				157		
Algal volume ($\text{mm}^3\cdot\text{m}^{-3}$)	560				873		

^a during incubation period

Table 39. Physical, chemical and biological data from Curtis Lake, October 23, 1980.

Depth (m)	Compensation depth (m) <u>5.4</u>			Surface temperature ($^{\circ}\text{C}$) <u>11.0</u>			Einsteins $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$ <u>0.62</u> ^a		
	Extinction coefficient (k_e) <u>0.80</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>10.0</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>14</u>	Einsteins $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$ <u>7.61</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>14</u>	Einsteins $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$ <u>0.62</u> ^a			
0	5.4	5.4	5.4	5.5	5.5	5.5	5.8	5.8	5.8
1	5.5	5.5	5.5	5.61	5.61	5.61	5.8	5.8	5.8
2	5.6	5.6	5.6	5.7	5.7	5.7	5.9	5.9	5.9
3	5.7	5.7	5.7	5.8	5.8	5.8	5.9	5.9	5.9
5	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
7.5	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
10	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
20	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
pH									
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)									
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)									
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)									
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	278	278	278	278	278	278	278	278	278
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	65	65	65	65	65	65	65	65	65
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	39	39	39	39	39	39	39	39	39
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	14	14	14	14	14	14	14	14	14
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	14	14	14	14	14	14	14	14	14
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	4	4	4	4	4	4	4	4	4
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)	570	570	570	570	570	570	570	570	570
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	570	570	570	570	570	570	570	570	570
Glucose turnover time (h)	12	12	12	12	12	12	12	12	12
Dark bottle glucose turnover time (h)	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	227	49	46	49	38	40	45	45	45
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	40	40	50	45	45	45	45	45	45
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	1.00	0.65	0.32	0.16	0.05	0.04	0.03	0.03	0.03
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	72	72	72	72	72	72	72	72	72
	97	97	97	97	97	97	97	97	97

^a during incubation period

Table 40. Physical, chemical and biological data from Devon Lake, May 28, 1980.

Depth (m)	Compensation depth (m)	6.6	Surface temperature (°C)	12.7	Einstiens·m ⁻² ·h ⁻¹	5.88	^a
	Extinction coefficient (k _e)	0.66	Zooplankton biomass (mg dry wt.·m ⁻³)	1.4	Einstiens·m ⁻² ·d ⁻¹	48.42	Daily primary production (mg C·m ⁻² ·d ⁻¹)
pH					0.72	0.68	
Dissolved inorganic carbon (mg C·L ⁻¹)		1.6		1.7	1.8		
Dissolved organic carbon (mg C·L ⁻¹)			298	382			1.7
Particulate carbon (µg C·L ⁻¹)			83	75	77		237
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)				47	57		48
Particulate nitrogen (µg N·L ⁻¹)		9		9	10		30
Ammonia (µg N·L ⁻¹)		<1		<1	<1		10
Nitrate (µg N·L ⁻¹)			2	3	3		15
Total phosphorus (µg P·L ⁻¹)				2	2		1
Total dissolved phosphorus (µg P·L ⁻¹)		2					2
Soluble reactive silicon (µg Si·L ⁻¹)		470		460	470		490
Total dissolved solids (mg·L ⁻¹)					22		
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.83	0.91	0.72	0.82	0.83	0.88	0.86
Glucose turnover time (h)	32	33	33	38	36	31	30
Dark bottle glucose turnover time (h)	39		37	52			53
Total primary production (mg C·m ⁻³ ·h ⁻¹)	5.10	2.97	2.43	1.39	0.82	0.16	0.01
Total chlorophyll (mg·m ⁻³)	2.94			3.52	4.64		0.47
Algal numbers (x10 ⁸ ·m ⁻³)	105					122	
Algal volume (mm ³ ·m ⁻³)	554						785

^a during incubation period

Table 41. Physical, chemical and biological data from Devon Lake, June 27, 1980.

Depth (m)	Compensation depth (m) <u>7.4</u>			Surface temperature (°C) <u>18.1</u>			Einstein·m ⁻² ·h ⁻¹ <u>3.37</u> ^a		
	Extinction coefficient (k_e) <u>0.59</u>	Zooplankton biomass (mg dry wt.·m ⁻³) <u>4.2</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹) <u>272</u>	Einstein·m ⁻² ·d ⁻¹ <u>38.24</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹) <u>272</u>	Einstein·m ⁻² ·h ⁻¹ <u>3.37</u> ^a			
0	5.9	0.67	5.7	5.7	1.00	1.00	1.5		
1									
2									
3									
5									
7.5									
10									
20									

^aduring incubation period

Table 42. Physical, chemical and biological data from Devon Lake, July 24, 1980.

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Depth (m)	Compensation depth (m) 7.2			Surface temperature ($^{\circ}$ C) 17.1			Einsteins $\cdot m^{-2} \cdot h^{-1}$ 1.81 a		
	Extinction coefficient (k_e) 0.60	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) 6.1	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$) 105	Einsteins $\cdot m^{-2} \cdot d^{-1}$ 17.47					
0	6.2	0.41	5.7						
1			0.80						
2									
3									
5									
7.5									
10									
20									
pH									
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)									
Dissolved organic carbon (mg C $\cdot L^{-1}$)	6.8	9.3	8.1						
Particulate carbon (μ g C $\cdot L^{-1}$)	237	240	221						
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)	147	176	241						
Particulate nitrogen (μ g N $\cdot L^{-1}$)	38	37	34						
Ammonia (μ g N $\cdot L^{-1}$)	16	15	16						
Nitrate (μ g N $\cdot L^{-1}$)	<1	<1	<1						
Total phosphorus (μ g P $\cdot L^{-1}$)	3	3	2						
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)	<1	<1	1						
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)	80	90	150						
Total dissolved solids (mg $\cdot L^{-1}$)			16						
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.98	2.15	1.62	1.81	1.26	0.86	0.73	0.68	
Glucose turnover time (h)	22	19	16	15	16	19	33	118	
Dark bottle glucose turnover time (h)		32		15	23			215	
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)	4.23	2.58	1.08	0.54	0.04	0.00	0.00	0.00	0.00
Total chlorophyll (mg $\cdot m^{-3}$)	3.50		3.58	3.45					0.78
Algal numbers ($\times 10^8 \cdot m^{-3}$)	197			139					
Algal volume ($mm^3 \cdot m^{-3}$)		9328							

a during incubation period

Table 43. Physical, chemical and biological data from Devon Lake, August 20, 1980.

Depth (m)	Compensation depth (m)	5.3	Surface temperature (°C)	16.5	Einstein·m ⁻² ·h ⁻¹	4.49 ^a
	Extinction coefficient (k_e)	0.82	Zooplankton biomass (mg dry wt.·m ⁻³)	1.8	Einstein·m ⁻² ·d ⁻¹	39.83
Secchi depth (m)	4.0				Daily primary production (mg C·m ⁻² ·d ⁻¹)	211
0						
1						
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon (mg C·L ⁻¹)						
Dissolved organic carbon (mg C·L ⁻¹)						
Particulate carbon (µg C·L ⁻¹)						
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)						
Particulate nitrogen (µg N·L ⁻¹)						
Ammonia (µg N·L ⁻¹)						
Nitrate (µg N·L ⁻¹)						
Total phosphorus (µg P·L ⁻¹)						
Total dissolved phosphorus (µg P·L ⁻¹)						
Soluble reactive silicon (µg Si·L ⁻¹)						
Total dissolved solids (mg·L ⁻¹)						
Bacteria numbers (x10 ⁶ ·mL ⁻¹)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production (mg C·m ⁻² ·h ⁻¹)						
Total chlorophyll (mg·m ⁻³)						
Algal numbers (x10 ⁸ ·m ⁻³)						
Algal volume (mm ³ ·m ⁻³)						

^aduring incubation period

Table 44. Physical, chemical and biological data from Devon Lake, September 25, 1980.

Depth (m)	Compensation depth (m) <u>4.7</u>			Surface temperature ($^{\circ}$ C) <u>14.0</u>			Einstiens. \cdot m $^{-2}$.h $^{-1}$ <u>2.78</u> ^a		
	Extinction coefficient (k_e) <u>0.96</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>5.7</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>106</u>	Einstiens. \cdot m $^{-2}$.d $^{-1}$ <u>22.57</u>	Einstiens. \cdot m $^{-2}$.d $^{-1}$ <u>22.57</u>	Einstiens. \cdot m $^{-2}$.h $^{-1}$ <u>2.78</u> ^a			
pH				6.0	6.0	5.8			
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)		0.13		>7.5	>7.5	>7.5			
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				467	409	182			
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)				64	74	48	60		
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				83	71	61	27		
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				8	5	<4	<4		
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				<1	<1	<1	15		
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				3	2	3	4		
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				<1	<1	<1	<1		
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				440	440	460	460		
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)									
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)						35			
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				2.02	2.04	2.60	2.42	2.14	0.98
Glucose turnover time (h)				30	25	17	22	19	90
Dark bottle glucose turnover time (h)									
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)				5.80	3.90	2.70	1.90	0.32	0.00
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)				8.20	7.12	6.88			0.72
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				287			235		
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				3204			3242		

^a during incubation period

Table 45. Physical, chemical and biological data from Devon Lake, October 24, 1980.

Depth (m)	Compensation depth (m) <u>4.1</u>			Surface temperature (°C) <u>10.5</u>			Einstein·m ⁻² ·h ⁻¹ <u>0.63</u> ^a		
	Extinction coefficient (k_e) <u>1.06</u>	Zooplankton biomass <u>9.9</u> (mg dry wt. · m ⁻³)	Daily primary production <u>10</u> (mg C·m ⁻² ·d ⁻¹)	Einstein·m ⁻² ·d ⁻¹ <u>6.08</u>	Einstein·m ⁻² ·h ⁻¹ <u>6.08</u>	Daily primary production <u>10</u> (mg C·m ⁻² ·d ⁻¹)	Einstein·m ⁻² ·h ⁻¹ <u>6.08</u>	Einstein·m ⁻² ·h ⁻¹ <u>6.08</u>	Daily primary production <u>10</u> (mg C·m ⁻² ·d ⁻¹)
0				5.5	4.9	5.3	5.5	5.5	5.5
1				0.90			0.90		
2									
3									
5									
7.5									
10									
20									
pH									
Dissolved inorganic carbon (mg C·L ⁻¹)									
Dissolved organic carbon (mg C·L ⁻¹)				5.5	4.9	5.3	5.5	5.5	5.5
Particulate carbon (µg C·L ⁻¹)	341			339	353				
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)		116		119	97				
Particulate nitrogen (µg N·L ⁻¹)		56		58	63				
Ammonia (µg N·L ⁻¹)	13			10	13				
Nitrate (µg N·L ⁻¹)	6			3	2				
Total phosphorus (µg P·L ⁻¹)		3		3	3				
Total dissolved phosphorus (µg P·L ⁻¹)	<1			<1	<1				
Soluble reactive silicon (µg Si·L ⁻¹)	470			480	470				
Total dissolved solids (mg·L ⁻¹)						17			
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.97	1.43	1.49	1.29	1.13	1.28	0.71		
Glucose turnover time (h)	65	43	44	47	54	44	46	87	
Dark bottle glucose turnover time (h)		51		50	47				
Total primary production (mg C·m ⁻³ ·h ⁻¹)	0.57	0.24	0.13	0.07	0.04	0.04	0.04	0.00	
Total chlorophyll (mg·m ⁻³)	7.96								0.68
Algal numbers (x10 ⁸ ·m ⁻³)	240								204
Algal volume (mm ³ ·m ⁻³)	2828								2297

^aduring incubation period

Table 46. Physical, chemical and biological data from Eden Lake, May 3, 1980.

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Compensation depth (m)	<u>4.5</u>	Surface temperature ($^{\circ}$ C)	<u>5.9</u>
Extinction coefficient (k_e)	<u>0.96</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	<u>4.4</u>
Secchi depth (m)	<u>3.5</u>		
Depth (m)		1	3
pH		6.8	6.4
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	1891		
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	83	70	59
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	7	8	9
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	43	44	42
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2	2	2
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	1	1	<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	1780	1600	1690
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)		44	
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	0.39	0.22	0.34
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	8		14
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	18	16	

Table 47. Physical, chemical and biological data from Eden Lake, June 24, 1980.

Depth (m)	Compensation depth (m)	4.7	Surface temperature (°C)	15.7
	Extinction coefficient (k_e)	0.93	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	30.2
Secchi depth (m)	5.0			
pH		6.1		6.1
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		4191		4107
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)		69	59	78
Ammonia ($\mu g\ N\cdot L^{-1}$)		7	10	7
Nitrate ($\mu g\ N\cdot L^{-1}$)		13	14	14
Total phosphorus ($\mu g\ P\cdot L^{-1}$)		2	2	2
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)		2220	2800	2380
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)				2260
Total dissolved solids ($mg\ \cdot L^{-1}$)			36	
Total chlorophyll ($mg\ \cdot m^{-3}$)		0.30	3.12	2.44
Algal numbers ($\times 10^8\ \cdot m^{-3}$)			51	3.54
Algal volume ($mm^3\ \cdot m^{-3}$)		144	83	

Table 48. Physical, chemical and biological data from Eden Lake, September 24, 1980.

Depth (m)	Compensation depth (m) <u>3.9</u>			Surface temperature ($^{\circ}\text{C}$) <u>14.0</u>		
	Extinction coefficient (k_e) <u>1.13</u>			Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$) <u>27.0</u>		
Secchi depth (m) <u>3.5</u>	1	3	5	1	3	5
pH				6.7		6.5
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				2600		2086
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	81	102	370			141
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	5	5	4			<4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	28	29	30			55
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	1	1	1			1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2	2	2			1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	2040	2030	2040			1990
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)				41		
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	2.22	1.94	2.24			0.38
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	37				20	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	178				163	

Table 49. Physical, chemical and biological data from Great Central Lake, Station 1, March 18, 1980.

Depth (m)	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass (mg dry wt. $\cdot\text{m}^{-3}$)	
	1	3	5	20	5.3	3.5
pH				6.6	5.28	5.39
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)				<4	<4	<4
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)				38	39	39
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)				<1	1	<1
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)				<1	1	<1
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)				1130	1130	1150
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)				0.51	0.51	0.60
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)				0.56	0.62	0.62
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				52	1	
Total chlorophyll (mg $\cdot\text{m}^{-3}$)				508	7	
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)						
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)						

Table 50. Physical, chemical and biological data from Great Central Lake, Station 2, March 18, 1980.

Depth (m)	Compensation depth (m)			Surface temperature (°C)			<u>6.0</u>		
				Zooplankton biomass (mg dry wt. · m ⁻³)			<u>2.5</u>		
	1	3	5	1	3	5	1	3	20
pH				6.6	6.7	6.7			
Dissolved inorganic carbon (mg C·L ⁻¹)				4.90					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	<4	<4	<4				<4		
Ammonia (µg N·L ⁻¹)	4	37	38	37	39				
Nitrate (µg N·L ⁻¹)	<1	<1	<1	<1	<1	<1	<1		
Total phosphorus (µg P·L ⁻¹)	<1	<1	<1	<1	<1	<1	<1		
Total dissolved phosphorus (µg P·L ⁻¹)	1090	1100	1110	1110	1130				
Soluble reactive silicon (µg Si·L ⁻¹)									
Bacteria numbers (x10 ⁶ · mL ⁻¹)	0.51	0.51	0.51	0.51	0.56				
Chlorophyll > 0.8 µm (mg·m ⁻³)	0.54	0.78	0.94	0.94	0.50				
Chlorophyll 0.8-54 µm (mg·m ⁻³)	0.54	0.78	0.94	0.94	0.50				
Chlorophyll > 54 µm (mg·m ⁻³)	<0.12	<0.12	<0.12	<0.12	<0.12		<0.12		
Algal numbers (x10 ⁸ · m ⁻³)	4	5	5	5					
Algal volume (mm ³ · m ⁻³)	170	174							

Table 51. Physical, chemical and biological data from Great Central Lake, Station 1, April 15, 1980.

	Compensation depth (m)	<u>16.1</u>		Surface temperature ($^{\circ}$ C)	<u>7.3</u>	
	Extinction coefficient (k_e)	<u>0.27</u>		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>1.7</u>	
	Secchi depth (m)	<u>10.0</u>				
	Depth (m)			1	3	5
				20		20
pH				6.6		6.5
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)				5.49		6.00
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)				36	31	25
Ammonia ($\mu g\ N\cdot L^{-1}$)				14	16	15
Nitrate ($\mu g\ N\cdot L^{-1}$)				24	26	27
Total phosphorus ($\mu g\ P\cdot L^{-1}$)				1	2	2
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)				1	2	2
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)				900	900	900
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				0.30	0.38	0.36
Total chlorophyll ($mg\ \cdot m^{-3}$)				1.31	1.40	1.34
Algal numbers ($\times 10^8 \cdot m^{-3}$)				29	11	11
Algal volume ($mm^3 \cdot m^{-3}$)				338	223	223

Table 52. Physical, chemical and biological data from Great Central Lake, Station 2, April 15, 1980.

Depth (m)	Compensation depth (m) <u>17.5</u>			Surface temperature (°C) <u>6.2</u>			Zooplankton biomass (mg dry wt. · m ⁻³) <u>1.3</u>
	1	3	5	5	20		
pH				6.5			6.5
Dissolved inorganic carbon (mg C·L ⁻¹)			5.84				6.24
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	16	14		14			13
Ammonia (µg N·L ⁻¹)	16	14		14			13
Nitrate (µg N·L ⁻¹)	31	31		32			31
Total phosphorus (µg P·L ⁻¹)	1	1		1			1
Total dissolved phosphorus (µg P·L ⁻¹)	1	2		1			<1
Soluble reactive silicon (µg Si·L ⁻¹)	910	900		900			890
Bacteria numbers (x10 ⁶ · mL ⁻¹)	0.40	0.41		0.55			0.64
Chlorophyll > 0.8 µm (mg · m ⁻³)	0.99	1.01		1.02			1.23
Chlorophyll 0.8-54 µm (mg · m ⁻³)	0.99	1.01		1.02			1.23
Chlorophyll > 54 µm (mg · m ⁻³)	<0.12	<0.12		<0.12			<0.12
Algal numbers (x10 ⁸ · m ⁻³)	14			13			24
Algal volume (mm ³ · m ⁻³)	394			658			236

Table 53. Physical, chemical and biological data from Great Central Lake, Station 1, May 16, 1980.

	Compensation depth (m)	<u>14.8</u>	Surface temperature ($^{\circ}$ C)	<u>14.6</u>
	Extinction coefficient (k_e)	<u>0.29</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>5.0</u>
	Secchi depth (m)	<u>7.3</u>		
	Depth (m)		1	3
pH			6.9	6.7
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			4.04	4.98
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)		46	76	48
Ammonia ($\mu g\ N\cdot L^{-1}$)		9	10	10
Nitrate ($\mu g\ N\cdot L^{-1}$)		<1	<1	33
Total phosphorus ($\mu g\ P\cdot L^{-1}$)		1	<1	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)		<1	<1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)		820	920	920
Bacteria numbers ($\times 10^6\ mL^{-1}$)		0.79	0.64	0.74
Total chlorophyll ($mg\ \cdot m^{-3}$)		1.03	1.05	1.08
Algal numbers ($\times 10^8\ \cdot m^{-3}$)		103	96	0.88
Algal volume ($mm^3\ \cdot m^{-3}$)		2541	1957	

Table 54. Physical, chemical and biological data from Great Central Lake, Station 2, May 16, 1980.

	Compensation depth (m)	14.9	Surface temperature ($^{\circ}$ C)	13.0
	Extinction coefficient (k_e)	0.28	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	3.4
Depth (m)	Secchi depth (m)	8.0		
pH				
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)				
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	52	53	28	49
Ammonia ($\mu g\ N\cdot L^{-1}$)	10	9	9	10
Nitrate ($\mu g\ N\cdot L^{-1}$)	10	10	10	35
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	1	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	900	910	880	1040
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.67	0.82	0.55	0.67
Chlorophyll > 0.8 μm ($mg\ \cdot m^{-3}$)	0.90	1.11	1.19	0.79
Chlorophyll 0.8-54 μm ($mg\ \cdot m^{-3}$)	0.65	0.86	0.93	0.61
Chlorophyll > 54 μm ($mg\ \cdot m^{-3}$)	0.25	0.25	0.26	0.18
Algal numbers ($\times 10^8 \cdot m^{-3}$)	40	40	15	
Algal volume ($mm^3 \cdot m^{-3}$)	4793	3925	612	

Table 55. Physical, chemical and biological data from Great Central Lake, Station 1, June 13, 1980.

	Compensation depth (m)	<u>15.2</u>		Surface temperature ($^{\circ}$ C)	<u>16.2</u>	
	Extinction coefficient (k_e)	<u>0.29</u>		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>7.1</u>	
Depth (m)	Secchi depth (m)	<u>7.8</u>				
			1	3	5	20
pH			7.6	7.1		
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			3.76			
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)		48	37	56		
Ammonia ($\mu g\ N\cdot L^{-1}$)		<4	<4	<4		
Nitrate ($\mu g\ N\cdot L^{-1}$)		<1	<1	<1		
Total phosphorus ($\mu g\ P\cdot L^{-1}$)		1	3	2		
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)		1	<1	1		
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)		710	700	700	1020	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.82	0.61	0.94	0.56	
Total chlorophyll ($mg\ m^{-3}$)		1.28	1.46	1.46	1.22	
Algal numbers ($\times 10^8 \cdot m^{-3}$)		166	167			
Algal volume ($mm^3 \cdot m^{-3}$)		4909	4926			

Table 56. Physical, chemical and biological data from Great Central Lake, Station 2, June 13, 1980.

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Depth (m)	Compensation depth (m)	14.1	Surface temperature (°C) 15.9		
	Extinction coefficient (k_e)	0.31	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	6.4	20
Secchi depth (m)	7.0				
1			1	3	5
pH			7.6	7.1	7.1
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		3.68			
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	60	82	56	59	
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	<4	<4	<4	
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1	33	
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	1	1	1	3	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	1	1	1	1	2
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	680	680	700	970	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.06	0.89	0.81	0.67	
Chlorophyll > 0.8 μm ($mg\ \cdot m^{-3}$)	1.50	1.96	1.96	2.86	
Chlorophyll 0.8-54 μm ($mg\ \cdot m^{-3}$)	0.58	1.18	1.22	1.98	
Chlorophyll > 54 μm ($mg\ \cdot m^{-3}$)	0.92	0.78	0.74	0.88	
Algal numbers ($\times 10^8 \cdot m^{-3}$)	81		88	35	
Algal volume ($mm^3 \cdot m^{-3}$)	9535		10396	1481	

Table 57. Physical, chemical and biological data from Great Central Lake, Station 1, July 11, 1980.

Depth (m)	Compensation depth (m)	15.4	Surface temperature ($^{\circ}$ C) 17.5 Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) 9.6
	Extinction coefficient (k_e)	0.28	
Secchi depth (m)	7.5		
1			
3			
5			
20			
pH		7.1	6.7
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		3.98	4.89
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	72	65	75
Ammonia ($\mu g\ N\cdot L^{-1}$)	6	6	8
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1110	870	830
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.25	1.14	1.28
Total chlorophyll ($mg\ \cdot m^{-3}$)	0.73	0.82	0.79
Algal numbers ($\times 10^8 \cdot m^{-3}$)	111		102
Algal volume ($mm^3 \cdot m^{-3}$)	2769		2889

Table 58. Physical, chemical and biological data from Great Central Lake, Station 2, July 11, 1980.

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Depth (m)	Compensation depth (m)	13.6	Surface temperature ($^{\circ}$ C)	17.6	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	5.3
	Extinction coefficient (k_e)	0.32				
Secchi depth (m)	8.0					
pH			7.0			6.6
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			4.00			5.65
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	65		46			102
Ammonia ($\mu g\ N\cdot L^{-1}$)	10		8			9
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1		<1			34
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1		<1			<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1		<1			<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1340		1350			1300
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.26		1.37			0.86
Chlorophyll > 0.8 μm ($mg\ \cdot m^{-3}$)	1.40		1.88			3.05
Chlorophyll 0.8-54 μm ($mg\ \cdot m^{-3}$)	0.80		1.52			1.84
Chlorophyll > 54 μm ($mg\ \cdot m^{-3}$)	0.60		0.36			1.21
Algal numbers ($\times 10^8 \cdot m^{-3}$)	65		49			32
Algal volume ($mm^3 \cdot m^{-3}$)	7883		5348			2407

Table 59. Physical, chemical and biological data from Great Central Lake, Station 1, August 8, 1980.

Depth (m)	Compensation depth (m)	16.4	Surface temperature (°C)	21.7	
	Extinction coefficient (k_e)	0.27		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	14.1
Secchi depth (m)	10.5				
	1	3	5	20	
pH		6.9	4.25	6.7	4.89
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)					
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	68	61	58	65	
Ammonia ($\mu g\ N\cdot L^{-1}$)	12	4	<4	6	
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1	17	
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	2	<1	1	<1	
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1	<1	
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	670	660	650	900	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.04	1.16	1.17	0.85	
Total chlorophyll ($mg\ \cdot m^{-3}$)	0.56	0.68	0.88	4.46	
Algal numbers ($\times 10^8 \cdot m^{-3}$)	29	46			
Algal volume ($mm^3 \cdot m^{-3}$)	161	362			

Table 60. Physical, chemical and biological data from Great Central Lake, Station 2, August 8, 1980.

Depth (m)	Compensation depth (m) <u>15.4</u>		Surface temperature ($^{\circ}$ C) <u>21.7</u>		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>13.2</u>
	Extinction coefficient (k_e)	0.28			
Secchi depth (m)	10.0				
pH			6.9		6.6
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		4.30			5.12
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	64	57	56		54
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	5	6		<4
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1		14
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	1	<1		<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1		<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	650	650	650		890
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.00	1.03	1.06		0.76
Chlorophyll > 0.8 μm ($mg\ \cdot m^{-3}$)	0.76	1.10	1.04		4.16
Chlorophyll 0.8-54 μm ($mg\ \cdot m^{-3}$)	0.56	0.56	0.58		2.18
Chlorophyll > 54 μm ($mg\ \cdot m^{-3}$)	0.26	0.54	0.46		1.98
Algal numbers ($\times 10^8 \cdot m^{-3}$)	43		56	55	
Algal volume ($mm^3 \cdot m^{-3}$)	640	1061	4639		

Table 61. Physical, chemical and biological data from Great Central Lake, Station 1, September 12, 1980.

	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	
				1	3	5	20
pH					6.2		
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)					7.21		
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				47	33	26	38
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				4	6	<4	<4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				<1	<1	<1	18
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				2	2	2	1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				1	1	1	<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				2080	990	910	1290
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				1.25	1.32	1.49	0.97
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)				0.79	0.70	0.73	4.66
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				30		26	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				265		312	

Table 62. Physical, chemical and biological data from Great Central Lake, Station 2, September 12, 1980.

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Depth (m)	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Surface temperature ($^{\circ}\text{C}$)	<u>19.0</u>	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	<u>4.2</u>
	1	3	5	20			
pH				6.2			
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)				7.90			
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	50	63	53	56			
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	<4	7	<4	<4			
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	<1	1	<1	13			
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	2	2	3	2			
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1	1	1	1			
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	1640	780	820	1000			
Bacteria numbers ($\times 10^6 \cdot \text{ml}^{-1}$)	1.75	1.77	1.68	0.82			
Chlorophyll $> 0.8 \mu\text{m}$ ($\text{mg}\cdot\text{m}^{-3}$)	1.05	0.83	0.89	6.48			
Chlorophyll $0.8\text{-}54 \mu\text{m}$ ($\text{mg}\cdot\text{m}^{-3}$)	0.81	0.66	0.72	5.27			
Chlorophyll $> 54 \mu\text{m}$ ($\text{mg}\cdot\text{m}^{-3}$)	0.24	0.17	0.17	1.21			
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	14	27	86				
Algal volume ($\text{mm}^3\cdot\text{m}^{-3}$)	791	317	7102				

Table 63. Physical, chemical and biological data from Great Central Lake, Station 1, October 10, 1980.

	Compensation depth (m)	<u>11.5</u>		Surface temperature (°C)	<u>16.3</u>	Zooplankton biomass (mg dry wt.·m ⁻³)	<u>5.1</u>	
Extinction coefficient (k _e)	<u>0.37</u>	Secchi depth (m)	<u>12.5</u>	Depth (m)	1	3	5	20
pH				7.0				
Dissolved inorganic carbon (mg C·L ⁻¹)					4.08			
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)				47	35	70		64
Ammonia (μg N·L ⁻¹)				4	5	<4		4
Nitrate (μg N·L ⁻¹)				1	1	1		2
Total phosphorus (μg P·L ⁻¹)				<1	<1	<1		<1
Total dissolved phosphorus (μg P·L ⁻¹)				<1	<1	1		<1
Soluble reactive silicon (μg Si·L ⁻¹)				1880	1560	1660		1310
Bacteria numbers (x10 ⁶ ·mL ⁻¹)				0.92	0.68	1.04		1.17
Total chlorophyll (mg·m ⁻³)				1.18	0.94	1.33		2.52
Algal numbers (x10 ⁸ ·m ⁻³)				34		60		
Algal volume (mm ³ ·m ⁻³)				109		81		

Table 64. Physical, chemical and biological data from Great Central Lake, Station 2, October 10, 1980.

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	Compensation depth (m)	<u>13.6</u>		Surface temperature (°C)	<u>16.2</u>
	Extinction coefficient (k _e)	<u>0.30</u>		Zooplankton biomass (mg dry wt.·m ⁻³)	<u>6.0</u>
Secchi depth (m)	<u>8.5</u>				
Depth (m)		1	3	5	20
pH				7.1	
Dissolved inorganic carbon (mg C·L ⁻¹)		3.92			
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)	57	66	65		71
Ammonia (μg N·L ⁻¹)	<4	4	<4		4
Nitrate (μg N·L ⁻¹)	1	<1	<1		<1
Total phosphorus (μg P·L ⁻¹)	2	2	2		2
Total dissolved phosphorus (μg P·L ⁻¹)	1	1	<1		<1
Soluble reactive silicon (μg Si·L ⁻¹)	2320	2210	1680		1100
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	1.20	1.66	1.13		1.23
Chlorophyll > 0.8 μm (mg·m ⁻³)	1.84	1.79	1.92		4.04
Chlorophyll 0.8-54 μm (mg·m ⁻³)	1.22	1.19	1.38		2.28
Chlorophyll > 54 μm (mg·m ⁻³)	0.62	0.60	0.54		1.76
Algal numbers (x10 ⁸ ·m ⁻³)	9	19	50		
Algal volume (mm ³ ·m ⁻³)	725	491	3868		

Table 65. Physical, chemical and biological data from Great Central Lake, Station 1, November 22, 1980.

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Depth (m)	Compensation depth (m)	<u>10.9</u>	Surface temperature ($^{\circ}$ C)		
	Extinction coefficient (k_e)	<u>0.38</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>9.7</u>	<u>6.4</u>
Secchi depth (m)	<u>7.0</u>		1	3	5
Depth (m)			1	3	5
pH			6.9		
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			4.17		
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)			73	71	75
Ammonia ($\mu g\ N\cdot L^{-1}$)			10	7	7
Nitrate ($\mu g\ N\cdot L^{-1}$)			3	2	3
Total phosphorus ($\mu g\ P\cdot L^{-1}$)			2	1	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)			<1	<1	1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)			610	610	590
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)			1.40	1.46	1.62
Total chlorophyll (mg $\cdot m^{-3}$)			2.66	1.44	3.17
Algal numbers ($\times 10^8 \cdot m^{-3}$)			71		96
Algal volume ($mm^3 \cdot m^{-3}$)			1104		1211

Table 66. Physical, chemical and biological data from Great Central Lake, Station 2, November 22, 1980.

	Compensation depth (m)	<u>11.6</u>		Surface temperature (°C)	<u>9.7</u>	
	Extinction coefficient (k_e)	<u>0.37</u>		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>8.3</u>	
	Secchi depth (m)	<u>5.5</u>				
	Depth (m)			1	3	5
						20
pH				6.8		
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)				4.34		
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	51		74		53	71
Ammonia ($\mu g\ N\cdot L^{-1}$)	5		11		5	8
Nitrate ($\mu g\ N\cdot L^{-1}$)	2		2		2	2
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	1		1		1	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1		<1		1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	600		600		590	700
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.76				1.47	0.98
Chlorophyll > 0.8 μm ($mg\ \cdot m^{-3}$)	2.47		2.47		2.36	2.68
Chlorophyll 0.8-54 μm ($mg\ \cdot m^{-3}$)	1.91		1.88		1.99	1.43
Chlorophyll > 54 μm ($mg\ \cdot m^{-3}$)	0.56		0.59		0.37	1.25
Algal numbers ($\times 10^8 \cdot m^{-3}$)	32				36	50
Algal volume ($mm^3 \cdot m^{-3}$)	749				816	2305

Table 67. Physical, chemical and biological data from Henderson Lake, March 18, 1980.

Depth (m)	Compensation depth (m)			Surface temperature (°C)			Zooplankton biomass (mg dry wt. · m ⁻³)		
				5.9			3.7		
	1	3	5	1	3	5	1	3	20
pH				6.6			6.6		
Dissolved inorganic carbon (mg C·L ⁻¹)				2.95			2.96		
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)									
Ammonia (µg N·L ⁻¹)	<4				9		<4		11
Nitrate (µg N·L ⁻¹)	30				31		31		36
Total phosphorus (µg P·L ⁻¹)		1			1		1		1
Total dissolved phosphorus (µg P·L ⁻¹)		1			<1		<1		2
Soluble reactive silicon (µg Si·L ⁻¹)									
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	640				640		650		640
Total chlorophyll (mg·m ⁻³)									
Algal numbers (x10 ⁸ ·m ⁻³)	0.91				0.91		0.91		0.93
Algal volume (mm ³ ·m ⁻³)	0.54				0.48		0.44		0.42
	27				227				
	134				338				

Table 68. Physical, chemical and biological data from Henderson Lake, April 15, 1980.

Depth (m)	Compensation depth (m) <u>11.9</u>			Surface temperature ($^{\circ}$ C) <u>7.8</u>			Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>4.0</u>
	1	3	5	20			
pH					6.5		6.4
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)					3.27		3.56
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)	132		96			44	17
Ammonia (μ g N $\cdot L^{-1}$)	132		96			44	17
Nitrate (μ g N $\cdot L^{-1}$)	116		90			50	27
Total phosphorus (μ g P $\cdot L^{-1}$)	24		18			9	1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)	21		16			8	1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)	650		630			640	620
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.30		1.06			0.93	1.09
Total chlorophyll (mg $\cdot m^{-3}$)	0.80		0.81			0.75	0.47
Algal numbers ($\times 10^8 \cdot m^{-3}$)	104					15	
Algal volume ($mm^3 \cdot m^{-3}$)	409		514				

Table 69. Physical, chemical and biological data from Henderson Lake, May 16, 1980.

Depth (m)	Compensation depth (m)	<u>9.4</u>	Surface temperature ($^{\circ}$ C)	<u>12.8</u>
	Extinction coefficient (k_e)	<u>0.47</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>21.7</u>
Secchi depth (m)	<u>4.5</u> <td></td> <td></td> <td></td>			
Depth (m)	1	3	5	20
pH		6.7	6.6	
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		2.68	2.90	
Dissolved kjeldahl nitrogen (µg N $\cdot L^{-1}$)	100	69	85	83
Ammonia (µg N $\cdot L^{-1}$)	9	11	10	12
Nitrate (µg N $\cdot L^{-1}$)	<1	<1	<1	29
Total phosphorus (µg P $\cdot L^{-1}$)	1	2	2	<1
Total dissolved phosphorus (µg P $\cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg Si $\cdot L^{-1}$)	260	290	300	520
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.08	1.04	0.97	0.81
Total chlorophyll (mg $\cdot m^{-3}$)	3.20	3.51	2.48	0.43
Algal numbers ($\times 10^8 \cdot m^{-3}$)	101		225	
Algal volume (mm $^3 \cdot m^{-3}$)	2205		6242	

Table 70. Physical, chemical and biological data from Henderson Lake, June 13, 1980.

Depth (m)	Compensation depth (m)	<u>11.2</u>	Surface temperature ($^{\circ}$ C)	<u>14.6</u>
	Extinction coefficient (k_e)	<u>0.38</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>25.1</u>
	Secchi depth (m)	<u>5.0</u>		
	1	3	5	20
pH		7.3	7.0	
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		2.25		2.46
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	66	107	87	51
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1	37
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	3	3	2	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	1	<1	1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	50	50	50	600
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.67	1.84	1.72	0.90
Total chlorophyll ($mg\ \cdot m^{-3}$)	3.98	4.04	4.36	1.32
Algal numbers ($\times 10^8 \cdot m^{-3}$)	106		105	
Algal volume ($mm^3 \cdot m^{-3}$)	9203		3973	

Table 71. Physical, chemical and biological data from Henderson Lake, July 11, 1980.

Depth (m)	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	
	9.9	0.45	6.0	16.4	8.1	
1				6.7		6.5
3				3.04		3.69
5				91		101
20						9
						34
						<1
						<1
						2
						<1
						570
						60
						0.89
						1.06
						1.99
						2.27
						187
						1681
						1387

Table 72. Physical, chemical and biological data from Henderson Lake, August 8, 1980.

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Depth (m)	Compensation depth (m) <u>2.2</u>			Surface temperature (°C) <u>19.9</u>			
	Extinction coefficient (k_e) <u>0.47</u>			Zooplankton biomass (mg dry wt. · m ⁻³) <u>7.1</u>			
Secchi depth (m)	<u>6.0</u>			1	3	5	20
pH				6.8			6.4
Dissolved inorganic carbon (mg C·L ⁻¹)				2.80			3.65
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	88			98		80	101
Ammonia (µg N·L ⁻¹)	4			<4		<4	10
Nitrate (µg N·L ⁻¹)	<1			<1		<1	37
Total phosphorus (µg P·L ⁻¹)	2			3		2	2
Total dissolved phosphorus (µg P·L ⁻¹)	<1			2		1	<1
Soluble reactive silicon (µg Si·L ⁻¹)	110			110		110	450
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	3.09			2.87		2.68	1.17
Total chlorophyll (mg·m ⁻³)	2.16			3.60		3.62	0.80
Algal numbers (x10 ⁸ ·m ⁻³)	86					24	
Algal volume (mm ³ ·m ⁻³)	360					314	

Table 73. Physical, chemical and biological data from Henderson Lake, September 12, 1980.

	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	
			6.5		17.3	9.0	
				1	1	81	
				3	3	734	
				5	5	320	
				20	20	320	
pH					6.2		
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)					4.21		
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)					79	121	39
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)					5	7	9
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)					2	2	1
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)					5	5	3
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)					3	3	1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)					130	320	650
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)					2.05	1.98	2.35
Total chlorophyll ($\text{mg}\cdot\text{m}^{-3}$)					4.93	4.96	4.98
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)					81	86	0.89
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)					734	320	

Table 74. Physical, chemical and biological data from Henderson Lake, October 10, 1980.

Depth (m)	Compensation depth (m) <u>6.8</u>			Surface temperature ($^{\circ}\text{C}$) <u>15.3</u>		
	Extinction coefficient (k_e) <u>0.65</u>	Secchi depth (m) <u>5.0</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>10.0</u>	1	3	5
pH				6.8		
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				2.62		
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	60			70		20
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	5			6		4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	1			1		1
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	1			1		2
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2			2		1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	370			380		510
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	2.36			1.89		1.68
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	7.48			8.14		6.98
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	121					64
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	1825					2946

Table 75. Physical, chemical and biological data from Henderson Lake, November 22, 1980.

Compensation depth (m)	<u>7.8</u>	Surface temperature ($^{\circ}\text{C}$)	<u>10.2</u>
Extinction coefficient (k_e)	<u>0.56</u>	Zooplankton biomass (mg dry wt. $\cdot\text{m}^{-3}$)	<u>11.3</u>
Secchi depth (m)	<u>6.0</u>		
Depth (m)		1	3
		5	20
pH		6.6	
Dissolved inorganic carbon (mg C $\cdot\text{L}^{-1}$)		2.92	
Dissolved kjeldahl nitrogen (µg N $\cdot\text{L}^{-1}$)	92	108	78
Ammonia (µg N $\cdot\text{L}^{-1}$)	12	14	11
Nitrate (µg N $\cdot\text{L}^{-1}$)	8	7	7
Total phosphorus (µg P $\cdot\text{L}^{-1}$)	2	2	2
Total dissolved phosphorus (µg P $\cdot\text{L}^{-1}$)	1	1	1
Soluble reactive silicon (µg Si $\cdot\text{L}^{-1}$)	400	380	390
Bacteria numbers ($\times 10^6 \cdot\text{mL}^{-1}$)	1.38	1.40	1.08
Total chlorophyll (mg $\cdot\text{m}^{-3}$)	3.58	2.95	4.69
Algal numbers ($\times 10^8 \text{ m}^{-3}$)	83		25
Algal volume ($\text{mm}^3 \cdot\text{m}^{-3}$)	814	418	

Table 76. Physical, chemical and biological data from Hobitton Lake, March 18, 1980.

	Compensation depth (m)	Surface temperature ($^{\circ}$ C)	<u>6.7</u>
	Extinction coefficient (k_e)	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>11.7</u>
	Secchi depth (m)		
Depth (m)		1	3
pH		6.2	6.1
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		3.42	3.97
Dissolved kjeldahl nitrogen (µg N $\cdot L^{-1}$)			
Ammonia (µg N $\cdot L^{-1}$)	<4	6	16
Nitrate (µg N $\cdot L^{-1}$)	31	31	31
Total phosphorus (µg P $\cdot L^{-1}$)	2	2	2
Total dissolved phosphorus (µg P $\cdot L^{-1}$)	1	1	1
Soluble reactive silicon (µg Si $\cdot L^{-1}$)	1360	1350	1340
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.73	0.73	0.97
Total chlorophyll (mg $\cdot m^{-3}$)	0.92	0.78	0.76
Algal numbers ($\times 10^8 \cdot m^{-3}$)	87	38	38
Algal volume ($mm^3 \cdot m^{-3}$)	176	58	58

Table 77. Physical, chemical and biological data from Hobiton Lake, April 15, 1980.

Depth (m)	Compensation depth (m)		Surface temperature ($^{\circ}$ C)		8.5	
	8.6	0.50	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	5.6	20	20
Secchi depth (m)	6.0					
pH			6.3	6.2		
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			2.80			
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	64		35	14		
Ammonia ($\mu g\ N\cdot L^{-1}$)	64		35	14		
Nitrate ($\mu g\ N\cdot L^{-1}$)	15		16	15		
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	3		3	2		
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	2		2	2		
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1260		1250	1270		
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.69		0.73	1.25		
Total chlorophyll (mg $\cdot m^{-3}$)	1.76		1.98	1.80		
Algal numbers ($\times 10^8 \cdot m^{-3}$)	42		39		0.43	
Algal volume ($mm^3 \cdot m^{-3}$)	179		129			

Table 78. Physical, chemical and biological data from Hobiton Lake, May 16, 1980.

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Depth (m)	Compensation depth (m) <u>8.3</u>			Surface temperature (°C) <u>14.1</u>		
	Extinction coefficient (k_e) <u>0.52</u>			Zooplankton biomass (mg dry wt. · m ⁻³) <u>7.5</u>		
Secchi depth (m)	<u>6.0</u>			1	3	5
pH				6.6	6.2	6.2
Dissolved inorganic carbon (mg C·L ⁻¹)				1.89		3.21
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	61			80	51	40
Ammonia (µg N·L ⁻¹)	10			10	11	9
Nitrate (µg N·L ⁻¹)	<1			3	2	31
Total phosphorus (µg P·L ⁻¹)	1			2	1	1
Total dissolved phosphorus (µg P·L ⁻¹)	<1			<1	<1	<1
Soluble reactive silicon (µg Si·L ⁻¹)	1080			1130	1120	1190
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.77			0.59	0.53	0.61
Total chlorophyll (mg·m ⁻³)	1.08			1.12	1.10	0.18
Algal numbers ($\times 10^8 \cdot m^{-3}$)	50			69		
Algal volume (mm ³ ·m ⁻³)	120			184		

Table 79. Physical, chemical and biological data from Hobiton Lake, June 13, 1980.

Depth (m)	Compensation depth (m)	8.7	Surface temperature (°C)	15.7
	Extinction coefficient (k_e)	0.49	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	8.3
Secchi depth (m)	6.5			
1				
3				
5				
20				
pH		7.2		6.7
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		1.67		2.15
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	52	63	38	26
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1	39
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	2	2	2	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	1	1	1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1080	1080	1080	1180
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.88	1.90		5.98
Total chlorophyll (mg $\cdot m^{-3}$)	2.42	1.82	1.88	0.26
Algal numbers ($\times 10^8 \cdot m^{-3}$)	42		54	
Algal volume ($mm^3 \cdot m^{-3}$)	422		369	

Table 80. Physical, chemical and biological data from Hobbiton Lake, July 11, 1980.

	Compensation depth (m)	<u>9.6</u>		Surface temperature (°C)	<u>17.5</u>	
	Extinction coefficient (k_e)	<u>0.45</u>		Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>20.5</u>	
Secchi depth (m)	<u>6.5</u>					
Depth (m)				1	3	5
					5	20
pH				6.9	6.4	
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)				1.62		2.92
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	88		79	73	102	
Ammonia ($\mu g\ N\cdot L^{-1}$)	11		7	7	8	
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1		<1	<1	37	
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1		<1	<1	<1	
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1		<1	<1	<1	
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	960		980	1000	1180	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	2.27		1.93	2.07	1.19	
Total chlorophyll ($mg\ \cdot m^{-3}$)	2.55		2.63	2.60	0.35	
Algal numbers ($\times 10^8 \cdot m^{-3}$)	36			64		
Algal volume ($mm^3 \cdot m^{-3}$)	710			1192		

Table 81. Physical, chemical and biological data from Hobiton Lake, August 8, 1980.

Depth (m)	Compensation depth (m)	7.1	Surface temperature (°C)	20.5
	Extinction coefficient (k_e)	0.62	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	4.8
Secchi depth (m)	4.5			
1				
3				
5				
20				
pH				
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)				
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	48	61	43	50
Ammonia ($\mu g\ N\cdot L^{-1}$)	22	<4	5	7
Nitrate ($\mu g\ N\cdot L^{-1}$)	<1	<1	<1	41
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	3	4	<1	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	650	660	660	1220
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	2.01	1.87	2.07	0.74
Total chlorophyll (mg $\cdot m^{-3}$)	2.24	2.38	2.80	0.44
Algal numbers ($\times 10^8 \cdot m^{-3}$)	21		38	
Algal volume ($mm^3 \cdot m^{-3}$)	2799		2986	

Table 82. Physical, chemical and biological data from Hobiton Lake, September 12, 1980

	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	
				1	3	5	20
pH					5.9		
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)					3.37		
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				75	76	5	48
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				4	4	5	<4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				<1	<1	<1	40
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				3	4	4	2
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				2	2	2	1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				680	790	680	1230
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				1.31	1.66	2.18	0.71
Total chlorophyll (mg $\cdot \text{m}^{-3}$)				2.28	2.30	2.52	0.86
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				46		70	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				810		991	

Table 83. Physical, chemical and biological data from Hobiton Lake, October 10, 1980.

Depth (m)	1	3	5	20
pH	6.9			
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)		2.00		
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	54	55	41	41
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	5	5	5	4
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	1	1	23	40
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	2	2	2	<1
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1	1	2	<1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	930	910	1020	1220
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	1.56	1.22	1.66	1.01
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	3.12	3.33	3.25	1.60
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	46		19	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	537	485		
Surface temperature ($^{\circ}\text{C}$)	14.5			
Zooplankton biomass ($\text{mg dry wt.}\cdot\text{m}^{-3}$)				6.8

Table 84. Physical, chemical and biological data from Hobbiton Lake, November 22, 1980.

Depth (m)	Compensation depth (m)	7.1	Surface temperature (°C)		9.2
	Extinction coefficient (k_e)	0.60	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	2.6	
Secchi depth (m)			1	3	5
Depth (m)					20
pH			6.7		
Dissolved inorganic carbon (mg C·L ⁻¹)				2.12	
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	51		61		82
Ammonia (µg N·L ⁻¹)	10		11		12
Nitrate (µg N·L ⁻¹)	11		10		10
Total phosphorus (µg P·L ⁻¹)	2		2		2
Total dissolved phosphorus (µg P·L ⁻¹)	1		2		1
Soluble reactive silicon (µg Si·L ⁻¹)	1080		1080		1080
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.80		1.35		1.52
Total chlorophyll (mg·m ⁻³)	1.23		1.04		0.93
Algal numbers ($\times 10^8 \cdot m^{-3}$)	5			15	
Algal volume (mm ³ ·m ⁻³)	239			251	

Table 85. Physical, chemical and biological data from Ian Lake, Station 1, May 3, 1980.

Depth (m)	Compensation depth (m) <u>3.1</u>			Surface temperature (°C) <u>6.3</u>		
	Extinction coefficient (k_e) <u>1.41</u>			Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>16.4</u>		
Secchi depth (m) <u>3.5</u>						
Depth (m)	1	3	5	20		
pH	6.2	6.2	6.2	6.2	3.29	3.29
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)					66	62
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)					9	11
Ammonia ($\mu g\ N\cdot L^{-1}$)					33	33
Nitrate ($\mu g\ N\cdot L^{-1}$)					35	35
Total phosphorus ($\mu g\ P\cdot L^{-1}$)					2	1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)					2	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)					1380	1350
Total dissolved solids ($mg\ \cdot L^{-1}$)					40	1260
Total chlorophyll (mg $\cdot m^{-3}$)	0.33	0.25	0.25	0.14		
Algal numbers ($\times 10^8\ m^{-3}$)	15	15	16			
Algal volume ($mm^3\ \cdot m^{-3}$)	24	24	22			

Table 86. Physical, chemical and biological data from Ian Lake, Station 2, May 3, 1980.

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	Compensation depth (m)	<u>3.7</u>	Surface temperature ($^{\circ}$ C)	<u>6.5</u>
	Extinction coefficient (k_e)	<u>1.15</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>2.6</u>
	Secchi depth (m)	<u>3.5</u>		
	Depth (m)		1	3
			5	20
pH		6.4	6.4	6.4
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		2.77	2.77	4.11
Dissolved kjeldahl nitrogen (µg N $\cdot L^{-1}$)	76	72	86	124
Ammonia (µg N $\cdot L^{-1}$)	6	7	16	7
Nitrate (µg N $\cdot L^{-1}$)	29	29	30	31
Total phosphorus ($\mu g P \cdot L^{-1}$)	2	1	3	2
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)	1	<1	<1	<1
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)	1440	1450	1410	1530
Total dissolved solids ($mg \cdot L^{-1}$)		36		
Total chlorophyll (mg $\cdot m^{-3}$)	0.41	0.55	0.39	0.22
Algal numbers ($\times 10^8 \cdot m^{-3}$)	19		15	
Algal volume ($mm^3 \cdot m^{-3}$)	87		79	

Table 87. Physical, chemical and biological data from Ian Lake, Station 1, June 24, 1980.

	Compensation depth (m)	<u>4.7</u>	Surface temperature ($^{\circ}$ C)	<u>15.7</u>
	Extinction coefficient (k_e)	<u>0.92</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>24.7</u>
	Secchi depth (m)	<u>5.0</u>		
	Depth (m)		1	3
pH			6.1	6.1
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		2.81		3.52
Dissolved kjeldahl nitrogen (µg N $\cdot L^{-1}$)		71	66	73
Ammonia (µg N $\cdot L^{-1}$)		5	4	10
Nitrate (µg N $\cdot L^{-1}$)		15	18	15
Total phosphorus (µg P $\cdot L^{-1}$)		2	2	2
Total dissolved phosphorus (µg P $\cdot L^{-1}$)		<1	<1	<1
Soluble reactive silicon (µg Si $\cdot L^{-1}$)		1880	1950	2040
Total dissolved solids (mg $\cdot L^{-1}$)			34	
Total chlorophyll (mg $\cdot m^{-3}$)		3.50	3.14	2.34
Algal numbers ($\times 10^8 \cdot m^{-3}$)		16		28
Algal volume (mm $^3 \cdot m^{-3}$)		160	605	

Table 88. Physical, chemical and biological data from Ian Lake, Station 2, June 24, 1980.

	Compensation depth (m)	<u>3.7</u>	Surface temperature (°C)	<u>16.4</u>
	Extinction coefficient (k_e)	<u>1.16</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>20.1</u>
	Secchi depth (m)	<u>4.0</u>		
Depth (m)		1	3	5
		20		
pH		5.8	5.6	
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		2.66		
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)		62	77	56
Ammonia ($\mu g\ N\cdot L^{-1}$)		7	8	5
Nitrate ($\mu g\ N\cdot L^{-1}$)		17	17	18
Total phosphorus ($\mu g\ P\cdot L^{-1}$)		2	2	2
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)		<1	<1	<1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)		1700	1720	1780
Total dissolved solids ($mg\ \cdot L^{-1}$)			37	
Total chlorophyll ($mg\ \cdot m^{-3}$)		3.92	3.54	2.44
Algal numbers ($\times 10^8\ m^{-3}$)		52		175
Algal volume ($mm^3\ \cdot m^{-3}$)		472		737

Table 89. Physical, chemical and biological data from Ian Lake, Station 1, September 24, 1980.

	Compensation depth (m)	<u>3.7</u>	Surface temperature ($^{\circ}$ C)	<u>14.3</u>
	Extinction coefficient (k_e)	<u>1.18</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>42.4</u>
	Secchi depth (m)	<u>4.0</u>		
	Depth (m)		1	3
pH			6.6	6.3
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)			1.75	2.29
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	120	142	156	100
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	<4	7	7
Nitrate ($\mu g\ N\cdot L^{-1}$)	22	22	22	41
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	2	1	1	1
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1680	1670	1690	1660
Total dissolved solids ($mg\ \cdot L^{-1}$)			42	
Total chlorophyll ($mg\ \cdot m^{-3}$)	3.68	2.42	2.30	0.26
Algal numbers ($\times 10^8\ \cdot m^{-3}$)	36	31		
Algal volume ($mm^3\ \cdot m^{-3}$)	294	236		

Table 90. Physical, chemical and biological data from Ian Lake, Station 2, September 24, 1980.

	Compensation depth (m)	<u>4.2</u>	Surface temperature ($^{\circ}$ C)	<u>14.4</u>
	Extinction coefficient (k_e)	<u>1.07</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>16.3</u>
	Secchi depth (m)	<u>3.0</u>		
Depth (m)			1	3
pH			6.5	6.2
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		111	1.54	1.75
Dissolved kjeldahl nitrogen (µg N $\cdot L^{-1}$)		143	88	88
Ammonia (µg N $\cdot L^{-1}$)	<4	6	<4	<4
Nitrate (µg N $\cdot L^{-1}$)	25	25	25	40
Total phosphorus (µg P $\cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg P $\cdot L^{-1}$)	<1	1	<1	1
Soluble reactive silicon (µg Si $\cdot L^{-1}$)	1560	1560	1570	1560
Total dissolved solids (mg $\cdot L^{-1}$)		48		
Total chlorophyll (mg $\cdot m^{-3}$)	2.80	2.60	1.96	0.36
Algal numbers ($\times 10^8 \cdot m^{-3}$)	49		34	
Algal volume ($m^3 \cdot m^{-3}$)	254		233	

Table 91. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, March 19, 1980.

Depth (m)	Compensation depth (m)	Surface temperature ($^{\circ}$ C)	6.7	Einstein $\cdot m^{-2} \cdot h^{-1}$	1.18 ^a
	Extinction coefficient (k_e)	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	2.2	Einstein $\cdot m^{-2} \cdot d^{-1}$	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)
Secchi depth (m)	8.5				
0	6.7	4.73	2.0	2.7	2.5
1	pH		100	130	97
3	Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)		17	16	16
5	Dissolved organic carbon ($mg\ C \cdot L^{-1}$)		<4	<4	<4
7.5	Particulate carbon ($\mu g\ C \cdot L^{-1}$)		43	45	44
10	Dissolved kjeldahl nitrogen ($\mu g\ N \cdot L^{-1}$)		1	2	<1
20	Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)		3	1	<1
30	Ammonia ($\mu g\ N \cdot L^{-1}$)		940	950	950
	Nitrate ($\mu g\ N \cdot L^{-1}$)		27		27
	Total phosphorus ($\mu g\ P \cdot L^{-1}$)				
	Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)		1.21	1.22	1.12
	Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		242	1284	608
	Total dissolved solids ($mg \cdot L^{-1}$)				285
	Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				279
	Glucose turnover time (h)		588	1701	4083
	Dark bottle glucose turnover time (h)		0.12	0.36	0.24
	Total primary production ($mg\ C \cdot m^{-3} \cdot h^{-1}$)		1.14	0.52	0.48
	Total chlorophyll (mg $\cdot m^{-3}$)		117		65
	Algal numbers ($\times 10^8 \cdot m^{-3}$) ^b		62		34
	Algal volume ($mm^3 \cdot m^{-3}$) ^b				

^aduring incubation period
^bultraphytoplankton counted by epifluorescence

Table 92. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, March 19, 1980.

Depth (m)	Compensation depth (m)	8.7	Surface temperature (°C)	7.2	Einstein·m ⁻² ·h ⁻¹	1.66	a
	Extinction coefficient (k _e)	0.50	Zooplankton biomass (mg dry wt.·m ⁻³)	2.8	Einstein·m ⁻² ·d ⁻¹		
Secchi depth (m)	6.0				Daily primary production (mg C·m ⁻² ·d ⁻¹)		
0	0						
1	22	6.6					
3	3.74						
5	2.4	3.10					
7	2.2						
10	128	2.1					
10	107						
10	110						
20							
30							
pH							
Dissolved inorganic carbon (µg C·L ⁻¹)							
Dissolved organic carbon (µg C·L ⁻¹)							
Particulate carbon (µg C·L ⁻¹)							
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)							
Particulate nitrogen (µg N·L ⁻¹)							
Ammonia (µg N·L ⁻¹)							
Nitrate (µg N·L ⁻¹)							
Total phosphorus (µg P·L ⁻¹)							
Total dissolved phosphorus (µg P·L ⁻¹)							
Soluble reactive silicon (µg Si·L ⁻¹)							
Total dissolved solids (mg·L ⁻¹)							
Bacteria numbers (x10 ⁶ ·mL ⁻¹)							
Glucose turnover time (h)							
Dark bottle glucose turnover time (h)							
Total primary production (mg C·m ⁻³ ·h ⁻¹)							
Total chlorophyll (mg·m ⁻³)							
Algal numbers (x10 ⁸ ·m ⁻³)							
Algal volume (mm ³ ·m ⁻³)							

a during incubation period

Table 93. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, April 16, 1980.

Depth (m)	Compensation depth (m)	9.8	Surface temperature (°C)	9.2	Einstein·m ⁻² ·h ⁻¹	4.77 ^a
	Extinction coefficient (k_e)	0.42	Zooplankton biomass (mg dry wt.·m ⁻³)	2.3	Einstein·m ⁻² ·d ⁻¹	Daily primary production (mg C·m ⁻² ·d ⁻¹)
Secchi depth (m)	6.0					
0						
1						
3						
5						
7.5						
10						
20						
30						

pH						
Dissolved inorganic carbon (mg C·L ⁻¹)						
Dissolved organic carbon (mg C·L ⁻¹)						
Particulate carbon (µg C·L ⁻¹)						
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)						
Particulate nitrogen (µg N·L ⁻¹)						
Ammonia (µg N·L ⁻¹)						
Nitrate (µg N·L ⁻¹)						
Total phosphorus (µg P·L ⁻¹)						
Total dissolved phosphorus (µg P·L ⁻¹)						
Soluble reactive silicon (µg Si·L ⁻¹)						
Total dissolved solids (mg·L ⁻¹)						
Bacteria numbers (x10 ⁶ ·mL ⁻¹)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production (mg C·m ⁻³ ·h ⁻¹)						
Total chlorophyll (mg·m ⁻³)						
Algal numbers (x10 ⁸ ·m ⁻³) ^b						
Algal volume (mm ³ ·m ⁻³) ^b						

^aduring incubation period
^bultraphytoplankton counted by epifluorescence

Table 94. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, April 16, 1980.

Depth (m)	0	1	3	5	7.5	10	20	30
Compensation depth (m)	7.7							
Extinction coefficient (k_e)	0.57	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	3.0					
Secchi depth (m)	6.0							
		Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)						
pH			6.8	6.8	6.7			
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)			3.09	3.09	3.33			
Dissolved organic carbon (mg C $\cdot L^{-1}$)			1.5	1.6	1.8			
Particulate carbon ($\mu g C \cdot L^{-1}$)	114		80	408				
Dissolved kjeldahl nitrogen ($\mu g N \cdot L^{-1}$)			17	18	43			
Particulate nitrogen ($\mu g N \cdot L^{-1}$)			18	16	42			
Ammonia ($\mu g N \cdot L^{-1}$)			17	18	17			
Nitrate ($\mu g N \cdot L^{-1}$)	27		27	26				
Total phosphorus ($\mu g P \cdot L^{-1}$)			3	3	3			
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)			1	2	2			
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)	850		840	850				
Total dissolved solids (mg $\cdot L^{-1}$)			20					
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)			1.14	1.46	0.97	0.83		
Glucose turnover time (h)	142		381	154	250	102	160	356
Dark bottle glucose turnover time (h)			295	238	165			430
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.83		0.74	0.76	0.60	0.04	0.00	0.00
Total chlorophyll (mg $\cdot m^{-3}$)			1.24	1.27	1.26			0.51
Algal numbers ($\times 10^8 \cdot m^{-3}$)	72					61		
Algal volume (mm $^3 \cdot m^{-3}$)			188			157		

^a during incubation period

Table 95. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, May 15, 1980.

Depth (m)	Compensation depth (m)	8.9	Surface temperature ($^{\circ}$ C)	14.6	Einstein $\cdot m^{-2} \cdot h^{-1}$	4.90	^a
	Extinction coefficient (k_e)	0.49	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	4.2	Einstein $\cdot m^{-2} \cdot d^{-1}$		
Secchi depth (m)	5.0				Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)		
0				0			
1				1			
3				3			
5				5			
7.5				7.5			
10				10			
20				20			
30				30			
pH					7.3	7.0	
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)				3.71	3.65		
Dissolved organic carbon (mg C $\cdot L^{-1}$)				1.5	1.4	2.9	1.3
Particulate carbon (μ g C $\cdot L^{-1}$)				357	319	290	123
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)				58	65	59	36
Particulate nitrogen (μ g N $\cdot L^{-1}$)				58	59	57	16
Ammonia (μ g N $\cdot L^{-1}$)				11	11	11	11
Nitrate (μ g N $\cdot L^{-1}$)				<1	<1	1	45
Total phosphorus (μ g P $\cdot L^{-1}$)				1	2	1	<1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)				<1	<1	<1	<1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)				690	680	680	810
Total dissolved solids (mg $\cdot L^{-1}$)				26			27
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				2.08	1.24	1.16	1.27
Glucose turnover time (h)				68	58	75	127
Dark bottle glucose turnover time (h)				143	79	296	384
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)				2.04	1.91	2.68	1.65
Total chlorophyll (mg $\cdot m^{-3}$)					1.76	1.90	1.96
Algal numbers ($\times 10^8 \cdot m^{-3}$) ^b					1414	1377	0.18
Algal volume ($mm^3 \cdot m^{-3}$) ^b					2685	1902	

^aduring incubation period
^bultraphytoplankton counted by epifluorescence

Table 96. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, May 15, 1980.

Depth (m)	Compensation depth (m) <u>8.3</u>			Surface temperature (°C) <u>13.7</u>			Einstein·m ⁻² ·h ⁻¹ <u>5.18</u> ^a					
	Extinction coefficient (k_e) <u>0.53</u>	Zooplankton biomass (mg dry wt. · m ⁻³) <u>3.2</u>	Einstein·m ⁻² ·d ⁻¹ <u>3.2</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹)	0	1	3	5	7.5	10	20	30
pH					7.0				6.9			
Dissolved inorganic carbon (mg C·L ⁻¹)			2.93						3.05			
Dissolved organic carbon (mg C·L ⁻¹)				1.1	1.2	1.6				1.3		
Particulate carbon (µg C·L ⁻¹)				214	199	207				125		
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)			51	86	81				64			
Particulate nitrogen (µg N·L ⁻¹)			31	33	30				13			
Ammonia (µg N·L ⁻¹)			11	11	11				12			
Nitrate (µg N·L ⁻¹)			13	13	13				30			
Total phosphorus (µg P·L ⁻¹)			<1	1	1				1			
Total dissolved phosphorus (µg P·L ⁻¹)			<1	<1	<1				<1			
Soluble reactive silicon (µg Si·L ⁻¹)			690	710	670				660			
Total dissolved solids (mg·L ⁻¹)			23						23			
Bacteria numbers (x10 ⁶ ·mL ⁻¹)			1.02	1.08		1.04		0.96	1.15	1.04	0.91	
Glucose turnover time (h)			146	117	107	150		166	123	235	334	
Dark bottle glucose turnover time (h)				199	152	124				168		
Total primary production (mg C·m ⁻³ ·h ⁻¹)			1.14	1.28	1.15	0.83	0.17	0.02	0.00	0.00		
Total chlorophyll (mg·m ⁻³)				1.45	1.27	1.30				0.21		
Algal numbers (x10 ⁸ ·m ⁻³)			64		60							
Algal volume (mm ³ ·m ⁻³)			364		323							

^a during incubation period

Table 97. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, June 12, 1980.

Depth (m)	Compensation depth (m) <u>9.3</u>			Surface temperature ($^{\circ}$ C) <u>15.8</u>			Einsteins $\cdot m^{-2} \cdot h^{-1}$ <u>5.74</u> ^a		
	Extinction coefficient (k_e) <u>0.48</u>	Zooplankton biomass <u>7.2</u> (mg dry wt. $\cdot m^{-3}$)	Secchi depth (m) <u>6.0</u>	Einsteins $\cdot m^{-2} \cdot d^{-1}$ <u>53.1</u>	Daily primary production <u>124</u> (mg C $\cdot m^{-2} \cdot d^{-1}$)				
0				7.7		7.3			
1				3.67		4.05			
3					1.0	0.9			
5							1.1		
7.5								106	
10								29	
20								24	
30								<4	
pH									38
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)									
Dissolved organic carbon (mg C $\cdot L^{-1}$)									
Particulate carbon (μ g C $\cdot L^{-1}$)				349	350	351			
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)				44	41	74			
Particulate nitrogen (μ g N $\cdot L^{-1}$)				60	74	78			
Ammonia (μ g N $\cdot L^{-1}$)				<4	<4	<4			
Nitrate (μ g N $\cdot L^{-1}$)				<1	<1	<1			
Total phosphorus (μ g P $\cdot L^{-1}$)				3	3	3			1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)				1	<1	1			1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)				660	670	680			870
Total dissolved solids (mg $\cdot L^{-1}$)				26					25
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				2.51	1.77	1.83			
Glucose turnover time (h)				40	20	65	32	27	100
Dark bottle glucose turnover time (h)					40	34	20		178
Total primary production (mg C $\cdot m^{-2} \cdot h^{-1}$)				2.82	1.59	1.79	1.10	0.60	0.28
Total chlorophyll (mg $\cdot m^{-3}$)					3.14	3.30	3.22		0.32
Algal numbers ($\times 10^8 \cdot m^{-3}$) ^b					758	50 ^c			
Algal volume ($mm^3 \cdot m^{-3}$) ^b					1752	1152			

^aduring incubation period

^bultraphytoplankton counted by epifluorescence

^cno count for ultraphytoplankton

Table 98. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, June 12, 1980.

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Depth (m)	Compensation depth (m) <u>8.3</u>			Surface temperature ($^{\circ}$ C) <u>16.2</u>			Einstein $\cdot m^{-2} \cdot h^{-1}$ <u>5.41</u> ^a		
	Extinction coefficient (k_e) <u>0.59</u>	Zooplankton biomass ($mg\ dry\ wt.\cdot m^{-3}$) <u>18.4</u>	Dissolved oxygen ($mg\ O_2\cdot L^{-1}$) <u>5.5</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$ <u>53.1</u>	Daily primary production ($mg\ C\cdot m^{-2} \cdot d^{-1}$) <u>110</u>				
0	7.4	3.26	1.1	260	261	243	3.43	7.4	7.4
1			1.3	32	81	43			
3			1.3	66	64	51			
5				4	<4	<4			
7.5				6	5	5			
10				2	2	2			
20				<1	<1	<1			
30				720	750	750			
				23				21	
				1.86	1.66	1.58	1.35	0.89	0.94
				142	37	38	61	740	3438
				56	39	44			
				3.72	2.21	1.69	0.72	0.19	0.05
				2.12	2.08	2.24			
				114				0.32	
				484				121	
				345					

^aduring incubation period

Table 99. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, July 10, 1980.

Depth (m)	Compensation depth (m)			Surface temperature ($^{\circ}\text{C}$)			Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$			0.99 ^a		
	9.6	0.45	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	13.3	17.7	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	17.8	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	232	($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	17.8	
pH					7.0		6.8					
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				4.76			4.92					
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				3.7	3.6	3.7						4.1
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)				451	483	434						285
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				75	136	184						86
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				78	79	80						44
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				11	6	8						7
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				<1	<1	<1						4.9
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				<1	<1	<1						<1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				<1	<1	<1						<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				730	630	890						1020
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)				26								27
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				1.83	2.04	2.20	2.26	2.15	2.23	0.80	0.71	
Glucose turnover time (h)				29	16	33	15	29	27	475	3244	
Dark bottle glucose turnover time (h)					65	51	150					10000
Total primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$)				5.27	3.59	1.46	0.57	0.33	0.00	0.00	0.00	0.00
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)				3.28	3.02	2.40						1.78
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$) ^b				975		599						
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$) ^b				919		790						

^a during incubation period
^b ultraphytoplankton counted by epifluorescence

Table 100. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, July 10, 1980.

Depth (m)	Compensation depth (m)	k_e	8.3	Surface temperature (°C)	17.5		Einstein·m ⁻² ·h ⁻¹	1.13 ^a
					0.54	Zooplankton biomass (mg dry wt.·m ⁻³)		
Secchi depth (m)	6.0						Daily primary production (mg C·m ⁻² ·d ⁻¹)	128
					0	1	5	7.5
						3	10	20
						5	20	30
pH					7.0		6.9	
Dissolved inorganic carbon (mg C·L ⁻¹)					3.38		3.52	
Dissolved organic carbon (mg C·L ⁻¹)					3.4	3.6	3.9	4.2
Particulate carbon (μ g C·L ⁻¹)					354	404	644	265
Dissolved kjeldahl nitrogen (μ g N·L ⁻¹)					96	111	99	128
Particulate nitrogen (μ g N·L ⁻¹)					60	66	88	44
Ammonia (μ g N·L ⁻¹)					8	6	10	16
Nitrate (μ g N·L ⁻¹)					<1	<1	<1	23
Total phosphorus (μ g P·L ⁻¹)					<1	<1	<1	<1
Total dissolved phosphorus (μ g P·L ⁻¹)					<1	<1	<1	<1
Soluble reactive silicon (μ g Si·L ⁻¹)					700	640	1130	990
Total dissolved solids (mg·L ⁻¹)					25		23	
Bacteria numbers ($\times 10^6$ ·mL ⁻¹)					0.95	1.16	1.16	1.06
Glucose turnover time (h)					45	24	33	25
Dark bottle glucose turnover time (h)						205	155	129
Total primary production (mg C·m ⁻³ ·h ⁻¹)					3.46	2.58	0.84	0.30
Total chlorophyll (mg·m ⁻³)						2.56	2.50	1.65
Algal numbers ($\times 10^8$ ·m ⁻³)					52		107	
Algal volume (mm ³ ·m ⁻³)					393		240	

^a during incubation period

Table 101. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, August 7, 1980.

Depth (m)	Compensation depth (m) 9.2			Surface temperature (°C) 20.3			Einstein·m ⁻² ·h ⁻¹ 5.87 ^a					
	Extinction coefficient (k _e) 0.48	Zooplankton biomass (mg dry wt·m ⁻³) 24.9	Einstein·m ⁻² ·d ⁻¹ 46.1	Daily primary production (mg C·m ⁻² ·d ⁻¹) 242	0	1	3	5	7.5	10	20	30
pH					6.9				6.4			
Dissolved inorganic carbon (mg C·L ⁻¹)					4.85				6.76			
Dissolved organic carbon (mg C·L ⁻¹)					2.4	4.0		4.3				3.2
Particulate carbon (μg C·L ⁻¹)					352	450		320				276
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)					67	90		88				48
Particulate nitrogen (μg N·L ⁻¹)					51	64		48				36
Ammonia (μg N·L ⁻¹)					4	<4		6				5
Nitrate (μg N·L ⁻¹)					<1	<1		<1				52
Total phosphorus (μg P·L ⁻¹)					1	1		<1				1
Total dissolved phosphorus (μg P·L ⁻¹)					<1	1		1				<1
Soluble reactive silicon (μg Si·L ⁻¹)					640	640		640				860
Total dissolved solids (mg·L ⁻¹)					29		27					
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					2.51	2.47	2.48	2.39	1.78	1.72	1.08	1.08
Glucose turnover time (h)					26	20	25	19	36	25	87	242
Dark bottle glucose turnover time (h)					16	53	39					164
Total primary production (mg C·m ⁻³ ·h ⁻¹)					3.20	3.90	3.92	2.88	1.34	1.02	0.00	0.00
Total chlorophyll (mg·m ⁻³)					1.90	1.96	1.66					0.74
Algal numbers (x10 ⁸ ·m ⁻³) ^b					734		614					
Algal volume (mm ³ ·m ⁻³) ^b					446		368					

^aduring incubation period

^bultraphytoplankton counted by epifluorescence

Table 102. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, August 7, 1980.

Depth (m)	Compensation depth (m)	10.3	Surface temperature (°C)	20.7	Einstein·m ⁻² ·h ⁻¹	6.09	^a
	Extinction coefficient (k_e)	0.42	Zooplankton biomass (mg dry wt.·m ⁻³)	6.7	Einstein·m ⁻² ·d ⁻¹	46.1	
Secchi depth (m)	5.0				Daily primary production (mg C·m ⁻² ·d ⁻¹)	119	
					0	1	3
pH					6.4	6.4	6.5
Dissolved inorganic carbon (mg C·L ⁻¹)					5.77	4.1	4.2
Dissolved organic carbon (mg C·L ⁻¹)							4.74
Particulate carbon (µg C·L ⁻¹)					457	456	445
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)					72	91	77
Particulate nitrogen (µg N·L ⁻¹)					55	61	62
Ammonia (µg N·L ⁻¹)					9	<4	<4
Nitrate (µg N·L ⁻¹)					<1	<1	<1
Total phosphorus (µg P·L ⁻¹)					2	2	<1
Total dissolved phosphorus (µg P·L ⁻¹)					<1	1	<1
Soluble reactive silicon (µg Si·L ⁻¹)					690	720	710
Total dissolved solids (mg·L ⁻¹)					25	24	
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					2.70	2.41	2.30
Glucose turnover time (h)					39	13	9
Dark bottle glucose turnover time (h)					17	16	26
Total primary production (mg C·m ⁻³ ·h ⁻¹)					2.82	2.95	2.36
Total chlorophyll (mg·m ⁻³)					2.24	2.44	2.08
Algal numbers (x10 ⁸ ·m ⁻³)					78	80	
Algal volume (mm ³ ·m ⁻³)					925	933	

^a during incubation period

Table 103. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, September 11, 1980

Depth (m)	Compensation depth (m)			Surface temperature ($^{\circ}$ C)			Einstein $\cdot m^{-2} \cdot h^{-1}$			3.49^a		
	Extinction coefficient (k_e)			Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)			Einstein $\cdot m^{-2} \cdot d^{-1}$			Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)		
Secchi depth (m)	5.0			12.8			29.3			289		
0	1	3	5	7.5	10	20	30					
pH				7.5	7.5	6.7						
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)			3.83									
Dissolved organic carbon (mg C $\cdot L^{-1}$)				2.6	2.7	2.6						
Particulate carbon (μ g C $\cdot L^{-1}$)				477	427	399						
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)				67	70	65						
Particulate nitrogen (μ g N $\cdot L^{-1}$)				85	74	63						
Ammonia (μ g N $\cdot L^{-1}$)				<4	<4	<4						
Nitrate (μ g N $\cdot L^{-1}$)				<1	<1	2						
Total phosphorus (μ g P $\cdot L^{-1}$)				8	7	5						
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)				5	5	5						
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)				690	1100	1260						
Total dissolved solids (mg $\cdot L^{-1}$)				30								
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				1.62	1.63	2.42	1.77	1.78	1.72	1.10	0.98	
Glucose turnover time (h)				32	18	28	14	30	23	139	2053	
Dark bottle glucose turnover time (h)					71	46	59					
Total primary production (mg C $\cdot m^{-2} \cdot h^{-1}$)					8.70	8.72	4.97	2.38	0.59	0.06	0.00	0.00
Total chlorophyll (mg $\cdot m^{-3}$)							6.30	5.64	4.77			
Algal numbers ($\times 10^8 \cdot m^{-3}$) ^b							5077			3201		
Algal volume ($mm^3 \cdot m^{-3}$) ^b							1327			874		

^aduring incubation period

^bultraphytoplankton counted by epifluorescence

Table 104. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, September 11, 1980.

Depth (m)	Compensation depth (m)			Surface temperature ($^{\circ}$ C)			$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$			$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$		
	k_e	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	2.4	Euston biomass (mg C $\cdot \text{m}^{-3}$)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Secchi depth (m) 5.5				Daily primary production (mg C $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	169							
	0	1	3	5	7.5	10	20	30				
pH				6.6		6.3						
Dissolved inorganic carbon (mg C $\cdot \text{L}^{-1}$)			4.05			5.29						
Dissolved organic carbon (mg C $\cdot \text{L}^{-1}$)			2.4	2.6	2.4							2.8
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)			225	232	242							131
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			56	53	49							43
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			41	43	46							16
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)			<4	<4	<4							<4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)			5	1	<1							38
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			3	5	4							3
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			2	3	2							3
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)			1270	710	1110							1010
Total dissolved solids (mg $\cdot \text{L}^{-1}$)			27									25
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)			1.68	1.81	1.62	1.89	1.86	1.52	1.07	1.04		
Glucose turnover time (h)			172	131	33	16	19	37	104	1076		
Dark bottle glucose turnover time (h)			35	26	14							216
Total primary production (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)			3.21	3.66	2.97	1.78	1.04	0.35	0.00	0.00		
Total chlorophyll (mg $\cdot \text{m}^{-3}$)			2.36	2.60	2.68							0.45
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)			159		162							
Algal volume (mm $^3 \cdot \text{m}^{-3}$)			323		337							

^a during incubation period

Table 105. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, October 9, 1980.

Depth (m)	Compensation depth (m)	5.3	Surface temperature ($^{\circ}\text{C}$)	<u>14.6</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$	<u>3.68</u> ^a
	Extinction coefficient (k_e)	<u>0.80</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	<u>5.0</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	<u>25.6</u>
Secchi depth (m)	<u>4.0</u>				Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	<u>293</u>
			0	1	3	5
	pH			7.0	6.9	
	Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			4.41	4.36	
	Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			3.6	4.0	3.6
	Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)			717	718	687
	Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			64	63	44
	Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			100	104	88
	Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)			4	4	5
	Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)			<1	<1	<1
	Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			4	4	4
	Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			2	3	2
	Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)			840	800	950
	Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)			29		29
	Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)			1.26	1.50	1.10
	Glucose turnover time (h)			268	184	104
	Dark bottle glucose turnover time (h)			505	261	94
	Total primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$)			8.46	11.02	7.80
	Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)			8.46	11.02	7.80
	Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$) ^b			6.30	6.64	2.03
	Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$) ^b			6151	6917	
				1353	1564	

^a during incubation period

^b ultraphytoplankton counted by epifluorescence

Table 106. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, October 9, 1980.

Depth (m)	Compensation depth (m) <u>6.4</u>			Surface temperature ($^{\circ}$ C) <u>14.7</u>			Einstein $\cdot m^{-2} \cdot h^{-1}$ <u>3.89</u> a		
	Extinction coefficient (k_e) <u>0.64</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>11.9</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$ <u>25.6</u>	Secchi depth (m) <u>4.0</u>	Daily primary production (mg $\cdot m^{-2} \cdot d^{-1}$) <u>144</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$ <u>25.6</u>			
0	6.9	3.51	3.5	3.5	3.7	3.5	6.9	6.9	6.9
1							3.66	3.66	3.66
3							3.2	3.2	3.2
5									
7.5									
10									
20									
30									
pH									
Dissolved inorganic carbon ($mg \cdot L^{-1}$)									
Dissolved organic carbon ($mg \cdot L^{-1}$)									
Particulate carbon ($\mu g \cdot L^{-1}$)									
Dissolved kjeldahl nitrogen ($\mu g \cdot N \cdot L^{-1}$)									
Particulate nitrogen ($\mu g \cdot N \cdot L^{-1}$)									
Ammonia ($\mu g \cdot N \cdot L^{-1}$)									
Nitrate ($\mu g \cdot N \cdot L^{-1}$)									
Total phosphorus ($\mu g \cdot P \cdot L^{-1}$)									
Total dissolved phosphorus ($\mu g \cdot P \cdot L^{-1}$)									
Soluble reactive silicon ($\mu g \cdot Si \cdot L^{-1}$)									
Total dissolved solids ($mg \cdot L^{-1}$)									
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)									
Glucose turnover time (h)									
Dark bottle glucose turnover time (h)									
Total primary production ($mg \cdot m^{-3} \cdot h^{-1}$)	2.87	4.18	3.74	1.66	0.42	0.00	0.00	0.00	0.00
Total chlorophyll ($mg \cdot m^{-3}$)	3.17	2.82	1.49				0.22		
Algal numbers ($\times 10^8 \cdot m^{-3}$)	129		152						
Algal volume ($mm^3 \cdot m^{-3}$)	48		197						

a during incubation period

Table 107. Physical, chemical and biological data from Kennedy Lake, Clayoquot Arm, Station 2, November 21, 1980

Depth (m)	Compensation depth (m) <u>8.4</u>			Surface temperature ($^{\circ}$ C) <u>9.6</u>			Einstein $\cdot m^{-2} \cdot h^{-1}$ <u>0.69</u> ^a		
	Extinction coefficient (k_e) <u>0.53</u>	Zooplankton biomass ($mg \text{ dry wt.} \cdot m^{-3}$) <u>8.0</u>	Dissolved organic carbon ($mg \text{ C} \cdot L^{-1}$) <u>0.53</u>	Particulate carbon ($\mu g \text{ C} \cdot L^{-1}$) <u>0.53</u>	Dissolved kjeldahl nitrogen ($\mu g \text{ N} \cdot L^{-1}$) <u>8.0</u>	Particulate nitrogen ($\mu g \text{ N} \cdot L^{-1}$) <u>7.7</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$ <u>8.18</u>	Daily primary production ($mg \text{ C} \cdot m^{-2} \cdot d^{-1}$) <u>77</u>	
0									
1									
3									
5									
7.5									
10									
20									
30									

pH

Dissolved inorganic carbon ($mg \text{ C} \cdot L^{-1}$)

Dissolved organic carbon ($mg \text{ C} \cdot L^{-1}$)

Particulate carbon ($\mu g \text{ C} \cdot L^{-1}$)

Dissolved kjeldahl nitrogen ($\mu g \text{ N} \cdot L^{-1}$)

Particulate nitrogen ($\mu g \text{ N} \cdot L^{-1}$)

Ammonia ($\mu g \text{ N} \cdot L^{-1}$)

Nitrate ($\mu g \text{ N} \cdot L^{-1}$)

Total phosphorus ($\mu g \text{ P} \cdot L^{-1}$)

Total dissolved phosphorus ($\mu g \text{ P} \cdot L^{-1}$)

Soluble reactive silicon ($\mu g \text{ Si} \cdot L^{-1}$)

Total dissolved solids ($mg \cdot L^{-1}$)

Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)

Glucose turnover time (h)

Dark bottle glucose turnover time (h)

Total primary production ($mg \text{ C} \cdot m^{-3} \cdot h^{-1}$)

Total chlorophyll ($mg \cdot m^{-3}$)

Algal numbers ($\times 10^8 \cdot m^{-3}$)^b

Algal volume ($mm^3 \cdot m^{-3}$)^b

^aduring incubation period

^bultraphytoplankton counted by epifluorescence

Table 108. Physical, chemical and biological data from Kennedy Lake, Main Arm, Station 3, November 21, 1980.

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Depth (m)	Compensation depth (m)	6.5	Surface temperature (°C)	9.7	Einstiens·m ⁻² ·h ⁻¹	0.85	a
	Extinction coefficient (k_e)	0.65	Zooplankton biomass (mg dry wt.·m ⁻³)	8.4	Einstiens·m ⁻² ·d ⁻¹	8.18	
Secchi depth (m)	5.0				Daily primary production (mg C·m ⁻² ·d ⁻¹)	38	
	0	1	3	5	7.5	10	20
pH				6.9	6.9	6.9	
Dissolved inorganic carbon (mg C·L ⁻¹)			3.25		3.25		
Dissolved organic carbon (mg C·L ⁻¹)			3.6	3.5	3.4		3.5
Particulate carbon (µg C·L ⁻¹)		228	230	231			
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)		59	70	74			81
Particulate nitrogen (µg N·L ⁻¹)		23	25	63			69
Ammonia (µg N·L ⁻¹)		10	11	11			12
Nitrate (µg N·L ⁻¹)		26	24	24			24
Total phosphorus (µg P·L ⁻¹)			2	2	2		2
Total dissolved phosphorus (µg P·L ⁻¹)			2	1	1		1
Soluble reactive silicon (µg Si·L ⁻¹)		720	740	740			730
Total dissolved solids (mg·L ⁻¹)		22			21		
Bacteria numbers (x10 ⁶ ·mL ⁻¹)		1.46	1.47	1.43	1.44	1.35	0.88
Glucose turnover time (h)		438	93	142	70	110	119
Dark bottle glucose turnover time (h)			321	261	104		145
Total primary production (mg C·m ⁻³ ·h ⁻¹)		0.95	0.79	0.70	0.30	0.10	0.00
Total chlorophyll (mg·m ⁻³)		0.58	0.57	0.56			0.56
Algal numbers (x10 ⁸ ·m ⁻³)		93			66		
Algal volume (mm ³ ·m ⁻³)		52			53		

a during incubation period

Table 109. Physical, chemical and biological data from Kitlope Lake, Station 1, April 30, 1980.

Depth (m)	Compensation depth (m) <u>8.2</u>			Surface temperature (°C) <u>3.3</u>			Zooplankton biomass (mg dry wt.·m ⁻³) <u>2.2</u>	
	0	1	2	3	5	7.5	10	20
pH					6.2	6.1		
Dissolved inorganic carbon (mg C·L ⁻¹)					1.64	2.04		
Dissolved organic carbon (mg C·L ⁻¹)	3.0				1.9	1.5		1.9
Particulate carbon (µg C·L ⁻¹)	248				189	191		223
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	27				66	49		28
Particulate nitrogen (µg N·L ⁻¹)	22				22	24		24
Ammonia (µg N·L ⁻¹)	5				6	7		5
Nitrate (µg N·L ⁻¹)	66				66	66		67
Total phosphorus (µg P·L ⁻¹)	2				1	2		1
Total dissolved phosphorus (µg P·L ⁻¹)	<1				1	<1		<1
Soluble reactive silicon (µg Si·L ⁻¹)	930				890	970		960
Total dissolved solids (mg·L ⁻¹)					24			
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.43	0.55	0.44	0.55	0.46	0.53	0.44	0.52
Glucose turnover time (h)	309	199	178	346	174	191	182	389
Dark bottle glucose turnover time (h)					464	263		400
Total primary production (mg C·m ⁻³ ·h ⁻¹)	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total chlorophyll (mg·m ⁻³)	<0.12				0.16	0.14		<0.12
Algal numbers (x10 ⁸ ·m ⁻³)	128				211			
Algal volume (mm ³ ·m ⁻³)	62				74			

Table 110. Physical, chemical and biological data from Kitlope Lake, Station 1, May 30, 1980.

^a during incubation period

Table III. Total chlorophyll data ($\text{mg} \cdot \text{m}^{-3}$) from Kitlope Lake, May 30, 1980

Depth (m)	1	3	5	20
Station A	<0.06	<0.06	0.09	0.10
Station B	<0.06	<0.06	0.07	0.10
Station C	0.07	0.23	0.30	0.09
Station D	0.23	0.29	0.25	0.10

Table 112. Physical, chemical and biological data from Kitlope Lake, Station 1, June 28, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20	
	0	1	2	3	5	7.5	10	20	
pH					6.3	6.2			
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)					1.09	1.09			
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)					0.5	0.9	0.4		<0.1
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	174				182	235			209
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	36				35	22			25
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	30				40	28			41
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	<4				<4	<4			15
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	9				10	10			27
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1				2	1			2
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1				<1	<1			<1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	510				480	490			640
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)						21			
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.41	0.41	0.57	0.47	0.55	0.41	0.51	0.58	
Glucose turnover time (h)	241	68	47	36	61	83	60	54	
Dark bottle glucose turnover time (h)	44		47		62				73
Primary production > 0.2 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.15	0.43	0.80	0.80	1.07	1.04	0.60	0.00	
Primary production 0.2-8.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.36				0.52	0.73			
Primary production > 8.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.07				0.28	0.34			
Total chlorophyll 1 ($\text{mg}\cdot\text{m}^{-3}$)	1.34				1.48	2.62			0.22
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	152						150		
Algal volume ($\text{mm}^3\cdot\text{m}^{-3}$)	92						153		

^aduring incubation period

Table 113. Total chlorophyll data ($\text{mg} \cdot \text{m}^{-3}$) from Kitlope Lake, June 28, 1980

Depth (m)	1	3	5	20
Station A	0.31	1.84	4.10	0.20
Station B	0.35	0.30	4.60	0.25
Station C	0.46	1.34	3.20	0.18
Station D	0.62	1.52	2.80	0.33

Table 114. Physical, chemical and biological data from Kitlope Lake, Station 1, July 27, 1980.

Depth (m)	Compensation depth (m)	9.5	Surface temperature (°C)	13.0	Einstein·m ⁻² ·h ⁻¹	2.34 ^a
	Extinction coefficient (k _e)	0.49	Zooplankton biomass (mg dry wt.·m ⁻³)	2.0	Einstein·m ⁻² ·d ⁻¹	29.86
	Secchi depth (m)	3.0	Daily primary production (mg C·m ⁻² ·d ⁻¹)	41		
	Depth (m)	0	1	2	3	5
pH				6.3	6.2	
Dissolved inorganic carbon (mg C·L ⁻¹)			0.72	2.3	1.9	0.92
Dissolved organic carbon (mg C·L ⁻¹)			2.2	249	224	269
Particulate carbon (µg C·L ⁻¹)			287	60	86	113
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)			60	31	40	31
Particulate nitrogen (µg N·L ⁻¹)			31	35	14	16
Ammonia (µg N·L ⁻¹)			14	15	14	16
Nitrate (µg N·L ⁻¹)			2	<1	1	12
Total phosphorus (µg P·L ⁻¹)			3	<1	1	<1
Total dissolved phosphorus (µg P·L ⁻¹)			<1	<1	1	<1
Soluble reactive silicon (µg Si·L ⁻¹)			310	330	340	420
Bacteria numbers (x10 ⁶ ·mL ⁻¹)			0.68	0.79	0.49	0.45
Glucose turnover time (h)			81	46	133	57
Dark bottle glucose turnover time (h)				51	42	79
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)			0.52	0.31	0.44	0.53
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)				0.30	0.49	0.33
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)			0.01	0.04	0.06	
Total chlorophyll (mg·m ⁻³)			0.40	1.48	1.84	0.32
Algal numbers (x10 ⁸ ·m ⁻³)			58	6		
Algal volume (mm ³ ·m ⁻³)			75	46		

^a during incubation period

Table 115. Physical, chemical and biological data from Kitlope Lake, Station 1, July 28, 1980.

Compensation depth (m)	7.5	Surface temperature (°C)	11.4	Einstiens·m ⁻² ·h ⁻¹	2.11 ^a
Extinction coefficient (k_e)	0.50	Zooplankton biomass (mg dry wt·m ⁻³)	1.3	Einstiens·m ⁻² ·d ⁻¹	38.90
Secchi depth (m)	2.5	Daily primary production (mg C·m ⁻² ·d ⁻¹)	68		
Depth (m)	0	1	2	3	5
pH					
Dissolved inorganic carbon (mg C·L ⁻¹)					
Dissolved organic carbon (mg C·L ⁻¹)					
Particulate carbon (µg C·L ⁻¹)	328	267	258		202
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	198	211	144		70
Particulate nitrogen (µg N·L ⁻¹)	50	42	37		29
Ammonia (µg N·L ⁻¹)	15	14	14		15
Nitrate (µg N·L ⁻¹)	3	4	4		13
Total phosphorus (µg P·L ⁻¹)					<1
Total dissolved phosphorus (µg P·L ⁻¹)					<1
Soluble reactive silicon (µg Si·L ⁻¹)	370	350	360		400
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.55	0.51	0.49		0.59
Glucose turnover time (h)	681	385	371	109	244
Dark bottle glucose turnover time (h)		122	118	127	
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.38	0.43	0.47	0.50	0.29
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.22			0.33	0.17
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.21			0.17	0.12
Total chlorophyll (mg·m ⁻³)	0.97			1.29	1.59
Algal numbers (x10 ⁸ ·m ⁻³)	79			2 ^b	
Algal volume (mm ³ ·m ⁻³)	50			16 ^b	

^a during incubation period

^b no count for ultraphytoplankton

Table 116. Nutrient data following fertilization of Kitlope Lake, July 28, 1980 at 1540 h.

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Depth (m)	1	3	5	20
<u>Fertilization + 10 minutes</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	413	696	532	657
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	15	14	14	15
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	<1	2	3	11
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	<1	<1	
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	<1	<1	
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	350	350	350	400
<u>Fertilization + 2 hours</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	368	113	481	356
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	14	14	13	15
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	5	<1	3	14
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	1	1	1
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	<1	1	<1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	350	350	350	390

Table 117. Nutrient data following fertilization of Kitlope Lake, July 28, 1980 at 1540 h.

Depth (m)	1	3	5	20
<u>Fertilization + 4 hours</u>				
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	184	203	404	331
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	15	52	14	15
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	5	68	6	13
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1	16	11	1
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	<1	<1	
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	360	390	390	390

Table 118. Physical and biological data from Kitlope Lake, July 28, 1980.

Station	Surface temperature (°C)	Total chlorophyll (mg·m ⁻³) (1 meter)	Zooplankton biomass (mg dry wt.·m ⁻³)
1	11.1		
2	11.1		
3	11.7		
4	11.2		
5	11.5		
6W	12.4	0.50	1.7
6C	11.3	0.68	1.8
6E	11.0	0.71	2.2
7W	11.9	0.33	2.8
7C	12.5	0.24	3.9
7E	12.0	0.57	3.9
8W	10.2	0.40	2.2
8C	9.5	5.1	
8E	9.2	1.06	4.2
9C	9.7	0.88	
10C	11.5	0.22	4.1

Table 119. Physical, chemical and biological data from Kitlope Lake, Station 1, July 29, 1980.

Depth (m)	Compensation depth (m)	10.0	Surface temperature ($^{\circ}$ C)	11.3	Einstein $\cdot m^{-2} \cdot h^{-1}$	2.03	a
	Extinction coefficient (k_e)	0.45	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	3.7	Einstein $\cdot m^{-2} \cdot d^{-1}$	19.98	
Secchi depth (m)	3.0	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	34				
Depth (m)	0	1	2	3	5	7.5	10
pH							
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)							
Dissolved organic carbon (mg C $\cdot L^{-1}$)							
Particulate carbon (μ g C $\cdot L^{-1}$)							
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)							
Particulate nitrogen (μ g N $\cdot L^{-1}$)							
Ammonia (μ g N $\cdot L^{-1}$)							
Nitrate (μ g N $\cdot L^{-1}$)							
Total phosphorus (μ g P $\cdot L^{-1}$)							
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)							
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)							
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)							
Glucose turnover time (h)	275	37	45	43	111	82	165
Dark bottle glucose turnover time (h)	67			56	132		174
Primary production > 0.2 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.14	0.15	0.20	0.38	0.47	0.20	0.21
Primary production 0.2-8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)				0.30			0.00
Primary production > 8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)				0.08			
Total chlorophyll (mg $\cdot m^{-3}$)				0.22	0.66	2.01	0.24
Algal numbers ($\times 10^8 \cdot m^{-3}$)	99				6 ^b		
Algal volume (mm $^3 \cdot m^{-3}$)	119				64 ^b		

a during incubation period

b no count for ultraphytoplankton

Table 120. Physical, chemical and biological data from Kitlope Lake, Station 2, July 29, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH		6.2				6.3		
Dissolved inorganic carbon (mg C·L ⁻¹)		0.92				0.85		
Dissolved organic carbon (mg C·L ⁻¹)		2.5			1.4	5.4		2.0
Particulate carbon (µg C·L ⁻¹)	354		322	279				296
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	331		176	100				38
Particulate nitrogen (µg N·L ⁻¹)	45		46	37				33
Ammonia (µg N·L ⁻¹)	23		13	14				14
Nitrate (µg N·L ⁻¹)	33		13	<1				12
Total phosphorus (µg P·L ⁻¹)	4		<1	<1				<1
Total dissolved phosphorus (µg P·L ⁻¹)	4		3	2				<1
Soluble reactive silicon (µg Si·L ⁻¹)	390		370	370				390
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.49		0.55					
Glucose turnover time (h)	91	39	38	45	34	44	53	40
Dark bottle glucose turnover time (h)		44		45	74			43
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.23	0.23	0.32	0.25	0.36	0.24	0.05	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.19			0.20	0.23			
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.04			0.05	0.13			
Total chlorophyll (mg·m ⁻³)	0.18		0.40	1.28				0.42
Algal numbers (x10 ⁸ ·m ⁻³)	19		12 ^b					
Algal volume (mm ³ ·m ⁻³)	54		86 ^b					

^a during incubation period^b no count for ultraphytoplankton

Table 121. Chlorophyll data from Kitlope Lake, Station 1, July 29, 1980.

Depth	Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)
0	0.18
1	0.28
2	0.32
3	0.60
4	1.04
5	1.22
6	1.38
7	1.18
8	1.02
9	1.12
10	0.90
11	0.92
12	0.76
13	0.28
14	0.24
15	0.24
16	0.26
17	0.18
18	0.12
19	0.28

Table 122. Zooplankton biomass data from five consecutive hauls from Kitlope Lake, July 29, 1980.

Haul No.	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)
1	4.2
2	4.7
3	1.7
4	4.5
5	3.6

Table 123. Physical, chemical and biological data from Kitlope Lake, Station 1, July 30, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20	
pH					6.4		6.2		
Dissolved inorganic carbon (mg C·L ⁻¹)					0.83		1.04		
Dissolved organic carbon (mg C·L ⁻¹)	3.1					1.9	2.0		
Particulate carbon (µg C·L ⁻¹)	210				190	274			276
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	92				71	69			235
Particulate nitrogen (µg N·L ⁻¹)	27				29	40			33
Ammonia (µg N·L ⁻¹)	15				14	14			14
Nitrate (µg N·L ⁻¹)	21				9	<1			15
Total phosphorus (µg P·L ⁻¹)	3				<1	2			<1
Total dissolved phosphorus (µg P·L ⁻¹)	1				1	1			<1
Soluble reactive silicon (µg Si·L ⁻¹)	370				340	380			430
Total dissolved solids (mg·L ⁻¹)					15				
Bacteria numbers (x10 ⁶ ·mL ⁻¹)		0.52			0.58	0.54			0.62
Glucose turnover time (h)	1694	114	39	37	57	68	96	387	
Dark bottle glucose turnover time (h)		67			36	130			130
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.38	0.42	0.52	0.51	0.93	0.41	0.12	0.00	
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.34				0.43	0.53			
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.08				0.08	0.40			
Total chlorophyll (mg·m ⁻³)	0.41				1.02	3.37			
Algal numbers (x10 ⁸ ·m ⁻³)	119				170				
Algal volume (mm ³ ·m ⁻³)	97				397				

^aduring incubation period

Table 124. Physical, chemical and biological data from Kitlope Lake, Station 2, July 30, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH					6.3		6.2	
Dissolved inorganic carbon (mg C·L ⁻¹)			0.86			1.16		
Dissolved organic carbon (mg C·L ⁻¹)			1.5		1.4	2.0		1.3
Particulate carbon (µg C·L ⁻¹)	195			208	307			185
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	84			224	306			380
Particulate nitrogen (µg N·L ⁻¹)	29			34	36			24
Ammonia (µg N·L ⁻¹)	23			15	14			14
Nitrate (µg N·L ⁻¹)	25			5	<1			11
Total phosphorus (µg P·L ⁻¹)	4			1	<1			1
Total dissolved phosphorus (µg P·L ⁻¹)	<1			<1	<1			<1
Soluble reactive silicon (µg Si·L ⁻¹)	360			360	370			390
Total dissolved solids (mg·L ⁻¹)				19				
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.51			0.42	0.49			0.59
Glucose turnover time (h)	70	55	40	45	54	37	45	65
Dark bottle glucose turnover time (h)		73		48	124			69
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.46	0.45	0.81	0.85	1.01	0.44	0.05	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.35			0.71	0.53			
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.10			0.14	0.48			
Total chlorophyll (mg·m ⁻³)	0.57			1.43	3.85			0.33
Algal numbers (x10 ⁸ ·m ⁻³)	168			18 ^b				
Algal volume (mm ³ ·m ⁻³)	101			122 ^b				

^aduring incubation period^bno count for ultraphytoplankton

Table 125. Temperature and chlorophyll data from Kitlope Lake, July 30, 1980.

Station	Depth (m)	Temperature (°C)	Total chlorophyll (mg·m ⁻³)
K1	0	15.3	
	1	10.2	0.67
	3	9.2	1.35
	5	8.8	3.66
	0	14.3	
K2	1	10.4	0.51
	3	9.3	0.82
	5	9.0	3.61
	0	13.0	
	1	11.9	0.43
K3	3	9.8	0.73
	5	9.1	2.71
	0	12.9	
	1	11.4	0.57
	3	9.5	1.52
K4	5	9.1	4.19
	0	12.8	
	1	11.4	0.47
	3	9.6	1.00
	5	9.1	3.61
K5	0	12.4	
	1	11.3	0.43
	3	9.9	1.25
	5	9.2	2.71

Table 126. Physical, chemical and biological data from Kitlope Lake, Station 1, July 31, 1980.

Compensation depth (m)	10.1	Surface temperature (°C)	11.7	Einsteins·m ⁻² ·h ⁻¹	1.47 ^a
Extinction coefficient (k_e)	0.44	Zooplankton biomass (mg dry wt.·m ⁻³)	4.8	Einsteins·m ⁻² ·d ⁻¹	24.02
Secchi depth (m)	3.0	Daily primary production (mg C·m ⁻² ·d ⁻¹)	77		
Depth (m)	0	1	2	3	5
pH					
Dissolved inorganic carbon (mg C·L ⁻¹)					
Dissolved organic carbon (mg C·L ⁻¹)					
Particulate carbon (µg C·L ⁻¹)					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)					
Particulate nitrogen (µg N·L ⁻¹)					
Ammonia (µg N·L ⁻¹)					
Nitrate (µg N·L ⁻¹)					
Total phosphorus (µg P·L ⁻¹)					
Total dissolved phosphorus (µg P·L ⁻¹)					
Soluble reactive silicon (µg Si·L ⁻¹)					
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					
Glucose turnover time (h)					
Dark bottle glucose turnover time (h)					
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.45	0.44	0.47	0.40	0.77
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.37			0.34	0.39
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.07			0.06	0.38
Total chlorophyll (mg·m ⁻³)	0.33			0.76	2.65
Algal numbers (x10 ⁸ ·m ⁻³)	127			14 ^b	
Algal volume (mm ³ ·m ⁻³)	82			131 ^b	

^a during incubation period^b no count for ultraphytoplankton

Table 127. Physical, chemical and biological data from Kitlope Lake, Station 1, August 19, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH					6.5	6.3		
Dissolved inorganic carbon (mg C·L ⁻¹)		0.61			3.1	2.9	0.67	>7.5
Dissolved organic carbon (mg C·L ⁻¹)	3.0				179	231		249
Particulate carbon (µg C·L ⁻¹)	159				48	37		23
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	40				31	36		33
Particulate nitrogen (µg N·L ⁻¹)	<4			<4	6	6		6
Ammonia (µg N·L ⁻¹)	8				9	6		14
Nitrate (µg N·L ⁻¹)					5	8	10	9
Total phosphorus (µg P·L ⁻¹)					1	1	1	1
Total dissolved phosphorus (µg P·L ⁻¹)	620				640	540		620
Soluble reactive silicon (µg Si·L ⁻¹)							8	
Total dissolved solids (mg·L ⁻¹)								
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.79	0.95	0.68	0.73	0.71	0.76	0.70	0.64
Glucose turnover time (h)	212	164	123	74	58	101	163	238
Dark bottle glucose turnover time (h)	427			88	278		103	
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.32	0.50	0.48	0.47	0.33	0.17	0.04	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.46				0.35	0.24		
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.04				0.12	0.09		
Total chlorophyll (mg·m ⁻³)	1.16				1.16	0.70	1.30	0.50
Algal numbers (x10 ⁸ ·m ⁻³)	77						74	
Algal volume (mm ³ ·m ⁻³)	58						63	

^aduring incubation period

Table 128. Physical, chemical and biological data from Kitlope Lake, Station 1, September 23, 1980.

Compensation depth (m)	<u>3.7</u>	Surface temperature ($^{\circ}$ C)	<u>10.3</u>	Einstein·m $^{-2} \cdot h^{-1}$	<u>1.68</u> a
Extinction coefficient (k_e)	<u>1.28</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>28.9</u>	Einstein·m $^{-2} \cdot d^{-1}$	<u>12.54</u>
Secchi depth (m)	<u>1.0</u>	Daily primary production (mg C·m $^{-2} \cdot d^{-1}$)	<u>27</u>		
Depth (m)	0	1	2	3	5
pH		6.0	5.8		
Dissolved inorganic carbon (mg C·L $^{-1}$)		1.31	1.65		
Dissolved organic carbon (mg C·L $^{-1}$)		3.8	3.2	2.6	2.8
Particulate carbon (μ g C·L $^{-1}$)		422	377		364
Disolved kjeldahl nitrogen (μ g N·L $^{-1}$)		144	175	110	155
Particulate nitrogen (μ g N·L $^{-1}$)		42	48		41
Ammonia (μ g N·L $^{-1}$)		<4	7	<4	<4
Nitrate (μ g N·L $^{-1}$)		28	30	19	28
Total phosphorus (μ g P·L $^{-1}$)		9	8	8	11
Total dissolved phosphorus (μ g P·L $^{-1}$)		2	3	4	2
Soluble reactive silicon (μ g Si·L $^{-1}$)		700	670	650	650
Total dissolved solids (mg·L $^{-1}$)			12		
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		1.23	1.37	2.41	0.61
Glucose turnover time (h)		58	48	50	55
Dark bottle glucose turnover time (h)			40	58	82
Primary production > 0.2 μ m (mg C·m $^{-3} \cdot h^{-1}$)		1.61	1.48	0.81	0.33
Primary production 0.2-8.0 μ m (mg C·m $^{-3} \cdot h^{-1}$)			1.06	0.25	0.00
Primary production > 8.0 μ m (mg C·m $^{-3} \cdot h^{-1}$)		0.42	0.08	0.02	0.00
Total chlorophyll (mg·m $^{-3}$)		2.04	1.56	0.88	0.32
Algal numbers ($\times 10^8 \cdot m^{-3}$)		36 ^b	22 ^b		
Algal volume (mm $^3 \cdot m^{-3}$)		117 ^b	137 ^b		

a during incubation period

b ultraphytoplankton counted by epifluorescence

Table 129. Physical, chemical and biological data from Kitlope Lake, Station 1, October 25, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH	5.8	6.0						
Dissolved inorganic carbon (mg C·L ⁻¹)	1.71							
Dissolved organic carbon (mg C·L ⁻¹)	2.2	2.0	1.6					
Particulate carbon (µg C·L ⁻¹)	300	259	250					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	64	46	88					
Particulate nitrogen (µg N·L ⁻¹)	44	43	38					
Ammonia (µg N·L ⁻¹)	9	9	8					
Nitrate (µg N·L ⁻¹)	24	24	25					
Total phosphorus (µg P·L ⁻¹)	5	5	5					
Total dissolved phosphorus (µg P·L ⁻¹)	2	1	3					
Soluble reactive silicon (µg Si·L ⁻¹)	680	670	690					
Total dissolved solids (mg·L ⁻¹)	9							
Bacteria numbers (x10 ⁶ ·mL ⁻¹)	0.62	0.67	0.71	0.76	0.67	0.54	0.68	0.73
Glucose turnover time (h)	206	74	83	104	74	70	92	217
Dark bottle glucose turnover time (h)	1771							
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	0.49	0.28	0.13	0.06	0.00	0.00	0.00	0.00
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.20							
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.08							
Total chlorophyll (mg·m ⁻³)	1.04							
Algal numbers (x10 ⁸ ·m ⁻³)	24 ^b							
Algal volume (mm ³ ·m ⁻³)	157 ^b	181 ^b						

During incubation period ultraphytoplankton counted by epifluorescence

Table 130. Physical, chemical and biological data from Long Lake, Station 2, March 21, 1980.

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Depth (m)	Compensation depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	$\frac{4.43}{\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}}$	a
Depth (m)	Extinction coefficient (k_e)	Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)	
0	6.4	0.69	5.9	2.5	2.5	2.43
1	5.5	5.5	2.16	129	98	3.0
2				50	71	93
3				21	19	59
5				<4	<4	17
7.5						43
10						43
20						59
						59
pH						59
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)						59
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)						59
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)						59
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)						59
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)						59
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)						59
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)						59
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)						59
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)						59
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)						59
Total dissolved solids (mg L^{-1})						59
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)						59
Glucose turnover time (h)						59
Dark bottle glucose turnover time (h)						59
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)						59
Total chlorophyll (mg $\cdot \text{m}^{-3}$)						59
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)						59
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)						59

a during incubation period

Table 131. Physical, chemical and biological data from Long Lake, Station 3, March 21, 1980.

Depth (m)	Compensation depth (m)	5.9	Surface temperature ($^{\circ}$ C)	5.9	Einstein $\cdot m^{-2} \cdot h^{-1}$	4.40	a
	Extinction coefficient (k_e)	0.79	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	4.8	Einstein $\cdot m^{-2} \cdot d^{-1}$	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	—
0	0	6.2	1.82	2.3	4.3	3.1	
1							
2							
3							
5							
7.5							
10							
20							
pH							
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)							
Dissolved organic carbon (mg C $\cdot L^{-1}$)							
Particulate carbon (μ g C $\cdot L^{-1}$)							
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)							
Particulate nitrogen (μ g N $\cdot L^{-1}$)							
Ammonia (μ g N $\cdot L^{-1}$)							
Nitrate (μ g N $\cdot L^{-1}$)							
Total phosphorus (μ g P $\cdot L^{-1}$)							
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)							
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)							
Total dissolved solids (mg $\cdot L^{-1}$)							
Bacteria numbers ($\times 10^6 \cdot ml^{-1}$)							
Glucose turnover time (h)							
Dark bottle glucose turnover time (h)							
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)							
Total chlorophyll (mg $\cdot m^{-3}$)							
Algal numbers ($\times 10^8 \cdot m^{-3}$)							
Algal volume ($mm^3 \cdot m^{-3}$)							

a during incubation period

Table 132. Physical, chemical and biological data from Long Lake, Station 2, April 19, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20	
Compensation depth (m)	3.8								
Extinction coefficient (k_e)	1.21								
Secchi depth (m)	6.5								
Dissolved inorganic carbon (mg C·L ⁻¹)									
Dissolved organic carbon (mg C·L ⁻¹)									
Particulate carbon (µg C·L ⁻¹)									
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)									
Particulate nitrogen (µg N·L ⁻¹)									
Ammonia (µg N·L ⁻¹)									
Nitrate (µg N·L ⁻¹)									
Total phosphorus (µg P·L ⁻¹)									
Total dissolved phosphorus (µg P·L ⁻¹)									
Soluble reactive silicon (µg Si·L ⁻¹)									
Total dissolved solids (mg·L ⁻¹)									
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)									
Glucose turnover time (h)									
Dark bottle glucose turnover time (h)									
Total primary production (mg C·m ⁻³ ·h ⁻¹)									
Total chlorophyll (mg·m ⁻³)									
Algal numbers ($\times 10^8 \cdot m^{-3}$)									
Algal volume (mm ³ ·m ⁻³)									

^a during incubation period

Table 133. Physical, chemical and biological data from Long Lake, Station 3, April 19, 1980.

Depth (m)	Compensation depth (m) <u>4.2</u>			Surface temperature ($^{\circ}\text{C}$) <u>6.6</u>			Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$ <u>2.55</u> ^a					
	Extinction coefficient (k_e) <u>1.11</u>	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$) <u>4.7</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	Daily primary production (mg C $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	0	1	2	3	5	7.5	10	20
pH					6.0	6.2						
Dissolved inorganic carbon (mg C $\cdot \text{L}^{-1}$)			2.0		2.24		2.1	3.1				
Dissolved organic carbon (mg C $\cdot \text{L}^{-1}$)			27			46	149					122
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)			40			52	54					70
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			9			11	31					22
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)			22			18	17					16
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)			44			43	43					43
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)			2			2	2					1
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			2			2	2					1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)			1000			990	1010					980
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)			12									10
Total dissolved solids (mg $\cdot \text{L}^{-1}$)			0.94	1.04	0.99	1.09	1.07	1.12	1.04	0.81		
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)			194	141	109	151	165	181	194	197		
Glucose turnover time (h)			140			119	130					314
Dark bottle glucose turnover time (h)			0.83	0.97	0.94	0.80	0.27	0.03	0.00	0.00		0.88
Total primary production (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)			1.20			1.11	1.14					
Total chlorophyll (mg $\cdot \text{m}^{-3}$)			108			131						
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)			199			282						
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)												

^aduring incubation period

Table 134. Physical, chemical and biological data from Long Lake, Station 2, May 13, 1980.

Compensation depth (m)	<u>6.7</u>	Surface temperature (°C)	<u>11.2</u>	<u>Einstein·m⁻²·h⁻¹</u>	<u>3.82</u>	^a		
Extinction coefficient (k _e)	<u>0.63</u>	Zooplankton biomass (mg dry wt. · m ⁻³)	<u>6.4</u>	<u>Einstein·m⁻²·d⁻¹</u>				
Secchi depth (m)	<u>5.0</u>	Daily primary production (mg C · m ⁻² · d ⁻¹)						
Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon (mg C · L ⁻¹)								
Dissolved organic carbon (mg C · L ⁻¹)								
Particulate carbon (µg C · L ⁻¹)								
Dissolved kjeldahl nitrogen (µg N · L ⁻¹)								
Particulate nitrogen (µg N · L ⁻¹)								
Ammonia (µg N · L ⁻¹)								
Nitrate (µg N · L ⁻¹)								
Total phosphorus (µg P · L ⁻¹)								
Total dissolved phosphorus (µg P · L ⁻¹)								
Soluble reactive silicon (µg Si · L ⁻¹)								
Total dissolved solids (mg · L ⁻¹)								
Bacteria numbers (x10 ⁶ · mL ⁻¹)								
Glucose turnover time (h)								
Dark bottle glucose turnover time (h)								
Primary production > 0.2 µm (mg C · m ⁻³ · h ⁻¹)	2.49	1.63	1.82	1.13	0.34	0.06	0.00	0.00
Primary production 0.2-8.0 µm (mg C · m ⁻³ · h ⁻¹)	1.21			0.93	0.28			
Primary production > 8.0 µm (mg C · m ⁻³ · h ⁻¹)	0.42			0.20	0.06			
Total chlorophyll (mg · m ⁻³)	1.74			1.76	0.98			
Algal numbers (x10 ⁸ · m ⁻³)	38			114				
Algal volume (mm ³ · m ⁻³)	184			134				

^a during incubation period

Table 135. Physical, chemical and biological data from Long Lake, Station 3, May 13, 1980.

Depth (m)	Compensation depth (m)	6.8	Surface temperature ($^{\circ}$ C)	10.6	Einstiens $\cdot m^{-2} \cdot h^{-1}$	4.76 ^a
	Extinction coefficient (k_e)	0.63	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	3.0	Einstiens $\cdot m^{-2} \cdot d^{-1}$	
Secchi depth (m)	5.5				Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	
0						
1						
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)						
Dissolved organic carbon (mg C $\cdot L^{-1}$)						
Particulate carbon (μ g C $\cdot L^{-1}$)						
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)						
Particulate nitrogen (μ g N $\cdot L^{-1}$)						
Ammonia (μ g N $\cdot L^{-1}$)						
Nitrate (μ g N $\cdot L^{-1}$)						
Total phosphorus (μ g P $\cdot L^{-1}$)						
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)						
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)						
Total dissolved solids (mg $\cdot L^{-1}$)						
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)						
Glucose turnover time (h)						
Dark bottle glucose turnover time (h)						
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)						
Total chlorophyll (mg $\cdot m^{-3}$)						
Algal numbers ($\times 10^8 \cdot m^{-3}$)						
Algal volume ($mm^3 \cdot m^{-3}$)						

^a during incubation period

Table 136. Physical, chemical and biological data from Long Lake, Station 2, June 10, 1980.

Compensation depth (m)	<u>8.0</u>	Surface temperature ($^{\circ}$ C)	<u>14.3</u>	Einstein \cdot m $^{-2}$ \cdot h $^{-1}$	<u>1.34</u> ^a
Extinction coefficient (k_e)	<u>0.52</u>	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	<u>3.7</u>	Einstein \cdot m $^{-2}$ \cdot d $^{-1}$	<u>27.05</u>
Secchi depth (m)	<u>5.5</u>	Daily primary production (mg C \cdot m $^{-2}$ \cdot d $^{-1}$)	<u>137</u>		
Depth (m)	0	1	2	3	5
pH			5.7	5.7	5.7
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)		4.17	4.17	3.63	3.4
Dissolved organic carbon (mg C \cdot L $^{-1}$)		1.6	1.9	2.0	
Particulate carbon (μ g C \cdot L $^{-1}$)	258	264	258		160
Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)	24	64	59		10
Particulate nitrogen (μ g N \cdot L $^{-1}$)	41	37	44		34
Ammonia (μ g N \cdot L $^{-1}$)	<4	<4	<4		7
Nitrate (μ g N \cdot L $^{-1}$)	31	33	32		59
Total phosphorus (μ g P \cdot L $^{-1}$)	1	1	1		1
Total dissolved phosphorus (μ g P \cdot L $^{-1}$)	<1	<1	<1		<1
Soluble reactive silicon (μ g Si \cdot L $^{-1}$)	910	910	900		950
Total dissolved solids (mg \cdot L $^{-1}$)	15				11
Bacteria numbers ($\times 10^6 \cdot$ mL $^{-1}$)	0.71	0.63	0.79	0.80	0.80
Glucose turnover time (h)	120	136	150	107	146
Dark bottle glucose turnover time (h)	413	163	178	113	126
Primary production > 0.2 μ m (mg C \cdot m $^{-3} \cdot$ h $^{-1}$)	2.42	1.15	1.14	0.99	0.77
Primary production 0.2-8.0 μ m (mg C \cdot m $^{-3} \cdot$ h $^{-1}$)	0.58			0.50	0.64
Primary production > 8.0 μ m (mg C \cdot m $^{-3} \cdot$ h $^{-1}$)	0.57			0.49	0.13
Total chlorophyll 1 (mg \cdot m $^{-3}$)	1.42			2.60	2.50
Algal numbers ($\times 10^8 \cdot$ m $^{-3}$)	44			38	0.28
Algal volume (mm $^3 \cdot$ m $^{-3}$)	170			501	

^aduring incubation period

Table 137. Physical, chemical and biological data from Long Lake, Station 3, June 10, 1980.

Depth (m)	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Surface temperature ($^{\circ}\text{C}$)	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$	
	0	1	2	3	4.0	73	0	1	2	3	4
pH							5.8	5.8	5.8	5.8	5.8
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)							3.32	3.32	3.44	3.44	3.44
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)							1.4	1.6	1.5	1.5	1.4
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)							251	200	214	214	178
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)							37	32	<10	<10	<10
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)							47	42	43	43	44
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)							<4	<4	<4	<4	<4
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)							40	40	39	39	60
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)							1	1	1	1	1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)							<1	<1	<1	<1	<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)							930	920	950	950	930
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)							13	13	13	13	10
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)							0.92	0.68	1.70	0.60	0.90
Glucose turnover time (h)							84	128	105	89	111
Dark bottle glucose turnover time (h)							104	105	140	89	80
Total primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$)							2.29	1.25	0.66	0.45	0.22
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)							2.46	2.46	2.16	2.12	0.24
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)							67	67	79	79	79
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)							106	106	529	529	529

^aduring incubation period

Table 138. Physical, chemical and biological data from Long Lake, Station 2, July 8, 1980.

Depth (m)	6.5	Surface temperature (°C)	16.0	Einstеins·m ⁻² ·h ⁻¹	5.92	a		
Extinction coefficient (k _e)	0.47	Zooplankton biomass (mg dry wt.·m ⁻³)	0.6	Einstеins·m ⁻² ·d ⁻¹	55.78			
Secchi depth (m)	5.0	Daily primary production (mg C·m ⁻² ·d ⁻¹)	62					
Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon (mg C·L ⁻¹)			1.25					
Dissolved organic carbon (mg C·L ⁻¹)			3.5	3.5	3.3			
Particulate carbon (μg C·L ⁻¹)			579	571	368			
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)			52	89	22			
Particulate nitrogen (μg N·L ⁻¹)			75	77	57			
Ammonia (μg N·L ⁻¹)			6	7	7			
Nitrate (μg N·L ⁻¹)			5	3	5			
Total phosphorus (μg P·L ⁻¹)			<1	<1	<1			
Total dissolved phosphorus (μg P·L ⁻¹)			<1	<1	<1			
Soluble reactive silicon (μg Si·L ⁻¹)			770	700	790			
Total dissolved solids (mg·L ⁻¹)			17					
Bacteria numbers (x10 ⁶ ·mL ⁻¹)			0.68	0.68	0.70	0.65	0.64	0.92
Glucose turnover time (h)			214	128	75	119	152	201
Dark bottle glucose turnover time (h)				877	93	132		
Primary production > 0.2 μm (mg C·m ⁻³ ·h ⁻¹)				0.94	0.77	1.00	1.08	0.85
Primary production 0.2-8.0 μm (mg C·m ⁻³ ·h ⁻¹)					0.49		0.68	0.40
Primary production > 8.0 μm (mg C·m ⁻³ ·h ⁻¹)					0.28		0.40	0.45
Total chlorophyll (mg·m ⁻³)						1.57	2.09	1.88
Algal numbers (x10 ⁸ ·m ⁻³)						47		51
Algal volume (mm ³ ·m ⁻³)						839		929

a during incubation period

Table 139. Physical, chemical and biological data from Long Lake, Station 3, July 8, 1980.

Depth (m)	Compensation depth (m)	k_e	Extinction coefficient (k_e)	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	Surface temperature ($^{\circ}C$)	16.6	Einstiens $\cdot m^{-2} \cdot h^{-1}$	5.58	a
	8.9	0.50		3.6			Einstiens $\cdot m^{-2} \cdot d^{-1}$	55.78	
	5.5						Daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$)	62	
					0	1	2	3	5
							7.5	10	20
pH					6.3	6.5			
Dissolved inorganic carbon ($mg C \cdot L^{-1}$)					1.85				
Dissolved organic carbon ($mg C \cdot L^{-1}$)						3.4	3.2		
Particulate carbon ($\mu g C \cdot L^{-1}$)					3.7				
Dissolved kjeldahl nitrogen ($\mu g N \cdot L^{-1}$)					343	365	461		465
Particulate nitrogen ($\mu g N \cdot L^{-1}$)					65	59	47		46
Ammonia ($\mu g N \cdot L^{-1}$)					52	61	80		73
Nitrate ($\mu g N \cdot L^{-1}$)					11	11	7		8
Total phosphorus ($\mu g P \cdot L^{-1}$)					12	12	13		50
Total dissolved phosphorus ($\mu g P \cdot L^{-1}$)					<1	<1	<1		<1
Soluble reactive silicon ($\mu g Si \cdot L^{-1}$)					<1	<1	<1		<1
Total dissolved solids ($mg \cdot L^{-1}$)					830	780	930		280
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)					17				15
Glucose turnover time (h)					0.91	0.94	0.89	0.91	0.83
Dark bottle glucose turnover time (h)					258	149	163	192	272
Total primary production ($mg C \cdot m^{-3} \cdot h^{-1}$)					254	387	2145	92	167
Total chlorophyll ($mg \cdot m^{-3}$)					0.89	0.84	1.02	1.11	0.81
Algal numbers ($\times 10^8 \cdot m^{-3}$)					1.46				0.03
Algal volume ($mm^3 \cdot m^{-3}$)					17	1.99	1.86		0.44
					365				1064

a during incubation period

Table 140. Physical, chemical and biological data from Long Lake, Station 2, August 5, 1980.

Depth (m)	Compensation depth (m)	pH	Surface temperature ($^{\circ}\text{C}$)	17.4	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	5.92	a
Secchi depth (m)	5.0	5.5	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	3.6	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$	48.94	
Dissolved organic carbon (mg $\text{C} \cdot \text{L}^{-1}$)	0.51	5.5	Daily primary production (mg $\text{C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	85			
Particulate carbon (µg $\text{C} \cdot \text{L}^{-1}$)	0	1	2	3	5	7.5	10
Particulate nitrogen (µg $\text{N} \cdot \text{L}^{-1}$)	4.1	1.53	4.5	4.8			
Dissolved kjeldahl nitrogen (µg $\text{N} \cdot \text{L}^{-1}$)	405	365					
Nitrate (µg $\text{N} \cdot \text{L}^{-1}$)	61	83	72				
Ammonia (µg $\text{N} \cdot \text{L}^{-1}$)	49	18					
Total phosphorus (µg $\text{P} \cdot \text{L}^{-1}$)	7	3	6				
Total dissolved phosphorus (µg $\text{P} \cdot \text{L}^{-1}$)	<1	<1	<1				
Soluble reactive silicon (µg $\text{Si} \cdot \text{L}^{-1}$)	750	750	750				
Total dissolved solids (mg $\cdot \text{L}^{-1}$)	0.43	0.65	0.68	0.77	0.64	0.65	0.77
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	154	51	42	49	58	71	63
Glucose turnover time (h)	47	85	175				
Dark bottle glucose turnover time (h)	1.06	1.62	1.67	1.84	1.29	0.36	0.08
Primary production > 0.2 µm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	1.14	1.18	0.77				
Primary production 0.2-8.0 µm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	0.48	0.66	0.52				
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	2.80	2.30	2.24				
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	46	55					
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	55	1138					

During incubation period

Table 141. Physical, chemical and biological data from Long Lake, Station 3, August 5, 1980.

Depth (m)	Compensation depth (m) <u>2.1</u>			Surface temperature ($^{\circ}$ C) <u>17.7</u>			Einsteins \cdot m $^{-2}$ \cdot h $^{-1}$ <u>5.77</u> ^a		
	Extinction coefficient (k_e) <u>0.48</u>	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$) <u>2.8</u>	Daily primary production (mg C \cdot m $^{-2}$.d $^{-1}$) <u>83</u>	Einsteins \cdot m $^{-2}$ \cdot d $^{-1}$ <u>48.94</u>	Einsteins \cdot m $^{-2}$ \cdot h $^{-1}$ <u>5.77</u> ^a	Daily primary production (mg C \cdot m $^{-2}$.d $^{-1}$) <u>83</u>	Einsteins \cdot m $^{-2}$ \cdot h $^{-1}$ <u>5.77</u> ^a	Einsteins \cdot m $^{-2}$ \cdot d $^{-1}$ <u>48.94</u>	Daily primary production (mg C \cdot m $^{-2}$.d $^{-1}$) <u>83</u>
0	6.6	1.79	6.6	332	326	1.61	6.6	285	1.61
1	6.5	6.6	5.8	104	115	5.7	6.5	42	5.7
2	6.5	6.6	5.8	42	40	5.7	6.5	30	5.7
3	6.5	6.6	5.8	10	6	5.6	6.5	6	5.6
5	6.5	6.6	5.8	<1	<1	3	6.5	56	6.5
7.5	6.5	6.6	5.8	<1	<1	3	6.5	56	6.5
10	6.5	6.6	5.8	<1	<1	3	6.5	56	6.5
20	6.5	6.6	5.8	<1	<1	3	6.5	56	6.5
pH									
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)									
Dissolved organic carbon (mg C \cdot L $^{-1}$)	345	6.1	6.6	332	326	1.61	6.6	285	1.61
Particulate carbon (μ g C \cdot L $^{-1}$)									
Dissolved kjeldahl nitrogen (μ g N \cdot L $^{-1}$)	55	345	332	104	115	5.7	6.6	42	5.7
Particulate nitrogen (μ g N \cdot L $^{-1}$)	46	55	55	42	40	5.7	6.6	30	5.7
Ammonia (μ g N \cdot L $^{-1}$)	10	46	46	10	6	5.6	6.5	6	5.6
Nitrate (μ g N \cdot L $^{-1}$)	<1	<1	<1	<1	<1	3	6.5	56	6.5
Total phosphorus (μ g P \cdot L $^{-1}$)	<1	<1	<1	<1	<1	3	6.5	56	6.5
Total dissolved phosphorus (μ g P \cdot L $^{-1}$)	1	1	1	1	1	<1	<1	<1	<1
Soluble reactive silicon (μ g Si \cdot L $^{-1}$)	760	760	760	770	770	950	950	950	950
Total dissolved solids (mg \cdot L $^{-1}$)									
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.80	0.83	0.80	0.59	0.73	0.74	0.77	0.79	0.79
Glucose turnover time (h)	77	37	37	50	41	43	45	279	279
Dark bottle glucose turnover time (h)	47	47	84	101	101	702	702		
Total primary production (mg C \cdot m $^{-2}$.h $^{-1}$)	1.14	1.70	1.98	1.65	0.98	0.34	0.09	0.00	0.00
Total chlorophyll (mg \cdot m $^{-3}$)	1.52	1.52	2.28	2.22	2.22	0.28	0.28	0.28	0.28
Algal numbers ($\times 10^8 \cdot m^{-3}$)	66	66	41	41	41				
Algal volume (mm $^3 \cdot m^{-3}$)	972	972	632	632	632				

^a during incubation period

Table 142. Physical, chemical and biological data from Long Lake, Station 2, September 9, 1980.

Depth (m)	5.2	Surface temperature (°C)	15.5	Einstein·m ⁻² ·h ⁻¹	4.23 ^a
Extinction coefficient (k _e)	0.87	Zooplankton biomass (mg dry wt.·m ⁻³)	1.8	Einstein·m ⁻² ·d ⁻¹	37.34
Secchi depth (m)	3.5	Daily primary production (mg C·m ⁻² ·d ⁻¹)	91		
	0	1	2	3	10
pH					
Dissolved inorganic carbon (mg C·L ⁻¹)					
Dissolved organic carbon (mg C·L ⁻¹)					
Particulate carbon (µg C·L ⁻¹)					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)					
Particulate nitrogen (µg N·L ⁻¹)					
Ammonia (µg N·L ⁻¹)					
Nitrate (µg N·L ⁻¹)					
Total phosphorus (µg P·L ⁻¹)					
Total dissolved phosphorus (µg P·L ⁻¹)					
Soluble reactive silicon (µg Si·L ⁻¹)					
Total dissolved solids (mg·L ⁻¹)					
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					
Glucose turnover time (h)					
Dark bottle glucose turnover time (h)					
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)					
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)					
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)					
Total chlorophyll (mg·m ⁻³)					
Algal numbers (x10 ⁸ ·m ⁻³)					
Algal volume (mm ³ ·m ⁻³)					

^a during incubation period

Table 143. Physical, chemical and biological data from Long Lake, Station 3, September 9, 1980.

Depth (m)	Compensation depth (m)		Surface temperature ($^{\circ}$ C)		Einstiens $\cdot m^{-2} \cdot h^{-1}$		Einstiens $\cdot m^{-2} \cdot d^{-1}$		Daily primary production	
	k_e	0.71	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	2.2	$m^{-2} \cdot h^{-1}$	4.18	$m^{-2} \cdot d^{-1}$	37.34	$m^{-2} \cdot d^{-1}$	115
0					6.9	6.6				
1					0.99	1.26				
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

^a during incubation period

Table 144. Physical, chemical and biological data from Long Lake, Station 2, October 7, 1980.

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Compensation depth (m)	<u>6.2</u>	Surface temperature ($^{\circ}$ C)	<u>13.9</u>	Einstеins \cdot m $^{-2}$ \cdot h $^{-1}$	<u>1.29</u>	^a
Extinction coefficient (k_e)	<u>0.70</u>	Zooplankton biomass (mg dry wt. \cdot m $^{-3}$)	<u>3.7</u>	Einstеins \cdot m $^{-2}$ \cdot d $^{-1}$	<u>8.37</u>	
Secchi depth (m)	<u>3.0</u>	Daily primary production (mg C \cdot m $^{-2}$ \cdot d $^{-1}$)	<u>58</u>			
Depth (m)	0 1 2 3 5 7.5 10 20					
pH		6.3	6.3	6.3	6.3	
Dissolved inorganic carbon (mg C \cdot L $^{-1}$)		1.52	1.52	1.55	1.55	
Dissolved organic carbon (mg C \cdot L $^{-1}$)		3.4	3.2	3.9	3.1	
Particulate carbon (μg C \cdot L $^{-1}$)		307	242	243	163	
Dissolved kjeldahl nitrogen (μg N \cdot L $^{-1}$)		49	51	24	41	
Particulate nitrogen (μg N \cdot L $^{-1}$)		40	38	34	25	
Ammonia (μg N \cdot L $^{-1}$)		5	5	6	7	
Nitrate (μg N \cdot L $^{-1}$)		5	5	6	42	
Total phosphorus (μg P \cdot L $^{-1}$)		2	2	1	1	
Total dissolved phosphorus (μg P \cdot L $^{-1}$)		2	3	2	2	
Soluble reactive silicon (μg Si \cdot L $^{-1}$)		390	970	840	910	
Total dissolved solids (mg \cdot L $^{-1}$)		15			14	
Bacteria numbers ($\times 10^6$ mL $^{-1}$)		1.38	1.23	1.59	1.62	0.91
Glucose turnover time (h)		104	48	54	26	46
Dark bottle glucose turnover time (h)			77	51	279	636
Primary production > 0.2 μm (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)		1.74	3.34	1.80	0.87	0.28
Primary production 0.2-8.0 μm (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)			2.75	0.71	0.14	
Primary production > 8.0 μm (mg C \cdot m $^{-3}$ \cdot h $^{-1}$)		0.59		0.16	0.14	
Total chlorophyll (mg·m $^{-3}$)		3.55		3.93	3.93	2.09
Algal numbers ($\times 10^8$ m $^{-3}$)		68		43		
Algal volume (mm 3 ·m $^{-3}$)		933		633		

^a during incubation period

Table 145. Physical, chemical and biological data from Long Lake, Station 3, October 7, 1980.

Depth (m)	Compensation depth (m) <u>6.3</u>	Extinction coefficient (k_e) <u>0.68</u>	Secchi depth (m) <u>3.0</u>	Surface temperature ($^{\circ}\text{C}$) <u>13.7</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>6.2</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$) <u>23</u>	Einstein's $\text{m}^{-2} \cdot \text{h}^{-1}$ <u>1.19</u>	
Depth (m)	0	1	2	3	5	7.5	10	20
pH				6.3	6.4			
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				1.50	1.61			
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				3.5	3.3	3.3		3.2
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)				242	234	245		156
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				52	35	76		43
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				34	34	36		22
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				10	5	5		8
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				7	6	8		54
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				1	<1	<1		<1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				1	1	1		<1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				1040	880	1010		1000
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)				14				15
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				0.86	0.77	0.83	0.88	1.00
Glucose turnover time (h)				209	75	110	104	118
Dark bottle glucose turnover time (h)				31		51		367
Total primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$)				1.68	1.26	0.64	0.27	0.06
Total chlorophyll (mg m^{-3})				2.85		2.87	1.32	
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				97		84		0.27
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				853		851		

a during incubation period

Table 146. Physical, chemical and biological data from Long Lake, Station 2, November 18, 1980.

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Depth (m)	6.1	Surface temperature ($^{\circ}\text{C}$)	8.8	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	0.18 ^a	1.15		
Extinction coefficient (k_e)	0.70	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	3.5	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$				
Secchi depth (m)	4.5	Daily primary production (mg $\text{C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	28					
Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon (mg $\text{C} \cdot \text{L}^{-1}$)								
Dissolved organic carbon (mg $\text{C} \cdot \text{L}^{-1}$)								
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)								
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)								
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)								
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)								
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)								
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)								
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)								
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)								
Total dissolved solids (mg $\cdot \text{L}^{-1}$)								
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)								
Glucose turnover time (h)								
Dark bottle glucose turnover time (h)								
Primary production > 0.2 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)								
Primary production 0.2-8.0 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)								
Primary production > 8.0 μm (mg $\text{C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)								
Total chlorophyll 1 (mg $\cdot \text{m}^{-3}$)								
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)								
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)								

^a during incubation period

Table 147. Physical, chemical and biological data from Long Lake, Station 3, November 18, 1980.

Depth (m)	Compensation depth (m)	Extinction coefficient (k_e)	Secchi depth (m)	Surface temperature ($^{\circ}\text{C}$)				Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$				Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$				Daily primary production $\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$				
				0	1	2	3	5	7.5	10	20	0	1	2	3	5	7.5	10	20	
pH				6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	406	406	406	406	406	406	406	406	
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)				322	322	322	322	322	322	322	322	30	30	30	30	30	30	30	30	
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				20	20	20	20	20	20	20	20	51	51	51	51	51	51	51	51	
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)				42	42	42	42	42	42	42	42	51	51	51	51	51	51	51	51	
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				10	10	10	10	10	10	10	10	12	12	12	12	12	12	12	12	
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)				33	33	33	33	33	33	33	33	27	27	27	27	27	27	27	27	
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				820	820	820	820	820	820	820	820	840	840	840	840	840	840	840	840	
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)				132	132	132	132	132	132	132	132	134	134	134	134	134	134	134	134	
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	
Glucose turnover time (h)				808	96	187	149	217	152	186	186	170	170	170	170	170	170	170	170	
Dark bottle glucose turnover time (h)				286	286	654	288	288	288	288	288	1434	1434	1434	1434	1434	1434	1434	1434	1434
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)				1.47	1.06	0.99	0.73	0.25	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)				0.58	0.58	0.60	0.60	0.60	0.60	0.60	0.60	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				55	55	120	120	120	120	120	120	120	120	120	120	120	120	120	120	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				165	165	194	194	194	194	194	194	194	194	194	194	194	194	194	194	

a during incubation period

Table 148. Physical, chemical and biological data from Lowe Lake, May 1, 1980.

Compensation depth (m)	<u>7.5</u>	Surface temperature ($^{\circ}$ C)	<u>4.6</u>	Einstein $\cdot m^{-2} \cdot h^{-1}$	^a
Extinction coefficient (k_e)	<u>0.57</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	<u>3.0</u>	Einstein $\cdot m^{-2} \cdot d^{-1}$	
Secchi depth (m)	<u>7.0</u>	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)			
Depth (m)	0	1	2	3	5
pH			5.7	5.8	
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)		0.47		0.53	
Dissolved organic carbon (mg C $\cdot L^{-1}$)	2.0		2.2	1.8	2.1
Particulate carbon (μ g C $\cdot L^{-1}$)	192		142	115	116
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)	52		66	56	43
Particulate nitrogen (μ g N $\cdot L^{-1}$)	23		19	17	16
Ammonia (μ g N $\cdot L^{-1}$)	6		5	5	5
Nitrate (μ g N $\cdot L^{-1}$)	21		21	20	19
Total phosphorus (μ g P $\cdot L^{-1}$)	2		<1	1	1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)	2		<1	1	2
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)	500		500	510	460
Total dissolved solids (mg $\cdot L^{-1}$)			8		
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.76	0.76	0.57	0.76	0.74
Glucose turnover time (h)	191	217	314	171	260
Dark bottle glucose turnover time (h)	282	709	685		425
Primary production > 0.2 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.48	0.33	0.20	0.08	0.00
Primary production 0.2-8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.25		0.06	0.01	475
Primary production > 8.0 μ m (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.08		0.02	0.01	
Total chlorophyll (mg $\cdot m^{-3}$)	0.57		0.71	0.40	0.36
Algal numbers ($\times 10^8 \cdot m^{-3}$)	165			104	
Algal volume (mm $^3 \cdot m^{-3}$)	96			47	

^aduring incubation period

Table 149. Physical, chemical and biological data from Lowe Lake, May 28, 1980.

Compensation depth (m)	8.3	Surface temperature ($^{\circ}\text{C}$)	10.6	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{h}^{-1}$	5.49	a
Extinction coefficient (k_e)	0.52	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	6.8	$\text{Einsteins} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$	48.42	
Secchi depth (m)	6.5	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	101			
Depth (m)	0	1	2	3	5	7.5
pH					5.6	5.8
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				1.17		0.61
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			1.4		1.4	1.7
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)	195			170	163	156
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	55			34	24	9
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	37			31	28	23
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)	11			11	11	9
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	16			16	15	18
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		3		3	3	3
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	<1			<1	1	1
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)	490			490	500	500
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)				8		
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.99	0.91	0.82	1.10	1.00	0.98
Glucose turnover time (h)	148	105	128	111	126	286
Dark bottle glucose turnover time (h)		50		88	157	334
Primary production $> 0.2 \mu\text{m}$ ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	4.38	2.75	2.48	1.72	0.46	0.10
Primary production $0.2\text{-}8.0 \mu\text{m}$ ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	2.13			1.46	0.34	
Primary production $> 8.0 \mu\text{m}$ ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	0.62			0.26	0.12	
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	1.70			1.44	1.86	0.17
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	97				68	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	104				58	

a during incubation period

Table 150. Physical, chemical and biological data from Lowe Lake, June 27, 1980.

Depth (m)	9.1	Surface temperature (°C)	17.4	Einstein·m ⁻² ·h ⁻¹	4.10	^a
Extinction coefficient (k_e)	0.47	Zooplankton biomass (mg dry wt.·m ⁻³)	65.2	Einstein·m ⁻² ·d ⁻¹	38.24	
Secchi depth (m)	5.0	Daily primary production (mg C·m ⁻² ·d ⁻¹)	112			
Depth (m)	0	1	2	3	5	7.5
pH						
Dissolved inorganic carbon (mg C·L ⁻¹)						
Dissolved organic carbon (mg C·L ⁻¹)	0.9					
Particulate carbon (µg C·L ⁻¹)	208					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	64					
Particulate nitrogen (µg N·L ⁻¹)	50					
Ammonia (µg N·L ⁻¹)	6					
Nitrate (µg N·L ⁻¹)	5					
Total phosphorus (µg P·L ⁻¹)	2					
Total dissolved phosphorus (µg P·L ⁻¹)	<1					
Soluble reactive silicon (µg Si·L ⁻¹)	350					
Total dissolved solids (mg·L ⁻¹)					20	
Bacteria numbers ($\times 10^6$ ·mL ⁻¹)	1.81	2.08	2.43	2.16	1.85	1.51
Glucose turnover time (h)	26	18	17	17	19	32
Dark bottle glucose turnover time (h)		18		20	21	
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)	4.88	4.05	2.26	1.30	0.56	0.01
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)		3.29			0.92	0.40
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)	0.76				0.38	0.16
Total chlorophyll (mg·m ⁻³)		2.36			2.60	2.54
Algal numbers ($\times 10^8$ ·m ⁻³)	111				157	
Algal volume (mm ³ ·m ⁻³)	335				309	

^a during incubation period

Table 151. Physical, chemical and biological data from Lowe Lake, July 24, 1980.

Depth (m)	8.3	Surface temperature ($^{\circ}\text{C}$)	17.2	Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$	1.69 ^a
Extinction coefficient (k_e)	0.52	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	29.3	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	17.47
Secchi depth (m)	7.5	Daily primary production (mg C $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	88		
pH					
Dissolved inorganic carbon (mg C $\cdot \text{L}^{-1}$)		3.9	5.6	4.1	4.1
Dissolved organic carbon (mg C $\cdot \text{L}^{-1}$)		237	231	293	142
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)		158	101	106	135
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)		43	48	49	20
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)		16	15	16	19
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)		3	<1	<1	19
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)		3	<1	<1	<1
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		<1	<1	<1	<1
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		360	360	370	370
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)					
Total dissolved solids (mg $\cdot \text{L}^{-1}$)					
Bacteria numbers ($\times 10^6 \cdot \text{ml}^{-1}$)		1.43	1.74	1.46	1.77
Glucose turnover time (h)		28	19	23	20
Dark bottle glucose turnover time (h)		34	33	148	92
Primary production > 0.2 μm (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)		4.45	2.96	1.40	0.77
Primary production 0.2-8.0 μm (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)		2.72	0.73	0.19	0.00
Primary production > 8.0 μm (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)		0.24	0.04	0.03	0.00
Total chlorophyll (mg $\cdot \text{m}^{-3}$)		2.39	2.20	2.09	0.38
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)		221	139		
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)		152	101		

^aduring incubation period

Table 152. Physical, chemical and biological data from Lowe Lake, August 20, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon (mg C·L ⁻¹)								
Dissolved organic carbon (mg C·L ⁻¹)								
Particulate carbon (µg C·L ⁻¹)								
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)								
Particulate nitrogen (µg N·L ⁻¹)								
Ammonia (µg N·L ⁻¹)								
Nitrate (µg N·L ⁻¹)								
Total phosphorus (µg P·L ⁻¹)								
Total dissolved phosphorus (µg P·L ⁻¹)								
Soluble reactive silicon (µg Si·L ⁻¹)								
Total dissolved solids (mg·L ⁻¹)								
Bacteria numbers ($\times 10^6$ ·mL ⁻¹)								
Glucose turnover time (h)								
Dark bottle glucose turnover time (h)								
Primary production > 0.2 µm (mg C·m ⁻³ ·h ⁻¹)								
Primary production 0.2-8.0 µm (mg C·m ⁻³ ·h ⁻¹)								
Primary production > 8.0 µm (mg C·m ⁻³ ·h ⁻¹)								
Total chlorophyll (mg·m ⁻³)								
Algal numbers ($\times 10^8$ ·m ⁻³)								
Algal volume (mm ³ ·m ⁻³)								

^a during incubation period

Table 153. Physical, chemical and biological data from Lowe Lake, September 25, 1980.

Compensation depth (m)	<u>6.7</u>	Surface temperature ($^{\circ}\text{C}$)	<u>14.6</u>	Einstеins $\cdot\text{m}^{-2}\cdot\text{h}^{-1}$	<u>3.32</u>	a
Extinction coefficient (k_e)	<u>0.67</u>	Zooplankton biomass (mg dry wt. $\cdot\text{m}^{-3}$)	<u>12.8</u>	Einstеins $\cdot\text{m}^{-2}\cdot\text{d}^{-1}$	<u>22.57</u>	
Secchi depth (m)	<u>6.0</u>	Daily primary production (mg C $\cdot\text{m}^{-2}\cdot\text{d}^{-1}$)	<u>32</u>			
Depth (m)	0	1	2	3	5	7.5
pH			6.0	6.0	6.0	
Dissolved inorganic carbon (mg C $\cdot\text{L}^{-1}$)		0.42	0.48	0.48	0.48	
Dissolved organic carbon (mg C $\cdot\text{L}^{-1}$)		5.2	5.6	4.8	5.0	
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	242	247	244			189
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	69	48	55			67
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	35	39	34			14
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	4	<4	<4			8
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	6	6	6			23
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	4	1	6			4
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	2	<1			<1
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	570	560	560			470
Total dissolved solids (mg $\cdot\text{L}^{-1}$)			22			
Bacteria numbers ($\times 10^6 \cdot\text{ml}^{-1}$)		1.22	1.10	1.17	1.14	1.23
Glucose turnover time (h)	82	33	24	30	25	27
Dark bottle glucose turnover time (h)		18	25	30		164
Primary production > 0.2 μm (mg C $\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.52	0.70	1.22	0.66	0.32	0.23
Primary production 0.2-8.0 μm (mg C $\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)				0.24	0.04	0.00
Primary production > 8.0 μm (mg C $\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)				0.08		
Total chlorophyll (mg $\cdot\text{m}^{-3}$)		1.30	1.96	1.96	1.96	0.38
Algal numbers ($\times 10^8 \cdot\text{m}^{-3}$)	145				72	
Algal volume ($\text{mm}^3 \cdot\text{m}^{-3}$)	107				78	

a during incubation period

Table 154. Physical, chemical and biological data from Lowe Lake, October 24, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH								
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)								
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	3.8							
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	332							
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	49							
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	55							
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	13							
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	18							
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	2							
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1							
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	530							
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)					7			
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.92	0.85	0.97	0.82	1.00	0.95	0.94	0.89
Glucose turnover time (h)	93	66	118	69	60	82	79	69
Dark bottle glucose turnover time (h)		89		110	93		300	
Primary production > 0.2 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.26	0.12	0.05	0.02	0.01	0.00	0.00	0.00
Primary production > 0.2-8.0 μm ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)								
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	0.84							
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	65							
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	42							

^a during incubation period

Compensation depth (m) 6.1

Extinction coefficient (k_e) 0.69

Secchi depth (m) 4.5

Daily primary production ($\text{mg C}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$) 3

Depth (m)

Table 155. Physical, chemical and biological data from Lowe Lake, December 16, 1980.

Depth (m)	Compensation depth (m) <u>6.4</u>		Surface temperature (°C) <u>5.0</u>	
	Extinction coefficient (k_e) <u>0.67</u>	Secchi depth (m) <u>3.0</u>	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) <u>0.0</u>	
0	4.6		3.8	4.5
1	212		235	255
2	71		104	66
3	2376		2705	1521
5	6		9	7
7	9		8	8
10	2		2	3
126	2		3	3
126	450		450	450
126	0.94		1.10	1.20
126			87	84
126	0.33		0.24	0.21
126	198		127	
126	124		113	
20				

Table 156. Physical, chemical and biological data from Mercer Lake, May 3, 1980.

Depth (m)	Compensation depth (m)	5.6	Surface temperature ($^{\circ}\text{C}$)	6.5
	Extinction coefficient (k_e)	0.74	Zooplankton biomass (mg dry wt. $\cdot \text{m}^{-3}$)	2.1
	Secchi depth (m)	5.0		
		1	3	5
		20		
pH		6.2	6.2	6.2
Dissolved inorganic carbon (mg $\text{C} \cdot \text{L}^{-1}$)		1.39	1.39	1.52
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)		67	42	72
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)		7	9	6
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)		12	13	12
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		3	<1	2
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		1	<1	2
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)		950	1000	1020
Total dissolved solids (mg $\cdot \text{L}^{-1}$)			31	31
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)		0.18	0.31	0.32
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)		2	2	2
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)		28	26	26

Table 157. Physical, chemical and biological data from Mercer Lake, June 24, 1980.

Depth (m)	Compensation depth (m)		Surface temperature ($^{\circ}$ C)		$\frac{15.2}{\text{Zooplankton biomass (mg dry wt. m}^{-3})}$	
	7.4	0.60	1	3	5	20
pH			6.3		6.1	
Dissolved inorganic carbon (mg C L^{-1})		2.24			2.02	
Dissolved kjeldahl nitrogen ($\mu\text{g N L}^{-1}$)		65	65	75		<10
Ammonia ($\mu\text{g N L}^{-1}$)	<4		<4		<4	
Nitrate ($\mu\text{g N L}^{-1}$)	<1		<1		<1	
Total phosphorus ($\mu\text{g P L}^{-1}$)	2		3		2	
Total dissolved phosphorus ($\mu\text{g P L}^{-1}$)	<1		1		<1	
Soluble reactive silicon ($\mu\text{g Si L}^{-1}$)	2280		1550		1490	
Total dissolved solids (mg L^{-1})				25		
Total chlorophyll (mg m^{-3})	2.14		2.08		2.02	
Algal numbers ($\times 10^8 \text{ m}^{-3}$)	53				35	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	779				922	

Table 158. Physical, chemical and biological data from Mercer Lake, September 24, 1980.

Depth (m)	Compensation depth (m)	4.2	Surface temperature (°C)	12.6
	Extinction coefficient (k_e)	1.04	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	7.4
Secchi depth (m)	3.5			
1				
3				
5				
20				
pH		6.5		6.3
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		1.69		
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	37	49	50	53
Ammonia ($\mu g\ N\cdot L^{-1}$)	<4	<4	1.0	5
Nitrate ($\mu g\ N\cdot L^{-1}$)	21	20	21	25
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	2	1	3	3
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1600	1620	1630	1600
Total dissolved solids ($mg\ \cdot L^{-1}$)		35		
Total chlorophyll ($mg\ \cdot m^{-3}$)	4.56	4.32	3.16	1.40
Algal numbers ($\times 10^8\ \cdot m^{-3}$)	47		47	
Algal volume ($mm^3\ \cdot m^{-3}$)	1808		2561	

Table 159. Physical, chemical and biological data from Mikado Lake, May 1, 1980.

Depth (m)	Compensation depth (m) 8.2			Surface temperature (°C) 5.1			Einstein·m ⁻² ·h ⁻¹														
	Extinction coefficient (k _e) 0.51	Zooplankton biomass (mg dry wt.·m ⁻³) 1.4	Dissolved organic carbon (mg C·L ⁻¹) 0.55	Particulate carbon (μg C·L ⁻¹) 153	Dissolved kjeldahl nitrogen (μg N·L ⁻¹) 51	Particulate nitrogen (μg N·L ⁻¹) 20	Ammonia (μg N·L ⁻¹) 6	Nitrate (μg N·L ⁻¹) 16	Total phosphorus (μg P·L ⁻¹) 1	Total dissolved phosphorus (μg P·L ⁻¹) 1	Soluble reactive silicon (μg Si·L ⁻¹) 420	Total dissolved solids (mg·mL ⁻¹) 9	Bacteria numbers (x10 ⁶ ·mL ⁻¹) 1.16	Glucose turnover time (h) 224	Dark bottle glucose turnover time (h) 194	Total primary production (mg C·m ⁻³ ·h ⁻¹) 0.35	Total chlorophyll (mg·m ⁻³) 0.62	Algal numbers (x10 ⁸ ·m ⁻³) 30	Algal volume (mm ³ ·m ⁻³) 29		
0	0	0	5.6	166	166	24	7	15	<1	<1	410	1	1.12	211	153	0.25	0.16	0.09	0.04	0.00	0.00
1	0.55	0.55	5.6	173	60	21	5	15	2	2	380	5	1.30	194	107	0.09	0.04	0.00	0.00	0.00	0.00
2	0.47	0.47	5.6	41	21	5	5	15	2	2	360	9	1.32	153	153	0.65	0.71	0.16	0.16	0.59	0.59
3																					
5																					
7.5																					
10																					
20																					

^aduring incubation period

Table 160. Physical, chemical and biological data from Mikado Lake, May 29, 1980.

Depth (m)	Compensation depth (m) 8.1			Surface temperature (°C) 14.3			Einstiens·m ⁻² ·h ⁻¹ 5.35 ^a					
	Extinction coefficient (k _e) 0.55	Zooplankton biomass (mg dry wt.·m ⁻³) 3.2	Einstiens·m ⁻² ·d ⁻¹ 49.27	Daily primary production (mg C·m ⁻² ·d ⁻¹) 45	0	1	2	3	5	7.5	10	20
pH					5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Dissolved inorganic carbon (mg C·L ⁻¹)					0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Dissolved organic carbon (mg C·L ⁻¹)					1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Particulate carbon (μg C·L ⁻¹)					258	272	280	280	280	280	280	280
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)					55	61	36	36	36	36	36	36
Particulate nitrogen (μg N·L ⁻¹)					44	46	45	45	45	45	45	45
Ammonia (μg N·L ⁻¹)					9	11	12	12	12	12	12	12
Nitrate (μg N·L ⁻¹)					<1	<1	<1	<1	<1	<1	<1	<1
Total phosphorus (μg P·L ⁻¹)					2	2	2	2	2	2	2	2
Total dissolved phosphorus (μg P·L ⁻¹)					<1	<1	<1	<1	<1	<1	<1	<1
Soluble reactive silicon (μg Si·L ⁻¹)					400	400	400	400	400	400	400	400
Total dissolved solids (mg·L ⁻¹)					6	6	6	6	6	6	6	6
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					0.50	0.80	0.61	0.74	0.71	0.85	0.85	1.07
Glucose turnover time (h)					1200	592	551	218	142	79	410	129
Dark bottle glucose turnover time (h)					514	514	208	188	188	188	100	100
Total primary production (mg C·m ⁻³ ·h ⁻¹)					0.27	0.23	0.31	0.76	0.98	0.21	0.06	0.00
Total chlorophyll (mg·m ⁻³)					1.65	1.65	2.03	2.66	2.66	2.66	2.66	2.66
Algal numbers (x10 ⁸ ·m ⁻³)					30	30	23	23	23	23	23	23
Algal volume (mm ³ ·m ⁻³)					78	78	45	45	45	45	45	45

^aduring incubation period

Table 161. Physical, chemical and biological data from Mohun Lake, March 20, 1980.

Depth (m)	Compensation depth (m) 8.6			Surface temperature (°C) 4.3			Einsteins·m ⁻² ·h ⁻¹ 0.87 ^a		
	Extinction coefficient (k_e) 0.53	Zooplankton biomass (mg dry wt.·m ⁻³) 15.5	Secchi depth (m) 6.0	Daily primary production (mg C·m ⁻² ·d ⁻¹)					
0					0	1	3	5	7.5
1					6.6				10
3					2.55				20
5					2.4	2.5			30
6.6					152	149	167		
pH	Dissolved inorganic carbon (mg C·L ⁻¹)	Dissolved organic carbon (mg C·L ⁻¹)	Particulate carbon (µg C·L ⁻¹)	Dissolved kjeldahl nitrogen (µg N·L ⁻¹)	148	107	59		
				Particulate nitrogen (µg N·L ⁻¹)	36	36	38		
				Ammonia (µg N·L ⁻¹)	36	32	40		
				Nitrate (µg N·L ⁻¹)	37	37	37		
				Total phosphorus (µg P·L ⁻¹)	5	5	5		
				Total dissolved phosphorus (µg P·L ⁻¹)	3	2	3		
				Soluble reactive silicon (µg Si·L ⁻¹)	1030	1090	940		
				Total dissolved solids (mg·L ⁻¹)			23		
				Bacteria numbers (x10 ⁶ ·mL ⁻¹)	1.71	1.68	1.68		
				Glucose turnover time (h)	387	2050	557	290	481
				Dark bottle glucose turnover time (h)	145	896	694		
				Total primary production (mg C·m ⁻³ ·h ⁻¹)	0.71	1.07	0.92	0.52	
				Total chlorophyll (mg·m ⁻³)	2.34	2.50	2.26		
				Algal numbers (x10 ⁸ ·m ⁻³)	58	38			
				Algal volume (mm ³ ·m ⁻³)	774	763			

^a during incubation period

Table 162. Physical, chemical and biological data from Mohun Lake, April 17, 1980.

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Depth (m)	Compensation depth (m) <u>10.5</u>			Surface temperature ($^{\circ}$ C) <u>8.3</u>			Einstein $\cdot m^{-2} \cdot h^{-1}$ <u>0.78</u> ^a		
	Extinction coefficient (k_e) <u>0.40</u>	Zooplankton biomass ($mg\ dry\ wt.\cdot m^{-3}$) <u>7.4</u>		Einstein $\cdot m^{-2} \cdot d^{-1}$	Daily primary production ($mg\ C\cdot m^{-2}\cdot d^{-1}$)	Einstein $\cdot m^{-2} \cdot h^{-1}$	Daily primary production ($mg\ C\cdot m^{-2}\cdot d^{-1}$)	Einstein $\cdot m^{-2} \cdot h^{-1}$	
0	0	1	3	5	7.5	10	20	30	
pH				6.5		6.4			
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		2.35			2.76				
Dissolved organic carbon ($mg\ C\cdot L^{-1}$)		1.6	1.9	1.8				1.7	
Particulate carbon ($\mu g\ C\cdot L^{-1}$)			242	199				121	
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	84	77	59					66	
Particulate nitrogen ($\mu g\ N\cdot L^{-1}$)		38	33					23	
Ammonia ($\mu g\ N\cdot L^{-1}$)	39	39	59					51	
Nitrate ($\mu g\ N\cdot L^{-1}$)	37	36	38					34	
Total phosphorus ($\mu g\ P\cdot L^{-1}$)		3	3	3				2	
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)		1	2	2				2	
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	970	950	970					960	
Total dissolved solids ($mg\ \cdot L^{-1}$)		18						18	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		1.45	1.02	1.02				1.10	
Glucose turnover time (h)	742	1070	850	1093	689	726	425	1284	
Dark bottle glucose turnover time (h)		974	1279	2796				408	
Total primary production ($mg\ C\cdot m^{-3}\cdot h^{-1}$)		1.08	1.12	1.18	0.66	0.52	0.12	0.00	
Total chlorophyll 1 ($mg\ \cdot m^{-3}$)		2.55	2.66	2.71				1.62	
Algal numbers ($\times 10^8 \cdot m^{-3}$)	54	46							
Algal volume ($mm^3 \cdot m^{-3}$)	761	959							

^a during incubation period

Table 163. Physical, chemical and biological data from Mohun Lake, May 14, 1980.

Depth (m)	Compensation depth (m) 12.3			Surface temperature (°C) 14.5			Einstein·m ⁻² ·h ⁻¹ 2.11 a					
	Extinction coefficient (k _e) 0.35	Zooplankton biomass (mg dry wt.·m ⁻³) 28.2	Einstein·m ⁻² ·d ⁻¹	Daily primary production (mg C·m ⁻² ·d ⁻¹)	0	1	3	5	7.5	10	20	30
pH					6.2				6.3			
Dissolved inorganic carbon (mg C·L ⁻¹)					3.10				3.10			
Dissolved organic carbon (mg C·L ⁻¹)						1.9	2.1					1.7
Particulate carbon (μg C·L ⁻¹)					263	205	238					192
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)					33	54	45					61
Particulate nitrogen (μg N·L ⁻¹)					42	32	34					32
Ammonia (μg N·L ⁻¹)					33	34	31					48
Nitrate (μg N·L ⁻¹)					50	50	48					50
Total phosphorus (μg P·L ⁻¹)					1	1	1					1
Total dissolved phosphorus (μg P·L ⁻¹)					<1	<1	1					<1
Soluble reactive silicon (μg Si·L ⁻¹)					690	720	700					910
Total dissolved solids (mg·L ⁻¹)					21							21
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					1.83	1.80						1.66
Glucose turnover time (h)					110	129	116	171	239	338	263	1992
Dark bottle glucose turnover time (h)					126	341	142					223
Total primary production (mg C·m ⁻³ ·h ⁻¹)					2.13	1.38	1.15	1.32	0.81	1.02	0.01	0.00
Total chlorophyll (mg·m ⁻³)					1.03	1.14	0.56					0.58
Algal numbers (x10 ⁸ ·m ⁻³)					39		34					
Algal volume (mm ³ ·m ⁻³)					282		504					

a during incubation period

Table 164. Physical, chemical and biological data from Mohun Lake, June 11, 1980.

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Depth (m)	Compensation depth (m)			10.8	Surface temperature (°C)	15.7	Einstein·m ⁻² ·h ⁻¹	5.11	a
	Extinction coefficient (k _e)	0.40	Zooplankton biomass (mg dry wt.·m ⁻³)	28.0			Einstein·m ⁻² ·d ⁻¹		
Secchi depth (m)	5.5						Daily primary production (mg C·m ⁻² ·d ⁻¹)		
0	1	3	5	7.5	10	20	30		
pH				6.7		6.9			
Dissolved inorganic carbon (mg C·L ⁻¹)				1.92		1.64			
Dissolved organic carbon (mg C·L ⁻¹)				1.7	1.6	1.7			1.7
Particulate carbon (µg C·L ⁻¹)				275	357	311			184
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)				93	48	7			23
Particulate nitrogen (µg N·L ⁻¹)				60	74	78			24
Ammonia (µg N·L ⁻¹)				<4	8	7			7
Nitrate (µg N·L ⁻¹)				45	45	43			57
Total phosphorus (µg P·L ⁻¹)				1	1	2			2
Total dissolved phosphorus (µg P·L ⁻¹)				1	1	1			1
Soluble reactive silicon (µg Si·L ⁻¹)				580	580	580			930
Total dissolved solids (mg·L ⁻¹)				16					17
Bacteria numbers (x10 ⁶ ·mL ⁻¹)				1.93	2.25	1.78	1.91	2.05	1.97
Glucose turnover time (h)				162	125	115	115	92	83
Dark bottle glucose turnover time (h)					104		134		
Total primary production (mg C·m ⁻³ ·h ⁻¹)					1.89	2.54	2.77	2.60	2.14
Total chlorophyll (mg·m ⁻³)						2.16	1.82	2.32	1.62
Algal numbers (x10 ⁸ ·m ⁻³)						75		35	
Algal volume (mm ³ ·m ⁻³)						1096		670	

a during incubation period

Table 165. Physical, chemical and biological data from Mohun Lake, July 9, 1980.

Depth (m)	Compensation depth (m)	9.9	Surface temperature ($^{\circ}$ C)	19.1	Einstiens $\cdot m^{-2} \cdot h^{-1}$	4.53	a
	Extinction coefficient (k_e)	0.45	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	23.2	Einstiens $\cdot m^{-2} \cdot d^{-1}$	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	
Secchi depth (m)	6.0						
pH							
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)			6.4	6.6			
Dissolved organic carbon (mg C $\cdot L^{-1}$)			1.17	2.14			
Particulate carbon (μ g C $\cdot L^{-1}$)			3.6	4.4	3.9		4.6
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)			611	475	546		389
Particulate nitrogen (μ g N $\cdot L^{-1}$)			107	98	64		65
Ammonia (μ g N $\cdot L^{-1}$)			85	85	86		61
Nitrate (μ g N $\cdot L^{-1}$)			6	10	8		39
Total phosphorus (μ g P $\cdot L^{-1}$)			6	5	8		58
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)			<1	<1	<1		<1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)			<1	<1	<1		<1
Total dissolved solids (mg $\cdot L^{-1}$)			590	950	1270		650
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)			23				24
Glucose turnover time (h)			0.85	0.71	0.89	0.95	1.04
Dark bottle glucose turnover time (h)			30	55	40	51	30
Total primary production (mg C $\cdot m^{-2} \cdot h^{-1}$)			1.48	1.23	1.18	1.47	1.35
Total chlorophyll (mg $\cdot m^{-3}$)			3.57	2.81	2.83		
Algal numbers ($\times 10^8 \cdot m^{-3}$)			181		151		
Algal volume ($mm^3 \cdot m^{-3}$)			4508		4533		

a during incubation period

Table 166. Physical, chemical and biological data from Mohun Lake, August 6, 1980.

Depth (m)	Compensation depth (m) 11.0			Surface temperature ($^{\circ}$ C) 19.5			Einstein $\cdot m^{-2} \cdot h^{-1}$ 4.19 ^a					
	Extinction coefficient (k_e) 0.40	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$) 10.2	Einstein $\cdot m^{-2} \cdot d^{-1}$	Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	0	1	3	5	7.5	10	20	30
pH					6.9				6.8			
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)					1.81				1.90			
Dissolved organic carbon (mg C $\cdot L^{-1}$)					3.2	3.4	3.2					2.9
Particulate carbon (μ g C $\cdot L^{-1}$)					561	430	409					349
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)					115	89	67					143
Particulate nitrogen (μ g N $\cdot L^{-1}$)					68	51	49					56
Ammonia (μ g N $\cdot L^{-1}$)					6	<4	8					40
Nitrate (μ g N $\cdot L^{-1}$)					<1	<1	<1					68
Total phosphorus (μ g P $\cdot L^{-1}$)					<1	<1	3					<1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)					<1	<1	<1					<1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)					180	180	180					970
Total dissolved solids (mg $\cdot L^{-1}$)					20	20						
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)					1.29	1.06	1.43	1.26	1.44	1.74	1.77	1.53
Glucose turnover time (h)					33	18	18	22	19	37	138	766
Dark bottle glucose turnover time (h)					25	21	21					8052
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)					1.54	2.01	2.06	1.67	1.42	1.06	0.00	0.00
Total chlorophyll ($mg \cdot m^{-3}$)					2.60	2.14	2.48					3.74
Algal numbers ($\times 10^8 \cdot m^{-3}$)					134		127					
Algal volume ($mm^3 \cdot m^{-3}$)					4108		3985					

^a during incubation period

Table 167. Physical, chemical and biological data from Mohun Lake, September 10, 1980.

Depth (m)	Compensation depth (m)	10.9	Surface temperature (°C)	17.1	Einstein·m ⁻² ·h ⁻¹	1.40 ^a
	Extinction coefficient (k_e)	0.37	Zooplankton biomass (mg dry wt. · m ⁻³)	5.8	Einstein·m ⁻² ·d ⁻¹	
Secchi depth (m)	8.5				Daily primary production (mg C·m ⁻² ·d ⁻¹)	
0					0	
1					1	
3					3	
5					5	
7.5					7.5	
10					10	
20					20	
30					30	
pH					7.3	7.0
Dissolved inorganic carbon (mg C·L ⁻¹)				1.88	1.84	
Dissolved organic carbon (mg C·L ⁻¹)				3.7	3.7	3.7
Particulate carbon (μg C·L ⁻¹)				252	248	239
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)				92	88	90
Particulate nitrogen (μg N·L ⁻¹)				38	41	40
Ammonia (μg N·L ⁻¹)				5	<4	<4
Nitrate (μg N·L ⁻¹)				<1	<1	<1
Total phosphorus (μg P·L ⁻¹)				4	3	3
Total dissolved phosphorus (μg P·L ⁻¹)				3	3	3
Soluble reactive silicon (μg Si·L ⁻¹)				700	700	820
Total dissolved solids (mg·L ⁻¹)				20		20
Bacteria numbers ($\times 10^6$ ·mL ⁻¹)				2.15	1.81	1.77
Glucose turnover time (h)				36	28	26
Dark bottle glucose turnover time (h)					92	135
Total primary production (mg C·m ⁻³ ·h ⁻¹)				1.48	1.84	1.78
Total chlorophyll (mg·m ⁻³)					1.49	2.01
Algal numbers ($\times 10^8$ ·m ⁻³)					219	254
Algal volume (mm ³ ·m ⁻³)					163	306

^aduring incubation period

Table 168. Physical, chemical and biological data from Mohun Lake, October 8, 1980.

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Depth (m)	Compensation depth (m) <u>9.9</u>			Surface temperature ($^{\circ}$ C) <u>15.0</u>			Einstiens $\cdot m^{-2} \cdot h^{-1}$ <u>1.50</u> ^a		
	Extinction coefficient (k_e) <u>0.44</u>	Zooplankton biomass ($mg\ dry\ wt.\cdot m^{-3}$) <u>15.9</u>	Secchi depth (m) <u>6.0</u>	Einstiens $\cdot m^{-2} \cdot d^{-1}$	Daily primary production ($mg\ C\cdot m^{-2}\cdot d^{-1}$)		Einstiens $\cdot m^{-2} \cdot h^{-1}$	mg C $\cdot m^{-2} \cdot d^{-1}$	
	0	1	3	5	7.5	10	20	30	
pH				6.6	6.7	6.7			
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)		2.41		3.1	3.0		2.9		
Dissolved organic carbon ($mg\ C\cdot L^{-1}$)				273	273	275	282		
Particulate carbon ($\mu g\ C\cdot L^{-1}$)				82	89	89	69		
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)				39	43	45	45		
Particulate nitrogen ($\mu g\ N\cdot L^{-1}$)				<4	5	5	69		
Ammonia ($\mu g\ N\cdot L^{-1}$)				2	<1	2	53		
Nitrate ($\mu g\ N\cdot L^{-1}$)				4	1	3	1		
Total phosphorus ($\mu g\ P\cdot L^{-1}$)				2	2	2	2		
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)				520	790	880	1340		
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)				24			25		
Total dissolved solids ($mg\ \cdot L^{-1}$)				1.53	1.50	1.47	1.16		
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)				399	40	59	75	67	96
Glucose turnover time (h)				240	107	112	1254	350	408
Dark bottle glucose turnover time (h)				2.74	3.75	3.04	2.13	0.91	0.48
Total primary production ($mg\ C\cdot m^{-3}\cdot h^{-1}$)				0.96	6.40		7.30		
Total chlorophyll (mg $\cdot m^{-3}$)				191		244			
Algal numbers ($\times 10^8 \cdot m^{-3}$)				153	180				
Algal volume ($mm^3 \cdot m^{-3}$)									

^aduring incubation period

Table 169. Physical, chemical and biological data from Mohun Lake, November 19, 1980.

Depth (m)	Compensation depth (m) <u>10.2</u>			Surface temperature ($^{\circ}\text{C}$) <u>8.7</u>			Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$ <u>0.41</u> ^a					
	Extinction coefficient (k_e) <u>0.40</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$) <u>13.0</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	0	1	3	5	7.5	10	20	30
pH					7.2	7.2						
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			1.65		1.64							
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)			4.9	4.7	4.6							3.6
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)		270	284	271								294
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)		100	103	113								98
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)		32	38	38								30
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)		15	17	14								77
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)		14	13	12								52
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		2	4	3								4
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)		2	4	4								4
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)		390	380	370								1020
Total dissolved solids ($\text{mg} \cdot \text{L}^{-1}$)		19										19
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)		1.86	1.75	2.04								1.25
Glucose turnover time (h)		690	116	115	84	125	172	172	172	172	172	347
Dark bottle glucose turnover time (h)		43	127	239								308
Total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	1.64	1.25	1.24	0.58	0.21	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)		2.74	2.94	2.79								4.44
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)		103										70
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)		3004										2000

^a during incubation period

Table 170. Physical, chemical and biological data from Morice Lake, Station 1, May 27, 1980.

Depth (m)	Surface temperature ($^{\circ}$ C)			4.3	Einstiens $\cdot m^{-2} \cdot h^{-1}$	5.18 ^a		
	0	1	2	3	5	7.5	10	20
pH					6.8	6.8		
Dissolved inorganic carbon ($mg\ C\cdot L^{-1}$)					5.53	5.01		
Dissolved organic carbon ($mg\ C\cdot L^{-1}$)	0.6				0.5	0.4		
Particulate carbon ($\mu g\ C\cdot L^{-1}$)	129				112	111	162	
Dissolved kjeldahl nitrogen ($\mu g\ N\cdot L^{-1}$)	9				9	8	20	
Particulate nitrogen ($\mu g\ N\cdot L^{-1}$)	26				19	17	17	
Ammonia ($\mu g\ N\cdot L^{-1}$)	9				9	8	8	
Nitrate ($\mu g\ N\cdot L^{-1}$)	28				38	40	36	
Total phosphorus ($\mu g\ P\cdot L^{-1}$)	<1				1	<1	<1	
Total dissolved phosphorus ($\mu g\ P\cdot L^{-1}$)	<1				<1	<1	<1	
Soluble reactive silicon ($\mu g\ Si\cdot L^{-1}$)	1320				1300	1350	1300	
Total dissolved solids ($mg\ \cdot L^{-1}$)					25			
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.32	0.31			0.43	0.43	0.34	0.41
Glucose turnover time (h)	521	491	523		1326	693	499	830
Dark bottle glucose turnover time (h)		1060			1039	1154		2630
Total primary production ($mg\ C\cdot m^{-3}\cdot h^{-1}$)	0.16	0.26	0.34		0.34	0.32	0.33	0.29
Total chlorophyll ($mg\ \cdot m^{-3}$)	0.59				0.60	0.65		0.66
Algal numbers ($\times 10^8 \cdot m^{-3}$)	67				57			
Algal volume ($mm^3 \cdot m^{-3}$)	99				62			

^aduring incubation period

Table 171. Physical, chemical and biological data from Morice Lake, Station 2, May 27, 1980.

Depth (m)	Compensation depth (m)	26.3	Surface temperature ($^{\circ}$ C)	3.9	Einstein $\cdot m^{-2} \cdot h^{-1}$	5.21 ^a
	Extinction coefficient (k_e)	0.17	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	4.2	Einstein $\cdot m^{-2} \cdot d^{-1}$	43.12
Secchi depth (m)	11.0				Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	45
pH				6.8	6.7	
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)				5.42	5.64	
Dissolved organic carbon (mg C $\cdot L^{-1}$)			0.3	0.5	0.5	0.5
Particulate carbon (μ g C $\cdot L^{-1}$)			217	108	101	
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)			9	23	65	9
Particulate nitrogen (μ g N $\cdot L^{-1}$)			32	14	16	
Ammonia (μ g N $\cdot L^{-1}$)			9	9	9	9
Nitrate (μ g N $\cdot L^{-1}$)			42	47	46	48
Total phosphorus (μ g P $\cdot L^{-1}$)			<1	<1	<1	<1
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)			<1	<1	<1	<1
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)			1310	1310	1320	1310
Total dissolved solids (mg $\cdot L^{-1}$)					21	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)			0.48	0.63	0.47	0.51
Glucose turnover time (h)			827	419	566	949
Dark bottle glucose turnover time (h)				637	693	765
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)			0.12	0.18	0.24	0.20
Total chlorophyll (mg $\cdot m^{-3}$)				0.52	0.46	0.51
Algal numbers ($\times 10^8 \cdot m^{-3}$)				16	13	
Algal volume ($mm^3 \cdot m^{-3}$)				61	22	

^aduring incubation period

Table 172. Physical, chemical and biological data from Morice Lake, Station 1, June 25, 1980.

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Depth (m)	Surface temperature (°C)			Einstein·m ⁻² ·h ⁻¹			Einstein·m ⁻² ·d ⁻¹			Einstein·m ⁻² ·d ⁻¹		
	0	1	3	5	7.5	10	20	30	Daily primary production (mg C·m ⁻² ·d ⁻¹)	183	57.17	4.94 a
pH					7.1							
Dissolved inorganic carbon (mg C·L ⁻¹)					4.37							
Dissolved organic carbon (mg C·L ⁻¹)					0.9	0.8	0.7					1.1
Particulate carbon (μg C·L ⁻¹)					300	174	182					126
Dissolved kjeldahl nitrogen (μg N·L ⁻¹)					43	35	70					21
Particulate nitrogen (μg N·L ⁻¹)					45	39	40					35
Ammonia (μg N·L ⁻¹)					7	<4	<4					<4
Nitrate (μg N·L ⁻¹)					30	30	32					37
Total phosphorus (μg P·L ⁻¹)					1	1	1					2
Total dissolved phosphorus (μg P·L ⁻¹)					<1	<1	<1					<1
Soluble reactive silicon (μg Si·L ⁻¹)					2380	2200	3820					2600
Total dissolved solids (mg·L ⁻¹)							25					
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)					0.44	0.55	0.55	0.42	0.50	0.51	0.44	0.53
Glucose turnover time (h)					577	477	305	186	221	313	656	
Dark bottle glucose turnover time (h)					823	383	217					699
Total primary production (mg C·m ⁻³ ·h ⁻¹)					0.49	0.59	0.98	1.46	1.15	1.01	0.04	0.00
Total chlorophyll (mg·m ⁻³)					1.08	2.14	2.24					1.90
Algal numbers ($\times 10^8 \cdot m^{-3}$)					48			77				
Algal volume (mm ³ ·m ⁻³)					42			85				

a during incubation period

Table 173. Physical, chemical and biological data from Morice Lake, Station 2, June 25, 1980.

Depth (m)	Compensation depth (m) <u>17.8</u>			Surface temperature (°C) <u>7.0</u>			Einstein·m ⁻² ·h ⁻¹ <u>5.25</u> ^a					
	Extinction coefficient (k_e) <u>0.24</u>	Zooplankton biomass (mg dry wt. · m ⁻³) <u>17.3</u>	Einstein·m ⁻² ·d ⁻¹ <u>57.17</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹) <u>99</u>	0	1	3	5	7.5	10	20	30
pH					7.1	7.1						
Dissolved inorganic carbon (mg C·L ⁻¹)					4.76		5.00					
Dissolved organic carbon (mg C·L ⁻¹)						0.6	0.5					0.8
Particulate carbon (µg C·L ⁻¹)						106	113	149				132
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)						33	47	72				30
Particulate nitrogen (µg N·L ⁻¹)						31	33	40				33
Ammonia (µg N·L ⁻¹)						5	<4	<4				5
Nitrate (µg N·L ⁻¹)						35	36	36				39
Total phosphorus (µg P·L ⁻¹)						1	1	1				2
Total dissolved phosphorus (µg P·L ⁻¹)						1	1	2				1
Soluble reactive silicon (µg Si·L ⁻¹)						2470	1470	2700				2130
Total dissolved solids (mg·L ⁻¹)							37					
Bacteria numbers (x10 ⁶ · mL ⁻¹)						0.61	0.63	0.48	0.56	0.53	0.57	0.44
Glucose turnover time (h)						4428	620	637	470	296	500	380
Dark bottle glucose turnover time (h)							2627	2833	1235			1590
Total primary production (mg C·m ⁻³ ·h ⁻¹)						0.06	0.24	0.38	0.70	0.69	0.60	0.09
Total chlorophyll (mg · m ⁻³)							0.56	1.00	0.66			1.18
Algal numbers (x10 ⁸ · m ⁻³)						30	37					
Algal volume (mm ³ · m ⁻³)						34	86					

^aduring incubation period

Table 174. Physical, chemical and biological data from Morice Lake, Station 1, July 22, 1980.

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Depth (m)	Surface temperature (°C)			Einstiens·m ⁻² ·h ⁻¹			Einstiens·m ⁻² ·d ⁻¹			Einstiens·m ⁻² ·h ⁻¹			Einstiens·m ⁻² ·d ⁻¹				
	0	1	2	3	5	7.5	10	20	0	1	2	3	5	7.5	10	20	
pH					7.0								6.8				
Dissolved inorganic carbon (mg C·L ⁻¹)					4.59								5.02				
Dissolved organic carbon (mg C·L ⁻¹)					2.0								1.9				
Particulate carbon (µg C·L ⁻¹)					234								190				
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)					216								120				
Particulate nitrogen (µg N·L ⁻¹)					24								24				
Ammonia (µg N·L ⁻¹)					15								16				
Nitrate (µg N·L ⁻¹)					23								24				
Total phosphorus (µg P·L ⁻¹)					3								<1				
Total dissolved phosphorus (µg P·L ⁻¹)					1								<1				
Soluble reactive silicon (µg Si·L ⁻¹)					1130								1170				
Total dissolved solids (mg·L ⁻¹)						35											
Bacteria numbers (x10 ⁶ ·mL ⁻¹)					0.71	0.61				0.76	0.65	0.67	0.67	0.65			
Glucose turnover time (h)					3187	157	136	272	440	1850			785	790			
Dark bottle glucose turnover time (h)						68				770	272			147			
Total primary production (mg C·m ⁻³ ·h ⁻¹)					0.28	0.42	0.52	0.46	0.58	0.40	0.40	0.40	0.40	0.04			
Total chlorophyll (mg·m ⁻³)						0.79				0.94	1.05			1.41			
Algal numbers (x10 ⁸ ·m ⁻³)					71					100							
Algal volume (mm ³ ·m ⁻³)					89					143							

^a during incubation period

Table 175. Physical, chemical and biological data from Morice Lake, Station 2, July 22, 1980.

Depth (m)	0	1	2	3	5	7.5	10	20
pH	6.9	4.73	2.3	2.7			7.0	
Dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	1.9							
Dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	180	188	187				225	
Particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)	370	177	190				150	
Dissolved kjeldahl nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	21	29	11				32	
Particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	19	15	15				15	
Ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	24	25	26				31	
Nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)	<1	1	2				<1	
Total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	<1	<1	<1				<1	
Total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	1130	1150	1140				1160	
Soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)								
Total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)								
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	0.55	0.55	0.49	0.54	0.64	0.58	0.64	
Glucose turnover time (h)	991	649	468	461	375	486	513	3329
Dark bottle glucose turnover time (h)		626	731	920				2026
Total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	0.10	0.28	0.38	0.42	0.52	0.22	0.20	0.00
Total chlorophyll (mg $\cdot \text{m}^{-3}$)		1.21	1.20	1.12				1.41
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	26		18					
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	55		28					

^aduring incubation period

Table 176. Physical, chemical and biological data from Morice Lake, Station 1, August 21, 1980.

Depth (m)	Surface temperature ($^{\circ}\text{C}$)			Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$			3.44^{a}		
	15.1	12.4	12.2	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	139.32	Daily primary production	158	(mg C $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	
pH				7.1	225	186	7.0		
Dissolved inorganic carbon (mg C $\cdot \text{L}^{-1}$)	3.3	2.3	2.3	60	48	48			
Dissolved organic carbon (mg C $\cdot \text{L}^{-1}$)	179	4.22	4.47	27	39	30			
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)				5	5	5			
Dissolved kjeldahl nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	60	22	21	22	21	23			
Particulate nitrogen ($\mu\text{g N} \cdot \text{L}^{-1}$)	27	39	30	5	5	5			
Ammonia ($\mu\text{g N} \cdot \text{L}^{-1}$)				5	5	5			
Nitrate ($\mu\text{g N} \cdot \text{L}^{-1}$)	3	3	3	2	2	2			
Total phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)	2	2	2	1520	1810	2570			
Total dissolved phosphorus ($\mu\text{g P} \cdot \text{L}^{-1}$)				32					
Soluble reactive silicon ($\mu\text{g Si} \cdot \text{L}^{-1}$)				0.77	0.82	0.80	0.67	0.83	0.83
Total dissolved solids (mg $\cdot \text{L}^{-1}$)				679	115	80	154	427	295
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				904	271	442	232	360	3758
Glucose turnover time (h)									
Dark bottle glucose turnover time (h)									
Total primary production (mg C $\cdot \text{m}^{-3} \cdot \text{h}^{-1}$)	0.85	1.51	1.90	1.16	1.16	1.08	1.04	1.20	1.20
Total chlorophyll (mg $\cdot \text{m}^{-3}$)									
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	37	52	52						
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	66	174	174						

^aduring incubation period

Table 177. Physical, chemical and biological data from Morice Lake, Station 2, August 21, 1980.

Depth (m)	Compensation depth (m)			18.8			Surface temperature (°C)			10.9			Einstiens·m ⁻² ·h ⁻¹			3.99 ^a		
	Extinction coefficient (k_e)	0.23	Zooplankton biomass (mg dry wt.·m ⁻³)	25.2	Einstiens·m ⁻² ·d ⁻¹	39.32	Daily primary production (mg C·m ⁻² ·d ⁻¹)	120	Einstiens·m ⁻² ·h ⁻¹	39.32	Daily primary production (mg C·m ⁻² ·d ⁻¹)	120	Einstiens·m ⁻² ·h ⁻¹	39.32	Daily primary production (mg C·m ⁻² ·d ⁻¹)	120	Einstiens·m ⁻² ·h ⁻¹	39.32
0	1	2	3	5	7.5	10	20	0	1	2	3	5	7.5	10	20			
pH								6.9					7.1					
Dissolved inorganic carbon (mg C·L ⁻¹)								4.58					4.25					
Dissolved organic carbon (mg C·L ⁻¹)								2.6					2.6					
Particulate carbon (µg C·L ⁻¹)								155					166					
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)								81					60					
Particulate nitrogen (µg N·L ⁻¹)								25					25					
Ammonia (µg N·L ⁻¹)								7					6					
Nitrate (µg N·L ⁻¹)								24					24					
Total phosphorus (µg P·L ⁻¹)								3					3					
Total dissolved phosphorus (µg P·L ⁻¹)								2					2					
Soluble reactive silicon (µg Si·L ⁻¹)								1770					1150					
Total dissolved solids (mg·L ⁻¹)													26					
Bacteria numbers (x10 ⁶ ·mL ⁻¹)								0.83					0.89					
Glucose turnover time (h)								740					138					
Dark bottle glucose turnover time (h)								299					337					
Total primary production (mg C·m ⁻³ ·h ⁻¹)								0.23					0.78					
Total chlorophyll (mg·m ⁻³)								0.78					0.90					
Algal numbers (x10 ⁸ ·m ⁻³)								22					57					
Algal volume (mm ³ ·m ⁻³)								92					172					

^aduring incubation period

Table 178. Physical, chemical and biological data from Morice Lake, Station 1, September 28, 1980.

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Depth (m)	Compensation depth (m) <u>18.8</u>			Surface temperature (°C) <u>10.3</u>			Einstiens·m ⁻² ·h ⁻¹ <u>0.43</u> ^a		
	Extinction coefficient (k _e) <u>0.23</u>	Zooplankton biomass (mg dry wt.·m ⁻³) <u>30.9</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹) <u>86</u>	Einstiens·m ⁻² ·d ⁻¹ <u>3.26</u>	Daily primary production (mg C·m ⁻² ·d ⁻¹) <u>86</u>	Einstiens·m ⁻² ·h ⁻¹ <u>0.43</u> ^a			
0	1	2	3	5	7.5	10	20		
pH									
Dissolved inorganic carbon (mg C·L ⁻¹)									
Dissolved organic carbon (mg C·L ⁻¹)									
Particulate carbon (µg C·L ⁻¹)									
Dissolved kjeldahl nitrogen (µg N·L ⁻¹)									
Particulate nitrogen (µg N·L ⁻¹)									
Ammonia (µg N·L ⁻¹)									
Nitrate (µg N·L ⁻¹)									
Total phosphorus (µg P·L ⁻¹)									
Total dissolved phosphorus (µg P·L ⁻¹)									
Soluble reactive silicon (µg Si·L ⁻¹)									
Total dissolved solids (mg·L ⁻¹)									
Bacteria numbers (x10 ⁶ ·mL ⁻¹)									
Glucose turnover time (h)									
Dark bottle glucose turnover time (h)									
Total primary production (mg C·m ⁻³ ·h ⁻¹)									
Total chlorophyll (mg·m ⁻³)									
Algal numbers (x10 ⁸ ·m ⁻³)									
Algal volume (mm ³ ·m ⁻³)									

^aduring incubation period

Table 179. Physical, chemical and biological data from Morice Lake, Station 2, September 28, 1980.

Depth (m)	Compensation depth (m)	20.4	Surface temperature ($^{\circ}\text{C}$)	<u>9.7</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$	<u>0.39</u>	^a
	Extinction coefficient (k_e)	<u>0.21</u>	Zooplankton biomass ($\text{mg dry wt.} \cdot \text{m}^{-3}$)	<u>23.2</u>	Einstein $\cdot \text{m}^{-2} \cdot \text{d}^{-1}$	<u>3.26</u>	
Secchi depth (m)	<u>6.0</u>	Daily primary production ($\text{mg C} \cdot \text{m}^{-2} \cdot \text{d}^{-1}$)	<u>60</u>				
pH				7.2	7.2	7.2	
Dissolved inorganic carbon ($\text{mg C} \cdot \text{L}^{-1}$)				4.13	2.8	3.7	
Dissolved organic carbon ($\text{mg C} \cdot \text{L}^{-1}$)					4.27		2.5
Particulate carbon ($\mu\text{g C} \cdot \text{L}^{-1}$)			2.7				187
Dissolved kjeldahl nitrogen ($\mu\text{g N.L}^{-1}$)			178	181	190		53
Particulate nitrogen ($\mu\text{g N.L}^{-1}$)			34	39	32		19
Ammonia ($\mu\text{g N.L}^{-1}$)			21	25	24		4
Nitrate ($\mu\text{g N.L}^{-1}$)			<4	<4	<4		23
Total phosphorus ($\mu\text{g P.L}^{-1}$)			15	15	15		<1
Total dissolved phosphorus ($\mu\text{g P.L}^{-1}$)			<1	<1	<1		<1
Soluble reactive silicon ($\mu\text{g Si.L}^{-1}$)			<1	<1	<1		<1
Total dissolved solids (mg.L^{-1})			1070	1070	1080		1110
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)				21			
Glucose turnover time (h)			0.73	0.88	1.06	0.71	0.79
Dark bottle glucose turnover time (h)			266	168	385	143	136
Total primary production ($\text{mg C.m}^{-3} \cdot \text{h}^{-1}$)				380	140	136	157
Total chlorophyll (mg $\cdot \text{m}^{-3}$)			0.99	1.57	0.44	1.18	0.43
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)				1.44		1.28	2.02
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)				44		48	1.16
				76		104	104

^a during incubation period

Table 180. Physical, chemical and biological data from Morice Lake, Station 1, October 21, 1980.

Depth (m)	Surface temperature ($^{\circ}\text{C}$) <u>8.7</u>					Einstiens $\cdot \text{m}^{-2} \cdot \text{h}^{-1}$ <u>1.67</u> ^a		
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>7.5</u>	<u>10</u>	<u>20</u>
pH	7.2	7.1						
Dissolved inorganic carbon (mg C.L^{-1})	4.22	4.45						
Dissolved organic carbon (mg C.L^{-1})	3.1	2.8	2.0					
Particulate carbon ($\mu\text{g C.L}^{-1}$)	158	169	169					
Dissolved kjeldahl nitrogen ($\mu\text{g N.L}^{-1}$)	108	55	64					
Particulate nitrogen ($\mu\text{g N.L}^{-1}$)	25	26	29					
Ammonia ($\mu\text{g N.L}^{-1}$)	9	8	8					
Nitrate ($\mu\text{g N.L}^{-1}$)	17	17	18					
Total phosphorus ($\mu\text{g P.L}^{-1}$)	2	1	1					
Total dissolved phosphorus ($\mu\text{g P.L}^{-1}$)	2	2	<1					
Soluble reactive silicon ($\mu\text{g Si.L}^{-1}$)	1090	1090	1090					
Total dissolved solids (mg.L^{-1})	0.97	1.00	1.04	1.00	1.08	1.07	1.08	1.11
Bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	611	296	238	252	435	242	262	380
Glucose turnover time (h)	1858	358						
Dark bottle glucose turnover time (h)								
Total primary production ($\text{mg C.m}^{-2} \cdot \text{h}^{-1}$)	0.16	0.42	0.54	0.53	0.44	0.35	0.30	0.02
Total chlorophyll (mg $\cdot \text{m}^{-3}$)	2.88	2.78	2.68					
Algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	27						112	
Algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)	194						116	

^a during incubation period

Table 181. Physical, chemical and biological data from Morice Lake, Station 2, October 21, 1980.

Depth (m)	Compensation depth (m)	9.3	Surface temperature ($^{\circ}$ C)	8.2	Einstein $\cdot m^{-2} \cdot h^{-1}$	1.60 ^a
	Extinction coefficient (k_e)	0.48	Zooplankton biomass (mg dry wt. $\cdot m^{-3}$)	21.3	Einstein $\cdot m^{-2} \cdot d^{-1}$	9.75
Secchi depth (m)	3.0				Daily primary production (mg C $\cdot m^{-2} \cdot d^{-1}$)	27
0						
1						
2						
3						
5						
7.5						
10						
20						
pH						
Dissolved inorganic carbon (mg C $\cdot L^{-1}$)						
Dissolved organic carbon (mg C $\cdot L^{-1}$)						
Particulate carbon (μ g C $\cdot L^{-1}$)	158		2.2	2.4	1.8	1.2
Dissolved kjeldahl nitrogen (μ g N $\cdot L^{-1}$)			144	168	168	
Particulate nitrogen (μ g N $\cdot L^{-1}$)	55		56	44	61	
Ammonia (μ g N $\cdot L^{-1}$)	21		21	26	26	
Nitrate (μ g N $\cdot L^{-1}$)	8		9	8	13	
Total phosphorus (μ g P $\cdot L^{-1}$)	23		23	23	24	
Total dissolved phosphorus (μ g P $\cdot L^{-1}$)	2		2	2	2	
Soluble reactive silicon (μ g Si $\cdot L^{-1}$)	<1		<1	<1	<1	
Total dissolved solids (mg $\cdot L^{-1}$)	1110		1120	1110	1110	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)						
Glucose turnover time (h)	1700	617	215	849	419	407
Dark bottle glucose turnover time (h)		1368		718	840	
Total primary production (mg C $\cdot m^{-3} \cdot h^{-1}$)	0.17	0.48	0.66	0.56	0.56	0.10
Total chlorophyll (mg $\cdot m^{-3}$)	2.04		2.14	2.02	2.02	2.02
Algal numbers ($\times 10^8 \cdot m^{-3}$)	9		11			
Algal volume ($mm^3 \cdot m^{-3}$)	58		95			

^aduring incubation period

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Appendix Table 1. Monthly sampling dates for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			3	24			24			
Babine-1				4			29			
Babine-2				4			29			
Babine-3				4			30			
Babine-4				4			30			
Babine-5				4			30			
Bonilla			2,29	26	23	27	26	22		16
Curtis			2,31	26	23	20	26	22		
Devon			28	27	24	20	25	24		
Eden			3	24			24			
Great Central-1	18	15	16	13	11	8	12	10	22	
Great Central-2	18	15	16	13	11	8	12	10	22	
Henderson	18	15	16	13	11	8	12	10	22	
Hobiton	18	15	16	13	11	8	12	10	22	
Ian-1			3	24			24			
Ian-2			3	24			24			
Kennedy-2	19	16	15	12	10	7	11	9	21	
Kennedy-3	19	16	15	12	10	7	11	9	21	
Kitlope		30	30	28	30	19	23	25		
Long-2	21	19	13	10	8	5	9	7	18	
Long-3	21	19	13	10	8	5	9	7	18	
Lowe			1,28	27	24	20	25	24		16
Mercer			3	24			24			
Mikado			1,29							
Mohun	20	17	14	11	9	6	10	8	19	
Morice-1			27	25	22	21	28	21		
Morice-2			27	25	22	21	28	21		

Appendix Table 2. Monthly values and depth of maximum stability (m) for the 1980 study lakes.

Lake and station	Mar Depth value	Apr Depth value	May Depth value	Jun Depth value	Jul Depth value
Awun		10.0	.002	6.8	.051
Babine-1				5.5	.028
Babine-2				11.0	.003
Babine-3				6.0	.005
Babine-4				2.5	.004
Babine-5				0.5	.008
Bonilla	0	7.0	.022	6.6	.069
Curtis	13.0	.002	7.2	.043	4.1
Devon		3.8	.042	5.1	.084
Eden		17.0	.002	7.6	.063
Great Central-1	0	7.8	.009	10.4	.051
Great Central-2	0	1.2	.005	9.8	.036
Henderson	0	2.5	.009	16.0	.089
Hobiton	0	15.2	.010	6.2	.048
Ian-1				1.0	.007
Ian-2				2.0	.006
Kennedy-2	23.0	.002	0.2	.018	5.1
Kennedy-3	7.5	.002	10.2	.007	9.6
Kitlope		0		5.0	.011
Long-2	0	16.0	.002	9.2	.036
Long-3	0	14.0	.003	7.0	.018
Lowe		0		12.5	.016
Mercer				2.0	.006
Mikado		1.0	.003	3.8	.048
Mohun	0	4.8	.014	6.2	.046
Morice-1				0	.016
Morice-2				0	.009
				3.2	23.0
				2.2	.011

Appendix Table 2 Cont'd.

Lake and station		Aug Depth	Aug value	Sep Depth	Sep value	Oct Depth	Oct value	Nov Depth	Nov value	Dec Depth	Dec value
Awun			10.8	.034							
Babine-1			9.2	.020							
Babine-2			35.2	.043							
Babine-3			29.0	.032							
Babine-4			21.7	.044							
Babine-5			17.0	.044							
Bonilla		9.6	.084	14.2	.048	19.6	.025				0
Curtis		6.9	.084	10.5	.030	17.9	.063				
Devon		8.0	.066	11.8	.042	13.6	.063				
Eden				13.2	.039						
Great Central-1		8.4	.096	11.2	.091	11.2	.084	19.4	.032		
Great Central-2		10.2	.062	11.7	.087	11.0	.069	17.4	.024		
Henderson		16.1	.077	17.2	.119	23.0	.089	28.4	.023		
Hobiton		6.2	.132	9.3	.077	12.0	.077	23.8	.014		
Ian-1				14.6	.042						
Ian-2				18.0	.056						
Kennedy-2		6.2	.136	5.6	.074	15.2	.026	24.8	.012		
Kennedy-3		8.0	.136	13.2	.103	14.1	.051	3.2	.009		
Kitlope		3.6	.059	3.9	.014	21.8	.003				
Long-2		9.8	.066	2.8	.030	19.0	.027	26.5	.013		
Long-3		6.6	.036	0.2	.036	18.7	.044	28.0	.023		
Lowe		11.0	.108	16.0	.051	28.0	.021				0
Mercer				13.0	.010						
Mikado											
Mohun		7.7	.094	9.9	.084	11.0	.077	16.2	.019		
Morice-1		26.6	.032	33.9	.012		0				
Morice-2		27.6	.012	36.1	.007	34.0	.016				

Appendix Table 3. Monthly Secchi depth (m) values for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			4.5	5.0			3.5			
Babine-1				4.0			4.5			
Babine-2				6.5			4.5			
Babine-3				5.5			4.5			
Babine-4				4.5			4.5			
Babine-5				5.5			4.5			
Bonilla		4.5	4.5	3.5	3.5	2.5	2.5	2.5		2.0
Curtis		6.5	6.0	6.0	5.0	4.0	4.0	4.5		
Devon			5.5	4.5	5.5	4.0	4.0	3.0		
Eden			3.5	5.0			3.5			
Great Central-1	12.0	10.0	7.3	7.8	7.5	10.5	12.0	12.5	7.0	
Great Central-2	12.5	11.0	8.0	7.0	8.0	10.0	11.0	8.5	5.5	
Henderson	7.0	5.5	4.5	5.0	6.0	5.0	6.5	5.0	6.0	
Hobiton	7.0	6.0	6.0	6.5	6.5	4.5	6.0	4.0		
Ian-1				3.5	5.0			4.0		
Ian-2				3.5	4.0			3.0		
Kennedy-2	8.5	6.0	5.0	6.0	6.0	6.5	5.0	4.0	4.0	
Kennedy-3	6.0	6.0	5.0	5.5	6.0	5.0	5.5	4.0	5.0	
Kitlope			5.5	6.0	4.5	3.0	2.5	1.0	1.5	
Long-2	5.5	6.5	5.0	5.5	5.0	5.0	3.5	3.0	4.5	
Long-3	6.0	6.0	5.5	5.5	5.5	6.5	4.0	3.0	4.5	
Lowe			7.0	6.5	5.0	7.5	6.5	6.0	4.5	3.0
Mercer				5.0	6.0			3.5		
Mikado				6.0						
Mohun	6.0	6.0	7.0	5.5	6.0	6.9	8.5	6.0	7.0	
Morice-1				12.0	6.5	6.5	5.5	8.0	5.5	
Morice-2				11.0	6.5	5.5	6.0	6.0	3.0	

Appendix Table 4. Monthly mean extinction coefficient (k_e) values for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			0.85	0.71			0.92			
Babine-1				0.80			0.67			
Babine-2				0.62			0.59			
Babine-3				0.60			0.56			
Babine-4				0.55			0.62			
Babine-5				0.59			1.87			
Bonilla	0.91	0.75	0.94	0.95	1.12	1.20	1.24			1.21
Curtis	0.62	0.58	0.57	0.65	0.76	0.82	0.80			
Devon			0.66	0.59	0.60	0.82	0.96	1.06		
Eden			0.96	0.93			1.13			
Great Central-1	0.27	0.29	0.29	0.28	0.27		0.37	0.38		
Great Central-2	0.24	0.28	0.31	0.32	0.28		0.30	0.37		
Henderson	0.36	0.47	0.38	0.45	0.47		0.65	0.56		
Hobiton	0.49	0.52	0.49	0.45	0.62		0.79	0.60		
Ian-1			1.41	0.92			1.18			
Ian-2			1.15	1.16			1.07			
Kennedy-2		0.42	0.49	0.48	0.45	0.48		0.79	0.53	
Kennedy-3	0.50	0.57	0.53	0.59	0.54	0.42		0.64	0.65	
Kitlope		0.54	0.52	0.45	0.48	0.51	1.28	0.98		
Long-2	0.69	1.21	0.63	0.52	0.47	0.51	0.87	0.70	0.70	
Long-3	0.79	1.11	0.63	0.49	0.50	0.48	0.71	0.68	0.64	
Lowe		0.57	0.52	0.47	0.52	0.56	0.67	0.69		0.67
Mercer			0.74	0.60			1.04			
Mikado			0.55							
Mohun	0.53	0.40	0.35	0.40	0.45	0.40	0.37	0.44	0.40	
Morice-1				0.20	0.26	0.25	0.29	0.23	0.32	
Morice-2				0.16	0.24	0.31	0.35	0.21	0.48	

Appendix Table 5. Monthly compensation depth (m) values for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			5.0	6.1			4.8			
Babine-1				5.6			6.3			
Babine-2				7.1			7.2			
Babine-3				7.1			7.4			
Babine-4				5.5			6.9			
Babine-5				5.5			2.5			
Bonilla	4.9	5.8	4.6	4.6	3.9	3.6	3.5			3.5
Curtis	6.7	7.4	7.7	6.7	5.7	5.3	5.4			
Devon			6.6	7.4	7.2	5.3	4.7	4.1		
Eden			4.5	4.7			3.8			
Great Central-1	16.1	14.8	15.2	15.4	16.4		11.5	10.9		
Great Central-2	17.5	14.9	14.1	13.6	15.4		13.6	11.6		
Henderson	11.9	9.4	11.2	9.9	9.2		6.8	7.8		
Hobiton	8.6	8.3	8.7	9.6	7.1		5.9	7.1		
Ian-1			3.1	4.7			3.7			
Ian-2			3.7	3.7			4.2			
Kennedy-2		9.8	8.9	9.3	9.6	9.2		5.3	8.4	
Kennedy-3	8.7	7.7	8.3	8.3	8.3	10.3		6.4	6.5	
Kitlope		8.2	8.5	10.0	9.3	8.9	3.7	4.5		
Long-2	6.4	3.8	6.7	8.0	6.5	8.6	5.2	6.2	6.1	
Long-3	5.9	4.2	6.8	8.8	8.9	9.1	6.1	6.3	6.7	
Lowe		7.5	8.3	9.1	8.3	7.8	6.7	6.1		6.4
Mercer			5.6	7.4			4.2			
Mikado				8.1						
Mohun	8.6	10.5	12.3	10.8	9.9	11.0	10.9	9.9	10.2	
Morice-1			22.3	16.9	17.1	15.1	18.8	12.9		
Morice-2			26.3	17.9	14.4	12.8	20.4	9.3		

Appendix Table 6. Monthly surface temperature ($^{\circ}\text{C}$) values for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			5.6	16.2			14.5			
Babine-1				12.2			10.9			
Babine-2				5.8			11.4			
Babine-3							10.9			
Babine-4				6.8			11.2			
Babine-5				6.4			11.7			
Bonilla		6.0	12.1	17.6	17.6	15.5	14.7	10.9		5.5
Curtis		5.5	13.8	19.4	17.7	17.3	14.2	11.0		
Devon			12.7	18.1	17.1	16.5	14.0	10.5		
Eden			5.9	15.7			14.0			
Great Central-1	5.3	7.3	14.6	16.2	17.5	21.7	18.9	16.3	9.7	
Great Central-2	6.0	6.2	13.0	15.9	17.6	21.7	19.0	16.2	9.7	
Henderson		5.9	7.8	12.8	14.6	16.4	19.9	17.3	15.3	10.2
Hobiton		6.7	8.5	14.1	15.7	17.5	20.5	17.3	14.5	9.2
Ian-1			6.3	15.7			14.3			
Ian-2			6.5	16.4			14.4			
Kennedy-2		6.7	9.2	14.6	15.8	17.7	20.3	17.9	14.6	9.6
Kennedy-3		7.2	8.3	13.7	16.2	17.5	20.7	17.7	14.7	9.7
Kitlope			3.3	7.8	10.7	11.5	12.7	10.3	8.0	
Long-2		5.9	5.6	11.2	14.3	16.0	17.4	15.5	13.9	8.8
Long-3		5.9	6.6	10.6	13.1	16.6	17.7	16.4	13.7	9.2
Lowe			4.6	10.6	17.4	17.2	16.0	14.6	11.1	
Mercer				6.5	15.2			12.6		
Mikado			5.1	14.3						
Mohun		4.3	8.3	14.5	15.7	19.1	19.5	17.1	15.0	8.7
Morice-1				4.3	9.6	11.0	12.4	10.3	8.7	
Morice-2				3.9	7.0	10.5	10.9	9.7	8.2	

Appendix Table 7. Monthly mean epilimnetic pH values for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			6.4	6.2			4.9			
Babine-1				7.3			7.6			
Babine-2				7.0			7.6			
Babine-3				7.4			7.7			
Babine-4				7.4			7.6			
Babine-5				7.3			7.6			
Bonilla		5.7	5.7	5.5	6.0	6.2	5.8	5.7		
Curtis		6.0	5.7	5.7	6.4	6.4	6.2	5.6		
Devon			5.7	5.8	6.0	5.8	5.9	5.5		
Eden			6.6	6.1			7.3			
Great Central-1	6.6	6.5	6.9	7.6	7.1	6.9	6.2	7.0	6.9	
Great Central-2	6.6	6.5	7.1	7.6	7.0	6.9	6.2	7.1	6.8	
Henderson	6.6	6.4	6.7	7.3	6.6	6.8	6.2	6.8	6.6	
Hobiton	6.1	6.2	6.6	7.2	6.9	6.9	5.9	6.9	6.6	
Ian-1			6.2	6.1			4.4			
Ian-2			6.4	5.7			3.5			
Kennedy-2	6.7	6.7	7.1	7.5	6.9	6.8	7.1	6.9	7.0	
Kennedy-3	6.6	6.8	7.0	7.4	7.0	6.4	6.4	7.0	6.9	
Kitlope			6.1	6.1	6.2	6.3	6.4	5.9	5.9	
Long-2	6.1	6.0	6.0	5.7	6.6	6.5	6.5	6.3	6.3	
Long-3	6.0	6.1	6.1	5.8	6.4	6.5	6.8	6.3	6.3	
Lowe			5.8	5.7	5.9	6.0	6.0	6.0	5.4	
Mercer				6.2	6.2		3.6			
Mikado			5.6	5.6						
Mohun	6.5	6.4	6.2	6.8	6.5	6.9	7.2	6.7	7.2	
Morice-1				6.8	7.0	6.9	7.1	7.1	7.1	
Morice-2				6.7	7.1	6.9	7.0	7.2	7.1	

Appendix Table 8. Monthly values of mean epilimnetic total alkalinity ($\text{mg}\cdot\text{L}^{-1}$ CaCO_3) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			5.10	4.85			4.69			
Babine-1				33.60			35.78			
Babine-2				35.70			36.30			
Babine-3				41.25			35.56			
Babine-4				36.00			35.56			
Babine-5				38.50			36.05			
Bonilla	0.50	0.55	0.50	0.80	1.05	1.12	0.74			
Curtis	1.38	0.79	1.00	1.30	1.43	1.43	0.79			
Devon			0.50	0.75	0.72	0.74	0.57	0.40		
Eden			5.31	5.76			6.13			
Great Central-1	12.58	12.57	12.95	14.70	13.84	13.72	11.85	13.95	12.96	
Great Central-2	11.80	12.38	12.53	14.44	13.47	13.72	12.47	13.83	12.84	
Henderson	6.90	7.01	7.40	8.40	8.36	8.48	6.17	7.95	7.28	
Hobiton	4.70	4.63	4.70	5.91	5.19	6.24	3.83	6.17	5.43	
Ian-1			4.73	3.75			4.33			
Ian-2			6.82	2.55			3.16			
Kennedy-2	11.82	12.41	13.33	14.77	15.22	14.94	14.20	14.24	12.15	
Kennedy-3	8.81	9.00	9.69	10.76	11.54	11.51	10.74	11.29	10.06	
Kitlope		2.22	1.83	1.73	1.63	1.20	1.46	1.41		
Long-2	1.25	2.13	2.69	2.89	3.56	3.78	3.15	2.78	3.08	
Long-3	2.75	2.50	2.91	3.00	3.56	4.12	3.15	2.96	3.03	
Lowe		0.36	0.57	0.60	0.70	0.70	0.52	0.12		
Mercer			2.03	4.00			3.63			
Mikado		0.28	0.28							
Mohun	5.75	5.00	4.87	5.38	4.12	5.93	6.61	6.30	5.68	
Morice-1				14.51	15.08	14.68	14.69	14.60	14.81	
Morice-2				14.69	15.85	14.51	14.57	14.77	14.47	

Appendix Table 9. Monthly values of mean epilimnetic dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$) for the 1980 study lakes.^a

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			2.71	2.46			1.61			
Babine-1				9.29			9.20			
Babine-2				10.70			9.27			
Babine-3				10.94			9.05			
Babine-4				9.46			9.15			
Babine-5				10.74			9.17			
Bonilla		0.72	0.75	0.93	0.51	0.69	1.40	1.15		
Curtis		1.32	1.16	1.21	0.53	0.72	0.94	1.38		
Devon			0.70	0.83	0.41	0.79	0.66	0.90		
Eden			2.24	4.15			2.60			
Great Central-1	5.24	5.74	4.04	3.76	3.98	4.25	7.21	4.08	4.17	
Great Central-2	4.52	6.04	3.69	3.68	4.00	4.30	7.90	3.92	4.34	
Henderson	2.95	3.27	2.68	2.25	3.04	2.80	4.21	2.62	2.92	
Hobiton	3.69	2.80	1.89	1.67	1.62	1.91	3.37	2.00	2.12	
Ian-1				3.25	3.16			1.75		
Ian-2				3.44	4.75			1.54		
Kennedy-2	4.61	4.56	3.68	3.86	4.84	4.85	4.27	4.38	3.67	
Kennedy-3	3.42	3.20	2.99	3.35	3.45	5.26	4.67	3.58	3.42	
Kitlope			1.84	1.56	1.09	0.94	0.64	1.48	1.61	
Long-2	2.30	1.98	2.42	3.90	1.50	1.52	1.40	1.54	1.67	
Long-3	2.51	1.99	2.29	3.38	1.64	1.70	1.12	1.56	1.61	
Lowe		0.50	0.89	0.60	0.52	0.55	0.45	0.37		
Mercer				1.46	2.13		1.69			
Mikado		0.51	0.48							
Mohun	2.74	2.55	3.10	1.78	1.66	1.85	1.86	2.30	1.64	
Morice-1				5.27	4.74	4.80	4.34	4.32	4.33	
Morice-2				5.53	4.88	4.63	4.41	4.20	4.34	

^aThese values are calculated from the titration method (APHA 1975).

Appendix Table 10. Monthly values of mean epilimnetic dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Babine-1				3.9			6.5			
Babine-2				3.9			7.5			
Babine-3				4.2			7.4			
Babine-4				4.0			7.3			
Babine-5				3.7			7.4			
Bonilla	3.0	2.5	2.4	7.1	5.7	6.7	6.4			6.6
Curtis	1.9	1.7	1.4	4.7	5.5	5.7	5.8			
Devon		1.7	1.7	8.1	5.9	7.5	5.2			
Kennedy-2	2.5	1.6	1.9	0.9	3.7	3.6	2.6	4.1	3.7	
Kennedy-3	2.2	1.6	1.3	1.2	3.6	4.1	2.5	3.6	3.5	
Kitlope		2.1	0.8	0.6	2.3	3.0	3.2	1.9		
Long-2	2.5	3.3	1.9	1.8	3.4	4.5	3.5	3.5	4.1	
Long-3	3.3	2.4	2.0	1.5	3.4	6.2	3.9	3.4	3.9	
Lowe		2.0	1.5	0.8	4.5	5.4	5.2	3.9		4.3
Mohun	2.5	1.8	2.0	1.7	4.0	3.3	3.6	3.1	4.7	
Morice-1			0.5	0.8	2.0	4.0	3.4	3.2		
Morice-2			0.4	0.6	2.3	2.7	2.9	1.9		

Appendix Table 11. Monthly values of mean epilimnetic particulate carbon ($\mu\text{g C.L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Babine-1				392			246			
Babine-2				156			243			
Babine-3				256			218			
Babine-4				225			260			
Babine-5				167			283			
Bonilla		288	328	542	613	569	618	431		437
Curtis		199	272	402	506	601	442	278		
Devon			298	444	233	410	438	344		
Kennedy-2	105	93	322	350	467	374	434	707	363	
Kennedy-3	105	167	207	255	467	453	233	287	230	
Kitlope		213	158	197	238	190	400	270		
Long-2	107	166	253	260	506	385	516	264	269	
Long-3	123	86	230	222	390	334	458	240	342	
Lowe		141	176	230	254	304	244	265		232
Mikado		169	270							
Mohun	164	182	235	314	544	467	246	274	275	
Morice-1			128	196	212	197	212	170		
Morice-2			142	125	195	160	184	160		

Appendix Table 12. Monthly values of mean epilimnetic dissolved organic nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			85	49			53			
Babine-1				129			97			
Babine-2				111			102			
Babine-3				101			95			
Babine-4				173			110			
Babine-5				160			341			
Bonilla	20	83	70	123	75	136	94			94
Curtis	54	53	61	276	83	53	54			
Devon		69	69	172	63	58	99			
Eden		63	61			180				
Great Central-1	14	47	47	64	56	32	48	65		
Great Central-2	10	35	66	37	55	53	61	52		
Henderson	10	75	87	137	87	87	48	76		
Hobiton	10	54	51	72	42	51	45	54		
Ian-1		54	64			137				
Ian-2		68	58			112				
Kennedy-2	13	50	53	123	78	67	53	66		
Kennedy-3	12	62	51	94	77	53	57	60		
Kitlope	41	14	31	63	40	141	57			
Long-2	50	44	36	49	48	67	48	36	34	
Long-3	33	36	25	26	47	83	50	48	14	
Lowe		53	27	65	106	45	56	61		69
Mercer			53	68			42			
Mikado			40							
Mohun	63	27	15	48	82	86	88	83	90	
Morice-1				10	27	130	54	42	66	
Morice-2				27	49	206	50	38	43	

Appendix Table 13. Monthly values of mean epilimnetic particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Babine-1				62			38			
Babine-2				24			36			
Babine-3				39			30			
Babine-4				43			34			
Babine-5				34			41			
Bonilla	30	65	90	97	104	91	61			27
Curtis	26	43	66	89	80	63	40			
Devon		47	70	36	53	72	59			
Kennedy-2	18	18	58	71	78	54	74	97	42	
Kennedy-3	20	23	31	60	71	59	43	39	23	
Kitlope	23	25	33	32	34	45	42			
Long-2	19	24	41	41	70	34	66	37	39	
Long-3	16	18	38	44	64	43	56	35	45	
Lowe		19	32	51	47	42	36	40		17
Mikado		21	45							
Mohun	37	31	36	76	85	56	40	42	36	
Morice-1			20	40	27	32	26	27		
Morice-2			21	34	23	25	22	24		

Appendix Table 14. Monthly values of mean epilimnetic ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			7	10			5			
Babine-1				12			5			
Babine-2				13			5			
Babine-3				10			6			
Babine-4				6			5			
Babine-5				8			5			
Bonilla		13	12	4	18	7	4	13		8
Curtis		9	11	5	15	10	4	14		
Devon			9	4	16	13	6	12		
Eden			8	8			5			
Great Central-1	4	14	10	4	7	7	5	4	8	
Great Central-2	4	14	9	4	9	5	5	4	7	
Henderson	7	114	10	4	9	4	7	6	12	
Hobiton	8	38	10	4	8	10	4	5	11	
Ian-1			9	6			5			
Ian-2			10	7			5			
Kennedy-2	4	14	11	4	8	5	4	4	10	
Kennedy-3	4	17	11	4	8	5	4	4	11	
Kitlope		6	9	4	14	5	5	9		
Long-2	14	17	14	4	7	5	4	5	14	
Long-3	18	18	10	4	10	8	4	7	10	
Lowe		5	11	5	16	11	4	15		7
Mercer			7	4			6			
Mikado		6	11							
Mohun	36	46	33	6	8	6	4	5	15	
Morice-1			9	5	16	5	4	8		
Morice-2			9	4	16	7	4	10		

Appendix Table 15. Monthly values of mean epilimnetic nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			32	2			16			
Babine-1				43			38			
Babine-2				93			55			
Babine-3				76			55			
Babine-4				80			49			
Babine-5				91			39			
Bonilla	8	1	1	1	1	3	1	4		5
Curtis	22	1	1	1	1	2	2	14		
Devon		1	1	1	1	1	1	4		
Eden		43	14				29			
Great Central-1	39	27	1	1	1	1	1	1	1	3
Great Central-2	37	31	10	1	1	1	1	1	1	2
Henderson	32	103	1	1	1	1	2	1	1	8
Hobiton	31	15	2	1	1	1	1	1	1	10
Ian-1			33	16			22			
Ian-2			30	17			25			
Kennedy-2	45	30	1	1	1	1	1	1	1	23
Kennedy-3	33	26	13	5	1	1	2	2	2	25
Kitlope		66	48	10	10	8	26	24		
Long-2	58	41	44	32	4	1	6	5	5	30
Long-3	56	43	47	40	12	2	1	7	7	30
Lowe		21	16	5	2	10	6	13		9
Mercer			13	1			21			
Mikado		15	1							
Mohun	38	36	49	45	6	1	1	2	2	13
Morice-1			35	31	24	22	14	18		
Morice-2			45	36	26	25	17	23		

Appendix Table 16. Monthly values of mean epilimnetic total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			1	2			2			
Babine-1				4			1			
Babine-2				3			2			
Babine-3				4			1			
Babine-4				5			1			
Babine-5				4			1			
Bonilla	2	4	8	5	9	4	4			3
Curtis	1	3	3	2	6	3	3			
Devon		3	3	3	5	3	3			
Eden		2	2			1				
Great Central-1	1	2	1	2	1	2	2	1	1	
Great Central-2	1	1	1	2	1	1	2	2	1	
Henderson	1	2	2	3	1	2	5	1	2	
Hobiton	2	3	1	2	1	3	4	2	2	
Ian-1			1	2			1			
Ian-2			2	2			1			
Kennedy-2	1	2	1	3	1	1	7	4	2	
Kennedy-3	2	2	1	2	1	2	4	1	2	
Kitlope		2	2	1	2	8	8	5		
Long-2	4	2	1	1	1	2	6	2	2	
Long-3	4	2	1	1	1	1	4	1	2	
Lowe		2	3	2	2	3	4	2		2
Mercer			2	2			1			
Mikado			2							
Mohun	5	3	1	1	1	2	3	3	3	3
Morice-1			1	1	2	3	1	1		
Morice-2			1	1	1	3	1	2		

Appendix Table 17. Monthly values of mean epilimnetic total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			2				2			
Babine-1				3			1			
Babine-2				3			1			
Babine-3				3			2			
Babine-4				3			2			
Babine-5				3			2			
Bonilla	1	1	2	2	5	1	2			3
Curtis	2	2	1	1	3	2	2			
Devon			2	2	1	3	1	1		
Eden			1	5			2			
Great Central-1	1	2	1	1	1	1	1	1	1	
Great Central-2	1	1	1	1	1	1	1	1	1	
Henderson	1	18	1	1	1	1	3	2	1	
Hobiton	1	2	1	1	1	1	2	1	1	
Ian-1			1	1			1			
Ian-2			1	1			1			
Kennedy-2	2	2	1	1	1	1	5	2	1	
Kennedy-3	2	2	1	1	1	1	2	1	1	
Kitlope	1	1	1	1	1	1	3	2		
Long-2	2	2	1	1	1	1	2	2	2	
Long-3	2	2	1	1	1	1	1	1	2	
Lowe	2	1	1	1	3	1	1			2
Mercer			1	1			2			
Mikado			1							
Mohun	2	2	1	1	1	1	3	2	4	
Morice-1			1	1	1	2	1	2		
Morice-2			1	1	1	2	1	1		

Appendix Table 18. Monthly values of mean epilimnetic soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			1747	1973			1780			
Babine-1				1990						
Babine-2				2047						
Babine-3				2040						
Babine-4				2063						
Babine-5				2163						
Bonilla	510	563	440	260	513	507	550			503
Curtis	480	477	357	297	607	577	563			
Devon		467	157	107	497	447	473			
Eden		1690	2467			2037				
Great Central-1	1135	890	887	703	937	660	1327	1700	603	
Great Central-2	1108	900	897	687	1470	650	1080	2070	597	
Henderson	643	640	283	50	137	110	310	460	390	
Hobiton	1348	1260	1110	1080	980	657	717	953	1080	
Ian-1			1330	1957			1680			
Ian-2			1433	1733			1563			
Kennedy-2	955	916	683	670	750	640	1017	863	775	
Kennedy-3	885	848	690	740	823	707	1030	1050	733	
Kitlope		930	823	493	363	600	673	680		
Long-2	1023	998	923	907	753	750	810	733	855	
Long-3	1023	995	877	933	847	763	850	977	830	
Lowe		503	493	370	363	597	563	527		450
Mercer			990	1773			1617			
Mikado		403	400							
Mohun	1125	963	703	580	937	180	740	730	380	
Morice-1			1323	2620	1145	1818	1063	1090		
Morice-2			1313	2213	1145	2015	1083	1113		

Appendix Table 19. Monthly values of mean total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			27	29			40			
Babine-1				66			64			
Babine-2				73			62			
Babine-3				72			63			
Babine-4				71			59			
Babine-5				68			61			
Bonilla	28	16	40	20	22	18	22			
Curtis	12	11	25	27	18	7	12			
Devon			22	38	16	24	35	17		
Eden			44	36			41			
Ian-1			40	34			42			
Ian-2			36	37			48			
Kennedy-2	27	24	26	26	28	30	29	26		
Kennedy-3	25	20	23	25	24	26	27	22		
Kitlope	24	9	21	15	8	12	9			
Long-2	10	13	15	16	11	11	14	91		
Long-3	12	11	13	17	15	12	14	133		
Lowe	8	8	20	20	12	22	7			
Mercer			31	25			35			
Mikado	9	6								
Mohun	25	18	16	23	20	20	24	19		
Morice-1			24	25	35	32	21	18		
Morice-2			21	37	28	26	21	17		

Appendix Table 20. Monthly values of mean (0-10 m) bacteria numbers ($\times 10^6 \cdot mL^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Babine-1				0.82			1.08			
Babine-2				0.95			1.35			
Babine-3				0.79			1.43			
Babine-4				0.94			1.79			
Babine-5				0.82			1.32			
Bonilla	0.82	1.02	2.34	3.37	2.24	2.29	1.86			1.72
Curtis	0.72	0.79	2.05	1.95	1.86	1.49	1.08			
Devon		0.83	1.50	1.49	1.66	2.05	1.26			
Great Central-1	0.51	0.34	0.72	0.79	1.22	1.13	1.35	0.88	1.49	
Great Central-2	0.51	0.46	0.68	0.91	1.35	1.03	1.74	1.34	1.11	
Henderson	0.91	1.09	1.02	1.74	1.98	2.88	2.13	1.98	1.29	
Hobiton	0.73	0.89	0.64	1.89	2.10	1.98	1.72	1.49	1.22	
Kennedy-2	1.15	1.08	1.37	1.77	2.13	2.23	1.83	1.35	1.52	
Kennedy-3	1.07	1.08	1.05	1.44	1.08	2.24	1.72	1.61	1.34	
Kitlope		0.49	0.63	0.48	0.55	0.76	0.94	0.67		
Long-2	1.04	1.06	0.67	0.89	0.71	0.64	1.22	1.20	1.22	
Long-3	1.26	1.04	0.55	0.86	0.89	0.77	0.95	0.98	1.17	
Lowe		0.71	0.92	1.81	1.43	1.49	1.17	0.92		1.08
Mikado		1.15	0.71							
Mohun	1.70	1.16	1.82	1.97	0.95	1.37	1.50	1.50	1.89	
Morice-1				0.38	0.50	0.68	0.79	0.97	1.04	
Morice-2				0.47	0.57	0.56	0.83	0.85	0.85	

X Appendix Table 21. Monthly values of mean (0-10 m) ^a light and dark bottle glucose turnover times (h) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Babine-1				328 ^b 671 ^c			54 78			
Babine-2				352 420			62 70			
Babine-3				295 509			195 301			
Babine-4				279 288						
Babine-5				513 377			181 115			
Bonilla	131 187	41 48	57 47	25 54	48 54	24 27	40 39			43
Curtis	193 198	82 59	30 26	34 46	22 156	20 15	56 45			
Devon			33 42	21 32	19 22	23 48	23 48			
Kennedy-2	445 1597	153 247	88 150	40 30	24 79	24 32	22 58	150 231	202 157	
Kennedy-3	396 215	180 227	133 155	54 46	37 160	19 19	45 23	97 117	132 206	
Kitlope		217 327	73 72	70 50	100 62	112 219	61 58	93 266		
Long-2	459 311	216 241	387 340	127 229	133 221	63 89	23 25	50 103	198 157	
Long-3	254 464	159 129	201 261	96 115	175 595	46 74	80 149	124 40	201 378	
Lowe		230 515	168 88	23 20	28 55	52 53	31 24	79 97		97
Mikado		189 147	326 271							
Mohun	815 447	845 1525	168 182	126 119	42 65	23 22	40 86	87 142	160 109	
Morice-1			653 1088	320 411	224 479	531 242	165 135	314 813		
Morice-2			558 692	704 2089	538 747	166 926	185 193	529 940		

^aMeans calculated using the geometric mean (\log_{10}).

^blight bottle values

^cdark bottle values

Appendix Table 22. Monthly values of mean epilimnetic total chlorophyll (mg·m⁻³) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun		0.41	2.79				2.40			
Babine-1				4.46			2.61			
Babine-2				1.93			2.32			
Babine-3				3.94			2.21			
Babine-4				4.01			2.50			
Babine-5				2.38			3.02			
Bonilla	0.27	4.08	3.59	7.21	6.47	6.35	3.34			0.62
Curtis	0.76	3.11	2.29	4.02	3.58	6.34	1.33			
Devon		3.70	3.81	3.51	3.50	7.40	6.88			
Eden		0.32	1.95				2.13			
Great Central-1	0.62	1.28	1.05	1.40	0.78	0.71	0.74	1.15	2.42	
Great Central-2	0.69	1.06	1.07	1.81	1.70	0.97	0.92	1.85	2.43	
Henderson	0.47	0.81	3.06	4.13	2.67	3.13	4.96	6.40	3.71	
Hobiton	0.77	1.85	1.10	2.04	2.59	2.47	2.37	3.23	1.07	
Ian-1			0.28	2.99			2.80			
Ian-2			0.45	3.40			2.45			
Kennedy-2	0.60	1.11	1.87	3.22	2.90	1.84	5.57	4.99	1.76	
Kennedy-3	0.55	1.07	1.34	2.15	2.24	2.25	2.55	2.49	0.57	
Kitlope		0.14	0.13	1.81	1.60	1.05	1.49	0.90		
Long-2	0.38	0.36	1.49	2.17	1.85	2.45	4.45	3.80	0.67	
Long-3	0.43	1.08	1.33	2.25	1.77	2.01	5.12	2.35	0.59	
Lowe		0.56	1.16	2.50	2.23	1.78	1.74	0.77		0.25
Mercer			0.27	2.08			4.01			
Mikado		0.66	2.11							
Mohun	2.28	2.39	0.91	2.10	3.07	2.41	1.78	3.68	2.82	
Morice-1			0.61	1.82	1.05	1.12	1.97	2.94		
Morice-2			0.50	0.74	1.24	0.95	1.48	2.06		

Appendix Table 23. Monthly values of mean epilimnetic size fractionated chlorophyll ($\text{mg} \cdot \text{m}^{-3}$) for Great Central Lake, Station 2.

Size fraction	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
0.8-8.0 μm	0.69	0.13	0.00	0.19	0.33	0.12	0.12	0.13	0.20
8.0-54 μm	0.12	0.93	0.86	0.91	1.01	0.46	0.61	1.27	1.73
$> 54 \mu\text{m}$	0.12	0.12	0.25	0.81	0.42	0.42	0.19	0.59	0.51

Appendix Table 24. Monthly values of mean (1 and 5 m) total algal numbers (including ultraphytoplankton) ($\times 10^8 \cdot m^{-3}$) for the 1980 study lakes.^a

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			16	62			458			
Babine-1				65			68			
Babine-2				32			88			
Babine-3				56			62 ^b			
Babine-4				44			83 ^b			
Babine-5				50			95			
Bonilla	39	175	2051 ^c	228	655	412	156			167
Curtis	50	118	178	330	452	202	66			
Devon		114	130	168	138	261	222			
Eden		11	50			28				
Great Central-1	26	20	100	166	106	38	28	47	84	
Great Central-2	5 ^d	13 ^d	40 ^e	84 ^e	57 ^e	50 ^e	20 ^e	14 ^e	34 ^e	
Henderson	127	60 ^f	163	106	208	55 ^f	83	92 ^f	54	
Hobiton	62	40	60	48	50	30 ^d	58 ^c	32 ^d	10 ^c	
Ian-1			13	22			34			
Ian-2			17	114			42			
Kennedy-2	114 ^g	450 ^g	1583 ^g	515 ^g	982 ^g	740 ^g	4215 ^g	6181 ^g	677 ^g	
Kennedy-3	58	67	62	118	80	79	161	156	79	
Kitlope		170	218	123	127	76	25 ^g	73 ^g		
Long-2	21	22	76	41	49	50	38	55	42	
Long-3	120	120	42	73	45	54	58	91	88	
Lowe		134	82	134	180	118	108	79		162
Mercer			2	44			47			
Mikado		23	26							
Mohun	48	50	36	55	166	130	236	218	86	
Morice-1			62	62	86	44	137	70		
Morice-2			14	34	22	40	46 ^d	10 ^d		

^avalues include ultraphytoplankton numbers counted by the Utermöhl (1958) technique.

^bthere was no 1-m sample for this date.

^cno count for ultraphytoplankton at 1 m.

^dno count for ultraphytoplankton at 1 or 5 m.

^ethe cyanophyte filament only was included in ultraphytoplankton counts.

^fno count for ultraphytoplankton at 5 m.

^gultraphytoplankton were counted using the epifluorescence technique.

Appendix Table 25. Monthly values of mean (1 and 5 m) total algal volume (including ultraphytoplankton) ($\text{mm}^3 \cdot \text{m}^{-3}$) for the 1980 study lakes.^a

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			32	183			208			
Babine-1				1528			171			
Babine-2				125			199			
Babine-3				260			336 ^b			
Babine-4				227			568 ^b			
Babine-5				140			468			
Bonilla	133	1573	858 ^c	933	1032	411	161		141	
Curtis	91	540	1665	964	1272	716	120			
Devon		670	2317	1131	1739	3223	2563			
Eden			17	113			170			
Great Central-1	258	280	2249	4917	2829	261	288	95	1157	
Great Central-2	172 ^d	526 ^d	4359 ^e	9965 ^e	6615 ^e	851 ^e	554 ^e	608 ^e	782 ^e	
Henderson	236	462 ^f	4224	6589	1534	337 ^f	527	2385 ^f	616	
Hobiton	117	154	152	395	951	2892 ^d	900 ^c	511 ^d	245 ^c	
Ian-1			21	382			265			
Ian-2			83	604			244			
Kennedy-2	48 ^g	198 ^g	787 ^g	1376 ^g	811 ^g	382 ^g	866 ^g	1113 ^g	214 ^g	
Kennedy-3	74	173	344	414	317	929	330	212	53	
Kitlope		68	94	111	236	60	123 ^g	169 ^g		
Long-2	80	98	159	335	884	937	1000	783	295	
Long-3	157	241	216	317	715	802	913	852	179	
Lowe		72	81	322	126	88	92	45		118
Mercer			27	851			2185			
Mikado		22	61							
Mohun	768	860	393	883	4521	4047	235	166	2502	
Morice-1			81	64	116	120	238	155		
Morice-2			41	60	42	132	90 ^d	76 ^d		

^avalues include ultraphytoplankton volume counted by the Utermöhl (1958) technique.

^bthere was no 1-m sample for this date.

^cno count for ultraphytoplankton at 1 m.

^dno count for ultraphytoplankton at 1 or 5 m.

^ethe cyanophyte filament only was included in the ultraphytoplankton counts.

^fno count for ultraphytoplankton at 5 m.

^gultraphytoplankton was counted using the epifluorescence technique.

Appendix Table 26. Monthly values of mean (1 and 5 m) ultraphytoplankton numbers ($\times 10^8 \cdot m^{-3}$) counted by the Utermöhl (1958) and epifluorescence techniques for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Bonilla			116 ^a	2009	154	613	371	110	
			123 ^b	1945	55	397	737	76	
Curtis					208				
					360				
Devon						99			
						82			
Great Central-2 ^c					6	33	7	3	
					21	182	30	25	
Kennedy-2	106	431	1537	475	180	101			
					964	712	4004	6072	651
Kitlope				109	109	68			
				<1	3	20	11	7	
Long-2						31	27	46	38
						89	156	217	78
Lowe				119	146	81	92		
				151	231	403	283		
Mohun								45	
								309	
Morice-1					72	28			
					275	576			
Morice-2					16	25			
					174	447			

^acounted by the Utermöhl (1958) technique.

^bcounted by the epifluorescence technique.

^cthe cyanophyte filament only was included in the counts.

Appendix Table 27. Monthly values of mean (1 and 5 m) ultraphytoplankton volume ($\text{mm}^3 \cdot \text{m}^{-3}$) counted by the Utermöhl (1958) and epifluorescence techniques for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Bonilla			30 ^a	427	43	248	100	32	
			62 ^b	972	28	198	368	38	
Curtis					97				
					100				
Devon					41				
					36				
Great Central-2 ^c					7	40	8	4	
					26	224	37	31	
Kennedy-2	15	43	154	48	116	82	440	618	65
Kitlope				40	42	25			
				0	2	9	6	4	
Long-2					29	24	53	35	
					77	104	214	84	
Lowe				36	51	30	33		
				38	42	69	53		
Mohun								13	
								31	
Morice-1					22	8			
					28	58			
Morice-2					6	8			
					17	45			

^acounted by the Utermöhl (1958) technique.

^bcounted by the epifluorescence technique.

^cthe cyanophyte filament only was included in the counts.

Appendix Table 28. Monthly values of mean euphotic zone total primary production ($\text{mg C} \cdot \text{m}^{-3} \cdot \text{h}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Babine-1				0.92			1.89		
Babine-2				0.55			2.25		
Babine-3				1.55			1.50		
Babine-4				1.80			1.65		
Babine-5				0.86			8.71		
Bonilla	0.11	3.06	14.66	5.30	4.50	8.61 ^a	0.82 ^a		
Curtis	0.49	2.79	1.81	1.78	4.88	2.30	0.21		
Devon			1.87	3.24	0.92	4.48	2.78	0.25	
Kennedy-2	0.13	0.41	1.66	1.44	1.36	3.42	4.92 ^b	7.94	0.77
Kennedy-3	0.21	0.58	0.87	1.35	1.01	1.53	2.33 ^b	3.12	0.62
Kitlope	0.01	0.02	0.98	0.42 ^c	0.36	0.98	0.17		
Long-2	0.12	0.13	1.09	0.85	1.02	1.23	1.98	1.33	0.70
Long-3	0.26	1.00	0.85	0.48	0.70	1.10	2.10	0.53	0.72
Lowe	0.13	1.38	1.32	1.00	1.46	0.68	0.06		
Mikado	0.45	0.59							
Mohun	0.66	0.74	1.40	2.68	2.02	1.98	1.25	2.34	0.76
Morice-1			0.22	0.94	0.40	1.52	0.62	0.44	
Morice-2			0.21	0.51	0.30	0.96	0.31	0.48	

^aUsing gas chromatograph values of total inorganic carbon the values of primary production are changed to 2.73 and 0.06 for September and October, respectively.

^bvalues are estimates as there was no compensation depth values for this date.

^cvalue is the mean of several values from the week-long survey.

Appendix Table 29. Monthly values of mean euphotic zone size fractionated primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$) (0.2-8.0 μm) for the 1980 study lakes.

Lake and station	May	Jun	Jul	Aug	Sep	Oct	Nov
Bonilla	1.98	10.03	3.06	1.89	1.41	0.02	
Long-2	0.81	0.38	0.52	1.03	0.85	1.20	0.62
Lowe	1.31	1.54	1.22	1.68	0.25		
Kitlope		0.54	0.32	0.08	0.66	0.08	

Appendix Table 30. Monthly values of mean euphotic zone size fractionated primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$) ($> 8.0 \mu\text{m}$) for the 1980 study lakes.

Lake and station	May	Jun	Jul	Aug	Sep	Oct	Nov
Bonilla	0.60	0.92	1.42	0.56	0.25	0.01	
Long-2	0.23	0.40	0.38	0.55	0.81	0.30	0.09
Lowe	0.34	0.43	0.10	0.18	0.08		
Kitlope		0.23	0.12 ^a	0.35	0.18	0.03	

^avalue is the mean of several values from the week-long survey.

Appendix Table 31. Monthly values of mean euphotic zone size fractionated primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$) for Bonilla Lake in 1980.

Size fraction	Jun	Aug
$> 0.2 \mu\text{m}$	16.81	3.72
0.2-3.0 μm	12.50	1.35
3.0-8.0 μm	2.47	0.91
$> 8.0 \mu\text{m}$	0.92	0.56

Appendix Table 32. Monthly values of mean daily primary production ($\text{mg C}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$) for the 1980 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Babine-1			43			86		
Babine-2			32			116		
Babine-3			138			161		
Babine-4			124			171		
Babine-5			49			324		
Bonilla	4	174	1065	222	211	318	55	
Curtis	33	413	258	108	218	110	14	
Devon		103	272	105	211	106	10	
Kennedy-2			124	232	242	289	293	77
Kennedy-3			110	128	119	169	144	38
Kitlope	2	89	90	26	27	4		
Long-2			137	62	85	91	58	28
Long-3			73	62	83	115	23	25
Lowe		100	112	88	115	32	3	
Mikado		45	89					
Morice-1		40	183	48	158	86	33	
Morice-2		45	99	32	120	60	27	

Appendix Table 33. Monthly values of mean daily primary production per unit of light (mg C·Einstein⁻¹) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Babine-1				1.07			5.10		
Babine-2				0.80			6.85		
Babine-3				4.04			20.16		
Babine-4				3.66			23.24		
Babine-5				1.11			44.10		
Bonilla	0.09	3.46	27.75	7.43	13.00	17.80 ^a	7.22 ^a		
Curtis	0.81	12.26	5.72	3.54	5.49	6.15	1.83		
Devon		2.10	7.12	3.68	5.29	4.70	1.62		
Kennedy-2	0.98	0.84	3.01	2.33	9.18	5.37	9.88	11.44	9.42
Kennedy-3	1.11	0.98	1.40	2.08	5.34	2.59	5.80	23.36	4.69
Kitlope		0.06	1.95	2.59 ^b	1.02	2.16	0.56		
Long-2	0.17	0.21	1.92	5.05	1.36	1.78	2.44	6.41	24.26
Long-3	0.35	1.65	1.22	2.68	1.34	1.73	3.06	2.80	21.64
Lowe		2.08	2.93	4.91	2.87	1.38	0.48		
Mikado		0.90	1.95						
Mohun	6.54	10.01	8.16	5.66	5.56	5.21	9.72	15.40	19.00
Morice-1			0.96	3.20	1.76	6.66	26.80	3.40	
Morice-2			1.04	1.73	1.11	3.08	16.08	2.80	

^aUsing gas chromatograph values of total inorganic carbon the values of primary production per unit of light are changed to 5.64 and 0.55 for September and October, respectively.

^bvalue is the mean of several values from the week-long survey.

Appendix Table 34. Monthly values of light intensity during the incubation period ($\text{Einsteins}\cdot\text{m}^{-2}\cdot\text{h}^{-1}$) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Babine-1				4.83			2.33		
Babine-2				4.85			2.37		
Babine-3				2.72			0.55		
Babine-4				2.71			0.49		
Babine-5				4.25			0.49		
Bonilla	5.81	4.99	2.43	3.29	1.26 ^a	1.74	0.40		
Curtis	4.02	1.68	2.07	3.37	5.07	1.98	0.62		
Devon			5.88	3.37	1.81	4.49	2.78	0.63	
Kennedy-2	1.18	4.77	4.90	5.74	0.99	5.87	3.48	3.68	0.69
Kennedy-3	1.66	4.58	5.18	5.41	1.13	6.08	3.62	3.89	0.85
Kitlope			3.55	5.00	1.90 ^b	3.10	1.68	1.32	
Long-2	4.43	2.41	3.82	1.34	5.92	5.92	4.23	1.29	0.18
Long-3	4.40	2.55	4.76	1.57	5.58	5.77	4.18	1.19	0.22
Lowe			5.49	4.10	1.69	3.97	3.32	0.80	
Mikado				5.35					
Mohun	0.87	0.78	2.11	5.11	4.53	4.19	1.40	1.50	0.41
Morice-1				5.18	4.94	3.87	3.44	0.43	1.67
Morice-2				5.21	5.25	3.85	3.99	0.39	1.60

^avalue is a mean of 6 dates during the week-long survey.

^bvalue is a mean of 5 dates during the week-long survey.

Appendix Table 35. Monthly values of zooplankton biomass (mg dry weight·m⁻³) for the 1980 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun			7.3	59.3			25.4			
Babine-1				83.6			24.8			
Babine-2				18.1			79.9			
Babine-3				77.3			52.5			
Babine-4				50.5			48.7			
Babine-5				41.2			100.6			
Bonilla		4.5	6.9	16.8	33.5	53.8	110.3	113.6		1.6
Curtis		1.0	2.4	4.7	11.6	11.4	11.3	10.0		
Devon			1.4	4.2	6.1	1.8	5.7	9.9		
Eden			4.4	30.2			27.0			
Great Central-1	3.5	1.7	5.0	7.1	9.6	14.1	3.3	5.1	6.4	
Great Central-2	2.5	1.3	3.4	6.4	5.3	13.2	4.2	6.0	8.3	
Henderson	3.7	4.0	21.7	25.1	8.1	7.1	9.0	10.0	11.2	
Hobiton	11.7	5.6	7.5	8.3	20.5	4.8	7.4	6.8	9.6	
Ian-1			16.4	24.7			42.4			
Ian-2			2.6	20.1			16.3			
Kennedy-2	2.2	2.3	4.2	7.2	13.3	24.9	12.8	5.0	8.0	
Kennedy-3	2.8	3.0	3.2	18.4	9.4	6.7	2.4	11.9	8.4	
Kitlope		2.2	1.8	2.2	2.9	5.7	28.9	3.5		
Long-2	2.9	3.4	6.4	3.7	0.6	3.6	1.8	3.7	3.5	
Long-3	4.8	4.7	3.0	4.0	3.6	2.8	2.2	6.2	6.0	
Lowe		3.0	6.8	65.2	29.3	50.0	12.8	24.2		0.1
Mercer			2.1	3.2			7.4			
Mikado			1.4	3.2						
Mohun	15.5	7.4	28.2	28.0	23.2	10.2	5.8	15.9	13.0	
Morice-1				9.7	17.4	15.3	72.2	30.9	22.4	
Morice-2				4.2	17.3	57.3	25.2	23.2	21.3	

Appendix Table 36. Dates for the beginning and end of the growing season^a used to compute time-weighted means for the 1980 study lakes.

Lake and station	Beginning		End	
Awun	May 22	4.71 ^b	Sep. 24	8.77 ^c
Bonilla	May 11	4.36	Oct. 15	9.47
Curtis	May 11	4.35	Oct. 14	9.45
Devon	May 28	4.90 ^c	Oct. 11	9.37
Eden	May 14	4.46	Sep. 24	8.77 ^c
Great Central-1	Apr. 18	3.59	Nov. 7	10.24
Great Central-2	Apr. 24	3.77	Nov. 7	10.23
Henderson	Apr. 16	3.53	Nov. 7	10.23
Hobiton	Apr. 7	3.24	Oct. 31	9.99
Ian-1	May 12	4.40	Sep. 24	8.77 ^c
Ian-2	May 11	4.35	Sep. 24	8.77 ^c
Kennedy-2	Apr. 3	3.09	Nov. 1	10.02
Kennedy-3	Apr. 9	3.28	Nov. 2	10.05
Kitlope	Jun. 2	5.05	Aug. 29	7.95
Long-2	Apr. 29	3.94	Oct. 23	9.74
Long-3	Apr. 28	3.91	Oct. 23	9.74
Lowe	May 17	4.54	Oct. 17	9.54
Mercer	May 12	4.39	Sep. 24	8.77 ^c
Mohun	Apr. 15	3.49	Oct. 28	9.91
Morice-1	Jun. 17	5.54	Aug. 28	7.92
Morice-2	Jul. 2	6.08	Aug. 28	7.92

^aThe beginning and end of the growing season is defined as the time when the lake surface temperature reaches 8°C in spring and falls to 12°C in the fall.

^bEach date is transformed to a number for computer entries.

^cThis date is the best estimate for the beginning or end of the growing season as a surface temperature of 8°C or 12°C was not observed due to sampling schedule.

Appendix Table 37. Time-weighted means of depth (m) and value of maximum stability, Secchi depth (m) and mean extinction coefficient (k_e) for the 1980 study lakes.

Lake and station	Maximum stability depth (m)	value	Secchi depth (m)	Mean extinction coefficient (k_e)
Awun	8.5	0.041	4.4	0.80
Bonilla	9.9	0.063	3.3	1.00
Curtis	7.7	0.072	5.0	0.69
Devon	7.6	0.072	4.5	0.75
Eden	10.7	0.047	4.3	1.00
Great Central-1	10.4	0.066	9.6	0.31
Great Central-2	10.1	0.062	8.7	0.30
Henderson	16.8	0.076	5.4	0.50
Hobiton	9.0	0.068	<u>5.6</u>	<u>0.59</u>
Ian-1	8.3	0.058	4.5	1.07
Ian-2	10.7	0.056	3.6	1.13
Kennedy-2	7.2	0.075	<u>5.5</u>	0.55
Kennedy-3	10.2	0.077	<u>5.2</u>	0.55
Kitlope	2.0	0.038	3.8	0.49
Long-2	9.2	0.042	4.5	0.63
Long-3	6.9	0.030	5.0	0.60
Lowe	11.5	0.068	6.2	0.56
Mercer	7.9	0.039	5.0	0.77
Mohun	8.4	0.074	6.6	0.40
Morice-1	20.1	0.020	6.3	0.26
Morice-2	12.1	0.011	5.8	0.32
			6.05	0.29

Appendix Table 38. Time-weighted means of compensation depth (m), surface temperature (°C), mean epilimnetic pH and mean epilimnetic total alkalinity ($\text{mg}\cdot\text{L}^{-1}\text{CaCO}_3$) for the 1980 study lakes.

Lake and station	Compensation depth (m)	Surface temperature (°C)	Mean epilimnetic pH	Mean epilimnetic total alkalinity ($\text{mg}\cdot\text{L}^{-1}\text{CaCO}_3$)
Awun	5.5	14.7	5.8	4.81
Bonilla	4.4	15.0	5.8	0.80
Curtis	6.5	15.8	6.1	1.20
Devon	6.1	15.8	5.8	0.66
Eden	4.4	13.9	6.6	5.83
Great Central-1	14.4	16.6	6.9	13.40
Great Central-2	14.3	16.5	6.9	13.34
Henderson	9.1	15.2	6.7	7.70
Hobiton	7.7	15.5	6.6	5.25
Ian-1	4.1	14.0	5.5	4.08
Ian-2	3.9	14.4	5.0	3.32
Kennedy-2	8.3	15.6	7.0	14.11
Kennedy-3	8.2	15.7	6.8	10.70
Kitlope	9.3	10.9	6.2	1.60
Long-2	6.8	14.5	6.3	3.14
Long-3	7.6	14.5	6.3	3.28
Lowe	7.9	14.9	5.9	0.59
Mercer	6.1	13.2	5.3	3.62
Mohun	10.8	16.0	6.7	5.53
Morice-1	16.5	10.9	7.0	14.79
Morice-2	14.3	10.2	7.0	14.70

Appendix Table 39. Time-weighted means of mean epilimnetic dissolved inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$), mean epilimnetic dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$), and mean epilimnetic particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mean epilimnetic inorganic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	Mean epilimnetic dissolved organic carbon ($\text{mg C}\cdot\text{L}^{-1}$)	Mean epilimnetic particulate carbon ($\mu\text{g C}\cdot\text{L}^{-1}$)
Awun	2.17		
Bonilla	0.85	5.0	524
Curtis	0.94	3.9	433
Devon	0.69	5.3	374
Eden	3.38		
Great Central-1	4.64		
Great Central-2	4.67		
Henderson	2.97		
Hobiton	2.18		
Ian-1	2.69		
Ian-2	3.48		
Kennedy-2	4.34	2.7	396
Kennedy-3	3.83	2.7	298
Kitlope	1.02	1.7	205
Long-2	2.01	3.2	364
Long-3	1.92	3.5	312
Lowe	0.58	3.6	245
Mercer	1.89		
Mohun	2.11	2.9	331
Morice-1	4.65	2.3	201
Morice-2	4.57	2.3	173

Appendix Table 40. Time-weighted means of mean epilimnetic dissolved organic nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$), mean epilimnetic particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$), mean epilimnetic ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$) and mean epilimnetic nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mean epilimnetic dissolved organic nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	Mean epilimnetic particulate nitrogen ($\mu\text{g N}\cdot\text{L}^{-1}$)	Mean epilimnetic ammonia ($\mu\text{g N}\cdot\text{L}^{-1}$)	Mean epilimnetic nitrate ($\mu\text{g N}\cdot\text{L}^{-1}$)
Awun	54		8	10
Bonilla	94	87	9	2
Curtis	100	66	9	3
Devon	87	57	10	1
Eden	102		7	23
Great Central-1	47	1	7	3
Great Central-2	50		6	4
Henderson	80		7	3
Hobiton	49		10	3
Ian-1	87		6	20
Ian-2	78		6	21
Kennedy-2	66	64	7	6
Kennedy-3	61	47	7	7
Kitlope	42	32	8	15
Long-2	48	48	7	15
Long-3	47	46	7	18
Lowe	60	41	9	8
Mercer	57		5	9
Mohun	65	53	13	18
Morice-1	75	32	9	25
Morice-2	124	25	11	27

Appendix Table 41. Time-weighted means of mean epilimnetic total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$), mean epilimnetic total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$), mean epilimnetic soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$) and mean total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$) for the 1980 study lakes.

Lake and station	Mean epilimnetic total phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	Mean epilimnetic total dissolved phosphorus ($\mu\text{g P}\cdot\text{L}^{-1}$)	Mean epilimnetic soluble reactive silicon ($\mu\text{g Si}\cdot\text{L}^{-1}$)	Mean total dissolved solids ($\text{mg}\cdot\text{L}^{-1}$)
Awun	2		1883	32
Bonilla	6	2	459	23
Curtis	3	2	475	17
Devon	3	2	334	27
Eden	2	3	2224	39
Great Central-1	2	1	1022	
Great Central-2	2	1	1122	
Henderson	4	3	268	
Hobiton	2	1	955	
Ian-1	2	1	1780	37
Ian-2	2	1	1636	40
Kennedy-2	3	2	794	27
Kennedy-3	2	1	842	24
Kitlope	3	1	526	14
Long-2	2	1	814	13
Long-3	2	1	874	14
Lowe	3	2	485	16
Mercer	2	2	1617	29
Mohun	2	2	659	21
Morice-1	2	1	1766	31
Morice-2	2	1	1608	28

Appendix Table 42. Time-weighted means of mean (0-10 m) bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$), mean (0-10 m) light bottle glucose turnover times (h) and mean (0-10 m) dark bottle glucose turnover times (h) for the 1980 study lakes.

Lake and station	Mean (0-10 m) bacteria numbers ($\times 10^6 \cdot \text{mL}^{-1}$)	Mean (0-10 m) light bottle glucose turnover times (h)	Mean (0-10 m) dark bottle glucose turnover times (h)
Bonilla	2.22	43	52
Curtis	1.57	44	68
Devon	1.57	24	39
Great Central-1	1.00		
Great Central-2	1.15		
Henderson	1.87		
Hobiton	1.54		
Kennedy-2	1.68	79	139
Kennedy-3	1.48	79	104
Kitlope	0.59	88	92
Long-2	0.90	125	161
Long-3	0.85	119	203
Lowe	1.34	60	56
Mohun	1.50	143	215
Morice-1	0.67	349	394
Morice-2	0.67	409	968

Appendix Table 43. Time-weighted means of mean epilimnetic total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$), mean (1 and 5 m) algal numbers ($\times 10^8 \cdot \text{m}^{-3}$) and mean (1 and 5 m) algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$) for the 1980 study lakes.

Lake and station	Mean epilimnetic total chlorophyll ($\text{mg} \cdot \text{m}^{-3}$)	Mean (1 and 5 m) algal numbers ($\times 10^8 \cdot \text{m}^{-3}$)	Mean (1 and 5 m) algal volume ($\text{mm}^3 \cdot \text{m}^{-3}$)
Awun	2.45	204	180
Bonilla	5.31	419	775
Curtis	3.68	245	954
Devon	4.57	170	1889
Eden	1.82	37	121
Great Central-1	1.05	75	1565
Great Central-2	1.42	41	3370
Henderson	3.86	109	2296
Hobiton	2.22	45	871
Ian-1	2.57	25	295
Ian-2	2.69	76	413
Kennedy-2	3.07	2079	1083
Kennedy-3	2.01	105	377
Kitlope	1.35	141	142
Long-2	2.67	50	685
Long-3	2.47	62	634
Lowe	1.82	122	136
Mercer	2.50	40	1198
Mohun	2.35	182	1660
Morice-1	1.29	67	103
Morice-2	1.07	30	80

Appendix Table 44. Time-weighted means of mean (1 and 5 m) ultraphytoplankton numbers ($\times 10^8 \cdot m^{-3}$) and mean (1 and 5 m) ultraphytoplankton volume ($mm^3 \cdot m^{-3}$) counted by the Utermöhl (1958) and epifluorescence techniques for the 1980 study lakes.

Lake and station	Mean (1 and 5 m) ultraphytoplankton numbers ($\times 10^8 \cdot m^{-3}$)	Mean (1 and 5 m) ultraphytoplankton volume ($mm^3 \cdot m^{-3}$)
Bonilla	400 ^a 516 ^b	248 258
Great Central-2	15 957	18 519
Long-2	35 160	35 138
Lowe	109 296	38 74
Kennedy-2	2151	628
Kitlope	15	7

^acounted by the Utermöhl (1958) technique.

^bcounted by the epifluorescence technique.

Appendix Table 45. Time-weighted means of mean euphotic zone total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$), mean euphotic zone size fractionated primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$) ($0.2 - 8.0 \mu\text{m}$ and $> 8.0 \mu\text{m}$) and mean daily primary production ($\text{mg C}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$) for the 1980 study lakes.

Lake and station	Mean euphotic zone total primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	Mean euphotic zone primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	Mean euphotic zone primary production ($\text{mg C}\cdot\text{m}^{-3}\cdot\text{h}^{-1}$)	Mean daily primary production ($\text{mg C}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$)
Bonilla	6.57	3.59	0.74	360
Curtis	2.57			200
Devon	2.70			160
Kennedy-2	3.05			243
Kennedy-3	1.58			133
Kitlope	0.55	0.31	0.22	62
Long-2	1.23	0.80	0.47	80
Long-3	0.99			72
Lowe	1.08	1.28	0.23	82
Mohun	1.81			
Morice-1	0.89			120
Morice-2	0.58			75

Appendix Table 46. Time-weighted means of mean daily primary production per unit of light ($\text{mg C}\cdot\text{Einstein}^{-1}$), light intensity during the incubation period ($\text{Einsteins}\cdot\text{m}^{-2}\cdot\text{h}^{-1}$) and zooplankton biomass ($\text{mg dry weight}\cdot\text{m}^{-3}$) for the 1980 study lakes.

Lake and station	Mean daily primary production per unit of light ($\text{mg C}\cdot\text{E}^{-1}$)	Light intensity during incubation period ($\text{E}\cdot\text{m}^{-2}\cdot\text{h}^{-1}$)	Zooplankton biomass ($\text{mg dry wt.}\cdot\text{m}^{-3}$)
Awun			42.5
Bonilla	12.97	2.70	46.0
Curtis	6.09	2.86	8.2
Devon	4.74	3.36	4.3
Eden			26.0
Great Central-1			6.9
Great Central-2			6.3
Henderson			12.5
Hobiton			8.7
Ian-1			29.7
Ian-2			16.5
Kennedy-2	6.22	4.06	10.1
Kennedy-3	6.26	4.15	7.9
Kitlope	1.65	3.44	3.5
Long-2	3.45	3.71	3.2
Long-3	2.50	3.77	4.1
Lowe	2.71	3.38	32.6
Mercer			4.5
Mohun	8.73	2.86	17.1
Morice-1	3.93	4.02	33.1
Morice-2	2.18	4.02	39.6

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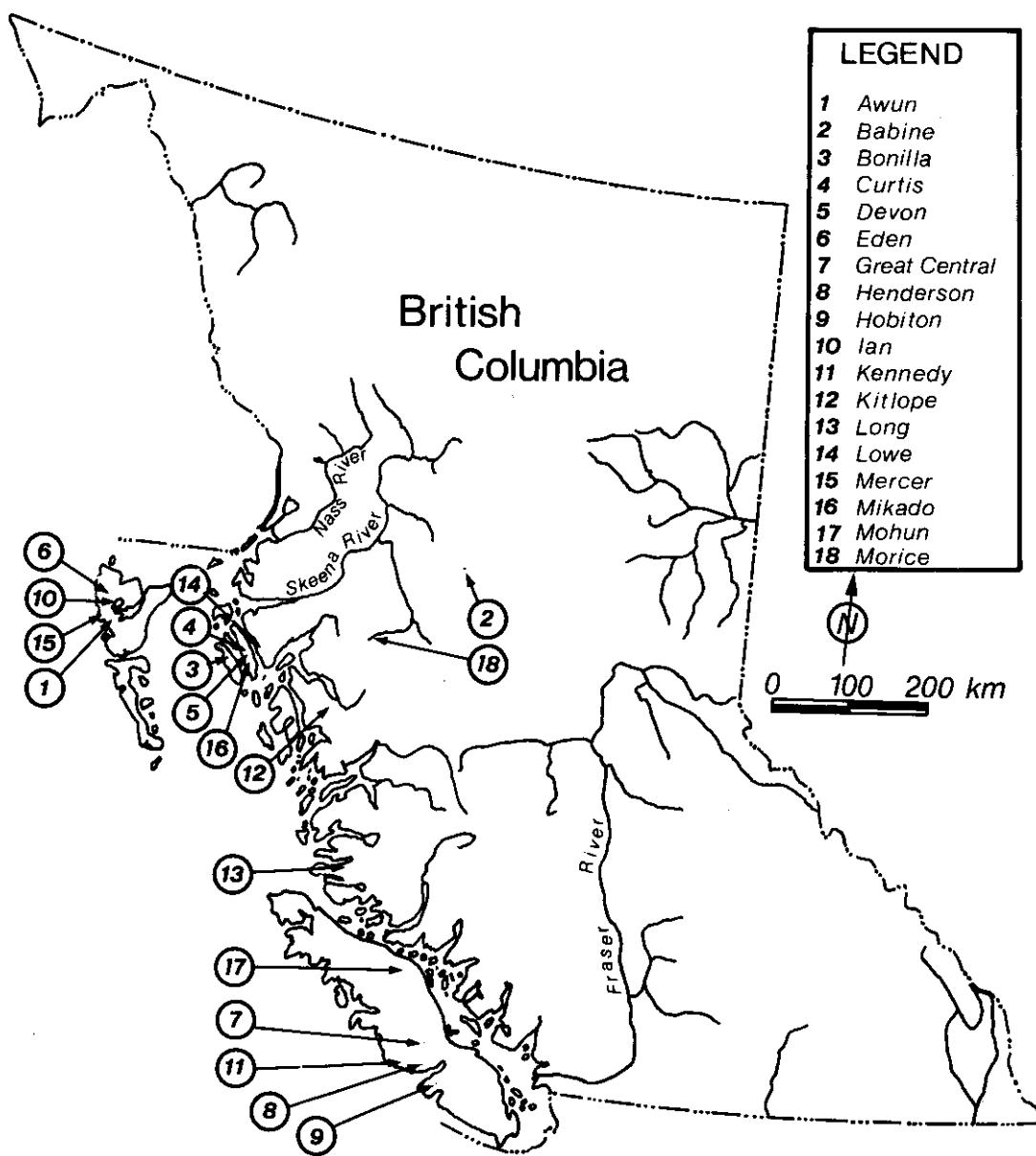


Fig. 1. Map of British Columbia showing locations of 1980 study lakes.

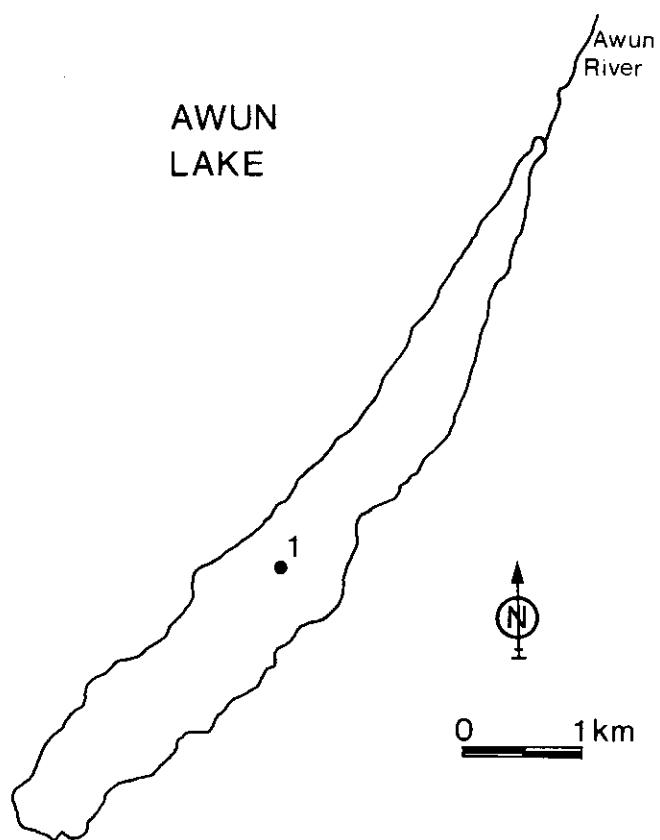


Fig. 2. Map showing station location at Awun Lake.

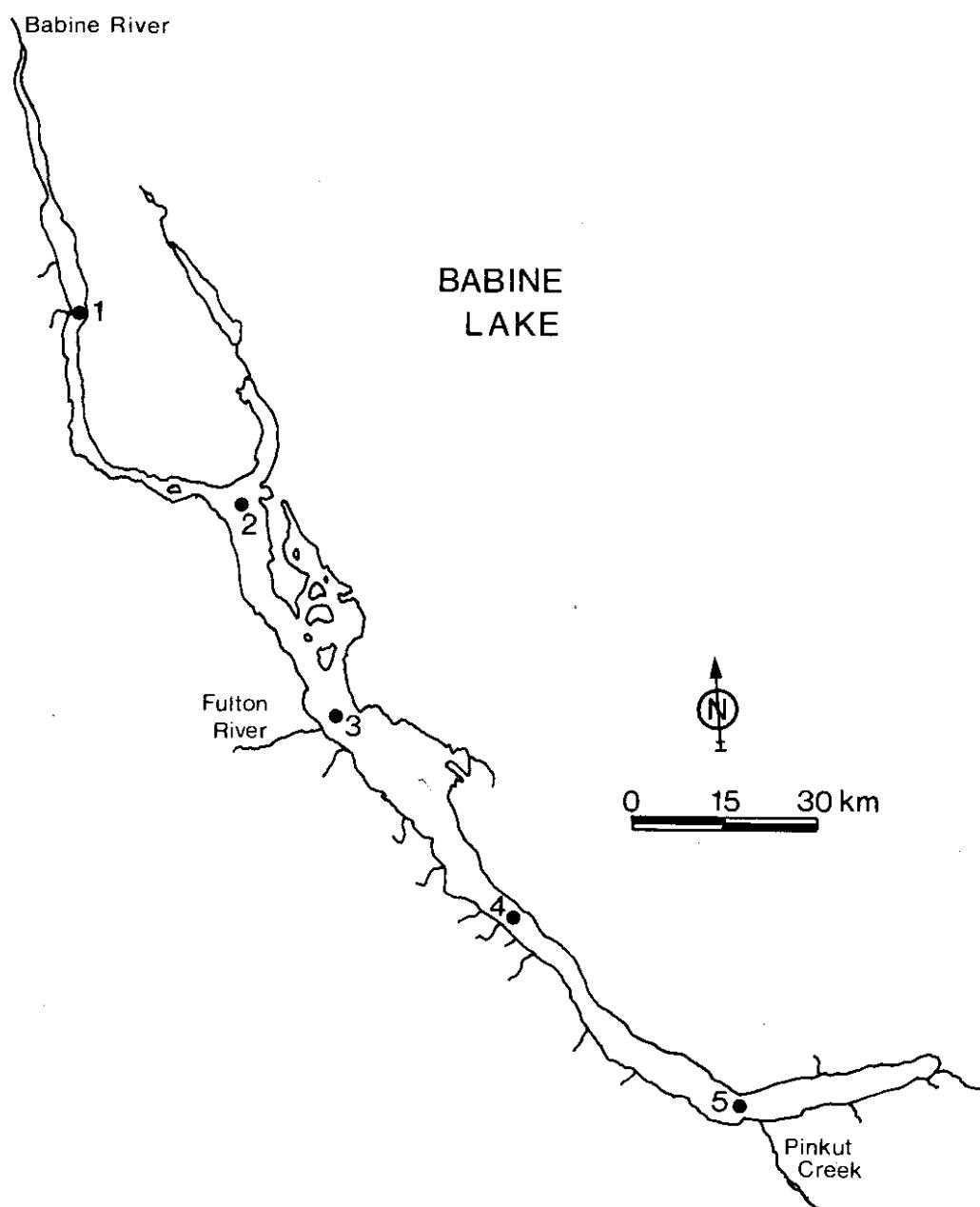


Fig. 3. Map showing station locations at Babine Lake.

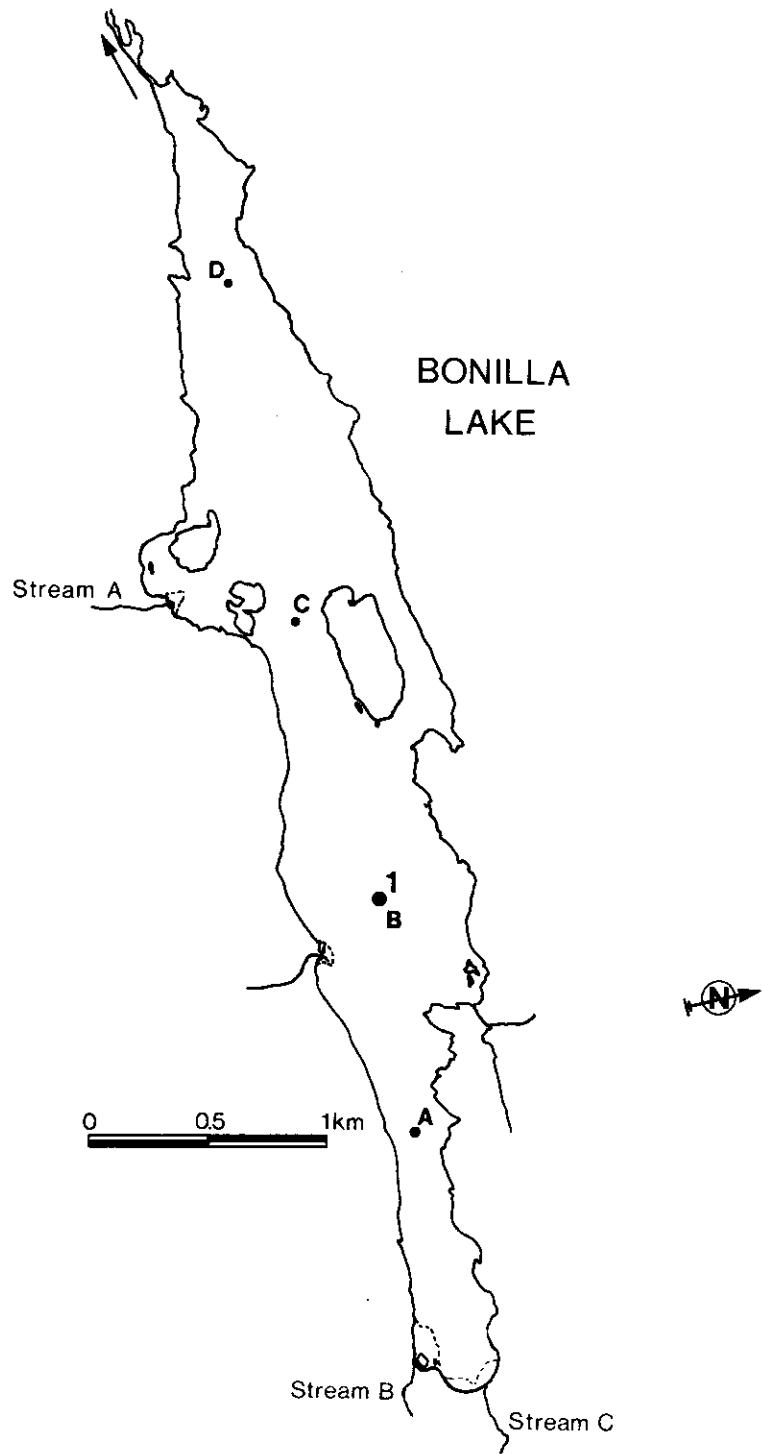


Fig. 4. Map showing station locations at Bonilla Lake.

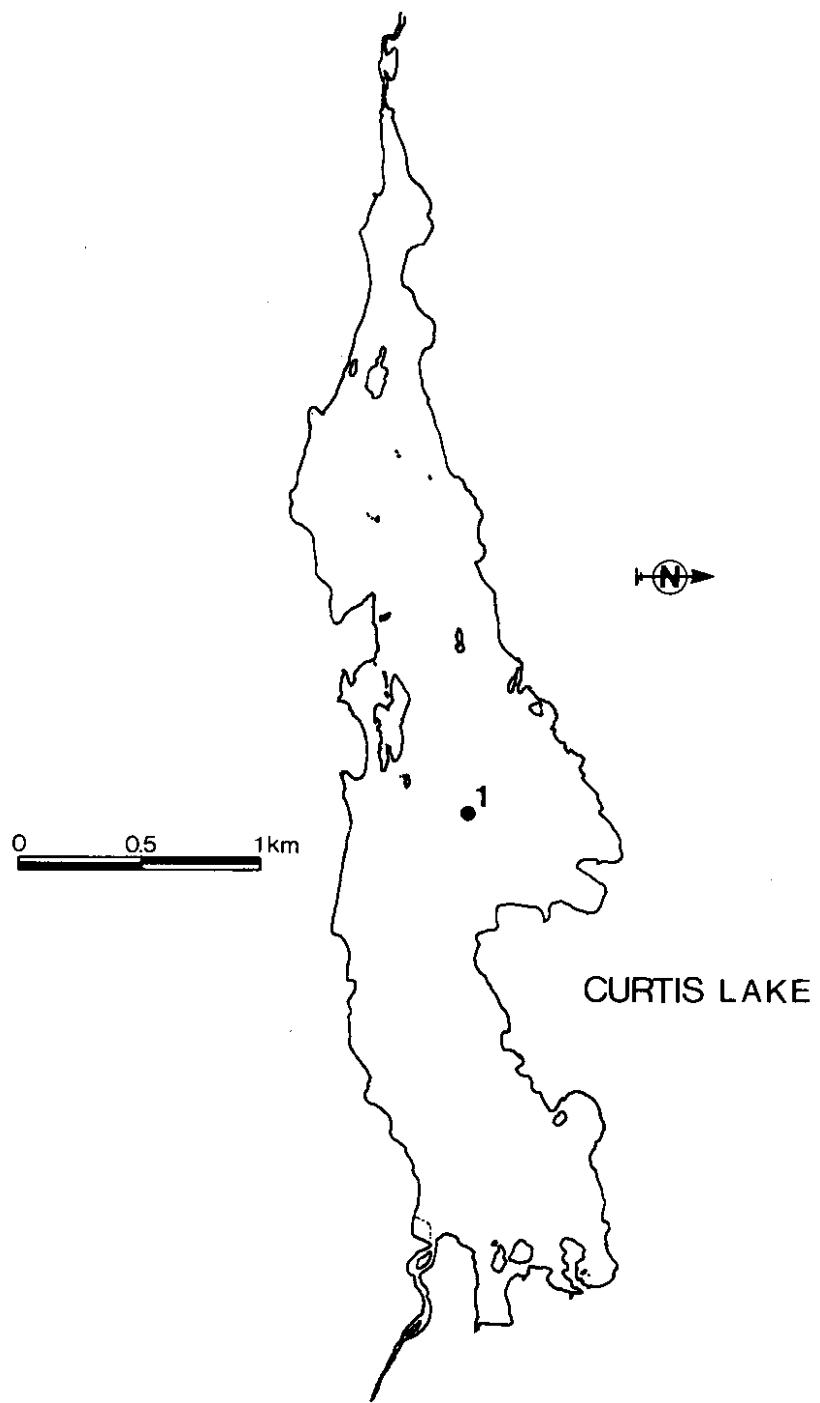


Fig. 5. Map showing station location at Curtis Lake.

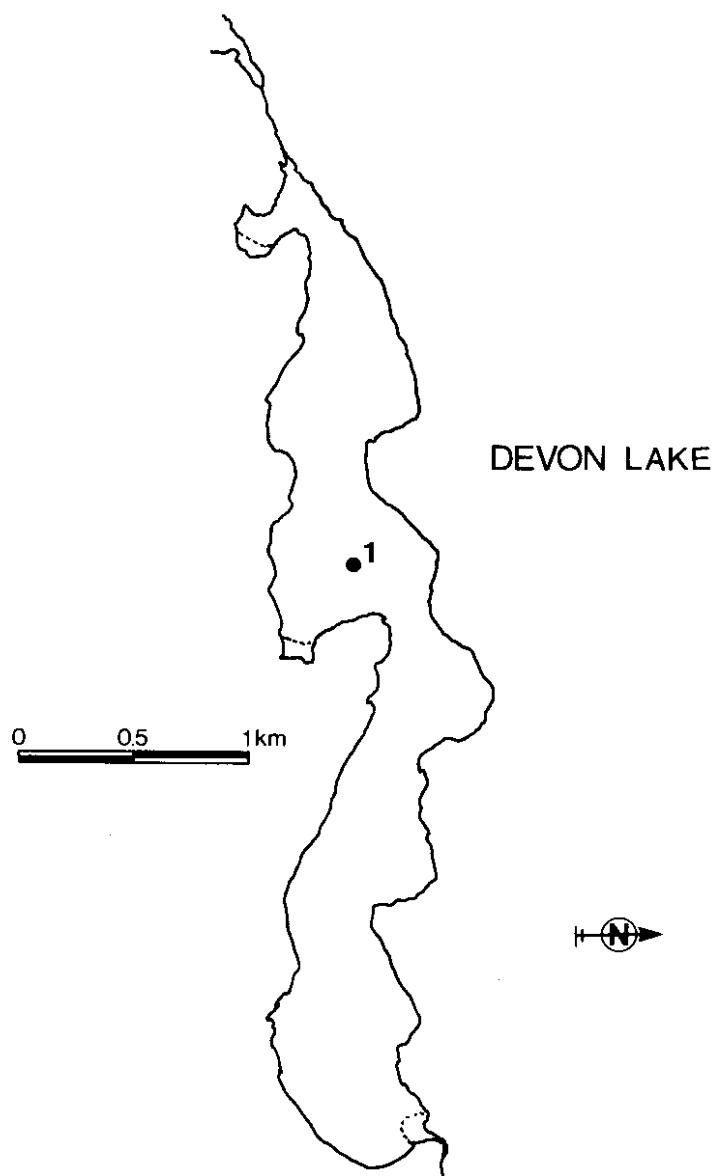


Fig. 6. Map showing station location at Devon Lake.

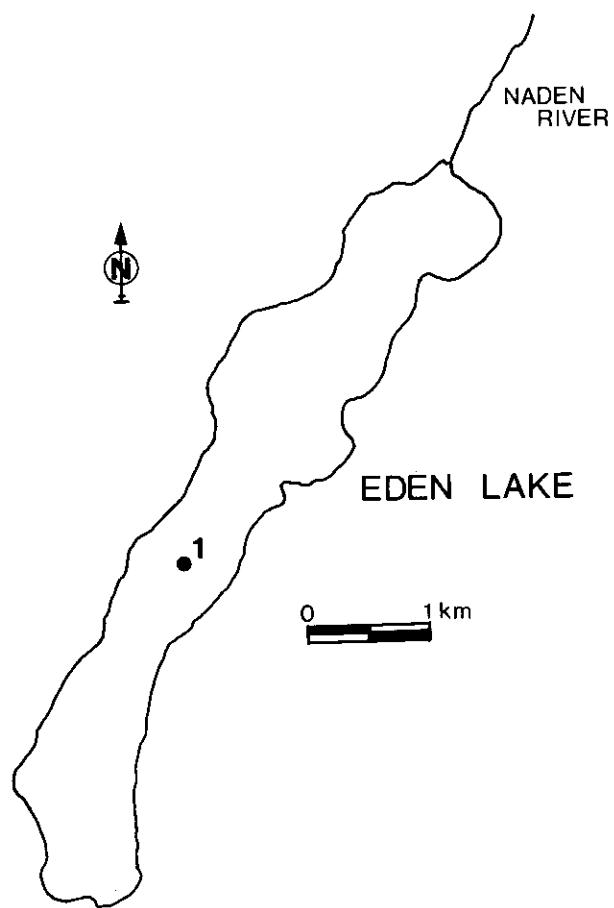


Fig. 7. Map showing station location at Eden Lake.

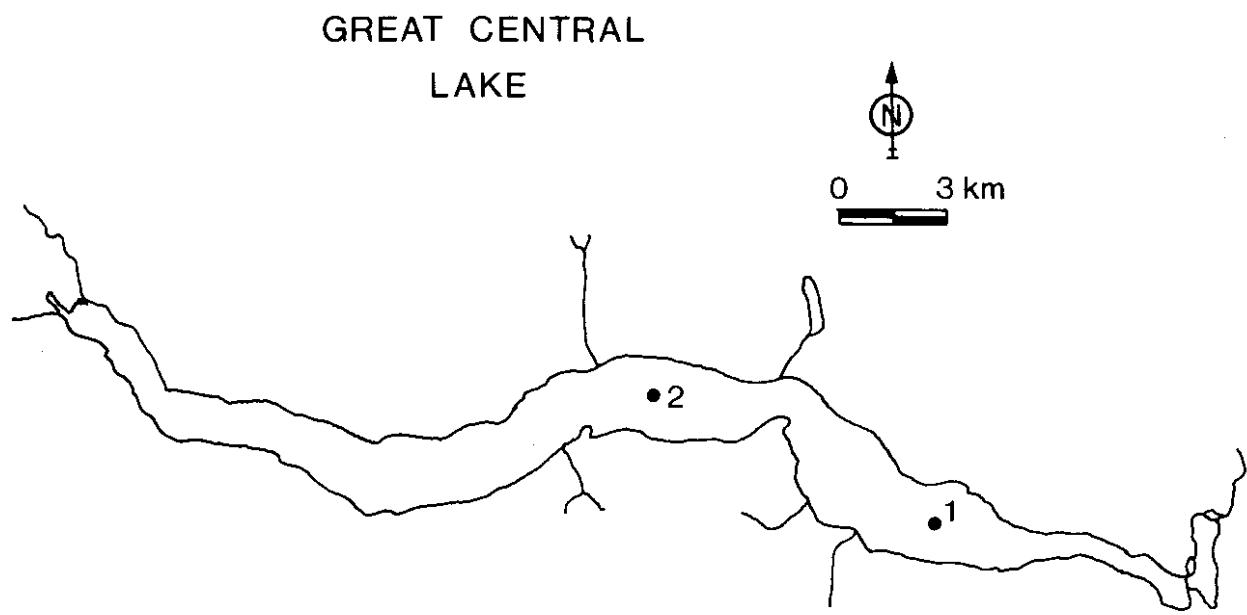


Fig. 8. Map showing station locations at Great Central Lake.

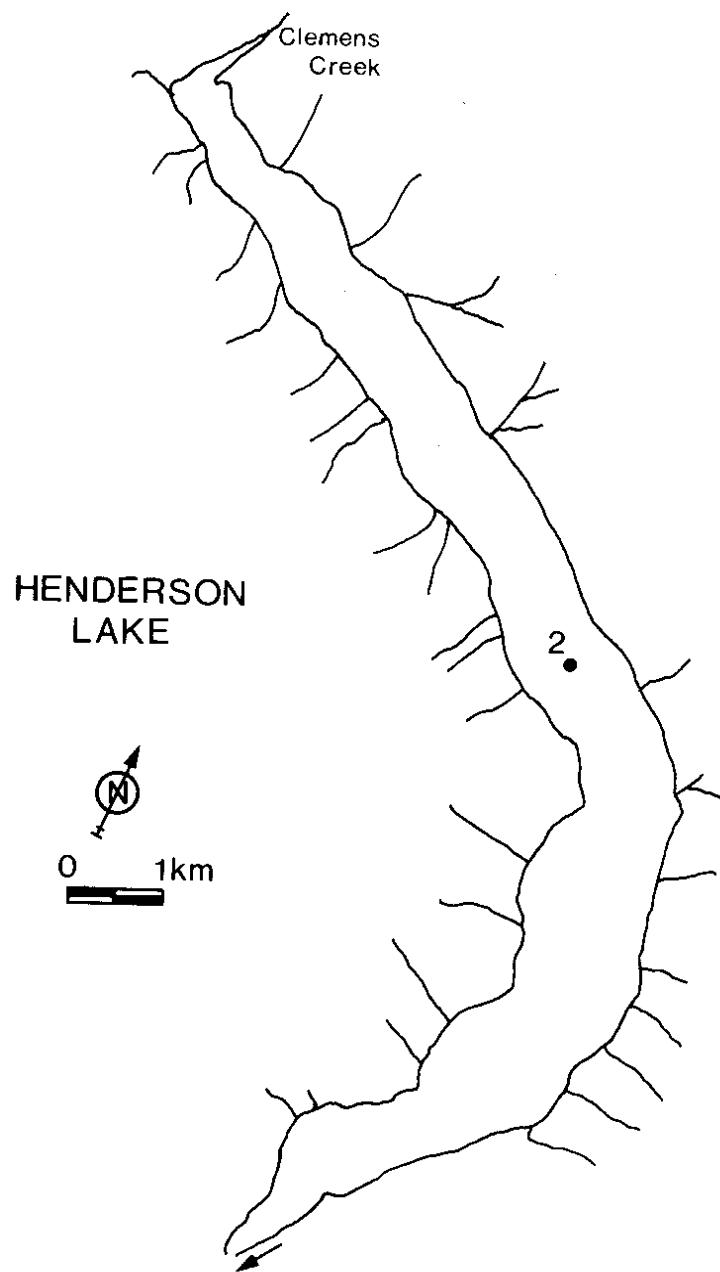


Fig. 9. Map showing station location at Henderson Lake.

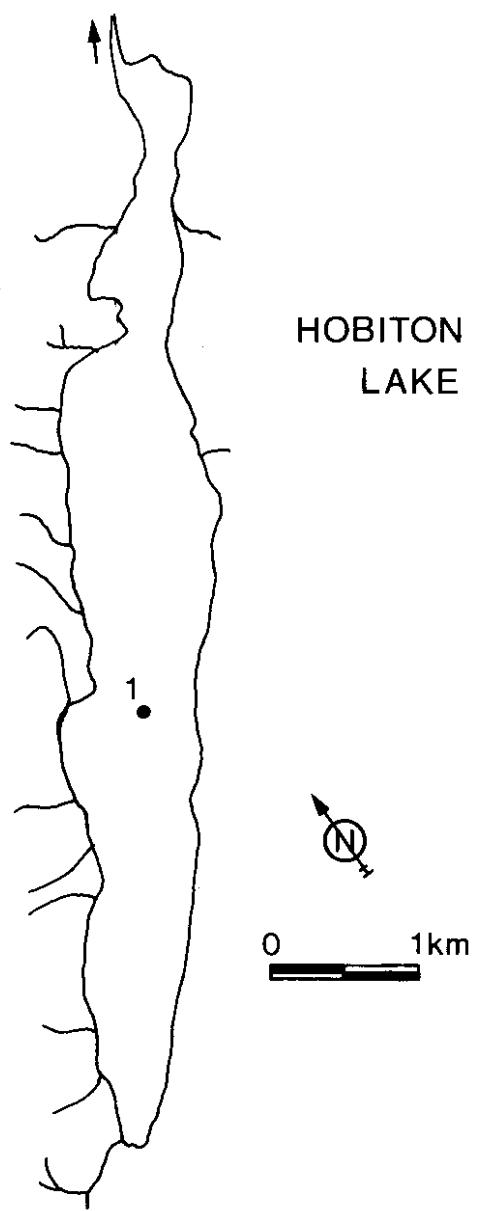


Fig. 10. Map showing station location at Hobiton Lake.

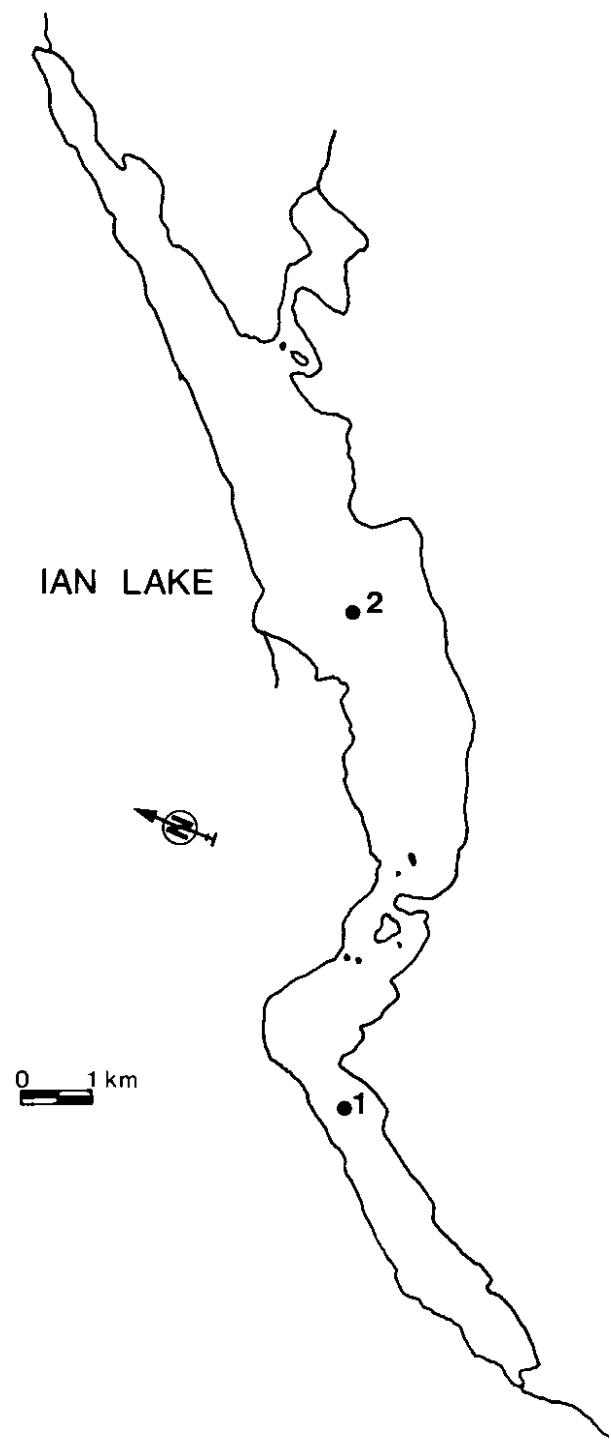


Fig. 11. Map showing station locations at Ian Lake.

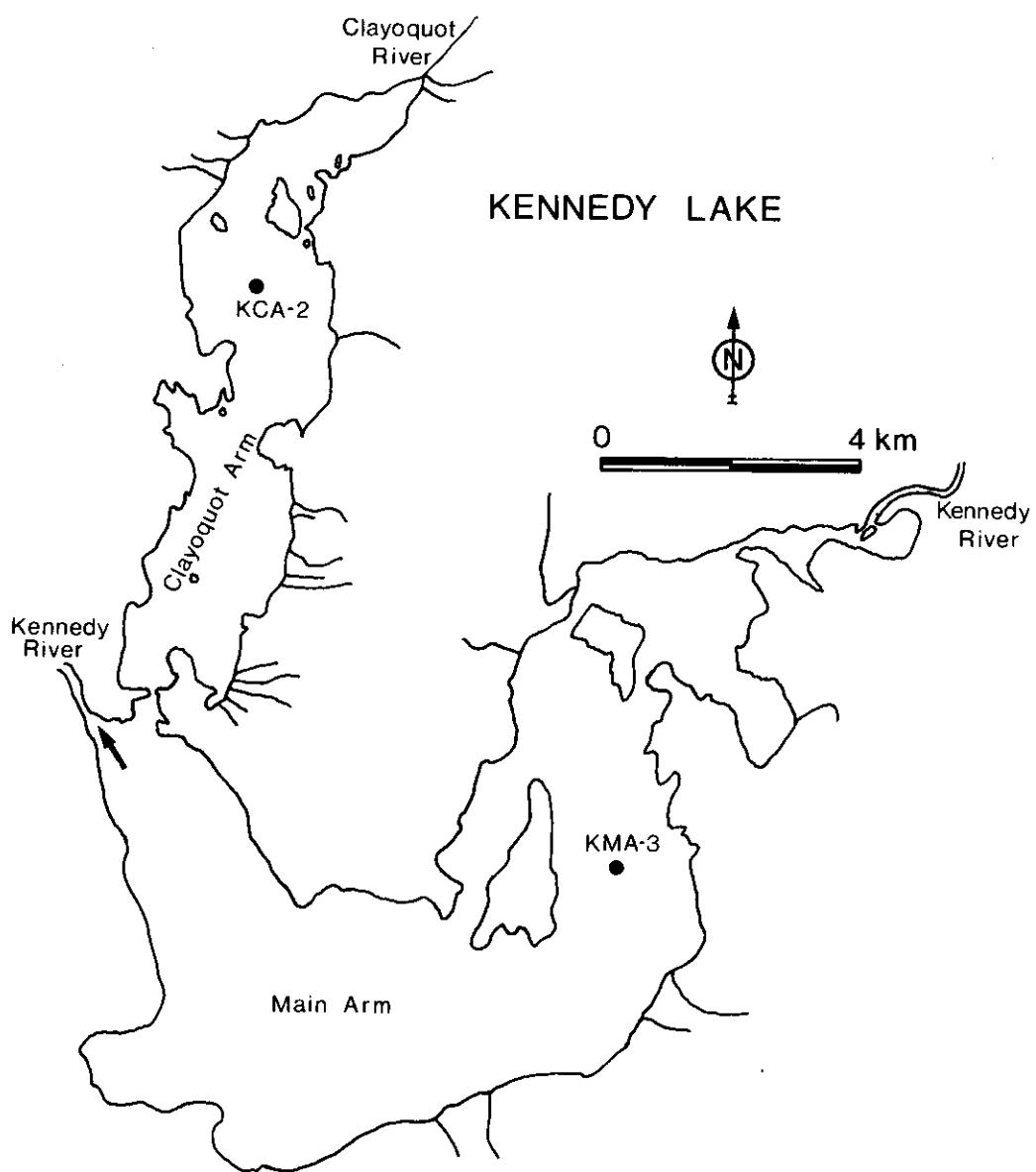


Fig. 12. Map showing station locations at Kennedy Lake.

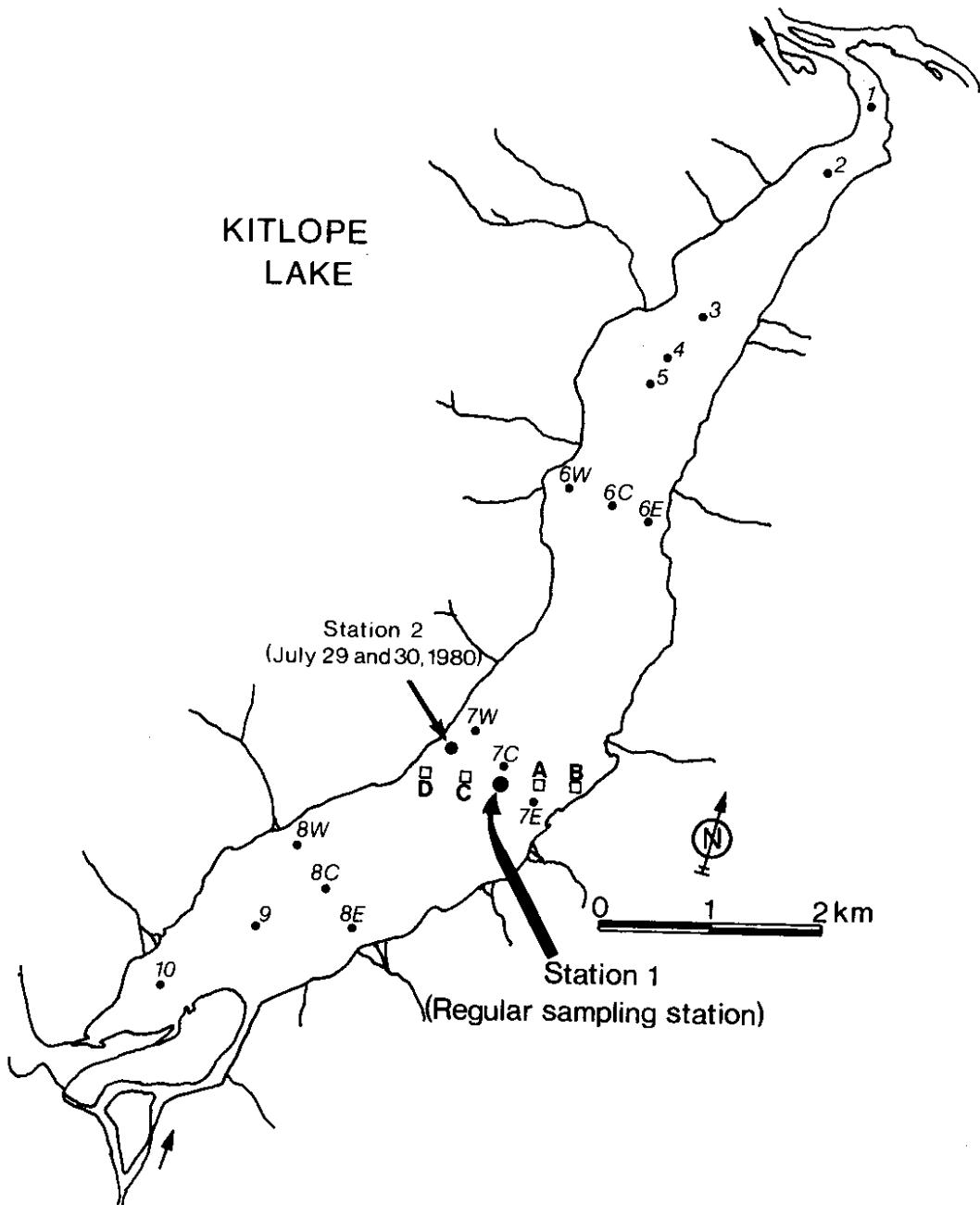


Fig. 13. Map showing station locations at Kitlope Lake.

LONG LAKE

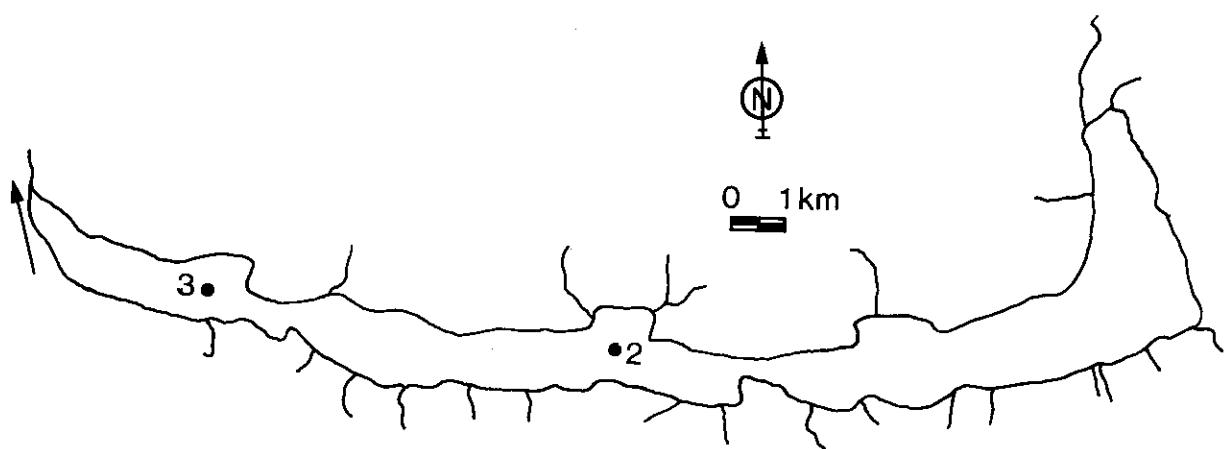


Fig. 14. Map showing station locations at Long Lake.

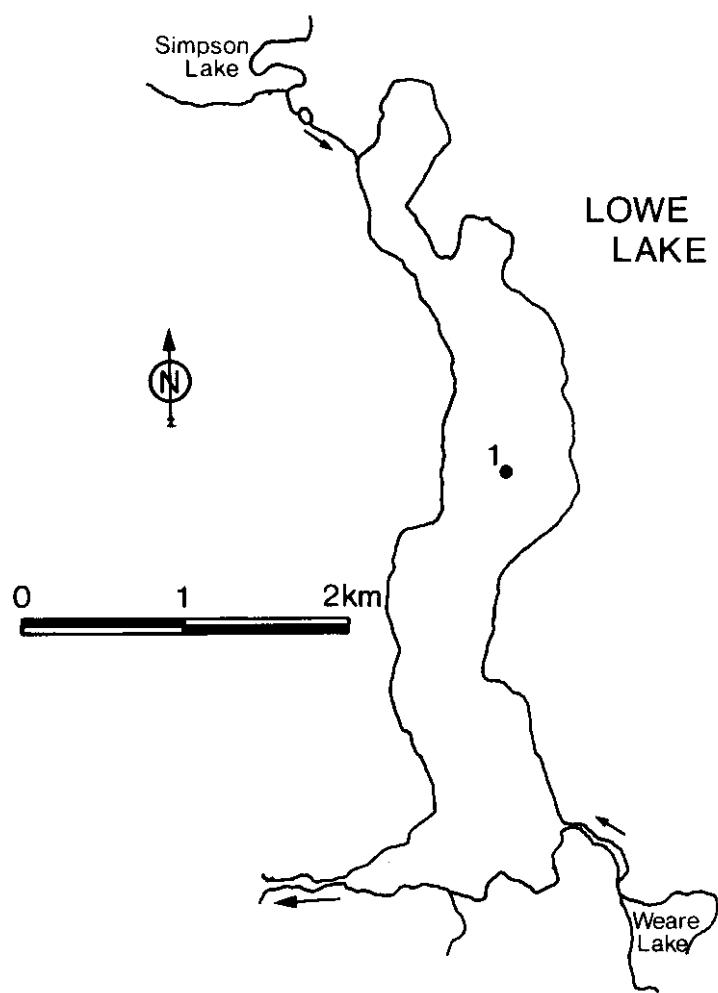


Fig. 15. Map showing station location at Lowe Lake.

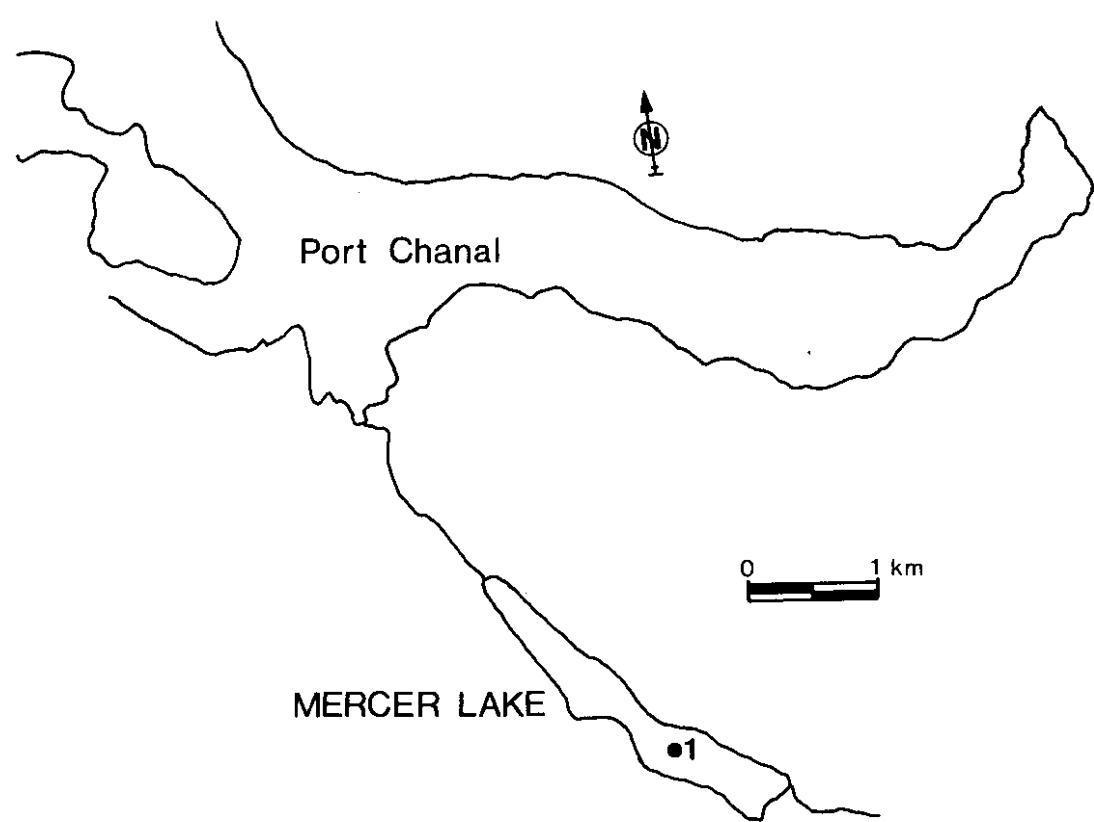


Fig. 16. Map showing station location at Mercer Lake.

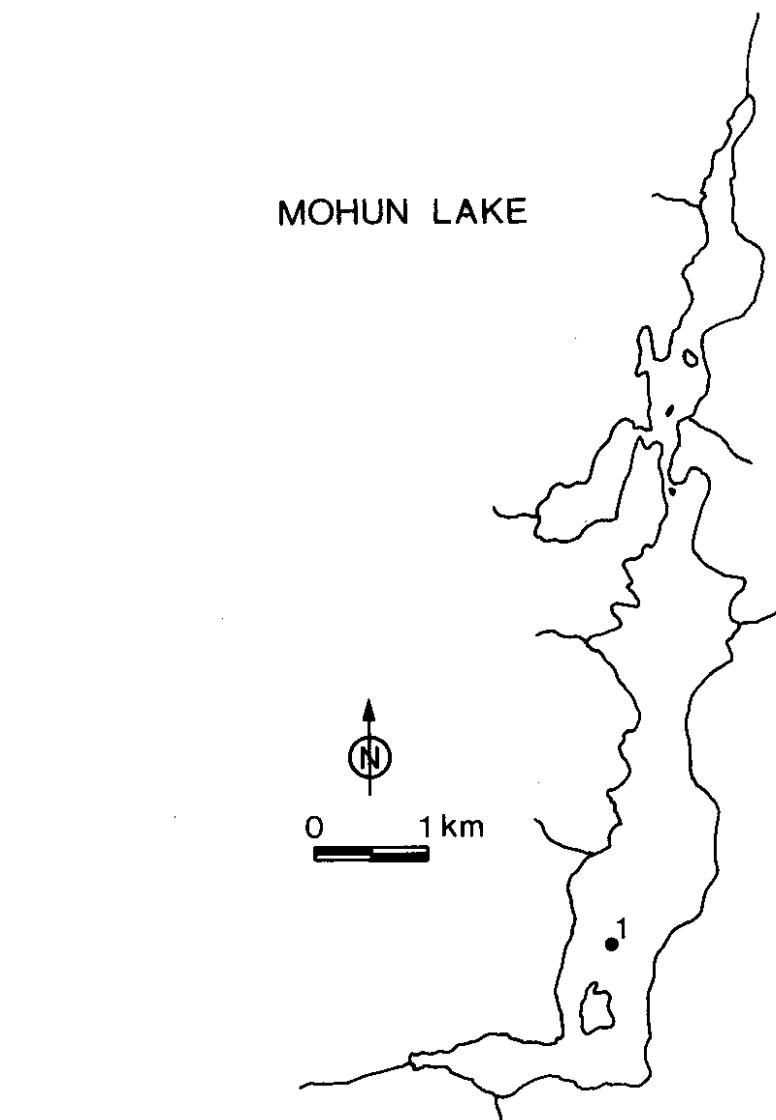


Fig. 17. Map showing station location at Mohun Lake.

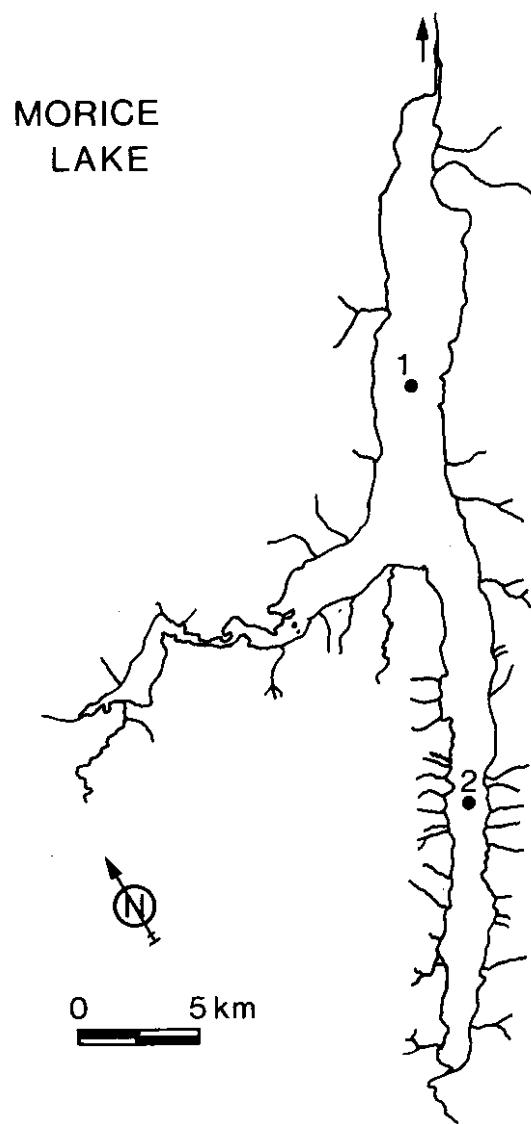


Fig. 18. Map showing station locations at Morice Lake.

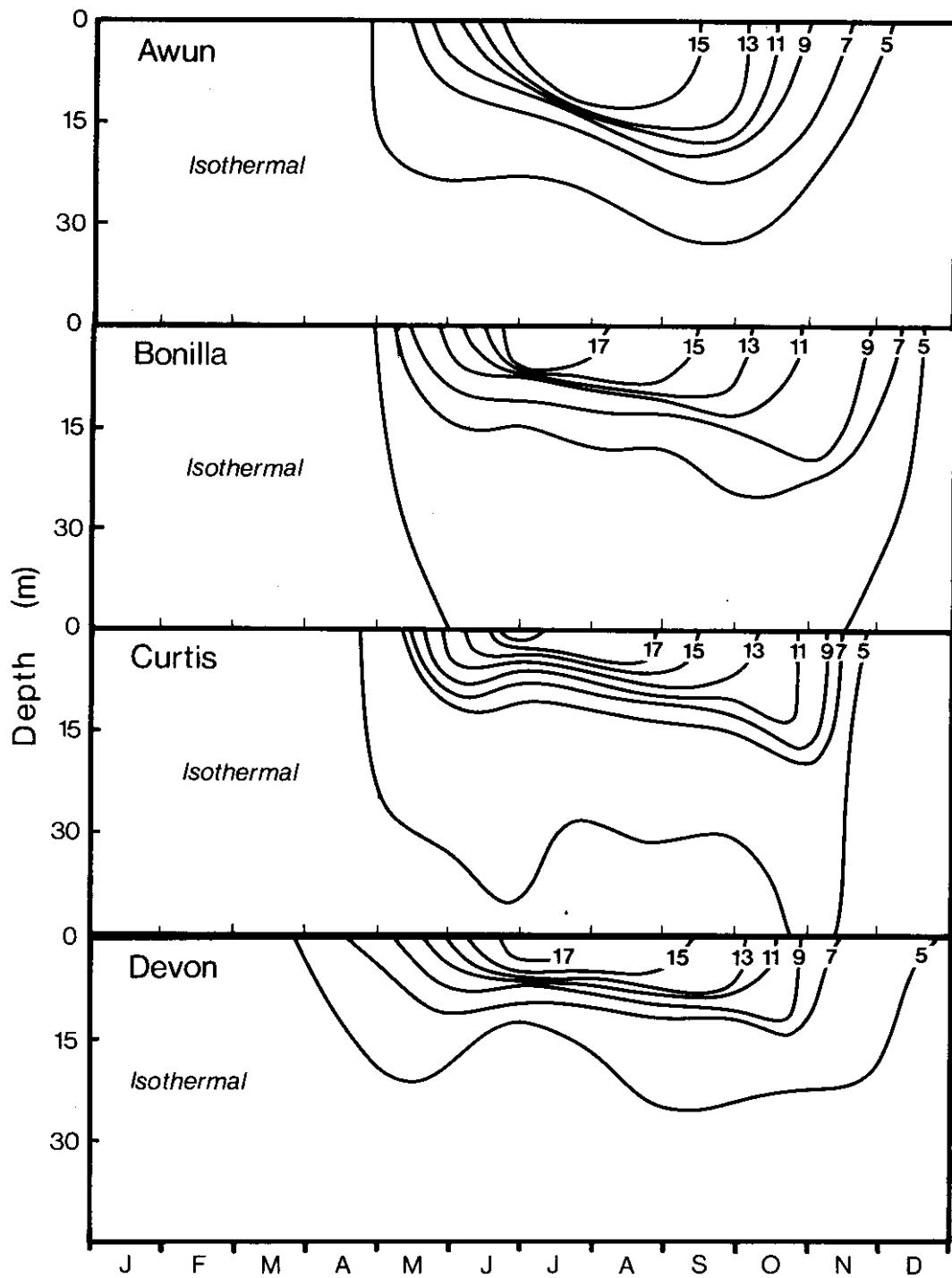


Fig. 19. Annual temperature isopleths of Awun, Bonilla, Curtis and Devon lakes.

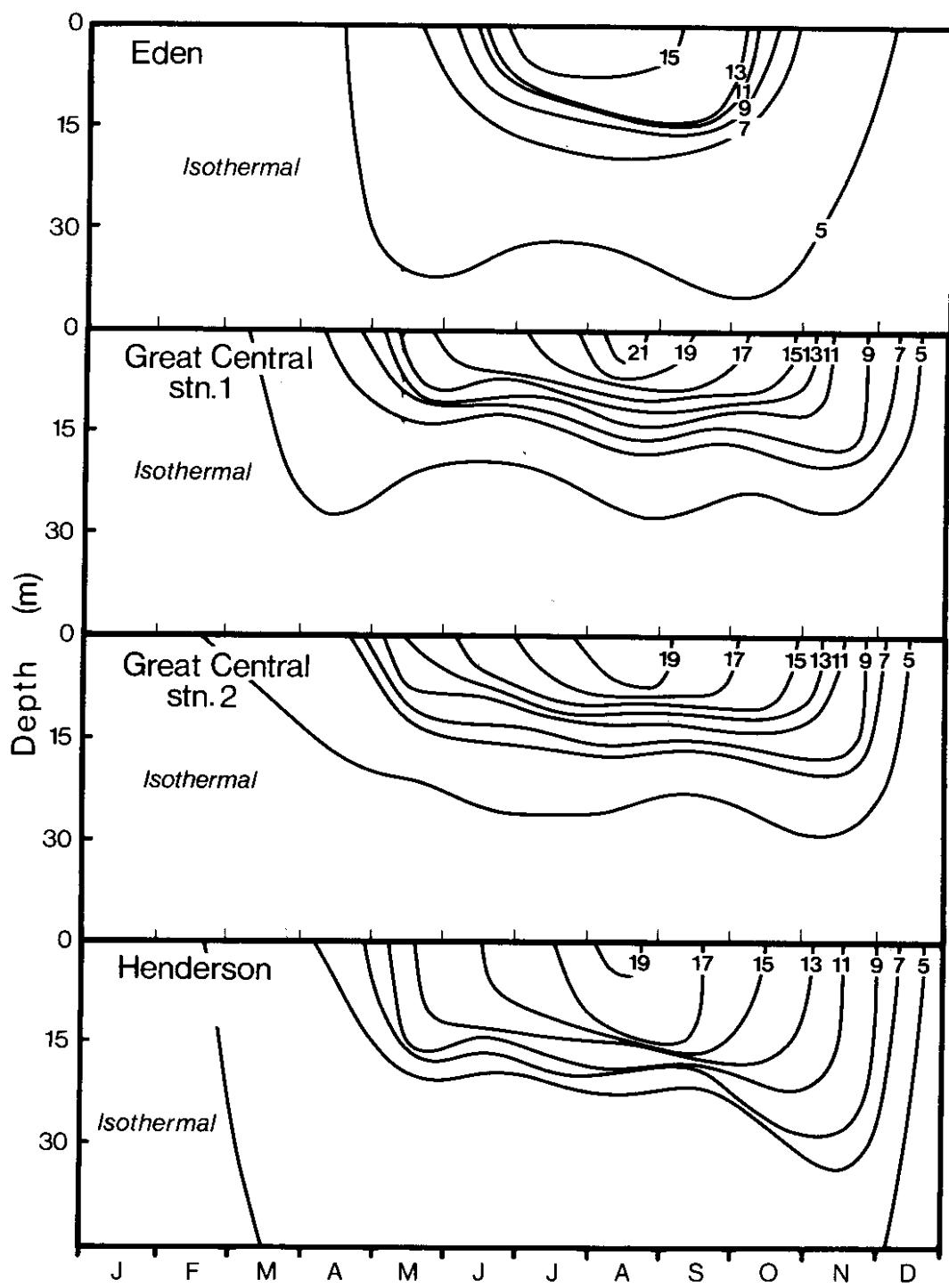


Fig. 20. Annual temperature isopleths of Eden, Great Central (Stations 1 and 2) and Henderson lakes.

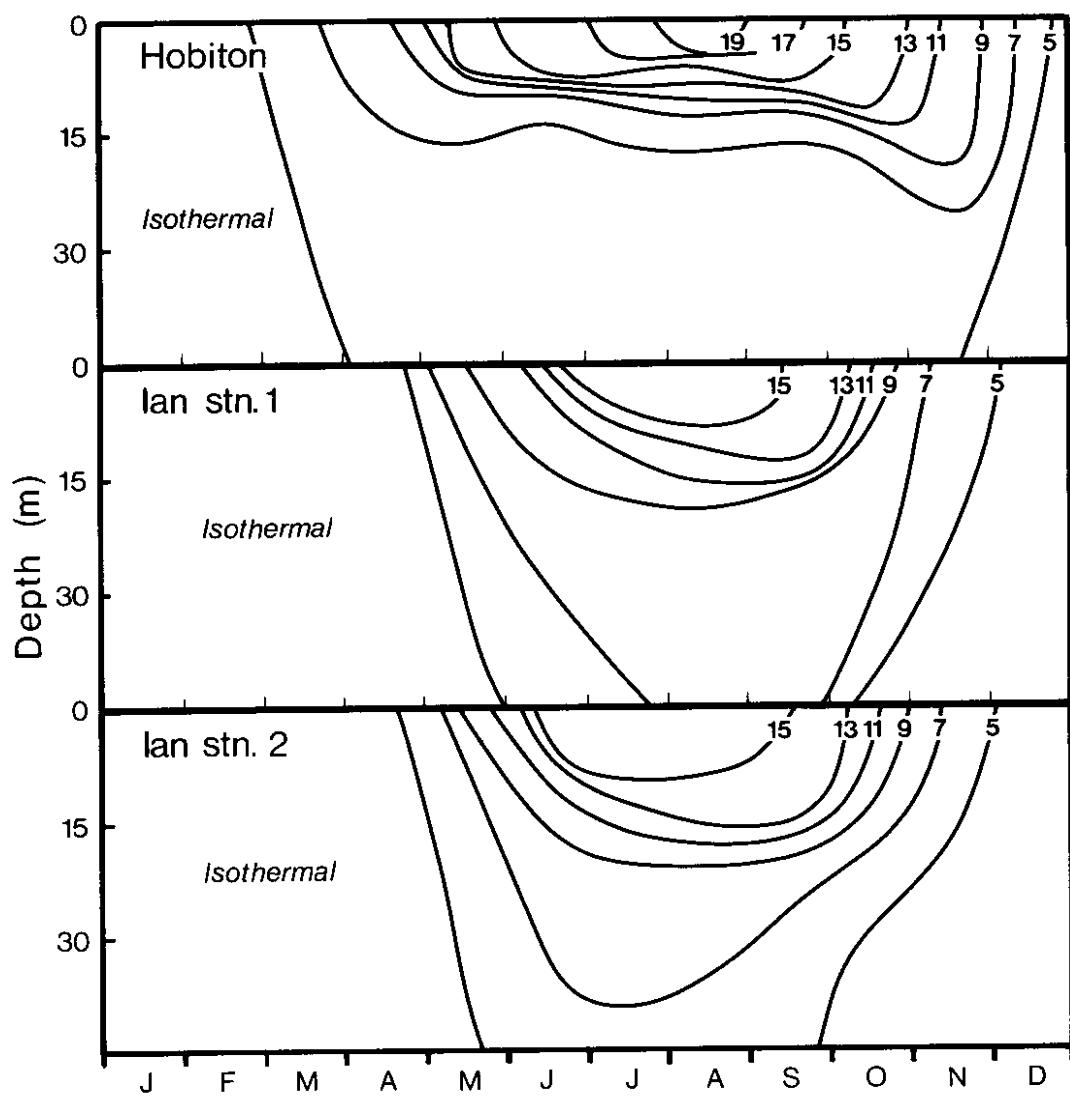


Fig. 21. Annual temperature isopleths of Hobiton and Ian lakes (Stations 1 and 2).

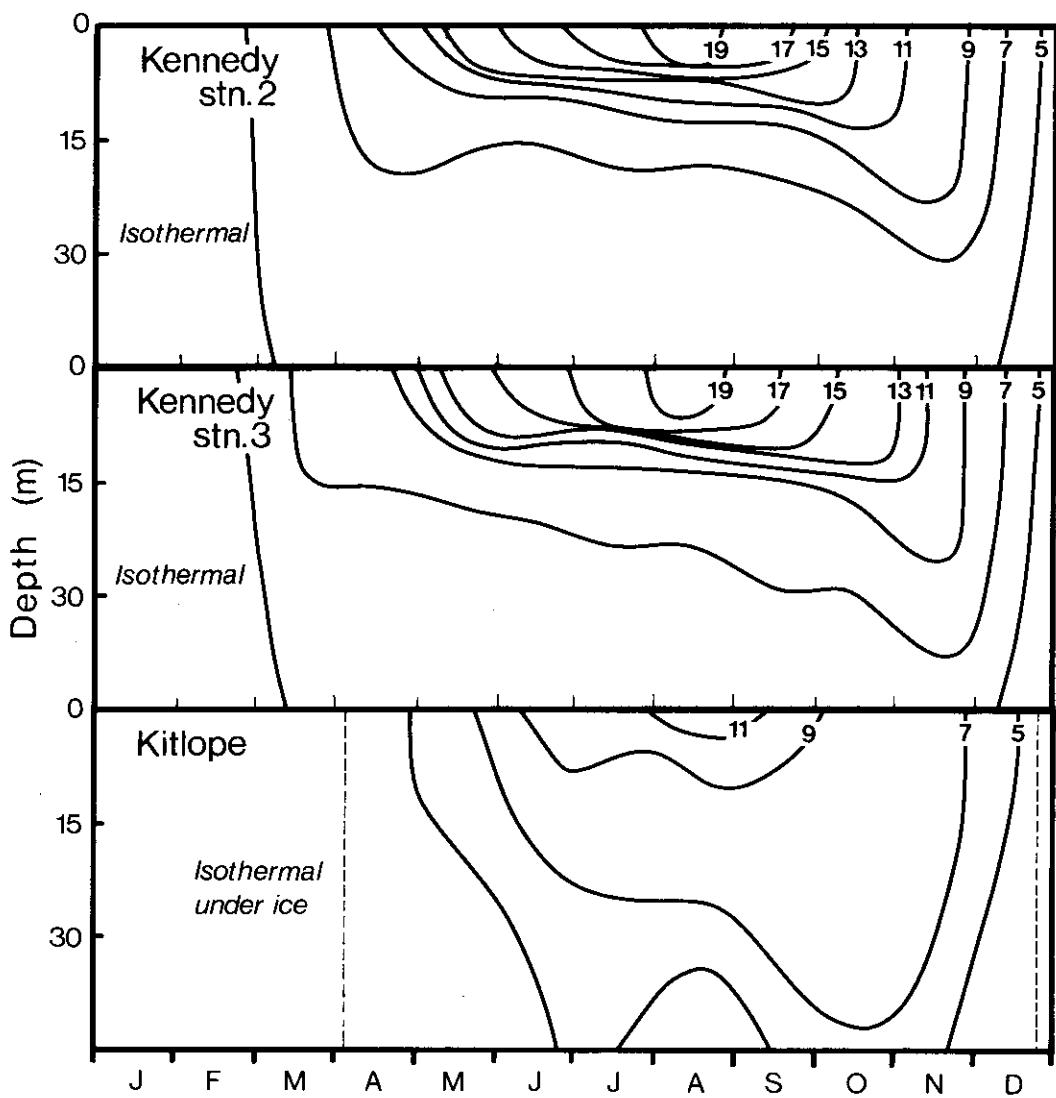


Fig. 22. Annual temperature isopleths of Kennedy (Stations 2 and 3) and Kitlope lakes.

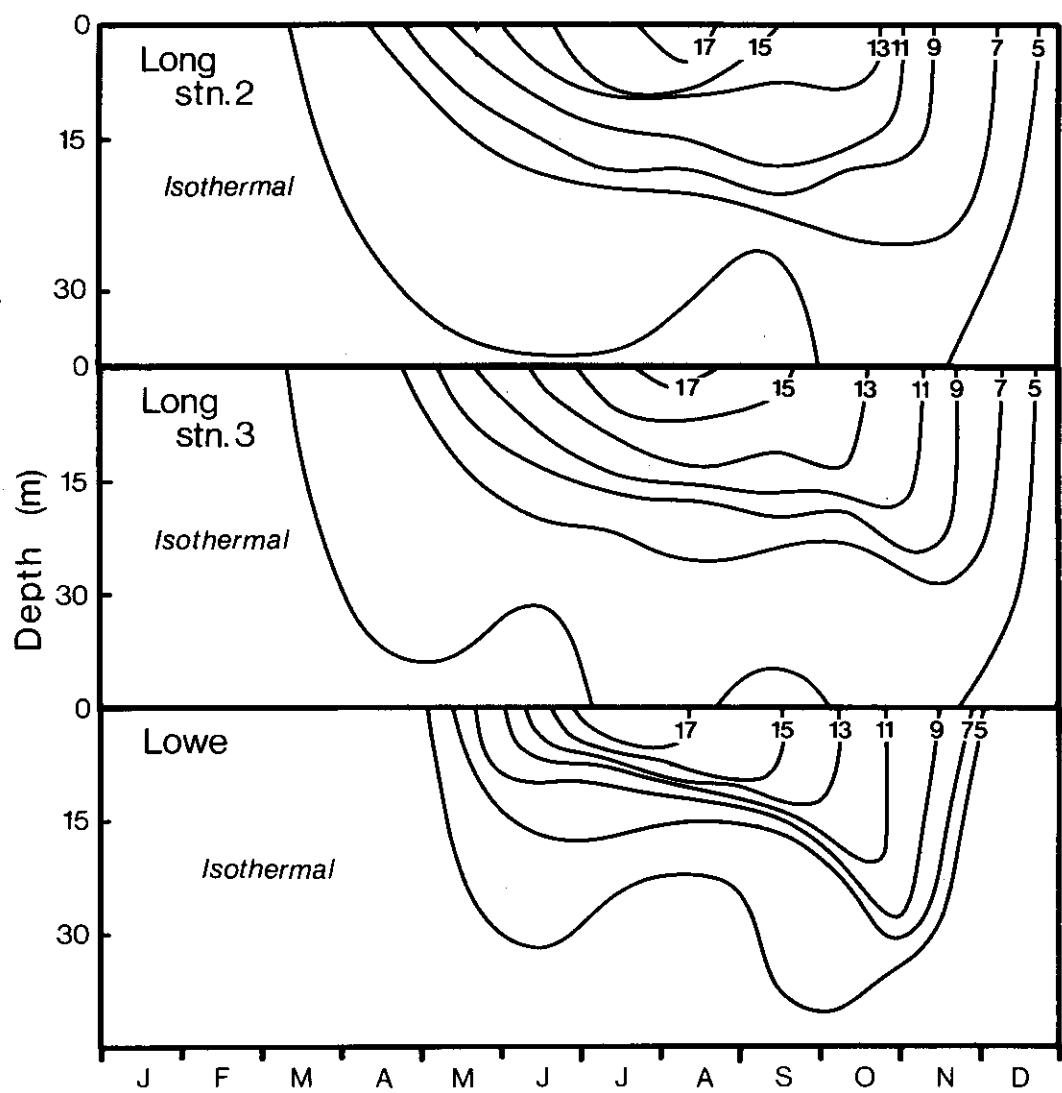


Fig. 23. Annual temperature isopleths of Long (Stations 2 and 3) and Lowe lakes.

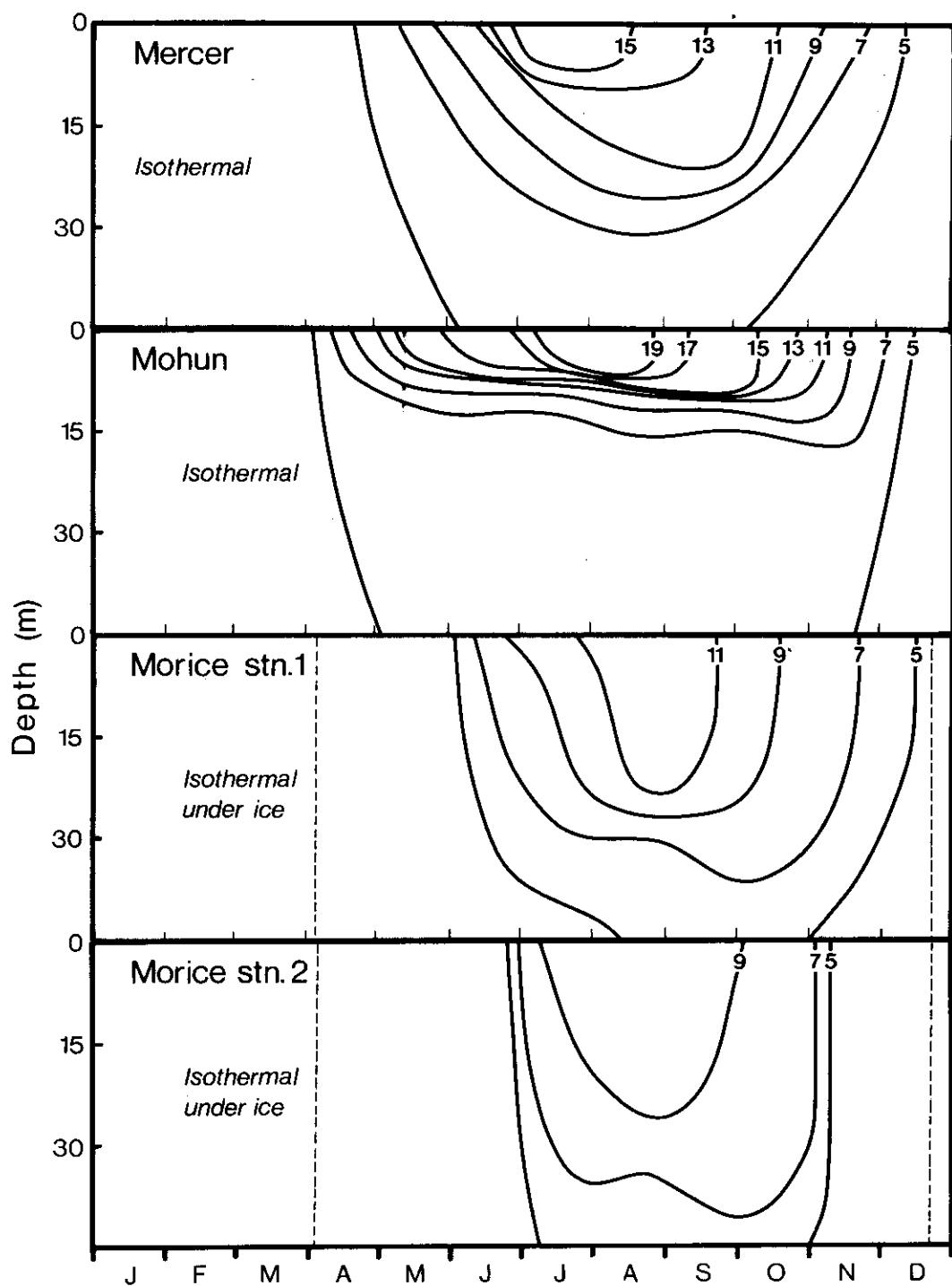


Fig. 24. Annual temperature isopleths of Mercer, Mohun and Morice lakes (Stations 1 and 2).