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The Changing Pelagia of Lake Ontario (1981 to 1995): A Report of the DFO Long-Term Biomonitoring (Bioindex) Program.

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1998

Canadian Technical Report of Fisheries and Aquatic Sciences No. 2243

Canadian Technical Report of
Fisheries and Aquatic Sciences

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THE CHANGING PELAGIA OF LAKE ONTARIO (1981 TO 1995): A REPORT OF THE DFO LONG-TERM BIOMONITORING (BIOINDEX) PROGRAM.

by

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Cat. No. Fs 97-6/2243E ISSN 0706-6457

Correct citation for this publication:

Johannsson, O.E., E.S. Millard, K.M. Ralph, D.D. Myles, D.M. Graham, W.D. Taylor*, B.G. Giles, R.E. Allen. 1998. The Changing Pelagia of Lake Ontario (1981 to 1995): A Report of the DFO Long-Term Biomonitoring (Bioindex) Program. Can. Tech. Rep. Fish. Aquat. Sci. No. 2243: i-ix + 278 pp.

ABSTRACT

The Bioindex, or Long-Term Biological Monitoring Program on Lake Ontario commenced in 1981 as a prototype program for biological monitoring. The physical conditions, nutrient concentrations, and the biomass, composition and production of the lower trophic levels were measured in the surface waters of the lake. The Program focused on measuring seasonal changes rather than spatial patterns because temporal variability was much greater than spatial variability in the lake. Two permanent stations were sampled on a weekly basis from the beginning of April until the end of October, one in the midlake and the other in the centre of the eastern basin. The Bioindex Program was terminated in 1995 due to lack of resources.

During the 15 years of the program, phosphorus levels in the lake declined with decreases in phosphorus loading (1981-1986), salmonid stocking reached a plateau (1984-1992) and subsequently was halved (1993), the dominant planktivore (alewife) population declined dramatically from a peak in 1981-1983, and exotic species, namely, *Bythotrephes* (1985) and dreissenid mussels (1989), invaded the lake. This report documents trends through this 15 year period. For these analyses, the season was divided into prestratified and stratified periods because production and composition are controlled by different factors during these two periods.

Decreases in phosphorus loading to the lake were associated with declines in total phosphorus concentration, standing crop and zooplankton productivity at both stations between 1981 and 1987. Photosynthetic rates were not measured until 1987. Total phosphorus, particulate organic carbon and nitrogen and chlorophyll *a* continued to decrease in the eastern basin between 1987 and 1995 while water clarity and soluble reactive silica increased. Dreissenid filtering activity, both within the basin and upstream, are thought to be responsible for these changes. Although seasonal photosynthesis did not decline during this period, edible algal biomass, notably cryptophytes, decreased which may account for the continued decline in zooplankton production.

Evidence of changes in predation pressure on the zooplankton community due to the decline in the alewife population was not dramatic. Cyclopoid densities did increased slightly at both stations. The rarer, larger zooplankton species became slightly more abundant in the latter years, particularly in the eastern basin. *Epischura*, a large calanoid, was first observed in 1993. In spite of these changes, the community remained dominated by small bodied species and *Bythotrephes* remained rare: predation continued to be the dominant force structuring the zooplankton community.

It is recommended that this type of program be undertaken on all the Great Lakes. Many changes would have gone undetected or been misinterpreted without this type of biomonitoring program.

RÉSUMÉ

Le Bioindex, programme de surveillance à long terme des indices biologiques dans le lac Ontario, a été lancé en 1981 comme prototype de programme de biovigilance. Les conditions physiques, les concentrations d'éléments nutritifs ainsi que la biomasse, la composition et la production des niveaux trophiques inférieurs ont été mesurées dans les eaux superficielles du lac. Le programme était axé sur la mesure des changements saisonniers plutôt que sur les patrons spatiaux, du fait que la variabilité temporelle était beaucoup plus grande que la variabilité spatiale dans le lac. L'échantillonnage a été effectué chaque semaine, du début d'avril à la fin d'octobre, à deux stations permanentes, situées l'une au milieu du lac et l'autre au centre du bassin oriental. La pénurie de ressources a forcé l'abandon du programme en 1995.

Pendant les 15 ans qu'a duré le programme, les concentrations de phosphore dans le lac ont baissé en même temps que les apports de phosphore (1981-1986), l'ensemencement en salmonidés s'est stabilisé (1984-1992) puis a été réduit de moitié (1993), la population du planctophage dominant (le gaspareau) a chuté de façon spectaculaire après un pic en 1981-1983, et des espèces exotiques, en l'occurrence *Bythotrephes* (1985) et les dreissenidés (1989), ont envahi le lac. Le présent rapport expose les tendances observées sur cette période de 15 ans. Pour les analyses, la saison a été divisée en période pré-stratification et période de stratification, car la production et la composition sont régies par des facteurs différents pendant ces deux périodes.

Les baisses des concentrations de phosphore total, de la biomasse et de la productivité du zooplancton aux deux stations entre 1981 et 1987 étaient associées aux réductions des apports en phosphore dans le lac. Les taux de photosynthèse n'ont pas été mesurés avant 1987. Le phosphore total, le carbone et l'azote organiques particulaires et la chlorophylle *a* ont baissé dans le bassin oriental entre 1987 et 1995, tandis que la transparence de l'eau et la teneur en silice réactive soluble étaient en augmentation. L'activité de filtrage des dreissenidés, aussi bien dans le bassin qu'en amont, semblait responsable de ces changements. Bien que l'activité photosynthétique saisonnière n'ait pas baissé pendant cette période, la biomasse algale comestible, notamment les cryptophytes, a diminué, ce qui pourrait expliquer le déclin continu de la production zooplanctonique.

Les changements dans la pression de prédation exercée sur la communauté zooplanctonique, causés par le déclin de la population de gaspareau, n'ont pas été spectaculaires. Les densités des cyclopoïdes ont légèrement augmenté aux deux stations. Les espèces zooplanctoniques plus grosses et plus rares sont devenues légèrement plus abondantes les dernières années, particulièrement dans le bassin oriental. *Epischura*, un gros calanoïde, a été observé pour la première fois en 1993. Malgré ces changements, la communauté est demeurée dominée par des espèces de petite taille, et *Bythotrephes* est resté rare. La prédation a continué à être la force dominante structurant la communauté zooplanctonique.

Sans le Bioindex, de nombreux changements seraient restés occultés ou auraient été mal interprétés. Idéalement, il faudrait mener un programme de biovigilance dans tous les Grands Lacs.

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BACKGROUND

The Bioindex, or Long-Term Biological Monitoring Program commenced in 1981. It was originally a developmental or prototype program for biological monitoring on Lake Ontario. The design of the Bioindex Program was developed jointly by many people at the Canada Centre for Inland Waters, but particularly by the scientists in the Great Lakes Fisheries Research Branch of the Department of Fisheries and Oceans, Canada: Ken Minns, John Cooley, Nelson Watson and Harvey Shear. The Great Lakes Fisheries Research Branch, later know as the Great Lakes Laboratory for Fisheries and Aquatic Sciences, assumed responsibility for the program from its inception and received support for the program from the Technical Operations Branch and National Laboratory for Environmental Testing, Environment Canada.

The attempt to conduct more intensive biological monitoring was prompted by the International Joint Commission's acceptance in 1978 of a broader definition of lake health encompassing all components of the ecosystem. Many of man's activities such as fishing, nutrient loading of lakes and rivers, shoreline alteration, accidental introductions of exotic species and contaminant production, ultimately affect the lake ecosystem. The effects of these stresses are not always known and cannot be monitored individually. Biological monitoring is an integrative monitoring strategy. Ecosystems respond to stress with compensatory changes in community structure and function mediated at the population level (Boesch and Rosenberg 1981). Therefore, changes in ecosystem health (or state) can be detected by monitoring changes in the biotic communities (Dillon et al. 1978; Nicholls et al. 1980).

A comprehensive monitoring program should first document the state of the ecosystem, namely, the species composition, biomass, and production of each community component, including the normal ranges of temporal and annual variation. The second step is to examine the relationships and interactions amongst the ecosystem components in order to interpret changes in community structure or function and predict the future. Thus, the value of such a monitoring program goes far beyond its surveillance capabilities; it can form the backbone for research activities, thereby encouraging a detailed understanding of the system. To date, under the auspices of this program, the phytoplankton, zooplankton and benthic communities of the early 1980's have been

compared with those described in earlier years (Johannsson et al. 1985a; Johannsson et al. 1985b; Johannsson 1987) and trends in nutrient and biological parameters have been documented and compared with those in Lake Michigan (Johannsson et al. 1991b; Johengen et al. 1994). Statistical methods have been developed for comparing biological communities taking into account offsets in seasonal patterns of community change (Johannsson and Minns 1987). Phytoplankton production has been measured and factors limiting this production, namely, light and phosphorus, have been compared seasonally and spatially (Millard et al. 1996a; Millard et al. 1996b). Changes in the zooplankton community during the 1980's have been analyzed and compared with earlier periods (Johannsson et al. 1991b); ciliate and rotifer production have been estimated (Taylor and Johannsson 1991); life history and production of *Limnocalanus macrurus* has been investigated (Dumitru 1995), cyclopoid feeding ecology has been studied (LeBlanc et al. 1997); and interactions between zooplankton and alewife have been examined (Johannsson and O'Gorman 1991; O'Gorman et al. 1997). Mysid population structure, life history, distribution, productivity and interactions with the zooplankton and fish community have been detailed for Lake Ontario and compared with Lake Michigan (Johannsson 1992; Johannsson et al. 1994; Rand et al. 1994; Johannsson 1995). Zooplankton production to biomass ratios from the literature have been related to temperature and body size and tested with the Bioindex data (Stockwell and Johannsson 1997). In addition, several projects which examine food web dynamics are still in progress or nearing publication.

The most important contribution of the program, however, occurred as part of an assessment for the Great Lakes Fishery Commission. The sustainability of salmonid stocking rates in the lake were evaluated in 1992 in response to the marked declines in the density, biomass and condition of the alewife population. Production and consumption of each lower trophic level were estimated and compared in order to determine if there was sufficient benthic and pelagic production to support the planktivore populations. Further comparison between planktivore production and salmonid energy consumption was made to determine whether there was sufficient energy flow to support salmonid populations. The lower trophic level productivity estimates used in these calculations and interpretation were derived from The Bioindex Program data. As a result of these analyses, stocking programs were modified.

The Lake Ontario Biological Monitoring Program was reduced in scope in 1996 with the reorganization of the Department. During the 1981-1995 period, phosphorus levels in the lake declined in association with decreases in phosphorus loading (1981-1986), as planned under the Great Lakes Water Quality Agreements (Neilson et al. 1995), salmonid stocking reached its peak (1984-1992) and subsequently was halved (1993) (Orsati and LeTendre 1994), the primary planktivore (alewife) population in the lake declined dramatically from peaks in abundance during 1981-1983 (O'Gorman and Stewart 1999), and dreissenid mussels invaded the lake in 1989, becoming well established in the western basin by 1991 and in the eastern basin by 1993 (Schaner 1991; Wormington et al. 1993). It is thus appropriate, at this time, to update our analyses of trends in the physical, chemical and biological data in relation to the above changes in the environment. It is also appropriate to make the basic data available to the Lake Ontario LaMP (Lakewide Management Plan) Working Group, the resource agencies and other researchers who could use this information. Trends in these variables should assist in the interpretation of present conditions and in the assessment of future management strategies.

INTRODUCTION

The primary objective of the Bioindex Program was to detect change in the nutrient chemistry, physical conditions and the sub-vertebrate biological community in response to management actions and other perturbations. This report presents epilimnetic or surface water data collected between 1981 and 1995 at two sites representative of large regions of the lake. Trends in the various physical, chemical and biological measures are examined across years. The analyses separate out periods of expected phosphorus loading, low planktivory and *Dreissena spp.* impacts.

METHODS

During the 1970's the Inland Waters Directorate (IWD) conducted several spatially-intensive, seasonal (monthly) surveys of Lake Ontario for physical, chemical, and biological parameters. The biological parameters measured were particulate organic carbon (POC), particulate organic nitrogen (PON), and chlorophyll *a* uncorrected for phaeopigments (Chl_{un}). The results of these surveys indicated that there was much more variability in the temporal than in the spatial data

(El-Shaarawi and Kwiatkowski 1977). Minns (1984) obtained a similar result with zooplankton data. Because biological variables changed rapidly through the season, and because development of the biological community was similar throughout much of the open-waters of the lake (Patalas 1969; Johannsson and Minns 1987), the Bioindex program sampled a minimum number of stations on a weekly basis. In the end, two permanent stations were maintained. Station 41 was located in the more stable, less productive, midlake region, 28 km south of Chub Point at 130 m depth (latitude = 43°43'00", longitude = 78°01'36"). Station 81 was situated in the centre of the more productive eastern basin at 34 m depth (latitude = 44°01'00", longitude = 76°40'18"; Fig. 1). In order to maximize the continuity of data in the Federal Government database on Lake Ontario, the exact locations were chosen to coincide with permanent surveillance stations.

Samples were collected weekly from the beginning of April until the end of October and in the earlier years over a longer season. All physical and chemical parameter measurements were obtained from discrete depth samples in 1981-1983, and from integrated epilimnetic samples thereafter. The discrete depth data were converted to integrated estimates for all analyses. A temperature profile was obtained with an electronic bathythermograph. Density was calculated at 0.5 m intervals and a criterion of 0.08 $kg.m^{-3}.m^{-1}$ was chosen as the minimum density gradient required to delineate a mixed depth at a depth greater than six metres, criteria used in other studies (Reynolds and Wiseman 1982; Reynolds et al. 1984; Millard 1986; Millard et al. 1996b). At 10°C, this density gradient is met with a thermal gradient of 0.8 to 0.9°$C.m^{-1}$, while at 20°C, 0.4°$C.m^{-1}$ was sufficient. We collected an integrated water sample from the surface to 1 m above the thermocline, or to 20 m if the lake was unstratified or the thermocline deeper than 20 m. From this sample, water was taken for all measures except zooplankton and oxygen; that is, rotifers and ciliates (1984, 1986, 1990-1995), phytoplankton biomass and species composition, integral photosynthesis (1987-1995), particulate organic carbon (POC) and nitrogen (PON), chlorophyll *a* (Chl), total phosphorus (TP), total filtered phosphorus (TFP), soluble reactive phosphorus (SRP), nitrate+nitrite (NO_3NO_2), total Kjeldahl nitrogen (TKJN), ammonia (NH_3), chloride (Cl), soluble reactive silica (SiO_2), pH and conductivity (Cond). The water sample was placed in acid-washed, darkened, insulated 20L polycarbonate bottles. Sample containers were cleaned with 10% sulphuric acid between cruises, rinsed thoroughly with distilled water and several times with sample water at collection time. In Lake Ontario, the depth of 1% light

penetration (Z_{eu}) extended beyond the relatively shallow mixed depth (Z_m) of the epilimnion in early summer. Samples from three equally spaced depths through this metalimnetic euphotic zone were pooled when this layer exceeded 3 m in thickness for determination of photosynthesis and Chl_{un}. Oxygen was measured in a discrete sample taken from the mid-depth of the mixed layer. Secchi disk and light extinction (1987-1995) were measured separately. Zooplankton were collected with a 30-cm diameter, 70-μm mesh net from 1981 until September 1982, when it was lost and replaced by a 25-cm diameter, 64-μm mesh net for the remainder of the year. In 1983 we constructed 50-cm diameter, 64-μm mesh nets which became the standard for the program. The net was hauled vertically through the water column at 0.7 $m.sec^{-1}$ through the same depth range as the integrated sample. The nets were metered as of 1986, first with General Oceanics flow meters and later with Rigotia meters, to allow correction for net efficiency. Two replicate samples were collected and later collated to reduce sample variability. *Mysis relicta*, the opossum shrimp, was collected monthly from the mid-lake station starting in 1984. Four replicate net hauls were taken with a 1 m^2 1-mm (500-μm mesh cod end) net from 2 m off the bottom to the surface. The net was retrieved at 0.33 $m.sec^{-1}$ and all samples were collected at night during the period of the new moon.

SAMPLE ANALYSIS

The following is a list of parameters with their methods of measurement. All chemical determinations are described in much greater detail in Philbert and Traversy (1973) or Inland Waters Directorate (1979).

Physical Parameters

Temperature: (Temp) A temperature profile from surface to bottom was obtained with an electronic bathythermograph.

Sounding Depth: The water depth was determined acoustically with an echo sounder.

Solar Irradiance: Incident solar irradiance of photosynthetically available radiation (PAR) was measured at both ends of the lake with Li-190 quantum sensors (Li-Cor, Lincoln, Nebraska). In the east end of the lake, a sensor was mounted on top of the Point Petre lighthouse. In the west

end of the lake, a sensor was mounted on the roof of the Canada Centre for Inland Waters (CCIW), Burlington. Sensors were calibrated yearly by the manufacturer. Daily integral photosynthesis rates at station 81 were calculated using solar data from Point Petre. Solar data from CCIW were used for station 41 calculations. The raw data are not presented in this report but are available upon request.

Dissolved Oxygen: (O_2) The oxygen concentration of the water was determined by Winkler titration using the modified Winkler iodometric measure.

Euphotic Depth: (Z_{eu}) (1981-1986) A vertical profile of horizontal transparency was obtained with a transmissometer using a 0.25 m pathlength (CSS Bayfield) or a 1 m pathlength (CSS Limnos) and Wratten 45 blue-green filters. The following relationships, developed by Dr. J. Jerome (National Water Research Institute, Burlington, Ontario, pers. comm.), were used to calculate beam and light attenuation:

$$\text{Beam attenuation (C)} = \text{Ln}\left(\frac{100}{T}\right)^{1/P} \quad \text{where: } T = \text{transmission reading}, \; P = \text{pathlength}$$

To convert $C_{1.0}$ to $C_{0.25}$:

$$\text{TRANS} > 30\% \quad C_{.25} = 0.882 * C_{1.0} + 0.431$$

$$\text{TRANS} < 30\% \quad C_{.25} = 0.984 * C_{1.0} + 0.947$$

$$\text{Light attenuation } (\varepsilon_{par}) = 0.185 * C_{.25} + 0.02$$

The depth of one per cent light penetration was then calculated from the following equation:

$$Z_{eu} = \frac{\ln(I_o) - \ln(I_{eu})}{\varepsilon_{par}} \quad \text{where: } I_o = 100\% \text{ subsurface radiation}, \; I_{eu} = \%\text{ radiation at depth } Z_{eu}\ (1\%)$$

(1987-1995). Extinction of photosynthetically available radiation (PAR=400-700 nm) was

estimated from vertical light profiles measured using an underwater quantum sensor (LI-192) (LI-COR, Inc., Lincoln Neb.) The extinction coefficient for PAR (ε_{par}) was calculated as the slope of a simple linear regression of the natural logarithm of light intensity versus depth.

Mean Epilimnetic Irradiance: ($\bar{I}$) was calculated using the computer programs of Fee (1990).

Secchi Disc Depth: (Secchi) The vertical transparency was measured as the depth of disappearance of a 30 cm diameter white disc lowered on the shady side of the boat.

Conductivity: (Cond) Specific conductance was measured with a conductivity meter at ambient temperature and converted to 25°C.

Dissolved Inorganic Carbon: (DIC) The sample was filtered through a 0.45-μm membrane filter, mixed with HC1, and then mixed with oxygen. The resulting CO_2 was separated from the liquid phase and measured with an infrared detector.

pH: (pH) Measurements were made with a radiometer model pH52 digital readout pH meter.

Chloride: (Cl) The chloride concentrations of filtered samples (0.45-μm membrane filters) were determined using the autoanalyzer mercuric thiocyanate method.

Nutrient Parameters

Total Phosphorus: (TP) A 110 mL water sample was preserved with 1 mL of 30% H_2SO_4 and later digested in acid persulphate. The phosphorus concentration was determined colorimetrically using the ammonium molybdate-stannous chloride method.

Soluble Reactive Phosphorus: (SRP) A 110 mL sample was filtered through a 0.45-μm membrane filter and stored at 5°C. On return to the laboratory it was analyzed in the autoanalyzer using the ammonium molybdate-stannous chloride method.

Total Filtered Phosphorus: (TFP) A 110 mL water sample was filtered through a 0.45-μm membrane filter, preserved with 1 mL of 30% H_2SO_4, and analyzed as per TP.

Total Kjeldahl Nitrogen: (TKJN) A 110 mL water sample was filtered through a 0.45-μm membrane filter. The filtrate was digested with H_2SO_4 and an oxidant at 300°C in an autoanalyzer system. The concentration of the resultant $(NHK_4)_2SO_4$ was determined colorimetrically using salicylate and dichloroisocyanurate.

Ammonia: (NH_3) A 110 mL sample was filtered through a 0.45-μm membrane filter and the N

content determined by an automated alkaline phenol method.

Nitrate Nitrite: (NO_3NO_2) The sample was filtered through a 0.45-μm membrane filter and the N content determined by the autoanalyzer cadmium reduction method.

Total Nitrogen: (TN) Total nitrogen was calculated as the sum of NO_3NO_2 + TKJN.

Soluble Reactive Silica: (SiO_2) The sample was filtered through a 0.45-μm membrane filter and the silica concentration determined by the autoanalyzer heteropoly-blue method.

Biological Parameters

Dissolved Organic Carbon: (DOC) The concentration of DOC in a 0.45-μm membrane, filtered sample was determined by an automated ultraviolet method.

Particulate Organic Carbon: (POC) The sample was filtered through a precombusted (500°C) GF/C filter. The carbon residue on the filter was analyzed using a Hewlett-Packard model 185 CHN Analyzer.

Particulate Organic Nitrogen: (PON) The particulate nitrogen concentration was determined on the same filter, using the same equipment as the POC.

Chlorophyll *a* Uncorrected: (Chl_{un}) Two methods were employed. From March 1981 until May 1982, the GF/C filtration/acetone extraction and grinding method described by Strickland and Parsons (1968) was used. From 1982 until 1984, phytoplankton was collected on Millipore filters and chlorophyll *a* extracted with 90% acetone. The Millipore and GF/C (with 90% acetone extraction and grinding) techniques did not produce significantly different estimates of chlorophyll *a* in Lake Ontario samples. In 1985, we reverted to the GF/C procedure which is used extensively in other lower Great Lakes programs out of the Canada Centre for Inland Waters.

Chlorophyll *a* Corrected: (Chl_{cor}) The phaeophytin concentration was determined by acidification of the above sample, and the Chl_{cor} concentration determined by the equation provided by Strickland and Parsons (1968).

Phytoplankton: Integrated 250 mL whole-water samples were preserved with 2.5 mL of Lugol's solution, and the phytoplankton identified and enumerated using the inverted microscope technique (Utermöhl 1958 in Munawar et al. 1974). A 15 mL aliquot was settled and examined using phase contrast. At least 200 units/sample were counted at 300x, 600x, and 1500x

magnification by the strip method providing an estimate of total cell numbers within ± 14 % (Lund et al. 1958), and cell measurements taken. Phytoplankton volumes were calculated using approximations to geometric shapes, and converted to biomass assuming a density of one. The standard deviation of the total biomass of replicate hauls was ± 22.8 % in 1982 (N=33 pairs) and ± 15.8 % in 1981 (N=17 pairs) (Johannsson et al. 1985a). Taxonomic references are cited in Johannsson et al. (1985a).

Phytoplankton Photosynthesis: Photosynthetic rates were determined by measuring ^{14}C uptake of whole water samples exposed to a light gradient in a shipboard incubator. The incubator was a rectangular trough made of 9-mm grey PVC (1.1 m x 0.4 m x 0.15 m) with clear, 9-mm plexiglass at the end nearest the light source (Fee et al. 1989; Fee et al. 1992). The light source was a 150-W, high-pressure sodium vapour lamp (Thorn Lighting, Mississauga). A working tracer solution (approximate activity 18.5 $x10^5$ $Bq \cdot mL^{-1}$ = 50 $uCi \cdot mL^{-1}$) was made by diluting stock $Na_2{}^{14}CO_3$ (Amersham Co.) with a carrier solution (unlabelled Na_2CO_3) of the same alkalinity as Lake Ontario. Five-mL aliquots of tracer solution were flame-sealed in glass ampoules and autoclaved for later use. One litre of whole lakewater was inoculated by dispensing the contents of one ampoule through an in-line cellulose-acetate filter. The inoculated sample was well mixed and dispensed through a silicon tube to 10-15 light and 2 dark, 60-mL Pyrex bottles (Corning). Batch inoculation reduced inter-bottle variability. Bottles were incubated in a light gradient at close to *in situ* temperatures. Incubation periods were 3-4 hours in the summer and 4-5 hours in the spring when volume-based uptake rates were lowest. Samples from the metalimnetic portion of the euphotic zone were incubated in a separate incubator at the average temperature of the 3 depths sampled. Phytoplankton from this part of the water column were often shade-adapted and optimum response was achieved using a light gradient spanning a lower range of intensities. The light level at all bottle positions was checked at least once during an incubation using a Biospherical QSP-200 scalar quantum sensor (Biospherical, San Diego, Ca., recalibrated yearly by the manufacturer). Light measurements at each bottle position were invariant over the incubation and replicate light measurements in the incubator were unnecessary. When bottles were removed at the end of an incubation they were replaced with a dummy set of filled bottles to ensure a consistent light environment for incubations not yet complete. Uptake at the end of the experiment was determined by the acidifying and bubbling technique (ABM). A 5-mL aliquot from each bottle was placed in a

glass scintillation vial with 1 mL of 0.5 N HCl and bubbled for 30 min. in a vacuum apparatus (Shearer et al. 1985). Five-mL standards were taken from three random bottles and placed in scintillation vials with 200 mL of ethanolamine to determine the total ^{14}C available for uptake. Samples were removed from the bubbler, capped, shaken and left overnight with loose caps before 10 mL of Redi-Gel liquid scintillation fluor were added (Beckman Co., Mississauga, ON). Samples were counted in a Beckman LS5000 TD liquid scintillation counter for 20 min. or to a 2 sigma level of accuracy of 2 %. Quench corrections were made using the external standard technique and the H# (Beckman Co.).

Photosynthesis Calculations: Depth integrals of photosynthesis were calculated with the computer programs of Fee (1990). Chl_{un}, vertical profiles of transparency, incident solar irradiance, photosynthetic parameters and mixing depth data are required as input to the programs. Percent transmission of PAR at depth was calculated from ε_{par}. The photosynthetic parameters P^B_m (mg C·mg $Chl_{un}^{-1} \cdot h^{-1}$), the carbon uptake rate at light-saturating irradiance and α^B (mg C·mg $Chl_{un}^{-1} \cdot E^{-1} \cdot m^{-2}$) the slope of the light-limiting part of the photosynthesis vs. light intensity curve, were derived using the curve-fitting program PSPARMS (Fee 1990) and the photosynthesis vs. light intensity data measured in the incubator. The superscript B indicates that P^B_m and α^B are normalized per unit of biomass, using Chl_{un} as a biomass index.

Daily *in situ* photosynthetic rates were calculated with the programs YPHOTO and YTOTAL (Fee 1990). These programs calculate carbon fixed over longer periods of time by interpolation. Methods used in this study were identical to those described by Fee et al. (1989) and Fee et al. (1992) making comparison with those data sets possible.

Ciliates and Rotifers: 500 mL of integrated water was preserved each week with 5 mL of Lugols solution for ciliates, and 5 L of integrated water was filtered through a 44-μm mesh screen for rotifers. The rotifers were narcotized in soda water for 2 minutes before being preserved in 4% buffered, sugar formalin. Individual samples were enumerated in 1984 and 1986. Samples from 1990 to 1995 were collated into 4 time periods and enumerated. Only ciliates were enumerated in 1986 . Ciliates and rotifers were counted with an inverted phase microscope in settling chambers at 200x magnification. Ciliates <25 μm in length were counted separately at 400x magnification. The data presented here are seasonal mean densities.

Zooplankton: Zooplankton were preserved in 4% buffered, sugar formalin, and identified under

a dissecting microscope using a stratified counting system (Cooley et al. 1986). Cladocerans and adult calanoids and cyclopoids were identified, and the number of individuals and eggs per species recorded. The calanoid and cyclopoid nauplii and copepodids were counted, but not identified to species. Algorithms were developed to convert densities uncorrected for net efficiency, to corrected densities. In the prestratified period, no relationship existed between net efficiency and algal or diatom biomass, Chl_{un}, POC or PON. We used the observed mean net efficiencies to correct the earlier data: station 41 - April 60.5%, May and June 54.6%; station 81 – April 41.1%, May and June 52.0%. From stratification until August 8 (station 41) and August 18 (station 81) net efficiency averaged 76%. After these dates net efficiency (NE) was calculated as NE = 1.2529 – 0.00234 * Julian Date (station 81) or NE = 0.5758 – 0.001195 * Mixed Depth + 0.01404 * Temperature (station 41). All data were converted to corrected densities.

Zooplankton Production: We calculated epilimnetic/surface water production for the April 1 to October 31 period. Zooplankton densities ($no.m^{-3}$) were multiplied by the mixed depth or 20 m, whichever was less, to determine epilimnetic abundances. Species biomass were determined as per Johannsson and O'Gorman (1991). They were based on Lake Ontario length-weight relationships and size-frequency distributions for the dominant species. *Bosmina* and *Daphnia* size and biomass were estimated annually while the 1985 averages were employed for *Ceriodaphnia* and the dominant copepods. Mean biomass was assigned to the rarer species and groups based on Wilson and Watson's estimates for Great Lakes zooplankton (Malley et al. 1989). Zooplankton production was estimated using the egg-ratio method of Paloheimo (1974).

Mysid Production: All samples were enumerated completely and the body length and number of eggs were recorded for 100 randomly selected individuals from each sample. Body length was measured from the tip of the rostrum to the apical cleft of the telson. Biomass was determined from a length-weight equation determined for Lake Ontario mysids: ln(biomass) = -12.27 + 2.72 ln(length) where biomass is in grams dry weight and length is in millimeters. Production was estimated using Menzies' (1980) modification of the size-frequency method of Hynes (Johannsson 1992; Johannsson 1995).

DATA ANALYSIS

The data were collected over ever-shorter periods of time as the program progressed, going from mid-March to mid-December in 1981 to early-April to the end of October by 1995. For comparative purposes, we standardized the season to the April 1 to October 31 period. For the trend analyses, the season was further divided into two segments because different variables control phytoplankton dynamics in the spring when the water column is thoroughly mixed, and in the summer when the lake is stratified. The period immediately following stratification is a time of transition (Reynolds 1984) and was omitted. During this period, the phytoplankton community switches from a more light-limited to a more nutrient-limited state. With the much shorter mixed depth following thermal stratification, heavier particles, such as diatoms, tend to fall out of the epilimnion, and mean epilimnetic irradiance increases. Phosphorus supply is reduced with the isolation of the surface waters from the bulk of the water column, and phosphorus rapidly becomes limiting (Lean et al. 1987; Millard et al. 1996a).

We defined the prestratified period as extending from April 1 until the water column stratified. The stratified period commenced 18 days after the onset of stratification and ended when the mixed depth exceeded 20 m. The period of 18 days was chosen to ensure the first two weeks after stratification were removed (time of transition) because Lean et al. (1987) found most of the changes to occur during this period. The data were expressed as annual means, within each period and a Mann Kendall (sign) Test was applied to assess trends across years.

Methods for Mann Kendall Trend Analysis

The major groups of variables assessed were physical conditions, nutrients, indices of phyto- and zooplankton biomass and species composition, phytoplankton photosynthesis and zooplankton production. The physical parameters measured were temperature (Temp), vertical mixing depth (Z_m), euphotic depth (Z_{eu}), extinction coefficient for PAR (ε_{par}), Secchi disk transparency, conductivity (Cond), pH, and oxygen (O_2). Nutrient parameters measured were total phosphorus (TP), total filtered phosphorus (TFP), soluble reactive phosphorus (SRP), total nitrogen (TN), total Kjeldahl nitrogen (TKJN), ammonia (NH_3), nitrate+nitrite (NO_3NO_2), soluble reactive silica

(SiO_2), dissolved inorganic carbon (DIC) and dissolved organic carbon (DOC). Indices of phytoplankton biomass measured were particulate organic carbon (POC) and nitrogen (PON), chlorophyll *a* uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Total phytoplankton biomass as well as biomass of major phytoplankton groups (Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae, Bacillariophyceae) and species compositon were measured. The photosynthetic rates, parameters and associated variables measured were daily areal photosynthesis rates calculated with empirical (ΣP_{emp}) and cloudless (ΣP_{cldlss}) solar irradiance for the whole water column as well as for the epilimnion only (ΣP_{epi}), the maximal rate of photosynthesis normalized to Chl_{un} ($P^B{}_m$), the slope of the light-limited part of the photosynthesis versus light intensity curve normalized to Chl_{un} (α^B), the rate of photosynthesis at optimal PAR ($P_{opt} = P^b{}_m \times Chl_{un}$), the level of PAR at the onset of light saturation (I_k), and the mean epilimnetic irradiance calculated with empirical (I_{emp}) and cloudless ($I_{cldllss}$) solar irradiance. The zooplankton variables measured were total zooplankton density (Tzoop), total density of the major groups of zooplankton ,that is, cladocerans (Tclad), cyclopoids (Tcyclo), and calanoids (Tcalan), zooplankton production (Zprod) and mysid production.

For each year, seasonal means were calculated for the three thermal periods. Mysid and zooplankton production, however, were estimated for the year or for the season, and therefore, could only be treated as annual estimates. The significance of trends through the 1981-1990, 91, 92, 93, 94, 95 and 1987-1995 periods were determined using the Mann Kendall (sign) Test. A matrix was created for each test by comparing every yearly mean (Y_i) with the yearly means after it (Y_{j-i}) and assigning a value of 1 if Y_i was greater, 0 if they were equal, or -1 if it was smaller. The matrix was them summed to give a value (S_j) which is expected to equal 0 if there was no change over time. A variance for S_j was calculated by the formula

(a) $Var(S_j) = [\, n_j (n_j - 1) (2n_j + 5)] / 18$ where n_j = the number of yearly means.

However, when there were ties ($Y_i = Y_{j-i}$), the formula used was:

(b) $Var(S_j) = [\, n_j (n_j - 1) (2n_j + 5) - t (t - 1) (2t + 5) \,] / 18$

where n_j = the number of yearly means and t = the number of yearly means involved in ties.

The S_j value was then converted to a Zvalue (Zj) as follows;

(c) $Zj = \frac{S_j - 1}{Var(S_j)^{1/2}}$ where $S_j > 0$;

(d) $Zj = 0$ where $S_j = 0$;

(e) $Zj = \frac{S_j + 1}{Var(S_j)^{1/2}}$ where $S_j < 0$;

The probability of finding a Z_j value more extreme than the calculated Z_j, using a normal distribution, was calculated within a statistical software package. If the determined probability was less than the test level of $\alpha = 0.05$, the trend was considered significant (i.e. S_j significantly different from 0). The results of these tests are summarized in Tables 190 to 195 .

Community Composition

We examined both zooplankton and phytoplankton community composition for trends through the years using multivariate statistical techniques. For the zooplankton, seasonally-weighted mean densities of all species were log transformed and a dissimilarity matrix based on the Euclidean distances computed. Euclidean distance is the square root of half the sum of the squared difference between species densities. Dreissenid veligers and juvenile forms, which were not identified to species, were not included in the analysis. Multidimensional scaling (MDS) of the dissimilarity matrix produced a two dimensional graph of distances amongst years. The dimensions were correlated with principal component (PCA) factors of species associations. We also examined trends in the major zooplankton groups (calanoids, cyclopoids and cladocerans) using these techniques. Instead of doing a PCA, we examined correlations between the MDS dimensions and the zooplankton groups.

For the phytoplankton, a dissimilarity matrix based on Euclidean distance was computed from the seasonally-weighted mean biomass of all the phytoplankton taxonomic groups, except the euglenids which were rare. MDS was performed and correlations were sought between the MDS dimensions and the phytoplankton groups.

RESULTS

Physical Conditions *(Tables 1-30)*

a) Prestratified Period: In both the eastern basin (station 81) and in the main body of the lake (station 41), chloride concentrations fell progressively from 26 $mg.L^{-1}$ to 21 $mg.L^{-1}$, conductivity declined slowly from the 320-330 $\mu mhos.cm^{-1}$ range to the 300-320 $\mu mhos.cm^{-1}$ range, and the extinction coefficient of light in water (ε_{par}) first increased and then decreased (eastern basin only) roughly following changes in diatom abundance (Fig. 2, 3, 4, 5). Transparency changed less in the eastern basin and no relationships with phytoplankton was evident. The lowest ε_{par} values (increased transparency) observed during the study occurred in 1995 in the eastern basin and from 1981 to 1984 in the midlake. Another measure of water clarity, Secchi depth, increased gradually in the eastern basin with depths consistently greater than 5.0 m as of 1991: the maximum occurred in 1995 with a mean of 7.0 m. No significant trend in Secchi depth was observed in the midlake where the average Secchi depth for 1981-1995 period was 7.1 m.

b) <u>Stratified Period</u>: Although chloride concentrations decreased at both stations, significant trends in conductivity were found only in the midlake where values first fell below 300 $\mu mhos.cm^{-1}$ in 1990 and remained below as of 1993. In the eastern basin, conductivity averaged 305 $\mu mhos.cm^{-1}$ between 1981 and 1995 (Fig. 2, 3).

Midlake, water clarity increased over the 15 year period although trends were not observed over shorter periods, 1981-1992 or 1987-1995. Secchi depths were > 4.5 m starting in 1987 (except 1991) and ε_{par} values were ≤0.3 starting in 1990 (Fig. 4). In the eastern basin, Secchi depth increased to depths > 4.0 m starting in 1989 and > 5.0 m in 1993 and 1994 (Fig. 5). The decrease

in Secchi depth to 3.2 m in 1995 likely negated any trend through the 1987-1995 period although the greatest Secchi depths occurred in 1990, 1992, 1993 and 1994. The extinction co-efficient, $\varepsilon_{par,}$ showed no long-term trend but decreased significantly between 1987 and 1995.

Nutrients (Tables 31-60)

a) Prestratified Period: Total phosphorus and TFP declined at both stations between 1981 and 1987 or 1988 (Figs. 6, 7). In the midlake, TP went from a maximum of 14.2 $ug.L^{-1}$ in 1983 to approximately 10 $ug.L^{-1}$ after 1988 and TFP from a maximum of 9.8 $ug.L^{-1}$ in 1984 to approximately 5 $ug.L^{-1}$ after 1988. In the eastern basin, the decline in TP was similar, dropping from 13.4 $ug.L^{-1}$ in 1984 to 10 $ug.L^{-1}$. The change in TFP was less marked, declining from 5.8 $ug.L^{-1}$ in 1984 to approximately 4.5 $ug.L^{-1}$. Soluble reactive phosphorous declined in the midlake reaching a minimum in 1991-1992 and thereafter increased, while in the eastern basin SRP increased over the 15 year period but was very variable (Fig. 6, 7). The ratio of N:P increased over the 1981-1995 period at both sites with most of the change occurring while the phosphorus concentrations were dropping (Fig. 6, 7). No trend was observed between 1987 and 1995. The concentrations of NO_3NO_2 increased in the eastern basin, but not in the midlake (Fig. 2, 3) .

There was a significant increase in SiO_2 in the eastern basin between 1987 and 1995, but not in the midlake. However, SiO_2 did increase at both stations through the 1990s. Midlake, values approached those observed from 1983-1985, and in the eastern basin, surpassed these earlier values in 1995 (Figs. 4, 5).

Dissolved organic carbon increased at both sites between 1981 and 1995 (Figs. 8, 9) .

b) Stratified Period: Significant declines were observed in TP and TFP at both sites: the decline leveled off in 1987 in the midlake and in 1989 in the eastern basin (Figs. 6, 7). Total phosphorus fell from 15.8 $ug.L^{-1}$ to approximately 10 $ug.L^{-1}$ midlake, and from 16.3 $ug.L^{-1}$ to approximately 11 $ug.L^{-1}$ in the eastern basin. Total filtered phosphorus declined from 7.5 $ug.L^{-1}$ to approximately 4.6 $ug.L^{-1}$ in the midlake, and from 8.7 to 5.4 $ug.L^{-1}$ in the eastern basin. Soluble reactive phosphorus increased at station 41 between 1981 and 1995, but showed no trend in the

eastern basin (Figs. 6, 7)

The N:P ratios increased at both sites and were > 30 as of 1985 in the eastern basin, and as of 1982, midlake (Figs. 6, 7). At station 81, increases in NO_3NO_2 were also observed between 1981 and the 1990s (Fig. 3).

DOC increased at station 41, but not station 81, between 1981 and the 1990s (Figs. 8, 9).

Phytoplankton and Related Biomass Indices ***(Tables 61-120)***

a) Prestratified Period: The trends in phytoplankton and related biomass variables differed between the two regions of the lake. Midlake, POC, PON, Chl_{un}, total algal biomass and chrysophyte biomass increased significantly between 1981 and 1992 (Figs. 8, 10). POC and PON concentrations declined in 1991 and remained low through to 1995. Phytoplankton and Chl_{un} increased until the mid-1980s when they 'stabilized', while chrysophytes increased irradically throughout the 15 year period. Diatoms, which are the dominant group of phytoplankton in the spring, exhibited a pattern of variable interannual biomass with the highest values occurring in the late 1980s and early 1990s.

In the eastern basin, POC and PON were relatively stable until the mid-1980s but declined significantly between 1987 and 1995 (Fig. 9). The decline was sharp and commenced in 1990. Dinoflagellates declined throughout the 15-year period, but their loss in biomass was compensated for by an increase in diatoms which peaked in 1990 and 1991(Fig. 11). No other trends were significant, however, it is worth noting that Chl_{un} concentrations between 1992 and 1994 were lower than those in 1985-1990 but similar to values observed in 1982-1984. Also, both cryptophyte and dinoflagellate biomass were higher in the 1981-1987 period than in the 1987-1995 period.

b) Stratified Period: Midlake, POC and PON declined from 1981 to 1987 with no further trend between 1987 and 1995 (Fig. 8). Cryptophytes followed a similar pattern, but their losses in biomass were compensated for by increases in dinoflagellates (Fig. 10). Dinoflagellates

continued to increase through the 1987-1995 period. Total algal biomass oscillated through time with higher values in the 1982-1985 and 1994-1995 periods.

In the eastern basin, POC and PON declined throughout the entire period with minimum values observed in 1993 (Fig. 9). Chl_{un} fell from 1981 to 1987 but did not change further between 1988 and 1995 (Fig. 9). Total phytoplankton biomass followed the same pattern as that of Chl_{un}. Cryptophytes declined from 1981 to 1992 and then stabilized (Fig. 11).

c) Phytoplankton Composition: We examined trends in phytoplankton composition by applying the Mann Kendall statistic to look for trends in the major phytoplankton taxonomic groups, and by using multivariate analysis (multidimensional scaling (MDS)) to assess the dissimilarity amongst years in community composition. The results from the two methods show strong agreement.

In the eastern basin, a progressive shift from negative to positive values along the 2nd dimension of the multidimensional scaling configuration was correlated with a shift from higher to lower biomasses of cryptophytes and dinoflagellates (Fig. 12). The seasonally-weighted mean biomass of both groups showed significant declines from 1981 to 1992 and 1995. Examination of the data revealed that biomass was higher from 1981 to 1986 than from 1987 to 1995. The 1st dimension was negatively correlated with shifts in diatom biomass. 1990 and 1985 were years of high diatom biomass relative to 1994 and 1995 which had low diatom biomass. These seasonal decreases in cryptophytes and dinoflagellates were associated with significant declines in total algal biomass, Chl_{un}, POC and PON. The trends in the latter three variables were significant through the 1987-1995 period as well as from the 1980s to 1990s.

In the midlake, the progression of community structure through the years followed the 1st dimension of the MDS configuration. It shifted from the right (low diatom biomass) to the left (high diatom biomass) and in recent years (1991-1995) remained in the centre (intermediate diatom biomass) (Fig. 12). The 2nd dimension was negatively correlated with chrysophyte biomass. Two years had particularly high chrysophyte biomass: 1988 and 1993. Although a significant decrease in seasonal as well as stratified cryptophytes was observed between 1981

and 1995, cryptophyte biomass was not correlated with either dimension. Although POC and PON decreased significantly over the 1981-1995 period, total algal biomass and Chl_{un} did not decrease.

Photosynthetic Rates, Parameters and Related Variables ***(Tables 121-157)***

Photosynthetic parameters were only measured between 1987 and 1995, a period when many other variables were relatively stable. Total seasonal areal photosynthesis (SAP) also remained fairly stable through this period although Millard et al. (1996b) estimated that SAP had declined over the longer term, approximately 30% since the early 1970's. The coefficient of variation for SAP values was only 7.9% and 7.0% for stations 41 and 81 respectively for the 1987-95 period if anonymously low values from 1988 were not included (Table 157). The comparative stability in SAP, in spite of significant changes in some of the component variables that affect this measurement (e.g. Chl_{un}, $P^B{}_m$, ε_{par} at station 81 and ε_{par} at station 41), reflects the self-compensatory nature of areal photosynthesis. The significant increase in seasonal means for $\sum P_{cld}$ at station 81 was undoubtedly due to the increase in photosynthetic capacity ($P^B{}_m$) and increased water clarity which compensated for the decline in chlorophyll levels. Although $\sum P_{cld}$ increased significantly, the range from the lowest to the highest values was only 24 % (excluding 1988). The increase in spring I_k, the limiting light level for photosynthesis, at both stations (Fig. 4, 5) appears to be anomalous given that I_k is the ratio of $P^B{}_m$: α^B and no significant changes were detected in either of these parameters during this period. More detailed analysis of the 1987-1992 primary production data can be found in Millard et al. (1996b).

Zooplankton (Tables 158-189)

a) Density:

i) *Prestratified Period*: The prestratified period is dominated by cyclopoids. During this period, cyclopoid densities midlake did not changeover the years of study, but a gradual increase occurred in the eastern basin which continued through the 1987-95 period (Figs. 13, 14). Calanoid densities at both sites and cladoceran densities midlake increased between the early 1980s and the 1990s (Figs. 13, 14). No trends in calanoids were observed from 1987 to 1995

although the densities in the eastern basin from 1993 to 1995 were amongst the highest observed.

ii) *Stratified Period*: In the eastern basin, total zooplankton density during the stratified season declined between the early 1980s and 1990s due to significant declines in cladocerans and cyclopoids (Figs. 14). There appeared to be a continuing decline in cladocerans between 1987 and 1995 (Fig. 13, p =0.07), but not in cyclopoids. No change was observed in calanoids although the densities from 1993 to 1995 were the highest recorded in the eastern basin. Midlake, the trends were not as strong. Total zooplankton density declined between 1981 and the early 1990s. Marginal declines in cladocerans and cyclopoids were observed over the same time period. There were significant increases in density between 1987 and 1995 if all data were considered. However, 1988 was an unusual year: primary production was lower than expected given the phosphorus concentrations (Millard et al. 1996b) and zooplankton production was low as well. If 1988 were removed from the analyses, the trends were no longer significant (p=0.06). A longer data set is needed to determine whether the increasing trends through the 1990s are real.

b) Production: Summer (June 15 – Oct 31) epilimnetic, zooplankton production decreased between the early 1980s and the 1990s at both sites (Fig 15). In the eastern basin, production continued to decline through the 1987-95 period, but not in the midlake. This roughly corresponded with the continuing decline in TP observed in the eastern basin but not in the midlake where TP concentrations leveled off as of 1987 (Fig. 6). No trend in mysid production was detected between 1988 and 1995 (Fig. 14). Insufficient data were available prior to this time to look at longer term analyses.

c) Composition: We ranked species as dominant (those persistently contributing the majority of zooplankton density), sub-dominant (those seen at some time in at least 13 of the 15 years), or rare (those seen sporadically) (Tables 158, 159). The dominant species at both stations were *Diacyclops thomasi, Tropocyclops extensus, Bosmina longirostris, Eubosmina coregoni,* and *Daphnia retrocurva*, and additionally in the eastern basin, *Ceriodaphnia lacustris*. *Ceriodaphnia lacustris* had been dominant midlake, but gradually declined and was not observed in 1995. The sub-dominant species included *Leptodora kindtii, Limnocalanus macrurus, Leptodiaptomus sicilis, Skistodiaptomus oregonensis,* and *Eurytemora affinis* at both sites, as well as *Daphnia galeata mendotae, Holopedium gibberum* and *Diaphanosoma birgei* at station 81. A number of

species have been seen periodically over the years. *Polyphemus pediculus* and *Chydorus sphaericus* were observed regularly at both stations until 1991 or 1992, then they disappeared. *Ceriodaphnia quadrangula* was present between 1981 to 1983 at station 41 although it was not observed in the eastern basin. Other species, such as, *Daphnia longiremis*, *Mesocyclops edax* and *Cyclops vernalis* were seen predominantly during the early years of the study and were more common in the eastern basin than in the midlake. *Epischura lacustris*, on the other hand, has only been observed since 1993 in the midlake and 1994 in the eastern basin. Other species occurred more sporadically and infrequently: *Eubosmina longispina*, *Daphnia ambigua* (station 81 only), *Daphnia galeata mendotae* (infrequent at station 41 only), *Daphnia pulex, Simocephalus vetulus* (station 81 only), *Leptodiaptomus minutus, L. ashlandi* and *L. siciloides* (station 41 only). *Bythotrephes cederströemi*, an exotic predatory cladoceran was first reported in the Great Lakes in 1984 (Bur et al. 1986). It was first observed in Bioindex samples in 1987, five years after a specimen had been found by H. Frickker at depth in the offshore (Johannsson et al. 1991a), and two years after it was observed along the south shore of the lake by Lange and Cap (1986). It has rarely been observed in the lake, reaching noticeable numbers only in 1987 and 1994. *Bythotrephes* is found predominantly in deeper waters and is not detected in epilimnetic samples unless the population is well established. Veliger larvae of *Dreissena*, an exotic mussel which invaded Lake St. Clair and Lake Erie in the late 1980s, were first reported from Port Weller in Lake Ontario in the autumn of 1989 (Schaner 1991). *Dreissena* adults were well established in the western end of the lake by 1991 and in the eastern basin by 1993 (Stewart et al. 1994). Veligers were first found in offshore waters at the Bioindex sites in 1993.

Zooplankton community composition was also examined for trends through the years using multivariate statistical techniques. In the eastern basin, 1992 stood out from the other years, and 1993 to 1995 were distinct from the cluster of remaining years (Fig. 16). The first two PCA factors had eigenvalues >1 and accounted for 47% of variation in species composition amongst years. The 1st dimension of the configuration was positively correlated with factor 2 ($p<0.001$) and negatively correlated with factor 1 ($p=0.001$). Neither total zooplankton density or either PCA factor were correlated with dimension 2. *Chydorus sphaericus,* and to a lesser extent *Bosmina, Ceriodaphnia, S. oregonensis,* and *D. g. mendotae* pulled the dimension 1 scores towards positive values, while *Holopedium,* and to a lesser extent the rarer species *(Leptodora,*

Limnocalanus. L. sicilis, Diaphanosoma, and *Eurytemora*) pulled the scores towards negative numbers. The last three years (1993 to 1995) to the far left on dimension 1, are characterized by relatively lower densities of the dominant species (*Chydorus, Bosmina* and *Ceriodaphnia*) and relatively higher abundances of the larger, rarer species (*Leptodora, Limnocalanus, L. sicilis* and *Holopedium*). When we examined the data as total cladocerans, cyclopoids and calanoids instead of species, the data from the 1980s and 1990s tended to split along a diagonal from the mid-left to the upper-right of the configuration diagram and 1995 stood on its own (Fig. 16). The 1st dimension showed a negative correlation ($p<0.001$) with calanoid density, and the 2nd dimension, a positive correlation ($p<0.001$) with cladoceran density. Trends across years indicated a decrease in cladocerans and increase in calanoids. 1995 separated on the 2nd dimension suggesting a particularly low level of cladocerans that year. Although the 1995 cladoceran density was the lowest recorded, the density in 1992 was also extremely low. The MDS configuration contains more information than the correlated change in group densities.

In the midlake, the species MDS configuration separated out 1987 (Fig. 17). The other years form an arc around it with the data from the 1980s tending to be to the upper right and the data from the 1990s tending to be to the left. The PCA factor scores accounted for 48% of the variation in the species associations. The first MDS dimension was positively correlated with the second PCA factor ($p=0.001$), and the second MDS dimension was negatively correlated with the first PCA factor ($p=0.003$). High dimension 1 values are associated with high densities of *Polyphemus, D. g. mendotae, Eurytemora* and to a lesser extent *Holopedium* and *Eubosmina,* while negative values were associated with high densities of *Bosmina* and to a lesser extent *Diacyclops.* Positive dimension 2 values were associated with high densities of *Ceriodaphnia* and *Bosmina*, while negative values were associated with high densities of *Leptodora,* and to a lesser extent, *Holopedium, L. minutus* and *D. retrocurva.* The second dimension was also positively correlated with total zooplankton density. 1987 was characterized by low levels of *Ceriodaphnia* and *Bosmina* and higher levels of *Polyphemus, D. g. mendotae, Eurytemora* and *Eubosmina.* 1990, 1994 and 1995 were unusual in that they were characterized by high *Bosmina* and *Leptodora* densities and low *Ceriodaphnia* and total zooplankton densities. The MDS configuration of the zooplankton groups revealed no underlying structure (Fig. 17).

Ciliates and Rotifers

Ciliates were abundant in 1982 (Taylor and Heynen 1987), but more abundant still in 1984 and 1986. Their density decreased significantly both in the midlake and in the eastern basin between 1984 and 1993 (Fig. 18). Rotifers were reported to be abundant in 1982 (Mazumder et al. 1992), and their densities were higher in 1984 than through the 1990-1995 period. No trend was apparent through the 1990s at either station (Fig. 18).

DISCUSSION

Rehabilitation of the Great Lakes started in the early 1970s with the implementation of the Great Lakes Water Quality Agreement which limited phosphorus loading to the lake. On the heels of this effort, came programs to reduce contaminant loadings, and to re-establish top predator populations through the salmonid stocking program, rehabilitation of streams and the control of sea lamprey populations. All of these actions had the potential to impact lower trophic level composition, function and productivity in Lake Ontario. The arrival of new exotic species, such as *Bythotrephes* and *Dreissena* spp. were coincident with these management actions and had the potential to reinforce certain management actions such as phosphorus reduction. For example, reduced phytoplankton standing crop was a goal of phosphorus management although dreissenid colonization can achieve the same effect through a different mechanism. The Bioindex data charts the response of the lake to these simultaneous influences.

The phosphorus reduction program has been very successful, target loadings were reached by 1983 (Neilson et al. 1995) and phosphorus concentration in the midlake declined until approximately 1987. An anomalous peak in phosphorus occurred in 1991, associated with an unusually high load from the Niagara River (Neilson et al. 1995), but was transitory. Phosphorus levels have continued to decline in the eastern basin but not in the midlake. Particulate organic carbon and nitrogen concentrations during the stratified period declined in step with the declines in TP at both sites. The changes were large enough that the seasonal means also showed a significant decline. The best measures of the response of the system to changes in phosphorus loading were integrative variables, such as POC, PON

The response of the lower trophic levels to phosphorus management has been less apparent when other measures are examined . In the midlake, no trend could be discerned in either total algal biomass or Chl_{un}, measures with high inter-annual variability (Johannsson et al. 1985a); however, phytoplankton composition has changed. Cryptophytes, an edible type of algae, decreased while dinoflagellates, a less edible form, increased. In the eastern basin, the decline in Chl_{un} was significant, perhaps because the decline in phosphorus continued throughout the 1981-1995 period and was more marked than in the midlake. Again cryptophyte biomass decreased, but there was no corresponding increase in dinoflagellates during the stratified period. Total algal biomass declined.

The continuing decline in TP in the eastern basin between 1987 and 1995 was not reflected in a decline in photosynthesis. Millard et al. (1996b; 1998) had established a relationship between seasonal areal photosynthesis and mean seasonal phosphorus levels using data from several lakes (including Lake Ontario) with a total phosphorus range of 40 $ug.L^{-1}$. Judging by the variability inherent in this relationship, the lack of response in Lake Ontario may have been due to the relatively small change in total phosphorus (about 4 $ug.L^{-1}$) that occurred over the 1987-1995 period, and/or to the compensatory increases in P^B_m, the rate of carbon uptake per unit of Chl_{un}. However, there appears to have been a significant decline in seasonal photosynthesis (about 30%) since the inception of phosphorus control in the early 1970s (Millard et al. 1996b).

Zooplankton production appears to have responded to the longer term changes in TP since the early 1980's, possibly mediated through the longer term decline in photosynthesis and changes in algal composition away from edible forms such as cryptophytes. Zooplankton production declined through the period of phosphorus reduction at both stations, and total zooplankton density and production reflected the declines in seasonal TP in the eastern basin between 1987 and 1995 (Table 195). In the later period, although seasonal photosynthesis did not decrease, the biomass of cryptophytes, an edible algae decreased which may have contributed to the decline in zooplankton production. As zooplankton production can also be strongly influenced by predation, both factors need to be considered in any analysis..

Salmonid stocking in Lake Ontario reached a plateau in 1984 and was not reduced until 1993

(Orsati and LeTendre 1994). Salmonids feed principally on the dominant planktivore in the lake, the alewife, *Alosa pseudoharengus*, which declined through the late 1980s and early 1990s in response to this increase in salmonid predation (O'Gorman and Stewart 1999). Decreases in the alewife population would be expected to reduce predation pressure on the zooplankton community. Reduced predation should result in higher zooplankton densities and biomass and more of the larger zooplankton species. If composition changed dramatically towards larger species, then zooplankton density might fall while biomass increased. However, the dominant species did not change during this study. The evidence for any release from predation is not dramatic. In the midlake, cyclopoid densities increased during the summer during the 1987-1995 period and *Leptodora* and *Epischura*, large predatory species, were more abundant in the mid-1990s. The increasing trend in mysid production may also reflect some release from fish predation; however, not enough is known about possible changes in their food supply or diet to draw a firm conclusion. In the eastern basin, total zooplankton density, mainly cyclopoids, increased in the prestratified period between 1987 and 1995 and the abundance of larger zooplankton was higher in the 1993-1995 period. It would appear that any decrease in predation during the summer period was nearly balanced by the continuing decrease in zooplankton production. Other indications of the continuing importance of alewife in structuring the zooplankton community, were the lack of persistent *Bythotrephes* populations in the lake (Makarewicz and Jones 1990; Johannsson et al. 1991a) and the persistence of a community dominated by small-bodied species.

Dreissenids have markedly altered most systems they have colonized. Lake St. Clair and Lake Erie were at the epicentre of the invasion and changed dramatically after the establishment of the mussels (Leach 1993; Nicholls and Hopkins 1993; Gillis and Mackie 1994; Dahl et al. 1995; Mellina et al. 1995; Graham et al. 1996; Johannsson et al. 1998; Millard et al. 1998). Although the localized impact of dreissenids in shallower, nearshore regions in Lake Ontario may be severe, we can comment only on their possible impacts in the offshore, stratified regions of the lake. Station 81 in the eastern basin was expected to show more changes than station 41 in the midlake because there is abundant local habitat for dreissenids and because much of the water passing through the eastern basin comes from nearshore, dreissenid-infested regions (Simons and Schertzer 1987). With the establishment of dreissenids in Lake Erie, the concentrations of SiO_2

and TP in the Niagara River have increased (D. Williams, Environmental Conservation Branch-Ontario Region, Environment Canada, Burlington, Ontario, pers. com.). Water from the Niagara River commonly flows along the south shore of Lake Ontario, where dreissenids were also abundant (Stewart and Haynes 1994), and then into the eastern basin where dreissenids had become well established by 1993 (Stewart et al. 1994).

Water clarity increased significantly in the eastern basin and in the midlake over the 1987-1995 period, as witnessed by decreases in ε_{par} and increases in the euphotic depth and Secchi disk depths (eastern basin only). The change was more pronounced in the eastern basin where significant improvements were noted in all three periods, than in the midlake where improved water clarity was only detected in the seasonal means, not in the stratified or prestratified means. Dreissenids increase water clarity by removing particles from the water column, and as a result, measures of standing crop, such as POC, PON, Chl_{un} and algal biomass decline (Holland 1993; Leach 1993; Nicholls and Hopkins 1993). Therefore, the changes during the period from 1987 to 1995 in POC and PON in the eastern basin during the stratified period can most likely be attributed to dreissenids impacts both upstream and within the basin. The low abundance of ciliates and rotifers observed both in the eastern basin and in the midlake occurred synchronously and prior to the dreissenid invasion, and therefore, can not be attributed to dreissenid activities.

Soluble reactive silica concentrations increased in the eastern basin in the 1987-1995 period, and the SiO_2 concentrations in early April were consistently higher from 1993 to 1995 than in previous years. Diatoms incorporate silica into their frustules as they grow and normally drive the concentrations of SiO_2 down to limiting levels in Lake Ontario (Johannsson et al. 1985a; Millard et al. 1996a). From 1993 to 1995, the concentrations were not driven down to the range of 20 $\mu g.L^{-1}$ to 65 $\mu g.L^{-1}$ typical of the prestratified period during most of the study (Tables 46-60). Three hypotheses could be proposed to explain the higher initial and final SiO_2 concentrations in the prestratified period. First: local cropping of diatoms by dreissenids decreased standing crop and SiO_2 demand. This hypothesis was first proposed to explain decreases in diatom biomass in Lake Erie (Dermott and Munawar 1993). It is not clear that dreissenid consumption has been important in the eastern basin of Lake Ontario in 1993 or 1994. No detectable change in prestratified diatom biomass was observed during the 1987-1995 period.

Prestratified diatom biomass was high between 1989 and 1994 in the eastern basin. In 1995, however, diatom biomass was the lowest observed during the study (Fig. 11). Second: falling phosphorus concentrations have accentuated phosphorus limitation during the prestratified period and reduced diatom growth rates and hence silica incorporation. Millard et al. (1996a) found moderate phosphorus limitation in the spring in the eastern basin in 1988 and 1989 prior to the dreissenid invasion. Third: higher early spring SiO_2 concentrations in the eastern basin originated from decreased utilization of SiO_2 in Lake Erie and along the southern shore of Lake Ontario. As mentioned above, annual mean SiO_2 concentrations rose from approximately 0.7 $mg.L^{-1}$ to 1.7 $mg.L^{-1}$ between 1989 and 1995 in the Niagara River (D. Williams, Environmental Conservation Branch-Ontario Region, Environment Canada, Burlington, Ontario, pers. com.). This is the cumulative impact hypothesis where dreissenid impacts upstream affect conditions further along the waterway. In some years, all three mechanisms may be important, in other years, SiO_2 levels may be controlled principally by one factor.

Dreissenids have also been implicated in temporary reductions in TP when they first invade a system (Fahnenstiel et al. 1995; Mellina et al. 1995). The continued reduction in seasonal TP in the eastern basin during the 1990s was possibly the result of dreissenid filtering. When phosphorus loadings had declined, the response in TP had been relatively synchronous in the midlake and eastern basin. In the 1990s there was no corresponding decline in the mid-lake TP levels. The more recent declines in TP in the eastern basin really started in 1993 when dreissenids became well established. The eastern basin is downstream of a region of strong dreissenid impacts, namely the south shore of the lake (Stewart et al. 1994; Mills et al. 1998), which may have augmented the decline. As mentioned above, although TP continued to decrease, seasonal photosynthesis did not change through the 1990s. The lack of change in photosynthesis in the face of decreasing Chl_{un}, can be explained by the compensatory increases in P^B_m, the rate of carbon uptake per unit of Chl_{un}, and increased water transparency.

Dreissenids appear to have effected significant changes in the standing crop (POC, PON, cryptophytes) and productivity (zooplankton) of the pelagic biota in the eastern basin likely through a combination of direct and indirect impacts within the basin and upstream. Impacts had not (yet) reached the midlake during this study.

CONCLUSION

Our ability to detect and interpret trends indicates the value of long-term monitoring programs. The Bioindex Program has also supported a number of other research initiatives on Lake Ontario by providing a sampling platform, associated data and expertise. These associated programs have studied (1) phosphorus and light limitation of algal growth, (2) interactions of zooplankton and planktivorous fish, (3) predation rates and diet of *Diacyclops,* (4) *Limnocalanus* life history and production, (5) *Mysis relicta* diet, feeding rates and whole-lake production, (6) estimation of zooplankton production from size-based production/biomass ratios, and (7) food-web models to examine energy and contaminant flow in the lake. In return, the information gleaned from these initiatives has helped to increase our understanding of pelagic interactions and to interpret changes, or lack of changes, in the system. This combination of long-term databases and research projects is very powerful. Long-term biomonitoring should form the backbone of much of the ecological research on the Great Lakes.

ACKNOWLEDGEMENTS

This program was only successful through the hard work and loyalty of the many people who ran the ships, assisted with the sampling and analyzed the samples. In particular, we would like to thank Bob Marshall, Head of Ships Division, for keeping the ships running during the many fiscal crises, and the Captains of the CCS Bayfield and CCS Lauzier, Captains Birchall, Cloutier, Berchem and Luce, for their interest in the work and assistance in getting good samples. Technical Operations personnel from Environment Canada always whole-heartedly supported the program and provided excellent assistance. In particular, we would like to acknowledge the support of Pat Healey, Head of Technical Operations, Larry Benner, Bob Hess, John Kraft, Earl Walker and Paulos Youkim. Many summer students worked on the program over the years and their dedication to the job ensured the successful completion of the work each year: Margaret Armstrong, Margaret Baker, Jonathan Balcombe, Celeste Bignell, Christine Burrows, Rose-Ann Danis, Monica Deboer, Bill Gardener, Brian Giles, Leanne Gris, Eric Nicholson, Warren Norwood, Brad O'Neil, Maria Pei, Elizabeth Rezek, Craig Schleyer, Linda White, and Jesse Wood. The Inland Waters Directorate of Environment Canada supported the chemical analyses between 1984-1987. The phytoplankton samples were enumerated by Dave Beliveau of Bioaquatic Research and Consulting, and the zooplankton by Bill Geiling of Limnoservices, Rita De Mello, and Cheryl Clark of Beroe Consulting. We acknowledge the first class work of the National Laboratory for Environmental Testing, and thank Jim Byron for keeping a close eye on data entered into the Star Data Base, and Ron Dermott for his careful review of the final manuscript. We are grateful to Janette Anderson of Environment Canada - Ontario Region for the financial support to complete this technical report. We also want to thank Vic Cairns, the Division Head of the DFO's Great Lakes Laboratory for Fisheries and Aquatic Sciences, for his continuous support of the program irrespective of the winds of change.

REFERENCES

Boesch, D. F. and R. Rosenberg. 1981. Responses to stress in marine benthic communities. 179-200 p. In: Stress Effects on Natural Ecosystems. G. W. Barrett and R. Rosenberg, John Wiley and Sons, Ltd., Chichester, U.K.

Bur, M. T., D. M. Klarer and K. A. Kreiger. 1986. First records of a European cladoceran, *Bythotrephes cederstroemi*, in Lakes Erie and Huron. J. Great Lakes Res. 12: 144-146.

Cooley, J. M., J. E. Moore and W. T. Geiling. 1986. Population dynamics, biomass, and production of the macrozooplankton in the Bay of Quinte during changes in phosphorus loadings. 166-176 p. In: Project Quinte: Point-source phosphorus control and ecosystem response in the Bay of Qunite, Lake Ontario. C. K. Minns, D. A. Hurley and K. H. Nicholls, Can. Spec. Publ. Fish. Aquat. Sci. 86.

Dahl, J. A., D. M. Graham, R. Dermott, O. E. Johannsson, E. S. Millard and D. D. Myles. 1995. Lake Erie 1993, western, west central and eastern basins: Change in trophic status, and assessment of the abundance, biomass and production of the lower trophic levels. Can. Tech. Rep. Fish. Aquat. Sci. No. 2070: xii + 118 p.

Dermott, R. and M. Munawar. 1993. Invasion of Lake Erie offshore sediments by *Dreissena*, and its ecological implications. Can. J. Fish. Aquat. Sci. 50: 2298-2304.

Dillon, P. J., K. H. Nicholls and G. W. Robinson. 1978. Phosphorus removal at Gravenhurst Bay: An 8 year study on water quality changes. Verh. Internat. Verein. Limnol. 20: 263-277.

Dumitru, C. 1995. Production by *Limnocalanus macrurus* at a deep water station in Lake Ontario. B.Sc. Hons. thesis, University of Toronto, Mississauga, Ont.

El-Shaarawi, A. H. and R. E. Kwiatkowski. 1977. A model to describe the inherent spatial and temporal variability of parameters in Lake Ontario 1974. J. Great Lakes Res. 3: 177-183.

Fahnenstiel, G. L., G. A. Lang, T. F. Nalepa and T. H. Johengen. 1995. Effects of zebra mussel (*Dreissena polymorpha*) colonization on water quality parameters in Saginaw Bay, Lake Huron. J. Great Lakes Res. 21: 435-448.

Fee, E. J. 1990. Computer programs for calculating *in situ* phytoplankton photosynthesis. Can. Tech. Rep. Fish. Aquat. Sci. No. 1740: v + 27 p.

Fee, E. J., R. E. Hecky, M. P. Stainton, P. Sandberg, L. L. Hendzel, S. J. Guildford, H. J. Kling, G. K. McCullough, C. Anema and A. Salki. 1989. Lake variability and climate research

in northwestern Ontario: Study design and 1985-1986 data from the Red Lake District. Can. Tech. Rep. Fish. Aquat. Sci. No. 1662: v + 39 p.

Fee, E. J., J. A. Shearer, E. R. DeBruyn and E. U. Schindler. 1992. Effects of lake size on phytoplankton photosynthesis. Can. J. Fish. Aquat. Sci. 49: 2445-2459.

Gillis, P. L. and G. L. Mackie. 1994. Impact of the zebra mussel, *Dreissena polymorpha*, on populations of Unionidae (Bivalvia) in Lake St. Clair. Can. J. Zool. 72: 1260-1271.

Graham, D. M., J. A. Dahl, E. S. Millard, O. E. Johannsson and L. L. White. 1996. Assessment of abundance, biomass and production of the lower trophic levels in the eastern basin of Lake Erie, 1994. Can. Tech. Rep. Fish. Aquat. Sci. No. 2110: x + 104 p.

Holland, R. E. 1993. Changes in planktonic diatoms and water transparency in Hatchery Bay, Bass Island area, western Lake Erie since the establishment of the zebra mussel. J. Great Lakes Res. 19: 617-624.

Inland Waters Directorate. 1979. Analytical Methods Manual. Can. Dept. Environm., Inl. Wat. Direct., Wat. Qual. Br., Ottawa.

Johannsson, O. E. 1987. Comparison of Lake Ontario zooplankton communities between 1967 and 1985: Before and after implementation of salmonid stocking and phosphorus control. J. Great Lakes Res. 13: 328-339.

Johannsson, O. E. 1992. Life history and productivity of *Mysis relicta* in Lake Ontario. J. Great Lakes Res. 18: 154-168.

Johannsson, O. E. 1995. The response of *Mysis relicta* population dynamics and productivity to spatial and temporal gradients in Lake Ontario. Can. J. Fish. Aquat. Sci. 52: 1509-1522.

Johannsson, O. E., R. M. Dermott, R. Feldkamp and J. E. Moore. 1985a. Lake Ontario Long Term Biological Monitoring Program: 1981, 1982 Database. Can. Data Rep. Fish. Aquat. Sci. No. 552: iv + 103 p.

Johannsson, O. E., R. M. Dermott, R. Feldkamp and J. E. Moore. 1985b. Lake Ontario Long Term Biological Monitoring Program: Report for 1981 and 1982. Can. Tech. Rep. Fish. Aquat. Sci. No. 1414: xvi + 208 p.

Johannsson, O. E., D. D. Graham, D. W. E. Einhouse and E. L. Mills. 1998. Historical and recent changes in the Lake Erie zooplankton community and their relationship to ecosystem function. In: The State of Lake Erie Ecosystem (SOLE) - past, present and future. M. Munawar and T. Edsall, Backhuys Publishers, The Netherlands. (accepted).

Johannsson, O. E., E. L. Mills and R. O'Gorman. 1991a. Changes in the nearshore and offshore zooplankton communities in Lake Ontario. Can. J. Fish. Aquat. Sci. 48: 1546-1557.

Johannsson, O. E. and C. K. Minns. 1987. Examination of association indices and formulation of a composite seasonal dissimilarity index. Hydrobiol. 150: 109-121.

Johannsson, O. E. and R. O'Gorman. 1991. The role of predation, food and temperature in structuring the epilimnetic zooplankton populations in Lake Ontario. Trans. Amer. Fish. Soc. 120: 193-208.

Johannsson, O. E., K. M. Ralph, E. S. Millard, D. D. Myles, R. J. J. Stevens and M. A. Neilson. 1991b. Trends in nutrient and biological variables in the off-shore: A preliminary report of the Lake Ontario Biomonitoring Program. 12: 1-10 p. In: Lake Ontario Fisheries Unit 1990 Annual Report. Picton, Ontario, Ontario Ministry of Natural Resources.

Johannsson, O. E., L. G. Rudstam and D. C. Lasenby. 1994. *Mysis relicta*: Assessment of a metalimnetic feeding strategy and implications for competition in Lakes Ontario and Michigan. Can. J. Fish. Aquat. Sci. 51: 2591-2602.

Johengen, T., O. E. Johannsson, G. Pernie and E. S. Millard. 1994. Temporal and seasonal trends in nutrient dynamics and biomass measures in Lakes Michigan and Ontario in response to phosphorus control. Can. J. Fish. Aquat. Sci. 51: 2570-2578.

Lange, C. and R. Cap. 1986. *Bythotrephes cederstroemi* (Schodler) (Cercopagidae: Cladocera): A new record for Lake Ontario. J. Great Lakes Res. 12: 142-143.

Leach, J. H. 1993. Impacts of the zebra mussel (*Dreissena polymorpha*) on water quality and fish spawning reefs in western Lake Erie. 23: 381-397 p. In: Zebra Mussels: Biology, Impact and Control. T. F. Nalepa and D. W. Schloesser. Lewis Publishers, Inc., Boca Ratton, Fla.

Lean, D. R. S., H.-J. Fricker, M. N. Charlton, R. L. Cuhel and F. R. Pick. 1987. The Lake Ontario life support system. Can. J. Fish. Aquat. Sci. 44: 2230-2240.

LeBlanc, J., W. Taylor and O. E. Johannsson. 1997. The feeding ecology of the cyclopoid copepod *Diacyclops thomasi* in Lake Ontario. J. Great Lakes Res. 23: 369-38.

Lund, J. W. G., C. Kipling and E. D. Lecren. 1958. The inverted microscope method of estimating algal numbers and the statistical basis of estimation of counting. Hydrobiol. 11: 143-170.

Makarewicz, J. C. and D. Jones. 1990. The establishment of *Bythotrephes cederstroemi* in the offshore of Lake Ontario. J. Great Lakes Res. 16: 143-147.

Malley, D. F., S. G. Lawrence, M. A. MacIver and W. J. Findlay. 1989. Range of variation in estimates of dry weight for planktonic Crustacea and Rotifera from temperate North American lakes. Can. Tech. Rep. Fish. Aquat. Sci. No. 1666: iv + 49p.

Mazumder, A., D. R. S. Lean and W. D. Taylor. 1992. Dominance of small filter feeding zooplankton in the Lake Ontario foodweb. J. Great Lakes Res. 18: 456-466.

Mellina, E., J. B. Rasmussen and E. L. Mills. 1995. Impact of zebra mussel (*Dreissena polymorpha*) on phosphorus cycling and chlorophyll in lakes. Can. J. Fish. Aquat. Sci. 52: 2553-2573.

Menzies, C. A. 1980. A note on the Hynes method of estimating secondary production. Limnol. Oceanogr. 25: 770-773.

Millard, E. S. 1986. Effect of light climate, photosynthetic capacity, and respiration on gross integral primary production and net primary production potential in the Bay of Quinte, Lake Ontario. 128-138 p. In: Project Quinte: Point-source phosphorus control and ecosystem response in the Bay of Quinte, Lake Ontario. C. K. Minns, D. A. Hurley and K. H. Nicholls, Can. Spec. Publ. Fish. Aquat. Sci. 86.

Millard, E. S., E. J. Fee, D. D. Myles and J. A. Dahl. 1998. Comparison of phytoplankton photosynthesis using 14C-incubator techniques and numerical modeling in Lake Erie, Ontario, the Bay of Quinte and the Northwest Ontario Lake Size Series (NOLSS). In: The State of Lake Erie Ecosystem (SOLE) - past, present and future. M. Munawar and T. Edsall. Backhuys Publishers, The Netherlands. (accepted).

Millard, E. S., D. D. Myles, O. E. Johannsson and K. M. Ralph. 1996a. Phosphorus demand of Lake Ontario phytoplankton at two index stations: Light vs. phosphorus limitation of growth. Can. J. Fish. Aquat. Sci. 53: 1112-1124.

Millard, E. S., D. D. Myles, O. E. Johannsson and K. M. Ralph. 1996b. Phytoplankton photosynthesis at two index stations in Lake Ontario 1987-92: Assessment of the long-term response to phosphorus control. Can. J. Fish. Aquat. Sci. 53: 1092-1111.

Mills, E. L., L. G. Rudstam, N. K. Pauliukonis, S. K. Hall, C. P. Schneider, B. C. Weidel, S. Lary, D. Busch, R. McCullough, D. Bishop and G. Lane. 1998. Status of the Lake Ontario Ecosystem: A biomonitoring approach (1997 Progress Report). 12: 1-44 p. In: New York State Department of Environmental Conservation 1997 Annual Report., New York State Department of Environmental Conservation, Division of Fish, Wildlife and

Marine Resources.

Minns, C. K. 1984. Spatial and temporal variability in zooplankton abundance of the Great Lakes. Can. MS Rep. Fish. Aquat. Sci. No. 1750: iv + 15 p.

Munawar, M., P. Stadelmann and I. F. Munawar. 1974. Phytoplankton biomass, species composition and primary production at a nearshore and a mid-lake station of Lake Ontario during I.F.Y.G.L. Internat. Assoc. Great Lakes Res., Proc. 17th Conf. Great Lakes Res. 1974: 629-652.

Neilson, M., S. L'Italien, V. Glumac and D. Williams. 1995. Nutrients: Trends and system response. State of the Lakes Ecosystem Conference background paper. Environment Canada, Environmental Conservation Branch, Burlington, Ont. 20 pp.

Nicholls, K. H. and G. J. Hopkins. 1993. Recent changes in Lake Erie (North Shore) phytoplankton: Cumulative impacts of phosphorus loading reductions and the zebra mussel introduction. J. Great Lakes Res. 19: 637-647.

Nicholls, K. H., D. W. Standen and G. J. Hopkins. 1980. Recent changes in the near-shore phytoplankton of Lake Erie's western basin at Kingsville, Ontario. J. Great Lakes Res. 6: 146-153.

O'Gorman, R., O. E. Johannsson and C. P. Schneider. 1997. Age and growth of alewives in the changing pelagia of Lake Ontario, 1978-1992. Trans. Amer. Fish. Soc. 126: 112-126.

O'Gorman, R. and T. J. Stewart. 1999. Ascent, dominance, and decline of the alewife in the Great Lakes: Food web interactions and management strategies. In, "Great Lakes Policy and Management: A Binational Perspective", W. W. Taylor and C. P. Ferreri, editors. (in press).

Orsati, S. D. and G. C. LeTendre. 1994. Lake Ontario stocking and marketing program. 135-179 p. In: Lake Ontario Committee 1994 Annual Meeting. Great Lakes Fishery Commission, Niagara Falls, Ont.

Paloheimo, J. E. 1974. Calculations of instantaneous birth rate. Limnol. Oceanogr. 19: 692-694.

Patalas, K. 1969. Composition and horizontal distribution of crustacean plankton in Lake Ontario. J. Fish. Res. Board Can. 26: 2135-2164.

Philbert, F. J. and W. J. Traversy. 1973. Methods of sample treatment and analysis of Great Lakes water and precipitation samples. Internat. Assoc. Great Lakes Res., Proc. 16th Conf. Great Lakes Res. 1973: 294-308.

Rand, P. S., D. J. Stewart, B. F. Lantry, L. G. Rudstam, J. O. E., R. O'Gorman, G. Eck, A. Goyke and S. B. Brandt. 1994. Level and effect of whole-lake invertebrate predation by pelagic planktivores in Lakes Michigan and Ontario. Can. J. Fish. Aquat. Sci. 52: 1546-1563.

Reynolds, C. S. 1984. The Ecology of Freshwater Phytoplankton. Cambridge University Press, Cambridge, U.K. 384 pp.

Reynolds, C. S. and S. W. Wiseman. 1982. Sinking losses of phytoplankton in closed limnetic systems. J. Plank. Res. 4: 489-522.

Reynolds, C. S., S. W. Wiseman and M. S. O. Clarke. 1984. Growth- and loss-rate responses of phytoplankton to intermittent artificial mixing and their potential application to the control of planktonic algal biomass. J. Appl. Ecol. 21: 11-39.

Schaner, T. 1991. OMNR's zebra mussel monitoring program on Lake Ontario, 1990. 5: 1-5 p. Lake Ontario Fisheries Unit 1990 Annual Report. Picton, Ontario, Ontario Ministry of Natural Resources.

Shearer, J. A., E. R. DeBruyn, D. R. DeClerq, D. W. Schindler and E. J. Fee. 1985. Manual of phytoplankton primary production methodology. Can. Tech. Rep. Fish. Aquat. Sci. No. 1341: iv + 58 p.

Simons, T. J. and W. M. Schertzer. 1987. Stratification, currents, and upwelling in Lake Ontario, summer 1982. Can. J. Fish. Aquat. Sci. 44: 2047-2058.

Stewart, T., J. Hoyle and T. Schaner. 1994. Zebra mussel studies. 6: 1-3 p. In: Lake Ontario Fisheries Unit 1993 Annual Report. Picton, Ontario, Ontario Ministry of Natural Resources.

Stewart, T. W. and J. M. Haynes. 1994. Benthic macroinvertebrate communities of southwestern Lake Ontario following invasion of *Dreissena*. J. Great Lakes Res. 20: 479-493.

Stockwell, J. and O. E. Johannsson. 1997. A temperature-dependent, allometric model to estimate zooplankton production in temperate, freshwater lakes. Can. J. Fish. Aquat. Sci. 54: 2350-2360.

Strickland, J. D. H., and T. R. Parsons. 1968. A practical handbook for seawater analysis. Bull. Fish. Res. Board Can. No. 167.

Taylor, W. and O. E. Johannsson. 1991. A comparison of estimates of productivity and consumption by zooplankton for planktonic ciliates in Lake Ontario. J. Plank. Res. 13: 363-372.

Taylor, W. D. and M. L. Heynen. 1987. Seasonal and vertical distribution of Ciliophora in Lake Ontario. Can. J. Fish. Aquat. Sci. 44: 2185-2191.

Utermöhl, H. 1958. Zur Vervolkommung der quantitativen Phytoplankton. Method. Mitt. Internat. Verein. Limnol. 9: 1-38.

Wormington, A., C. A. Timmins, and R. M. Dermott. 1993. Distribution of zebra mussels on Canadian Navigational Buoys on the Great Lakes and Upper St. Lawrence River, December 1992. Can. Manuscr. Rep. Fish Aquat. Sci. 2186: 35 pp.

Table 1. Physical parameters for Lake Ontario: station 41, 1981. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
19-MAR-81	1.5	128.0					349.0	8.3	14.2	26.2
23-MAR-81	1.4	128.0	27.6	4.6	0.167		321.2	8.2	14.0	26.0
31-MAR-81	1.4	128.0	22.6	5.7	0.204	7.0	325.0	8.2	14.3	27.3
09-APR-81	1.8	128.0	45.0	2.8	0.102		320.3	8.3	14.2	27.1
16-APR-81	2.1	128.0	26.2	4.9	0.176		317.0		14.2	27.4
22-APR-81	2.2	128.0	23.7	5.4	0.194		318.1		14.0	26.2
28-APR-81	2.5	128.0	26.4	4.8	0.174		337.1	8.2	13.8	27.0
05-MAY-81	2.7	128.0	29.2	4.4	0.158		329.0	8.1	14.0	26.8
13-MAY-81	3.1	128.0	27.6	4.6	0.167	9.0	321.9	8.2	13.5	26.6
21-MAY-81	3.6	128.0	27.8	4.6	0.166	7.0	343.6	8.1	13.5	27.7
27-MAY-81	3.7	128.0	30.9	4.1	0.149	9.0	352.8	8.2	13.7	26.8
03-JUN-81	4.1	128.0	25.0	5.1	0.184	7.5	337.6	8.2	13.5	26.8
10-JUN-81	4.7	128.0	12.7	10.1	0.363		341.0	8.6	13.1	27.0
16-JUN-81	13.7	7.0	15.7	0.4	0.293		327.6	8.8	13.4	27.0
23-JUN-81	9.8	9.0	14.6	0.6	0.315	4.5	342.0	8.5	12.9	26.6
30-JUN-81	12.0	18.0	14.6	1.2	0.315	4.0	340.5	8.5	12.5	27.2
07-JUL-81	18.4	6.0	11.6	0.5	0.398	6.0	327.1	8.8	12.6	27.5
13-JUL-81	18.2	5.0	13.9	0.4	0.331	4.0	327.3	8.5	11.8	27.4
22-JUL-81	18.3	6.0	12.3	0.5	0.374	2.5	321.5	8.6	11.7	26.2
27-JUL-81	19.4	6.0	10.3	0.6	0.447	2.9	327.5	8.6	11.4	26.6
05-AUG-81	20.2	8.0	7.5	1.1	0.614	1.5	311.3	8.5	9.9	26.2
11-AUG-81	21.7	4.0	7.8	0.5	0.590		312.7	8.6	9.8	26.5
19-AUG-81	19.8	6.0	10.0	0.6	0.462		318.1	8.4	9.4	26.9
25-AUG-81	20.1	8.0	12.3	0.7	0.374	2.5	321.8	8.3	9.7	26.3
01-SEP-81	20.7	10.0	10.9	0.9	0.423	2.5	329.1	8.5	10.0	26.2
16-SEP-81	17.4	16.0	16.2	1.0	0.284		312.7	8.3	10.4	18.0
25-SEP-81	14.0	21.0	19.8	1.1	0.233	6.0	333.4	8.0	10.5	18.8
29-SEP-81	13.7	30.0	19.0	1.6	0.243	5.0	324.6	8.1	10.3	26.6
06-OCT-81	6.3	128.0	18.1	7.1	0.254		379.5	7.8	10.4	26.9
14-OCT-81	6.2	128.0	20.7	6.2	0.222		380.1	8.0	11.3	26.7
21-OCT-81	7.1	128.0	21.6	5.9	0.213		383.0	7.9	11.2	26.4
27-OCT-81	6.3	128.0	24.9	5.1	0.185		380.8	7.5	11.1	26.7
03-NOV-81	6.4	128.0	22.6	5.7	0.204		367.6	7.8	11.5	26.5
11-NOV-81	5.8	128.0	24.9	5.1	0.185		379.5	7.7	11.9	26.5
18-NOV-81	6.3	128.0	20.8	6.2	0.221		381.3	7.7	11.5	26.5
24-NOV-81	6.0	128.0	22.1	5.8	0.208		383.0	7.7	11.5	26.7
01-DEC-81	6.4	128.0	29.2	4.4	0.158		339.1	7.6	11.6	27.0
11-DEC-81	5.3	128.0	19.9	6.4	0.231		322.0	8.1	12.0	27.8
SWM[a]	11.0	66.5	19.1	3.0	0.291		334.3	8.3	12.0	26.0

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 2. Physical parameters for Lake Ontario: station 41, 1982. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
10-MAR-82	1.1	128.0								
18-MAR-82	1.0	128.0								
25-MAR-82	1.2	128.0					330.5		13.8	26.2
01-APR-82	1.4	128.0	27.6	4.6	0.167		320.0		13.8	26.6
14-APR-82	1.3	128.0	26.6	4.8	0.173	11.0	298.4		13.6	26.9
29-APR-82	1.8	128.0	38.6	3.3	0.119	6.0	304.5		13.9	26.5
04-MAY-82	2.2	128.0	30.9	4.1	0.149	8.0	314.4		13.9	26.5
11-MAY-82	2.6	128.0	32.9	3.9	0.140		318.3		13.9	26.6
18-MAY-82	2.6	128.0	45.0	2.8	0.102	5.0	305.7		14.0	26.8
28-MAY-82	2.6	128.0	35.0	3.7	0.132		353.8		13.8	26.8
01-JUN-82	2.8	128.0	43.4	2.9	0.106		322.5		13.9	26.9
07-JUN-82	3.3	128.0	35.0	3.7	0.132	8.0	337.6		14.1	26.6
15-JUN-82	3.5	128.0				6.0	316.7		13.8	26.6
22-JUN-82	4.1	128.0					336.2		14.0	26.6
29-JUN-82	12.2	10.0	10.9	0.9	0.423		336.3		13.3	26.0
06-JUL-82	14.7	11.0	11.9	0.9	0.387		328.0		12.7	26.4
13-JUL-82	14.6	9.0	14.5	0.6	0.318	4.0	326.1		12.5	26.3
21-JUL-82	20.4	4.0	18.2	0.2	0.253	5.5	298.0		11.9	26.6
26-JUL-82	20.0	7.0	29.2	0.2	0.158		322.5		11.0	26.4
04-AUG-82	18.7	7.0	16.2	0.4	0.284		318.3		10.2	26.6
09-AUG-82	18.7	7.5								
17-AUG-82	18.7	8.0	8.6	0.9	0.535	1.5	325.5		10.2	26.4
24-AUG-82	13.7	5.0	10.9	0.5	0.422	2.5	337.5		13.1	25.3
30-AUG-82	15.0	10.0	10.9	0.9	0.422		325.8		10.8	25.8
08-SEP-82	14.4	19.0	11.6	1.6	0.397		329.0		10.6	26.6
14-SEP-82	15.2	20.0	12.5	1.6	0.368	2.5	323.0		11.3	23.7
23-SEP-82	15.6	18.0	22.1	0.8	0.208		322.7		10.4	25.3
28-SEP-82	15.5	19.0	11.6	1.6	0.397	5.5	323.2		10.1	25.7
05-OCT-82	15.6	19.0	24.9	0.8	0.185	5.5	328.4		10.4	25.3
13-OCT-82	14.9	24.0	12.5	1.9	0.368		312.6		10.3	25.7
19-OCT-82	5.2	128.0	32.9	3.9	0.140		320.9		11.1	26.0
25-OCT-82	5.0	128.0	35.0	3.7	0.132		334.0		11.9	26.7
02-NOV-82	4.8	50.5	35.0	1.4	0.132	7.5	332.5		11.8	25.8
09-NOV-82	5.7	128.0	8.2	15.6	0.562	8.0	333.5		11.9	25.9
16-NOV-82	4.6	128.0	15.0	8.5	0.307		327.5		12.7	26.3
22-NOV-82	5.6	128.0					328.7		11.8	25.9
SWM[a]	9.8	66.1	23.3	2.2	0.257	5.6	321.8		12.3	26.2

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 3. Physical parameters for Lake Ontario: station 41, 1983. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
17-MAR-83	3.5	128.0	15.6	8.2	0.296	5.0	320.0		12.9	25.7
06-APR-83	3.3	128.0	16.8	7.6	0.274	7.0	315.2		13.3	26.2
12-APR-83	3.3	128.0	35.0	3.7	0.131		333.3		13.2	25.7
22-APR-83	3.3	128.0	35.0	3.7	0.131		331.3		13.2	26.0
26-APR-83	3.4	128.0	35.0	3.7	0.131		337.1		13.2	25.6
04-MAY-83	3.6	128.0	32.9	3.9	0.140		326.2		13.3	25.8
10-MAY-83	3.8	128.0	32.9	3.9	0.140		331.6		13.0	25.7
17-MAY-83	4.1	128.0	26.2	4.9	0.176		319.5		14.1	25.9
25-MAY-83	4.3	128.0	26.2	4.9	0.176		320.3		13.6	26.2
01-JUN-83	4.6	128.0	16.8	7.6	0.273	4.5	328.5		14.2	26.2
08-JUN-83	9.3	13.0	14.6	0.9	0.316	5.0	325.6		13.5	26.1
15-JUN-83	14.5	5.0	24.9	0.2	0.185	6.0	307.7		11.6	25.5
22-JUN-83	15.7	10.0	22.6	0.4	0.204	5.0	297.4		13.4	25.8
29-JUN-83	17.8	10.0	14.6	0.7	0.316		302.5		11.8	25.8
06-JUL-83	18.6	6.0	17.5	0.3	0.263		286.0		10.8	25.9
13-JUL-83	17.9	10.0	16.8	0.6	0.273	4.5	294.0		11.0	26.4
21-JUL-83	20.6	6.0	10.6	0.6	0.436	4.8	305.0		10.9	25.7
26-JUL-83	17.2	12.0	16.2	0.7	0.284	4.0	295.7		11.0	25.3
03-AUG-83	22.2	8.0	10.3	0.8	0.449	2.6	300.0		9.9	25.1
10-AUG-83	22.2	10.0	9.7	1.0	0.476		297.5		9.1	24.1
16-AUG-83	21.4	16.0	9.4	1.7	0.490		286.7		9.4	23.8
23-AUG-83	21.5	20.0	10.9	1.8	0.423		294.0		8.6	24.4
31-AUG-83	22.3	15.0				2.5	289.5		11.4	24.7
08-SEP-83	21.7	17.0	10.0	1.7	0.462	3.5	304.5		9.1	25.0
14-SEP-83	19.9	11.0	7.7	1.4	0.595	3.0	313.5		11.4	24.9
21-SEP-83	18.2	16.0	16.8	0.9	0.273		312.8		9.7	23.6
28-SEP-83	14.6	9.0	10.9	0.8	0.423	6.5	318.5		10.7	25.4
06-OCT-83	15.0	14.0	18.3	0.8	0.252		314.3		10.2	24.8
13-OCT-83	14.0	22.0	21.6	1.0	0.213		336.7		11.0	24.3
19-OCT-83	6.5	46.0	27.6	1.7	0.167		318.4		11.7	25.4
26-OCT-83	6.7	128.0	32.9	3.9	0.140		297.0		11.3	25.3
02-NOV-83	6.9	128.0	29.2	4.4	0.158		328.9		11.6	24.7
08-NOV-83	6.2	128.0	32.9	3.9	0.140		303.9		11.4	25.1
15-NOV-83	6.2	128.0	37.5	3.4	0.123		330.8		11.8	25.4
23-NOV-83	6.2	128.0	37.5	3.4	0.123		305.0		12.1	25.5
SWM[a]	13.0	52.9	19.7	2.3	0.288		311.4		11.6	25.4

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 4. Physical parameters for Lake Ontario: station 41, 1984. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
21-MAR-84	1.6	128.0	43.4	2.9	0.106				13.9	25.3
04-APR-84	1.6	128.0	24.9	5.1	0.185				14.0	
17-APR-84	2.1	128.0	47.1	2.7	0.098	8.0	314.5	7.5	13.6	25.8
25-APR-84	2.2	128.0	79.6	1.6	0.058	5.0	317.0	7.4	13.7	25.0
03-MAY-84	2.3	128.0					338.5	7.6	13.5	25.6
07-MAY-84	2.5	128.0	40.2	3.2	0.114		324.5	7.9	13.4	25.7
14-MAY-84	2.7	128.0	51.4	2.5	0.090		321.0	8.1	13.3	25.4
23-MAY-84	3.1	128.0	32.9	3.9	0.140	6.0	323.5	8.2	13.5	25.5
30-MAY-84	3.4	128.0	37.5	3.4	0.123		337.0	8.3	13.4	25.5
05-JUN-84	3.5	128.0	37.5	3.4	0.123	7.5	342.5	8.2	13.4	25.1
13-JUN-84	13.3	5.0	16.8	0.3	0.273	3.0	327.0	8.6	12.8	25.2
19-JUN-84	13.7	8.0	16.2	0.5	0.284		316.0	8.8	12.2	25.3
26-JUN-84	13.6	8.0	13.6	0.6	0.339		336.5	8.9	12.5	25.3
05-JUL-84	17.8	7.0	11.0	0.6	0.419	3.0	324.5	9.0	12.0	25.6
10-JUL-84	13.9	8.0	16.2	0.5	0.284		321.5	8.8	12.3	25.7
18-JUL-84	14.8	8.0	20.7	0.4	0.223	5.0	333.0	8.8	11.8	25.2
25-JUL-84	21.3	4.0	19.8	0.2	0.233	6.0	336.0	8.8	11.5	25.4
30-JUL-84	19.9	2.0	15.6	0.1	0.294		320.5	8.7	10.6	23.4
08-AUG-84	22.4	6.0	9.7	0.6	0.476	2.5	295.0	8.5	9.3	23.7
14-AUG-84	23.2	8.0	7.6	1.0	0.603	2.0	298.5		8.9	24.9
21-AUG-84	22.0	14.0	6.8	2.1	0.680	1.0	294.0	8.5	9.1	24.7
28-AUG-84	21.5	14.0	8.2	1.7	0.563		296.5	8.6	9.2	23.9
05-SEP-84	19.2	14.0	26.6	0.5	0.173		323.0	8.5	9.2	23.9
11-SEP-84	18.8	18.0	19.0	0.9	0.243	2.5	301.5	8.6	9.0	24.3
18-SEP-84	17.4	14.0	16.8	0.8	0.274		329.0	8.2	9.8	24.7
25-SEP-84	17.0	18.0					298.0	8.4	9.6	25.0
09-OCT-84	13.2	18.0	27.6	0.7	0.167		315.0	8.1	10.5	24.3
16-OCT-84	13.1	17.0	23.7	0.7	0.194		308.0	8.4	10.7	22.5
25-OCT-84	12.5	26.0	19.0	1.4	0.243		310.0	8.6	10.7	23.9
05-NOV-84	10.8	32.0	24.9	1.3	0.185		332.0	7.9	10.7	24.6
14-NOV-84	9.0	26.0	43.4	0.6	0.106			8.1	11.2	24.7
SWM[a]	12.3	49.7	26.1	1.6	0.252		317.8	8.3	11.5	24.8

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 5. Physical parameters for Lake Ontario: station 41, 1985. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
26-MAR-85	1.4	128.0				5.0	342.5	8.2	13.8	25.0
04-APR-85	1.6	128.0	37.5	3.4	0.123	9.0	333.5	8.2	13.6	23.3
09-APR-85	1.6	128.0								
16-APR-85	2.0	128.0	26.2	4.9	0.176		306.0	8.0	13.6	23.7
23-APR-85	2.1	128.0	32.9	3.9	0.140		326.5	8.2	13.8	25.2
30-APR-85	2.2	128.0	37.5	3.4	0.123		313.0	8.3	13.7	25.3
07-MAY-85	2.4	128.0	32.9	3.9	0.140		302.0	8.0	13.9	25.2
14-MAY-85	2.9	128.0	37.5	3.4	0.123	5.5	323.0	8.0	13.7	24.8
21-MAY-85	3.5	128.0	37.5	3.4	0.123		322.5	8.1	13.9	25.3
29-MAY-85	3.5	128.0	32.9	3.9	0.140		320.0	7.9	13.3	25.0
07-JUN-85	10.2	8.0	19.0	0.4	0.243	4.5	323.5	8.3	13.5	25.6
11-JUN-85	11.0	8.0	19.0	0.4	0.243	6.0	316.0	8.3	12.6	26.1
18-JUN-85	10.5	15.0	15.1	1.0	0.305		321.0	8.3	12.8	26.0
25-JUN-85	10.5	12.0	30.9	0.4	0.149	5.0	315.5	8.4	13.0	25.4
03-JUL-85	13.5	12.0	15.1	0.8	0.305		307.0	8.4	13.4	25.6
09-JUL-85	14.1	15.0	19.8	0.8	0.233	5.5	336.0	8.6	13.2	25.1
15-JUL-85	13.0	12.0	19.8	0.6	0.233	4.0	304.0	8.5	12.2	24.9
23-JUL-85	16.0	10.0	29.2	0.3	0.158		310.0	8.2	11.1	26.6
29-JUL-85	17.9	8.0	30.9	0.3	0.149		317.5	8.3	10.2	23.4
07-AUG-85	20.2	12.0	14.1	0.9	0.327	3.0			10.0	24.0
14-AUG-85	19.9	8.0	8.2	1.0	0.563		302.0	8.2	9.8	25.2
20-AUG-85	20.3	14.0	8.0	1.8	0.579		295.5		9.5	24.4
29-AUG-85	19.9	8.0	9.4	0.9	0.490		311.5		9.4	24.6
04-SEP-85	18.8	15.0	21.6	0.7	0.213	2.5	311.0		9.5	24.5
10-SEP-85	19.5	16.0	9.7	1.7	0.476		295.0		9.8	24.3
16-SEP-85	18.4	18.0	14.1	1.3	0.327		293.5		9.8	23.4
25-SEP-85	18.3	15.0	15.1	1.0	0.305	3.5	305.0		9.4	23.6
30-SEP-85	16.8	13.0	19.8	0.7	0.233		308.5		9.7	24.0
07-OCT-85	12.3	20.0	27.6	0.7	0.167		315.0		10.4	25.0
15-OCT-85	12.7	18.0	26.2	0.7	0.176		307.0		11.3	24.2
22-OCT-85	11.8	22.0	23.7	0.9	0.194	4.0	315.0		9.8	24.9
29-OCT-85	12.3	30.0	43.4	0.7	0.106		320.5		10.8	24.6
SWM[a]	11.6	47.4	24.0	1.7	0.240	4.7	312.9		11.7	24.7

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 6. Physical parameters for Lake Ontario: station 41, 1986. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
10-APR-86	1.8	128.0					325.0	8.2	13.7	24.7
15-APR-86	2.2	128.0				8.0	327.0	8.2	13.6	24.3
23-APR-86	2.2	128.0	30.5	4.2	0.151					
29-APR-86	2.4	128.0	32.9	3.9	0.140		324.5	8.1	13.6	24.5
05-MAY-86	2.6	128.0	32.9	3.9	0.140		336.5	8.2	13.5	24.6
13-MAY-86	3.0	128.0	38.6	3.3	0.119		326.5	8.2	13.7	24.3
20-MAY-86	3.2	128.0	35.7	3.6	0.129		319.5	8.2	13.6	24.4
26-MAY-86	3.5	128.0	19.8	6.5	0.233	8.0	331.5	8.2	13.4	24.4
02-JUN-86	4.4	128.0	31.3	4.1	0.147	5.5			14.0	24.3
09-JUN-86	4.6	128.0	18.8	6.8	0.245		320.0	8.4	14.6	24.1
17-JUN-86	4.7	128.0	17.9	7.2	0.257	4.5	328.5	8.3	13.7	24.1
24-JUN-86	12.0	8.0	20.2	0.4	0.228		325.0	8.5	12.3	24.3
02-JUL-86	12.0	19.0	18.7	1.0	0.246	5.0	321.0	8.3	12.2	24.3
07-JUL-86	14.4	6.0	18.5	0.3	0.249	4.0	321.0	8.5	12.5	24.4
15-JUL-86	15.9	10.0				4.8	301.0	8.5	11.5	24.3
22-JUL-86	17.7	9.0	14.8	0.6	0.311					
28-JUL-86	22.4	6.0	8.4	0.7	0.548		303.5	8.6	11.3	23.3
05-AUG-86	21.6	12.0	12.6	1.0	0.365	3.0	299.0	8.5	9.8	19.4
12-AUG-86	18.8	10.0				3.0	294.0	8.5	10.1	23.6
21-AUG-86	21.6	10.0	12.1	0.8	0.381	2.0	303.0	8.6	9.8	23.0
25-AUG-86	18.5	11.0	17.4	0.6	0.265		306.5	8.4	9.2	23.7
02-SEP-86	15.0	17.0	17.8	1.0	0.259			8.0	7.3	23.4
09-SEP-86	16.5	14.0				2.5	297.0	8.4	10.6	
16-SEP-86	15.0	23.0	31.3	0.7	0.147	4.5	307.0	8.3	9.9	23.8
22-SEP-86	15.2	21.0	26.5	0.8	0.174		303.5	8.3	10.0	23.4
29-SEP-86	16.6	29.0					298.5	8.3	9.5	
07-OCT-86	14.3	34.0								
16-OCT-86	12.9	26.0	31.3	0.8	0.147	5.0	308.0	8.2	10.5	
22-OCT-86	12.0	22.0	31.3	0.7	0.147	7.0	309.5	8.2	10.7	
SWM[a]	11.2	58.6	24.1	2.2	0.222	5.3	313.5	8.3	11.7	

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 7. Physical parameters for Lake Ontario: station 41, 1987. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
14-APR-87	2.9	128.0	16.4	7.8	0.280	6.5			13.3	23.9
23-APR-87	3.3	128.0	19.2	6.7	0.240	8.5	324.0	8.1	13.4	24.1
28-APR-87	3.4	128.0	11.5	11.1	0.400		328.0	8.1	13.5	24.1
05-MAY-87	3.6	128.0	14.9	8.6	0.310	9.0	333.0	8.1	13.5	23.9
13-MAY-87	4.1	128.0	17.7	7.2	0.260	7.8	334.0	8.2	14.0	23.4
20-MAY-87	4.3	128.0	19.2	6.7	0.240		335.5	8.1	14.0	23.7
27-MAY-87	4.6	128.0	17.1	7.5	0.270	4.5	330.5	8.4	15.2	23.3
03-JUN-87	5.0	128.0	17.1	7.5	0.270	5.5	320.0	8.3	15.5	23.6
10-JUN-87	11.1	10.0	17.7	0.6	0.260	5.5	326.0	8.6	12.9	23.3
17-JUN-87	13.3	9.5	15.4	0.6	0.300	6.5	322.0	8.6	12.8	23.5
24-JUN-87	16.8	10.0	17.7	0.6	0.260	6.5	319.0	9.1	12.3	23.9
01-JUL-87	17.3	12.0	12.1	1.0	0.380	6.0	318.0	8.7	10.9	22.5
08-JUL-87	18.3	13.0	10.5	1.2	0.440	7.0	319.0	8.7	10.6	23.3
17-JUL-87	18.4	12.0	7.8	1.5	0.590	5.5	311.0	8.7	11.3	23.2
22-JUL-87	21.2	8.0	15.9	0.5	0.290	4.5	307.0	8.6	10.0	23.4
29-JUL-87	21.8	9.0	15.4	0.6	0.300	6.5	312.0	8.8	9.4	22.8
06-AUG-87	22.4	12.0	16.4	0.7	0.280	2.5	300.0	8.6	9.2	20.7
12-AUG-87	21.1	17.0	14.9	1.1	0.310	2.0	302.0	8.7	9.5	23.2
19-AUG-87	23.0	10.0	14.9	0.7	0.310	1.5	293.5	8.6	9.3	21.8
26-AUG-87	13.3	10.0	11.0	0.9	0.420	5.0	323.0	8.2	10.3	23.2
03-SEP-87	18.1	15.0	19.2	0.8	0.240	4.0	309.0	8.5	9.5	23.3
09-SEP-87	18.8	14.0	17.7	0.8	0.260	5.0	305.0	8.5	9.8	22.5
16-SEP-87	18.8	14.0	11.0	1.3	0.420	6.0	310.0	8.5	9.8	22.6
24-SEP-87	17.6	23.0	14.5	1.6	0.319	6.5	307.0	8.5	9.3	22.2
30-SEP-87	16.8	22.0					310.0	8.4	9.7	22.4
09-OCT-87	12.1	20.5					318.5	8.2	10.4	22.7
15-OCT-87	11.4	16.0				6.5	320.0	8.3	18.8	22.6
21-OCT-87	11.1	25.0				7.0	320.0	8.2	10.8	22.2
SWM[a]	12.8	50.0				5.9	317.7	8.4	11.8	23.1

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 8. Physical parameters for Lake Ontario: station 41, 1988. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
07-APR-88	2.3	128.0					323.0	7.9	14.0	23.5
20-APR-88	2.4	128.0	17.1	7.5	0.270	8.0	325.0	8.3		23.5
27-APR-88	2.7	128.0	16.0	8.0	0.287	5.0	324.0	8.3	13.4	23.6
06-MAY-88	3.0	128.0	22.0	5.8	0.209	9.5	319.0	8.2	13.0	23.3
11-MAY-88	3.2	128.0	22.0	5.8	0.209	8.5	310.0	8.1	13.6	23.0
19-MAY-88	3.5	128.0	15.8	8.1	0.291	7.0	327.0	8.2	13.1	22.8
26-MAY-88	3.6	128.0				7.5	329.0	8.1	13.4	23.0
02-JUN-88	5.3	128.0	14.3	8.9	0.322	5.5	328.0	8.2	13.9	23.3
08-JUN-88	4.7	128.0	22.7	5.6	0.203	5.0	327.0	8.4	13.1	23.1
16-JUN-88	11.4	11.5	19.0	0.6	0.242	6.0	324.0	8.7	12.7	23.5
22-JUN-88	13.5	7.0	8.9	0.8	0.520	5.0	307.0	8.5	13.3	23.5
30-JUN-88	10.6	7.0	19.7	0.4	0.234	6.0	326.5	8.5	11.3	23.7
06-JUL-88	14.0	9.0	15.9	0.6	0.289	5.7	313.5	8.3	13.1	23.7
14-JUL-88	18.0	6.0	16.4	0.4	0.280	7.0	325.5	8.2	13.0	23.5
20-JUL-88	20.4	8.0	12.5	0.6	0.369	6.2	323.0	8.2	10.4	23.2
28-JUL-88	20.9	7.0	10.4	0.7	0.444	3.3	317.0	8.5	8.9	23.0
04-AUG-88	24.6	5.0	8.8	0.6	0.524	2.0	310.0	8.1	11.9	22.8
11-AUG-88	23.4	7.0	11.8	0.6	0.391	2.3	309.5	8.3	8.9	22.9
18-AUG-88	19.3	12.5	11.5	1.1	0.401	2.4	307.0	8.3	9.7	22.3
25-AUG-88	19.6	11.0	13.3	0.8	0.346	3.0	311.0	8.3	9.4	22.3
31-AUG-88	20.7	19.0	17.4	1.1	0.264	5.0	307.0	8.2	11.1	21.4
09-SEP-88	19.0	28.0	12.4	2.3	0.372			8.4	9.4	21.2
15-SEP-88	17.2	13.5	13.9	1.0	0.332	5.0	310.5	8.4	9.6	21.4
22-SEP-88	15.5	12.5	19.9	0.6	0.231	6.2	316.0	8.3	10.1	21.0
28-SEP-88	15.7	22.5	15.6	1.4	0.295	6.0	315.5	8.2	10.1	21.5
06-OCT-88	15.1	15.0	15.4	1.0	0.299	6.0	315.5	8.6	9.9	20.9
SWM[a]	12.5	51.5	15.6	3.1	0.312	5.7	317.7	8.3	11.6	22.6

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 9. Physical parameters for Lake Ontario: station 41, 1989. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
04-APR-89	2.1	128.0	17.9	7.1	0.257	7.0			13.9	22.4
20-APR-89	2.1	128.0	20.8	6.2	0.221	8.0			13.9	23.1
26-APR-89	2.4	128.0				11.0			13.6	22.9
04-MAY-89	2.6	128.0	20.2	6.3	0.228	10.5			13.9	22.6
10-MAY-89	2.9	128.0					372.0	8.1	13.3	22.6
18-MAY-89	3.2	128.0	20.0	6.4	0.231		359.0	8.2	13.4	22.6
25-MAY-89	3.4	128.0	23.2	5.5	0.198	10.0	347.0	8.3	13.8	22.6
01-JUN-89	3.8	128.0	20.3	6.3	0.227	10.0	346.0	8.2	13.7	22.2
07-JUN-89	11.2	6.0	22.1	0.3	0.208	8.5			13.0	22.3
15-JUN-89	6.7	21.0	16.2	1.3	0.285	5.5	366.0	8.4	13.6	22.4
21-JUN-89	9.2	15.0	23.6	0.6	0.195	6.0	345.0	8.6	13.4	22.7
29-JUN-89	13.1	7.0	20.6	0.3	0.223	10.0	361.0	8.3	12.6	22.5
06-JUL-89	19.2	7.0	21.1	0.3	0.218	10.5	368.0	8.7	10.5	22.0
13-JUL-89	18.8	7.0	20.8	0.3	0.222	11.0	366.0	8.7	11.2	22.3
19-JUL-89	19.6	9.0	18.3	0.5	0.251	8.5	369.0	8.8	10.8	22.8
27-JUL-89	22.8	6.5	21.4	0.3	0.215	11.0	356.0	8.7	9.6	22.6
02-AUG-89	21.9	10.5					357.0	8.7	9.5	22.5
11-AUG-89	19.2	7.5	10.3	0.7	0.448	2.5	361.0	8.5	10.5	22.4
17-AUG-89	19.2	7.5	9.9	0.8	0.468	2.2	359.0	8.6	10.4	22.2
24-AUG-89	19.3	9.0	10.3	0.9	0.448	2.1	359.0	8.5	9.7	22.4
30-AUG-89	18.7	9.5	11.2	0.9	0.412	2.7	360.0	8.6	10.0	
08-SEP-89	18.5	11.0	13.6	0.8	0.340	4.5				21.8
14-SEP-89	18.8	14.0				4.5	355.0	8.5	9.8	21.6
21-SEP-89	18.4	18.0	13.0	1.4	0.354	5.0	355.0	8.3	9.8	21.2
27-SEP-89	15.1	18.5	15.3	1.2	0.300	5.0	361.0	8.4	12.0	22.2
05-OCT-89	8.8	20.5	20.4	1.0	0.226		312.0	8.1	11.2	22.2
12-OCT-89	8.0	32.0	13.2	2.4	0.350		296.0	8.2	11.6	22.3
26-OCT-89		128.0	12.4	10.3	0.370		309.0	7.8	11.3	
SWM[a]	11.5	54.0	17.3	3.0	0.287				11.9	22.4

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 10. Physical parameters for Lake Ontario: station 41, 1990. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
03-APR-90	2.0	128.0				6.0	330.0		13.9	22.4
19-APR-90	2.3	128.0	17.7	7.2	0.260	6.6	293.0	8.2	15.1	22.4
25-APR-90	2.4	128.0				6.0	292.0	8.2	15.0	22.5
03-MAY-90	2.8	128.0	14.4	8.9	0.320	6.0	295.0	8.4	13.8	22.2
09-MAY-90	3.0	128.0				5.5	300.0	8.2	13.8	22.3
17-MAY-90	3.5	128.0	12.8	10.0	0.360	6.5	293.0	8.6	14.2	22.0
24-MAY-90	3.6	128.0				5.8	291.0		14.5	21.9
31-MAY-90	3.9	128.0	14.9	8.6	0.310	6.0	299.0	8.5	14.7	22.2
06-JUN-90	5.0	128.0	14.4	8.9	0.320	7.0	286.0	8.7	13.5	22.2
14-JUN-90	13.1	6.0	14.9	0.4	0.310	4.8	284.0	8.7	12.7	22.4
20-JUN-90	13.4	9.0	15.9	0.6	0.290	4.8	276.0	8.8	12.9	22.3
28-JUN-90	14.0	11.5	20.0	0.6	0.230		275.0	8.7	13.0	22.3
05-JUL-90	16.3	10.5	21.9	0.5	0.210		269.0	8.8	12.2	22.4
12-JUL-90	17.1	12.5	25.6	0.5	0.180	7.5	268.0	8.6	11.6	22.2
18-JUL-90	18.4	12.5	23.0	0.5	0.200	8.5	269.0	8.4	10.9	22.3
26-JUL-90	20.0	14.5	20.9	0.7	0.220	8.8	270.0	8.6	11.4	22.1
02-AUG-90	21.1	12.5	19.2	0.7	0.240	6.5	277.0	8.7	10.3	22.0
10-AUG-90	21.7	13.0	14.4	0.9	0.320	4.0	268.0	8.3	10.4	21.2
15-AUG-90	21.8	16.5				2.4	251.0	8.4	9.6	21.4
24-AUG-90	21.2	13.5	13.2	1.0	0.350	3.9	254.0		9.9	21.7
30-AUG-90	21.4	15.0	10.2	1.5	0.450	2.5	260.0	8.1	9.5	21.8
07-SEP-90	21.1	13.5	10.7	1.3	0.430	3.5	259.0	8.2	9.6	21.5
12-SEP-90	19.9	15.5	11.0	1.4	0.420	3.2	269.0	8.5	9.7	21.7
20-SEP-90	17.2	20.5					270.0	8.4	9.9	21.4
27-SEP-90	10.9	20.0	19.2	1.0	0.240	6.5	281.0	8.0	11.3	21.9
12-OCT-90	11.8	34.0	14.0	2.4	0.330	6.5	279.0	8.3	10.9	21.5
25-OCT-90	7.1	128.0	16.4	7.8	0.280	7.0	261.0		11.3	21.3
SWM[a]	11.9	59.3	16.2	3.9	0.299	5.8	279.1	8.4	12.1	22.0

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 11. Physical parameters for Lake Ontario: station 41, 1991. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
03-APR-91	2.5	128.0				1.0	334.0	8.2	13.6	22.0
16-APR-91	2.8	128.0				7.5	322.0	8.0	14.0	
24-APR-91	3.3	128.0				9.0	319.0	8.1	13.8	21.9
01-MAY-91	3.5	128.0	23.3	5.5	0.198	9.0	316.0	7.8	13.9	22.0
09-MAY-91	3.8	128.0	18.7	6.8	0.246	8.0	327.0	8.2	14.0	21.8
15-MAY-91	4.0	128.0	17.2	7.4	0.268	6.5	322.0	8.3	14.7	22.0
24-MAY-91	4.3	128.0	12.3	10.4	0.375	3.5	315.0	8.4	16.4	22.0
29-MAY-91	4.5	128.0	12.7	10.1	0.363	3.8	308.0	8.7	15.2	22.0
06-JUN-91	4.9	128.0	14.2	9.0	0.324	3.5	317.0	8.6	15.3	
11-JUN-91	15.2	10.0	16.5	0.6	0.279	4.8	292.0	8.8	12.9	21.9
20-JUN-91	15.5	11.5	19.2	0.6	0.240	7.5	308.0	8.8	12.4	21.5
26-JUN-91	18.3	10.0	16.5	0.6	0.279	4.5	302.0	8.9	11.9	22.3
05-JUL-91	20.5	12.5	12.8	1.0	0.358	2.8	300.0	8.8	9.7	21.3
10-JUL-91	20.6	12.0	11.6	1.0	0.397	1.5	297.0	8.7	9.7	20.7
18-JUL-91	21.2	5.0	10.9	0.5	0.424	2.5	304.0	8.3	9.8	21.6
24-JUL-91	20.7	12.2	12.3	1.0	0.376	2.5	307.0	8.5	10.3	22.0
01-AUG-91	21.0	9.0	15.8	0.6	0.291	4.0	301.0	8.6	9.6	21.3
07-AUG-91	20.1	12.0	15.0	0.8	0.307	4.2	307.0	8.7	9.8	22.0
15-AUG-91	21.6	8.3	15.5	0.5	0.297	3.5	301.0	8.6	9.9	20.7
21-AUG-91	20.5	17.5	12.2	1.4	0.376	3.2	307.0	8.5	9.5	21.5
29-AUG-91	21.5	16.5	9.7	1.7	0.475	2.2	299.0	8.5	9.6	20.7
04-SEP-91	21.1	21.0	9.7	2.2	0.474	2.8	298.0	8.6	9.2	21.5
12-SEP-91	21.0	19.0	11.4	1.7	0.405	3.5	296.0	8.5	9.0	21.2
18-SEP-91	20.9	18.0	14.9	1.2	0.309	4.0	298.0	8.7	9.0	21.0
03-OCT-91	12.6	14.5	16.5	0.9	0.279	5.5	309.0	8.1	10.6	21.7
10-OCT-91	12.7	26.0	16.1	1.6	0.287	5.8	308.0	8.2	10.6	21.4
17-OCT-91	11.2	34.0	16.9	2.0	0.272	6.5	310.0	8.3	10.9	21.8
24-OCT-91	12.2	26.0	15.2	1.7	0.303	6.0	308.0	8.2	11.3	21.3
30-OCT-91	12.0	46.0				6.0	309.0	8.3	10.9	21.5
SWM[a]	13.4	52.3				4.7	308.6	8.4	11.6	21.6

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 12. Physical parameters for Lake Ontario: station 41, 1992. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
31-MAR-92	1.5	128.0				7.0			13.9	
08-APR-92	1.8	128.0	18.8	6.8	0.245		320.0	8.3	14.1	21.8
15-APR-92	2.0	128.0	15.5	8.3	0.297	5.5	324.0	8.2	14.0	21.7
28-APR-92	2.8	128.0	19.9	6.4	0.231	6.0	321.0	8.1	13.8	21.6
07-MAY-92	3.0	128.0	22.6	5.7	0.203	8.8	319.0	8.1	13.7	21.6
14-MAY-92	3.4	128.0	19.1	6.7	0.241	7.0	319.0	8.0	13.8	21.1
22-MAY-92	4.5	128.0	18.9	6.8	0.244	8.8	320.0	8.2	14.3	21.7
26-MAY-92	3.8	128.0	14.4	8.9	0.320	7.8	317.0	8.0	14.1	21.8
04-JUN-92	6.5	128.0	17.0	7.5	0.271			8.3	14.7	21.8
10-JUN-92	6.3	128.0	17.0	7.5	0.271	6.5	326.0	8.3	14.5	21.5
18-JUN-92	13.1	7.5	18.9	0.4	0.243	6.0	314.0	8.5		21.7
25-JUN-92	12.3	11.0	24.3	0.5	0.190	6.5	313.0	8.6		21.6
02-JUL-92	15.4	9.0	21.9	0.4	0.210	7.5	312.0	8.5	10.7	21.6
09-JUL-92	15.9	10.0	23.5	0.4	0.196	8.5	317.0	8.0	10.7	20.9
16-JUL-92	17.1	10.0	23.9	0.4	0.193	8.5	320.0	8.0	10.4	21.7
22-JUL-92	18.1	13.5	24.8	0.5	0.185	7.5	311.0	8.7	10.2	21.3
30-JUL-92	18.3	12.5	13.7	0.9	0.335	4.0	308.0	8.7	10.2	21.5
13-AUG-92	17.1	8.5	10.4	0.8	0.443	2.9	310.0	8.7	11.0	21.5
19-AUG-92	17.3	10.0	9.7	1.0	0.475	2.5	305.0	8.6	10.8	21.6
27-AUG-92	21.0	6.5	10.5	0.6	0.440	3.2	302.0	8.7	10.8	21.4
02-SEP-92	14.5	10.5	16.3	0.6	0.283	4.8	308.0	8.4	11.1	21.4
11-SEP-92	15.0	11.0	14.6	0.8	0.316	4.5	306.0	8.3	10.7	21.2
16-SEP-92	16.4	7.5	16.5	0.5	0.280	4.5	304.0	8.6		20.7
30-SEP-92	15.3	18.5	21.9	0.8	0.210		306.0	8.6	11.0	21.0
08-OCT-92	14.0	18.5	19.9	0.9	0.231	7.0			11.1	20.9
15-OCT-92	12.4	21.0	26.7	0.8	0.172	6.0	307.0	8.2	10.8	20.8
22-OCT-92	6.3	128.0	23.7	5.4	0.194	6.0	314.0	8.2	11.6	21.6
SWM[a]	11.0	58.9	18.6	3.2	0.266	6.0	313.5	8.3	12.1	21.4

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 13. Physical parameters for Lake Ontario: station 41, 1993. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
30-MAR-93	1.3	128.0				8.0	323.0	8.2	14.0	21.4
07-APR-93	1.9	128.0				7.0	318.0	7.9	13.8	21.3
14-APR-93	2.2	128.0	24.3	5.3	0.190	9.5	317.0	7.9	13.5	21.3
21-APR-93	2.4	128.0	26.8	4.8	0.172	10.0	308.0	7.9	13.6	21.4
28-APR-93	2.5	128.0	44.0	2.9	0.105	9.0	309.0	8.3	13.5	21.4
06-MAY-93	2.8	128.0	28.5	4.5	0.162	8.5	310.0	8.1	13.5	21.2
12-MAY-93	3.1	128.0	24.3	5.3	0.190	8.0	311.0	8.1	13.6	21.2
20-MAY-93	3.3	128.0	26.1	4.9	0.177		309.0	8.1	14.1	21.5
27-MAY-93	3.6	128.0	21.8	5.9	0.211	8.0	309.0	8.2	13.8	21.3
03-JUN-93	5.5	128.0	17.5	7.3	0.263		307.0	8.3	13.6	21.3
09-JUN-93	5.7	128.0	23.8	5.4	0.193	5.5	317.0	8.4	13.8	21.2
17-JUN-93	11.0	6.0				4.8	315.0	8.6	13.1	21.3
23-JUN-93	13.2	4.8				5.5	312.0	8.9	12.5	21.0
01-JUL-93	16.2	6.0	20.3	0.3	0.226	6.5	310.0	8.7	12.1	21.3
07-JUL-93	19.4	5.8	19.6	0.3	0.235	6.5	306.0	8.9	14.4	20.3
15-JUL-93	20.4	7.0	19.1	0.4	0.241	8.0	-99.9	8.8	9.8	18.3
21-JUL-93	15.8	5.0	18.4	0.3	0.250	5.0	308.0	9.0	11.8	17.6
29-JUL-93	13.5	13.5	18.5	0.7	0.249	5.8	312.0	8.8	13.1	17.3
05-AUG-93	19.8	8.5	20.9	0.4	0.221	6.0	305.0	8.9	10.0	21.0
12-AUG-93	21.0	8.5	19.0	0.4	0.242	6.0	306.0	8.8	10.0	21.6
18-AUG-93	22.6	6.0	12.9	0.5	0.357	2.5	300.0	8.9	9.8	20.6
26-AUG-93	22.1	11.5	12.2	0.9	0.377	3.8	300.0	8.8	9.4	21.5
01-SEP-93	22.2	11.5	12.7	0.9	0.361	2.8	298.0	8.8	8.8	21.4
10-SEP-93	21.5	12.0	15.7	0.8	0.294	4.0	298.0	8.5	8.9	21.7
15-SEP-93	16.9	12.5	26.3	0.5	0.175	3.5	17.0	8.5	9.9	21.6
23-SEP-93	16.2	16.0	10.3	1.6	0.447	4.0	298.0	8.6	10.0	21.4
30-SEP-93	14.5	10.5	15.8	0.7	0.291	5.5	304.0	8.5	10.0	21.2
07-OCT-93	8.4	128.0	19.2	6.7	0.240	7.5	309.0	8.8	10.9	21.8
14-OCT-93	10.7	128.0	16.5	7.8	0.279	6.5	310.0	8.2	10.9	22.0
27-OCT-93	10.5	128.0	18.0	7.1	0.255	6.5	304.0	7.8	11.1	21.3
SWM[a]	11.8	65.2	20.7	3.2	0.242	6.3	285.6	8.5	11.8	21.0

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 14. Physical parameters for Lake Ontario: station 41, 1994. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
12-APR-94	0.8	128.0					310.0	8.0	14.3	21.8
19-APR-94	1.1	128.0					209.0	7.7	15.8	22.0
26-APR-94		128.0								21.2
05-MAY-94		128.0								21.9
12-MAY-94	2.3	128.0	18.3	7.0	0.252	8.0	321.0	8.2	14.2	21.3
19-MAY-94	2.8	128.0	14.4	8.9	0.319	7.0	323.0	8.3	14.2	21.9
26-MAY-94	3.0	128.0	21.9	5.8	0.210	5.5	318.0	8.2	13.9	22.3
02-JUN-94	3.1	128.0	24.5	5.2	0.188	7.0	319.0	8.2	13.9	22.5
06-JUN-94	3.5	128.0	19.3	6.6	0.239	7.5	303.0	8.3	14.3	21.6
16-JUN-94	5.2	128.0	22.9	5.6	0.201	6.0	285.0	8.1	14.1	21.5
30-JUN-94	13.0	5.0	22.4	0.2	0.206	4.0	280.0	8.5	13.3	21.7
14-JUL-94	17.0	10.3	16.4	0.6	0.281	5.5	298.0	8.5	10.9	22.0
28-JUL-94	20.3	10.8	15.6	0.7	0.295	7.5	295.0	8.8	10.7	21.7
11-AUG-94	19.5	10.0	16.4	0.6	0.281	5.3	278.0	8.5	10.3	21.3
18-AUG-94	16.9	2.8	13.8	0.2	0.333	4.0	309.0	8.4	10.8	21.9
25-AUG-94	18.1	6.0	15.5	0.4	0.298	4.5	293.0	8.2	10.4	21.5
31-AUG-94	17.7	10.0	13.7	0.7	0.336	4.0	296.0	8.6	10.3	21.6
09-SEP-94	17.9	10.5	15.5	0.7	0.298	5.0	285.0	8.5	10.0	21.3
14-SEP-94	17.2	12.0	18.8	0.6	0.245	5.3	300.0	8.5	10.0	20.5
22-SEP-94	16.4	13.5	14.2	1.0	0.325	3.5	295.0	8.5	10.6	21.4
26-SEP-94	17.4	18.0								
06-OCT-94	12.6	24.3	15.0	1.6	0.307	5.0	304.0	8.3	10.4	21.1
13-OCT-94	12.8	12.8	15.8	0.8	0.292	5.3	304.0	8.4	10.6	21.2
20-OCT-94	12.8	19.0	16.2	1.2	0.284	5.3	301.0	8.3	12.2	20.7
SWM[a]	10.9	57.1					293.6	8.3	12.3	21.5

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 15. Physical parameters for Lake Ontario: station 41, 1995. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
11-APR-95	2.5	128.0				7.0	308.0	7.7	13.3	21.0
19-APR-95	2.7	128.0	26.3	4.9	0.175	8.0	323.0	8.3	13.2	21.3
26-APR-95	2.8	128.0	20.8	6.2	0.221	8.0	321.0	8.3	13.3	21.2
04-MAY-95	2.9	128.0	20.9	6.1	0.220	10.0	317.0	8.3	13.5	21.2
11-MAY-95	3.1	128.0	26.5	4.8	0.174	6.6	316.0	8.2	13.6	21.0
18-MAY-95	3.4	128.0	28.7	4.5	0.160	7.5	317.0	8.0	13.3	21.0
24-MAY-95	3.7	128.0	21.4	6.0	0.216	7.2	314.0	8.0	13.6	21.2
02-JUN-95	4.8	128.0	18.0	7.1	0.256	6.0	314.0	8.4	14.1	21.0
07-JUN-95	11.9	4.7	16.1	0.3	0.286	5.5	311.0	8.5	15.5	21.0
16-JUN-95	5.2	128.0					310.0	8.5	15.3	20.9
21-JUN-95	16.3	7.0	17.7	0.4	0.260	6.3	309.0		12.1	20.9
29-JUN-95	18.3	8.0	16.2	0.5	0.284	6.3	299.0	8.9	10.4	20.7
10-JUL-95	18.6	12.0	23.0	0.5	0.200	6.2	298.0	8.9	12.2	20.6
15-JUL-95		9.0	16.9	0.5	0.273	7.5	298.0	8.9		20.6
24-JUL-95	20.7	9.5	17.4	0.5	0.265	7.5	307.0	8.9	10.6	20.7
01-AUG-95	23.3	6.5	10.8	0.6	0.428	2.3	292.0	8.7	10.8	19.8
11-AUG-95	23.2	12.0	17.2	0.7	0.267	3.5	289.0	8.7	9.2	19.1
16-AUG-95	23.2	14.5	10.9	1.3	0.421	2.0	291.0	8.5	9.3	20.3
30-AUG-95	21.2	19.5	14.3	1.4	0.322	3.0	292.0	8.5	9.0	20.3
14-SEP-95	18.4	16.5	17.7	0.9	0.261	5.0				21.0
21-SEP-95	17.0	21.0	22.1	1.0	0.209	5.5	297.0	8.4	9.5	20.9
26-SEP-95	14.4	27.5	19.1	1.4	0.241	5.5	300.0	8.3	10.4	20.9
04-OCT-95	15.2	22.0					287.0	8.4		21.1
10-OCT-95	14.1	28.5	18.9	1.5	0.243	7.0	297.0	8.1	10.2	20.2
23-OCT-95	5.3	128.0	15.1	8.5	0.306	7.0	305.0	8.2		20.5
SWM[a]	12.6	60.5	18.8	2.8	0.260	6.0	303.5	8.4	11.6	20.7

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 16. Physical parameters for Lake Ontario: station 81, 1981. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
16-MAR-81	0.3	35.0	22.8	1.5	0.202		310.5	8.3	15.6	24.3
24-MAR-81	0.6	35.0	12.3	2.8	0.374		310.5	8.4	14.7	25.0
31-MAR-81	1.3	35.0	16.8	2.1	0.274	4.0	318.9	8.3	15.0	26.5
08-APR-81	2.6	35.0	25.3	1.4	0.182		317.3	8.5	14.7	26.1
17-APR-81	3.4	35.0	15.1	2.3	0.305	4.0	314.0		13.9	26.2
22-APR-81	3.9	35.0	15.1	2.3	0.305	4.0	330.0		13.6	26.2
28-APR-81	4.1	35.0	16.2	2.2	0.284	4.0	337.0	8.4	13.4	26.5
05-MAY-81	5.1	35.0	22.6	1.5	0.204	5.0	342.2	8.3	13.5	26.3
12-MAY-81	6.1	35.0	22.6	1.5	0.204	5.0	330.2	8.4	12.9	26.4
22-MAY-81	7.2	35.0	14.8	2.4	0.311	4.0	323.6	8.1	12.4	27.0
28-MAY-81	8.0	35.0	14.6	2.4	0.315	4.0	355.8	8.4	12.3	25.8
04-JUN-81	11.5	12.0	14.6	0.8	0.315		339.0	8.6	12.4	26.1
10-JUN-81	9.2	35.0	15.6	2.2	0.295	4.0	337.8	8.4	11.7	25.6
16-JUN-81	13.8	6.0	16.3	0.4	0.283	4.5	328.8	8.6	11.7	25.7
23-JUN-81	13.6	15.0	17.5	0.9	0.263		330.6	8.4	11.1	25.1
30-JUN-81	12.6	35.0	14.1	2.5	0.327	3.0	332.1	8.6	11.2	25.5
07-JUL-81	19.5	4.0	11.6	0.3	0.398	3.0	318.8	8.7	12.1	25.7
14-JUL-81	20.0	9.0	10.2	0.9	0.451		318.8	8.4	10.4	25.7
23-JUL-81	20.1	9.0	7.3	1.2	0.627	1.8	313.4	8.5	9.9	24.4
30-JUL-81	19.6	17.0	15.1	1.1	0.305	3.0	319.7	8.4	9.1	25.9
05-AUG-81	20.2	14.0	8.0	1.8	0.576	2.0	312.2	8.6	9.6	26.0
11-AUG-81	22.0	11.0	12.0	0.9	0.384	2.0	306.0	8.5	9.3	26.0
18-AUG-81	19.7	18.0	16.2	1.1	0.284	3.5	316.7	8.3	8.6	27.3
25-AUG-81	19.7	14.0	15.1	0.9	0.305		317.3	8.3	9.3	27.5
01-SEP-81	20.3	19.0	15.1	1.3	0.305		331.7	8.2	9.2	26.2
09-SEP-81	19.0	26.0	18.2	1.4	0.253		311.6	8.2	9.3	26.2
15-SEP-81	19.0	15.0	18.2	0.8	0.253	3.5	317.0	8.3	10.3	18.9
24-SEP-81	15.3	27.0	19.8	1.4	0.233	4.0	325.5	7.8	9.5	20.7
30-SEP-81	13.6	27.0	16.2	1.7	0.284	4.0	317.1	7.7	10.5	26.4
05-OCT-81	13.0	35.0	13.8	2.5	0.334	4.5	368.0	7.6	9.9	25.4
14-OCT-81	11.9	35.0	17.5	2.0	0.263	4.0	372.4	7.8	10.4	26.2
20-OCT-81	11.6	35.0	10.6	3.3	0.434		373.3	8.1	10.6	25.8
27-OCT-81	10.9	35.0	19.8	1.8	0.233	4.0	387.4	7.5	10.4	26.5
03-NOV-81	10.3	35.0	19.8	1.8	0.233		362.6	7.6	11.1	26.1
11-NOV-81	9.2	35.0	17.5	2.0	0.263		386.5	7.8	11.2	26.3
18-NOV-81	8.7	35.0	16.9	2.1	0.272		381.2	7.7	10.9	26.2
24-NOV-81	7.8	35.0	16.8	2.1	0.274		379.1	7.7	11.6	26.5
01-DEC-81	6.4	35.0	16.2	2.2	0.284		340.7	7.7	11.6	26.8
08-DEC-81	5.7	35.0	13.0	2.7	0.354	5.0	313.3	8.2	12.0	26.8
SWM[a]	13.0	24.6	15.8	1.6	0.315	3.7	331.2	8.3	11.2	25.6

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 17. Physical parameters for Lake Ontario: station 81, 1982. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
31-MAR-82	0.3	35.0	17.5	2.0	0.263		348.9		14.4	26.8
28-APR-82	2.6	35.0	18.3	1.9	0.252		305.2		14.2	25.4
05-MAY-82	3.9	35.0	19.0	1.8	0.243		314.8		14.3	25.4
11-MAY-82	4.5	35.0	20.7	1.7	0.222		327.8		14.1	26.0
20-MAY-82	5.8	35.0	21.8	1.6	0.211		321.0		14.2	26.4
27-MAY-82	7.1	35.0	19.8	1.8	0.233	5.5	337.3		12.7	25.7
01-JUN-82	6.9	35.0	20.7	1.7	0.222		324.6		13.2	26.7
08-JUN-82	10.8	19.0	19.0	1.0	0.242		338.1		12.1	26.5
16-JUN-82	12.3	10.0	19.9	0.5	0.231	3.0	326.8		11.9	26.1
22-JUN-82	12.3	11.0	14.1	0.8	0.327		340.7		11.8	26.0
29-JUN-82	14.2	9.0	17.5	0.5	0.263		334.2		11.5	24.3
06-JUL-82	15.1	6.0	16.8	0.4	0.274	5.5	302.0		11.8	25.6
15-JUL-82	15.6	16.0	18.3	0.9	0.252		317.8		11.6	25.8
21-JUL-82	19.7	6.0	19.0	0.3	0.242	4.5	330.6		10.8	26.0
27-JUL-82	20.8	9.0	11.9	0.8	0.387		318.4		9.9	25.5
04-AUG-82	20.2	14.0	11.6	1.2	0.397	3.0	309.0		9.2	25.5
10-AUG-82	21.1	12.0	10.9	1.1	0.422	3.0	320.0		9.5	24.8
18-AUG-82	20.4	10.0	7.8	1.3	0.590	1.5	312.0		9.6	25.9
24-AUG-82	18.5	24.0	11.9	2.0	0.387		329.4		8.8	24.5
31-AUG-82	18.7	25.0	17.5	1.4	0.263		316.4		9.4	25.9
08-SEP-82	17.9	28.0				4.0	328.7		9.4	26.5
16-SEP-82	17.6	24.0	13.9	1.7	0.331		332.6		9.5	25.8
23-SEP-82	15.9	19.0	24.9	0.8	0.185		327.0		10.3	25.9
29-SEP-82	15.4	20.0	11.9	1.7	0.387		326.5		10.2	26.1
05-OCT-82	15.5	22.0	19.8	1.1	0.233		331.8		9.9	25.5
14-OCT-82	13.8	29.0	11.7	2.5	0.394	3.0	309.5		10.4	26.3
19-OCT-82	12.2	20.0	21.6	0.9	0.213		330.5		10.1	26.1
26-OCT-82	11.2	35.0	16.8	2.1	0.274		331.3		10.5	26.0
02-NOV-82	11.2	35.0	19.8	1.8	0.233		331.6		10.9	25.7
09-NOV-82	10.0	35.0	14.6	2.4	0.315		322.9		10.7	25.4
17-NOV-82	8.8	35.0	14.5	2.4	0.318	3.5	318.5		11.9	25.9
23-NOV-82	8.9	35.0	23.7	1.5	0.194		332.1		11.3	25.8
SWM[a]	12.4	23.0	16.9	1.4	0.291		324.3		11.5	25.8

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 18. Physical parameters for Lake Ontario: station 81, 1983. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
17-MAR-83	1.6	35.0	13.5	2.6	0.342		346.6		14.2	25.1
06-APR-83	2.4	35.0	12.1	2.9	0.380	4.0	315.0		14.1	25.9
12-APR-83	2.8	35.0	12.1	2.9	0.380	4.5	331.0		14.0	25.5
21-APR-83	3.3	35.0	18.2	1.9	0.253	3.0	328.2		13.6	25.9
26-APR-83	3.4	35.0	18.2	1.9	0.253		335.6		13.6	26.2
04-MAY-83	4.5	35.0	19.0	1.8	0.243		308.6		12.3	25.5
10-MAY-83	5.1	35.0	17.5	2.0	0.263	4.5	330.1		13.1	25.4
17-MAY-83	6.3	35.0	19.0	1.8	0.243		321.5		13.9	25.6
25-MAY-83	7.2	35.0	19.0	1.8	0.243		315.2		12.7	25.6
01-JUN-83	8.7	35.0	15.6	2.2	0.294	5.0	297.0		12.5	25.4
07-JUN-83	9.1	35.0	13.6	2.6	0.339	4.0	322.7		12.2	24.6
14-JUN-83	14.4	6.0	18.2	0.3	0.253	5.0	293.0		11.7	23.9
22-JUN-83	20.0	3.0	21.6	0.1	0.213	6.5	295.0		11.5	24.8
28-JUN-83	16.6	13.0	13.6	1.0	0.339	5.0	288.6		11.5	24.5
05-JUL-83	18.9	9.0	19.0	0.5	0.243	6.0	292.1		10.6	24.7
12-JUL-83	18.5	13.5	16.8	0.8	0.273	4.5	307.0		9.7	25.4
19-JUL-83	21.3	11.0	11.9	0.9	0.386	3.0	290.0		10.5	25.5
26-JUL-83	21.6	16.0	11.6	1.4	0.398		290.5		10.3	24.9
04-AUG-83	23.1	13.0	10.0	1.3	0.462		287.6		9.3	24.9
09-AUG-83	22.9	16.0	9.1	1.8	0.504	4.0	285.3		8.2	24.6
17-AUG-83	21.2	20.0	8.9	2.3	0.518		287.5		8.4	25.4
23-AUG-83	21.4	13.0	10.3	1.3	0.449	3.5	296.3		9.7	25.3
30-AUG-83	21.5	11.0					277.5		10.7	25.3
07-SEP-83	22.3	12.0	9.4	1.3	0.490		301.0		9.6	26.6
13-SEP-83	21.1	16.0	1.6	10.1	0.291		299.5		8.1	25.6
20-SEP-83	19.8	22.0	16.2	1.4	0.284		318.1		8.3	25.1
27-SEP-83	18.5	25.0	9.7	2.6	0.476	5.5	297.5		9.5	25.3
06-OCT-83	18.1	26.0	19.1	1.4	0.242		310.4		8.8	25.2
12-OCT-83	16.3	35.0	17.5	2.0	0.263		291.4		9.6	25.1
19-OCT-83	14.4	35.0	21.6	1.6	0.213	8.0	327.4		10.4	25.0
27-OCT-83	12.7	35.0	22.6	1.5	0.204		311.4		10.7	26.0
02-NOV-83	11.9	23.0	19.8	1.2	0.233	6.0	331.4		10.8	24.7
08-NOV-83	9.9	35.0	22.6	1.5	0.204	6.0	325.4		11.2	25.2
15-NOV-83	9.2	35.0	19.8	1.8	0.233		307.4		12.0	25.2
22-NOV-83	7.9	35.0	19.0	1.8	0.243	6.0	318.4		11.9	25.4
SWM[a]	14.5	23.3	14.8	1.9	0.329	4.8	305.4		11.0	25.3

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 19. Physical parameters for Lake Ontario: station 81, 1984. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
21-MAR-84	0.1	35.0	24.9	1.4	0.185	6.0			14.5	24.5
05-APR-84	1.0	35.0	32.9	1.1	0.140	5.0			14.6	
17-APR-84	2.0	35.0	26.2	1.3	0.176		313.0	7.5	13.5	25.4
25-APR-84	2.8	35.0	24.9	1.4	0.185	2.5	316.5	7.5	14.1	24.6
03-MAY-84	3.9	35.0				2.6	316.5	8.1	13.8	25.1
08-MAY-84	4.5	35.0	17.5	2.0	0.263	2.5		8.1	13.9	25.4
15-MAY-84	5.4	35.0	17.5	2.0	0.263	2.0	306.0	8.4	13.5	25.0
23-MAY-84	5.8	35.0	16.2	2.2	0.284		318.5	8.7	13.7	25.0
29-MAY-84	7.0	35.0	13.6	2.6	0.339	3.5	332.5	8.6	13.0	25.2
05-JUN-84	7.9	35.0	16.2	2.2	0.284	4.0	339.5	8.7	12.7	24.9
13-JUN-84	12.9	7.0	13.6	0.5	0.339		332.5	8.7	12.1	23.9
19-JUN-84	13.8	9.0	16.2	0.6	0.284		322.0	8.7	11.4	25.3
26-JUN-84	15.0	12.0	15.6	0.8	0.294		321.0	8.8	11.3	24.8
04-JUL-84	17.7	7.0	17.6	0.4	0.264	4.0	316.5	8.8	10.6	25.0
10-JUL-84	17.7	10.0	16.2	0.6	0.284	4.0	320.0	8.7	10.1	25.4
17-JUL-84	18.8	11.0	15.6	0.7	0.294	3.0	325.5	8.7	9.3	24.4
24-JUL-84	23.0	10.0	11.2	0.9	0.410	3.0	321.5	8.8	9.0	24.5
31-JUL-84	20.9	12.0	8.0	1.5	0.579		293.0	8.7	9.3	22.9
08-AUG-84	20.6	9.0	8.0	1.1	0.579	2.0	297.5	8.6	9.1	23.2
14-AUG-84	23.4	10.0	9.7	1.0	0.476		288.0		8.3	24.9
21-AUG-84	21.7	13.0	7.0	1.9	0.662		297.5	8.6	8.8	25.0
28-AUG-84	20.6	15.0				2.0	300.5	8.7	9.1	24.9
11-SEP-84	18.4	23.0	19.8	1.2	0.233	2.0	312.5	8.4	8.8	25.2
25-SEP-84	17.6	22.0	19.8	1.1	0.233		310.5	8.5	9.3	25.2
10-OCT-84	14.7	31.0	24.9	1.2	0.185		328.0	7.6	9.7	25.0
24-OCT-84	14.0	26.0	21.6	1.2	0.213	6.0	307.0	8.6	9.9	24.4
06-NOV-84	12.0	35.0	14.1	2.5	0.327		327.0	7.8	10.2	25.0
SWM[a]	13.4	22.6	17.7	1.3	0.306	3.4	314.4	8.4	11.0	24.8

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 20. Physical parameters for Lake Ontario: station 81, 1985. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
28-MAR-85	0.8	35.0					327.0	8.3	14.3	24.9
03-APR-85	0.9	35.0	19.8	1.8	0.233		333.0	8.3	14.2	23.0
10-APR-85	0.9	35.0								
16-APR-85	2.3	35.0	13.2	2.7	0.350	2.5	297.5	8.2	12.8	24.7
23-APR-85	3.0	35.0	15.6	2.2	0.294		324.5	8.4	14.2	24.9
30-APR-85	3.8	35.0	14.6	2.4	0.316	2.0	311.0	8.5	14.1	25.4
07-MAY-85	5.0	35.0	17.5	2.0	0.263	2.5	307.0	8.3	14.0	25.2
14-MAY-85	6.0	35.0	19.0	1.8	0.243	3.0	322.0	8.4	13.6	24.6
22-MAY-85	7.0	35.0	21.6	1.6	0.213	5.0	306.0	8.3	13.3	24.5
29-MAY-85	8.0	35.0	24.9	1.4	0.185	6.0	321.5	8.2	12.9	24.7
07-JUN-85	8.7	35.0	22.6	1.5	0.204	5.5	326.0	8.1	12.2	25.8
11-JUN-85	9.0	35.0	19.0	1.8	0.243	4.0	321.0	8.2	11.7	25.1
18-JUN-85	12.4	8.0	20.7	0.4	0.223		316.0	8.2	11.8	25.0
26-JUN-85	13.2	15.0	32.9	0.5	0.140		319.5	8.4	11.4	24.0
03-JUL-85	13.0	20.0	26.2	0.8	0.176	4.0	306.5	8.3	11.7	24.0
11-JUL-85	16.3	15.0	16.8	0.9	0.273				11.1	
16-JUL-85	17.6	13.0	23.7	0.5	0.194	4.0	308.0	8.3	10.1	23.4
23-JUL-85	18.0	14.0	19.8	0.7	0.233	4.0	305.0	8.1	9.5	24.0
30-JUL-85	19.4	20.0	15.1	1.3	0.305	3.5	306.5	8.1	9.2	24.3
09-AUG-85	20.7	15.0	10.3	1.5	0.449		330.0	8.5	9.5	24.2
13-AUG-85	21.1	14.0	10.0	1.4	0.462	2.5	293.0	8.1	9.3	24.2
20-AUG-85	20.4	18.0	9.1	2.0	0.504		297.0		8.7	24.1
28-AUG-85	20.3	19.0	10.9	1.7	0.423		308.0		8.8	24.3
06-SEP-85	19.4	16.0	30.1	0.5	0.153		310.5		9.1	24.7
10-SEP-85	19.0	20.0	13.2	1.5	0.350		295.5		9.1	24.3
17-SEP-85	17.9	18.0	21.6	0.8	0.213	2.5	302.5		9.4	24.2
25-SEP-85	17.5	21.0	18.2	1.2	0.253		308.5		9.4	24.5
01-OCT-85	17.0	26.0	21.6	1.2	0.213	2.5	305.5		9.5	24.7
08-OCT-85	15.4	35.0	20.7	1.7	0.223		302.0		9.6	25.8
16-OCT-85	14.2	35.0	21.6	1.6	0.213		304.5		9.7	24.7
23-OCT-85	13.9	35.0	21.6	1.6	0.213		311.0		9.9	30.5
29-OCT-85	13.1	35.0	20.7	1.7	0.223	3.0	316.0		10.1	24.8
SWM[a]	12.8	25.6	19.0	1.4	0.267	3.2	310.8		11.1	24.7

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 21. Physical parameters for Lake Ontario: station 81, 1986. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
09-APR-86	2.3	35.0					320.5	8.2	14.2	
17-APR-86	2.9	35.0					328.0	8.3	14.0	
22-APR-86	3.3	35.0	18.0	1.9	0.256		325.0	8.2	14.1	
30-APR-86	4.3	35.0	17.6	2.0	0.262		323.5	8.1	13.7	
06-MAY-86	5.3	35.0	15.7	2.2	0.293		325.0	8.2	13.7	
13-MAY-86	6.1	35.0	19.8	1.8	0.233	4.0	327.5	8.3	13.6	
21-MAY-86	7.1	35.0	20.1	1.7	0.229		320.5	8.3	13.0	
27-MAY-86	7.7	35.0	16.7	2.1	0.276	4.5	322.5	8.3	13.2	
03-JUN-86	8.7	35.0	23.9	1.5	0.193		324.0	8.3	12.5	
10-JUN-86	9.4	35.0	22.4	1.6	0.206	4.0	326.5	8.3	12.3	
18-JUN-86	13.9	11.0	19.3	0.6	0.239		328.0	8.3	12.0	
24-JUN-86	14.5	16.0	16.8	1.0	0.274		323.5	8.5	11.4	
03-JUL-86	16.3	12.0	18.9	0.6	0.244		319.5	8.4	11.5	
08-JUL-86	16.2	22.0	19.3	1.1	0.239	4.0	325.0	8.6	11.4	
17-JUL-86	18.8	13.0					301.0	8.2	10.0	
23-JUL-86	21.7	5.0	20.4	0.2	0.226	3.0	313.0	8.7	11.5	23.7
30-JUL-86	21.1	11.0	9.0	1.2	0.512		308.5	8.7	10.6	
06-AUG-86	20.8	18.0	10.3	1.7	0.447	2.0	304.5	8.5	9.4	19.1
14-AUG-86	21.3	16.0					295.5	8.6	9.2	23.6
26-AUG-86	19.2	17.0	14.4	1.2	0.320		257.0	8.3	8.7	
03-SEP-86	18.5	12.0	19.8	0.6	0.233		318.5	8.1	7.2	
11-SEP-86	17.0	24.0	18.2	1.3	0.253	4.0	299.0	8.2	9.4	
17-SEP-86	16.6	25.0					307.0	8.5	9.6	
23-SEP-86	16.1	26.0	28.9	0.9	0.159		307.0	8.3	9.3	
30-SEP-86	16.0	26.0	28.1	0.9	0.164	4.9	300.3	8.3	9.5	
07-OCT-86	14.5	20.0					326.0	7.9	9.8	
16-OCT-86	12.4	35.0	13.2	2.7	0.349		307.0	8.0	10.1	
21-OCT-86	11.9	35.0	19.1	1.8	0.241	4.0	320.0	8.3	10.5	
SWM[a]	13.0	24.9	18.5	1.4	0.268		313.7	8.3	11.2	

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 22. Physical parameters for Lake Ontario: station 81, 1987. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
16-APR-87	3.8	35.0							13.6	23.7
22-APR-87	4.7	35.0					336.0	8.3	13.8	23.8
29-APR-87	5.9	35.0				5.0	329.0	8.1	13.1	23.7
05-MAY-87	6.0	35.0				5.0	326.0	8.3	12.9	23.3
12-MAY-87	7.1	35.0	15.9	2.2	0.290	6.5	331.5	8.3	12.8	23.2
21-MAY-87	7.8	35.0	17.1	2.1	0.270	5.5	336.0	8.1	12.4	23.2
26-MAY-87	8.6	35.0	16.4	2.1	0.280	5.5	337.5	8.3	12.7	23.8
02-JUN-87	15.2	7.0	14.9	0.5	0.310	6.0	313.5	8.4	11.5	22.5
09-JUN-87	13.9	16.0	14.9	1.1	0.310		324.5	8.4	11.3	23.2
16-JUN-87	14.4	15.0	15.9	0.9	0.290	5.5	321.0	8.5	11.0	22.8
23-JUN-87	17.8	9.0	15.9	0.6	0.290	5.5	311.0	8.9	10.5	22.3
30-JUN-87	18.0	13.5	12.8	1.1	0.360	5.0	316.5	8.5	9.9	22.2
07-JUL-87	19.2	8.0	12.8	0.6	0.360	4.5	311.5	8.7	10.2	22.7
16-JUL-87	21.0	12.0				2.0	302.0	8.6	10.1	22.6
21-JUL-87	22.0	13.0	8.2	1.6	0.560	2.5			9.3	22.5
28-JUL-87	21.7	17.0	9.2	1.8	0.500	2.2	307.0	8.5	8.5	22.3
05-AUG-87	22.2	21.0	11.2	1.9	0.410	2.5	303.5	8.4	8.6	22.7
11-AUG-87	21.3	17.0	11.0	1.6	0.420	3.0	304.0	8.6	8.6	22.7
18-AUG-87	22.3	11.5	11.0	1.0	0.420	2.5	305.0	8.7	9.4	22.8
25-AUG-87	19.6	20.0	12.8	1.6	0.360	3.5	306.0	8.5	8.9	22.8
01-SEP-87	19.5	24.0	13.2	1.8	0.350	3.5	309.0	8.5	9.0	22.8
08-SEP-87	19.3	23.0	12.4	1.8	0.370	5.0	304.5	8.3	9.4	22.9
15-SEP-87	19.3	23.0	13.5	1.7	0.340	5.5	309.5	8.4	9.0	22.5
23-SEP-87	18.0	23.0	12.8	1.8	0.360	6.5	308.0	8.4	9.1	22.5
29-SEP-87	13.5	35.0	15.9	2.2	0.290	5.5	310.5	8.4	9.7	22.3
07-OCT-87	14.5	35.0	12.4	2.8	0.370		316.0	8.3	9.8	22.5
14-OCT-87	13.1	35.0	12.4	2.8	0.370	4.5	317.0	8.4	9.9	22.6
20-OCT-87	11.0	35.0	13.2	2.7	0.350	5.0	318.0	8.3	10.1	22.5
SWM[a]	14.4	24.4				4.6	317.2	8.4	10.7	22.9

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 23. Physical parameters for Lake Ontario: station 81, 1988. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
08-APR-88	2.0	35.0				4.0	322.0	8.1	14.4	22.8
19-APR-88	3.0	35.0	15.7	2.2	0.294		326.5	8.3	14.0	23.1
26-APR-88	3.6	35.0	13.4	2.6	0.344	4.5	326.0	8.4	13.2	23.7
05-MAY-88	4.8	35.0	14.6	2.4	0.316	5.5	326.0	8.4	14.1	22.9
10-MAY-88	5.4	35.0	13.3	2.6	0.345	4.3	306.5	8.4	13.5	23.0
18-MAY-88	6.8	35.0	13.3	2.6	0.346	4.8	329.0	8.3	12.8	23.1
25-MAY-88	7.7	35.0				5.0	328.0	8.3	13.0	22.8
01-JUN-88	8.2	35.0	17.1	2.1	0.270	5.2	325.0	8.3	12.3	22.7
07-JUN-88	10.5	16.0	15.4	1.0	0.299	4.5	321.0	8.4	13.8	22.5
15-JUN-88	11.8	16.0	15.4	1.0	0.300	5.0	320.0	8.2	11.6	21.8
21-JUN-88	15.4	7.0	14.6	0.5	0.316	5.0	294.0	8.4	11.6	22.1
29-JUN-88	14.0	21.5	19.0	1.1	0.243		321.0	8.4	10.4	22.6
05-JUL-88	15.3	19.5	14.8	1.3	0.312	5.2	309.5	8.2	10.8	22.7
12-JUL-88	19.5	7.0	11.5	0.6	0.399	3.5	314.0	8.5	11.1	22.7
19-JUL-88	20.2	9.0	11.4	0.8	0.403	3.0	316.0	8.3	10.1	22.2
27-JUL-88	22.9	6.0	6.2	1.0	0.742	3.0	303.0	8.4	8.0	
03-AUG-88	24.1	10.0	7.8	1.3	0.589	1.8	303.0	8.3	9.9	22.1
10-AUG-88	24.0	14.0	10.7	1.3	0.431	2.7	308.5	8.3	9.4	22.2
17-AUG-88	24.4	16.0	13.5	1.2	0.340	3.8	298.0	8.3	8.4	22.7
24-AUG-88	21.8	27.0	14.4	1.9	0.319		304.5	8.2	8.2	21.9
30-AUG-88	20.6	25.0	15.1	1.7	0.304	6.0	300.0	8.0		21.9
08-SEP-88	19.4	19.0				5.0		8.4	9.1	21.6
13-SEP-88	18.4	20.0	13.4	1.5	0.344	5.0	309.0	8.5	9.5	21.7
21-SEP-88	18.1	29.0	13.5	2.2	0.342	4.5	308.5	8.3	9.4	20.8
27-SEP-88	17.5	29.0	12.2	2.4	0.379	4.0	310.0	8.3	8.9	20.9
05-OCT-88	16.4	29.0	15.4	1.9	0.299	5.1	312.5	8.5	9.4	21.1
12-OCT-88	14.6	35.0	9.5	3.7	0.486	4.0	315.0	8.4	9.5	21.7
20-OCT-88	13.1	35.0	12.4	2.8	0.372	4.9	316.5	8.4	9.8	21.9
SWM[a]	13.9	24.7	13.5	1.8	0.359	4.4	314.1	8.3	11.0	22.3

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 24. Physical parameters for Lake Ontario: station 81, 1989. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
05-APR-89	1.2	35.0	10.6	3.3	0.435	5.0			14.7	22.5
19-APR-89	2.2	35.0	15.3	2.3	0.302	6.0			14.5	22.5
25-APR-89	2.2	35.0				6.0			13.9	23.1
03-MAY-89	4.0	35.0	17.0	2.1	0.271				13.7	22.5
09-MAY-89	5.0	35.0				6.5	376.0	8.2	13.0	22.5
17-MAY-89	5.6	35.0	19.1	1.8	0.241	9.5	354.0	8.3	13.3	22.3
24-MAY-89	7.2	35.0	16.6	2.1	0.277	6.5	337.0	8.3	12.7	22.1
31-MAY-89	7.6	35.0	13.3	2.6	0.347	7.0	370.0	8.3	13.0	21.8
06-JUN-89	11.1	12.5	13.1	1.0	0.351	6.0	369.0	8.5	12.5	21.7
14-JUN-89	11.6	20.5	14.2	1.4	0.324	5.3	357.0	8.4	12.1	21.9
20-JUN-89	10.4	35.0	15.1	2.3	0.304	6.0	372.0	8.4	11.8	21.6
28-JUN-89	17.9	8.0	16.2	0.5	0.285		363.0	8.7	11.1	21.6
05-JUL-89	18.7	9.0	16.5	0.5	0.279	6.5	361.0	8.5	10.4	21.7
12-JUL-89	19.6	12.5	14.1	0.9	0.326	6.0	365.0	8.7	10.0	21.8
18-JUL-89	20.9	9.5	12.6	0.8	0.366	3.5	360.0	8.6	10.1	22.4
26-JUL-89	21.4	14.5	9.2	1.6	0.501	2.5	357.0	8.6	9.7	21.9
01-AUG-89	21.5	10.0	8.3	1.2	0.553	3.0	342.0	8.6	9.6	21.7
10-AUG-89	21.8	15.0	10.4	1.4	0.442	2.9	360.0	8.5	9.0	21.7
16-AUG-89	22.5	13.5	10.4	1.3	0.443	3.8	359.0	8.6	9.5	21.8
23-AUG-89	21.8	19.0	17.9	1.1	0.257	4.0	360.0	8.5	8.9	22.0
29-AUG-89	21.1	15.0	16.5	0.9	0.280	4.7	361.0	8.6	9.5	21.9
07-SEP-89	19.7	22.5	11.4	2.0	0.404	3.8	332.0	8.6	10.2	
13-SEP-89	20.2	18.0				4.8	354.0	8.4	9.2	22.2
20-SEP-89	19.1	21.0	12.5	1.7	0.367	3.8	374.0	8.4	9.0	21.6
26-SEP-89	16.3	20.0	13.2	1.5	0.349	4.5	361.0	8.4	8.8	22.0
05-OCT-89	13.3	35.0	11.0	3.2	0.420	4.0	309.0	8.1	9.7	21.8
11-OCT-89	12.5	35.0	10.6	3.3	0.433	4.0	292.0	8.2	10.1	22.1
18-OCT-89	12.2	35.0	15.1	2.3	0.304		337.0	8.2	10.3	22.2
SWM[a]	13.4	24.4	13.8	1.8	0.349	5.0			11.2	22.1

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 25. Physical parameters for Lake Ontario: station 81, 1990. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
04-APR-90	1.5	35.0					334.0	8.0	14.4	22.5
18-APR-90	2.2	35.0	14.9	2.4	0.310	4.5	272.0	8.4	16.0	21.9
24-APR-90	3.3	35.0				3.8	292.0	8.4	15.1	21.6
02-MAY-90	4.8	35.0	13.5	2.6	0.340		301.0	8.4	13.6	22.4
08-MAY-90	5.7	35.0				5.0	292.0	8.4	13.6	22.6
15-MAY-90	5.3	35.0	14.4	2.4	0.320	5.5	295.0	8.5	14.0	22.1
23-MAY-90	6.7	35.0				5.0	288.0	8.6	13.2	22.0
29-MAY-90	8.0	26.0	17.7	1.5	0.260		286.0	8.6	13.1	21.7
05-JUN-90	9.6	16.0	15.9	1.0	0.290	7.0	287.0	8.7	12.6	21.9
12-JUN-90	11.3	14.0	12.1	1.2	0.380	4.8	280.0	8.6		21.9
19-JUN-90	15.6	6.5	17.7	0.4	0.260	5.0	278.0	8.8	12.1	22.1
26-JUN-90	15.1	8.0	15.4	0.5	0.300	5.4	277.0	8.6	11.9	21.7
04-JUL-90	16.6	11.0	14.9	0.7	0.310	5.5	268.0	8.7	11.3	21.4
11-JUL-90	18.3	11.0	14.4	0.8	0.320	7.0	269.0	8.4	11.0	21.4
17-JUL-90	18.9	16.0	16.4	1.0	0.280	6.5	265.0	8.6	9.6	21.4
24-JUL-90	20.2	10.5	12.8	0.8	0.360	5.5	266.0	8.3	10.3	21.4
31-JUL-90	22.7	8.5	13.5	0.6	0.340	5.5	264.0	8.6	10.6	21.4
08-AUG-90	21.2	15.0	10.7	1.4	0.430	3.5	265.0	8.1	10.0	21.7
14-AUG-90	22.2	17.0	11.5	1.5	0.400	3.2	254.0	8.3	9.5	21.6
22-AUG-90	20.9	21.0	13.2	1.6	0.350	3.5	271.0	8.2	9.3	21.8
28-AUG-90	21.2	16.0	9.6	1.7	0.480	1.8	272.0	8.3	9.6	21.7
06-SEP-90	20.8	16.0	12.1	1.3	0.380	3.0	260.0	8.0	9.2	21.5
11-SEP-90	18.9	21.0	11.8	1.8	0.390	4.0	275.0	8.4	9.4	21.5
18-SEP-90	17.5	21.0	12.1	1.7	0.380	3.8	260.0	8.5	9.8	21.7
26-SEP-90	15.5	35.0	12.4	2.8	0.370	4.5	276.0	8.0	10.1	21.5
02-OCT-90	15.2	29.0					268.0	8.2	10.1	21.8
11-OCT-90	14.3	35.0	17.7	2.0	0.260	5.0	278.0	8.4	10.1	21.6
16-OCT-90	14.2	35.0	11.8	3.0	0.390		278.0	8.4	10.0	21.6
24-OCT-90	13.0	35.0					270.0	8.1	10.8	21.7
SWM[a]	13.5	23.5	13.9	1.7	0.340	4.7	277.8	8.4	11.6	21.8

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 26. Physical parameters for Lake Ontario: station 81, 1991. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
05-APR-91	2.3	35.0					334.0	8.3	14.1	22.0
17-APR-91	3.5	35.0				4.8	314.0	8.2	14.4	21.4
23-APR-91	3.9	35.0	12.8	2.7	0.360	5.0	315.0	8.4	14.3	21.7
30-APR-91	4.9	35.0	14.8	2.4	0.312	5.2	315.0	8.4	14.3	22.0
07-MAY-91	6.0	35.0	17.0	2.1	0.270	4.5	316.0	8.4	13.7	21.7
14-MAY-91	8.8	35.0				6.0	313.0	8.6	13.8	21.6
22-MAY-91	7.8	35.0	15.6	2.2	0.295	5.8	314.0	8.6	13.5	21.8
28-MAY-91	12.4	6.0	15.6	0.4	0.296	5.2	309.0	8.5	13.0	21.7
04-JUN-91	14.6	6.0	15.8	0.4	0.292	5.5	307.0	8.8	11.6	
12-JUN-91	14.3	10.3	14.9	0.7	0.309	4.3	290.0	8.8	11.6	20.9
18-JUN-91	16.2	10.5	14.4	0.7	0.320	6.2	312.0	8.6	10.8	21.8
25-JUN-91	19.2	6.0	11.2	0.5	0.413	3.0	308.0	8.7	11.8	21.7
03-JUL-91	19.1	10.5	14.0	0.8	0.329	3.8	308.0	8.8	10.2	22.4
09-JUL-91	20.4	10.0	10.6	0.9	0.435	2.5	301.0	8.5	9.4	20.5
16-JUL-91	20.8	12.5	9.9	1.3	0.467	2.5	303.0	8.5	9.4	21.6
23-JUL-91	23.0	7.5	8.4	0.9	0.549		300.0	8.6	10.2	23.1
31-JUL-91	22.0	17.0	12.5	1.4	0.369	3.5	303.0	8.6	9.3	22.0
08-AUG-91	22.3	17.0	11.3	1.5	0.406	3.4			9.2	21.6
13-AUG-91	21.9	16.0	12.3	1.3	0.374	3.5	305.0	8.4	9.1	21.9
20-AUG-91	21.5	19.5	12.5	1.6	0.369	2.9	306.0	8.5	9.1	21.6
28-AUG-91	22.2	16.5	12.6	1.3	0.366	3.2	301.0	8.6	9.4	21.6
05-SEP-91	20.4	17.0	12.4	1.4	0.372	3.8	303.0	8.5	8.9	21.9
11-SEP-91	20.6	16.5	14.4	1.1	0.320		301.0	8.5	9.2	22.0
17-SEP-91	20.4	15.0	12.9	1.2	0.358	3.5	302.0	8.6	9.5	21.7
01-OCT-91	15.8	30.5	15.5	2.0	0.297	5.0	306.0	8.3	9.3	21.9
10-OCT-91	15.1	35.0					307.0	8.3	9.8	22.1
16-OCT-91	14.3	35.0	13.7	2.6	0.336	5.0	308.0	8.3	9.8	22.0
23-OCT-91	13.7	35.0	13.0	2.7	0.354	4.5	306.0	8.4	10.3	21.7
29-OCT-91	13.2	35.0				4.5	308.0	8.3	10.5	22.1
SWM[a]	15.1	21.9	13.4	1.6	0.353	4.3	307.9	8.5	11.0	21.8

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 27. Physical parameters for Lake Ontario: station 81, 1992. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
01-APR-92	0.8	35.0				3.5			14.5	
07-APR-92	1.2	35.0	10.0	3.5	0.460	5.5	292.0	8.2	14.6	21.7
14-APR-92	1.8	35.0	16.2	2.2	0.284	6.0	324.0	8.2	14.5	21.7
29-APR-92	3.5	35.0	17.4	2.0	0.264	6.0	319.0	8.2	14.3	21.6
05-MAY-92	4.2	35.0	17.4	2.0	0.264	6.8	320.0	8.2	14.0	20.3
12-MAY-92	5.8	35.0	18.0	1.9	0.256	6.0	318.0	8.3	14.3	21.5
20-MAY-92	7.9	35.0	18.3	1.9	0.251	6.8	315.0	8.4		21.7
28-MAY-92	7.9	35.0	17.4	2.0	0.265	6.0	313.0	8.1	12.8	21.7
02-JUN-92	8.8	35.0	20.5	1.7	0.225			8.4	13.0	21.7
09-JUN-92	11.3	10.5	20.2	0.5	0.228	5.5			12.8	20.0
16-JUN-92	14.2	11.5	18.3	0.6	0.251	6.0	309.0	8.3	11.6	21.0
24-JUN-92	14.4	15.0	16.2	0.9	0.284	5.5	314.0	8.7		22.6
30-JUN-92	16.2	10.0	24.2	0.4	0.190	6.0	309.0	8.6		21.6
08-JUL-92	15.8	11.0	19.3	0.6	0.239	6.0	313.0	8.1		22.5
14-JUL-92	16.9	13.0	15.8	0.8	0.292	5.5	307.0	8.4		21.3
21-JUL-92	18.4	12.5	14.7	0.9	0.314	4.5	307.0	8.6		21.3
28-JUL-92	18.4	15.0	9.6	1.6	0.482	2.8	307.0	8.7		21.3
11-AUG-92	18.6	17.0	10.6	1.6	0.434	3.0	307.0	8.5		21.5
18-AUG-92	18.7	16.0	11.5	1.4	0.401	2.8	306.0	8.6		21.4
25-AUG-92	19.5	21.0	10.8	1.9	0.428	4.0	303.0	8.5		21.6
01-SEP-92	20.5	28.0	12.8	2.2	0.359	4.8	304.0	8.3		21.4
10-SEP-92	18.6	25.0	11.5	2.2	0.402	5.5	304.0	8.3		21.4
15-SEP-92	18.2	25.5	13.7	1.9	0.337	4.5	307.0	8.5		21.3
30-SEP-92	16.6	32.0	15.3	2.1	0.301	5.0	307.0	8.3		20.9
07-OCT-92	15.2	30.0	13.6	2.2	0.340	5.5	305.0	8.6	10.2	21.2
14-OCT-92	15.0	35.0	24.7	1.4	0.187	5.5	306.0	8.3		20.8
20-OCT-92	12.7	35.0	16.4	2.1	0.281	5.5	306.0	8.2	11.0	21.1
SWM[a]	12.9	25.4	15.6	1.7	0.314	5.2	309.3	8.4	11.9	21.4

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 28. Physical parameters for Lake Ontario: station 81, 1993. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
07-APR-93	0.8	35.0					316.0	7.8	14.3	21.2
15-APR-93	1.9	35.0	25.1	1.4	0.184	6.0	322.0	8.2	14.4	21.3
20-APR-93	2.5	35.0	15.7	2.2	0.293	7.0	313.0	8.1	14.5	20.8
27-APR-93	3.0	35.0	17.1	2.0	0.269	7.0	315.0	8.3	14.0	21.1
04-MAY-93	3.7	35.0	18.4	1.9	0.250	5.0	307.0	8.2	14.2	21.3
11-MAY-93	6.6	35.0	28.7	1.2	0.160	6.5	307.0	8.3	14.1	21.1
18-MAY-93	6.1	35.0	15.7	2.2	0.293	5.8	304.0	8.4	13.6	21.0
26-MAY-93	7.5	35.0	18.7	1.9	0.246	5.0	304.0	8.3	12.9	20.6
01-JUN-93	7.7	35.0	18.6	1.9	0.248		305.0	8.2	12.7	20.9
08-JUN-93	10.0	35.0	18.9	1.9	0.244	4.5	314.0	8.4	12.3	20.9
15-JUN-93	13.1	7.5				5.2	311.0	8.4	11.9	21.0
22-JUN-93	13.3	8.3				5.2	306.0	8.9	11.5	20.3
29-JUN-93	15.6	9.5	16.1	0.6	0.286	6.0	301.0	8.8	11.4	20.5
06-JUL-93	16.6	12.2	20.7	0.6	0.223	5.0	267.0	8.8	13.9	20.1
13-JUL-93	19.1	7.5	19.9	0.4	0.232	7.0	302.0	8.7	10.0	18.1
20-JUL-93	19.7	10.3	24.7	0.4	0.187	8.0	304.0	8.8	9.6	17.6
27-JUL-93	20.6	14.5	24.1	0.6	0.191	6.0	305.0	8.7	8.2	17.2
04-AUG-93	21.4	12.5	16.5	0.8	0.280	5.0	303.0	8.8	9.3	20.5
10-AUG-93	21.3	19.0	19.4	1.0	0.237	4.0	305.0	8.7	9.6	20.7
17-AUG-93	23.0	7.0	13.5	0.5	0.342	5.0	303.0	8.9	9.9	20.7
24-AUG-93	21.4	15.8	17.8	0.9	0.259		302.0	8.8	8.9	21.1
31-AUG-93	21.9	11.5	12.4	0.9	0.371	2.5	300.0	8.8	9.0	21.3
08-SEP-93	21.4	14.0	15.3	0.9	0.302	4.2	302.0	8.6	8.7	21.3
14-SEP-93	19.4	35.0	13.4	2.6	0.344	3.5	302.0	8.6	8.8	21.6
22-SEP-93	18.8	35.0	15.3	2.3	0.301	5.8	298.0	8.5	9.2	21.3
28-SEP-93	17.2	35.0	12.7	2.8	0.362		299.0	8.6		21.1
06-OCT-93	14.7	35.0	15.4	2.3	0.299	5.8	300.0	8.5	9.3	21.6
13-OCT-93	13.7	35.0	14.6	2.4	0.315	4.5	306.0	8.3	9.9	21.6
20-OCT-93	13.0	35.0	14.0	2.5	0.328	5.0	301.0	8.2	10.1	20.6
26-OCT-93	11.9	35.0				5.0			10.5	21.0
SWM[a]	13.5	24.9	18.0	1.5	0.269	5.3	304.2	8.5	11.2	20.6

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 29. Physical parameters for Lake Ontario: station 81, 1994. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
13-APR-94	0.9	35.0					308.0	8.1	14.2	21.7
19-APR-94	1.5	35.0					213.0	6.2	16.0	21.9
10-MAY-94	5.0	35.0	16.2	2.2	0.285	5.0	323.0	8.4	13.8	21.6
18-MAY-94	5.7	35.0	18.3	1.9	0.252	5.5	317.0	8.5	13.3	21.8
25-MAY-94	6.7	35.0	24.0	1.5	0.192	6.5	318.0	8.5	14.1	22.2
31-MAY-94	7.6	35.0	21.9	1.6	0.210	6.5	316.0	8.3	12.8	22.2
07-JUN-94	8.8	35.0	20.3	1.7	0.227	6.0	294.0	8.4	12.3	22.1
14-JUN-94	10.3	35.0	20.8	1.7	0.221	6.0	277.0	8.1	12.4	21.2
28-JUN-94	14.3	12.5	17.9	0.7	0.257	5.5	275.0	8.4	11.2	20.8
12-JUL-94	18.5	5.8	22.4	0.3	0.206	8.5	295.0	8.3	10.2	21.1
26-JUL-94	21.0	7.5	21.2	0.4	0.217	7.5	287.0	8.6	10.0	21.2
09-AUG-94	21.5	15.3	21.0	0.7	0.220	6.0	279.0	8.4	9.7	21.2
17-AUG-94	19.1	17.8	14.4	1.2	0.319	6.0	304.0	8.4	9.7	21.1
23-AUG-94	20.4	14.7	14.8	1.0	0.311	5.0	292.0	8.6	9.9	21.5
30-AUG-94	19.2	19.3	14.9	1.3	0.310	5.0	296.0	8.6	9.3	21.5
07-SEP-94	18.7	21.5	14.2	1.5	0.325	4.0	287.0	8.5	9.5	21.7
13-SEP-94	17.9	17.0	16.5	1.0	0.280	4.8	303.0	8.5	9.6	21.1
21-SEP-94	18.0	19.3	15.4	1.3	0.300	4.5	292.0	8.5	9.4	21.2
27-SEP-94	18.0	24.5	15.6	1.6	0.296	5.0	298.0	8.5	9.6	21.6
05-OCT-94	15.4	27.5	16.8	1.6	0.275	6.0	302.0	8.3	9.5	21.2
12-OCT-94	14.6	27.5	14.1	2.0	0.327	4.5	302.0	8.3	9.9	21.3
19-OCT-94	13.8	31.3	22.0	1.4	0.209	6.0	303.0	8.2	10.0	21.3
SWM[a]	12.9	24.4					292.5	8.2	11.4	21.4

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 30. Physical parameters for Lake Ontario: station 81, 1995. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Mixing depth (Z_m), Secchi, and euphotic depth (Z_{eu} = 1% light-penetration) are all in meters. The extinction coefficient (ε_{par}) (m^{-1}) is the slope of the natural logarithm of light intensity vs. depth. Specific conductivity (Cond) is expressed in $\mu mhos \cdot cm^{-1}$, water temperature in °C, oxygen in $mg \cdot L^{-1}$ and chloride (Cl) in $g \cdot m^{-3}$.

Date	Temp	Z_m	Z_{eu}	Z_m:Z_{eu}	ε_{par}	Secchi	Cond	pH	O_2	Cl
06-APR-95	2.0	35.0				6.0	318.0	7.9	13.6	20.9
11-APR-95	2.1	35.0					308.0	7.8	13.8	21.0
20-APR-95	3.0	35.0	23.1	1.5	0.200	7.0	322.0	8.4	13.8	21.3
25-APR-95	3.6	35.0	21.7	1.6	0.212	8.0	321.0	8.4	13.7	21.2
03-MAY-95	4.8	35.0	21.3	1.6	0.216	7.0	315.0	8.4	13.7	21.0
10-MAY-95	5.3	35.0	24.8	1.4	0.186	5.8	311.0	8.3	13.9	20.9
17-MAY-95	6.4	35.0	23.9	1.5	0.192	7.0	312.0	8.3	13.5	21.1
25-MAY-95	8.0	35.0	26.0	1.3	0.177	7.5	304.0	8.3	12.2	20.6
01-JUN-95	9.6	35.0	25.1	1.4	0.183	8.0	305.0	8.3	12.0	20.6
06-JUN-95	9.5	35.0	20.6	1.7	0.223	6.0	307.0	8.3	12.2	20.8
15-JUN-95	10.7	35.0	23.1	1.5	0.200	8.0	302.0	8.5	12.8	20.4
20-JUN-95	15.6	10.5	22.8	0.5	0.202	6.5	301.0	8.5	11.9	20.0
28-JUN-95	18.1	10.5	25.2	0.4	0.183	8.0	300.0	8.7	10.4	20.3
14-JUL-95	20.6	9.0	19.9	0.5	0.231		299.0	8.6	10.6	20.3
27-JUL-95	21.4	17.5	21.9	0.8	0.211		299.0	8.7	9.6	20.3
02-AUG-95	22.6	15.5	18.3	0.8	0.252	4.0	298.0	8.8	9.5	21.0
10-AUG-95	22.8	14.5	12.6	1.1	0.364	2.0	296.0	8.7	9.7	20.4
15-AUG-95	23.0	8.0	9.8	0.8	0.468	1.8	293.0	8.7	9.8	20.6
23-AUG-95	22.7	13.5	11.5	1.2	0.400	2.0	290.0	8.5	9.8	20.5
29-AUG-95	21.0	16.5	13.4	1.2	0.343	3.0	293.0	8.6	9.4	20.6
07-SEP-95	19.5	14.0	11.0	1.3	0.417	4.5	291.0	8.3	9.5	20.1
12-SEP-95	17.0	19.5	11.1	1.8	0.414	5.0	293.0	8.3		21.0
20-SEP-95	16.2	23.5	23.3	1.0	0.198	5.0	298.0	8.3	9.6	21.0
27-SEP-95	15.6	22.5	17.2	1.3	0.267	6.0	298.0	8.3	9.8	21.1
04-OCT-95	15.4	29.5	20.9	1.4	0.220	5.3		8.3	9.7	21.1
11-OCT-95	14.7	25.0	16.4	1.5	0.282	9.0	298.0	8.3	10.0	21.0
20-OCT-95	12.1	35.0	15.8	2.2	0.292		300.0	8.3		20.5
SWM[a]	13.8	24.3	19.6	1.3	0.254	6.1	302.3	8.4	11.1	20.7

[a]SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 31 . Nutrient concentrations from surface waters of Lake Ontario: station 41, 1981. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Total phosphorus (TP), total filtered phosphorus (TFP), total nitrogen (TN), total Kjeldahl nitorgen (TKJN), ammonia (NH_3), nitrate-nitrite (NO_3NO_2), and soluble reactive silica (SiO_2) are expressed in ($\mu g \cdot L^{-1}$) and dissolved inorganic carbon (DIC) and dissolved organic carbon (DOC) in ($mg \cdot L^{-1}$).

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
19-MAR-81	14.1	9.8		542	172	3	343	38.4	418	22.9	2.1
23-MAR-81	13.6	8.6	3.5	547	177	3	338	40.3	372	23.1	2.0
31-MAR-81	13.2	6.7		553	177		334	41.9	279	23.1	2.3
09-APR-81	13.6	7.1	3.8	538	161	4	336	39.6		22.9	2.1
16-APR-81	15.0	7.9		525	153	4	348	35.0	320	23.3	2.3
22-APR-81	13.2	6.6			165	2	335		203	23.3	2.4
28-APR-81	13.1	7.3		545	170	7	340	41.6	215	23.1	2.0
05-MAY-81	12.8	7.4		574	180		354	44.9	216	22.0	2.1
13-MAY-81	12.6	8.4		582	193	8	354	46.2	261	22.0	2.2
21-MAY-81	11.9	8.0		526	193	9	304	44.2	179	22.6	2.2
27-MAY-81	11.6	7.8		530	168	12	327	45.7	186	22.3	2.2
03-JUN-81	13.5	6.2			165	6	335		189	21.9	2.3
10-JUN-81	16.8	7.7		547	228	10	197	32.6	41	22.0	2.1
16-JUN-81	16.2	6.5			213	12	115		55	21.0	2.1
23-JUN-81	15.0	7.6		509	191	5	221	34.0	60	22.4	2.0
30-JUN-81	14.8	7.2		482	209	9	167	32.6	75	22.0	2.1
07-JUL-81	16.6	7.2		390	211	7	53	23.5	68	20.6	2.1
13-JUL-81	14.2	9.7		451	235	8	139	31.7	106	21.3	2.3
22-JUL-81	14.8	7.0		399	252	13	30	27.0	65	20.2	2.4
27-JUL-81	13.9	5.5		362	207	2	63	26.1	62	20.2	2.1
05-AUG-81	17.3	6.2		363	215	7	44	21.0	60	19.0	2.5
11-AUG-81	15.9	5.9		353	219	5	26	22.2	66	19.4	2.4
19-AUG-81	17.3	7.2		382	197	6	63	22.1	119	20.3	2.4
25-AUG-81	15.4	7.6		396	255	6	51	25.7	97	19.9	3.2
01-SEP-81	19.8	7.7		380	219	4	50	19.2	94	19.9	2.9
16-SEP-81	12.4	6.1		365	202	3	85	29.4	216	20.4	2.7
25-SEP-81	11.3	5.8		483	249	4	165	42.8	135	21.9	2.1
29-SEP-81	11.5	6.3		466	211	2	182	40.6	261	21.7	2.1
06-OCT-81	11.0	5.4		494	203	8	223	44.9	267	22.0	2.2
14-OCT-81	10.7	6.0		535	201	1	265	50.0	273	22.2	2.2
21-OCT-81	11.0	6.4		524	218	2	246	47.6	311	22.0	1.9
27-OCT-81	12.9	6.1		477	197	4	227	37.0	262	22.1	2.0
03-NOV-81	11.3	5.4		506	214	5	235	44.8	201	21.7	1.9
11-NOV-81	10.0	5.6		487	177	4	261	48.7	226	22.5	2.0
18-NOV-81	12.6	7.0		500	199	6	241	39.7	198	22.1	2.1
24-NOV-81	10.3	6.1		478	180	4	258	46.5	226	21.7	2.1
01-DEC-81	12.1	8.0			198	5	295		376	21.8	2.0
11-DEC-81	11.0	7.8			176	2	300		345	22.1	2.0
SWM[a]	14.1	7.0		473	203	6	192	34.9	166	21.5	2.3

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 32 . Nutrient concentrations from surface waters of Lake Ontario: station 41, 1982. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
10-MAR-82											2.0
18-MAR-82											2.0
25-MAR-82	12.3	10.8	1.9	535	182	4	335	43.5	435	23.2	2.1
01-APR-82	12.8	10.2	3.6	550	167	6	366	43.0	428	22.9	1.9
14-APR-82	12.7	9.5	1.5	570	194	2	360	44.9	448	22.7	1.9
29-APR-82	12.8	8.5	5.2			2	365		414	22.9	2.1
04-MAY-82			3.5	540	190	5	319		430	23.0	2.1
11-MAY-82			1.4	566	200	2	332		415	22.0	1.9
18-MAY-82	13.1	9.0	0.7	573	202	23	344	43.7	391	23.3	2.0
28-MAY-82			5.3	651	272	22	355		385	19.9	2.2
01-JUN-82			2.0	609	257	9	334		445	22.7	1.9
07-JUN-82	13.0	7.4	1.5	653	313	9	322	50.2	360	21.1	2.0
15-JUN-82	11.7	8.5	3.1	524	182	15	312	44.8	328	22.8	1.9
22-JUN-82	12.6	9.1	1.7		288	17	334		329	22.5	2.0
29-JUN-82	16.8	5.9	1.3	545	276	8	159	32.4	77	22.4	2.2
06-JUL-82	22.7	8.9	3.3	601	298	1	206	26.5	115	22.4	2.1
13-JUL-82	11.3	6.7	0.6	483	180	4	216	42.8	198	22.2	2.2
21-JUL-82	10.4	8.6	1.6		330	24	110		90	20.8	2.5
26-JUL-82	8.4	7.0	2.0	518	321	28	116	61.7	77	19.4	2.2
04-AUG-82	13.5	4.2	0.5	449	270	60	94	33.3	83	19.9	2.1
09-AUG-82											
17-AUG-82	13.8	11.0	0.8	452	264	29	121	32.8	91	21.2	2.1
24-AUG-82	13.7	6.7	0.2	497	239	78	195	36.3	62	17.5	2.2
30-AUG-82	17.3	4.9	0.4	658	416	63	144	38.1	140	20.6	2.1
08-SEP-82	20.5	9.7	0.2	652	428	28	179	31.8	133	21.4	2.1
14-SEP-82	11.9	8.8	0.6		245	2	156		120	22.3	3.1
23-SEP-82	17.2	8.6	0.2	667	371	15	220	38.8	190	22.9	2.2
28-SEP-82	16.7	8.2	0.8	595	398	70	137	35.6	129	20.8	2.3
05-OCT-82	11.2	5.9	0.6	716	517	49	143	63.9	486	20.1	2.2
13-OCT-82	12.8	7.8	1.5	491	287	35	142	38.3	118	21.0	2.7
19-OCT-82	15.9	9.8	0.2	649	375	38	242	40.8	322	20.1	2.0
25-OCT-82	11.3	7.0	1.5	597	251	5	320	52.8	540	23.1	2.5
02-NOV-82	11.0	7.7	0.6	585	279	7	267	53.1	210	22.8	2.3
09-NOV-82	11.4	6.4	0.9	642	311	28	300	56.3	425	22.8	2.3
16-NOV-82	12.9	9.8	3.4	697	318	37	356	54.0	525	23.3	2.4
22-NOV-82	10.5	5.7	0.4	675	346	28	294	64.3	298	21.3	2.1
SWM[a]	13.7	8.1	1.6	569	278	23	238	42.3	263	21.6	2.2

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 33 . Nutrient concentrations from surface waters of Lake Ontario: station 41, 1983. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
17-MAR-83	12.1	10.1	8.0				377		466	22.4	2.1
06-APR-83	12.6	9.5	7.4	607	215	7	373	48.2	440	22.4	1.8
12-APR-83	13.0	11.2	0.7	825	496	45	292	63.4	477	18.8	2.1
22-APR-83	12.8	11.2	2.4	595	220	41	342	46.5	467	19.5	1.8
26-APR-83	12.9	10.3	2.2	612	226	16	370	47.5	460	21.0	1.9
04-MAY-83	12.7	9.4	2.1	568	208	56	341	44.7	397	18.4	2.0
10-MAY-83	12.2	9.0	2.3	590	233	27	338	48.4	368	20.2	2.5
17-MAY-83	13.6	6.9	1.7	657	294	26	335	48.3	329	20.8	2.3
25-MAY-83	20.3	8.2	2.2	626	172	26	420	30.9	337	19.4	2.6
01-JUN-83	18.4	8.2	0.3		278	51	309		174	21.7	2.5
08-JUN-83	14.0	8.7	1.5	1073	606	71	309	76.6	215	21.2	2.7
15-JUN-83	13.2	9.6	0.8	463	181	9	204	35.1	62	22.7	3.0
22-JUN-83	16.3	12.4	0.7	352	115	2	172	21.6	244	22.2	2.3
29-JUN-83	17.0	8.2	0..7	350	204	35	107	20.6	145	21.8	2.7
06-JUL-83	13.3	7.1	1.1	406	211	12	95	30.5	70	19.0	2.1
13-JUL-83	14.5	6.4	0.2	451	230	13	111	31.1	80	22.0	2.3
21-JUL-83	11.9	6.7	0.3	465	221	19	171	39.1	120	22.5	2.6
26-JUL-83	10.9	7.0	0.8	420	207	19	140	38.6	77	22.5	2.6
03-AUG-83	13.3	6.2	0.3	360	199	12	95	27.1	105	21.4	4.0
10-AUG-83	18.4	7.9	0.6	380	183	2	129	20.7	110	21.4	3.0
16-AUG-83	14.1	7.0	0.4	400	171	8	129	28.4	136	21.9	2.5
23-AUG-83	14.2	6.9	0.2	427	243	42	107	30.1	230	22.6	3.5
31-AUG-83	15.2	10.2	0.4		235	11	89		145	20.8	2.6
08-SEP-83	12.1	6.2			258	16	105		160	20.1	2.5
14-SEP-83	18.2	11.3		418	218	44	107	23.0	160	22.1	3.8
21-SEP-83	12.0	5.1	0.5	413	189	1	142	34.4	190	21.0	2.3
28-SEP-83	10.3	4.0		430	184	2	192	41.7	240	21.7	2.1
06-OCT-83	8.9	5.4	0.2	448	191	11	197	50.4	195	24.3	2.1
13-OCT-83	12.6	8.0	3.5	542	288	6	212	43.0	193	24.6	2.0
19-OCT-83	8.7	6.2	0.7	554	257	6	262	63.7	326	23.9	1.9
26-OCT-83	9.1	4.6	0.9	626	301	64	289	68.8	243	24.0	2.1
02-NOV-83	10.3	5.5	0.3		195	4	244		232	24.0	2.5
08-NOV-83	12.3	8.4	0.6	471	178		255	38.3	223	24.1	2.2
15-NOV-83	14.7	3.3	11.1		192	3	259		269	24.4	2.1
23-NOV-83	9.9	6.6	0.9	507	250	7	225	51.2	330		2.1
SWM[a]	13.5	7.9	1.2	526	242	23	216	40.4	231	21.5	2.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 34. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1984. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
21-MAR-84	14.6	6.2	0.9	615	221	79	352	42.1	530	23.8	1.6
04-APR-84	16.5	9.8			202					22.1	
17-APR-84	11.8	10.6	3.0	554	177	16	363	46.9	580	23.1	2.3
25-APR-84	12.3	9.6	2.5	636	257	57	357	51.7	585	22.9	1.9
03-MAY-84	14.5	12.7	6.3	596	244	47	340	41.1	590	24.8	2.8
07-MAY-84	11.5	9.3	1.0	595	218	35	356	51.7	600	24.3	2.7
14-MAY-84	12.8	9.3	2.2	573	190	3	348	44.8	610	23.3	2.5
23-MAY-84		8.1	1.7	597	212	23	365		590	23.5	2.0
30-MAY-84	11.6	7.1	2.4	590	192		365	50.9	550	24.8	1.9
05-JUN-84	13.2	11.5	2.6	536	126	2	394	40.6	595	23.6	2.4
13-JUN-84	13.3	6.1	1.4	1028	681	85	272	77.3	280	22.5	2.0
19-JUN-84	13.6	5.0	1.7	1023	742	21	202	75.3	70	21.3	2.0
26-JUN-84	23.9	7.0	0.3	555	322	35	153	23.2	75	22.3	2.1
05-JUL-84	11.1	4.0		433	209	19	127	39.0	100	21.3	2.1
10-JUL-84	13.8	5.2	0.4	594	267	1	201	43.0	50	23.9	2.1
18-JUL-84	12.2	5.0	0.2	676	349	139	197	55.5	65	23.8	2.0
25-JUL-84	15.3	5.3	0.3	472	202	31	182	30.9	60	22.3	2.0
30-JUL-84	14.1		0.4	397	176	4	153	28.2	75	23.0	2.0
08-AUG-84	23.4	14.7	0.5	353	209	6	81	15.1	80	21.4	2.5
14-AUG-84	19.2	7.4	1.0	614	361	45	70	32.0	95	21.5	3.0
21-AUG-84	15.6	6.9	0.8	334	197	8	88	21.4	75		
28-AUG-84	16.9	6.3	0.5	374	195	1	88	22.1	75	21.8	3.1
05-SEP-84	10.1	6.3	0.7	382	217	17	84	37.9	95	21.6	3.3
11-SEP-84	14.8	6.6		320	182	18	103	21.6	115	21.4	2.3
18-SEP-84	14.8	6.9	3.3	555	338	177	134	37.5	100	19.5	2.6
25-SEP-84	12.4	5.5		499	315	38	152	40.2	125	19.8	2.8
09-OCT-84	12.6	8.0	0.8	1111	808	572	226	88.2	190	20.6	2.8
16-OCT-84	15.6	6.9	0.7	506	202	12	210	32.5	185	21.6	2.5
25-OCT-84	11.8	5.4	1.3	452	207	9	209	38.3	195	22.1	2.8
05-NOV-84	9.4	4.2	0.4	550	242	196	247	58.5	245	21.5	3.3
14-NOV-84	11.0	5.3	0.2		214	55	284		270	22.4	3.0
SWM[a]	14.2	7.7	1.5	575	290	61	224	42.9	267	22.3	2.4

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 35. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1985. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
26-MAR-85			1.1	568	173	3	373		595	22.4	2.4
04-APR-85	9.7	6.7	1.2	563	173		369	58.0	615	22.3	
09-APR-85											
16-APR-85	10.1	6.3	4.9	592	177	5	390	58.6	570	22.2	
23-APR-85	9.8	5.9	3.5	569	147		393	58.0	530	22.7	
30-APR-85	15.1	7.1	1.7	586	160	4	397	38.8	570	23.1	
07-MAY-85	10.9	6.7	1.0	566	150		385	52.0	480	22.6	
14-MAY-85	10.6	7.4	3.0	576	171	7	374	54.3	480	23.1	
21-MAY-85	11.4	6.6	3.3	569	147	8	389	50.0	330	21.5	
29-MAY-85	10.0	5.9	2.6	561	162	11	357	56.2	260	23.4	
07-JUN-85		7.5		572	196	10	297		80	23.5	
11-JUN-85	17.4		0.6	537	191	12	276	30.9	50	22.9	
18-JUN-85	17.5	10.6	0.6	555	204	18	261	31.7	40	22.3	
25-JUN-85	9.4	3.3		602	224	49	289	64.1	80	23.8	
03-JUL-85	23.7	6.2	0.5		230	24	153		40	22.2	
09-JUL-85	11.6	4.8	0.5	660	301	58	275	56.9	80	22.5	
15-JUL-85	11.1	5.6	0.5	461	176	6	195	41.5	80	22.8	
23-JUL-85	8.2	4.3			201				50	23.2	
29-JUL-85	16.7	4.7	0.2	499	255	10	182	29.9	50	23.5	
07-AUG-85	10.7	4.6	0.4	421	212	15	148	39.4	60	22.3	
14-AUG-85	21.2	8.5	0.4	439	255	27	119	20.7	70	22.4	
20-AUG-85	16.1	6.9	0.6	476	278	46	110	29.6	80	21.5	
29-AUG-85	18.3	5.2	0.8	438	224	58	142	23.9	100	22.4	
04-SEP-85	14.1	4.9	0.4	420	211	14	141	29.8	90	21.9	
10-SEP-85	14.1	6.0	0.4	435	207	12	140	30.9	130	21.6	
16-SEP-85	13.2	6.1				13	150		40	21.9	
25-SEP-85	11.8	4.2		445	204	16	155	37.7	130	22.5	
30-SEP-85	8.9	3.5	0.6	399	198	5	155	44.8	240	22.5	
07-OCT-85	11.8	4.6	0.2	473	167	1	264	40.1	420	22.6	
15-OCT-85	11.0	7.2	0.3	471	177	1	240	42.9	170	21.3	
22-OCT-85	15.1	6.6	0.6			2	229		210	21.5	
29-OCT-85	9.3	5.0	0.5	528	230	45	248	56.8	190	21.0	
SWM[a]	13.0	6.0	1.2	517	200	16	251	43.6	220	22.4	

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 36. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1986. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
10-APR-86	12.7	8.4	1.4	818	396	54	404	64.4	590	24.0	
15-APR-86	12.0	8.9	0.4	1081	650	486	409	90.1	670	22.6	
23-APR-86											
29-APR-86	11.5	8.8	3.1	562	136		407	48.7	715	23.2	
05-MAY-86	11.5	8.5	2.9	576	150	2	406	50.1	640	23.1	
13-MAY-86	11.5	6.9	2.7	571	128	1	415	49.7	540	23.1	
20-MAY-86	11.5	8.3	0.6	617	185	2	406	53.7	610	23.1	
26-MAY-86	11.5	8.4	0.9	531	135		369	46.0	560	24.6	
02-JUN-86	13.1	5.2	0.7	553	123	6	378	42.1	455	22.2	
09-JUN-86	17.2	6.8	0.7	579	205	22	310	33.8	410	22.6	
17-JUN-86	16.5	9.3	1.2	526	137	5	283	31.9	250	22.3	
24-JUN-86	12.2	5.7	0.4	488	134	3	280	39.8	170	23.5	
02-JUL-86	8.8	4.9	1.0	492	147	6	281	55.6	130	23.2	
07-JUL-86	9.5	5.2	1.1	461	151	5	267	48.5	115	22.9	
15-JUL-86	9.1	6.2	0.9	518	243	36	187	56.9	35	22.9	
22-JUL-86											
28-JUL-86	13.4	5.9	0.4	438	200	12	161	32.7	40	22.1	
05-AUG-86	12.8	5.8	1.0		272				110		
12-AUG-86	11.1	5.0	0.4	437	207	12	166	39.2	60	22.0	
21-AUG-86	11.3	5.8	1.4	508	266	10	159	45.2	95	20.9	
25-AUG-86	15.4	6.2	1.5	513	278	19	165	33.3	160	22.0	
02-SEP-86	18.3	6.8	0.9	622	354	41	185	34.0	185	22.5	
09-SEP-86											
16-SEP-86	16.4	7.4	1.8		220				220	22.3	
22-SEP-86	12.1	6.4	0.6	600	300	16	256	49.6	180	22.9	
29-SEP-86											
07-OCT-86											
16-OCT-86											
22-OCT-86											
SWM[a]											

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 37. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1987. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
14-APR-87	9.7	7.4	1.2			1	402		447	23.1	
23-APR-87	10.8	7.2	1.5			2	387		489	22.8	
28-APR-87	10.9	5.7	0.9				402		410	22.7	
05-MAY-87	10.5	5.5	1.2			2	394		376	22.1	
13-MAY-87	11.8	6.7	2.5			9	374		215	21.8	
20-MAY-87	11.5	5.2	2.1			23	375		180	22.4	
27-MAY-87	14.4	5.1	1.1			18	314		105		
03-JUN-87	12.9	5.1	2.9			6	277		110	22.8	
10-JUN-87	9.4	4.0	0.5			20	285		40	20.4	
17-JUN-87	9.4	3.3	0.3			24	270		65	22.8	
24-JUN-87	11.4	3.4				10	259		40	23.5	
01-JUL-87	9.0	5.7	1.1			17	208		70	22.5	
08-JUL-87	9.5	2.9				14	192		70	20.9	
17-JUL-87	7.9	4.3	0.7			8	183		95	21.6	
22-JUL-87	8.3	4.0	0.2			10	176		55	21.7	
29-JUL-87	12.6	5.7				11	173		75	21.4	
06-AUG-87	11.3	4.7							120	21.6	
12-AUG-87	9.2	4.4	0.3			4	150		95	20.5	
19-AUG-87	10.6	4.1	0.3			20	85		120	19.3	
26-AUG-87	7.6	3.3	0.3			13	293		235	23.0	
03-SEP-87	10.2	4.4	1.3			16	157		130	21.3	
09-SEP-87	10.9	4.9	1.0	409	191	5	158	37.6	145	20.0	
16-SEP-87	10.0	4.0	0.6	413	199	1	146	41.3	155	21.1	
24-SEP-87	9.7	4.0	0.5	405	194	11	173	41.8	170	21.2	
30-SEP-87	9.3	3.8	0.3	424	194	8	178	45.6	200	21.1	
09-OCT-87	9.5	4.1	0.5	502	201	6	263	52.9	315	21.8	
15-OCT-87	8.3	4.0	0.6	513	209	1	265	61.9	255	21.2	
21-OCT-87	6.1	3.3	0.5	485	188		256	79.5	245	22.0	
SWM[a]	10.0	4.8	0.9			9	256		194	21.9	

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 38. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1988. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
07-APR-88			1.6	612	206	2	376		545		
20-APR-88	10.0	8.5	0.5	608	219		352	60.8	204	22.3	2.2
27-APR-88	8.7	5.6		624	242	3	342	71.3	450	22.3	2.3
06-MAY-88	9.7	5.5		589	212		337	60.7	620	22.4	2.2
11-MAY-88	11.5	5.9	0.9				323		535	22.2	2.1
19-MAY-88	10.0	6.2		579	201	6	315	57.9	410	19.3	1.9
26-MAY-88	9.7	5.1		590	227		319	61.2	410	22.5	2.1
02-JUN-88	11.4	4.9	1.9	577	224	3	320	50.7	265	22.1	2.6
08-JUN-88	11.3	5.5	0.5	554	201	11	277	49.3	80	22.2	2.7
16-JUN-88	9.5	5.4	0.4	489	204	13	255	51.2	40	22.4	2.8
22-JUN-88	11.6	3.4	0.6	512	205	6	236	44.1	55	22.5	2.9
30-JUN-88	9.5	3.4	0.6	568	275	15	235	59.5	30	22.5	2.9
06-JUL-88	13.3	4.6	0.9	529	187	4	274	39.7	80	22.3	2.6
14-JUL-88	7.8	3.6	2.6	492	252	11	214	63.1	30	22.7	2.8
20-JUL-88	9.7	3.5		505	230	9	224	51.8	35	22.4	2.8
28-JUL-88	12.3	3.8	2.1	490	213	5	200	39.8	40	21.2	2.8
04-AUG-88	10.6	4.2	2.1	451	212	9	148	42.5	40	20.2	2.8
11-AUG-88	8.4	4.9	0.4	414	238	20	135	49.6	55	20.2	2.9
18-AUG-88	12.3	5.0	0.4	478	237	24	182	38.7	110	21.2	2.7
25-AUG-88	10.6	6.1	0.5	444	213	12	187	41.9	80	21.4	2.7
31-AUG-88	9.6	3.8	0.4	377	208	12	161	39.3	110	20.9	2.3
09-SEP-88	8.4	4.1	0.3	475	217	14	186	56.9	130	22.5	2.4
15-SEP-88	13.9	5.8	0.3	500	242	19	196	36.0	80	22.5	2.1
22-SEP-88	7.0	3.9	0.4	515	240	23	229	73.1	100	22.7	2.3
28-SEP-88	7.4	4.4	0.3	469	209		225	63.0	105	21.9	2.0
06-OCT-88	10.8	4.8	0.3	480	200	10	212	44.7	115	22.6	2.1
SWM[a]	10.2	5.1	0.9	519	218	10	250	52.2	186	22.0	2.4

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 39. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1989. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
04-APR-89	10.1	5.5	2.0	579	178	5	371	57.3	480	21.9	2.6
20-APR-89	10.7	5.4	0.7	572	159	3	378	53.5	233	23.0	2.4
26-APR-89	11.2	4.8	0.8	581	160	4	371	51.9	260	23.0	2.3
04-MAY-89	10.0	4.8	0.9	522	139	2	354	52.2	300	22.9	2.3
10-MAY-89	10.3	4.6	1.9	529	155	15	348	51.4	250	22.0	2.4
18-MAY-89	9.2	5.2	1.6	612	237	15	339	66.5	190	22.9	2.2
25-MAY-89	9.5	5.1	0.9	545	163	5	347	57.4	210	23.1	2.4
01-JUN-89	9.6	5.2	1.4	568	191	23	341	59.2	170	23.1	2.0
07-JUN-89	12.1		0.5	572	164	7	345	47.3	150	22.6	2.2
15-JUN-89	11.5	4.2	0.9	735	357		311	63.9	60	22.6	2.4
21-JUN-89	14.4	4.2		649	291	11	285	45.1	70	22.1	2.3
29-JUN-89	9.4	4.5		501	200	13	238	53.3	70	22.1	2.5
06-JUL-89	7.4	3.6	0.3	917	654	14	218	123.9	50	22.5	2.4
13-JUL-89	10.6	3.0		423	180	6	202	39.9	50	22.0	2.6
19-JUL-89	7.5	3.1	0.3	440	187	9	195	58.7	90	24.2	2.7
27-JUL-89	7.0	3.3	0.7	404	209	18	164	57.7	50	22.2	2.7
02-AUG-89	8.0	3.5	0.4	385	187	7	154	48.1	50	22.8	2.6
11-AUG-89	10.4	5.4	1.6	540	298	24	172	51.9	40	20.5	2.4
17-AUG-89	12.3	5.1	0.7	420	204	12	145	34.1	40	21.4	2.3
24-AUG-89	10.8	4.6	0.7	467	246	18	133	43.2	60	21.1	2.7
30-AUG-89	11.7	4.3	1.3	667	433	10	159	57.0	30		2.7
08-SEP-89	12.0	4.0	1.3	448	237	11	155	37.3	70	22.9	2.9
14-SEP-89	11.4	4.4	1.2	429	228	14	142	37.6	130	21.5	2.5
21-SEP-89	10.5	3.7	3.1	453	244	43	159	43.1	90	22.5	2.6
27-SEP-89	7.8	4.0		487	229	14	197	62.4	120	22.7	2.6
05-OCT-89	6.8	3.3		451	153		268	66.3	290	22.7	2.4
12-OCT-89	8.4	3.6		525	182		309	62.5	550	23.0	2.3
26-OCT-89											
SWM[a]	9.9	4.3		536	227		261	55.7	190	22.5	2.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 40. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1990. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
03-APR-90	9.7	5.6	1.1	547	150	6	368	56.4	500	22.2	2.1
19-APR-90	9.6	4.5	0.4	556	150	1	374	57.9	300	22.0	2.3
25-APR-90	9.4	4.6	0.2	554	146	5	375	58.9	250	22.0	2.3
03-MAY-90	8.7	3.8	0.4	555	151	3	372	63.8	220	20.9	2.6
09-MAY-90	8.7	4.2	0.7	514	162	5	317	59.1	200	21.7	2.7
17-MAY-90	13.5	4.5	0.9	513	163	5	305	38.0	140	23.4	2.2
24-MAY-90	9.9	5.8	0.6	526	155	5	319	53.1	90	21.6	2.4
31-MAY-90	9.9	4.8	0.6	546	168	5	320	55.2	100		
06-JUN-90	10.3	3.7	0.5	508	163	4	259	49.3	20	22.7	2.4
14-JUN-90	8.3	4.5	0.9	504	201	21	227	60.7	50	21.6	2.4
20-JUN-90	7.2	4.7	0.7	478	195	17	211	66.4	50	19.9	
28-JUN-90	7.2	4.0	0.5	524	220	8	235	72.8	60	22.1	2.6
05-JUL-90	5.6	3.6	0.5	403	196	12	159	72.0	30	21.3	2.7
12-JUL-90	5.2	2.6	0.5	392	201	15	150	75.4	30	21.0	2.6
18-JUL-90	8.1	3.1	0.5	478	274	34	173	59.0	40	20.9	2.4
26-JUL-90	6.5	3.1	0.5	396	194	19	166	60.9	40	20.9	2.8
02-AUG-90	8.6	4.7	0.5	485	274	46	170	56.4	100	20.8	2.7
10-AUG-90	8.7	4.9	0.5	388	163	17	176	44.6	70	20.2	2.5
15-AUG-90	9.7	4.3	0.5	441	223	15	146	45.5	60	18.8	2.6
24-AUG-90	7.6	4.0	1.3	433	243	24	146	57.0	60	21.3	2.5
30-AUG-90	9.0	4.0	0.7	558	357	21	133	62.0	80	20.1	2.9
07-SEP-90	9.3	3.3	0.5	459	276	27	136	49.4	120	19.6	3.5
12-SEP-90	9.2		1.2	446	230	25	156	48.5	100	20.0	2.8
20-SEP-90	11.7	8.3	0.5	446	211	26	170	38.1	140	21.3	2.7
27-SEP-90			0.5	633	227	24	336		180	22.1	3.0
12-OCT-90	11.1	6.3	0.5	456	204	10	201	41.1	170	22.4	2.5
25-OCT-90	9.4	5.8	0.8	540	211	14	267	57.4	230	22.5	2.6
SWM[a]	9.2	4.8	0.6	497	203	15	242	54.8	141	21.4	2.6

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 41. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1991. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
03-APR-91	16.8	12.8	1.9	545	169	39	355	32.4	410	20.4	2.7
16-APR-91						35	7				
24-APR-91	13.5	7.8	0.2	547	172	1	358	40.5	540	21.3	2.4
01-MAY-91	13.6	10.0	0.2	538	140	1	367	39.6	410	21.5	2.7
09-MAY-91	13.9	8.3	0.2	577	171	15	376	41.5	320	21.3	2.3
15-MAY-91	21.4	10.6	0.2	540	168	33	346	25.2	220	21.7	3.0
24-MAY-91	17.4	6.5	0.5	544	168	1	304	31.3	170	22.8	2.4
29-MAY-91	13.9	3.9	0.8	541	167	1	270	38.9	100	21.4	2.5
06-JUN-91	15.2		1.3	566	229	6	235	37.2	90		3.1
11-JUN-91	11.0	4.0	0.7	462	207	13	188	42.0	70	20.2	2.6
20-JUN-91	18.7	10.6	1.0	425	209	21	164	22.7	65	20.6	2.9
26-JUN-91	9.9	5.9	0.8	386	191	9	135	39.0	70	20.7	2.3
05-JUL-91	11.0	5.4	1.5	479	241	8	161	43.5	90	20.0	2.8
10-JUL-91	14.7	6.9	0.8	445	210	14	164	30.3	70	18.4	2.9
18-JUL-91	24.1	12.8	0.5	450	210	23	188	18.7	80	21.4	3.0
24-JUL-91	10.6	6.7	0.4	558	275	20	206	52.6	80	20.8	3.3
01-AUG-91	8.5	4.7	0.4	458	202	3	193	53.9	70	20.6	2.7
07-AUG-91			0.2	404	174	13	178		70	21.3	2.9
15-AUG-91	11.3	4.8	0.2	435	233	20	151	38.5	80	21.5	3.1
21-AUG-91	17.1	13.8	0.7	447	231	28	166	26.1	60	21.6	3.0
29-AUG-91	18.3	5.6	0.5	421	230	29	139	23.0	80	20.1	2.9
04-SEP-91		16.5	0.5	421	220	26	144		160	18.9	2.3
12-SEP-91	9.4	6.6	0.7			61	143		90	18.7	2.7
18-SEP-91	8.3	3.4	0.3	414	220	23	140	49.9	80	18.4	2.4
03-OCT-91			1.3	467	137	19	292		140	21.6	2.7
10-OCT-91	11.7	5.7	1.4	495	201	6	259	42.3	180	21.9	2.5
17-OCT-91	15.2	12.6	1.2	486	183	4	255	32.0	230	21.5	2.9
24-OCT-91	11.7	6.9	1.6	461	180	3	226	39.4	200	21.1	2.4
30-OCT-91	8.5	1.9	1.4	459	178	8	237	54.0	180	20.3	2.5
SWM[a]	13.6	7.6	0.8	481	195	17	217	37.8	175	20.7	2.7

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 42. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1992. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
31-MAR-92											
08-APR-92	9.8	4.4	1.1	590	190	10	366	60.2	410	21.2	3.0
15-APR-92	10.6	3.9	1.2	571	180	15	353	53.9	340	21.4	2.8
28-APR-92	8.7	4.2	2.0	534	156	15	351	61.4	450	21.4	2.6
07-MAY-92	9.3	4.7	2.0	523	144	12	350	56.2	400		1.9
14-MAY-92	9.7	5.1	1.0	590	203	50	349	60.8	290	20.2	2.5
22-MAY-92	9.3	4.2	0.9	551	172	10	344	59.2	187	22.1	2.6
26-MAY-92			1.5	519	139	20	341		280	21.4	2.5
04-JUN-92	9.2	3.9	1.6	577	175	8	318	62.7	90	21.3	2.4
10-JUN-92	9.2	3.8	1.3	503	151	21	301	54.7	50	20.1	2.8
18-JUN-92	16.7	6.3	1.4	508	216	1	235	30.4	40	22.0	2.7
25-JUN-92	10.0	3.4	1.2	447	160	45	244	44.7	40	21.2	2.7
02-JUL-92	9.2	4.7	1.3	425	153	39	246	46.2	80	22.5	2.8
09-JUL-92	8.0	3.9	1.1	391	127	17	229	48.9	70	20.8	2.7
16-JUL-92	8.7	3.7	0.9	423	131	20	235	48.6	70	21.5	2.9
22-JUL-92	9.4	3.7	0.7	435	169	15	201	46.3	80	21.4	2.9
30-JUL-92	10.0	4.1	0.9	397	160	14	165	39.7	150	21.6	2.8
13-AUG-92	13.6	6.6	1.1	473	215	38	159	34.8	150	21.2	3.0
19-AUG-92	12.5	5.7	1.9	472	230	72	137	37.8	150	21.8	2.2
27-AUG-92	11.8	5.9	2.0	418	232	28	117	35.3	155	21.8	2.8
02-SEP-92	9.8	5.0	1.3	467	197	29	216	47.7	130	23.9	3.2
11-SEP-92	10.4	4.2		474	214	22	201	45.6	90	23.7	
16-SEP-92	9.0	5.4	2.1	495	205	54	208	55.0	90	24.0	2.6
30-SEP-92	9.3	4.9	1.5	500	240	5	213	53.6	75	23.8	2.9
08-OCT-92	9.9	4.3	1.3	452	211	15	192	45.7	60	23.5	2.5
15-OCT-92	10.4	3.7	1.1	469	211	15	210	45.1	60	23.5	2.7
22-OCT-92	7.3	3.4	1.7	590	180	6	381	80.8	340		2.6
SWM[a]	10.0	4.5	1.4	497	184	22	260	51.4	180	22.0	2.7

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 43. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1993. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
30-MAR-93	9.8	4.9	1.5	551	162	6	364	56.2	420	25.7	2.4
07-APR-93	6.7	4.9	0.7	566	149	25	387	84.5	420	25.7	3.6
14-APR-93	10.3	6.8	1.1	701	268	36	401	68.1	460	25.5	3.0
21-APR-93	12.2	6.9	0.8	641	252	35	372	52.5	530		
28-APR-93	12.6	9.2	0.7	557	157	5	380	44.2	450	24.5	2.7
06-MAY-93	12.8	5.3	1.1	581	173	8	386	45.4	480	25.1	2.5
12-MAY-93	10.5	4.3	0.7	550	154	4	373	52.4	370	25.2	2.5
20-MAY-93	11.0	4.9	1.2	553	154	5	374	50.3	358	24.4	2.3
27-MAY-93	9.0	4.1	0.5	553	144	6	379	61.4	340	24.5	2.4
03-JUN-93	10.5	3.5	3.5	548	160	14	340	52.2	120	25.4	2.6
09-JUN-93	10.5	3.4	1.1	570	171	21	355	54.3	170	25.1	2.5
17-JUN-93	9.4	3.2	0.4	588	227	13	306	62.6	90	25.4	3.1
23-JUN-93	8.2	4.2	3.8	536	210	4	270	65.4	140	25.4	2.7
01-JUL-93	5.0	2.9	0.4	507	204	12	262	101.4	80	24.7	3.0
07-JUL-93	5.3	3.5	1.1	599	344	5	200	113.0	60	20.4	14.3
15-JUL-93	6.6	4.6	0.4	505	239	18	223	76.5	20	22.1	2.1
21-JUL-93		3.1	2.7	668	384	42	229		70	21.4	9.2
29-JUL-93	11.9	3.3	0.3	545	237	59	243	45.8	20	21.3	2.4
05-AUG-93	8.6	3.4	0.2	267	23	16	201	31.0	440	21.5	2.3
12-AUG-93	8.2	3.9	0.7	505	267	80	193	61.4	97	22.7	2.5
18-AUG-93	7.0	3.5	3.2		112	5	158		200	21.0	7.7
26-AUG-93	8.1	5.1	1.0	450	212	55	185	55.6	190	21.2	3.1
01-SEP-93	5.8	5.3	0.4	451	251	16	164	77.8	280	22.0	2.8
10-SEP-93	5.9	5.7	0.6	425	204	7	175	72.0	90	20.0	2.8
15-SEP-93	11.1	4.2	0.4	481	204	13	235	43.3	230	21.4	5.3
23-SEP-93	12.5	4.6	1.4	449	166	41	200	35.9	80	20.9	2.9
30-SEP-93	9.4	4.0	2.1	578	276	29	251	61.3	258	21.3	3.0
07-OCT-93	11.9	4.8	0.3	557	172	4	357	46.8	360	21.4	2.7
14-OCT-93	6.7	2.5	1.3	568	238	23	281	84.8	230	21.8	2.4
27-OCT-93	7.9	4.1	0.3	509	189	11	278	64.4	230		
SWM[a]	9.1	4.4	1.1	534	204	21	282	61.9	239	23.0	3.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 44. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1994. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
12-APR-94	7.7	4.7	0.8			5			520	22.5	2.5
19-APR-94	10.5	5.1	2.5	579	202	5	350	55.1	440	22.0	2.5
26-APR-94	9.9		2.5			17	372		420	14.2	3.6
05-MAY-94	12.0		6.5	627	228	9	374	52.2	430	22.0	4.2
12-MAY-94	9.8	5.1	1.9	572	175	24	364	58.4	370	22.6	2.2
19-MAY-94	9.5	4.5	0.8	638	202	3	397	67.3	348	22.0	2.2
26-MAY-94	12.4	5.5	2.2	638	234	8	367	51.5	360	22.1	2.7
02-JUN-94	10.6	7.8	1.4	506	155	5	319	47.7	330	22.0	2.3
06-JUN-94	9.9	4.0	0.9	615	203	11	378	62.1	300	22.3	2.8
16-JUN-94	10.8	4.9	1.5	592	174	22	373	54.8	250	21.7	2.4
30-JUN-94	14.0	4.1	0.2	512	181	13	265	36.6	120	21.0	2.6
14-JUL-94	11.0	4.3	0.6	505	244	12	185	45.9	40	21.4	2.8
28-JUL-94	13.2	4.9	0.5	484	275	54	156	36.7	90	21.2	2.7
11-AUG-94	10.4	5.0	1.3	589	365	50	172	56.6	70	18.0	13.7
18-AUG-94	10.7	5.1	2.4	532	281	19	185	49.8	118	20.8	3.5
25-AUG-94	11.6	5.5	1.4	487	249	20	187	42.0	60	21.0	3.0
31-AUG-94	9.9	3.7	0.5	451	206	26	175	45.6	70	21.4	3.0
09-SEP-94	9.6	4.6	0.9	485	253	8	188	50.5	150	22.0	4.0
14-SEP-94	13.9	6.8	1.8	485	248	21	178	34.9	130	21.4	2.7
22-SEP-94	8.7	5.1	0.2	520	275	45	183	59.8	210	21.3	2.3
26-SEP-94											
06-OCT-94	7.5	4.7	0.7	512	205	25	250	68.0	202	21.8	2.3
13-OCT-94	9.5	4.4	7.0	535	233	12	244	56.3	120	21.8	2.4
20-OCT-94	8.4	3.7	1.0	527	207	29	267	62.7	150	22.1	2.8
SWM[a]	10.5	4.8	1.5	544	228	21	268	52.2	222	21.2	3.3

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 45. Nutrient concentrations from surface waters of Lake Ontario: station 41, 1995. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
11-APR-95	10.9	5.2	1.4	591	165	14	396	54.0	700	22.4	2.1
19-APR-95	9.0	5.2	2.1	569	151	3	391	63.3	640	22.5	2.0
26-APR-95	9.3	5.4	1.9	565	142	2	402	60.8	590	23.2	2.1
04-MAY-95	10.3	5.5	2.3	580	152	4	398	56.3	605	23.2	2.1
11-MAY-95	8.1	4.8	2.0	576	162	6	385	71.1	530	22.7	2.2
18-MAY-95	9.0	8.0	2.4	567	134	5	410	63.4	480	22.7	2.1
24-MAY-95	8.9	4.0	1.7	636	226	5	382	71.5	470	22.0	2.2
02-JUN-95	11.6	4.3	2.1	562	186	6	322	48.4	240	21.6	2.2
07-JUN-95	10.1	4.1	0.3	566	193	5	313	56.3	230	22.9	2.3
16-JUN-95	10.6	4.5	0.8	539	192	6	279	50.6	255	22.9	2.4
21-JUN-95	4.0	3.1	0.6	528	215	12	260	133.7	225	23.1	2.2
29-JUN-95	8.9	3.7	0.7	384	185	11	152	43.1	340	21.3	2.6
10-JUL-95	9.8	3.8	0.2	374	191	13	144	38.2	140	19.5	2.4
15-JUL-95	5.7	1.7	0.2	336	170	9	137	58.9	130	22.3	2.4
24-JUL-95	7.3	3.9	0.2	433	183	12	186	59.3	40	18.1	2.4
01-AUG-95	10.4	4.3	0.8	421	186	9	171	40.5	80	12.9	2.3
11-AUG-95	9.8	5.0	0.2	369	188	5	135	37.7	160	20.1	2.2
16-AUG-95	7.9	4.2	0.2	403	210	9	146	51.1	130	19.7	2.4
30-AUG-95	8.1	2.9	0.9	395	211	11	130	48.8	150	20.1	2.7
14-SEP-95	10.3	5.5	4.1	565	281	4	193	55.1	160	21.5	5.2
21-SEP-95	8.8	3.9	0.7	497	231	9	218	56.5	230	21.4	2.1
26-SEP-95	7.0	4.4	0.4	509	207	5	262	72.5	360	19.6	2.3
04-OCT-95	8.4	4.0	0.4	460	183	5	234	54.8	350	21.6	2.8
10-OCT-95	8.8	5.0	0.4	462	196	6	223	52.5	240	18.7	2.4
23-OCT-95	7.1	3.0	1.1	558	206	7	316	78.6	400	22.6	2.6
SWM[a]	8.8	4.3	1.2	496	192	8	259	58.3	316	21.1	2.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 46. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1981. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
16-MAR-81	15.0	5.9		613	244	6	293	40.9	394	22.9	2.0
24-MAR-81	12.8	5.3	0.6	550	186	2	287	42.9	197	22.9	2.0
31-MAR-81	13.1	5.0		525	184		266	40.1	67	23.0	2.5
08-APR-81	13.3	5.7	0.9	506	181	6	244	38.1	52	23.1	2.5
17-APR-81	13.1	5.1		521	170	9	258	39.8	67	23.3	2.5
22-APR-81	15.2	5.1		521	181	5	259	34.3	32	23.2	2.9
28-APR-81	12.3	4.8		519	183	8	261	42.2	34	23.1	2.2
05-MAY-81	13.0	5.1		540	190	6	269	41.5	43	22.0	2.2
12-MAY-81	11.4	4.6		554	197	12	268	48.6	46	22.1	2.2
22-MAY-81	10.7	5.5		509	177	12	242	47.6	33	22.7	2.3
28-MAY-81	8.6	4.9		497	189	16	229	57.8	30	22.1	2.5
04-JUN-81	12.2	6.0		507	203	9	222	41.6		23.2	2.5
10-JUN-81	11.7	5.1		524	219	9	212	44.8	46	22.3	2.2
16-JUN-81	11.4	4.9		462	227	10	137	40.6	49	21.6	2.4
23-JUN-81	10.1	6.9		550	256	24	186	54.4	64	22.3	2.2
30-JUN-81	17.1	7.6		526	221	9	164	30.8	123	22.2	2.4
07-JUL-81	18.1	9.2		441	247	6	80	24.4	86	20.5	2.4
14-JUL-81	18.2	8.0		452	258	18	82	24.9	106	20.9	2.5
23-JUL-81	20.1	8.2		412	261	17	33	20.5	100	20.1	2.6
30-JUL-81	16.2	8.9		426	274	35	66	26.3	141	20.2	2.3
05-AUG-81	16.6	8.6		411	243	11	37	24.7	166	19.5	2.7
11-AUG-81	15.7	7.2		423	250	8	31	27.0	148	19.9	2.5
18-AUG-81	14.5	7.0		403	244	21	63	27.8	171	20.1	2.4
25-AUG-81	13.6	7.4		359	243	9	31	26.4	184	19.5	3.2
01-SEP-81	15.9	7.4		395	232	7	71	24.8	154	20.2	2.9
09-SEP-81	14.0	6.5		447	280	13	90	31.9	127	20.1	2.8
15-SEP-81	12.5	6.6		362	208	3	65	28.9	239	21.1	2.7
24-SEP-81	13.6	7.5		450	270	6	133	33.1	350	22.0	2.0
30-SEP-81	12.8	6.7		462	210	2	177	36.1	371	21.7	2.2
05-OCT-81	16.9	10.2		456	233	8	189	27.0	420	22.3	2.2
14-OCT-81	14.4	8.5		486	226	6	182	33.7	316	21.7	2.3
20-OCT-81	17.8	7.5		465	221	3	156	26.2	326	21.6	2.0
27-OCT-81	16.7	8.1		450	221	12	164	27.0	336	21.9	2.1
03-NOV-81	14.2	7.7		466	226	11	184	32.8	348	21.8	1.9
11-NOV-81	14.3	7.0		471	193	5	213	33.0	267	22.2	2.1
18-NOV-81	13.9	7.7		451	191	6	206	32.4	323	22.2	2.1
24-NOV-81	14.0	7.6		460	198	10	207	32.9	332	21.7	2.0
01-DEC-81	14.1	7.9		513	234	14	231	36.4	311	21.9	2.0
08-DEC-81	14.1	8.1		483	180	2	256	34.2	322	22.1	2.0
SWM[a]	14.3	6.8		469	223	11	155	34.5	145	21.6	2.4

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 47. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1982. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
31-MAR-82	12.9	5.0	0.4			4	321		224	23.1	2.1
28-APR-82	12.9	5.8	0.9			3	302		196	23.3	2.2
05-MAY-82			0.5	541	205	10	261		165	21.9	2.5
11-MAY-82			0.2	547	224	10	264		111	21.1	2.3
20-MAY-82	11.7	5.2	0.2	596	263	1	259	50.9	68	23.0	2.3
27-MAY-82			0.3	628	293	15	276		112	23.2	2.5
01-JUN-82			1.2	584	265	14	245		116	21.7	2.0
08-JUN-82	11.2	4.5	0.8	617	322	31	241	55.1	47	20.9	2.1
16-JUN-82	11.5	6.7	1.1	518	224	18	193	45.1	66	22.3	2.1
22-JUN-82	12.2	6.4	0.4	573	267	10	203	46.9	77	22.7	2.3
29-JUN-82	13.2	6.6	0.9		287	4	160		50	23.1	2.6
06-JUL-82	15.0	6.4	0.5	628	353	2	164	41.8	80	22.8	2.9
15-JUL-82	14.8	6.8	0.5		215	20	180		292	22.1	2.5
21-JUL-82	11.5	7.4	1.2	551	330	23	191	47.9	98	21.7	2.6
27-JUL-82	15.2	7.6	1.2	601	356	69	128	39.6	95	22.1	2.3
04-AUG-82	15.3	6.6	1.7	433	271	34	86	28.3	104	20.1	2.3
10-AUG-82	18.4	9.6	0.2	522	363	123	78	28.4	155	20.4	2.5
18-AUG-82	20.4	12.1	0.4	394	275	36	45	19.3	293	20.9	2.1
24-AUG-82	17.1	8.1	0.2	508	298	79	98	29.7	247	18.6	2.4
31-AUG-82	14.9	5.2	0.7	569	407	41	76	38.2	238	20.3	2.3
08-SEP-82	20.1	11.7	0.2	559	409	35	116	27.8	390	21.0	2.2
16-SEP-82	14.7	7.1	0.4	421	252	17	95	28.7	256	21.3	2.2
23-SEP-82	22.9	15.0	0.3	550	359	51	110	24.0	267	21.6	2.1
29-SEP-82	15.7	7.8		560	372	75	121	35.7	281	20.9	2.3
05-OCT-82	13.3	6.7	0.4	490	339	35	111	36.8	263	21.7	2.3
14-OCT-82	15.5	9.0	1.7		217	13	249		571	22.1	2.3
19-OCT-82	21.7	8.9	0.5	572	345	36	168	26.4	565	20.2	2.1
26-OCT-82	16.2	6.7	0.5	561	338	22	193	34.6	345	21.4	2.9
02-NOV-82	18.5	6.3	0.7	663	396	50	163	35.8	347	22.0	2.5
09-NOV-82	16.6	7.4	1.9	590	348	44	173	35.6	525	22.6	2.4
17-NOV-82	18.4	11.5	2.4	506	237	36	212	27.5	573	23.2	2.3
23-NOV-82	14.9	8.6	1.8	768	503	24	211	51.5	551	18.5	2.2
SWM[a]	14.7	7.1	0.6			27	186		206	21.8	2.3

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 48. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1983. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
17-MAR-83	12.2	5.8	0.8			2	317		84	22.5	2.4
06-APR-83	11.6	4.6	0.7	597	226	1	310	51.5	97	22.7	2.1
12-APR-83	12.0	4.8	0.2	661	331	51	266	55.1	124	20.3	2.1
21-APR-83	13.6	5.8	0.7		233	33	274		176	19.6	2.2
26-APR-83	13.4	6.8	0.5	625	248	18	314	46.7	125	21.2	2.0
04-MAY-83	11.8	5.8	0.6	622	259	49	281	52.7	76	20.0	2.2
10-MAY-83	12.5	6.7	0.6	631	267	29	303	50.5	59	19.7	2.4
17-MAY-83	12.0	5.0	1.0	570	222	12	269	47.5	31	21.1	2.4
25-MAY-83	12.5	6.1	0.5	569	227	45	274	45.5	50	20.7	2.7
01-JUN-83	16.1	6.4	0.4		322	59	258		40	22.1	2.8
07-JUN-83	12.8	5.8	0.3	539	229	36	222	42.1	55	22.7	2.9
14-JUN-83	14.8	9.7	0.6	490	219	19	195	33.1	85	22.7	3.1
22-JUN-83	16.9	7.1	1.1	411	144	9	207	24.3	160	22.4	2.7
28-JUN-83	12.7	5.4	1.7	459	199	2	160	36.1	154	22.2	2.6
05-JUL-83	13.8	9.1	0.4	460	233	17	137	33.3	116	21.8	2.4
12-JUL-83	17.1	7.0	0.6	499	240	12	159	29.2	110	22.4	2.3
19-JUL-83	15.8	6.5	0.4	538	319	18	78	34.1	140	21.9	2.6
26-JUL-83	16.6	7.6	1.2	386	235	18	43	23.2	125	21.4	2.9
04-AUG-83	14.3	6.2	0.6	561	209	15	196	39.3	495	22.6	4.0
09-AUG-83	14.7	7.3	0.4	417	230	16	87	28.4	169	21.4	3.0
17-AUG-83	17.0	11.2	2.0	331	206	30	67	19.5	250	21.0	2.5
23-AUG-83	20.0	7.3	0.8	393	209	11	60	19.6	503	15.7	3.5
30-AUG-83	18.4	11.4	0.4		227	3			245	19.5	2.6
07-SEP-83	14.9	4.9	0.3		236	69	25		410	18.9	2.6
13-SEP-83	14.2	11.8			232				370	21.5	3.3
20-SEP-83	11.0	5.0	0.3	348	193	2	90	31.6	331	20.0	2.3
27-SEP-83	12.1	5.4	0.7	320	189	6	68	26.4	374	20.5	2.2
06-OCT-83	7.7	5.1	0.3	429	289	24	93	55.8	287	23.1	2.0
12-OCT-83	12.6	8.5	1.5		249	17	102		411	22.6	2.1
19-OCT-83	12.3	7.4	1.0	398	202	8	152	32.4	403	23.0	2.1
27-OCT-83	11.7	5.7	1.6	607	400	34	163	51.9	435	23.1	2.3
02-NOV-83	12.9	5.0	0.6	548	355	39	143	42.5	415	22.8	2.6
08-NOV-83	11.7	7.5	0.6	446	185		207	38.1	415	23.5	2.2
15-NOV-83	14.9	6.4	1.0		202	22	202		364	23.2	2.1
22-NOV-83	12.6	6.4	0.6	450	203	2	203	35.8	333	23.6	2.1
SWM[a]	13.9	6.9	0.7	486	241	23	165	37.5	214	21.3	2.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 49. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1984. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
21-MAR-84	11.8	4.5	0.9	702	335	47	324	59.5	330	23.9	2.0
05-APR-84	14.5	7.2			181					21.9	
17-APR-84	13.7	7.6	0.4	554	158	6	344	40.4	370	23.7	2.3
25-APR-84	12.6	6.1	0.9	551	182	3	331	43.8	410	23.5	2.2
03-MAY-84	14.2	6.1	1.1	676	307	36	309	47.6	305	24.1	2.6
08-MAY-84	14.2	5.5	1.2	610	233	47	311	43.0	368	23.3	2.8
15-MAY-84	13.2	6.0	0.4		190	4	289		190	23.8	2.6
23-MAY-84		4.1	0.4	555	194	31	272		30	23.2	2.1
29-MAY-84	12.9	5.2		620	216	5	290	48.1	85	24.0	1.9
05-JUN-84	12.0	4.7	1.6	805	437	11	296	67.1	35	23.3	2.3
13-JUN-84	12.0	4.7	0.5	817	533	260	228	68.0	30	22.6	2.3
19-JUN-84	9.9	4.9		522	242	49	206	52.7	30	21.8	2.1
26-JUN-84	11.6	5.7	0.3	465	199	8	190	40.1	30	22.7	2.5
04-JUL-84	11.6	6.5		531	260	47	191	45.8	80	22.5	2.3
10-JUL-84	15.3	10.2	0.5	598	323	9	199	39.1	75	24.3	2.5
17-JUL-84	16.9	6.8	0.3	568	298	44	165	33.6	140	23.4	2.3
24-JUL-84	24.0	13.5	0.4	470	194	4	133	19.6	135	22.3	2.6
31-JUL-84	25.3	6.0	0.9		254	10	93		80	21.1	2.8
08-AUG-84	17.7	8.4	0.3	378	243	7	69	21.4	130	21.3	3.2
14-AUG-84		8.9	1.2	404	301	57	70		100	21.7	3.2
21-AUG-84	17.5	6.5	0.7	412	205	36	66	23.5	145		
28-AUG-84	17.5	6.8	0.4	394	203	3	47	22.5	210	21.4	3.3
11-SEP-84	14.1	5.8		351	206	6	102	24.9	290	21.0	2.3
25-SEP-84	11.6	5.7		389	218	13	110	33.5	235	20.5	2.6
10-OCT-84	13.3	5.3	0.5	532	283	50	153	40.0	260	20.3	2.9
24-OCT-84	12.4	5.7	2.3	418	180	3	182	33.7	270	21.6	3.3
06-NOV-84	15.2	5.4	0.4	587	318	160	196	38.6	340	21.2	3.3
SWM[a]	14.5	6.4	0.7	516	244	29	192	38.1	194	22.2	2.6

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 50. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1985. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
28-MAR-85			0.7	579	188	5	347		290	22.2	2.3
03-APR-85	10.4	5.3	0.8	566	170		337	54.2	250	22.8	
10-APR-85											
16-APR-85	10.5	3.7	0.3	552	154		327	52.6	130	22.9	
23-APR-85	10.5	4.4	0.7	567	167	4	329	54.0	80	22.4	
30-APR-85	11.0	4.4	0.2	571	166	2	320	51.9	70	22.9	
07-MAY-85	11.2	5.2	0.8	571	172	12	314	51.0	70	23.2	
14-MAY-85	12.7	4.1	0.6	595	202	11	312	46.9	40	22.6	
22-MAY-85	10.7	5.3	2.1	531	182	17	296	49.7	40	20.3	
29-MAY-85	9.5	4.8	1.5	536	179	13	299	56.5	40	23.8	
07-JUN-85		4.5		549	180	9	308		70	22.5	
11-JUN-85	11.9	6.1		574	207	17	297	48.3	60	22.0	
18-JUN-85	9.5	7.5	0.7	579	213	13	265	60.9	50	21.8	
26-JUN-85	10.8	5.0		541	205	10	251	50.1	80	22.4	
03-JUL-85	12.6	6.7	0.7	531	230	22	223	42.1	60	23.0	
11-JUL-85	13.2	7.8	0.2	521	216	16	221	39.4	60		
16-JUL-85	20.2	6.1	0.2	480	212	16	183	23.8	70	24.5	
23-JUL-85	13.1	5.5	0.4	456	224	26	141	34.8	90	22.9	
30-JUL-85	19.9	12.5	3.6	439	220	17	119	22.1	130	21.9	
09-AUG-85	14.1	5.5	2.2	460	274	52	102	32.6	180	22.4	
13-AUG-85	16.3	8.0	0.5	403	215	17	97	24.7	130	22.5	
20-AUG-85	20.2	6.4	0.9	412	217	17	98	20.4	190	21.2	
28-AUG-85	14.9	6.7	0.9	412	221	31	108	27.7	210	21.9	
06-SEP-85	11.6	5.6	0.7	440	262	51	115	37.9	270	22.1	
10-SEP-85	19.9	8.0	0.9	437	233	30	138	21.9	250	22.0	
17-SEP-85	11.9	7.4	0.2	486	272	7	137	40.8	340	21.9	
25-SEP-85	13.8	5.5		399	209	36	122	28.9	160	21.3	
01-OCT-85	10.4	3.5	0.3	424	194	69	153	40.8	280	21.3	
08-OCT-85	18.7	10.1	0.3	416	180		164	22.2	410	23.6	
16-OCT-85	14.2	7.3	0.5	462	205		176	32.6	530	21.7	
23-OCT-85	13.2	7.1	0.7	450	197		200	34.1	510	21.5	
29-OCT-85	16.1	10.6	0.8	520	255	22	198	32.3	490	22.3	
SWM[a]	13.4	6.3	0.8	497	206	22	214	40.0	175	22.4	

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 51. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1986. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
09-APR-86	10.8	6.1	1.1	844	451		345	78.2	350		
17-APR-86	10.4	4.8		1002	580	79	360	96.4			
22-APR-86											
30-APR-86	12.7	4.8		596	156	2	379	47.1	240		
06-MAY-86	11.1	4.5	0.3	573	147	3	343	51.4	190		
13-MAY-86	12.5	6.5	1.2	596	169	20	339	47.5	65		
21-MAY-86	13.0	5.1	0.4	563	185	7	305	43.3	100		
27-MAY-86	11.2	7.3	0.8	533	146	3	305	47.6	65		
03-JUN-86	10.2	4.0	0.2	527	143	9	326	51.7	190		
10-JUN-86	11.0	4.6	0.5	542	164	5	309	49.3	100		
18-JUN-86	9.5	4.5	0.5	508	133	2	308	53.2	90		
24-JUN-86	9.0	4.1		468	141	6	266	52.0	95		
03-JUL-86	13.0	4.3	0.6	538	178	8	254	41.5	70		
08-JUL-86	12.5	5.1	0.6	491	173	6	232	39.5	70		
17-JUL-86	14.4	5.6	5.3	565	268	82	229	39.1	130		
23-JUL-86	17.2	6.7	0.9	474	221	14	150	27.6	75	23.5	
30-JUL-86	24.7	7.3	1.1	401	218	16	107	16.3	100		
06-AUG-86	11.7	6.5	1.9		309				140		
14-AUG-86	13.0	5.8	1.0	455	266	20	137	35.0	155		
26-AUG-86	15.6	6.8	1.7	527	285	24	155	33.7	440		
03-SEP-86	18.2	10.4	1.0	595	365	38	150	32.7	245		
11-SEP-86											
17-SEP-86	15.5	6.9	0.9	455	202	6	208	29.4	320		
23-SEP-86	12.2	6.0	0.7	517	279	15	203	42.4	335		
30-SEP-86											
07-OCT-86											
16-OCT-86											
21-OCT-86											
SWM[a]											

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 52. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1987. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
16-APR-87	10.4	5.0	1.2			16	320		80	23.3	
22-APR-87	10.7	5.2	0.5			20	325		47	22.9	
29-APR-87	12.2	3.9				3	336		37	22.7	
05-MAY-87	11.3	3.3				32	329		61	22.2	
12-MAY-87	9.6	5.4	1.0			21	327		40	22.6	
21-MAY-87	8.9	4.2	1.3			14	312		30	18.6	
26-MAY-87	9.5	4.1	0.7			11	277		55	21.7	
02-JUN-87	9.0	4.6	0.3			19	252		135	23.1	
09-JUN-87	9.1	4.7				25	247		55	23.5	
16-JUN-87	8.9	3.8	0.4			68	237		125	22.6	
23-JUN-87	12.9	3.3				8	185		130	22.8	
30-JUN-87	12.7	3.9	0.5			15	194		100	22.3	
07-JUL-87	13.6	3.7	0.3			28	156		110	22.6	
16-JUL-87	12.8	6.0	0.8			33	110		110	20.9	
21-JUL-87	17.6	6.0	0.3			5	104		150	21.3	
28-JUL-87	13.5	5.6	0.3			21	108		165	20.7	
05-AUG-87	11.6	4.7							195	21.2	
11-AUG-87	12.5	4.5	0.6			6	119		225	20.5	
18-AUG-87	12.1	4.1				2	62		240	21.0	
25-AUG-87	11.9	4.4	0.5			13	107		400	21.3	
01-SEP-87	9.4	4.6	0.7			12	115		295	21.1	
08-SEP-87	10.9	4.2		402	204	6	132	36.9	330	21.6	
15-SEP-87	10.5	4.7	1.1	357	171	12	136	33.9	215	18.8	
23-SEP-87	9.3	4.2	0.5	405	210	7	155	43.5	220	21.1	
29-SEP-87	10.2	4.2	0.2	385	184	6	146	37.6	480	21.2	
07-OCT-87	9.8	4.3	0.4	415	192	7	178	42.4	585	21.5	
14-OCT-87	10.2	4.1	0.6	421	190	13	190	41.3	705	21.6	
20-OCT-87	10.4	4.6	0.7	438	197	2	191	41.9	610	21.3	
SWM[a]	11.1	4.5	0.6			15	201		219	21.7	

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 53. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1988. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
08-APR-88			0.4	597	214	1	318		180		
19-APR-88	15.1	7.9	1.6	553	159	3	304	36.6	210	22.6	2.3
26-APR-88	9.2	4.1		603	227	8	294	66.0	90	22.2	2.4
05-MAY-88	9.1	4.8		719	308	6	283	79.0	30	22.8	2.1
10-MAY-88	10.7	3.9		698	323	13	279	65.3	30	22.7	2.2
18-MAY-88	9.5	5.2		669	306	17	271	70.4	20	22.0	2.3
25-MAY-88	10.2	4.0		544	205		264	53.1		22.3	2.4
01-JUN-88	9.9	5.7		542	227	9	282	54.5	30	22.0	2.9
07-JUN-88	16.0	6.0	0.5	570	236	16	267	35.7	30	22.0	3.1
15-JUN-88	12.2	4.9	0.5	516	223	18	263	42.3	120	22.2	3.1
21-JUN-88	8.8	4.3	0.3	516	218	7	236	58.3	35	22.7	3.5
29-JUN-88	11.3	5.2	0.6	543	254	22	222	47.8	65	22.2	2.6
05-JUL-88	12.3	5.4	0.9	521	238	15	214	42.1	50	22.4	3.0
12-JUL-88	16.7	7.0	2.5	517	348	33	135	30.9	55	22.6	2.8
19-JUL-88	17.9	5.5		487	224	7	150	27.2	65	22.2	2.9
27-JUL-88	17.5	8.2	2.1	553	297	47	127	31.6	80		3.1
03-AUG-88	15.3	5.5	0.4	409	233	22	67	26.7	85	20.0	2.9
10-AUG-88	10.6	5.6	0.4	384	221	12	101	36.1	150	20.3	3.0
17-AUG-88	12.7	5.0	0.4	385	242	16	102	30.5	165	19.9	2.6
24-AUG-88	10.5	7.1	0.4	365	195	22	135	34.8	223	21.6	3.1
30-AUG-88	11.1	9.0		339	192	12	137	30.5	270	21.3	2.4
08-SEP-88	9.1	4.2	0.4	434	275	6	150	47.7	280	21.9	2.3
13-SEP-88	9.9	4.2	0.3	393	198		136	39.9	245	21.9	2.2
21-SEP-88	13.0	4.4	0.3	439	228		151	33.8	330	22.3	2.1
27-SEP-88	8.7	4.0	0.3	407	206	12	137	47.0	455	21.4	2.1
05-OCT-88	10.4	4.5		404	219	19	145	38.7	420	21.9	2.1
12-OCT-88	11.5	5.0	0.3	432	213		176	37.6	420	21.8	2.1
20-OCT-88	11.2	5.0	0.3	411	183		202	36.7	505	22.2	2.6
SWM[a]	12.1	5.6	0.8	498	233	15	202	43.0	181	21.9	2.6

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 54. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1989. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
05-APR-89	10.3	4.9		565	165	11	336	54.9	30	23.1	2.5
19-APR-89	10.1	6.7		635	245	61	326	62.9	156	22.9	2.6
25-APR-89	10.5	4.8	1.7	552	176	15	312	52.6	50	23.1	2.4
03-MAY-89	9.2	4.1		516	151	9	300	56.1	90	23.2	2.6
09-MAY-89	9.8	3.5	0.7	533	184	9	291	54.4	30	23.3	2.6
17-MAY-89	8.8	5.0	2.4	638	302	26	299	72.5	80	22.2	2.3
24-MAY-89	8.4	5.5	0.6	545	205	12	297	64.9	70	23.1	2.6
31-MAY-89	12.2	5.4	1.6	596	238	33	298	48.9	70	23.1	2.3
06-JUN-89	10.6	3.8	1.3	510	188	7	276	48.1	70	22.7	2.4
14-JUN-89	8.7	3.7	0.9	735	382	5	271	84.5		22.6	2.6
20-JUN-89	9.3	3.4	0.6	706	385	14	262	75.9	30	22.6	2.5
28-JUN-89	7.9	4.6		601	352	12	192	76.1	30	22.0	2.7
05-JUL-89	10.1	3.7	0.4	679	422	24	196	67.2	100	22.2	2.7
12-JUL-89	10.1	5.9	0.7	492	224	9	202	48.7	100	22.0	2.5
18-JUL-89	9.3	4.6	1.8	478	242	22	183	51.4	130	22.3	3.2
26-JUL-89	10.6		4.9	501	275	6	146	47.3	120	23.2	2.8
01-AUG-89	11.8	6.6	1.7	288	93	14	130	24.4	160	22.6	2.9
10-AUG-89	12.3	4.7	3.1	463	241	33	164	37.6	160	20.9	2.7
16-AUG-89	11.4	4.8		436	257	50	127	38.2	180	21.4	2.7
23-AUG-89	11.1	5.3	0.9	416	222	13	128	37.5	140		2.6
29-AUG-89	10.6	6.4	0.8	479	275	41	129	45.2	170	21.2	2.3
07-SEP-89	9.2	5.9	1.7	436	255	11	129	47.4	570		3.9
13-SEP-89	11.9	4.4	0.5	533	234	3	230	44.8	290	21.3	2.7
20-SEP-89	8.9	3.4	2.6	418	215	27	159	47.0	160	21.4	2.4
26-SEP-89	11.2	4.0		449	208	5	178	40.1	116	22.6	2.4
05-OCT-89	10.8	3.8		431	170		219	39.9	400	22.6	2.4
11-OCT-89	11.0	4.5		449	177	3	220	40.8	580	22.8	3.0
18-OCT-89	11.5	4.7		474	199	6	227	41.2	680	22.2	3.6
SWM[a]	10.3	4.8		520	236	17	226	51.6	192	22.3	2.7

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 55. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1990. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
04-APR-90	10.6	3.0	0.4	630	186	27	347	59.4	80	22.2	2.5
18-APR-90	10.5	4.8	0.6	573	185	18	327	54.6	100	22.0	2.4
24-APR-90	9.6	3.3	0.2	596	185	4	341	62.1	160	22.0	2.5
02-MAY-90	8.8	4.2	0.3	562	173	6	324	63.9	80	21.5	2.9
08-MAY-90	9.9	3.6	0.8	526	174	5	277	53.1	60	21.5	2.8
15-MAY-90	11.6	4.3	0.4	537	178	5	282	46.3	70	23.4	2.3
23-MAY-90	10.0	4.7	0.3	513	163	5	279	51.3	90	21.5	2.6
29-MAY-90	10.2	5.1	0.6	530	177	22	283	52.0	80	21.5	2.0
05-JUN-90	8.4	4.0	0.5	577	241	76	269	68.7	110	22.8	2.7
12-JUN-90	9.1	4.2	1.3	511	190	10	245	56.2	20	21.2	2.3
19-JUN-90	10.5	5.0	2.0	505	239	27	185	48.1	50	22.0	3.3
26-JUN-90	9.3	3.6	1.0	530	241	15	225	57.0	40	22.1	2.7
04-JUL-90	9.1	4.6	0.5	534	260	32	213	58.7	70	21.9	3.1
11-JUL-90		3.7	0.5	475	207	10	203		110	21.9	2.7
17-JUL-90	11.9	5.0	0.5	537	290	40	192	45.1	120	21.3	3.5
24-JUL-90	13.7	4.3	0.6	464	199	15	202	33.9	90	21.2	2.8
31-JUL-90	10.5	7.4	0.6	432	219	21	146	41.1	100	20.0	2.8
08-AUG-90	13.0	6.2	0.5	437	226	29	155	33.6	130	21.4	3.0
14-AUG-90	14.1		0.5	426	235	21	135	30.2	100	18.8	2.6
22-AUG-90	13.1	5.8	1.2	425	229	13	142	32.4	160	20.7	3.0
28-AUG-90	9.1	3.7	0.5	649	448	59	140	71.3	180	20.6	3.1
06-SEP-90	13.4	6.8	0.5	497	309	19	145	37.1	240	20.3	4.1
11-SEP-90	14.0	7.0	0.5	453	209	21	196	32.4	220	20.9	3.2
18-SEP-90	16.5	8.7	0.5	481	205	19	210	29.2	310	21.5	3.0
26-SEP-90	13.6	3.2	0.5	518	247	32	205	38.1	480	22.1	3.1
02-OCT-90	12.6	9.6	0.5	563	259	39	221	44.7	450	21.5	3.6
11-OCT-90	12.4	8.4	0.5	546	230	33	228	44.0	510	22.7	3.0
16-OCT-90	12.6	6.4	3.4	508	199	25	205	40.3	570	22.5	2.5
24-OCT-90	16.2	5.9	1.7		238	13	225		610	22.6	2.8
SWM[a]	11.6	5.2	0.8	521	225	23	229	47.7	191	21.6	2.8

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 56. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1991. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
05-APR-91	11.1	4.4	0.6	662	274	47	337	59.6	190	19.1	2.4
17-APR-91	12.4	9.3		589	205	4	327	47.5	190	18.0	2.5
23-APR-91	11.9	5.1		562	176	2	325	47.2	100	21.3	2.4
30-APR-91	12.2	5.0		563	196	45	319	46.1	90	21.7	3.4
07-MAY-91	12.4	5.3		598	217	33	334	48.2	100	20.8	2.4
14-MAY-91	11.5	7.4		557	205	26	295	48.4	100	21.4	2.9
22-MAY-91	13.8	7.9	0.8	591	209	14	319	42.8	20	22.9	3.0
28-MAY-91	14.4	11.6	1.0	502	175		265	34.9	40	22.0	3.2
04-JUN-91						1	256		40		3.1
12-JUN-91	12.3	10.2	0.9	525	228	24	223	42.7	80	21.3	2.9
18-JUN-91	12.7	4.0	0.7	503	213	13	237	39.6	70	21.3	2.8
25-JUN-91	14.4	9.0	0.8	462	221	20	180	32.1	90	21.0	3.1
03-JUL-91		18.6	0.9	459	205	12	172		170	20.9	2.4
09-JUL-91	16.2	10.2	2.4	452	268	52	131	27.9	130		3.6
16-JUL-91	20.5	18.2	0.9	494	270	41	146	24.1	150	20.1	3.0
23-JUL-91	16.7	14.0	0.5	491	241	26	119	29.4	720	19.9	3.0
31-JUL-91	11.3	6.0	0.7	477	261	19	129	42.2	160	20.5	3.0
08-AUG-91	11.0	6.2		339	161	25	115	30.8	130	20.5	2.9
13-AUG-91	26.7	8.3	0.2	402	207	2	123	15.1	210	20.8	4.3
20-AUG-91	26.2	14.6	1.2	433	225	4	124	16.5	210	21.1	3.3
28-AUG-91	16.5	8.4	0.5	414	242	22	111	25.1	150	19.9	3.3
05-SEP-91	22.1	14.1	0.4	424	230	19	139	19.2	210	19.0	2.5
11-SEP-91	9.2	4.5	0.5			27	133		210	19.0	2.6
17-SEP-91	9.0	8.6	0.5	409	216	23	137	45.4	210	18.7	2.5
01-OCT-91	13.2	7.6	1.3	425	210	29	166	32.2		21.0	2.8
10-OCT-91	16.2	4.3	1.2	439	229	6	166	27.1	510	21.2	2.7
16-OCT-91	17.2	7.5	1.3	409	190	10	172	23.8	590	21.3	3.1
23-OCT-91	16.1	8.7	1.3	409	195	6	173	25.4	490	21.3	2.7
29-OCT-91	12.8	5.6	1.4	420	212	11	168	32.8	650	20.4	2.7
SWM[a]	14.6	8.8	0.8	483	219	20	203	35.4	220	20.6	2.9

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 57. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1992. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
01-APR-92											
07-APR-92	10.1	4.6	1.3	662	280	10	333	65.5	170	21.5	3.0
14-APR-92	8.1	3.6	0.9	579	207	3	320	71.5	240	21.6	2.8
29-APR-92	7.9	4.1	1.2	534	175	19	307	67.6	110	21.4	2.5
05-MAY-92	10.0		1.9	615	265	47	297	61.5	80		2.4
12-MAY-92	11.3	3.5	0.8	528	155	7	308	46.7	60	21.8	2.2
20-MAY-92	7.9	3.4	1.6	538	179	12	305	68.2	50	22.0	2.8
28-MAY-92	7.0	5.1	1.2	536	178	12	300	76.6	60	22.2	2.8
02-JUN-92	5.5	3.0	1.5	551	192	12	299	100.2	100	21.9	2.9
09-JUN-92			1.4	544	199	18	283		190	19.4	3.1
16-JUN-92	9.8	3.9	1.5	549	212	15	287	56.0	70	21.4	3.0
24-JUN-92	8.4	3.8	1.4	563	261	47	256	67.0	180	21.1	3.9
30-JUN-92	10.9	5.2	1.2	410	142	32	229	37.6	80	21.1	3.0
08-JUL-92		3.7	1.2	360	130	12	196		20	20.2	2.8
14-JUL-92	10.6	4.4	1.0	409	153	19	204	38.6	100	20.8	3.0
21-JUL-92	13.6	4.5	1.4	437	177	28	179	32.1	160	21.3	3.1
28-JUL-92	10.9	4.8	0.9	387	164	3	129	35.5	150	21.1	2.7
11-AUG-92	11.5	6.3	2.2	429	214	38	145	37.3	290	21.2	3.0
18-AUG-92	12.6	6.4	0.9	415	243	14	123	32.9	260	22.3	2.8
25-AUG-92	12.4	5.5	1.2	413	212	14	131	33.3	280	21.8	3.1
01-SEP-92	10.1	5.4	2.2	420	238	43	138	41.6	300	23.4	3.8
10-SEP-92	10.5	5.1	1.2	396	214	35	132	37.7	300	23.0	3.0
15-SEP-92	10.6	5.4	1.2	410	210	21	139	38.7	220	23.4	2.7
30-SEP-92	13.4	7.1	4.2	408	220	5	139	30.4	410	23.8	2.9
07-OCT-92	13.3	6.0	1.4	437	216	25	153	32.9	250	22.9	2.4
14-OCT-92	13.5	6.5	1.5	404	220	55	134	29.9	270	23.5	2.7
20-OCT-92	10.5	4.9	1.4	490	202	12	241	46.7	290		2.8
SWM[a]	10.4	4.8	1.5	478	203	20	219	49.7	190	22.0	2.9

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 58. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1993. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
07-APR-93	9.3	5.2	1.1	589	193	30	361	63.3	340	24.9	2.5
15-APR-93	9.1	3.5	0.6	591	203	31	350	64.9	280	25.5	2.4
20-APR-93	20.3	7.3	0.8	547	188	10	318	26.9	230		
27-APR-93	12.6	6.0	0.7	587	197	25	351	46.6	300	3.0	3.0
04-MAY-93	12.3	3.8	0.3	561	185	16	330	45.6	210	25.1	2.6
11-MAY-93	10.3	5.8	0.6	617	239	29	321	59.9	170	23.4	2.4
18-MAY-93	10.2	3.5	0.6	528	169	15	313	51.5	122	24.4	2.6
26-MAY-93	9.0	3.8	0.4	570	199	19	316	63.3	80	24.5	3.9
01-JUN-93	20.7	5.2	10.0	530	155	97	320	25.6	70	24.1	2.9
08-JUN-93	7.7	3.3	1.1	530	160	28	314	68.8	110	24.9	2.8
15-JUN-93	7.8	3.3	0.4	580	226	16	294	74.4	100	25.1	2.8
22-JUN-93	6.5	2.9	0.8	497	172	2	269	76.5	50	25.0	4.7
29-JUN-93	5.4	3.1	0.4	559	262	38	257	103.5	20	25.0	2.9
06-JUL-93	4.8	4.4	0.6	618	305	25	262	128.8	20	21.3	2.4
13-JUL-93	6.2	5.2	0.6	523	237	18	235	84.4	20	21.4	2.3
20-JUL-93	9.1	4.7	0.6	539	241	17	255	59.2	20	20.8	3.0
27-JUL-93	7.6	3.0	0.3	485	212	42	238	63.8	50	20.8	2.5
04-AUG-93	8.1	3.3	0.8	453	187	18	214	55.9	180	21.0	2.4
10-AUG-93	8.3	4.0	0.9	514	251	56	204	61.9	212	23.0	2.9
17-AUG-93	10.0	3.9	10.0		127	26	155		290	21.5	2.2
24-AUG-93	6.9	5.0	1.3	420	189	12	191	60.9	140	21.3	3.1
31-AUG-93	5.0	4.1	0.4	425	224	21	169	85.0	230	21.8	2.9
08-SEP-93	8.1	5.5	0.6	407	190	11	176	50.2	180	20.4	2.5
14-SEP-93	12.5	5.4	0.6	408	150	21	208	32.6	350	20.7	19.6
22-SEP-93	10.8	3.6	0.2	452	216	16	189	41.9	280	20.5	2.8
28-SEP-93	10.0	4.2	0.4	542	278	10	226	54.2	350	20.9	
06-OCT-93	15.4	4.4	0.3	491	209	26	235	31.9	590	20.7	3.4
13-OCT-93	8.5	3.7	18.6	678	402	75	235	79.8	560	21.1	
20-OCT-93	9.2	4.0							570		
26-OCT-93	9.7	4.7	0.7	496	219	13	236	51.1	430		
SWM[a]	9.6	4.3	2.1	526	216	27	260	61.5	221	21.7	3.4

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 59. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1994. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
13-APR-94	9.9		2.8						340	22.2	3.6
19-APR-94	10.1	4.2	1.4			5	323		250	22.4	2.8
10-MAY-94	9.1	6.5	2.3	602	162	12	380	66.2	110	24.6	2.8
18-MAY-94	7.9	5.2	1.0	619	225	23	336	78.4	115	22.0	2.3
25-MAY-94	8.1	3.4							140	12.6	3.7
31-MAY-94	12.1	3.7	0.8	518	192	20	279	42.8	80	21.4	2.3
07-JUN-94	9.6	3.5	0.5	602	227	11	327	62.7	190	22.5	2.8
14-JUN-94	9.1	4.1	0.7	522	159	4	314	57.4	80	21.7	2.9
28-JUN-94	16.5	4.2	1.6	508	199	1	262	30.8	70	20.9	2.7
12-JUL-94	8.1	5.0	0.5	517	220	6	256	63.8	230	20.8	2.4
26-JUL-94	9.0	3.8	0.9	710	484	53	173	78.9	130	20.4	3.0
09-AUG-94	10.8	6.0	0.6	567	341	98	180	52.5	150	19.7	2.3
17-AUG-94	8.1	5.0	5.2	553	318	49	176	68.3	330	19.8	3.6
23-AUG-94	12.1	3.6	1.1	475	260	50	159	39.3	170	16.5	2.8
30-AUG-94	11.2	4.5	0.4	415	201	27	159	37.1	230	21.6	5.1
07-SEP-94	9.9	3.5	0.7	660	439	7	173	66.7	300	20.5	7.1
13-SEP-94	12.0	5.0	0.7	415	194	15	167	34.6	320	20.9	2.2
21-SEP-94	7.3	4.4	0.2	446	233	20	163	61.1	290	22.0	2.3
27-SEP-94	8.1	4.5	0.6	576	282	83	246	71.1	267	21.4	2.6
05-OCT-94	6.9	4.1	0.6	407	163	10	203	59.0	350	21.4	2.2
12-OCT-94	8.6	4.4	1.1	510	236	13	228	59.3	210	19.1	2.6
19-OCT-94	6.9	3.8	2.3	501	269	96	191	72.6	360	22.2	4.7
SWM[a]	9.7	4.5	1.3			29	249		212	21.1	3.1

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 60. Nutrient concentrations from surface waters of Lake Ontario: station 81, 1995. See table 31. for complete legend.

Date	TP	TFP	SRP	TN	TKJN	NH_3	NO_3NO_2	N:P	SiO_2	DIC	DOC
06-APR-95	10.0	3.8	0.6	629	226	5	368	63.2	480	22.7	2.9
11-APR-95	10.6	4.7	0.4	604	195	8	366	57.0	450	22.2	2.2
20-APR-95	6.3	3.4	0.5	557	153	4	361	88.4	400	23.7	1.9
25-APR-95	5.5	3.3	0.6	536	144	2	361	96.6	370	22.8	2.1
03-MAY-95	6.0	3.6	0.8	536	158	6	352	89.3	375	22.9	2.2
10-MAY-95	5.5	4.0	1.1	534	164	12	333	97.7	275	20.4	2.3
17-MAY-95	7.0	4.0	0.7	557	181	5	336	79.0	270	20.2	2.3
25-MAY-95	5.4	3.1	0.5	595	253	6	315	110.2	370	22.5	2.5
01-JUN-95	7.0	3.9	0.8	503	173	7	305	72.4	300	21.6	2.4
06-JUN-95	5.7	3.4	0.3	551	218	6	305	96.8	370	22.8	2.5
15-JUN-95	6.1	3.9	0.2	470	162	7	272	77.1	330	22.5	3.0
20-JUN-95	4.6	2.5	0.3	533	212	12	282	114.7	325	23.1	2.5
28-JUN-95	5.7	2.5	0.5	421	177	13	210	73.9	320	15.9	2.3
14-JUL-95	7.5	3.1	0.3	431	173	5	220	57.5	110	20.9	2.4
27-JUL-95	9.3	3.4	0.2	443	191	5	201	47.6	160	21.2	2.4
02-AUG-95	9.6	5.3	0.8	403	184	6	167	42.0	200	20.8	2.3
10-AUG-95	9.4	4.2	0.2	403	201	5	135	42.9	120	13.3	2.2
15-AUG-95	10.3	4.9	0.7	396	196	7	130	38.3	325	19.7	2.6
23-AUG-95	8.1	4.0	0.7	360	202	9	103	44.4	250	4.8	2.5
29-AUG-95	11.5	3.4	0.3	402	202	9	143	35.0	210	15.8	3.0
07-SEP-95	9.7	3.9	0.5	436	216	7	175	44.9	370	15.9	3.4
12-SEP-95	8.9	3.3	1.0	467	217	8	209	52.5	420	13.9	2.1
20-SEP-95	9.2	5.4	1.0	468	204	10	217	50.9	420	17.3	2.0
27-SEP-95	9.1	5.0	0.6	492	204	2	249	54.2	465	20.9	2.6
04-OCT-95	7.3	4.5	0.7	434	186	8	217	59.5	440	21.6	2.8
11-OCT-95	8.7	4.8	0.2	496	225	7	237	57.0	650	21.0	2.3
20-OCT-95	8.9	7.1	3.1	445	222	31	184	50.0	640	7.2	2.6
SWM[a]	7.9	4.1	0.7	481	194	9	245	65.3	351	18.7	2.5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 61. Indices of phytoplankton biomass for Lake Ontario: station 41, 1981. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
19-MAR-81	0.184	0.027	3.00	2.80	0.622
23-MAR-81	0.211	0.032	3.40	3.30	0.998
31-MAR-81	0.270	0.043	5.90	5.50	1.132
09-APR-81	0.230	0.041	5.20	4.70	1.099
16-APR-81	0.168	0.024	2.90	2.60	0.544
22-APR-81					
28-APR-81	0.207	0.035	2.60	2.20	1.022
05-MAY-81	0.196	0.040	2.10	1.90	0.547
13-MAY-81	0.210	0.035	1.80	1.50	0.469
21-MAY-81	0.217	0.030	1.80	1.70	0.648
27-MAY-81	0.238	0.035	1.70	1.50	0.344
03-JUN-81					1.008
10-JUN-81	0.758	0.122	5.30	5.20	1.323
16-JUN-81			3.60	3.40	1.398
23-JUN-81	0.666	0.098	4.70	4.80	0.977
30-JUN-81	0.642	0.105	4.10	4.00	2.435
07-JUL-81	0.682	0.127	6.50	6.40	
13-JUL-81	0.551	0.077	1.90	1.80	0.767
22-JUL-81	0.753	0.117	5.60	5.50	
27-JUL-81	0.578	0.093	2.40	2.30	0.308
05-AUG-81	0.540	0.105	3.70	3.40	0.704
11-AUG-81	0.680	0.108	2.90	2.90	0.496
19-AUG-81	0.642	0.123	3.40	2.90	
25-AUG-81	0.545	0.090	3.40	2.90	0.768
01-SEP-81	0.811	0.112	3.60	3.00	
16-SEP-81	0.557	0.078	5.40	4.80	
25-SEP-81	0.422	0.069	2.10	1.60	0.726
29-SEP-81	0.451	0.073	5.80	5.10	
06-OCT-81	0.465	0.067	6.00	5.60	1.208
14-OCT-81	0.392	0.069	5.70	5.70	1.120
21-OCT-81	0.337	0.060	3.70	3.50	0.943
27-OCT-81	0.288	0.053	3.80	3.00	0.913
03-NOV-81	0.385	0.057	5.30	4.90	1.275
11-NOV-81	0.338	0.049	4.30	3.90	1.154
18-NOV-81	0.401	0.061	6.30	4.60	1.001
24-NOV-81	0.237	0.040	3.70	3.10	0.907
01-DEC-81					0.495
11-DEC-81					0.329
SWM[a]	0.475	0.076	3.80	3.50	0.881

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 62. Indices of phytoplankton biomass for Lake Ontario: station 41, 1982. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
10-MAR-82					
18-MAR-82					
25-MAR-82	0.130	0.018	1.20	0.20	0.310
01-APR-82	0.093	0.017			0.361
14-APR-82	0.100	0.016	1.30	1.20	0.359
29-APR-82	0.115	0.023			
04-MAY-82	0.200	0.031	2.20	1.90	
11-MAY-82	0.195	0.033	1.50	0.50	0.837
18-MAY-82	0.151	0.026	1.30	1.00	0.498
28-MAY-82	0.154	0.024	2.20	1.80	0.741
01-JUN-82	0.141	0.017	1.60	0.40	0.719
07-JUN-82	0.105	0.018	2.70	2.10	0.756
15-JUN-82	0.193	0.030			1.496
22-JUN-82			3.10	1.80	
29-JUN-82	0.596	0.110	7.60	4.10	
06-JUL-82	0.554	0.097	4.30	2.50	1.049
13-JUL-82	0.553	0.088			1.490
21-JUL-82			4.20	1.50	1.143
26-JUL-82	0.275	0.081	0.80	0.20	0.367
04-AUG-82	0.444	0.085	1.00	1.00	0.221
09-AUG-82					
17-AUG-82	0.378	0.067		0.361	
24-AUG-82	0.463	0.063	1.70	1.30	0.543
30-AUG-82	0.584	0.098	1.60	1.00	0.981
08-SEP-82	0.279	0.045	1.80	1.10	0.687
14-SEP-82					0.886
23-SEP-82	0.432	0.076	4.80	3.60	1.799
28-SEP-82	0.352	0.060	4.20	3.60	1.058
05-OCT-82	0.372	0.056	5.50	3.30	1.410
13-OCT-82	0.432	0.062			0.859
19-OCT-82	0.258	0.033	2.50	1.50	0.597
25-OCT-82	0.193	0.026	1.20	1.00	0.357
02-NOV-82	0.245	0.038	1.90	1.60	0.410
09-NOV-82	0.207	0.032	0.50	0.20	0.456
16-NOV-82	0.142	0.023			0.210
22-NOV-82	0.216	0.035	1.60	1.60	0.466
SWM[a]	0.307	0.053			0.802

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 63. Indices of phytoplankton biomass for Lake Ontario: station 41, 1983. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
17-MAR-83	0.122	0.015			0.141
06-APR-83	0.143	0.020	0.80	0.00	0.254
12-APR-83	0.123	0.037	1.70	1.60	0.261
22-APR-83	0.127	0.033	1.80	1.60	0.145
26-APR-83	0.113	0.016	1.40	0.40	0.257
04-MAY-83	0.136	0.019	1.80	0.80	0.353
10-MAY-83	0.147	0.020	1.60	1.30	0.468
17-MAY-83	0.282	0.028	1.20	1.10	0.413
25-MAY-83	0.249	0.034	1.10	0.50	0.776
01-JUN-83					2.416
08-JUN-83	0.810	0.158	2.70	2.40	1.858
15-JUN-83	0.548	0.078	2.70	2.70	1.952
22-JUN-83	0.454	0.065	2.10	1.70	1.090
29-JUN-83	0.233	0.039	1.90	1.20	1.281
06-JUL-83	0.590	0.100	4.00	0.90	1.378
13-JUL-83	0.660	0.110	4.00	0.60	0.868
21-JUL-83	0.479	0.073	2.60	0.80	
26-JUL-83	0.543	0.074	1.70	1.30	0.354
03-AUG-83	0.550	0.067	2.90	0.30	0.593
10-AUG-83	0.523	0.069	3.10	1.10	0.653
16-AUG-83	0.875	0.100	3.90	2.10	0.679
23-AUG-83	0.658	0.077	3.90	0.30	0.828
31-AUG-83	1.135		5.10	4.20	1.923
08-SEP-83			2.50	1.60	
14-SEP-83	0.646	0.092	2.50	1.60	1.586
21-SEP-83	0.797	0.082	3.90	2.30	
28-SEP-83	0.425	0.054	6.70	1.10	1.135
06-OCT-83	0.454	0.061			0.839
13-OCT-83	0.880	0.043	7.70	2.90	1.118
19-OCT-83	0.250	0.035	6.80	2.70	0.209
26-OCT-83	0.250	0.036	8.40	2.40	0.620
02-NOV-83			10.40	8.10	0.815
08-NOV-83	0.231	0.039	7.20	4.10	0.679
15-NOV-83	0.234		8.10	7.50	0.554
23-NOV-83	0.263	0.032	6.60	6.40	0.452
SWM[a]	0.481	0.063	3.37	1.55	0.934

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 64. Indices of phytoplankton biomass for Lake Ontario: station 41, 1984. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
21-MAR-84	0.121	0.042	1.70	0.80	0.207
04-APR-84	0.119	0.020			0.361
17-APR-84	0.102	0.014	0.50		0.139
25-APR-84	0.128	0.022	0.60	0.10	0.208
03-MAY-84	0.118	0.013			0.161
07-MAY-84	0.116	0.020	1.00		0.170
14-MAY-84	0.144	0.036			0.212
23-MAY-84	0.146	0.020	0.80	0.20	0.264
30-MAY-84	0.170	0.033	0.80		0.351
05-JUN-84	0.150	0.016	0.60		0.124
13-JUN-84	0.564	0.075	2.60		1.008
19-JUN-84	0.577	0.081	2.70	1.45	1.304
26-JUN-84	0.527	0.080	8.30	3.50	2.769
05-JUL-84	0.451	0.097	7.55	1.15	1.864
10-JUL-84	0.458	0.126	3.30	1.50	1.647
18-JUL-84	0.604	0.131	2.80	1.10	1.313
25-JUL-84	0.502	0.089	2.80	0.30	0.939
30-JUL-84	0.423	0.068	1.10	0.30	0.560
08-AUG-84	0.342	0.063	1.80	1.20	0.475
14-AUG-84	0.825	0.183	1.30	0.80	0.864
21-AUG-84	0.310	0.050	4.10	1.90	0.742
28-AUG-84	0.607	0.092	2.80	0.80	0.794
05-SEP-84	0.545	0.081	2.60	0.40	0.416
11-SEP-84	0.217	0.035	3.80	2.40	0.902
18-SEP-84	0.450	0.084	5.40		0.800
25-SEP-84	0.218	0.032	3.70		0.715
09-OCT-84	0.439	0.077	5.90	0.30	0.840
16-OCT-84	0.698	0.094	1.10	0.40	1.350
25-OCT-84	0.359	0.035	5.60	2.00	1.101
05-NOV-84	0.289	0.061	4.60		0.636
14-NOV-84					0.529
SWM[a]	0.360	0.061	2.80	0.96	0.793

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 65. Indices of phytoplankton biomass for Lake Ontario: station 41, 1985. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
26-MAR-85	0.177	0.023	1.90	1.35	0.238
04-APR-85	0.145	0.022			0.304
09-APR-85					0.657
16-APR-85	0.208	0.025	2.80	1.25	0.745
23-APR-85	0.228	0.029	2.75	1.85	0.757
30-APR-85	0.224	0.029	2.70	1.60	
07-MAY-85	0.216	0.032	3.10	1.85	1.542
14-MAY-85	0.214	0.031	3.20	2.20	0.889
21-MAY-85	0.222	0.033	2.85	1.60	1.563
29-MAY-85	0.284	0.042	4.05	2.00	2.152
07-JUN-85	0.618	0.079	5.65	5.05	1.618
11-JUN-85	0.500	0.070	4.65	3.45	1.568
18-JUN-85	0.539	0.091	4.80	4.25	1.277
25-JUN-85	0.644	0.090	4.40	2.10	1.576
03-JUL-85			5.20	2.50	1.980
09-JUL-85	0.513	0.085	4.85	3.85	1.096
15-JUL-85	0.564	0.090	5.25	3.50	1.436
23-JUL-85	0.363	0.057	2.25	1.75	0.940
29-JUL-85	0.363	0.062	2.10	1.60	1.153
07-AUG-85	0.342	0.062	3.50	2.75	0.615
14-AUG-85	0.391	0.065	3.70	3.00	0.760
20-AUG-85	0.525	0.088	4.10	3.55	1.556
29-AUG-85	0.439	0.072	4.05	3.60	1.007
04-SEP-85	0.421	0.069	3.95	3.30	0.898
10-SEP-85	0.594	0.088	3.50	2.70	2.131
16-SEP-85	0.438	0.069	3.90	3.25	2.182
25-SEP-85	0.556	0.086	6.00	5.25	1.086
30-SEP-85	0.362	0.046	4.50	3.80	0.993
07-OCT-85	0.292	0.042	3.10	2.70	1.010
15-OCT-85	0.353	0.055	3.30	3.00	1.302
22-OCT-85	0.404	0.060	5.15	4.60	1.977
29-OCT-85	0.341	0.050	4.85	4.10	0.694
SWM[a]	0.388	0.059	3.82	2.84	1.263

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 66. Indices of phytoplankton biomass for Lake Ontario: station 41, 1986. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
10-APR-86	0.134	0.018	1.47	1.25	0.279
15-APR-86	0.150	0.022	1.10	1.30	0.160
23-APR-86					0.177
29-APR-86	0.157	0.020	1.05	1.00	0.122
05-MAY-86	0.136	0.020	1.60	1.05	0.336
13-MAY-86	0.192	0.029	2.10	1.50	0.498
20-MAY-86	0.175	0.027	1.80	1.50	0.202
26-MAY-86	0.164	0.027	1.90	1.65	0.380
02-JUN-86	0.451	0.051	5.20	3.50	2.084
09-JUN-86	0.501	0.064	8.35	6.10	2.246
17-JUN-86	0.737	0.106	8.40	6.45	3.009
24-JUN-86	0.488	0.074	4.75	3.60	1.562
02-JUL-86	0.431	0.064	3.30	2.70	1.739
07-JUL-86	0.352	0.042	2.80	2.30	2.073
15-JUL-86	0.475	0.088	3.65	2.90	1.960
22-JUL-86					0.517
28-JUL-86	0.446	0.076	1.95	1.35	0.480
05-AUG-86	0.392	0.064			0.577
12-AUG-86	0.435	0.064	3.70	3.10	0.828
21-AUG-86	0.687	0.083			
25-AUG-86	0.509	0.069	3.65	2.90	2.039
02-SEP-86	0.687	0.084	2.45	2.20	1.687
09-SEP-86			5.75	4.30	
16-SEP-86	0.372	0.041	3.40	2.60	1.529
22-SEP-86	0.318	0.044	3.85	2.65	1.287
29-SEP-86					1.278
07-OCT-86					
16-OCT-86			2.65	1.85	0.666
22-OCT-86			4.20	3.45	0.588
SWM[a]			3.34	2.58	1.100

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 67. Indices of phytoplankton biomass for Lake Ontario: station 41, 1987. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
14-APR-87	0.216	0.025			1.652
23-APR-87	0.169	0.020			0.723
28-APR-87	0.228	0.026			2.900
05-MAY-87	0.239	0.029			
13-MAY-87	0.288	0.051	4.37	2.55	2.324
20-MAY-87	0.340	0.050	5.53	3.96	2.959
27-MAY-87			9.24	6.38	3.441
03-JUN-87			5.54	3.20	1.543
10-JUN-87			2.89	2.19	1.205
17-JUN-87			3.08	2.75	0.872
24-JUN-87			4.83	4.06	0.982
01-JUL-87	0.342	0.057	2.73	2.37	0.832
08-JUL-87	0.258	0.040	1.92	1.37	0.266
17-JUL-87	0.233	0.031		1.40	0.288
22-JUL-87	0.216	0.032	2.00	1.05	0.355
29-JUL-87	0.255	0.036	2.23	1.77	0.484
06-AUG-87	0.371	0.039	3.61	2.54	1.545
12-AUG-87	0.603	0.082	4.27	3.67	0.857
19-AUG-87	0.349	0.040	7.79	5.14	1.919
26-AUG-87	0.274	0.040	2.36	1.50	
03-SEP-87	0.408	0.047	3.10	2.76	0.453
09-SEP-87	0.418	0.060	4.08	3.44	0.995
16-SEP-87	0.409	0.068	4.02	3.52	0.721
24-SEP-87	0.272	0.039	3.67	3.11	0.717
30-SEP-87	0.377	0.052	4.03	3.82	1.273
09-OCT-87	0.274	0.037	3.83	3.14	0.840
15-OCT-87	0.306	0.039	3.67	3.37	0.802
21-OCT-87	0.301	0.040	4.07	3.85	0.414
SWM[a]	0.310	0.044			1.251

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 68. Indices of phytoplankton biomass for Lake Ontario: station 41, 1988. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
07-APR-88	0.172	0.030	1.90	1.50	0.851
20-APR-88	0.174	0.037	2.50	1.95	0.851
27-APR-88	0.212	0.040	3.10	2.55	0.941
06-MAY-88	0.206	0.040	2.00	1.40	0.464
11-MAY-88	0.177	0.037	1.75	1.35	0.424
19-MAY-88	0.302	0.063	3.30	2.05	1.148
26-MAY-88	0.210	0.045	3.55	1.90	0.716
02-JUN-88	0.256	0.033	5.65	3.90	0.954
08-JUN-88	0.508	0.076	3.85	3.15	1.013
16-JUN-88	0.229	0.030	4.40	3.55	2.356
22-JUN-88	0.492	0.071	4.35	3.95	1.528
30-JUN-88	0.387	0.059	6.05	5.45	2.013
06-JUL-88	0.442	0.068	4.35	3.65	2.057
14-JUL-88	0.183	0.026	2.10	2.10	0.554
20-JUL-88	0.334	0.051	2.05	1.60	0.694
28-JUL-88	0.471	0.077	3.20	2.70	0.459
04-AUG-88	0.526	0.090	2.95	2.55	0.520
11-AUG-88	0.298	0.042	1.75	1.45	0.829
18-AUG-88	0.416	0.060	2.80	2.05	0.327
25-AUG-88	0.287	0.044	2.40	1.80	0.291
31-AUG-88	0.345	0.008	3.20	2.40	0.530
09-SEP-88	0.279	0.072	2.95	1.80	0.910
15-SEP-88	0.407	0.063	3.40	1.65	0.733
22-SEP-88	0.320	0.047	3.40	1.15	0.457
28-SEP-88	0.277	0.035	2.25	1.85	0.946
06-OCT-88	0.439	0.068	4.70	4.00	1.081
SWM[a]	0.327	0.052	3.33	2.57	0.928

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 69. Indices of phytoplankton biomass for Lake Ontario: station 41, 1989. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
04-APR-89	0.242	0.030	2.70	1.95	1.204
20-APR-89	0.240	0.035	3.70	2.20	1.661
26-APR-89	0.415	0.050	3.80	2.10	2.322
04-MAY-89	0.223	0.029	2.90	1.60	1.107
10-MAY-89	0.205	0.026	3.00	1.40	2.156
18-MAY-89	0.260	0.036	3.10	1.30	1.212
25-MAY-89	0.252	0.035	3.20	1.40	0.861
01-JUN-89	0.229	0.036	3.00	1.70	0.601
07-JUN-89	0.594	0.063	4.20	3.60	1.014
15-JUN-89	0.461	0.067	4.40	3.60	0.965
21-JUN-89	0.489	0.073	4.30	3.90	1.858
29-JUN-89	0.350	0.063	2.00	1.50	1.775
06-JUL-89	0.281	0.045	1.50	1.30	0.702
13-JUL-89	0.248	0.041	1.60	1.30	0.424
19-JUL-89	0.264	0.058	1.50	1.00	0.385
27-JUL-89	0.215	0.031	1.30	1.00	0.309
02-AUG-89	0.266	0.044	1.70	1.40	0.378
11-AUG-89	0.471	0.070	3.20	2.80	0.455
17-AUG-89	0.438	0.071	3.60	3.30	0.726
24-AUG-89	0.354	0.088	3.90	3.30	0.468
30-AUG-89	0.280	0.075	3.10	2.60	0.322
08-SEP-89	0.368	0.056	3.30	2.90	0.678
14-SEP-89	0.373	0.059	3.70	3.40	1.158
21-SEP-89	0.358	0.050	4.40	3.90	0.992
27-SEP-89	0.313	0.061	3.20	2.70	0.463
05-OCT-89	0.230	0.030	2.60	2.30	0.956
12-OCT-89	0.248	0.034	2.90	2.60	0.460
26-OCT-89					0.854
SWM[a]	0.312	0.048	3.02	2.30	0.955

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 70. Indices of phytoplankton biomass for Lake Ontario: station 41, 1990. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
03-APR-90	0.170	0.029	1.98	1.83	0.650
19-APR-90	0.209	0.032	3.59	1.32	1.253
25-APR-90	0.273	0.033	4.76	3.18	1.181
03-MAY-90	0.225	0.032	5.06	3.23	1.331
09-MAY-90	0.249	0.035	5.93	4.43	2.394
17-MAY-90	0.306	0.045	7.23	3.39	2.065
24-MAY-90	0.358	0.052	6.26	2.72	0.947
31-MAY-90	0.397	0.058	5.90	1.38	1.357
06-JUN-90		0.086	4.47	1.32	1.011
14-JUN-90	0.479	0.076	3.13	1.93	1.048
20-JUN-90	0.426	0.072	2.58	1.86	0.901
28-JUN-90	0.467	0.069	3.49	2.92	1.581
05-JUL-90	0.332	0.048	1.93	1.15	1.635
12-JUL-90	0.269	0.041	1.35	1.26	0.365
18-JUL-90	0.202	0.031	1.22	1.16	0.506
26-JUL-90	0.213	0.036	1.26	1.05	0.331
02-AUG-90	0.267	0.041	1.91	1.82	0.485
10-AUG-90	0.323	0.049	3.08	2.49	0.691
15-AUG-90	0.382	0.072	3.37	2.06	1.535
24-AUG-90	0.273	0.044	2.70	1.90	0.318
30-AUG-90	0.424	0.068	3.50	3.02	0.758
07-SEP-90	0.357	0.047	4.11	3.22	0.937
12-SEP-90	0.414	0.060	3.70	3.27	0.552
20-SEP-90	0.342	0.065	3.94	3.43	0.404
27-SEP-90	0.267	0.070	2.36	2.10	0.434
12-OCT-90	0.292	0.051	3.14	2.89	0.769
25-OCT-90	0.329	0.062	5.13	4.75	
SWM[a]	0.315	0.052	3.57	2.45	0.950

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 71. Indices of phytoplankton biomass for Lake Ontario: station 41, 1991. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
03-APR-91	0.189	0.021	1.10	0.80	
16-APR-91	0.219	0.038	1.73	0.91	0.791
24-APR-91	0.133	0.017	2.01	1.49	0.331
01-MAY-91	0.186	0.031	2.23	1.38	0.303
09-MAY-91	0.205	0.030	3.51	1.80	0.832
15-MAY-91	0.201	0.026	4.67	1.39	1.770
24-MAY-91	0.586	0.072	6.41	4.15	2.542
29-MAY-91	0.720	0.104	7.46	3.12	1.981
06-JUN-91	0.906	0.102	5.55	2.67	1.794
11-JUN-91	0.479	0.067	2.39	2.13	1.104
20-JUN-91	0.295	0.051	1.38	0.95	0.691
26-JUN-91	0.360	0.060	2.28	2.00	0.536
05-JUL-91	0.313	0.077	1.85	1.56	0.537
10-JUL-91	0.296	0.071	2.70	2.35	0.472
18-JUL-91	0.278	0.052	2.33	2.14	0.479
24-JUL-91	0.461	0.077	2.86	2.43	0.780
01-AUG-91	0.373	0.063	2.92	2.67	1.104
07-AUG-91	0.325	0.052	2.45	2.18	0.798
15-AUG-91	0.431	0.051	3.28	2.87	0.740
21-AUG-91	0.410	0.050	3.96	3.45	0.608
29-AUG-91	0.363	0.052	4.51	4.13	1.021
04-SEP-91	0.351	0.057	4.09	3.55	1.004
12-SEP-91	0.300	0.038	4.22	3.84	1.100
18-SEP-91	0.351	0.054	4.20	2.70	0.695
03-OCT-91	0.279	0.038	2.50	1.70	0.730
10-OCT-91	0.261	0.035	2.60	1.10	0.485
17-OCT-91	0.276	0.048	3.20	2.30	0.633
24-OCT-91	0.323	0.055	3.00	1.60	0.866
30-OCT-91	0.252	0.044	3.00	1.80	0.889
SWM[a]	0.343	0.052	3.20	2.21	0.896

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 72. Indices of phytoplankton biomass for Lake Ontario: station 41, 1992. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
31-MAR-92			2.20	1.37	1.622
08-APR-92	0.243	0.034	2.22	1.13	1.389
15-APR-92	0.265	0.038	4.73	3.24	1.921
28-APR-92	0.196	0.027	3.44	1.98	1.186
07-MAY-92	0.184	0.029	3.21	2.01	0.667
14-MAY-92	0.205	0.038	3.52	1.11	1.361
22-MAY-92	0.241	0.035	2.25	0.81	1.409
26-MAY-92	0.253	0.039	5.04	1.56	2.001
04-JUN-92	0.575	0.084	5.58	1.65	1.868
10-JUN-92	0.371	0.051	5.50	1.30	1.588
18-JUN-92	0.361	0.057	2.27	1.56	2.458
25-JUN-92	0.279	0.043	1.72	1.10	0.956
02-JUL-92	0.151	0.026	1.81	1.12	0.689
09-JUL-92	0.231	0.035	1.52	0.89	0.365
16-JUL-92	0.343	0.057	1.37	0.48	0.288
22-JUL-92	0.420	0.065	2.26	1.27	0.806
30-JUL-92	0.461	0.072	4.25	3.34	0.577
13-AUG-92	0.624	0.099	5.95	5.01	0.538
19-AUG-92	0.621	0.105	8.23	7.75	1.128
27-AUG-92	0.392	0.070	3.97	3.28	0.632
02-SEP-92	0.333	0.054	1.61	0.97	0.349
11-SEP-92	0.374	0.059	2.01	1.19	0.640
16-SEP-92	0.253	0.082	2.32	1.66	0.742
30-SEP-92	0.361	0.047	3.15	2.22	0.748
08-OCT-92	0.299	0.049	3.40	2.66	0.492
15-OCT-92	0.293	0.048	2.98	2.17	0.459
22-OCT-92	0.180	0.029	2.49	1.71	0.526
SWM[a]	0.325	0.052	3.36	2.11	0.984

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 73. Indices of phytoplankton biomass for Lake Ontario: station 41, 1993. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 103.

Date	POC	PON	Chl_{un}	Chl_{cor}
30-MAR-93	0.179	0.025	2.01	1.45
07-APR-93	0.189	0.030	2.43	1.44
14-APR-93	0.226	0.032	1.57	1.23
21-APR-93	0.128	0.017	1.43	1.00
28-APR-93	0.146	0.020	2.18	1.32
06-MAY-93	0.085	0.022	1.57	1.01
12-MAY-93	0.147	0.023	2.77	2.19
20-MAY-93	0.146	0.025	3.17	2.51
27-MAY-93	0.174	0.030	3.75	3.13
03-JUN-93	0.358	0.048	4.76	3.42
09-JUN-93	0.313	0.044	5.13	3.60
17-JUN-93	0.370	0.055	2.55	1.78
23-JUN-93	0.375	0.056	3.28	2.87
01-JUL-93	0.265	0.041	2.33	1.70
07-JUL-93	0.342	0.055	3.39	2.38
15-JUL-93	0.245	0.043	2.31	1.40
21-JUL-93	0.259	0.055	2.76	1.80
29-JUL-93	0.281	0.065		
05-AUG-93	0.194	0.043	2.49	1.63
12-AUG-93	0.202	0.044	3.10	2.47
18-AUG-93			3.34	2.42
26-AUG-93	0.139	0.053	3.32	2.65
01-SEP-93	0.173	0.036	2.98	1.81
10-SEP-93	0.284	0.046	2.87	1.92
15-SEP-93	0.267	0.042	2.72	2.14
23-SEP-93	0.386	0.083	3.13	2.48
30-SEP-93	0.339	0.050	2.97	2.31
07-OCT-93	0.193	0.028	1.98	1.38
14-OCT-93	0.266	0.049	3.10	2.87
27-OCT-93	0.269	0.042	4.28	3.55
SWM[a]	0.239	0.042	2.92	2.16

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 74. Indices of phytoplankton biomass for Lake Ontario: station 41, 1994. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 104.

Date	POC	PON	Chl_{un}	Chl_{cor}
12-APR-94	0.166	0.024	2.08	1.62
19-APR-94	0.219	0.027	2.37	1.95
26-APR-94	0.225	0.041	2.60	1.94
05-MAY-94	0.187	0.025	2.50	2.10
12-MAY-94	0.190	0.033	3.00	2.56
19-MAY-94	0.233	0.039	3.39	2.76
26-MAY-94	0.235	0.037	3.53	2.86
02-JUN-94	0.214	0.032	3.17	2.60
06-JUN-94	0.222	0.034	3.59	3.10
16-JUN-94	0.288	0.045	4.60	3.78
30-JUN-94	0.421	0.066	6.82	6.34
14-JUL-94	0.515	0.076	3.14	3.09
28-JUL-94	0.267	0.053	2.05	1.36
11-AUG-94	0.332	0.052	0.90	1.57
18-AUG-94	0.408	0.066	3.06	2.83
25-AUG-94	0.316	0.051	2.70	2.37
31-AUG-94	0.501	0.070	3.96	3.55
09-SEP-94	0.354	0.044	3.43	3.02
14-SEP-94	0.404	0.059	4.29	3.64
22-SEP-94	0.474	0.062	4.48	4.01
26-SEP-94				
06-OCT-94	0.422	0.057	3.93	3.57
13-OCT-94	0.402	0.058	3.68	3.40
20-OCT-94	0.389	0.053	4.82	4.45
SWM[a]	0.330	0.049	3.47	3.06

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 75. Indices of phytoplankton biomass for Lake Ontario: station 41, 1995. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 105.

Date	POC	PON	Chl_{un}	Chl_{cor}
11-APR-95	0.220	0.030	1.88	1.52
19-APR-95	0.166	0.027	2.39	1.66
26-APR-95	0.121	0.021	2.62	1.78
04-MAY-95	0.196	0.030	2.82	2.00
11-MAY-95	0.184	0.030	3.47	2.41
18-MAY-95	0.150	0.024	3.97	2.80
24-MAY-95	0.155	0.027	3.51	2.39
02-JUN-95	0.366	0.055	5.54	3.52
07-JUN-95	0.467	0.060	6.39	4.71
16-JUN-95	0.460	0.068	5.54	4.60
21-JUN-95	0.314	0.052	2.44	2.34
29-JUN-95	0.286	0.047	2.07	1.85
10-JUL-95	0.220	0.039	2.07	1.41
15-JUL-95	0.201	0.029	1.50	1.05
24-JUL-95	0.285	0.064	2.10	1.92
01-AUG-95	0.370	0.064	2.64	2.21
11-AUG-95	0.316	0.046	3.42	2.99
16-AUG-95	0.313	0.047	3.81	3.14
30-AUG-95	0.327	0.054	2.86	2.83
14-SEP-95	0.600	0.091	3.20	2.49
21-SEP-95	0.284	0.048	3.04	2.53
26-SEP-95	0.265	0.041	3.15	2.43
04-OCT-95	0.376	0.043	3.84	3.50
10-OCT-95	0.307	0.043	2.82	2.36
23-OCT-95	0.261	0.036	3.30	2.56
SWM[a]	0.292	0.045	3.13	2.48

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 76. Indices of phytoplankton biomass for Lake Ontario: station 81, 1981. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
16-MAR-81	0.509	0.076			2.638
24-MAR-81	0.432	0.077	8.70	8.60	2.503
31-MAR-81	0.524	0.075	9.00	8.70	2.041
08-APR-81	0.520	0.081	8.80	8.70	2.237
17-APR-81	0.583	0.093	7.10	6.80	1.348
22-APR-81	0.533	0.081	6.30	6.00	1.520
28-APR-81	0.481	0.075	4.50	3.90	1.849
05-MAY-81	0.421	0.081	4.00	3.60	1.456
12-MAY-81	0.459	0.089	3.20	3.00	1.286
22-MAY-81	0.560	0.091	2.80	2.80	0.501
28-MAY-81	0.541	0.080	2.90	3.00	0.996
04-JUN-81	0.527	0.083	4.20	4.05	2.107
10-JUN-81	0.585	0.093	3.70	3.40	1.528
16-JUN-81	0.576	0.098	5.20	5.10	1.994
23-JUN-81	0.518	0.108	5.50	5.20	1.238
30-JUN-81	0.725	0.141	10.40	10.10	1.732
07-JUL-81	0.617	0.113	6.90	6.50	
14-JUL-81	0.579	0.112	5.10	4.50	1.339
23-JUL-81	0.632	0.118	7.60	7.00	
30-JUL-81	0.375	0.086	6.60	5.50	0.901
05-AUG-81	0.609	0.131	9.20	8.30	1.939
11-AUG-81	0.651	0.143	5.20	4.70	0.699
18-AUG-81	0.413	0.097	5.90	5.60	
25-AUG-81	0.496	0.084	7.10	6.30	1.152
01-SEP-81	0.586	0.091	3.00	2.60	
09-SEP-81	0.471	0.076	3.80	4.30	
15-SEP-81	0.548	0.088	7.30	6.40	
24-SEP-81	0.301	0.047	2.90	2.00	0.738
30-SEP-81	0.472	0.075	6.20	5.60	
05-OCT-81	0.213	0.035	5.00	4.60	1.496
14-OCT-81	0.421	0.078	7.60	7.00	1.506
20-OCT-81	0.466	0.088	5.60	5.20	0.812
27-OCT-81	0.353	0.065	5.30	3.60	1.003
03-NOV-81	0.349	0.056	4.50	4.00	0.718
11-NOV-81	0.349	0.065	5.80	5.20	1.197
18-NOV-81	0.304	0.054	5.20	3.40	0.875
24-NOV-81	0.326	0.055	4.90	4.00	0.706
01-DEC-81	0.297	0.048	4.70	3.70	0.704
08-DEC-81	0.276	0.047	7.40	7.30	0.475
SWM[a]	0.507	0.090	5.66	5.22	1.301

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 77. Indices of phytoplankton biomass for Lake Ontario: station 81, 1982. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
31-MAR-82	0.262	0.045			1.862
28-APR-82	0.359	0.067			
05-MAY-82	0.509	0.075	4.90	4.50	
11-MAY-82	0.332	0.058	2.70	1.70	2.161
20-MAY-82	0.470	0.073			1.467
27-MAY-82	0.410	0.059	3.40	2.00	2.143
01-JUN-82	0.301	0.074	3.10	2.70	1.109
08-JUN-82	0.297	0.054	2.90	1.10	0.739
16-JUN-82	0.643	0.101			1.082
22-JUN-82	0.474	0.103	7.30	4.10	
29-JUN-82					
06-JUL-82	0.661	0.111	4.50	3.50	1.976
15-JUL-82					1.973
21-JUL-82	0.187	0.031	3.80	1.60	1.226
27-JUL-82	0.398	0.117	2.00	0.60	0.780
04-AUG-82	0.421	0.077	5.00	3.40	0.831
10-AUG-82	0.404	0.081	3.50	2.70	0.542
18-AUG-82	0.494	0.075			1.804
24-AUG-82	0.631	0.112	6.00	3.40	1.133
31-AUG-82	0.483	0.087	3.50	3.00	1.126
08-SEP-82	0.260	0.034			1.000
16-SEP-82	0.424	0.074			1.071
23-SEP-82	0.494	0.080	4.60	3.00	0.909
29-SEP-82	0.400	0.067	3.40	1.40	1.174
05-OCT-82	0.241	0.040	5.40	2.50	1.329
14-OCT-82					1.341
19-OCT-82	0.355	0.058	5.40	3.00	
26-OCT-82	0.199	0.030	3.60	2.70	0.723
02-NOV-82	0.462	0.104	9.40	8.90	1.648
09-NOV-82	0.440	0.069	4.20	3.10	0.763
17-NOV-82	0.368	0.057			0.623
23-NOV-82	0.309	0.053	1.80	1.00	0.474
SWM[a]	0.401	0.071			

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 78. Indices of phytoplankton biomass for Lake Ontario: station 81, 1983. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
17-MAR-83	0.334	0.050			0.794
06-APR-83	0.388	0.061	4.20		1.107
12-APR-83	0.393	0.064	4.80	0.80	1.448
21-APR-83					1.488
26-APR-83	0.396	0.064			1.189
04-MAY-83	0.462	0.082	5.60	3.70	1.065
10-MAY-83	0.414	0.061	3.00	3.00	1.356
17-MAY-83	0.542	0.080	1.90	0.90	1.701
25-MAY-83	0.454	0.068	4.00	2.00	1.617
01-JUN-83					1.440
07-JUN-83	0.645	0.088	3.40	0.50	1.904
14-JUN-83	0.571	0.077	2.60	2.20	1.922
22-JUN-83	0.472	0.060	2.40		1.335
28-JUN-83	0.585	0.100	6.30	3.60	2.249
05-JUL-83	0.520	0.090	2.90	1.40	1.935
12-JUL-83	0.680	0.100	5.10	1.40	1.319
19-JUL-83	0.891	0.141	7.80	2.20	
26-JUL-83	0.880	0.107	6.40	1.10	1.166
04-AUG-83	1.083	0.157	5.40	2.10	
09-AUG-83	0.685	0.100	3.30	2.00	1.343
17-AUG-83	0.534	0.058	3.90	2.10	0.725
23-AUG-83	1.032	0.124	7.10	5.80	2.395
30-AUG-83	1.172	0.142	5.70	4.80	1.536
07-SEP-83			3.60	2.90	1.818
13-SEP-83	0.874	0.093	3.70	2.10	
20-SEP-83	0.571	0.065	6.20	1.50	0.891
27-SEP-83	0.441	0.062	11.40	8.50	
06-OCT-83	0.314	0.047			0.769
12-OCT-83			10.10	0.50	1.022
19-OCT-83	0.350	0.044	10.40	3.20	0.789
27-OCT-83	0.267	0.044	10.00	4.00	0.680
02-NOV-83	0.334	0.050	12.60	5.10	0.808
08-NOV-83	0.362	0.054	12.70	5.40	0.863
15-NOV-83					0.907
22-NOV-83	0.344	0.044	11.00	9.90	0.662
SWM[a]	0.594	0.082	5.61	2.55	1.353

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 79. Indices of phytoplankton biomass for Lake Ontario: station 81, 1984. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
21-MAR-84	0.253	0.043	3.40	0.80	0.616
05-APR-84	0.212	0.051	0.20		0.677
17-APR-84	0.545	0.051	2.20	1.00	0.683
25-APR-84	0.283	0.039	2.90	1.40	0.964
03-MAY-84	0.379	0.061	3.00	2.10	1.761
08-MAY-84	0.387	0.066	2.90		2.159
15-MAY-84					2.378
23-MAY-84	0.591	0.089	5.00	1.20	1.275
29-MAY-84	0.560	0.114	1.60	0.10	1.662
05-JUN-84	0.506	0.072	5.00	4.90	2.113
13-JUN-84	0.572	0.056	3.80		1.304
19-JUN-84	0.497	0.074	4.80	3.40	2.029
26-JUN-84	0.442	0.077	4.50	0.80	1.022
04-JUL-84	0.423	0.080	3.70	0.80	1.800
10-JUL-84	0.355	0.077	1.40	0.60	1.474
17-JUL-84	0.491	0.105	3.60	1.60	0.663
24-JUL-84	0.657	0.144	3.60	0.60	1.001
31-JUL-84	0.848		3.20	2.50	1.030
08-AUG-84	0.376	0.067	6.10	5.10	1.045
14-AUG-84	0.221	0.033	2.90	0.70	1.700
21-AUG-84	0.860	0.140	4.00	1.40	1.772
28-AUG-84	0.828	0.144	5.00	1.00	0.960
11-SEP-84	0.241	0.042	4.70	1.00	0.673
25-SEP-84	0.462	0.060	6.10	4.60	1.264
10-OCT-84	0.369	0.096	5.70	0.40	0.865
24-OCT-84	0.356	0.057	5.60	3.80	0.991
06-NOV-84	0.421	0.074	5.30	2.00	0.495
SWM[a]	0.466	0.078	4.02	1.92	1.243

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 80. Indices of phytoplankton biomass for Lake Ontario: station 81, 1985. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
28-MAR-85	0.352	0.044	6.00	3.95	0.670
03-APR-85	0.375	0.060			1.590
10-APR-85					2.158
16-APR-85	0.523	0.071	9.25	2.80	2.973
23-APR-85	0.527	0.071	9.15	7.50	3.246
30-APR-85	0.641	0.085	9.85	6.75	2.746
07-MAY-85	0.598	0.085	8.45	6.35	1.587
14-MAY-85	0.644	0.082	7.85	6.15	2.458
22-MAY-85	0.387	0.053	3.95	2.05	1.992
29-MAY-85	0.396	0.059	3.05	2.40	1.284
07-JUN-85	0.422	0.061	4.20	2.95	1.636
11-JUN-85	0.508	0.070	4.40	2.95	1.110
18-JUN-85	0.642	0.101	5.75	4.55	1.802
26-JUN-85	0.545	0.086	5.55	4.30	1.534
03-JUL-85	0.458	0.078	3.60	2.95	2.168
11-JUL-85	0.474	0.084	4.45	3.40	1.663
16-JUL-85	0.469	0.086	5.15	3.90	1.113
23-JUL-85	0.484	0.092	5.95	4.30	0.942
30-JUL-85	0.544	0.100	4.35	3.55	1.565
09-AUG-85	0.435	0.084	4.80	3.80	0.769
13-AUG-85	0.572	0.091	4.40	3.80	
20-AUG-85	0.515	0.097	4.95	4.15	1.178
28-AUG-85	0.492	0.083	5.00	3.00	0.946
06-SEP-85	0.340	0.063	4.80	3.40	1.726
10-SEP-85	0.460	0.066	4.50	3.55	1.883
17-SEP-85	0.612	0.077	5.05	4.50	1.497
25-SEP-85	0.495	0.068	6.10	5.25	1.092
01-OCT-85	0.510	0.077	6.60	5.45	1.441
08-OCT-85	0.438	0.071	5.45	4.75	
16-OCT-85	0.507	0.082	6.45	5.50	1.722
23-OCT-85	0.316	0.053	6.10	5.25	2.263
29-OCT-85	0.408	0.067	8.25	7.60	1.768
SWM[a]	0.493	0.077	5.85	4.29	1.687

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 81. Indices of phytoplankton biomass for Lake Ontario: station 81, 1986. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
09-APR-86	0.300	0.049	3.60	2.20	2.002
17-APR-86	0.430	0.062	4.40	3.70	1.475
22-APR-86	0.421	0.062	5.00	3.40	1.169
30-APR-86	0.416	0.061	4.70	4.20	1.904
06-MAY-86	0.573	0.083	7.20	6.60	1.855
13-MAY-86	0.714	0.088	6.15	4.85	1.676
21-MAY-86	0.523	0.073	5.95	5.20	2.696
27-MAY-86	0.466	0.081	3.75	2.95	1.600
03-JUN-86	0.550	0.057	4.95	2.85	1.748
10-JUN-86	0.434	0.069	4.30	3.05	0.979
18-JUN-86	0.496	0.068	6.35	5.25	1.802
24-JUN-86	0.443	0.061	5.45	4.20	2.045
03-JUL-86	0.643	0.106	5.30	4.45	1.885
08-JUL-86	0.521	0.086	7.80	7.10	3.079
17-JUL-86	0.412	0.068	3.87	3.00	
23-JUL-86	0.552	0.102	4.40	3.45	0.928
30-JUL-86	0.434	0.075			1.349
06-AUG-86	0.449	0.081			0.387
14-AUG-86	0.358	0.052	5.25	4.55	0.443
26-AUG-86	0.658	0.088	7.45	5.30	1.010
03-SEP-86	0.802	0.080	4.20	3.60	1.614
11-SEP-86	0.352	0.054	4.23	3.67	1.994
17-SEP-86	0.356	0.045	6.60	5.55	1.540
23-SEP-86	0.310	0.035	4.65	2.60	0.994
30-SEP-86					0.786
07-OCT-86					1.076
16-OCT-86			4.10	3.05	1.086
21-OCT-86			4.55	3.40	0.706
SWM[a]			5.07	3.95	1.456

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 82. Indices of phytoplankton biomass for Lake Ontario: station 81, 1987. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
16-APR-87	0.563	0.069			1.569
22-APR-87	0.568	0.064			1.368
29-APR-87	0.554	0.069			1.392
05-MAY-87	0.558	0.068			2.072
12-MAY-87	0.555	0.068	3.52	2.69	1.747
21-MAY-87	0.470	0.046	5.53	3.96	1.463
26-MAY-87			4.07	3.26	1.216
02-JUN-87			4.21	3.34	1.558
09-JUN-87			4.80	4.15	1.398
16-JUN-87			2.71	2.35	0.317
23-JUN-87			3.81	2.97	0.960
30-JUN-87	0.525	0.080	4.63	3.85	1.493
07-JUL-87	0.502	0.063	4.85	4.14	1.970
16-JUL-87	0.599	0.095			1.180
21-JUL-87	0.491	0.049	5.26	4.32	1.145
28-JUL-87	0.415	0.062	4.54	3.39	0.972
05-AUG-87	0.387	0.043	3.62	2.78	0.883
11-AUG-87	0.551	0.075	4.55	3.69	0.891
18-AUG-87	0.673	0.099	5.59	4.31	2.031
25-AUG-87	0.638	0.081	5.16	4.07	1.458
01-SEP-87	0.348	0.042	4.83	3.66	0.903
08-SEP-87	0.402	0.066	4.77	3.88	0.635
15-SEP-87	0.327	0.050	3.35	2.94	0.579
23-SEP-87	0.291	0.040	3.68	3.29	0.446
29-SEP-87	0.387	0.055	4.98	4.54	0.958
07-OCT-87	0.348	0.046	3.99	3.60	0.804
14-OCT-87	0.276	0.041	4.45	4.29	0.654
20-OCT-87	0.357	0.050	5.31	4.87	1.331
SWM[a]	0.474	0.062			1.219

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 83. Indices of phytoplankton biomass for Lake Ontario: station 81, 1988. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
08-APR-88	0.373	0.066	5.70	3.80	1.930
19-APR-88	0.543	0.090	6.30	5.05	1.936
26-APR-88	0.435	0.082	5.55	4.35	1.494
05-MAY-88	0.528	0.128	5.80	4.70	1.386
10-MAY-88	0.476	0.096	5.60	4.55	0.541
18-MAY-88	0.500	0.092	4.90	3.75	1.280
25-MAY-88	0.410	0.075	4.55	3.45	0.673
01-JUN-88	0.286	0.032	4.80	3.80	0.867
07-JUN-88	0.441	0.066	4.55	3.65	1.036
15-JUN-88	0.236	0.030	5.00	3.35	0.943
21-JUN-88	0.446	0.062	3.65	3.35	1.561
29-JUN-88	0.406	0.066	3.55	2.95	1.103
05-JUL-88	0.412	0.068	4.20	3.55	0.735
12-JUL-88	0.224	0.035	2.10	2.00	1.221
19-JUL-88	0.647	0.112	5.25	4.70	1.342
27-JUL-88	0.709	0.129	7.50	6.70	0.452
03-AUG-88	0.624	0.108	4.00	3.25	0.795
10-AUG-88	0.416	0.062	3.80	3.00	0.669
17-AUG-88	0.365	0.042	4.55	3.55	0.645
24-AUG-88	0.278	0.035	4.15	3.20	0.676
30-AUG-88	0.314	0.010	3.60	2.90	0.673
08-SEP-88	0.355	0.009	3.30	1.05	1.349
13-SEP-88	0.406	0.059	4.80	2.60	1.342
21-SEP-88	0.387	0.061	4.90	2.65	0.785
27-SEP-88	0.373	0.064	4.25	3.55	0.665
05-OCT-88	0.319	0.040	3.75	3.10	0.473
12-OCT-88	0.305	0.043	4.60	3.90	0.879
20-OCT-88	0.243	0.026	3.10	2.30	0.746
SWM[a]	0.405	0.063	4.56	3.51	1.032

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 84. Indices of phytoplankton biomass for Lake Ontario: station 81, 1989. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
05-APR-89	0.491	0.064	6.80	3.85	2.162
19-APR-89	0.584	0.064	4.20	3.00	2.149
25-APR-89	0.593	0.064	2.90	1.00	1.315
03-MAY-89	0.483	0.065	3.00	1.90	1.695
09-MAY-89	0.549	0.058	2.10	1.30	1.884
17-MAY-89	0.298	0.037	2.00	1.10	0.770
24-MAY-89	0.331	0.043	2.50	1.60	1.103
31-MAY-89	0.360	0.060	3.80	2.80	1.471
06-JUN-89	0.414	0.046	4.90	4.20	1.696
14-JUN-89	0.463	0.082	5.00	4.00	1.596
20-JUN-89	0.352	0.059	4.50	4.00	1.578
28-JUN-89	0.319	0.057	2.20	1.70	0.991
05-JUL-89	0.348	0.061	3.40	2.80	0.971
12-JUL-89	0.398	0.066	2.40	1.70	0.590
18-JUL-89	0.294	0.053	4.20	3.50	1.169
26-JUL-89	0.455	0.080	3.80	3.40	0.395
01-AUG-89	0.443	0.065	4.70	4.10	0.593
10-AUG-89	0.358	0.058	4.40	3.70	0.993
16-AUG-89	0.319	0.052	3.90	3.60	0.810
23-AUG-89	0.246	0.066	3.70	3.20	0.893
29-AUG-89	0.318	0.075	3.70	3.30	0.895
07-SEP-89	0.325	0.052	4.40	3.80	0.685
13-SEP-89	0.383	0.069	3.70	3.20	0.696
20-SEP-89	0.265	0.044	3.10	2.70	0.541
26-SEP-89	0.339	0.063	4.00	3.30	0.596
05-OCT-89	0.302	0.042	3.80	3.10	0.706
11-OCT-89	0.367	0.052	4.80	3.70	0.571
18-OCT-89	0.326	0.048	5.30	4.60	
SWM[a]	0.385	0.058	3.96	3.09	1.086

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 85. Indices of phytoplankton biomass for Lake Ontario: station 81, 1990. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
04-APR-90	0.399	0.097	5.79	3.04	2.245
18-APR-90	0.510	0.061	5.17	3.04	3.884
24-APR-90	0.540	0.070	5.55	3.30	2.665
02-MAY-90	0.489	0.065	4.25	2.57	2.533
08-MAY-90	0.567	0.075	5.44	2.92	1.407
15-MAY-90	0.564	0.077	7.47	3.56	1.636
23-MAY-90	0.525	0.071	4.83	2.16	1.379
29-MAY-90	0.508	0.070	3.70	1.35	2.637
05-JUN-90	0.464	0.067	4.30	1.68	3.786
12-JUN-90	0.514	0.076	4.29	2.96	2.340
19-JUN-90	0.544	0.081	2.99	2.29	8.140
26-JUN-90	0.434	0.064	4.30	3.59	1.852
04-JUL-90	0.408	0.061	3.21	2.61	0.951
11-JUL-90	0.433	0.065	2.87	2.63	0.789
17-JUL-90	0.339	0.055	2.54	2.27	0.513
24-JUL-90	0.413	0.063	3.70	2.83	0.964
31-JUL-90	0.431	0.067	4.15	3.84	0.467
08-AUG-90	0.363	0.056	4.96	4.30	0.770
14-AUG-90	0.363	0.056	4.96	4.37	1.128
22-AUG-90	0.366	0.054	3.70	3.07	1.983
28-AUG-90	0.396	0.061	3.47	3.14	0.419
06-SEP-90	0.392	0.043	4.23	3.44	0.706
11-SEP-90	0.326	0.048	4.00	3.69	0.592
18-SEP-90	0.378	0.066	4.44	3.80	1.201
26-SEP-90	0.398	0.066	5.35	4.58	0.943
02-OCT-90	0.288	0.083	4.10	3.41	1.005
11-OCT-90	0.336	0.088	3.67	3.13	0.773
16-OCT-90	0.588	0.104	3.62	3.00	0.619
24-OCT-90	0.347		4.12	3.26	
SWM[a]	0.434	0.070	4.36	3.11	1.708

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 86. Indices of phytoplankton biomass for Lake Ontario: station 81, 1991. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
05-APR-91	0.387	0.051	3.02	2.02	1.894
17-APR-91	0.441	0.057	4.49	3.14	1.373
23-APR-91	0.482	0.061	6.41	3.74	3.527
30-APR-91	0.438	0.048	4.10	1.79	2.246
07-MAY-91	0.464	0.047	4.24	1.84	2.890
14-MAY-91	0.510	0.057	3.32	1.17	1.144
22-MAY-91	0.555	0.063	4.34	1.95	1.832
28-MAY-91	0.557	0.062	3.48	2.79	0.926
04-JUN-91	0.417	0.083	2.30	2.21	1.516
12-JUN-91	0.434	0.074	2.79	2.28	1.153
18-JUN-91	0.328	0.053	2.40	1.95	0.653
25-JUN-91	0.332	0.061	1.94	1.12	0.833
03-JUL-91	0.310	0.082	2.07	1.51	0.462
09-JUL-91	0.309	0.053	2.49	2.19	0.419
16-JUL-91	0.322	0.078	2.87	2.41	0.616
23-JUL-91	0.556	0.131	4.78	4.17	1.296
31-JUL-91	0.376	0.087	4.22	3.73	0.889
08-AUG-91	0.407	0.063	4.73	3.92	0.974
13-AUG-91	0.460	0.072	4.75	4.07	1.619
20-AUG-91	0.484	0.084	5.15	4.05	0.756
28-AUG-91	0.466	0.061	5.08	4.50	1.086
05-SEP-91	0.396	0.055	4.54	3.98	0.924
11-SEP-91	0.415	0.054	4.23	3.81	1.059
17-SEP-91	0.379	0.056	4.25	3.20	0.808
01-OCT-91	0.322	0.049	3.42	2.40	0.887
10-OCT-91	0.262	0.044	3.92	2.33	1.436
16-OCT-91	0.276	0.047	3.21	1.78	0.731
23-OCT-91	0.308	0.041	3.98	3.50	1.331
29-OCT-91	0.242	0.040	3.27	1.20	0.568
SWM[a]	0.401	0.063	3.78	2.72	1.235

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 87. Indices of phytoplankton biomass for Lake Ontario: station 81, 1992. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments, and total phytoplankton biomass (Phyto)($mg \cdot L^{-1}$, wet weight).

Date	POC	PON	Chl_{un}	Chl_{cor}	Phyto
01-APR-92	0.290	0.041	3.29	1.92	1.234
07-APR-92	0.349	0.049	1.87	0.43	1.229
14-APR-92	0.379	0.052	3.17	1.49	1.301
29-APR-92	0.392	0.052	1.82	1.33	1.380
05-MAY-92	0.363	0.053	3.05	0.94	1.627
12-MAY-92	0.446	0.065	3.15	0.95	1.109
20-MAY-92	0.338	0.055	1.25	0.17	1.365
28-MAY-92	0.427	0.058	3.94	1.72	1.634
02-JUN-92	0.411	0.060	2.85	1.55	1.416
09-JUN-92	0.423	0.062	2.24	1.05	2.250
16-JUN-92	0.303	0.050	2.04	1.53	1.250
24-JUN-92	0.308	0.046	1.45	1.10	0.764
30-JUN-92	0.241	0.039	1.38	1.12	0.713
08-JUL-92	0.229	0.034	1.57	0.68	0.500
14-JUL-92	0.320	0.052	3.19	2.54	0.765
21-JUL-92	0.478	0.081	3.83	2.71	0.280
28-JUL-92	0.575	0.094	6.95	6.91	0.516
11-AUG-92	0.382	0.070	4.13	3.63	0.502
18-AUG-92	0.272	0.049	4.87	3.31	0.564
25-AUG-92	0.403	0.070	3.80	3.08	0.811
01-SEP-92	0.236	0.044	1.34	0.77	0.486
10-SEP-92	0.283	0.050	2.77	1.73	1.288
15-SEP-92	0.389	0.061	3.37	2.58	0.497
30-SEP-92	0.311	0.048	4.72	3.80	1.334
07-OCT-92	0.415	0.068	5.74	4.80	1.433
14-OCT-92	0.300	0.050	3.70	2.31	0.763
20-OCT-92	0.257	0.047	4.97	3.64	0.584
SWM[a]	0.355	0.056	3.32	2.30	0.992

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 88. Indices of phytoplankton biomass for Lake Ontario: station 81, 1993. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 118.

Date	POC	PON	Chl_{un}	Chl_{cor}
07-APR-93	0.242	0.035	2.99	2.35
15-APR-93	0.292	0.038	3.21	2.51
20-APR-93	0.394	0.041	3.42	2.89
27-APR-93	0.362	0.039	3.84	3.14
04-MAY-93	0.233	0.046	1.57	1.01
11-MAY-93	0.431	0.057	3.68	2.97
18-MAY-93	0.317	0.046	3.43	2.57
26-MAY-93	0.381	0.055	3.75	2.96
01-JUN-93	0.389	0.055	4.23	3.01
08-JUN-93	0.386	0.056	3.83	2.84
15-JUN-93	0.417	0.060	2.72	2.37
22-JUN-93	0.397	0.056	2.59	2.14
29-JUN-93	0.251	0.040	2.39	2.12
06-JUL-93	0.325	0.051	2.62	1.82
13-JUL-93	0.349	0.051	2.15	1.63
20-JUL-93	0.181	0.043	2.33	1.21
27-JUL-93	0.141	0.035	2.93	1.63
04-AUG-93	0.228	0.052	3.77	2.06
10-AUG-93	0.233	0.059	4.07	2.65
17-AUG-93			3.40	2.61
24-AUG-93	0.057	0.040	3.13	2.45
31-AUG-93	0.155	0.032	3.28	2.47
08-SEP-93	0.273	0.041	3.57	2.76
14-SEP-93	0.321	0.050	3.95	3.30
22-SEP-93	0.326	0.047	3.75	3.10
28-SEP-93	0.269	0.039	3.11	2.29
06-OCT-93	0.278	0.047	3.43	2.45
13-OCT-93	0.252	0.041	2.68	2.31
20-OCT-93	0.223	0.039	3.27	3.02
26-OCT-93	0.323	0.041	3.93	3.07
SWM[a]	0.284	0.046	3.23	2.45

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 89. Indices of phytoplankton biomass for Lake Ontario: station 81, 1994. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 119.

Date	POC	PON	Chl_{un}	Chl_{cor}
13-APR-94	0.287	0.040	2.49	2.07
19-APR-94	0.337	0.055	3.63	3.26
10-MAY-94	0.413	0.060	4.82	4.51
18-MAY-94	0.409	0.058	4.34	3.77
25-MAY-94	0.365	0.056	3.23	2.92
31-MAY-94	0.334	0.047	3.04	2.89
07-JUN-94	0.308	0.048	3.22	2.73
14-JUN-94	0.306	0.049	2.83	2.62
28-JUN-94	0.318	0.047	2.91	2.80
12-JUL-94	0.318	0.041	1.16	0.75
26-JUL-94	0.418	0.053	1.77	1.43
09-AUG-94	0.328	0.046	3.21	2.99
17-AUG-94	0.400	0.059	3.78	3.19
23-AUG-94	0.399	0.056	4.48	4.01
30-AUG-94	0.451	0.055	4.98	4.41
07-SEP-94	0.457	0.048	5.68	4.85
13-SEP-94	0.420	0.054	5.09	4.42
21-SEP-94	0.355	0.050	3.51	2.98
27-SEP-94	0.269	0.048	3.19	2.71
05-OCT-94	0.269	0.041	3.05	2.76
12-OCT-94	0.324	0.046	4.57	4.16
19-OCT-94	0.256	0.041	3.62	3.20
SWM[a]	0.346	0.049	3.40	3.01

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 90. Indices of phytoplankton biomass for Lake Ontario: station 81, 1995. Integrated samples were collected from 0-20m during the unstratified period and from the epilimnion during the stratified periods. Indices shown are particulate organic carbon (POC)($mg \cdot L^{-1}$) and particulate organic nitrogen (PON)($mg \cdot L^{-1}$), and chlorophyll ($\mu g \cdot L^{-1}$) uncorrected (Chl_{un}) and corrected (Chl_{cor}) for phaeopigments. Phytoplankton were collated over three time periods before analysis. Results are interpreted in table 120.

Date	POC	PON	Chl_{un}	Chl_{cor}
06-APR-95	0.197	0.034	3.06	2.60
11-APR-95	0.289	0.043	2.88	2.46
20-APR-95	0.257	0.042	3.02	2.31
25-APR-95	0.202	0.031	2.69	1.96
03-MAY-95	0.190	0.026	2.10	1.62
10-MAY-95	0.252	0.037	3.37	2.73
17-MAY-95	0.264	0.040	3.09	2.09
25-MAY-95	0.168	0.027	1.22	1.09
01-JUN-95	0.171	0.025	2.04	1.34
06-JUN-95	0.192	0.029	2.28	1.87
15-JUN-95	0.245	0.036	2.86	2.63
20-JUN-95	0.237	0.039	2.57	2.22
28-JUN-95	0.226	0.034	1.16	0.86
14-JUL-95	0.246	0.038	2.29	1.31
27-JUL-95	0.330	0.051	3.00	2.57
02-AUG-95	0.316	0.052	3.57	2.90
10-AUG-95	0.510	0.067	4.93	4.59
15-AUG-95	0.513	0.070	5.71	5.20
23-AUG-95	0.359	0.055	4.72	4.32
29-AUG-95	0.344	0.057	4.39	3.90
07-SEP-95	0.302	0.045	3.03	2.46
12-SEP-95	0.253	0.041	2.79	2.29
20-SEP-95	0.263	0.047	3.12	2.47
27-SEP-95	0.256	0.040	3.41	2.55
04-OCT-95	0.182	0.031	2.27	1.87
11-OCT-95	0.233	0.034	2.55	2.03
20-OCT-95	0.259	0.039	3.39	2.84
SWM[a]	0.266	0.041	2.96	2.41

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 91. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1981. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
19-MAR-81	0.01566	0.00205	0.00215	0.07318	0.05414	0.00000	0.47507	0.62225
23-MAR-81	0.02822	0.00000	0.00160	0.10519	0.07677	0.00000	0.78602	0.99780
31-MAR-81	0.00927	0.00000	0.00526	0.06874	0.14161	0.00061	0.90629	1.13179
09-APR-81	0.01831	0.00000	0.00322	0.05984	0.07049	0.00000	0.94677	1.09863
16-APR-81	0.01057	0.00000	0.00130	0.06600	0.07369	0.00000	0.39234	0.54390
22-APR-81								
28-APR-81	0.01358	0.00000	0.00171	0.08871	0.32610	0.00000	0.59215	1.02225
05-MAY-81	0.01512	0.00000	0.00150	0.04618	0.23206	0.00000	0.25171	0.54657
13-MAY-81	0.01529	0.00000	0.00289	0.05594	0.18300	0.00147	0.21028	0.46887
21-MAY-81	0.06050	0.00000	0.00560	0.10452	0.22261	0.00000	0.25478	0.64801
27-MAY-81	0.00824	0.00000	0.00274	0.06192	0.13230	0.00000	0.13905	0.34425
03-JUN-81	0.03700	0.00000	0.01523	0.16356	0.53990	0.00828	0.24363	1.00760
10-JUN-81	0.03439	0.00000	0.02728	0.24200	0.38220	0.44243	0.19480	1.32310
16-JUN-81	0.01827	0.00000	0.08546	0.28307	0.32090	0.46774	0.22245	1.39789
23-JUN-81	0.04286	0.00000	0.10451	0.41591	0.19040	0.04107	0.18218	0.97692
30-JUN-81	0.05847	0.00000	0.11334	0.61908	0.62540	0.86021	0.15885	2.43535
07-JUL-81								
13-JUL-81	0.09736	0.00000	0.02469	0.36716	0.04310	0.22497	0.00950	0.76678
22-JUL-81								
27-JUL-81	0.02545	0.00000	0.00167	0.23128	0.03558	0.01139	0.00234	0.30771
05-AUG-81	0.04431	0.00000	0.20462	0.26679	0.15500	0.00000	0.03323	0.70395
11-AUG-81	0.07522	0.00000	0.01073	0.20261	0.20230	0.00000	0.00469	0.49555
19-AUG-81								
25-AUG-81	0.13737	0.00000	0.00173	0.46364	0.16130	0.00000	0.00428	0.76832
01-SEP-81								
16-SEP-81								
25-SEP-81	0.12811	0.00000	0.00907	0.48773	0.05893	0.00592	0.03591	0.72567
29-SEP-81								
06-OCT-81	0.16123	0.00000	0.01655	0.64990	0.11071	0.02231	0.24766	1.20836
14-OCT-81	0.11596	0.00000	0.00921	0.68876	0.17790	0.00887	0.11949	1.12019
21-OCT-81	0.05907	0.00000	0.01838	0.67225	0.10620	0.00271	0.08392	0.94253
27-OCT-81	0.11694	0.00000	0.01201	0.50344	0.03300	0.00000	0.24765	0.91304
03-NOV-81	0.07879	0.00000	0.00692	0.95086	0.09030	0.00000	0.14784	1.27471
11-NOV-81	0.06651	0.00000	0.00778	0.77514	0.09850	0.00145	0.20437	1.15374
18-NOV-81	0.06481	0.00000	0.01074	0.75348	0.08280	0.00000	0.08944	1.00127
24-NOV-81	0.12176	0.00000	0.01994	0.46613	0.11720	0.00000	0.18219	0.90722
01-DEC-81	0.05632	0.00000	0.00278	0.24172	0.01250	0.00000	0.18178	0.49510
11-DEC-81	0.02271	0.00000	0.00362	0.19383	0.07300	0.00000	0.03545	0.32861
SWM[a]	0.06837	0.00000	0.02585	0.33209	0.18287	0.08669	0.18850	0.88438

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 92. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1982. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
10-MAR-82								
18-MAR-82								
25-MAR-82	0.02553	0.00000	0.00234	0.11410	0.06639	0.00000	0.10153	0.30989
01-APR-82	0.02012	0.00000	0.00414	0.07847	0.04426	0.00000	0.21362	0.36061
14-APR-82	0.01654	0.00000	0.00175	0.10165	0.02018	0.00000	0.21899	0.35911
29-APR-82								
04-MAY-82								
11-MAY-82	0.05314	0.00000	0.00420	0.10240	0.07631	0.00022	0.60040	0.83667
18-MAY-82	0.03294	0.00000	0.00292	0.09290	0.03863	0.00022	0.33088	0.49849
28-MAY-82	0.05085	0.00000	0.00223	0.09223	0.05370	0.00000	0.54246	0.74147
01-JUN-82	0.03952	0.00000	0.00267	0.07324	0.04750	0.00000	0.55557	0.71850
07-JUN-82	0.06228	0.00000	0.00616	0.09799	0.08899	0.00000	0.50047	0.75589
15-JUN-82	0.07930	0.00000	0.02692	0.33513	0.39050	0.48183	0.18281	1.49650
22-JUN-82								
29-JUN-82								
06-JUL-82	0.10812	0.00000	0.04291	0.26221	0.13143	0.19081	0.31400	1.04948
13-JUL-82	0.21128	0.00000	0.07878	0.47039	0.18370	0.29720	0.24872	1.49007
21-JUL-82	0.16605	0.00000	0.04530	0.48075	0.18390	0.11417	0.15259	1.14276
26-JUL-82	0.04344	0.00000	0.00779	0.20596	0.03260	0.07136	0.00571	0.36686
04-AUG-82	0.07498	0.00000	0.00763	0.09219	0.04221	0.00216	0.00148	0.22065
09-AUG-82								
17-AUG-82	0.07440	0.00000	0.02027	0.19323	0.06444	0.00339	0.00510	0.36082
24-AUG-82	0.04948	0.00000	0.02947	0.31523	0.12548	0.02059	0.00242	0.54268
30-AUG-82	0.37934	0.00000	0.04290	0.33067	0.20364	0.00699	0.01699	0.98053
08-SEP-82	0.30945	0.00000	0.02148	0.23723	0.09280	0.00000	0.02611	0.68707
14-SEP-82	0.27857	0.00000	0.02460	0.38885	0.14387	0.01439	0.03602	0.88631
23-SEP-82	0.39108	0.00000	0.04237	0.88396	0.43639	0.00374	0.04129	1.79883
28-SEP-82	0.21362	0.00000	0.02493	0.66120	0.13080	0.00000	0.02762	1.05817
05-OCT-82	0.43775	0.00000	0.02904	0.72854	0.12332	0.00000	0.09159	1.41024
13-OCT-82	0.29041	0.00000	0.01115	0.38926	0.10029	0.00319	0.06455	0.85884
19-OCT-82	0.15543	0.00000	0.03687	0.22862	0.09940	0.00000	0.07663	0.59695
25-OCT-82	0.06054	0.00000	0.00515	0.22287	0.03492	0.00489	0.02871	0.35708
02-NOV-82	0.05450	0.00000	0.00868	0.26303	0.04338	0.00541	0.03545	0.41044
09-NOV-82	0.06297	0.00000	0.00361	0.27253	0.07815	0.00267	0.03624	0.45617
16-NOV-82	0.03711	0.00000	0.00122	0.11453	0.02101	0.00190	0.03448	0.21025
22-NOV-82	0.07223	0.00000	0.00119	0.27617	0.06074	0.00097	0.05480	0.46610
SWM[a]	0.13244	0.00000	0.02030	0.26939	0.11962	0.06375	0.19631	0.80181

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 93 . Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1983. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
17-MAR-83	0.00798	0.00000	0.00000	0.09278	0.01006	0.00501	0.02497	0.14080
Q6-APR-83	0.00999	0.00000	0.00206	0.12848	0.04515	0.00000	0.06880	0.25448
12-APR-83	0.01582	0.00000	0.00116	0.10385	0.03838	0.00012	0.10142	0.26075
22-APR-83	0.01577	0.00000	0.00034	0.05375	0.01802	0.00036	0.05675	0.14498
26-APR-83	0.01776	0.00000	0.00299	0.06285	0.04022	0.00000	0.13287	0.25669
04-MAY-83	0.03232	0.00000	0.00013	0.07870	0.03970	0.00000	0.20223	0.35308
10-MAY-83	0.03968	0.00000	0.00177	0.06346	0.08016	0.01243	0.27056	0.46807
17-MAY-83	0.05107	0.00000	0.00386	0.12131	0.07471	0.00103	0.16094	0.41292
25-MAY-83	0.03757	0.00000	0.00335	0.19392	0.12957	0.00069	0.41101	0.77612
01-JUN-83	0.10218	0.00000	0.00503	1.15598	0.41413	0.00000	0.73871	2.41603
08-JUN-83	0.12176	0.00000	0.02814	0.74566	0.45342	0.25506	0.25355	1.85759
15-JUN-83	0.04939	0.00000	0.01401	0.99850	0.06417	0.78638	0.03967	1.95212
22-JUN-83	0.10918	0.00000	0.00185	0.33341	0.04536	0.58693	0.01337	1.09010
29-JUN-83	0.22450	0.00000	0.02032	0.44196	0.08074	0.50838	0.00490	1.28080
06-JUL-83	0.21881	0.00000	0.00414	0.24616	0.66756	0.23736	0.00363	1.37766
13-JUL-83	0.13644	0.00000	0.02503	0.39065	0.04409	0.26928	0.00232	0.86781
21-JUL-83								
26-JUL-83	0.12165	0.00000	0.01436	0.14191	0.02015	0.04390	0.01185	0.35381
03-AUG-83	0.23793	0.00000	0.02322	0.19540	0.12341	0.00000	0.01339	0.59335
10-AUG-83	0.24749	0.00000	0.03442	0.28534	0.08101	0.00000	0.00433	0.65259
16-AUG-83	0.41787	0.00000	0.00889	0.08480	0.15683	0.00273	0.00824	0.67936
23-AUG-83	0.55086	0.00000	0.00821	0.11147	0.10890	0.03004	0.01843	0.82791
31-AUG-83	0.76716	0.00000	0.01783	0.70690	0.41514	0.00000	0.01592	1.92295
08-SEP-83								
14-SEP-83	0.94492	0.00000	0.01555	0.41267	0.15312	0.01148	0.04811	1.58585
21-SEP-83								
28-SEP-83	0.45570	0.00583	0.01800	0.53071	0.06543	0.01618	0.04363	1.13547
06-OCT-83	0.31610	0.00000	0.01111	0.27908	0.05872	0.05233	0.12169	0.83903
13-OCT-83	0.31449	0.00583	0.01134	0.40097	0.12620	0.03006	0.22935	1.11823
19-OCT-83	0.06791	0.00206	0.01206	0.11295	0.00333	0.00127	0.00911	0.20869
26-OCT-83	0.13396	0.00611	0.00353	0.35257	0.03691	0.05233	0.03465	0.62006
02-NOV-83	0.07836	0.00000	0.00937	0.59781	0.03110	0.00649	0.09148	0.81462
08-NOV-83	0.09446	0.01176	0.00623	0.42243	0.00975	0.00026	0.13432	0.67921
15-NOV-83	0.07979	0.00000	0.00138	0.23898	0.06820	0.00445	0.16101	0.55381
23-NOV-83	0.04172	0.00000	0.00339	0.28030	0.04570	0.00305	0.07801	0.45217
SWM[a]	0.24784	0.00072	0.01143	0.33718	0.13322	0.10046	0.10350	0.93435

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 94 . Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1984. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
21-MAR-84	0.00431	0.00000	0.00068	0.04850	0.06721	0.00845	0.07746	0.20661
04-APR-84	0.00502	0.00000	0.23629	0.03470	0.05477	0.00380	0.02678	0.36138
17-APR-84	0.00357	0.00000	0.01462	0.05088	0.05202	0.00200	0.01555	0.13864
25-APR-84	0.00412	0.00000	0.10403	0.04185	0.04283	0.00224	0.01323	0.20829
03-MAY-84	0.00142	0.00000	0.00547	0.04332	0.04989	0.01589	0.04502	0.16102
07-MAY-84	0.00139	0.00000	0.00480	0.03247	0.05473	0.02275	0.05336	0.16950
14-MAY-84	0.00226	0.00000	0.05553	0.03345	0.05384	0.01698	0.04985	0.21191
23-MAY-84	0.00193	0.00000	0.03091	0.04227	0.11609	0.01550	0.05684	0.26353
30-MAY-84	0.00231	0.00000	0.14846	0.02843	0.06127	0.01984	0.09110	0.35141
05-JUN-84	0.00500	0.00000	0.00145	0.03079	0.02262	0.02544	0.03827	0.12357
13-JUN-84	0.01757	0.00000	0.03272	0.20830	0.30735	0.19575	0.24620	1.00789
19-JUN-84	0.03948	0.00000	0.06826	0.56254	0.23495	0.10546	0.29371	1.30440
26-JUN-84	0.00961	0.00000	0.04919	1.06667	0.61669	0.54638	0.47999	2.76854
05-JUL-84	0.00194	0.00000	0.02753	0.20724	0.02389	1.55519	0.04846	1.86425
10-JUL-84	0.00213	0.00000	0.05890	0.48646	0.06183	0.89919	0.13827	1.64679
18-JUL-84	0.01656	0.00000	0.04333	0.42909	0.05836	0.60764	0.15783	1.31281
25-JUL-84	0.00533	0.00000	0.04079	0.24505	0.09168	0.44230	0.11410	0.93925
30-JUL-84	0.04815	0.00000	0.01827	0.25409	0.02743	0.20160	0.01042	0.55996
08-AUG-84	0.13587	0.00000	0.06885	0.07833	0.08388	0.09586	0.01179	0.47458
14-AUG-84	0.51912	0.00000	0.03788	0.13607	0.10366	0.06404	0.00319	0.86397
21-AUG-84	0.57400	0.00000	0.03836	0.06426	0.03196	0.02873	0.00499	0.74230
28-AUG-84	0.44267	0.00000	0.00556	0.16078	0.10253	0.07507	0.00784	0.79444
05-SEP-84	0.24546	0.00000	0.00464	0.08273	0.00852	0.06688	0.00787	0.41611
11-SEP-84	0.41191	0.00783	0.00715	0.24051	0.15295	0.07951	0.00199	0.90185
18-SEP-84	0.29118	0.00000	0.00916	0.29983	0.14400	0.04076	0.01498	0.79989
25-SEP-84	0.36462	0.00000	0.02619	0.12021	0.15418	0.03352	0.01624	0.71496
09-OCT-84	0.21148	0.00000	0.00851	0.52233	0.03357	0.02754	0.03703	0.84046
16-OCT-84	0.13339	0.00000	0.02701	0.86391	0.30765	0.01800	0.00000	1.34995
25-OCT-84	0.21459	0.00000	0.01842	0.54623	0.15159	0.02694	0.14338	1.10116
05-NOV-84	0.17059	0.00000	0.01498	0.21624	0.12555	0.02696	0.08175	0.63607
14-NOV-84	0.07167	0.00000	0.02256	0.19126	0.05565	0.01449	0.17296	0.52859
SWM[a]	0.13470	0.00024	0.04322	0.25284	0.11573	0.17315	0.07444	0.79433

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 95. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1985. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
26-MAR-85	0.00425	0.00000	0.00528	0.05405	0.02278	0.03474	0.11649	0.23760
04-APR-85	0.00198	0.00000	0.00963	0.08237	0.06933	0.02821	0.11200	0.30351
09-APR-85	0.00140	0.00000	0.00676	0.06236	0.06004	0.03172	0.49459	0.65689
16-APR-85	0.02286	0.00000	0.00473	0.14949	0.04270	0.08831	0.43704	0.74513
23-APR-85	0.01591	0.00000	0.00854	0.11390	0.04532	0.06497	0.50868	0.75731
30-APR-85								
07-MAY-85	0.02168	0.00000	0.00494	0.11989	0.07075	0.03440	1.29007	1.54172
14-MAY-85	0.01190	0.00000	0.00378	0.08310	0.10671	0.05477	0.62914	0.88940
21-MAY-85	0.01584	0.00000	0.00399	0.15827	0.18198	0.04169	1.16076	1.56254
29-MAY-85	0.02403	0.00000	0.00326	0.09705	0.21098	0.04543	1.77085	2.15160
07-JUN-85	0.03629	0.00000	0.05668	0.30268	0.74936	0.19751	0.27577	1.61829
11-JUN-85	0.03268	0.00000	0.06964	0.32709	0.34507	0.39493	0.39872	1.56813
18-JUN-85	0.01829	0.00000	0.11245	0.29440	0.03000	0.48730	0.33441	1.27684
25-JUN-85	0.05542	0.00000	0.09752	0.35542	0.13807	0.32860	0.60100	1.57602
03-JUL-85	0.01591	0.00000	0.02320	0.33800	0.34374	1.20895	0.05070	1.98050
09-JUL-85	0.01613	0.00000	0.13016	0.30653	0.10196	0.25540	0.28629	1.09647
15-JUL-85	0.01709	0.00000	0.06347	0.82348	0.11847	0.38712	0.02590	1.43552
23-JUL-85	0.13778	0.00000	0.02885	0.42478	0.14948	0.15609	0.04300	0.93998
29-JUL-85	0.05620	0.00000	0.02695	0.30253	0.11975	0.16321	0.48413	1.15277
07-AUG-85	0.13271	0.00000	0.01825	0.17937	0.07663	0.19960	0.00825	0.61482
14-AUG-85	0.03804	0.00000	0.06452	0.26174	0.14895	0.24705	0.00019	0.76048
20-AUG-85	0.15725	0.00000	0.07863	0.70640	0.16451	0.44146	0.00733	1.55558
29-AUG-85	0.43538	0.00000	0.05661	0.29363	0.05814	0.14111	0.02172	1.00660
04-SEP-85	0.31094	0.00000	0.02742	0.27626	0.13624	0.13251	0.01468	0.89804
10-SEP-85	0.55223	0.00000	0.07486	0.55466	0.74702	0.16510	0.03666	2.13052
16-SEP-85	1.30918	0.00000	0.05626	0.31958	0.09482	0.40137	0.00061	2.18182
25-SEP-85	0.57879	0.00000	0.03992	0.29083	0.03573	0.14007	0.00090	1.08624
30-SEP-85	0.46176	0.00000	0.04512	0.23562	0.02235	0.19938	0.02867	0.99289
07-OCT-85	0.29187	0.00000	0.03174	0.26354	0.13855	0.11122	0.17349	1.01041
15-OCT-85	0.25396	0.00000	0.04968	0.65597	0.08907	0.06798	0.18562	1.30227
22-OCT-85	0.16287	0.00000	0.01754	1.06572	0.23304	0.13233	0.36569	1.97719
29-OCT-85	0.20621	0.00000	0.02019	0.27723	0.06217	0.05666	0.07178	0.69424
SWM[a]	0.17651	0.00000	0.03954	0.31910	0.15626	0.20925	0.36214	1.26280

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 96. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1986. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
10-APR-86	0.00376	0.00000	0.00187	0.12549	0.01877	0.06390	0.06477	0.27856
15-APR-86	0.00190	0.00000	0.00023	0.06734	0.04618	0.02818	0.01577	0.15959
23-APR-86	0.00907	0.00000	0.00284	0.02849	0.05857	0.01721	0.06103	0.17719
29-APR-86	0.00826	0.00000	0.00163	0.04776	0.01596	0.04075	0.00740	0.12174
05-MAY-86	0.02451	0.00000	0.00211	0.06716	0.14368	0.03785	0.06024	0.33555
13-MAY-86	0.01059	0.00000	0.00556	0.05829	0.25789	0.04535	0.12000	0.49768
20-MAY-86	0.00744	0.00000	0.00203	0.05573	0.02634	0.05108	0.05958	0.20220
26-MAY-86	0.05057	0.00000	0.00160	0.04094	0.06747	0.04943	0.17031	0.38032
02-JUN-86	0.01631	0.00000	0.00166	0.27764	1.12123	0.06864	0.59892	2.08441
09-JUN-86	0.01202	0.00000	0.00829	0.71256	1.03860	0.09211	0.38242	2.24601
17-JUN-86	0.01972	0.00000	0.05006	0.48802	1.60113	0.34022	0.51009	3.00924
24-JUN-86	0.00614	0.00000	0.04460	0.46492	0.26034	0.67239	0.11404	1.56243
02-JUL-86	0.01048	0.00000	0.07598	0.46726	0.09243	1.00277	0.09023	1.73914
07-JUL-86	0.01443	0.00148	0.11773	0.63298	0.02292	1.02879	0.25457	2.07290
15-JUL-86	0.00636	0.00000	0.20531	0.36267	0.00343	0.75251	0.63016	1.96045
22-JUL-86	0.00594	0.00000	0.02497	0.19804	0.04066	0.24203	0.00507	0.51671
28-JUL-86	0.10095	0.00000	0.09394	0.14813	0.04442	0.09217	0.00044	0.48003
05-AUG-86	0.07038	0.00000	0.04932	0.17318	0.23020	0.05341	0.00096	0.57745
12-AUG-86	0.40410	0.00000	0.00809	0.18717	0.14103	0.08794	0.00000	0.82834
21-AUG-86								
25-AUG-86	0.61939	0.00000	0.05723	0.93334	0.32080	0.10045	0.00773	2.03894
02-SEP-86	0.86729	0.00000	0.01410	0.22915	0.45634	0.11947	0.00103	1.68738
09-SEP-86								
16-SEP-86	0.40755	0.00725	0.02720	0.43217	0.50211	0.09916	0.05329	1.52873
22-SEP-86	0.30533	0.00000	0.01709	0.65315	0.12902	0.09836	0.08441	1.28736
29-SEP-86	0.28733	0.01759	0.04824	0.69851	0.00494	0.12920	0.09217	1.27798
07-OCT-86								
16-OCT-86	0.08634	0.00000	0.02759	0.29373	0.14594	0.05262	0.06003	0.66625
22-OCT-86	0.09632	0.00000	0.01606	0.23401	0.09825	0.10045	0.04251	0.58759
SWM[a]	0.16159	0.00138	0.03387	0.32469	0.26208	0.19256	0.12379	1.09996

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 97. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1987. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
14-APR-87	0.07809	0.00000	0.00627	0.06188	0.18457	0.02308	1.29805	1.65194
23-APR-87	0.00627	0.00000	0.00442	0.03832	0.05129	0.02047	0.60177	0.72253
28-APR-87	0.02907	0.00000	0.00432	0.05848	0.08400	0.04128	2.68288	2.90004
05-MAY-87								
13-MAY-87	0.01672	0.00000	0.00791	0.11546	0.38691	0.04507	1.75207	2.32414
20-MAY-87	0.00485	0.00000	0.00837	0.16864	0.48399	0.04937	2.24420	2.95942
27-MAY-87	0.00060	0.00000	0.00169	0.50264	1.21777	0.01329	1.70521	3.44120
03-JUN-87	0.00904	0.00000	0.01552	0.27445	0.42087	0.17672	0.64653	1.54312
10-JUN-87	0.01247	0.00000	0.01017	0.28838	0.27383	0.29098	0.32909	1.20493
17-JUN-87	0.00157	0.00000	0.01289	0.22026	0.27171	0.33224	0.03311	0.87178
24-JUN-87	0.01374	0.00000	0.02473	0.34537	0.13696	0.41342	0.04741	0.98163
01-JUL-87	0.03229	0.00000	0.00774	0.25422	0.06660	0.46198	0.00901	0.83184
08-JUL-87	0.00610	0.00000	0.00775	0.12667	0.01179	0.11257	0.00071	0.26559
17-JUL-87	0.04767	0.00000	0.00362	0.13566	0.01679	0.08399	0.00013	0.28786
22-JUL-87	0.06338	0.00000	0.00302	0.12432	0.03755	0.12596	0.00028	0.35451
29-JUL-87	0.09208	0.00000	0.00215	0.20548	0.10789	0.07633	0.00000	0.48393
06-AUG-87	0.90974	0.00000	0.02223	0.21588	0.28557	0.11176	0.00000	1.54518
12-AUG-87	0.37245	0.00000	0.01367	0.15056	0.04557	0.19432	0.08047	0.85703
19-AUG-87	1.34832	0.00000	0.01115	0.18191	0.24197	0.11287	0.02299	1.91920
26-AUG-87								
03-SEP-87	0.06975	0.00000	0.00702	0.14616	0.05499	0.16769	0.00780	0.45342
09-SEP-87	0.13872	0.00000	0.02833	0.16498	0.42925	0.16562	0.06787	0.99478
16-SEP-87	0.11298	0.00000	0.02085	0.20811	0.13833	0.22403	0.01623	0.72052
24-SEP-87	0.24677	0.00000	0.02788	0.20523	0.11290	0.11594	0.00873	0.71746
30-SEP-87	0.25232	0.00000	0.02139	0.23109	0.21731	0.54011	0.01113	1.27336
09-OCT-87		0.00000	0.01334	0.25157	0.02019	0.20207	0.25609	0.84015
15-OCT-87	0.22750	0.00000	0.02466	0.29393	0.04102	0.13311	0.08168	0.80190
21-OCT-87	0.08285	0.00000	0.00922	0.19900	0.01361	0.09131	0.01846	0.41444
SWM[a]	0.17749	0.00000	0.01157	0.18732	0.19901	0.15308	0.52749	1.25102

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 98. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1988. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
07-APR-88	0.01908	0.00000	0.00025	0.11350	0.07990	0.06478	0.57369	0.85119
20-APR-88	0.01924	0.00000	0.00171	0.09757	0.02869	0.08831	0.61518	0.85070
27-APR-88	0.00882	0.00000	0.00446	0.12302	0.08077	0.04452	0.67919	0.94078
06-MAY-88	0.00806	0.00000	0.00244	0.06975	0.04385	0.03186	0.30790	0.46386
11-MAY-88	0.01108	0.00000	0.00609	0.06906	0.05686	0.04100	0.23947	0.42355
19-MAY-88	0.01911	0.00000	0.00340	0.13545	0.14671	0.05484	0.78861	1.14813
26-MAY-88	0.00968	0.00000	0.00343	0.07377	0.15102	0.06032	0.41765	0.71586
02-JUN-88	0.00753	0.00000	0.00601	0.27124	0.35534	0.11074	0.20268	0.95354
08-JUN-88	0.01989	0.00000	0.02474	0.27031	0.35806	0.27907	0.06083	1.01290
16-JUN-88	0.03026	0.00000	0.03839	0.28856	0.35085	1.46363	0.18399	2.35569
22-JUN-88	0.01574	0.00000	0.02219	0.20212	0.10587	1.15752	0.02431	1.52774
30-JUN-88	0.00679	0.00000	0.04166	0.18977	0.04927	1.47311	0.25225	2.01284
06-JUL-88	0.08456	0.00000	0.02393	0.21591	0.26662	1.29823	0.16809	2.05734
14-JUL-88	0.01121	0.00000	0.01080	0.18776	0.03331	0.31020	0.00082	0.55410
20-JUL-88	0.01746	0.00000	0.00676	0.18736	0.10459	0.37696	0.00085	0.69399
28-JUL-88	0.07473	0.00000	0.01337	0.16994	0.03423	0.16189	0.00516	0.45931
04-AUG-88	0.12856	0.00000	0.03508	0.10109	0.23363	0.01912	0.00221	0.51968
11-AUG-88	0.11638	0.00000	0.00205	0.02735	0.62405	0.05938	0.00000	0.82921
18-AUG-88	0.12827	0.00000	0.01817	0.10130	0.03517	0.04240	0.00144	0.32674
25-AUG-88	0.08035	0.00000	0.00519	0.10130	0.05048	0.02672	0.02711	0.29115
31-AUG-88	0.13372	0.00000	0.00917	0.12552	0.12385	0.11691	0.02101	0.53018
09-SEP-88	0.17150	0.00000	0.02148	0.19289	0.36716	0.11255	0.04426	0.90984
15-SEP-88	0.17862	0.00000	0.02836	0.20795	0.25247	0.06050	0.00532	0.73323
22-SEP-88	0.21823	0.00000	0.01008	0.11818	0.02529	0.05714	0.02779	0.45671
28-SEP-88	0.32430	0.00000	0.00919	0.23197	0.30762	0.04414	0.02861	0.94584
06-OCT-88	0.27763	0.00000	0.02642	0.39126	0.34744	0.02812	0.01037	1.08123
SWM[a]	0.07704	0.00000	0.01401	0.15912	0.17221	0.29316	0.19344	0.90899

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 99. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1989. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
04-APR-89	0.05018	0.00000	0.00519	0.09301	0.01171	0.03459	1.00919	1.20387
20-APR-89	0.00835	0.00000	0.00969	0.09811	0.11630	0.05704	1.37325	1.66074
26-APR-89	0.02102	0.00000	0.00221	0.05788	0.20788	0.06908	1.96437	2.32240
04-MAY-89	0.00588	0.00000	0.00777	0.05557	0.02557	0.03396	0.97832	1.10707
10-MAY-89	0.00766	0.00000	0.00077	0.04306	0.03373	0.03139	2.03936	2.15597
18-MAY-89	0.01153	0.00000	0.00942	0.05341	0.08378	0.08384	0.97024	1.21220
25-MAY-89	0.00489	0.00000	0.00999	0.02105	0.06935	0.01855	0.73775	0.86148
01-JUN-89	0.02408	0.00000	0.00811	0.05702	0.11813	0.05178	0.34159	0.60072
07-JUN-89	0.01252	0.00000	0.03466	0.21621	0.18249	0.52418	0.04382	1.01389
15-JUN-89	0.02333	0.00000	0.02958	0.20666	0.38880	0.18325	0.13367	0.96529
21-JUN-89	0.01320	0.00000	0.11788	0.46008	0.62488	0.47281	0.16950	1.85835
29-JUN-89	0.01689	0.00000	0.05243	0.77423	0.18802	0.70616	0.03747	1.77522
06-JUL-89	0.02063	0.00000	0.00147	0.21584	0.06096	0.40302	0.00000	0.70192
13-JUL-89	0.00347	0.00000	0.00206	0.12975	0.06243	0.22601	0.00000	0.42372
19-JUL-89	0.02489	0.00000	0.00195	0.14673	0.11700	0.09422	0.00000	0.38480
27-JUL-89	0.04735	0.00000	0.00047	0.12632	0.03398	0.09891	0.00151	0.30854
02-AUG-89	0.03390	0.00000	0.01062	0.07799	0.09463	0.15806	0.00277	0.37797
11-AUG-89	0.03991	0.00000	0.02937	0.18236	0.09459	0.09850	0.01030	0.45509
17-AUG-89	0.15319	0.00000	0.05323	0.12384	0.12202	0.21224	0.06148	0.72599
24-AUG-89	0.10592	0.00000	0.00741	0.19599	0.11782	0.03793	0.00317	0.46824
30-AUG-89	0.05003	0.00000	0.00508	0.12192	0.10081	0.04375	0.00043	0.32202
08-SEP-89	0.15869	0.00000	0.02252	0.17033	0.24487	0.06583	0.01613	0.67837
14-SEP-89	0.33241	0.00000	0.02386	0.24917	0.43041	0.12242	0.00000	1.15826
21-SEP-89	0.58329	0.00252	0.02397	0.13540	0.18228	0.06336	0.00120	0.99202
27-SEP-89	0.17324	0.00000	0.01763	0.14886	0.00344	0.11967	0.00039	0.46323
05-OCT-89	0.08264	0.00000	0.00396	0.25512	0.05610	0.10398	0.45414	0.95594
12-OCT-89	0.03103	0.00000	0.00581	0.23342	0.00187	0.09194	0.09544	0.45951
26-OCT-89	0.10390	0.00000	0.01308	0.56536	0.06499	0.08405	0.02288	0.85426
30-AUG-89	0.05003	0.00000	0.00508	0.12192	0.10081	0.04375	0.00043	0.32202
SWM[a]	0.07261	0.00008	0.01748	0.19382	0.12972	0.14749	0.39342	0.95451

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 100. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1990. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
03-APR-90	0.01185	0.00000	0.00347	0.06778	0.09314	0.03709	0.43660	0.64992
19-APR-90	0.00192	0.00000	0.01337	0.08431	0.10455	0.04592	1.00312	1.25321
25-APR-90	0.01609	0.00000	0.00417	0.07633	0.07790	0.03039	0.97652	1.18140
03-MAY-90	0.00754	0.00000	0.00230	0.03998	0.09160	0.01721	1.17259	1.33122
09-MAY-90	0.00879	0.00000	0.00444	0.05834	0.24159	0.03400	2.04688	2.39405
17-MAY-90	0.00403	0.00000	0.00299	0.07638	0.07070	0.01828	1.89215	2.06453
24-MAY-90	0.00097	0.00000	0.00138	0.03107	0.04459	0.00818	0.86128	0.94747
31-MAY-90	0.00996	0.00000	0.00514	0.05365	0.05458	0.02062	1.21257	1.35652
06-JUN-90	0.00987	0.00000	0.01658	0.12828	0.17339	0.13905	0.54423	1.01140
14-JUN-90	0.01213	0.00000	0.07140	0.23047	0.00000	0.53895	0.19482	1.04777
20-JUN-90	0.01786	0.00000	0.11814	0.17534	0.03907	0.46673	0.08347	0.90060
28-JUN-90	0.01914	0.00000	0.07322	0.61021	0.16733	0.56953	0.14175	1.58119
05-JUL-90	0.01955	0.00000	0.03787	0.65315	0.19655	0.71124	0.01709	1.63544
12-JUL-90	0.01631	0.00000	0.00372	0.17035	0.04405	0.13017	0.00000	0.36459
18-JUL-90	0.00687	0.00000	0.00189	0.20991	0.17356	0.10796	0.00611	0.50630
26-JUL-90	0.01516	0.00000	0.00170	0.13509	0.03138	0.14762	0.00033	0.33129
02-AUG-90	0.11885	0.00000	0.00963	0.12681	0.18827	0.04104	0.00000	0.48461
10-AUG-90	0.21252	0.00000	0.01163	0.09230	0.33557	0.03931	0.00000	0.69133
15-AUG-90	0.18289	0.00000	0.65180	0.17977	0.44757	0.07316	0.00000	1.53519
24-AUG-90	0.10196	0.00000	0.00484	0.13881	0.02031	0.05120	0.00038	0.31750
30-AUG-90	0.14907	0.00000	0.01460	0.20887	0.27248	0.11293	0.00000	0.75794
07-SEP-90	0.20803	0.00000	0.01138	0.20783	0.41151	0.09763	0.00032	0.93670
12-SEP-90	0.27218	0.00000	0.02420	0.11479	0.01772	0.12025	0.00321	0.55234
20-SEP-90	0.21574	0.00000	0.00968	0.06274	0.02562	0.08927	0.00049	0.40354
27-SEP-90	0.15316	0.00000	0.00595	0.14504	0.00862	0.12004	0.00126	0.43408
12-OCT-90	0.13975	0.00000	0.00597	0.24726	0.17476	0.13109	0.07066	0.76949
SWM[a]	0.07880	0.00000	0.03759	0.17123	0.13383	0.14497	0.38392	0.95034

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 101. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1991. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
03-APR-91								
16-APR-91	0.14084	0.00000	0.00968	0.12565	0.06036	0.04612	0.40845	0.79109
24-APR-91	0.01322	0.00000	0.00499	0.04585	0.05878	0.01022	0.19762	0.33069
01-MAY-91	0.00586	0.00000	0.00373	0.07882	0.01162	0.03037	0.17278	0.30318
09-MAY-91	0.00725	0.00000	0.00366	0.08609	0.09478	0.02320	0.61717	0.83216
15-MAY-91	0.00943	0.00000	0.00688	0.23643	0.18034	0.04443	1.29220	1.76971
24-MAY-91	0.01649	0.00000	0.00318	0.58613	0.46919	0.13175	1.33528	2.54202
29-MAY-91	0.01582	0.00000	0.01290	0.37870	0.29533	0.25561	1.02241	1.98077
06-JUN-91	0.01944	0.00000	0.02634	0.51028	0.40346	0.22122	0.61288	1.79363
11-JUN-91	0.02085	0.00000	0.02343	0.36668	0.17525	0.41117	0.10623	1.10361
20-JUN-91	0.00914	0.00000	0.03415	0.28780	0.08505	0.21179	0.06310	0.69102
26-JUN-91	0.03155	0.00000	0.01320	0.23315	0.04424	0.19233	0.02163	0.53610
05-JUL-91	0.02255	0.00000	0.00488	0.15512	0.23753	0.09366	0.02303	0.53677
10-JUL-91	0.03254	0.00000	0.06421	0.17584	0.10277	0.08643	0.01004	0.47184
18-JUL-91	0.05439	0.00000	0.01572	0.24240	0.06409	0.09819	0.00463	0.47942
24-JUL-91	0.24840	0.00000	0.08367	0.28579	0.05639	0.10469	0.00128	0.78021
01-AUG-91	0.26385	0.00000	0.00180	0.47843	0.25165	0.10710	0.00143	1.10426
07-AUG-91	0.42409	0.00000	0.01411	0.25394	0.01037	0.09528	0.00000	0.79779
15-AUG-91	0.18235	0.00000	0.00948	0.18102	0.23030	0.13636	0.00073	0.74024
21-AUG-91	0.26541	0.00000	0.01956	0.16708	0.08203	0.07439	0.00000	0.60847
29-AUG-91	0.33791	0.00000	0.03063	0.08775	0.48716	0.07758	0.00000	1.02103
04-SEP-91	0.43012	0.00000	0.01389	0.12747	0.27660	0.15550	0.00021	1.00378
12-SEP-91	0.42103	0.00000	0.01567	0.11916	0.44649	0.09720	0.00038	1.09993
18-SEP-91	0.23739	0.00000	0.01476	0.14621	0.24632	0.05021	0.00032	0.69520
03-SEP-91	0.22154	0.01110	0.05846	0.10189	0.21106	0.08862	0.03687	0.72953
10-OCT-91	0.21264	0.00000	0.03477	0.16116	0.02194	0.05326	0.00136	0.48514
17-OCT-91	0.08193	0.00000	0.00528	0.28632	0.16950	0.07395	0.01633	0.63331
24-OCT-91	0.12691	0.00000	0.00977	0.44405	0.07258	0.14796	0.06445	0.86572
30-OCT-91	0.09243	0.00000	0.00772	0.45228	0.14949	0.17087	0.01668	0.88948
SWM[a]	0.14232	0.00057	0.02103	0.22813	0.15649	0.11048	0.22172	0.88074

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 102. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1992. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
31-MAR-1992	0.02851	0.00000	0.00197	0.19819	0.09193	0.06821	1.23358	1.62240
08-APR-1992	0.01059	0.00000	0.00932	0.17757	0.14892	0.12421	0.91839	1.38899
15-APR-1992	0.01192	0.00000	0.00409	0.11313	0.20550	0.06052	1.52545	1.92060
28-APR-1992	0.00447	0.00000	0.00026	0.11427	0.16543	0.05429	0.84685	1.18557
07-MAY-1992	0.00134	0.00000	0.00521	0.05207	0.04935	0.02617	0.53247	0.66662
14-MAY-1992	0.00425	0.00000	0.00146	0.06980	0.00136	0.03630	1.24766	1.36084
22-MAY-1992	0.01644	0.00000	0.01154	0.10274	0.22859	0.66886	0.38064	1.40881
26-MAY-1992	0.00435	0.00000	0.00058	0.07179	0.04992	0.03713	1.83733	2.00109
04-JUN-1992	0.01957	0.00000	0.00432	0.31471	0.40576	0.08419	1.03941	1.86796
10-JUN-1992	0.01449	0.00000	0.00469	0.33018	0.24590	0.15914	0.83384	1.58824
18-JUN-1992	0.01648	0.00000	0.00229	1.64215	0.09214	0.58709	0.11793	2.45809
25-JUN-1992	0.02145	0.00000	0.00546	0.32913	0.27991	0.28721	0.03290	0.95605
02-JUL-1992	0.01483	0.00000	0.00341	0.19350	0.10367	0.36889	0.00453	0.68883
09-JUL-1992	0.00822	0.00000	0.00131	0.10693	0.04639	0.19874	0.00375	0.36534
16-JUL-1992	0.01962	0.00000	0.00577	0.07296	0.09007	0.08959	0.00987	0.28787
22-JUL-1992	0.13450	0.00000	0.00427	0.18514	0.31134	0.10987	0.06095	0.80607
30-JUL-1992	0.28104	0.00000	0.03277	0.06332	0.07431	0.05604	0.06904	0.57651
13-AUG-1992	0.06743	0.00000	0.17783	0.09874	0.11928	0.05519	0.01920	0.53766
19-AUG-1992	0.11436	0.00000	0.39324	0.15252	0.25487	0.11360	0.09968	1.12825
27-AUG-1992	0.11592	0.00000	0.04328	0.11521	0.23224	0.07938	0.04613	0.63216
02-SEP-1992	0.06526	0.00000	0.02364	0.19480	0.02740	0.02736	0.01049	0.34896
11-SEP-1992	0.17109	0.00000	0.01612	0.11709	0.12641	0.13769	0.07210	0.64050
16-SEP-1992	0.16412	0.00000	0.01216	0.11220	0.13248	0.25597	0.06503	0.74195
30-SEP-1992	0.19122	0.00000	0.01336	0.25101	0.11646	0.02073	0.15556	0.74833
08-OCT-1992	0.13708	0.00000	0.00491	0.14073	0.10574	0.03034	0.07320	0.49199
15-OCT-1992	0.15937	0.00000	0.01009	0.20158	0.01237	0.05278	0.02305	0.45924
22-OCT-1992	0.01759	0.00000	0.00583	0.09789	0.06590	0.04818	0.29031	0.52571
SWM[a]								

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 103. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1993. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.02123	0.00000	0.00280	0.08739	0.06336	0.02107	0.35148	0.54733
	2	0.01434	0.00000	0.00464	0.14889	0.08484	0.03519	0.41009	0.69797
	3	0.01659	0.00000	0.00831	0.12197	0.04110	0.02958	0.42771	0.64526
	mean	0.01739	0.00000	0.00525	0.11942	0.06310	0.02861	0.39643	0.63019
stratified	1	0.08998	0.00000	0.00216	0.11928	0.03061	0.33228	0.01606	0.59037
	2	0.15108	0.00000	0.00516	0.21229	0.25152	0.36008	0.03756	1.01770
	3	0.09691	0.00000	0.00886	0.14150	0.16315	0.38845	0.00099	0.79986
	mean	0.11266	0.00000	0.00539	0.15769	0.14843	0.36027	0.01820	0.80264
All year	1	0.04578	0.00000	0.00532	0.06164	0.03275	0.12369	0.03979	0.30898
	2	0.08712	0.00000	0.00830	0.16289	0.09997	0.40491	0.19515	0.95834
	3	0.13018	0.00000	0.02058	0.29971	0.12776	0.31984	0.13836	1.03642
	mean	0.08769	0.00000	0.01140	0.17475	0.08683	0.28281	0.12443	0.76791

Table 104. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1994. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.02224	0.00000	0.01075	0.25827	0.24280	0.14937	0.74156	1.42500
	2	0.00795	0.00163	0.00769	0.21561	0.23767	0.12016	0.94783	1.53854
	3	0.00895	0.00000	0.00603	0.27512	0.26243	0.11048	0.67783	1.34083
	mean	0.01305	0.00054	0.00816	0.24967	0.24763	0.12667	0.78907	1.43479
Stratified	1	0.44170	0.00000	0.04975	0.15910	0.36600	0.07506	0.10085	1.19246
	2	0.37039	0.00000	0.02347	0.20876	0.26794	0.08678	0.05183	1.00916
	3	0.49135	0.00000	0.02901	0.23315	0.14079	0.07897	0.00329	0.97655
	mean	0.43448	0.00000	0.03408	0.20034	0.25824	0.08027	0.05199	1.05939
All year	1	0.15998	0.00000	0.00589	0.16149	0.16134	0.06538	0.12914	0.68321
	2	0.25164	0.00000	0.00368	0.12587	0.35071	0.06972	0.31961	1.12124
	3	0.14981	0.00000	0.01403	0.13914	0.12728	0.09650	0.21693	0.74368
	mean	0.18714	0.00000	0.00787	0.14217	0.21311	0.07720	0.22189	0.84938

Table 105. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 41, 1995. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.00295	0.00000	0.00508	0.16384	0.23148	0.07562	0.59764	1.07661
	2	0.00616	0.00000	0.00398	0.17911	0.21573	0.16191	0.69820	1.26510
	3	0.00800	0.00000	0.00668	0.13933	0.19517	0.10844	0.36468	0.82230
	mean	0.00570	0.00000	0.00525	0.16076	0.21413	0.11532	0.55351	1.05467
stratified	1	0.24926	0.00000	0.01048	0.17249	0.12623	0.14608	0.02719	0.73172
	2	0.19231	0.00000	0.02252	0.16983	0.56149	0.13386	0.07145	1.15145
	3	0.25296	0.00000	0.01480	0.18879	0.12322	0.14609	0.03626	0.76213
	mean	0.23151	0.00000	0.01593	0.17704	0.27031	0.14201	0.04497	0.88177
All year	1	0.08870	0.00000	0.01230	0.18595	0.12936	0.13389	0.19833	0.74853
	2	0.12109	0.00000	0.01141	0.20833	0.06252	0.12353	0.34458	0.87145
	3	0.12815	0.00000	0.00941	0.15769	0.40923	0.17543	0.28669	1.16659
	mean	0.11265	0.00000	0.01104	0.18399	0.20037	0.14428	0.27653	0.92886

Table 106. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1981. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
16-MAR-81	0.09704	0.00000	0.00365	0.15855	0.36819	0.02073	1.98984	2.63800
24-MAR-81	0.05113	0.00000	0.00129	0.09213	0.25884	0.07894	2.02042	2.50275
31-MAR-81	0.02345	0.00501	0.00638	0.15226	0.38617	0.03718	1.43011	2.04057
08-APR-81	0.01911	0.00000	0.00831	0.21692	0.52059	0.02891	1.44280	2.23664
17-APR-81	0.02971	0.00247	0.01460	0.19610	0.35340	0.06562	0.68582	1.34771
22-APR-81	0.03362	0.00000	0.02362	0.27595	0.38040	0.12929	0.67710	1.51998
28-APR-81	0.06405	0.00000	0.00965	0.20699	0.73640	0.30185	0.52997	1.84891
05-MAY-81	0.05686	0.00000	0.03424	0.13365	0.69430	0.12876	0.40868	1.45648
12-MAY-81	0.01946	0.00000	0.08049	0.07933	0.68170	0.17266	0.25275	1.28638
22-MAY-81	0.05064	0.00000	0.04536	0.07873	0.14530	0.11829	0.06222	0.50053
28-MAY-81	0.13362	0.00000	0.02904	0.14568	0.34450	0.23516	0.10771	0.99572
04-JUN-81	0.13981	0.00000	0.07750	0.42746	0.47270	0.86328	0.12661	2.10736
10-JUN-81	0.08120	0.00000	0.22581	0.53466	0.39310	0.15018	0.14336	1.52831
16-JUN-81	0.05658	0.00000	0.06319	0.59429	0.51030	0.67112	0.09814	1.99362
23-JUN-81	0.11659	0.00000	0.03998	0.41808	0.29030	0.27631	0.09721	1.23847
30-JUN-81	0.47932	0.00000	0.04145	0.49312	0.31700	0.31878	0.08255	1.73222
07-JUL-81								
14-JUL-81	0.35560	0.00000	0.07722	0.37172	0.06490	0.44704	0.02229	1.33877
23-JUL-81								
30-JUL-81	0.14986	0.00000	0.02591	0.67094	0.03780	0.00000	0.01613	0.90064
05-AUG-81	0.29784	0.00000	0.17223	1.04440	0.36510	0.01964	0.03968	1.93889
11-AUG-81	0.32139	0.00000	0.02935	0.15236	0.17990	0.00000	0.01616	0.69916
18-AUG-81								
25-AUG-81	0.42710	0.00000	0.01658	0.49853	0.18920	0.00000	0.02094	1.15235
01-SEP-81								
15-SEP-81								
24-SEP-81	0.15101	0.00000	0.01564	0.39302	0.07540	0.00210	0.10034	0.73751
30-SEP-81								
05-OCT-81	0.22784	0.00000	0.05480	0.78524	0.27791	0.00297	0.14690	1.49566
14-OCT-81	0.19913	0.00000	0.02970	0.93532	0.18480	0.00000	0.15707	1.50602
20-OCT-81	0.09828	0.00000	0.01196	0.40053	0.11800	0.00192	0.18094	0.81163
27-OCT-81	0.09718	0.00000	0.00869	0.62055	0.18170	0.00000	0.09454	1.00266
03-NOV-81	0.11112	0.00000	0.00937	0.40897	0.03217	0.00000	0.15640	0.71803
11-NOV-81	0.09683	0.00000	0.00656	0.83951	0.02890	0.00145	0.22342	1.19667
18-NOV-81	0.06889	0.00000	0.00760	0.54163	0.06720	0.00000	0.18982	0.87514
24-NOV-81	0.05560	0.00000	0.00404	0.52071	0.03600	0.00000	0.08945	0.70580
01-DEC-81	0.04804	0.00000	0.00519	0.44404	0.05670	0.00000	0.15052	0.70449
08-DEC-81	0.02386	0.00000	0.01100	0.37017	0.03400	0.00000	0.03608	0.47511
SWM[a]	0.18837	0.00015	0.04326	0.41937	0.28312	0.14741	0.21892	1.30061

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 107. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1982. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
31-MAR-82	0.01509	0.00000	0.00910	0.19734	0.16820	0.00754	1.46465	1.86193
28-APR-82								
05-MAY-82								
11-MAY-82	0.06974	0.00000	0.01271	0.37771	0.89945	0.04744	0.75421	2.16126
20-MAY-82	0.11276	0.00000	0.01900	0.23477	0.52563	0.22948	0.34508	1.46672
27-MAY-82	0.06145	0.00000	0.01477	0.20769	0.30060	1.30817	0.25056	2.14323
01-JUN-82	0.05931	0.00000	0.01948	0.17334	0.28730	0.30484	0.26446	1.10873
08-JUN-82	0.05342	0.00000	0.03064	0.21128	0.12715	0.09387	0.22245	0.73881
16-JUN-82	0.03993	0.00000	0.04374	0.24041	0.20735	0.08508	0.46554	1.0805
22-JUN-82								
29-JUN-82								
06-JUL-82	0.04514	0.00000	0.08555	0.22819	0.14275	1.19946	0.27477	1.97586
15-JUL-82	0.06256	0.00000	0.04270	0.42206	0.26975	0.95268	0.22367	1.97342
21-JUL-82	0.05528	0.00000	0.04506	0.35598	0.09182	0.64211	0.03582	1.22608
27-JUL-82	0.12928	0.00000	0.02176	0.44070	0.12486	0.02837	0.03513	0.78010
04-AUG-82	0.18028	0.00000	0.00455	0.53678	0.10318	0.00022	0.00593	0.83093
10-AUG-82	0.18078	0.00000	0.03281	0.28392	0.04001	0.00000	0.00414	0.54166
18-AUG-82	0.31794	0.00000	0.03842	1.00200	0.43152	0.00000	0.01436	1.80424
24-AUG-82	0.58521	0.00000	0.01958	0.40428	0.11070	0.00360	0.00925	1.13262
31-AUG-82	0.26191	0.00000	0.01864	0.69025	0.12318	0.00085	0.03071	1.12554
08-SEP-82	0.29348	0.00000	0.00973	0.48567	0.15935	0.00327	0.04807	0.99957
16-SEP-82	0.38114	0.00000	0.00894	0.45123	0.15875	0.00584	0.06475	1.07065
23-SEP-82	0.28581	0.00000	0.02593	0.40120	0.12324	0.01117	0.06188	0.90922
29-SEP-82	0.44949	0.00000	0.03372	0.35684	0.18557	0.02455	0.12394	1.17411
05-OCT-82	0.23752	0.00000	0.02409	0.64869	0.17860	0.00766	0.23261	1.32918
14-OCT-82	0.31013	0.00000	0.06770	0.63456	0.24043	0.01085	0.07749	1.34116
19-OCT-82								
26-OCT-82	0.08430	0.00000	0.00437	0.50348	0.05560	0.00154	0.07349	0.72278
02-NOV-82	0.11916	0.00000	0.01569	1.24285	0.16210	0.00408	0.10382	1.64770
09-NOV-82	0.08718	0.00000	0.00299	0.45116	0.10380	0.00067	0.11724	0.76305
17-NOV-82	0.04486	0.00000	0.00032	0.45293	0.06740	0.00129	0.05625	0.62305
23-NOV-82	0.07900	0.00000	0.00017	0.26769	0.02891	0.00000	0.09799	0.47376
SWM[a]	0.15631	0.00000	0.02794	0.39937	0.27031	0.20584	0.34499	1.40476

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 108. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1983. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
17-MAR-83	0.04927	0.00000	0.00109	0.27505	0.32024	0.00044	0.14806	0.79414
06-APR-83	0.02595	0.00000	0.00225	0.30035	0.37936	0.02235	0.37690	1.10716
12-APR-83	0.05647	0.00000	0.00203	0.35529	0.43202	0.06360	0.53837	1.44778
21-APR-83	0.05044	0.00000	0.00696	0.42506	0.47171	0.06774	0.46604	1.48795
26-APR-83	0.02913	0.01492	0.00671	0.20980	0.41618	0.09906	0.41339	1.18919
04-MAY-83	0.01220	0.00000	0.00844	0.20816	0.37014	0.13228	0.33391	1.06513
10-MAY-83	0.03338	0.00000	0.01550	0.19025	0.21747	0.38594	0.51394	1.35648
17-MAY-83	0.06892	0.00000	0.01038	0.21535	0.27989	0.86566	0.26050	1.70070
25-MAY-83	0.07222	0.00000	0.03175	0.33653	0.19738	0.54567	0.43361	1.61716
01-JUN-83	0.08780	0.00000	0.06266	0.38471	0.21444	0.34195	0.34889	1.44045
07-JUN-83	0.17483	0.00000	0.10083	0.50300	0.34971	0.50336	0.27182	1.90354
14-JUN-83	0.14658	0.00000	0.05186	0.61641	0.27745	0.58539	0.24424	1.92193
22-JUN-83	0.07101	0.00000	0.00186	0.23422	0.05774	0.95129	0.01866	1.33478
28-JUN-83	0.05301	0.00000	0.02838	0.54574	0.22710	1.27999	0.11452	2.24874
05-JUL-83	0.17660	0.00000	0.00696	0.80413	0.32569	0.53878	0.08309	1.935
12-JUL-83	0.14063	0.00000	0.01685	0.75955	0.16483	0.14022	0.09686	1.31895
19-JUL-83								
26-JUL-83	0.28116	0.00000	0.01532	0.66479	0.17300	0.00800	0.02349	1.16576
04-AUG-83								
09-AUG-83	0.65979	0.00000	0.05232	0.42864	0.19610	0.00000	0.00597	1.34282
17-AUG-83	0.50673	0.00000	0.01137	0.11749	0.07822	0.00362	0.00753	0.72496
23-AUG-83	0.76359	0.00000	0.02359	0.55903	0.99970	0.03786	0.01081	2.39458
30-AUG-83	0.76968	0.00000	0.01527	0.44166	0.28795	0.00000	0.02187	1.53643
07-SEP-83	0.96702	0.00000	0.06459	0.40644	0.37057	0.00729	0.00192	1.81782
13-SEP-83								
20-SEP-83	0.44560	0.00000	0.01296	0.35483	0.05465	0.00426	0.01904	0.89134
27-SEP-83								
06-OCT-83	0.43794	0.00000	0.02870	0.22026	0.03561	0.00000	0.04616	0.76867
12-OCT-83	0.53508	0.03143	0.02929	0.21547	0.04873	0.00388	0.15826	1.02214
19-OCT-83	0.18670	0.00402	0.01100	0.36274	0.02733	0.00188	0.19576	0.78943
27-OCT-83	0.17095	0.00202	0.00986	0.29980	0.00793	0.00626	0.18281	0.67962
02-NOV-83	0.18898	0.00000	0.00672	0.19556	0.00964	0.00606	0.40127	0.80823
08-NOV-83	0.12209	0.00000	0.00226	0.45979	0.06429	0.01554	0.19909	0.86307
15-NOV-83	0.08412	0.00000	0.00257	0.34281	0.15043	0.00287	0.32469	0.90749
22-NOV-83	0.08481	0.00104	0.00236	0.29828	0.04413	0.00352	0.22777	0.66192
SWM[a]	0.29150	0.00162	0.02414	0.40101	0.23904	0.21830	0.17756	1.35316

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 109. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1984. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
21-MAR-84	0.00307	0.02127	0.05677	0.13462	0.13657	0.08550	0.17788	0.61567
05-APR-84	0.00435	0.00740	0.00117	0.18639	0.19917	0.16830	0.11008	0.67686
17-APR-84	0.00307	0.00000	0.00062	0.16002	0.31259	0.09130	0.11507	0.68267
25-APR-84	0.00269	0.00000	0.00070	0.11300	0.46177	0.17796	0.20811	0.96423
03-MAY-84	0.00360	0.00000	0.01270	0.30087	0.86081	0.22380	0.35877	1.76055
08-MAY-84	0.00981	0.00000	0.00350	0.30272	0.92012	0.33462	0.58822	2.15899
15-MAY-84	0.00959	0.00000	0.00190	0.38064	0.86089	0.24637	0.87843	2.37782
23-MAY-84	0.00555	0.00000	0.00702	0.22367	0.28543	0.17666	0.57630	1.27463
29-MAY-84	0.00891	0.00000	0.01095	0.25385	0.21183	0.30860	0.86818	1.66232
05-JUN-84	0.01018	0.00000	0.03444	0.29585	0.30373	0.50064	0.96818	2.11302
13-JUN-84	0.03209	0.00000	0.05274	0.16584	0.09157	0.58279	0.37857	1.30360
19-JUN-84	0.00444	0.00000	0.03846	0.25424	0.02902	1.42516	0.27759	2.02891
26-JUN-84	0.00745	0.00000	0.03279	0.19781	0.04081	0.68524	0.05769	1.02179
04-JUL-84	0.02092	0.00000	0.02281	0.18266	0.23504	1.25292	0.08585	1.80020
10-JUL-84	0.04171	0.00000	0.05652	0.35825	0.05098	0.90522	0.06133	1.47401
17-JUL-84	0.01151	0.00000	0.00955	0.33119	0.04842	0.15779	0.10413	0.66259
24-JUL-84	0.02536	0.00000	0.07386	0.45371	0.07649	0.33850	0.03316	1.00108
31-JUL-84	0.14634	0.00000	0.02834	0.56598	0.14417	0.11601	0.02924	1.03007
08-AUG-84	0.48543	0.00000	0.06615	0.32129	0.04885	0.11031	0.01286	1.04489
14-AUG-84	0.73334	0.00000	0.00735	0.46475	0.22564	0.25665	0.01244	1.70017
21-AUG-84	1.18741	0.00000	0.00750	0.39990	0.06769	0.10633	0.00324	1.77206
28-AUG-84	0.39897	0.00000	0.00490	0.27466	0.06928	0.20240	0.01004	0.96025
11-SEP-84	0.12540	0.00000	0.01073	0.31116	0.11610	0.10094	0.00824	0.67257
25-SEP-84	0.35090	0.00959	0.13222	0.39857	0.11483	0.15834	0.09914	1.26359
10-OCT-84	0.15629	0.00475	0.02023	0.32239	0.03097	0.08554	0.24438	0.86455
24-OCT-84	0.11176	0.00000	0.05807	0.46580	0.07511	0.06102	0.21972	0.99148
06-NOV-84	0.05476	0.00000	0.01346	0.16790	0.11042	0.01075	0.13745	0.49474
SWM[a]	0.15847	0.00137	0.03034	0.30915	0.21090	0.30416	0.22891	1.24329

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 110. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1985. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
28-MAR-85	0.00126	0.00000	0.00654	0.12864	0.11912	0.04170	0.37283	0.67010
03-APR-85	0.01105	0.00822	0.01458	0.15918	0.29604	0.06058	1.04034	1.58999
10-APR-85	0.00514	0.00000	0.01189	0.32067	0.66501	0.06396	1.09114	2.15781
16-APR-85	0.03211	0.00000	0.04651	0.39401	0.31957	0.10873	2.07212	2.97304
23-APR-85	0.01855	0.00000	0.02887	0.26430	0.54118	0.11811	2.27523	3.24623
30-APR-85	0.00750	0.00000	0.01655	0.24166	0.45238	0.13806	1.88984	2.74599
07-MAY-85	0.02601	0.00000	0.02601	0.30144	0.25036	0.18166	0.80174	1.58721
14-MAY-85	0.02053	0.00000	0.01984	0.19608	0.31614	0.26501	1.63990	2.45750
22-MAY-85	0.01712	0.00000	0.03216	0.13697	0.22562	0.27913	1.30123	1.99222
29-MAY-85	0.03473	0.00000	0.08490	0.20182	0.11626	0.28799	0.55819	1.28388
07-JUN-85	0.01593	0.00000	0.05355	0.15597	0.19450	0.35582	0.86035	1.63612
11-JUN-85	0.02408	0.00000	0.02279	0.18328	0.06384	0.22297	0.59284	1.10980
18-JUN-85	0.02484	0.00000	0.04107	0.38023	0.18882	0.89451	0.27253	1.80199
26-JUN-85	0.04975	0.00000	0.02887	0.52018	0.19004	0.58155	0.16356	1.53394
03-JUL-85	0.01590	0.00000	0.02292	0.44918	0.03095	1.59590	0.05284	2.16770
11-JUL-85	0.05860	0.00000	0.05215	0.37923	0.06332	0.99439	0.11546	1.66315
16-JUL-85	0.03445	0.00000	0.02066	0.46330	0.15043	0.40413	0.03961	1.11259
23-JUL-85	0.05276	0.00000	0.04547	0.43802	0.06115	0.31553	0.02879	0.94172
30-JUL-85	0.12730	0.00000	0.10911	0.98507	0.11838	0.19673	0.02797	1.56455
09-AUG-85	0.05911	0.00000	0.11536	0.28832	0.05268	0.19315	0.05992	0.76854
13-AUG-85								
20-AUG-85	0.17489	0.00000	0.02734	0.39390	0.34765	0.10112	0.13265	1.17755
28-AUG-85	0.33449	0.00000	0.08023	0.31478	0.08348	0.12121	0.01226	0.94644
06-SEP-85	0.57499	0.00000	0.12433	0.52618	0.29407	0.11809	0.08815	1.72580
10-SEP-85	0.37857	0.00000	0.05391	0.83374	0.45571	0.15182	0.00895	1.88270
17-SEP-85	0.23628	0.00000	0.05652	0.73241	0.23211	0.16244	0.07723	1.49699
25-SEP-85	0.22516	0.00000	0.08791	0.44926	0.00170	0.16083	0.16698	1.09184
01-OCT-85	0.37920	0.00000	0.08537	0.55216	0.16160	0.12926	0.13383	1.44143
08-OCT-85								
16-OCT-85	0.32993	0.00000	0.11904	0.58925	0.03000	0.14550	0.50860	1.72231
23-OCT-85	0.21936	0.00000	0.12757	1.14039	0.22550	0.09152	0.45903	2.26337
29-OCT-85	0.16385	0.00000	0.05364	0.44217	0.17966	0.12010	0.80863	1.76804
SWM[a]	0.13298	0.00019	0.05870	0.43234	0.20753	0.29278	0.56140	1.68594

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 111. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1986. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
09-APR-86	0.88633	0.00000	0.00220	0.17545	0.26531	0.28232	0.39004	2.00166
17-APR-86	0.05001	0.00000	0.01300	0.18989	0.65297	0.27667	0.29282	1.47535
22-APR-86	0.01759	0.00000	0.00618	0.13181	0.53584	0.20891	0.26834	1.16867
30-APR-86	0.03517	0.00000	0.00772	0.18414	0.63239	0.38548	0.65919	1.90410
06-MAY-86	0.03424	0.00000	0.01646	0.31471	0.58098	0.27387	0.63469	1.85495
13-MAY-86	0.01729	0.00000	0.01148	0.46201	0.77912	0.17445	0.23134	1.67570
21-MAY-86	0.03315	0.00000	0.08506	0.50061	1.29434	0.15585	0.62726	2.69627
27-MAY-86	0.01363	0.00000	0.06053	0.35463	0.70390	0.20613	0.26103	1.59985
03-JUN-86	0.02072	0.00000	0.04023	0.72337	0.16677	0.36350	0.43374	1.74832
10-JUN-86	0.01087	0.00000	0.09144	0.20365	0.08800	0.22406	0.36064	0.97865
18-JUN-86	0.00840	0.00222	0.10280	0.18031	0.21521	0.90894	0.38376	1.80164
24-JUN-86	0.00819	0.00000	0.13789	0.34349	0.00430	1.25598	0.29552	2.04536
03-JUL-86	0.01475	0.00000	0.05705	0.32958	0.01766	1.22070	0.24514	1.88489
08-JUL-86	0.05889	0.00000	0.02156	0.73000	0.00761	2.11631	0.14436	3.07874
17-JUL-86								
23-JUL-86	0.08756	0.00000	0.02181	0.53923	0.11482	0.12457	0.04047	0.92846
30-JUL-86	0.10888	0.00000	0.15846	0.69277	0.24488	0.11695	0.02748	1.34942
06-AUG-86	0.09256	0.00000	0.06374	0.08650	0.07217	0.05643	0.01600	0.38740
14-AUG-86	0.24772	0.00421	0.00335	0.07796	0.06475	0.00823	0.03707	0.44329
26-AUG-86	0.38671	0.00000	0.05811	0.37360	0.00000	0.08648	0.10500	1.00991
03-SEP-86	0.48686	0.00063	0.12041	0.71385	0.12949	0.09517	0.06711	1.61351
11-SEP-86	0.76066	0.00081	0.05865	0.75289	0.00000	0.35396	0.06660	1.99358
17-SEP-86	0.26453	0.00000	0.03139	0.63052	0.28939	0.08899	0.23537	1.54020
23-SEP-86	0.06658	0.00000	0.02637	0.49440	0.14932	0.00150	0.25596	0.99412
30-SEP-86	0.14887	0.00000	0.03937	0.38151	0.02820	0.06555	0.12205	0.78555
07-OCT-86	0.20872	0.00000	0.05230	0.58514	0.01693	0.11052	0.10283	1.07644
16-OCT-86	0.18400	0.00000	0.03245	0.43687	0.03102	0.12281	0.27880	1.08595
21-OCT-86	0.14163	0.00000	0.01103	0.38460	0.05423	0.08553	0.02944	0.70647
SWM[a]	0.18219	0.00032	0.04675	0.40367	0.24082	0.35254	0.22980	1.45610

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 112. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1987. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
16-APR-87	0.00372	0.00000	0.01261	0.15340	0.34294	0.34631	0.70989	1.56886
22-APR-87	0.00663	0.00000	0.01598	0.13425	0.21024	0.43723	0.56363	1.36795
29-APR-87	0.01241	0.00000	0.01535	0.09602	0.20732	0.48282	0.57783	1.39175
05-MAY-87	0.01045	0.00000	0.02118	0.10779	0.43855	0.28222	1.21130	2.07151
12-MAY-87	0.01238	0.00000	0.03156	0.08150	0.38937	0.50663	0.72601	1.74747
21-MAY-87	0.01431	0.00000	0.02763	0.11521	0.15320	0.59740	0.55520	1.46294
26-MAY-87	0.01421	0.00000	0.02895	0.19517	0.17273	0.47624	0.32911	1.21641
02-JUN-87	0.02136	0.00000	0.00703	0.21102	0.14316	1.16824	0.00768	1.55849
09-JUN-87	0.01154	0.00000	0.02159	0.29571	0.30827	0.74025	0.02022	1.39758
16-JUN-87	0.00257	0.00000	0.00172	0.18000	0.03449	0.08020	0.01799	0.31698
23-JUN-87	0.16261	0.00000	0.00875	0.39278	0.02297	0.32815	0.04480	0.96007
30-JUN-87	0.04838	0.00000	0.06048	0.53017	0.10700	0.67616	0.07092	1.49310
07-JUL-87	0.21009	0.00000	0.01657	0.59894	0.21263	0.78579	0.14588	1.96990
16-JUL-87	0.13066	0.00000	0.17145	0.78324	0.00000	0.07307	0.02195	1.18037
21-JUL-87	0.28264	0.00000	0.03555	0.35952	0.31241	0.12234	0.03233	1.14479
28-JUL-87	0.30126	0.00000	0.04870	0.35391	0.07681	0.14465	0.04624	0.97156
05-AUG-87	0.50490	0.00000	0.00603	0.18481	0.11812	0.06007	0.00953	0.88345
11-AUG-87	0.31189	0.00000	0.01490	0.27235	0.12421	0.14243	0.02524	0.89102
18-AUG-87	0.85211	0.00000	0.08794	0.49268	0.18295	0.29921	0.11590	2.03080
25-AUG-87	0.78237	0.00000	0.14671	0.13719	0.11251	0.21458	0.06443	1.45779
01-SEP-87	0.27340	0.00000	0.02746	0.12739	0.25742	0.13957	0.07752	0.90276
08-SEP-87	0.18641	0.00000	0.07618	0.14262	0.05855	0.14395	0.02738	0.63509
15-SEP-87	0.26722	0.00000	0.02483	0.15596	0.02036	0.11037	0.00021	0.57896
23-SEP-87	0.12845	0.00000	0.03341	0.16359	0.00097	0.11963	0.00031	0.44636
29-SEP-87	0.20319	0.00000	0.07935	0.27345	0.08063	0.18079	0.14105	0.95845
07-OCT-87	0.13053	0.00900	0.02847	0.22459	0.04254	0.22629	0.14305	0.80448
14-OCT-87	0.15286	0.00499	0.03117	0.21806	0.02365	0.07453	0.14831	0.65356
20-OCT-87	0.27644	0.00548	0.10000	0.58088	0.10740	0.16918	0.09183	1.33122
SWM[a]	0.18408	0.00083	0.04270	0.27590	0.15981	0.32449	0.23133	1.21914

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 113. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1988. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
08-APR-88	0.00742	0.00000	0.00139	0.30525	0.48334	0.18618	0.94610	1.92968
19-APR-88	0.00935	0.00000	0.00684	0.23263	0.21839	0.27426	1.19495	1.93642
26-APR-88	0.01813	0.00000	0.00436	0.15155	0.08468	0.27884	0.95688	1.49447
05-MAY-88	0.01868	0.00000	0.01879	0.15490	0.16430	0.36603	0.66330	1.38600
10-MAY-88	0.01257	0.00000	0.01173	0.09280	0.02298	0.14829	0.25247	0.54085
18-MAY-88	0.01709	0.00000	0.01831	0.13817	0.13185	0.16029	0.81459	1.28023
25-MAY-88	0.03042	0.00000	0.02644	0.14015	0.07756	0.14363	0.25435	0.67254
01-JUN-88	0.02330	0.00000	0.02580	0.28730	0.00594	0.35451	0.16995	0.86679
07-JUN-88	0.02094	0.00000	0.02120	0.20807	0.14637	0.53066	0.10856	1.03580
15-JUN-88	0.02430	0.00000	0.01397	0.24871	0.10752	0.31244	0.23646	0.94340
21-JUN-88	0.05574	0.00000	0.00654	0.23472	0.08293	1.04374	0.13758	1.56124
29-JUN-88	0.04057	0.00000	0.01061	0.32083	0.07825	0.34139	0.31149	1.10314
05-JUL-88	0.02301	0.00000	0.00315	0.18278	0.03546	0.36783	0.12278	0.73502
12-JUL-88	0.04573	0.00000	0.02514	0.42508	0.09435	0.44827	0.18292	1.22148
19-JUL-88	0.22824	0.00000	0.28682	0.41487	0.08804	0.31157	0.01209	1.34162
27-JUL-88	0.10326	0.00000	0.01374	0.10223	0.13471	0.07827	0.01972	0.45194
03-AUG-88	0.12604	0.00000	0.03620	0.19133	0.40900	0.03049	0.00175	0.79482
10-AUG-88	0.25583	0.00000	0.00641	0.19462	0.13816	0.07340	0.00097	0.66938
17-AUG-88	0.21796	0.00000	0.00634	0.16798	0.06110	0.19113	0.00000	0.64451
24-AUG-88	0.20323	0.00000	0.02613	0.16667	0.14189	0.06930	0.06897	0.67619
30-AUG-88	0.22426	0.00000	0.11115	0.15565	0.09780	0.05650	0.02811	0.67348
08-SEP-88	0.14054	0.00000	0.00932	0.69972	0.31267	0.09761	0.08883	1.34869
13-SEP-88	0.49344	0.00000	0.01559	0.43009	0.20208	0.05397	0.14693	1.34210
21-SEP-88	0.18467	0.01049	0.02643	0.27911	0.05431	0.09649	0.13359	0.78485
27-SEP-88	0.22254	0.00552	0.03764	0.10652	0.00530	0.08175	0.20536	0.66462
05-OCT-88	0.08355	0.00000	0.01254	0.09423	0.05475	0.04722	0.18066	0.47300
12-OCT-88	0.14352	0.00558	0.01656	0.38403	0.00297	0.08637	0.23948	0.87851
20-OCT-88	0.19576	0.00511	0.04779	0.25182	0.05090	0.04805	0.14660	0.74603
SWM[a]	0.11200	0.00108	0.03063	0.24276	0.13170	0.21624	0.29750	1.03190

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 114. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1989. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
05-APR-89	0.00826	0.00000	0.00318	0.09043	0.21400	0.06047	1.78563	2.16198
19-APR-89	0.02181	0.00000	0.00817	0.17650	0.27178	0.26128	1.40953	2.14906
25-APR-89	0.01849	0.00000	0.01570	0.14231	0.19610	0.19556	0.74636	1.31453
03-MAY-89	0.02982	0.00000	0.01271	0.18826	0.18984	0.29694	0.97663	1.69467
09-MAY-89	0.01785	0.00000	0.03817	0.11099	0.29356	0.39003	1.03324	1.88384
17-MAY-89	0.01140	0.00000	0.03764	0.05720	0.13317	0.27563	0.25505	0.77010
24-MAY-89	0.02244	0.00000	0.02098	0.06242	0.19409	0.51290	0.29016	1.10299
31-MAY-89	0.01682	0.00000	0.09372	0.11014	0.25041	0.52267	0.47749	1.47125
06-JUN-89	0.01528	0.00000	0.03218	0.06916	0.09619	1.24598	0.23690	1.69567
14-JUN-89	0.01860	0.00000	0.07462	0.17550	0.17672	0.73417	0.41617	1.59577
20-JUN-89	0.04134	0.00000	0.20101	0.18974	0.18729	0.67915	0.27978	1.57830
28-JUN-89	0.00142	0.00000	0.01089	0.18006	0.14605	0.63267	0.00749	0.99135
05-JUL-89	0.01532	0.00000	0.05826	0.12405	0.07790	0.67585	0.01953	0.97090
12-JUL-89	0.13130	0.00000	0.03246	0.20918	0.01792	0.19244	0.00628	0.58957
18-JUL-89	0.09981	0.00000	0.01748	0.33574	0.45189	0.21157	0.05256	1.16904
26-JUL-89	0.08298	0.00000	0.01629	0.17969	0.02721	0.08413	0.00423	0.39453
01-AUG-89	0.09665	0.00000	0.02210	0.33874	0.03851	0.09126	0.00538	0.59264
10-AUG-89	0.19072	0.00000	0.01559	0.45508	0.20757	0.10118	0.02271	0.99286
16-AUG-89	0.31353	0.00000	0.02274	0.28178	0.06270	0.12882	0.00017	0.80974
23-AUG-89	0.20800	0.00000	0.02238	0.19874	0.34470	0.11537	0.00408	0.89328
29-AUG-89	0.27497	0.00000	0.04571	0.12003	0.34884	0.09502	0.01046	0.89502
07-SEP-89	0.36763	0.00000	0.01594	0.07964	0.10059	0.11097	0.01038	0.68516
13-SEP-89	0.20200	0.00000	0.02561	0.16152	0.09647	0.16013	0.05000	0.69572
20-SEP-89	0.31512	0.00000	0.00860	0.08048	0.02261	0.11382	0.00007	0.54070
26-SEP-89	0.26561	0.00000	0.04314	0.16570	0.00651	0.09420	0.02111	0.59627
05-OCT-89	0.31273	0.00000	0.01520	0.23470	0.01958	0.04599	0.07733	0.70553
11-OCT-89	0.15819	0.00000	0.01233	0.24406	0.00665	0.03924	0.11027	0.57073
18-OCT-89								
SWM[a]	0.12020	0.00000	0.03143	0.18039	0.14616	0.27339	0.33443	1.08648

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 115. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1990. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
04-APR-90	0.07844	0.00000	0.00235	0.20936	0.43530	0.22890	1.29097	2.24530
18-APR-90	0.02634	0.00000	0.01429	0.28297	0.36708	0.25545	2.93835	3.88448
24-APR-90	0.01625	0.00000	0.00505	0.17790	0.36059	0.22909	1.87611	2.66499
02-MAY-90	0.16410	0.00000	0.00860	0.32380	0.26707	1.65711	1.51480	2.53347
08-MAY-90	0.01125	0.00000	0.00298	0.16987	0.27527	0.08921	0.85872	1.40729
15-MAY-90	0.00809	0.00000	0.01020	0.24176	0.07855	0.14649	1.15076	1.63585
23-MAY-90	0.00402	0.00000	0.00755	0.13248	0.12883	0.07584	1.03019	1.37891
29-MAY-90	0.02477	0.00000	0.05213	0.35211	0.20929	0.30838	1.69014	2.63681
05-JUN-90	0.01009	0.00000	0.07705	0.26818	0.24309	0.46723	2.72059	3.78622
12-JUN-90	0.02827	0.00000	0.11299	0.21272	0.08711	1.30649	0.59254	2.34013
19-JUN-90	0.00746	0.00000	0.08709	0.34166	0.32177	7.21290	0.16958	8.14046
26-JUN-90	0.02624	0.00000	0.08801	0.26037	0.17255	1.17698	0.12807	1.85222
04-JUL-90	0.00845	0.00000	0.01171	0.34911	0.16565	0.37420	0.04170	0.95083
11-JUL-90	0.05417	0.00000	0.03043	0.27119	0.15601	0.23194	0.04566	0.78940
17-JUL-90	0.06222	0.00000	0.02056	0.25869	0.07347	0.06697	0.03069	0.51259
24-JUL-90	0.21084	0.00000	0.06329	0.34842	0.19313	0.14084	0.00754	0.96405
31-JUL-90	0.09398	0.00000	0.01147	0.10248	0.14638	0.10644	0.00621	0.46696
08-AUG-90	0.19096	0.00000	0.01645	0.23827	0.24209	0.08150	0.00038	0.76965
14-AUG-90	0.55126	0.00000	0.04463	0.25417	0.19422	0.08408	0.00000	1.12837
22-AUG-90	1.38274	0.00000	0.02121	0.31421	0.05805	0.20720	0.00000	1.98340
28-AUG-90	0.23275	0.00000	0.01502	0.07707	0.01217	0.07194	0.01042	0.41937
06-SEP-90	0.28535	0.00000	0.03949	0.21324	0.00665	0.16049	0.00060	0.70582
11-SEP-90	0.27583	0.00000	0.02841	0.15665	0.00621	0.07804	0.04683	0.59197
18-SEP-90	0.59226	0.00000	0.09610	0.17455	0.15171	0.13379	0.05278	1.20120
26-SEP-90	0.20372	0.00000	0.02925	0.22314	0.02179	0.09448	0.37048	0.94287
02-OCT-90	0.36342	0.00000	0.02286	0.27085	0.17304	0.08677	0.08820	1.00514
11-OCT-90	0.26819	0.00000	0.02375	0.25331	0.01338	0.07437	0.13984	0.77284
16-OCT-90	0.18579	0.00000	0.04368	0.28137	0.01910	0.05737	0.03213	0.61943
24-OCT-90								
SWM[a]	0.18628	0.00000	0.03505	0.24207	0.16050	0.49097	0.60635	1.69489

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 116. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1991. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
05-APR-91	0.03056	0.00000	0.00886	0.19584	0.36549	0.11374	1.17937	1.89386
17-APR-91	0.01286	0.00000	0.00638	0.18988	0.15229	0.16198	0.84975	1.37314
23-APR-91	0.01864	0.00000	0.00727	0.28349	0.53267	0.56365	2.12118	3.52690
30-APR-91	0.01136	0.00000	0.01902	0.26509	0.36190	0.39939	1.18910	2.24586
07-MAY-91	0.01555	0.01022	0.01744	0.26005	0.62094	0.25453	1.71094	2.88968
14-MAY-91	0.00853	0.00000	0.02089	0.15388	0.13102	0.45881	0.37055	1.14368
22-MAY-91	0.02010	0.00000	0.02501	0.17758	0.09586	0.41654	1.09652	1.83160
28-MAY-91	0.00448	0.00000	0.02130	0.14921	0.08476	0.47320	0.19335	0.92629
04-JUN-91	0.01244	0.00000	0.03322	0.60950	0.14700	0.63798	0.07587	1.51602
12-JUN-91	0.00979	0.00000	0.02331	0.23960	0.20726	0.56332	0.11013	1.15342
18-JUN-91	0.01212	0.00000	0.03704	0.11830	0.04764	0.32280	0.11490	0.65280
25-JUN-91	0.04134	0.00000	0.01138	0.12928	0.04024	0.49484	0.11548	0.83257
03-JUL-91	0.03150	0.00000	0.09662	0.15356	0.03339	0.14413	0.00280	0.46201
09-JUL-91	0.03871	0.00000	0.00201	0.27457	0.00821	0.09376	0.00195	0.41920
16-JUL-91	0.15697	0.00000	0.00057	0.26441	0.12888	0.05688	0.00860	0.61632
23-JUL-91	0.20792	0.00671	0.01201	0.34322	0.62786	0.08651	0.01144	1.29567
31-JUL-91	0.31974	0.00000	0.01065	0.36433	0.09855	0.09040	0.00538	0.88905
08-AUG-91	0.32107	0.00000	0.00685	0.31309	0.14568	0.17015	0.01693	0.97377
13-AUG-91	1.02924	0.00000	0.00665	0.16238	0.31865	0.09535	0.00666	1.61894
20-AUG-91	0.39294	0.00000	0.02273	0.17952	0.03284	0.07292	0.05477	0.75572
28-AUG-91	0.37595	0.00000	0.01636	0.23973	0.28778	0.13832	0.02780	1.08594
05-SEP-91	0.34907	0.00254	0.13260	0.15140	0.18009	0.07963	0.02840	0.92373
11-SEP-91	0.28692	0.00000	0.05400	0.09322	0.48897	0.13559	0.00070	1.05940
17-SEP-91	0.28233	0.01500	0.02526	0.20974	0.07105	0.19963	0.00536	0.80836
01-OCT-91	0.23709	0.01061	0.00924	0.18875	0.25886	0.03646	0.14619	0.88719
10-OCT-91	0.20758	0.00266	0.05687	0.35808	0.23325	0.05488	0.52317	1.43648
16-OCT-91	0.15871	0.00384	0.03281	0.20830	0.13462	0.04185	0.15047	0.73060
23-OCT-91	0.11417	0.00000	0.00819	0.63125	0.16855	0.06011	0.34837	1.33065
29-OCT-91	0.04353	0.00261	0.00946	0.37426	0.07440	0.05508	0.00913	0.56848
SWM[a]	0.16284	0.00221	0.02471	0.24842	0.21035	0.21907	0.36783	1.23543

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 117. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1992. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Date	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
01-APR-92	0.03816	0.00000	0.00273	0.14099	0.09911	0.17211	0.78085	1.23396
07-APR-92	0.04541	0.00000	0.00245	0.14109	0.16763	0.18976	0.68275	1.22910
14-APR-92	0.00752	0.00000	0.00422	0.16328	0.10076	0.12709	0.89826	1.30113
29-APR-92	0.01737	0.00000	0.00234	0.06568	0.13218	0.12869	1.03389	1.38015
05-MAY-92	0.02663	0.00000	0.00348	0.10514	0.17010	0.38356	0.93832	1.62722
12-MAY-92	0.02359	0.00000	0.00535	0.09631	0.17915	0.42581	0.37853	1.10873
20-MAY-92	0.00559	0.00000	0.00467	0.05930	0.05252	0.04516	1.19769	1.36494
28-MAY-92	0.01829	0.00000	0.00700	0.13969	0.08366	0.91595	0.46902	1.63360
02-JUN-92	0.01160	0.00000	0.01486	0.07200	0.09450	0.78726	0.43559	1.41581
09-JUN-92	0.02012	0.00000	0.00631	0.12899	0.05893	1.90055	0.13527	2.25018
16-JUN-92	0.01657	0.00000	0.01432	0.09010	0.14036	0.86279	0.12564	1.24979
24-JUN-92	0.01685	0.00000	0.01360	0.12280	0.05310	0.53046	0.02729	0.76409
30-JUN-92	0.02680	0.00000	0.00706	0.09579	0.00734	0.52124	0.05522	0.71345
08-JUL-92	0.01617	0.00000	0.00918	0.15242	0.06477	0.16459	0.09254	0.49968
14-JUL-92	0.03127	0.00000	0.00434	0.31206	0.18060	0.12712	0.10954	0.76494
21-JUL-92	0.02952	0.00000	0.04450	0.05089	0.04030	0.02711	0.08727	0.27959
28-JUL-92	0.15852	0.00000	0.08742	0.10278	0.05937	0.06495	0.04299	0.51604
11-AUG-92	0.13529	0.00000	0.08585	0.10870	0.02296	0.12592	0.02306	0.50179
18-AUG-92	0.08351	0.00000	0.05901	0.22634	0.05806	0.11237	0.02489	0.56418
25-AUG-92	0.17882	0.00000	0.01083	0.23756	0.26033	0.10416	0.01922	0.81093
01-SEP-92	0.14906	0.00000	0.00416	0.22577	0.02738	0.05910	0.02035	0.48582
10-SEP-92	0.35381	0.00000	0.02289	0.58597	0.20922	0.04525	0.07131	1.28844
15-SEP-92	0.16749	0.00000	0.00696	0.14807	0.04259	0.02972	0.10178	0.49663
30-SEP-92	0.30683	0.00000	0.03429	0.26035	0.23001	0.06936	0.43365	1.33448
07-OCT-92	0.16959	0.00000	0.01063	0.67065	0.15445	0.09098	0.33638	1.43269
14-OCT-92	0.13382	0.00000	0.06974	0.22734	0.09054	0.03252	0.20915	0.76312
20-OCT-92	0.17404	0.00000	0.01946	0.18433	0.05908	0.02350	0.12356	0.58397
SWM[a]								

[a] SWM is the seasonally weighted mean calculated over the April 1st to Oct. 31st period.

Table 118. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1993. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.02789	0.00000	0.00406	0.10194	0.03423	0.06032	0.73225	0.96069
	2	0.02017	0.00000	0.01936	0.09492	0.09783	0.22515	0.48184	0.93926
	3	0.03468	0.00000	0.02087	0.28120	0.33136	0.28120	1.24745	2.18095
	mean	0.02758	0.00000	0.01476	0.15935	0.15447	0.18889	0.82051	1.36030
stratified	1	0.09545	0.00000	0.01825	0.12600	0.07093	0.30325	0.11795	0.73184
	2	0.15938	0.00000	0.01379	0.20324	0.34489	0.24448	0.08072	1.04651
	3	0.13090	0.00000	0.01231	0.15860	0.38423	0.35098	0.10134	1.13835
	mean	0.12858	0.00000	0.01478	0.16261	0.26668	0.29957	0.10000	0.97223
All year	1	0.07483	0.00000	0.01645	0.09612	0.14364	0.19466	0.45177	0.97747
	2	0.09337	0.00000	0.01018	0.11121	0.02600	0.25447	0.12327	0.61849
	3	0.08708	0.00000	0.01952	0.12045	0.07437	0.24718	0.19784	0.74644
	mean	0.08509	0.00000	0.01538	0.10926	0.08134	0.23210	0.25763	0.78080

Table 119. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1994. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.07744	0.00000	0.02695	0.33721	0.39928	0.86908	0.93144	2.64139
	2	0.07795	0.00000	0.01204	0.27379	0.25237	0.44768	0.45897	1.52282
	3	0.03129	0.00000	0.01709	0.23048	0.26451	0.36683	0.50855	1.41874
	mean	0.06223	0.00000	0.01869	0.28049	0.30539	0.56120	0.63299	1.86098
stratified	1	0.28199	0.00000	0.09322	0.17140	0.18457	0.05974	0.02262	0.81353
	2	0.46496	0.00000	0.01524	0.15700	0.05405	0.12966	0.06334	0.88425
	3	0.13308	0.00000	0.01137	0.12455	0.34245	0.08247	0.09392	0.78785
	mean	0.29334	0.00000	0.03994	0.15098	0.19369	0.09062	0.05996	0.82854
All year	1	0.26930	0.00000	0.08911	0.13731	0.09148	0.23196	0.11079	0.92996
	2	0.21411	0.00000	0.01119	0.16677	0.07528	0.16030	0.13544	0.76309
	3	0.21959	0.00000	0.02072	0.45630	0.13865	0.15288	0.10642	1.09456
	mean	0.23433	0.00000	0.04034	0.25346	0.10180	0.18171	0.11755	0.92920

Table 120. Phytoplankton biomass ($g.m^{-3}$) from surface waters of Lake Ontario: station 81, 1995. Integrated samples were collected from the top 20 m during unstratified periods and from the epilimnion during stratified periods. Weekly samples were collated into 3 groups representing prestratifed, stratified and whole year samples, with 3 replicates per group. Phytoplankton are presented by groups: Chlorophyceae, Euglenophyceae, Cyanophyceae, Cryptophyceae, Dinophyceae, Chrysophyceae and Bacillariophyceae (Diatom).

Sample	Rep.	Chloro	Euglen	Cyano	Crypto	Dino	Chryso	Diatom	Total
Pre-stratified	1	0.00742	0.00000	0.01422	0.16645	0.08607	0.58197	0.31776	1.17390
	2	0.00762	0.00000	0.00102	0.14060	0.06181	0.53156	0.28108	1.02369
	3	0.00770	0.00000	0.00431	0.23559	0.09602	0.66160	0.40347	1.40869
	mean	0.00758	0.00000	0.00652	0.18088	0.08130	0.59171	0.33410	1.20209
stratified	1	0.28778	0.00000	0.01285	0.14445	0.02674	0.15971	0.02359	0.65512
	2	0.51061	0.00000	0.00121	0.19816	0.08126	0.13407	0.17308	1.11457
	3	0.41646	0.00000	0.02545	0.16320	0.28047	0.10095	0.09670	1.08322
	mean	0.40495	0.00000	0.01317	0.16860	0.12949	0.13158	0.09779	0.95097
All year	1	0.16882	0.00000	0.01299	0.16734	0.03445	0.31292	0.10872	0.80524
	2	0.24760	0.00000	0.01059	0.18678	0.12102	0.36138	0.16174	1.08911
	3	0.08660	0.00000	0.00765	0.13975	0.13546	0.20632	0.11014	0.68592
	mean	0.16767	0.00000	0.01041	0.16462	0.09698	0.29354	0.12687	0.86009

Table 121. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1987. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
13-MAY-87	1041	1041	1230	4.37	9.60	2.19	4.50	135.6	0.72	1.03
20-MAY-87	741	741	840	5.53	4.70	0.85	3.54	66.8	0.86	1.22
27-MAY-87	1497	1497	1763	9.24	25.03	1.92	3.18	167.8	0.56	0.66
03-JUN-87	876	876	1133	5.54	10.46	1.89	2.75	191.0	0.82	1.11
10-JUN-87	670	464	681	2.89	3.86	1.33	2.80	132.6	15.46	15.13
17-JUN-87	1062	822	1233	3.08	7.02	2.28	4.88	129.6	11.05	15.79
24-JUN-87	1250	1101	1330	4.83	10.31	2.14	3.56	166.5	13.78	14.43
01-JUL-87	694	659	902	2.73	8.45	3.09	3.10	277.2	8.45	12.50
08-JUL-87	417	401	619	1.92	4.66	2.43	3.39	199.0	6.01	10.82
22-JUL-87	778	711	821	2.00	7.82	3.91	4.79	227.0	14.38	14.97
29-JUL-87	955	811	1150	2.23	10.48	4.70	4.15	314.7	10.94	15.63
06-AUG-87	750	742	786	3.61	9.77	2.71	3.53	213.6	8.67	8.73
12-AUG-87	789	789	823	4.27	12.76	2.97	3.82	216.0	4.91	4.92
19-AUG-87	960	960	1021	7.79	21.51	2.76	3.56	215.7	5.22	5.59
26-AUG-87	355	344	761	2.36	9.06	3.84	4.77	223.4	3.26	9.97
02-SEP-87	608	606	869	3.10	9.77	3.15	4.82	181.9	4.35	6.87
10-SEP-87	863	855	908	4.08	16.62	4.07	2.95	383.6	5.82	6.03
16-SEP-87	356	356	504	4.02	6.37	1.58	2.66	165.5	3.36	5.95
24-SEP-87	735	735	800	3.67	8.95	2.44	5.03	134.8	3.17	3.61
30-SEP-87	473	473	647	4.03	9.60	2.38	5.83	113.5	1.58	2.65
09-OCT-87	787	785	1248	3.83	8.91	2.33	10.53	61.4	1.76	4.61
15-OCT-87	490	488	650	3.67	8.68	2.36	4.27	153.6	2.50	3.82
21-OCT-87	137	137	298	4.07	4.12	1.01	4.74	59.4	0.34	1.84
SWM[a]										

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 122. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1988. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (μg·L^{-1}). I_k (μE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
20-APR-88	537	537	678	2.64	5.16	1.97	4.75	114.9	0.77	1.06
27-APR-88	185	185	287	2.69	1.96	0.73	2.59	78.3	0.42	1.04
06-MAY-88	188	188	210	1.99	1.32	0.66	1.40	131.1	1.07	1.24
11-MAY-88	152	152	155	2.14	0.78	0.36	1.51	67.1	1.17	1.19
19-MAY-88		69		69.00	163.00	3.49	1.36	0.4	0.73	151.00
02-JUN-88	604	604	645	5.91	5.97	1.01	1.60	175.5	7.93	8.12
08-JUN-88	390	385	730	3.84	4.09	1.06	2.29	128.7	3.06	8.88
16-JUN-88	367	307	420	4.63	3.24	0.70	0.64	305.1	11.30	13.43
22-JUN-88	213	204	361	4.52	6.47	1.42	1.20	330.8	4.81	9.17
30-JUN-88	616	501	742	5.96	5.15	0.86	1.16	206.8	12.70	18.72
06-JUL-88	403	386	581	4.51	7.45	1.65	1.41	324.3	8.98	13.31
14-JUL-88	517	381	639	1.98	5.53	2.79	2.64	293.8	13.15	17.96
20-JUL-88	157	139	306	1.67	3.24	1.94	2.13	254.1	5.60	14.40
28-JUL-88	552	537	622	3.18	10.61	3.33	3.25	284.6	9.44	11.05
04-AUG-88	548	485	709	2.91	12.51	4.30	5.15	232.0	8.74	12.93
11-AUG-88	318	287	531	1.92	7.91	4.12	3.68	311.1	7.01	12.58
18-AUG-88	529	528	588	3.00	9.22	3.06	3.27	260.1	6.46	7.13
25-AUG-88	627	624	778	2.32	10.50	4.52	5.39	233.4	5.85	8.10
31-AUG-88	721	721	771	3.20	9.73	3.04	3.16	267.3	5.25	5.66
09-SEP-88	1014	1014	1217	2.96	15.80	5.34	7.21	205.8	2.06	2.87
15-SEP-88	662	661	729	3.53	10.51	2.98	3.62	228.5	5.45	5.81
22-SEP-88	772	770	1240	3.20	7.71	2.41	3.78	177.3	3.53	7.12
28-SEP-88	521	521	586	2.40					2.98	3.38
06-OCT-88	341	341	512	4.80	8.49	1.77	2.73	180.1	2.09	3.62
13-OCT-88	539	539	770	3.53	10.09	2.86	6.15	129.0	1.21	2.24
SWM[a]	467	451	608	3.33	6.90	2.19	3.28	195.9	4.58	6.69

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 123. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1989. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
04-APR-89	101	101	196	3.20	1.83	0.57	0.90	176.3	0.46	0.98
20-APR-89	1386	1386	1595	3.70	10.56	2.85	5.96	133.0	1.00	1.28
04-MAY-89	1551	1551	1624	2.91	11.34	3.90	6.67	162.3	1.32	1.35
18-MAY-89	1042	1042	1256	3.13	8.10	2.59	4.98	144.5	1.04	1.40
25-MAY-89	779	779	1149	3.24	6.37	1.97	3.63	150.5	0.91	1.67
01-JUN-89	807	807	1154	3.04	6.67	2.20	4.95	123.3	0.72	6.21
07-JUN-89	1267	747	1456	4.22	8.98	2.12	2.33	253.4	19.06	23.23
15-JUN-89	307	307	892	4.38	6.80	1.55	4.16	103.4	1.00	6.27
21-JUN-89	705	691	1920	4.34	10.67	2.45	3.94	173.2	2.72	13.92
29-JUN-89	877	669	936	1.98	5.74	2.90	4.36	185.2	17.74	19.36
06-JUL-89	706	418	769	1.52	5.41	3.56	2.60	380.7	19.62	21.45
13-JUL-89	727	437	1052	1.59	3.95	2.48	2.25	306.6	12.76	19.01
19-JUL-89	478	368	778	1.46	5.98	4.10	3.73	305.1	9.19	16.39
27-JUL-89	554	363	1022	1.26	7.07	5.61	4.35	358.3	10.43	21.53
02-AUG-89	815	702	1166	1.74	9.98	5.74	4.72	338.2	8.17	12.39
11-AUG-89	707	635	1107	3.22	14.06	4.36	6.26	193.8	5.27	10.46
17-AUG-89	981	922	1018	3.64	15.72	4.32	6.16	194.9	9.67	9.76
24-AUG-89	932	924	986	3.87	13.94	3.60	6.85	146.2	8.13	8.50
30-AUG-89	495	482	544	3.06	8.22	2.69	5.14	145.2	5.61	6.58
08-SEP-89	658	654	855	3.34	11.04	3.30	4.85	189.1	5.71	7.88
21-SEP-89	989	989	1050	4.41	14.98	3.40	5.25	179.7	4.12	4.33
27-SEP-89	626	626	663	3.15	7.53	2.39	4.68	142.1	4.27	4.64
05-OCT-89	415	414	484	2.55	4.02	1.58	3.73	117.5	4.03	5.10
11-OCT-89	208	208	272	2.94	3.70	1.26	2.96	118.4	0.31	0.50
26-OCT-89	558	558	675	4.30	11.71	2.72	6.95	108.9	0.24	0.35
SWM[a]	776	714	996	3.12	8.72	2.93	4.62	185.4	5.33	7.74

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 124. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1990. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
03-APR-90				1.98						
19-APR-90	1165	1165	1378	3.59	12.06	3.35	5.14	181.6	0.77	1.10
25-APR-90	1343	1343	1584	4.76					0.73	1.04
03-MAY-90	1105	1105	1326	5.06	12.57	2.49	4.62	149.7	0.70	0.95
09-MAY-90	1169	1169	1481	5.93					0.63	0.93
17-MAY-90	886	886	1679	7.23	16.32	2.26	4.73	132.8	0.36	0.90
24-MAY-90	1233	1233	1680	6.26					0.65	1.00
31-MAY-90	1703	1703	1784	5.90	15.33	2.60	4.65	155.2	1.05	1.09
06-JUN-90	858	858	1162	4.47	11.07	2.47	3.82	179.8	0.65	1.05
14-JUN-90	694	587	1013	3.13	10.20	3.26	3.26	278.0	10.30	16.53
20-JUN-90	721	619	987	2.58	8.13	3.15	3.87	226.5	9.91	14.09
28-JUN-90	968	885	1208	3.49	8.40	2.41	3.26	205.4	11.45	13.99
05-JUL-90	1500	1387	1917	1.93	11.86	6.15	13.45	127.0	11.08	15.18
12-JUL-90	545	349	808	1.35	3.52	2.60	2.70	268.3	9.61	16.35
18-JUL-90	756	373	926	1.22	3.00	2.46	2.46	278.0	12.44	15.24
26-JUL-90	782	599	829	1.26	5.51	4.38	4.25	286.2	11.08	11.58
02-AUG-90	856	597	960	1.91	5.86	3.07	3.67	232.3	11.12	12.55
10-AUG-90	566	566	716	3.08	8.45	2.75	3.19	239.3	6.39	7.71
15-AUG-90	1193	1193	1337	3.37	17.43	5.17	5.50	261.3	6.02	6.27
24-AUG-90	739	736	880	2.70	11.01	4.08	5.86	193.6	6.23	7.77
30-AUG-90	742	742	775	3.50	12.64	3.61	5.28	190.1	4.76	4.89
07-SEP-90	536	536	751	4.11	13.53	3.29	3.76	243.2	3.18	4.88
12-SEP-90	660	660	718	3.70					3.89	4.03
20-SEP-90	840	840	1168	3.94	12.77	3.24	5.79	155.4	2.55	4.58
27-SEP-90	561	561	703	2.36					4.09	5.27
12-OCT-90	135	135	402	3.14					0.34	1.91
25-OCT-90	218	218	374	5.13	4.06	0.79	2.37	85.7	0.18	0.54
SWM[a]	838	791	1069	3.57	10.48	2.96	4.55	184.6	4.46	5.92

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 125. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1991. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
03-APR-91	136	136	144	1.10					1.22	1.26
05-APR-91	150	150	227	1.71					0.53	1.28
16-APR-91	228	228	239	1.73					1.29	1.39
24-APR-91	171	171	291	2.01	1.32	0.66	2.80	65.5	0.62	1.47
01-MAY-91	219	219	351	2.23	2.59	1.03	1.50	190.6	0.74	1.53
09-MAY-91	853	853	1327	3.51	9.97	2.84	4.69	168.7	0.60	1.28
15-MAY-91	665	665	711	4.67	6.02	1.29	1.87	192.3	1.13	1.20
24-MAY-91	1035	1035	1743	6.41	20.02	3.12	4.66	186.2	0.39	0.88
29-MAY-91	1084	1084	1421	7.46	14.02	1.88	3.62	144.8	0.60	0.92
06-JUN-91	1423	1423	1555	5.55	14.18	2.56	4.42	161.1	0.91	1.04
11-JUN-91	361	312	903	2.39	6.27	2.63	3.30	221.0	3.92	14.19
20-JUN-91	429	396	472	1.38	4.95	3.59	2.25	444.3	12.86	14.09
26-JUN-91	854	712	1049	2.28	8.68	3.81	3.98	265.7	10.78	14.20
05-JUL-91	371	368	752	1.85	8.54	4.62	5.88	218.4	3.45	9.32
10-JUL-91	1031	1030	1157	2.70	13.49	5.00	7.94	175.1	7.43	8.78
18-JUL-91	749	562	821	2.33	11.37	4.88	4.41	307.7	14.42	16.26
24-JUL-91	534	533	574	2.86	8.04	2.81	2.82	277.0	7.61	8.53
01-AUG-91	1189	1106	1259	2.92	14.60	5.00	4.41	315.0	13.29	13.98
07-AUG-91	713	696	802	2.45	9.54	3.90	3.76	288.2	8.88	10.17
15-AUG-91	638	613	1200	3.28	13.54	4.13	4.31	266.2	5.64	13.59
21-AUG-91	864	864	1317	3.96	17.94	4.54	5.97	211.1	2.72	5.25
29-AUG-91	766	766	898	4.51	15.88	3.52	4.66	209.7	3.36	4.23
04-SEP-91	676	676	790	4.09					2.70	3.24
12-SEP-91	855	855	898	4.22	13.91	3.30	5.02	182.6	3.63	3.87
18-SEP-91	692	692	1135	4.15					2.19	5.11
03-OCT-91	402	402	693	2.46					2.95	5.72
10-OCT-91	512	512	695	2.60	8.94	3.44	5.63	169.8	2.09	2.96
17-OCT-91	924	924	970	3.18					2.03	2.52
24-OCT-91	569	569	880	3.03	12.39	4.19	7.81	149.3	1.22	2.36
30-OCT-91	776	776	825	2.98					1.10	1.93
SWM[a]	657	638	872	3.21	10.04	3.10	4.43	197.5	4.06	5.87

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 126. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1992. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
31-MAR-92				2.20						
08-APR-92				2.22						
15-APR-92				4.73						
28-APR-92				3.44						
07-MAY-92	1034	1034	1101	3.21	6.91	2.15	3.49	171.3	1.37	1.49
14-MAY-92	262	262	360	3.52	2.94	0.84	1.00	233.5	0.83	1.29
22-MAY-92	614	614	672	2.25					1.16	1.31
26-MAY-92	795	795	1522	5.04	12.37	2.51	5.46	127.8	0.30	1.01
04-JUN-92	991	991	1249	5.58	8.98	1.61	3.22	139.0	0.89	1.21
10-JUN-92	1007	1007	1113	5.50	9.70	1.76	2.23	219.4	1.05	1.21
18-JUN-92	613	363	743	2.27	4.23	1.86	2.61	198.1	14.51	19.28
25-JUN-92	515	446	652	1.72	3.57	2.08	3.24	178.5	11.59	17.59
02-JUL-92	546	477	659	1.81	5.35	2.95	3.47	236.3	15.49	19.18
09-JUL-92	674	516	792	1.52	5.15	3.39	3.39	278.0	14.02	18.29
16-JUL-92	715	563	929	1.37	5.85	4.27	5.13	231.4	12.38	18.17
22-JUL-92	963	829	1199	2.26	6.48	2.87	3.72	214.5	9.84	14.75
30-JUL-92	1266	1255	1703	4.25	17.06	4.01	6.81	163.7	6.18	9.27
13-AUG-92	637	634	1778	5.95	22.13	3.72	7.61	135.9	1.79	9.15
19-AUG-92	1695	1687	1827	8.23	26.40	3.21	6.23	143.2	6.20	7.36
27-AUG-92	364	364	1108	3.97	17.42	4.39	6.34	192.5	1.12	6.42
02-SEP-92	749	736	884	1.61					8.10	10.16
11-SEP-92	1253	1231	1340	2.01	15.14	7.53	12.82	163.3	7.12	8.15
16-SEP-92	1101	965	1411	2.32					7.59	11.73
30-SEP-92	1508	1505	1865	3.15	15.97	5.07	8.92	158.0	4.25	6.26
08-OCT-92	624	624	910	3.40	8.76	2.58	4.92	145.8	2.61	5.23
15-OCT-92	130	130	955	2.98					0.47	5.65
22-OCT-92	533	533	609	2.49	5.22	2.09	4.60	126.3	0.61	0.76
SWM[a]				3.36						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 127. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1993. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
30-MAR-93				2.01						
07-APR-93				2.43						
14-APR-93				1.57						
21-APR-93	166	166	401	1.43	2.32	1.62	2.89	155.8	0.40	1.42
28-APR-93	282	282	522	2.18	3.60	1.65	1.10	417.0	1.03	2.11
06-MAY-93	1217	1217	1283	1.57	6.03	3.85	7.53	142.1	1.79	1.91
12-MAY-93	1444	1444	1624	2.77					1.34	1.67
20-MAY-93	1147	1147	1424	3.17	7.14	2.25	4.13	151.5	1.41	1.85
27-MAY-93	1778	1778	2047	3.75	11.83	3.16	6.05	145.2	1.32	1.58
03-JUN-93	1431	1431	1730	4.76	13.50	2.83	5.84	134.7	0.90	1.11
09-JUN-93	2088	2088	2682	5.13	15.18	2.96	4.62	178.1	1.22	1.76
17-JUN-93	1283	1035	1492	2.55	10.44	4.09	4.48	253.8	17.58	20.53
23-JUN-93	1222	870	1252	3.28	10.74	3.27	2.30	395.2	24.00	24.23
01-JUL-93	650	470	776	2.33	6.41	2.75	2.48	308.3	19.17	23.40
07-JUL-93	865	579	1110	3.39	7.31	2.15	2.34	255.4	16.10	22.76
15-JUL-93	721	439	776	2.31	5.92	2.57	1.99	359.0	17.08	18.85
21-JUL-93	746	385	863	2.76	7.21	2.62	2.39	304.8	19.20	22.55
29-JUL-93	706	691	905	2.95	6.74	2.29	3.41	186.7	7.17	10.08
05-AUG-93	923	832	1028	2.49	9.50	3.82	3.49	304.3	14.21	16.13
12-AUG-93	919	695	993	3.10	9.66	3.12	2.14	405.3	13.52	14.55
18-AUG-93	780	713	871	3.34	13.77	4.12	3.14	364.8	11.54	13.05
26-AUG-93	810	810	930	3.32	14.01	4.22	4.75	247.0	3.32	7.90
01-SEP-93	765	764	860	2.98	12.61	4.23	4.96	237.1	6.19	7.16
10-SEP-93	820	819	1031	2.87	12.45	4.34	5.54	217.8	4.96	7.14
15-SEP-93	672	626	1450	2.72	10.70	3.94	5.07	216.0	3.92	12.23
23-SEP-93	362	362	555	3.13	10.78	3.44	4.65	205.7	1.96	3.48
30-SEP-93	575	565	677	2.97					5.24	6.99
07-OCT-93	336	336	372	1.98	3.79	1.91	4.80	110.6	0.53	0.62
14-OCT-93	705	705	800	3.10	9.25	2.98	6.33	130.9	0.50	0.61
27-OCT-93	612	612	1096	4.28	13.53	3.16	6.00	146.4	0.24	0.56
SWM[a]	823	752	1032	2.93	8.71	2.96	4.14	223.7	6.48	8.21

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 128. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1994. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
12-APR-94				2.08						
19-APR-94				2.37						
26-APR-94				2.60						
05-MAY-94				2.50						
12-MAY-94	306	306	432	3.00	3.45	1.15	1.71	187	0.81	1.26
19-MAY-94	235	235	303	3.39	3.17	0.93	1.22	212	0.76	1.02
26-MAY-94	72	72	439	3.53	2.82	0.80	1.18	188	0.15	1.58
02-JUN-94	846	846	1187	3.17	6.30	1.99	3.45	160	0.89	1.79
06-JUN-94	268	268	430	3.59	3.13	0.87	1.26	192	0.68	1.42
16-JUN-94	1121	1121	1293	4.60	7.39	1.61	2.65	169	1.37	1.70
30-JUN-94	1498	1457	2097	6.82	14.56	2.14	2.42	246	8.57	14.71
14-JUL-94	826	767	1226	3.14	11.60	3.69	3.08	333	7.70	13.13
28-JUL-94	388	388	727	2.05	8.69	4.24	3.75	314	5.07	12.08
11-AUG-94	260	228	548	1.90	8.18	4.31	3.99	300	4.93	12.41
18-AUG-94	783	515	1016	3.06	11.23	3.67	4.02	254	11.22	16.83
25-AUG-94	782	553	1046	2.70	9.78	3.62	3.27	308	10.36	16.14
31-AUG-94	500	491	1263	3.96	15.42	3.89	5.41	200	2.44	9.38
09-SEP-94	794	784	957	3.43	10.70	3.12	4.75	183	6.61	9.22
14-SEP-94	707	693	1294	4.29	11.85	2.76	4.71	163	3.51	9.51
22-SEP-94	781	781	981	4.48	12.20	2.72	4.79	158	3.98	6.03
06-OCT-94	821	821	955	3.93	13.52	16.00	22.82	189	2.48	3.18
13-OCT-94	585	579	814	3.68	10.17	2.76	5.38	143	3.11	5.72
20-OCT-94	461	461	998	4.82	13.55	2.81	4.82	162	1.22	3.73
SWM[a]				3.52						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 129. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 41, 1995. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
07-APR-95										
11-APR-95				1.88						
19-APR-95				2.39						
26-APR-95				2.62						
04-MAY-95	765	765	943	2.82	6.01	2.13	4.18	141.7	0.93	1.39
11-MAY-95	567	567	937	3.47	5.13	1.48	2.21	186.2	0.87	1.82
18-MAY-95	1035	1035	1675	3.97	7.78	1.96	3.47	157.0	0.87	2.02
24-MAY-95	312	312	1046	3.51	6.43	1.83	3.23	157.5	0.23	1.53
02-JUN-95	548	548	1209	5.54	8.00	1.44	3.16	126.7	0.32	1.31
07-JUN-95	1024	1024	1297	6.39	11.00	1.72	2.61	183.2	0.78	1.19
16-JUN-95	913	913	1098	5.54	8.61	1.55	2.42	178.1	0.95	1.27
21-JUN-95	815	642	932	2.44	8.60	3.53	3.38	290.3	16.53	19.46
29-JUN-95	619	572	873	2.07	8.26	3.99	3.92	283.0	10.41	17.23
10-JUL-95	729	396	1078	2.07	4.01	1.94	2.05	263.1	9.99	15.97
15-JUL-95	630	593	733	1.50	8.16	5.44	4.45	339.8	13.03	15.53
24-JUL-95	274	246	538	2.10	4.45	2.12	1.72	342.7	7.35	20.12
01-AUG-95	518	486	743	2.64	12.89	4.88	3.72	364.7	8.58	13.15
11-AUG-95	893	870	1336	3.42	13.90	4.06	4.21	268.1	7.29	10.82
16-AUG-95	900	900	994	3.81	15.54	4.08	4.83	234.8	5.55	6.30
30-AUG-95	906	906	984	2.86	11.81	4.13	5.68	202.1	4.80	5.40
14-SEP-95	832	832	1145	3.20	10.63	3.32	6.14	150.3	3.12	5.69
21-SEP-95	1005	1005	1360	3.04	11.48	3.78	5.79	181.5	3.74	6.39
26-SEP-95	418	418	908	3.15	9.51	3.02	4.30	195.2	1.26	4.02
04-OCT-95	304	304	817	3.84	7.51	1.95	4.31	125.8	0.68	3.30
10-OCT-95	757	757	900	2.82	9.67	3.43	5.85	163.0	2.50	3.33
23-OCT-95	441	441	498	3.30	6.90	2.09	4.22	137.7	0.41	0.50
SWM[a]				3.13						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 130. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1987. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^B{}_m$	α^B	I_k
10-JUN-87	4.00	4.12	1.03	4.26	67.0
17-JUN-87	4.02	5.27	1.31	5.67	64.4
01-JUL-87	3.83	4.82	1.26	3.63	96.3
08-JUL-87	3.19	5.08	1.60	4.62	96.1
22-JUL-87	2.97	8.81	2.97	4.60	179.3
29-JUL-87	3.77	4.33	1.15	4.53	70.3
06-AUG-87	3.77	6.13	1.62	4.64	97.2
26-AUG-87	2.60	5.67	2.18	5.69	106.7
02-SEP-87	1.92	9.69	5.04	11.34	123.6
10-SEP-87	3.85	9.57	2.48	5.50	125.5
16-SEP-87	2.64	3.92	1.49	4.85	85.3
15-OCT-87	2.95	4.37	1.48	7.19	57.1

Table 131. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1988. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B.

Date	Chl_{un}	P_{opt}	P^b_m	α^B	I_k
08-JUN-88	4.02	2.93	0.73	2.90	69.7
16-JUN-88	3.98	3.01	0.76	2.27	93.2
22-JUN-88	4.23	2.67	0.63	2.32	75.5
30-JUN-88	4.57	2.89	0.63	2.20	80.1
14-JUL-88	3.27	4.92	1.51	3.20	131.1
20-JUL-88	2.55	4.80	1.88	3.75	139.3
04-AUG-88	2.96	9.41	3.18	5.75	153.8
11-AUG-88	1.92	6.82	3.55	6.65	148.3
25-AUG-88	2.43	7.30	3.01	5.78	144.7
31-AUG-88	2.05	4.29	2.09	3.98	146.2
15-SEP-88	2.39	4.60	2.59	5.91	121.8
22-SEP-88	2.44	4.29	2.47	4.38	156.8

Table 132. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1989. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
07-JUN-89	4.28	6.44	1.51	3.99	253.4
21-JUN-89	3.51	7.98	2.27	5.05	173.2
29-JUN-89	2.48	4.99	2.01	4.55	185.2
06-JUL-89	2.69	5.23	1.95	3.22	380.7
13-JUL-89	3.14	7.40	2.36	7.26	306.6
19-JUL-89	2.91	5.82	2.00	5.64	305.1
27-JUL-89	2.26	8.91	3.94	5.23	358.3
02-AUG-89	3.66	8.95	2.45	7.31	338.2
11-AUG-89	5.87	18.42	3.14	11.25	193.8
17-AUG-89	3.52	12.04	3.42	8.60	194.4
30-AUG-89	2.64	6.55	2.48	8.44	145.2

Table 133. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1990. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
14-JUN-90	4.09	10.36	2.54	4.02	175.2
20-JUN-90	3.53	8.38	2.37	6.39	103.2
28-JUN-90	3.44	6.86	1.99	3.60	153.4
05-JUL-90	2.29	5.48	2.40	5.44	122.6
12-JUL-90	2.95	5.18	1.76	5.77	84.8
18-JUL-90	3.82	7.63	1.99	8.29	66.8
26-JUL-90	3.74	13.65	3.65	11.89	85.3
02-AUG-90	5.03	14.64	2.90	8.44	95.5

Table 134. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1991. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
11-JUN-91	5.47	6.88	1.25	4.72	73.8
20-JUN-91	1.86	3.85	2.06	2.89	198.2
26-JUN-91	4.31	10.66	2.47	5.45	126.2
05-JUL-91	2.18	7.17	3.29	8.65	105.7
18-JUL-91	2.48	11.10	4.47	7.02	176.9
01-AUG-91	3.05	8.54	2.79	4.55	170.8
07-AUG-91	2.51	9.86	4.03	3.88	288.2
15-AUG-91	3.23	11.38	3.52	5.69	172.3

Table 135. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1992. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
18-JUN-92	5.20	4.03	0.78	2.74	79.1
25-JUN-92	2.73	2.15	0.79	2.12	103.6
02-JUL-92	2.12	2.87	1.35	3.48	107.8
09-JUL-92	2.44	2.27	0.93	3.18	81.3
16-JUL-92	2.16	2.68	1.24	3.76	91.7
22-JUL-92	2.99	3.45	1.15	5.48	58.3
30-JUL-92	4.29	14.74	3.44	7.82	122.3
13-AUG-92	5.50	19.81	3.60	12.47	80.3
02-SEP-92	0.77				
11-SEP-92	1.28	9.00	7.03	16.50	118.4
16-SEP-92	1.28				

Table 136. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1993. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
23-JUN-93	3.97				
01-JUL-93	3.27	4.33	1.33	2.06	179.5
07-JUL-93	2.34	8.24	3.54	5.83	168.8
15-JUL-93	3.34	6.66	2.00	3.70	150.3
21-JUL-93	3.64	6.57	1.80	2.79	179.4
29-JUL-93	5.77	4.52	0.78	3.31	
05-AUG-93	2.98	2.45	0.82	1.88	121.3
12-AUG-93	4.24	9.85	2.33	4.88	132.7
18-AUG-93	5.07				

Table 137. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1994. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
14-JUL-94	6.97	13.34	1.91	5.25	101.1
28-JUL-94	2.05				
11-AUG-94	2.92	7.99	2.74	5.43	140.3
18-AUG-94	3.91	9.78	2.50	5.29	131.4
25-AUG-94	3.36	8.67	2.58	8.92	80.4
31-AUG-94	3.73	9.33	2.50	6.60	105.3
09-SEP-94	3.57	10.95	3.07	4.54	188.0
14-SEP-94	3.86	9.83	2.55	4.27	166.0

Table 138. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 41, 1995. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
21-JUN-95	2.68	5.19	1.94	3.32	162.4
29-JUN-95	3.00	6.25	2.08	3.80	152.2
10-JUL-95	6.85	11.92	1.74	5.11	94.7
24-JUL-95	1.75	1.92	1.10	2.00	152.9
01-AUG-95	3.75	6.50	1.73	4.17	115.3

Table 139. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1987. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
12-MAY-87	507	507	584	3.52	4.55	1.29	3.78	95.1	2.41	3.45
21-MAY-87	655	655	762	5.53	5.90	1.07	2.37	125.1	2.77	3.95
26-MAY-87	743	743	867	4.07	6.69	1.64	4.26	107.1	2.54	3.63
02-JUN-87	838	735	930	4.21	9.23	2.19	3.45	176.4	13.17	14.31
09-JUN-87	472	472	939	4.80	6.82	1.42	4.82	81.9	1.64	7.00
16-JUN-87	638	631	659	2.71	7.85	2.90	2.12	380.5	9.41	9.44
23-JUN-87	909	806	965	3.81	9.86	2.59	3.38	213.2	11.60	12.17
30-JUN-87	962	962	1194	4.63	12.41	2.68	4.71	158.2	5.86	8.46
07-JUL-87	664	646	919	4.85	13.50	2.78	2.89	267.3	6.78	10.96
21-JUL-87	904	895	934	5.26	15.93	3.03	4.43	190.0	9.46	9.41
28-JUL-87	943	943	949	4.54	14.98	3.30	4.94	185.6	4.83	4.69
05-AUG-87	892	892	1017	3.62	13.61	3.76	5.32	196.2	3.92	4.50
11-AUG-87	1073	1073	1072	4.55	16.78	3.69	4.07	252.0	5.38	5.17
18-AUG-87	918	918	920	5.59	17.55	3.14	3.65	239.2	5.99	5.80
25-AUG-87	1207	1207	1290	5.16	21.60	4.19	4.00	291.2	4.05	4.40
01-SEP-87	598	598	868	4.83	10.63	2.21	3.48	176.2	2.03	3.88
09-SEP-87	414	414	562	4.77	7.91	1.66	3.20	144.3	2.00	3.27
15-SEP-87	883	883	986	3.35	11.95	3.57	6.41	155.0	2.77	3.67
23-SEP-87	564	564	704	3.68	10.39	2.83	4.87	161.2	2.30	3.05
29-SEP-87	732	732	885	4.98	12.24	2.46	4.50	151.9	3.08	4.40
07-OCT-87	599	599	706	3.99	10.72	2.69	5.19	144.1	1.28	1.83
14-OCT-87	492	492	574	4.45	7.96	1.79	4.80	103.8	1.18	1.68
20-OCT-87	293	293	448	5.31	7.78	1.47	2.93	139.4	0.90	1.43
SWM[a]										

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 140. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1988. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
19-APR-88	1043	1043	1317	6.42	9.45	1.47	3.80	107.7	2.43	4.04
26-APR-88	290	290	409	5.18	3.55	0.68	2.12	89.7	1.63	3.18
05-MAY-88	777	777	948	5.85	9.63	1.65	2.46	185.9	2.70	3.62
10-MAY-88	386	386	447	5.71	4.03	0.70	1.69	115.6	2.37	3.39
18-MAY-88	261	261	298	4.76	2.64	0.55	1.38	111.2	2.44	3.48
01-JUN-88	295	241	336	4.72	2.92	0.61	2.01	85.1	10.48	14.97
07-JUN-88	321	321	551	4.49	3.86	0.86	2.41	99.0	3.02	9.05
15-JUN-88	360	360	395	5.84	3.63	0.62	1.17	147.8	6.28	7.14
21-JUN-88	382	250	429	3.83	3.94	1.03	1.12	255.2	12.60	13.93
29-JUN-88	846	846	1130	3.81	7.31	1.92	3.76	141.7	4.47	7.59
05-JUL-88	507	507	605	4.19	7.63	1.82	2.10	240.5	4.31	5.13
12-JUL-88	609	572	788	2.10	9.93	4.72	5.83	225.1	8.59	12.40
19-JUL-88	612	605	879	5.15	14.19	2.76	2.57	298.3	5.06	8.57
27-JUL-88	859	858	914	7.48	21.01	2.81	4.15	187.9	6.65	7.21
03-AUG-88	758	758	849	4.03	18.44	4.58	4.71	270.5	5.84	6.61
10-AUG-88	898	898	952	3.75	12.98	3.46	5.59	172.1	5.42	5.84
17-AUG-88	393	393	753	4.40	11.97	2.71	2.13	353.6	2.84	6.52
24-AUG-88	461	461	935	4.29	10.60	2.47	3.58	192.2	1.73	3.89
30-AUG-88	777	777	875	3.55	11.54	3.25	3.27	276.6	3.53	4.12
08-SEP-88	1294	1294	1359	4.22	18.84	2.67	3.00	247.1	4.65	4.89
13-SEP-88	1090	1090	1198	5.22	15.71	2.21	3.48	176.4	3.54	4.07
21-SEP-88	560	560	912	4.83	13.68	1.54	2.02	212.6	1.19	2.73
27-SEP-88	594	594	744	3.83					1.72	2.26
05-OCT-88	781	781	925	3.86	10.39	2.69	5.05	148.4	2.01	2.87
12-OCT-88	470	470	578	4.58	11.35	2.48	5.49	125.4	0.83	1.31
20-OCT-88	495	495	509	3.23	7.76	2.40	5.99	111.3	1.51	1.54
SWM[a]	632	624	782	4.67	9.63	2.03	3.34	172.5	3.98	5.58

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 141. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1989. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ (mE $\cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
05-APR-89	188	188	261	6.25	3.13	0.50	1.60	86.5	1.14	2.16
19-APR-89	727	727	771	4.24	6.74	1.59	5.59	79.1	3.31	3.45
03-MAY-89	804	804	1002	3.04	6.77	1.21	3.59	93.4	2.81	4.17
17-MAY-89	663	663	758	2.02	4.47	2.47	6.86	100.1	3.48	4.97
24-MAY-89	638	638	736	2.47	5.55	2.07	4.09	140.4	3.09	4.41
31-MAY-89	771	771	1388	3.79	13.38	2.64	4.29	171.1	1.49	3.74
06-JUN-89	977	947	1032	4.88	9.57	1.47	2.33	175.5	9.46	9.92
14-JUN-89	532	532	1004	4.97	7.94	1.43	3.53	112.9	1.10	3.90
20-JUN-89	417	417	1089	4.48	8.41	1.84	4.01	127.8	0.84	4.16
28-JUN-89	810	668	958	2.15	8.34	3.99	4.59	241.6	13.59	15.65
05-JUL-89	1142	942	1288	3.44	11.73	3.35	3.27	284.9	13.10	14.90
12-JUL-89	966	957	1073	2.36	9.94	5.15	8.88	161.2	8.26	9.83
18-JUL-89	1211	1194	1327	4.22	18.47	4.18	5.29	220.0	9.02	10.06
26-JUL-89	930	930	1032	3.84	15.16	3.66	6.28	162.1	4.68	5.39
01-AUG-89	1174	1174	1291	4.70	22.77	4.05	6.26	179.9	5.69	6.42
10-AUG-89	971	971	1075	4.37	14.70	3.30	5.62	163.0	4.73	5.47
16-AUG-89	671	671	717	3.90	12.20	3.04	4.68	180.4	4.57	4.86
23-AUG-89	1283	1283	1603	3.67	15.79	4.29	5.12	232.8	5.13	7.11
29-AUG-89	239	239	1081	3.67	13.55	3.52	4.33	225.9	0.93	5.99
07-SEP-89	986	986	1188	4.39	17.17	4.10	6.82	167.2	2.40	3.35
20-SEP-89	850	850	892	3.07	12.49	4.08	7.04	161.0	3.48	3.59
26-SEP-89	587	587	697	3.95	10.55	2.85	4.05	195.6	2.71	3.55
05-OCT-89	624	624	649	3.77	14.62	4.17	4.46	260.0	1.62	1.65
11-OCT-89	265	265	323	4.78	6.59	1.56	2.37	183.3	1.13	1.49
18-OCT-89	801	801	953	5.25	12.37	2.33	4.97	130.3	1.36	1.95
SWM[a]	762	748	947	3.96	10.94	2.78	4.83	159.8	4.03	5.26

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 142. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1990. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
04-APR-90				5.79						
18-APR-90	948	948	981	5.17	8.54	1.65	4.31	106.4	3.32	3.31
24-APR-90	1019	1019	1107	5.55					2.97	3.33
02-MAY-90	877	877	883	4.25	7.35	1.73	5.37	89.5	3.47	3.32
08-MAY-90	901	901	1003	5.44					3.01	3.51
15-MAY-90	968	968	1138	7.47	9.17	1.23	3.14	108.9	2.99	3.73
23-MAY-90	1133	1133	1602	4.83					2.34	4.35
29-MAY-90	765	765	1810	3.70	12.23	3.31	6.97	132.1	0.98	4.81
05-JUN-90	1202	1196	1252	4.30	9.48	2.21	4.58	134.2	4.30	4.33
12-JUN-90	853	853	884	4.29	9.86	2.30	3.43	186.2	7.89	7.95
19-JUN-90	466	367	849	2.99					7.45	10.28
26-JUN-90	941	731	987	4.30	8.20	1.91	2.64	201.2	15.75	16.03
04-JUL-90	983	934	1077	3.21	11.05	3.44	3.73	256.0	10.53	11.67
11-JUL-90	813	779	997	2.87	10.60	3.69	4.02	255.3	8.60	11.20
17-JUL-90	808	807	942	2.54	8.23	3.26	4.60	196.9	7.60	8.93
24-JUL-90	958	927	1042	3.70	14.04	3.79	3.42	308.1	9.62	10.26
31-JUL-90	732	672	1108	4.15	12.80	3.08	3.43	249.6	7.50	13.44
08-AUG-90	899	899	913	4.96	14.05	2.84	3.40	231.7	5.79	5.69
14-AUG-90	950	950	1054	4.96	15.30	3.08	3.79	226.3	5.02	5.68
22-AUG-90	657	657	1068	3.70	13.59	3.67	4.87	209.5	2.22	4.78
28-AUG-90	547	547	763	3.47	12.86	3.71	5.72	180.3	2.86	4.32
06-SEP-90	599	599	995	4.23	17.43	4.12	4.08	280.8	2.41	5.02
11-SEP-90	742	742	868	4.00					2.80	3.63
18-SEP-90	893	893	896	4.44	12.79	2.88	4.94	162.0	3.71	3.54
26-SEP-90	750	750	997	5.35					1.39	2.05
02-OCT-90	756	756	829	4.10	12.68	3.10	3.91	220.0	2.36	2.56
11-OCT-90	272	272	1120	3.67					0.40	2.48
16-OCT-90	808	808	810	3.62	15.12	4.17	6.61	175.4	1.61	1.57
24-OCT-90	551	551	723	4.12	14.02	3.40	5.76	164.1	0.98	1.42
SWM[a]	818	801	1015	4.36	11.55	2.81	4.45	180.8	4.53	5.63

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 143. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1991. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
04-APR-91	292	292	335	3.02					1.81	2.58
17-APR-91	436	436	530	4.49					1.89	2.85
23-APR-91	733	733	780	6.41	7.97	1.25	2.85	121.4	2.83	2.97
30-APR-91	416	416	528	4.10	5.90	1.44	1.84	217.5	2.82	3.57
07-MAY-91	1030	1030	1484	4.24	10.85	2.56	5.84	121.7	2.54	4.26
14-MAY-91	532	532	678	3.32	4.92	1.49	3.61	114.7	2.68	4.20
22-MAY-91	985	985	1118	4.34	9.30	2.14	3.94	151.1	3.26	4.12
28-MAY-91	979	607	1042	3.48	8.72	2.51	2.52	276.8	17.80	19.37
04-JUN-91	614	433	792	2.30	6.27	2.73	4.01	189.0	12.13	19.80
12-JUN-91	580	511	764	2.79	6.38	2.28	3.37	188.3	8.79	12.32
18-JUN-91	597	572	671	2.40	6.92	2.89	3.43	234.0	10.31	11.97
25-JUN-91	649	505	678	1.94	8.91	4.59	3.61	353.2	15.16	15.65
03-JUL-91	843	797	897	2.07	9.85	4.77	5.08	260.8	11.10	11.59
09-JUL-91	956	952	993	2.49	14.05	5.64	7.02	223.2	9.18	9.41
16-JUL-91	805	805	847	2.87	13.46	4.68	5.49	237.3	6.57	6.89
23-JUL-91	746	744	795	4.78	15.53	3.25	3.53	256.1	8.27	9.01
31-JUL-91	1117	1117	1168	4.22	15.70	3.72	4.09	252.9	6.11	6.30
08-AUG-91	1277	1277	1554	4.73	23.82	5.03	5.45	256.6	4.25	5.53
13-AUG-91	1226	1226	1416	4.75	20.83	4.38	4.52	269.1	5.04	6.10
20-AUG-91	1423	1423	1656	5.15	18.81	3.65	6.97	145.5	3.44	4.91
28-AUG-91	1302	1302	1487	5.08	19.47	3.83	5.62	189.4	4.45	5.43
05-SEP-91	1133	1133	1180	4.54					4.86	5.02
11-SEP-91	1044	1044	1172	4.23	14.10	3.33	5.25	176.5	4.81	5.52
17-SEP-91	919	918	1087	4.25					3.91	5.09
01-OCT-91	483	483	1100	3.42					0.79	2.71
10-OCT-91	457	457	1199	3.95	17.77	4.49	7.00	178.6	0.52	2.05
16-OCT-91	755	755	835	3.21					1.66	1.81
23-OCT-91	738	738	864	3.98	15.73	3.95	6.20	177.0	1.24	1.57
29-OCT-91	630	630	674	3.27					1.33	1.46
SWM[a]	801	774	971	3.79	12.76	3.29	4.72	195.0	5.34	6.56

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 144. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1992. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
01-APR-92				3.29						
07-APR-92				1.87						
14-APR-92				3.17						
29-APR-92				1.82						
05-MAY-92	561	561	687	3.05	5.45	1.79	3.15	158.0	2.94	4.09
12-MAY-92	281	281	302	3.15	2.83	0.90	0.96	260.6	4.00	4.34
20-MAY-92	719	719	750	1.25	5.12	4.10	8.15	139.9	4.40	4.55
28-MAY-92	916	916	995	3.94	6.58	1.68	3.98	117.3	4.06	4.40
02-JUN-92	873	873	919	2.85	5.51	1.93	3.82	140.5	4.94	5.24
09-JUN-92	755	621	835	2.24					13.56	15.90
16-JUN-92	711	635	751	2.04	5.87	2.88	3.38	236.9	12.96	14.04
24-JUN-92	144	144	515	1.45	4.39	3.03	4.39	191.9	1.52	9.86
30-JUN-92	467	350	819	1.38	4.44	3.22	3.63	246.6	8.72	19.04
08-JUL-92	278	269	737	1.57	5.63	3.59	4.32	231.0	3.51	14.39
14-JUL-92	281	281	1025	3.19	8.64	2.71	4.35	173.2	1.48	10.26
21-JUL-92	1749	1699	1795	3.83	15.79	4.12	7.46	153.5	9.76	9.91
28-JUL-92	2210	2210	2323	6.95	30.42	4.38	9.37	130.0	5.20	5.49
11-AUG-92	1662	1662	1736	4.13	20.72	5.02	11.69	119.4	4.73	5.00
18-AUG-92	1412	1412	1570	4.87	18.34	3.77	8.15	128.6	4.64	5.42
25-AUG-92	822	822	993	3.80	15.78	4.15	5.40	213.6	2.74	3.73
01-SEP-92	497	497	513	1.34					3.13	3.25
10-SEP-92	950	950	1160	2.77	20.60	7.43	8.14	254.0	2.10	3.00
15-SEP-92	1280	1228	1494	3.37					2.33	3.32
30-SEP-92	1280	1280	1553	4.72	22.43	4.75	5.94	222.7	1.78	2.54
07-OCT-92	757	757	780	5.74	13.61	2.37	2.84	232.0	2.18	2.23
14-OCT-92	329	993	1099	3.70					0.59	3.13
20-OCT-92	732	732	1095	4.97	13.97	2.81	5.53	141.3	1.05	2.10
SWM[a]				3.32						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 145. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1993. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
07-APR-93				2.99						
15-APR-93				3.21						
20-APR-93	722	722	827	3.42	6.64	1.95	5.22	103.9	2.37	3.57
27-APR-93	841	841	858	3.84	7.78	2.03	2.94	192.0	4.12	4.07
04-MAY-93	912	912	1437	1.57	12.70	8.12	14.37	157.1	1.85	3.72
11-MAY-93	1345	1345	1522	3.68	6.91	1.87	3.72	139.7	5.53	7.26
18-MAY-93	747	747	898	3.43	6.31	1.84	5.33	96.0	3.13	4.10
26-MAY-93	1222	1222	1379	3.75	9.22	2.46	4.82	141.9	4.50	4.99
01-JUN-93	1359	1359	1580	4.23	9.94	2.35	5.35	122.1	4.30	5.02
08-JUN-93	701	701	1220	3.83	8.20	2.14	3.87	153.7	2.24	5.15
15-JUN-93	740	583	1083	2.72	7.69	2.83	4.03	195.2	10.96	16.96
22-JUN-93	697	632	797	2.59	7.32	2.82	3.12	251.3	12.59	15.42
29-JUN-93	832	657	865	2.39	7.26	3.03	3.27	257.6	14.21	14.71
06-JUL-93	1006	792	1254	2.62	7.72	2.95	3.13	262.0	10.66	13.34
13-JUL-93	734	553	773	2.15	6.26	2.91	2.50	323.6	17.13	17.83
20-JUL-93	837	670	989	2.33	6.30	2.71	2.78	271.0	13.60	16.89
27-JUL-93	643	607	920	2.93	7.92	2.70	2.80	268.1	5.96	9.35
04-AUG-93	1039	1024	1206	3.77	12.63	3.35	3.47	268.4	7.66	9.57
10-AUG-93	802	797	1220	4.07	10.99	2.70	2.91	257.9	5.69	9.96
17-AUG-93	825	737	1089	3.40	14.93	4.39	3.85	317.0	8.94	12.25
24-AUG-93	745	745	1129	3.13	12.16	3.89	3.99	271.0	4.07	7.80
31-AUG-93	682	681	937	3.28	14.70	4.48	4.79	260.0	4.34	6.85
08-SEP-93	703	703	938	3.57	11.37	3.18	4.17	212.0	4.22	6.52
14-SEP-93	939	939	1065	3.95	15.22	3.85	5.07	211.1	3.00	3.49
22-SEP-93	1080	1080	1103	3.75					3.77	3.79
28-SEP-93	308	308	729	3.11	11.15	3.58	5.62	177.1	0.77	2.66
06-OCT-93	627	627	880	3.43	13.03	3.80	4.87	216.9	1.42	2.29
13-OCT-93	683	683	745	2.68	10.84	4.05	6.65	169.3	1.81	2.00
20-OCT-93	452	452	823	3.27	13.14	4.02	6.74	165.8	0.71	1.76
26-OCT-93	773	773	915	3.93	15.63	3.98	6.43	172.1	1.22	1.63
SWM[a]	812	776	1024	3.23	10.00	3.18	4.73	200.5	5.47	7.28

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 146. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1994. P_{opt} (mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg $C \cdot$ mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg $C \cdot$ mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg $C \cdot m^{-2} \cdot d^{-1}$) and $\bar{I}$ ($mE \cdot m^{-2} \cdot min^{-1}$) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m / α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi}).

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
13-APR-94				2.49						
18-APR-94				3.63						
10-MAY-94	614	616	750	4.82	6.08	1.26	2.46	142.4	2.74	4.09
18-MAY-94	278	313	517	4.34	3.60	0.83	1.62	142.4	1.64	4.75
25-MAY-94	528	534	768	3.23	4.14	1.28	2.37	150.1	3.65	6.37
31-MAY-94	327	321	461	3.04	3.29	1.08	2.27	132.3	3.19	4.57
07-JUN-94	597	594	806	3.22	5.11	1.59	2.77	159.6	3.89	5.53
14-JUN-94	729	729	951	2.83	6.33	2.24	3.24	192.2	4.07	5.71
28-JUN-94	526	486	808	2.91	7.28	2.50	3.24	214.5	7.47	13.05
12-JUL-94	497	310	655	1.16	4.15	3.58	3.23	308.1	14.91	20.35
26-JUL-94	693	491	919	1.77	6.90	3.90	3.15	344.2	12.32	17.97
09-AUG-94	509	506	1412	3.21	12.51	3.90	3.43	316.1	2.85	10.75
17-AUG-94	944	944	1291	3.78	15.86	4.20	4.67	250.0	3.91	6.20
23-AUG-95	863	863	911	4.48	11.03	2.46	2.87	238.3	7.04	7.46
30-AUG-94	1521	1521	1627	4.98	18.72	3.76	5.20	201.0	5.07	5.45
07-SEP-94	1184	1184	1633	5.68	20.58	3.62	5.02	200.5	2.77	4.43
13-SEP-94	680	680	1472	5.09	16.83	3.31	4.46	206.3	2.02	6.18
21-SEP-94	1058	1058	1139	3.51	14.28	4.07	5.84	193.7	4.18	4.63
27-SEP-94	563	563	850	3.19	10.34	3.24	5.31	169.6	1.76	3.46
05-OCT-94	1224	1224	1333	3.05	16.70	5.48	8.17	186.5	2.76	3.15
12-OCT-94	1093	1093	1111	4.57	19.91	4.36	5.04	240.5	2.38	2.38
19-OCT-94	323	323	1298	3.62	13.69	3.78	5.78	181.8	0.52	3.04
SWM[a]				2.38						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 147. Seasonal data and seasonal-weighted means (SWM) for phytoplankton photosynthesis rates (P), parameters (P^B_m, α^B), and mean epilimnetic irradiance ($\bar{I}$) for Lake Ontario: station 81, 1995. P_{opt} (mg C·m^3·h^{-1}) is the photosynthetic rate at optimal irradiance and is the product of P^B_m and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. P^B_m (mg C·mg Chl^{-1}·h^{-1}) is the maximum photosynthetic rate and α^B (mg C·mg Chl^{-1}·E^{-1}·m^{-2}) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. Daily integral photosynthetic rates (ΣP = mg C·m^{-2}·d^{-1}) and $\bar{I}$ (mE·m^{-2}·min^{-1}) were both calculated with theoretical cloudless (cldlss) and empirical (emp) solar irradiance as denoted by subscripts. Chlorophyll is uncorrected for phaeopigments (µg·L^{-1}). I_k (µE·m^{-2}·s^{-1}), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of P^B_m /α^B. Daily integral photosynthetic rates were also calculated for the epilimnion alone (ΣP_{epi})..

Date	ΣP_{emp}	ΣP_{epi}	ΣP_{cldlss}	Chl_{un}	P_{opt}	P^B_m	α^B	I_k	$\bar{I}_{emp}$	$\bar{I}_{cldlss}$
06-APR-95				3.06						
11-APR-95				2.88						
20-APR-95				3.02						
25-APR-95				2.69						
03-MAY-95	507	507	555	2.10	3.59	1.71	3.10	153.3	4.51	5.22
10-MAY-95	1262	1264	1714	3.37	8.46	2.51	5.86	119.1	3.81	6.26
17-MAY-95	262	262	745	3.09	4.03	1.30	2.49	145.1	1.09	6.21
25-MAY-95	491	491	599	1.22	3.33	2.73	3.79	200.2	5.15	6.91
01-JUN-95	397	397	518	2.04	3.53	1.73	1.65	291.5	4.38	6.77
06-JUN-95	814	814	922	2.28	6.24	2.73	3.98	190.7	4.54	5.62
15-JUN-95	820	820	876	2.86	5.43	1.90	2.56	206.3	5.73	6.32
20-JUN-95	907	907	993	2.57	5.78	2.25	3.60	173.8	5.43	6.27
28-JUN-95	497	372	627	1.16	3.71	3.20	3.45	257.9	13.71	19.45
14-JUL-95	597	597	843	2.29	5.88	2.57	2.85	250.7	11.93	14.58
27-JUL-95	1009	1009	1366	3.00	9.52	3.17	4.12	213.9	6.77	10.93
02-AUG-95	872	872	1427	3.57	14.15	3.96	3.68	299.2	4.82	9.76
10-AUG-95	1649	1649	1774	4.93	24.45	4.96	5.41	254.9	6.63	7.24
15-AUG-95	1207	1207	1374	5.71	25.15	4.40	4.65	263.1	6.56	8.17
23-AUG-95	1498	1498	1686	4.72	23.15	4.90	6.50	209.6	5.25	6.31
29-AUG-95	1438	1438	1552	4.39	20.77	4.73	5.83	225.5	5.72	6.24
07-SEP-95	223	223	758	3.03	13.15	4.34	5.18	232.9	1.12	5.78
12-SEP-95	662	662	786	2.79	13.29	4.76	6.32	209.4	3.31	4.09
20-SEP-95	567	567	1677	3.12	13.58	4.35	6.45	187.5	1.29	6.01
27-SEP-95	897	897	957	3.41	10.23	3.00	5.18	161.0	3.95	4.43
04-OCT-95	392	392	912	2.27	8.37	3.69	6.52	157.3	1.01	3.70
11-OCT-95	735	735	817	2.55	10.55	4.15	6.66	173.2	2.82	3.37
20-OCT-95	760	760	947	3.39	12.84	3.79	7.03	149.9	1.61	2.25
SWM[a]				2.96						

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 148. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1987. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
09-JUN-87	4.55	6.35	1.39	5.10	75.8
16-JUN-87	3.19	6.82	2.14	4.11	144.8
23-JUN-87	3.63	6.01	1.65	4.03	114.1
30-JUN-87	3.92	12.71	3.24	4.71	191.4
07-JUL-87	4.27	7.85	1.83	3.49	146.1
21-JUL-87	5.50	16.99	3.09	4.35	197.6
29-SEP-87	4.01	9.86	2.46	4.38	156.0

Table 149. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1988. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
07-JUN-88	4.11	4.85	1.18	4.04	80.9
21-JUN-88	5.84	6.71	1.15	3.23	98.9
12-JUL-88	2.71	8.79	3.25	6.65	135.8
19-JUL-88	4.47	9.73	2.18	5.73	105.5
27-JUL-88	7.53	14.72	1.95	4.26	127.4
03-AUG-88	2.23	7.14	3.20	4.05	219.8

Table 150. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1989. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
06-JUN-89	4.93	9.06	1.84	5.53	175.5
28-JUN-89	3.32	8.87	2.67	4.27	260.1
05-JUL-89	3.82	7.79	2.04	6.06	284.9
18-JUL-89	2.94	9.12	3.10	6.19	220.0
16-AUG-89	2.80	5.52	1.97	4.59	180.1

Table 151. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1990. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
26-JUN-90	4.70	9.22	1.95	3.68	147.5
04-JUL-90	4.18	8.75	2.09	4.68	124.4
11-JUL-90	3.39	8.23	2.43	5.85	115.5
24-JUL-90	3.28	11.75	3.59	6.75	147.7
31-JUL-90	4.56	14.30	3.14	4.46	195.4

Table 152. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1991. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
28-MAY-91	4.01	7.61	1.90	4.66	113.1
04-JUN-91	2.81	6.48	2.31	4.34	148.2
12-JUN-91	3.95	5.93	1.49	5.93	70.1
18-JUN-91	2.39	4.12	1.74	3.55	136.5
25-JUN-91	3.37	8.00	2.37	5.19	127.0
03-JUL-91	2.18	6.16	2.83	7.95	99.0

Table 153. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1992. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
09-JUN-92	2.58				
16-JUN-92	2.32	3.07	1.32	3.90	94.1
30-JUN-92	2.63	5.71	2.17	3.44	175.4
08-JUL-92	2.33	4.00	1.72	3.30	144.9
14-JUL-92	2.95	4.21	1.43	5.04	78.9
21-JUL-92	4.72	12.32	2.61	7.11	102.1

Table 154. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1993. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
15-JUN-93	3.73				
29-JUN-93	4.06	7.64	1.89	4.80	109.5
06-JUL-93	4.08	7.40	1.82	7.53	67.2
13-JUL-93	2.35	4.04	1.72	3.55	134.7
20-JUL-93	2.02	4.79	2.38	4.16	159.0
27-JUL-93	2.51	6.62	2.65	4.26	172.9
04-AUG-93	3.77	8.64	2.30	5.04	126.9
17-AUG-93	3.40	17.28	5.08	7.05	200.3

Table 155. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1994. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
28-JUN-94	3.92	7.11	1.81	3.55	141.7
12-JUL-94	1.93	4.18	2.16	3.65	164.5
26-JUL-94	2.95	5.44	1.84	3.95	129.5
09-AUG-94	3.00	7.05	2.35	5.30	123.3

Table 156. Seasonal data for phytoplankton photosynthesis rates (P) for the metalimnetic portion of the euphotic zone of Lake Ontario: stn 81, 1995. Chlorophyll (Chl_{un}) is uncorrected for phaeopigments ($\mu g \cdot L^{-1}$). P_{opt}(mg $C \cdot m^3 \cdot h^{-1}$) is the photosynthetic rate at optimal irradiance and is the product of $P^B{}_m$ and chlorophyll. The photosynthetic parameters were derived from the photosynthesis vs. irradiance curve. $P^B{}_m$ (mg C·mg $Chl^{-1} \cdot h^{-1}$) is the maximum photosynthetic rate and α^B (mg C·mg $Chl^{-1} \cdot E^{-1} \cdot m^{-2}$) is the slope of the light-limited part of the curve. The superscript B indicates that both parameters were normalized on chlorophyll as an index of biomass. I_k ($\mu E \cdot m^{-2} \cdot s^{-1}$), the level of photosynthetically available radiation at the onset of light saturation, is the ratio of $P^B{}_m / \alpha^B$.

Date	Chl_{un}	P_{opt}	$P^b{}_m$	α^B	I_k
28-JUN-95	1.55	2.83	1.83	3.24	157.0
14-JUL-95	3.63	4.41	1.22	3.82	88.8
27-JUL-95	2.01	5.19	2.58	5.60	128.1
02-AUG-95	3.38	5.50	1.63	4.37	103.7
15-AUG-95	5.79	16.10	2.78	4.18	184.9

Table 157. Seasonal (May 1-Oct 31) phytoplankton photosynthesis (g C m^{-2}) at index stations in Lake Ontario.

Year	Empirical	Cloudless	% of Cloudless
Stn 41			
1987	133.8	172.7	77.5
1988	90.2	116.0	77.8
1989	136.0	184.8	73.6
1990	141.3	187.7	75.3
1991	142.4	179.0	79.6
1992	162.6	212.2	76.6
1993	158.0	211.3	74.8
1994	136.8	190.7	71.7
1995	132.5	181.2	73.1
Means	137.1	181.7	75.6±2.5
Stn 81			
1987	125.6	154.5	81.3
1988	108.2	137.8	78.5
1989	147.9	184.4	80.2
1990	144.0	189.2	76.1
1991	153.1	192.8	79.4
1992	161.1	208.9	77.5
1993	151.7	199.4	76.1
1994	138.1	189.2	73.0
1995	150.9	193.8	77.9
Means	142.3	183.3	77.8±2.5

Note: Empirical estimates use solar irradiance measured at Point Petre for station 81 and at CCIW for station 41. Cloudless estimates use theoretical cloudless irradiance calculated using the programs of Fee (1990).

Table 158. List of zooplankton taxa observed in Lake Ontario at station 41 between 1981-1995 and total number of years a taxon was detected in the samples. Taxon codes and abbreviations are used in Tables 160-174. "X" denotes a species commonly present in a given sampling year, and "R" indicates rare species which were observed on one or two occasions.

Taxon	Code	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	No.Years
Bosmina longirostris	Bos	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Eubosmina coregoni	Eubcor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Eubosmina longispina	Eublon								R	X	R	X					4
Daphnia retrocurva	Dret	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Daphnia galeata mendotae	Dgm	R	X	X	R	R	R	X	R	X	X				X		11
Daphnia longiremis	Dlong	R	R	R				R									4
Daphnia pulex	Dpul												R				1
Daphnia sp.	D.sp														R	R	2
Ceriodaphnia lacustris	Cerl	X	X	X	X	X	X	X	X	X	X	X	X	X	X		14
Ceriodaphnia quadrangula	Cerq	R	R	R													3
Ceriodaphnia sp.	Cer.sp								R								1
Chydorus sphaericus	Chydor	R	X	R		X	R		R		X	R					8
Diaphanosoma birgei	Diaph				X	R		R				R	R				5
Holopedium gibberum	Holo		X	X		X	X	X	X	X	X	X		X	X	X	12
Polyphemus pediculus	Poly		R	R	R	X	X	X	R	X	R	R					10
Leptodora kindtii	Lepto	R	R	R		R	R	X	X	R	X	R		X	X	X	13
Bythotrephes cederstroemi	Bytho							R							R		2
Veligers [a]	Velig													X		X	-
Diacyclops thomasi	Diac	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Cyclops vernalis	Vern		R	R													2
Tropocyclops extensus	Tropo	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Mesocyclops edax	Meso	R				X											2
Cyclopoid nauplii	Cycnp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Cyclopoid copepodid	Cyccop	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Limnocalanus macrurus [b]	Limno	X	X	R	X	X	R	R	X	R	X			X	R	X	13
Limnocalanus macrurus nauplii [b]	L.np	X	X	X	X	X	X	X	X	X	X	X					-
Limnocalanus macrurus copepodid [b]	L.cop	X	X	X	X	X	X	X	X	X	X	X					-
Leptodiaptomus sicilis	Sic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Skistodiaptomus oregonensis	Oregon	X	X	X	X	X	X	X	X	X	X	X	X		X	X	14
Leptodiaptomus siciloides	Sicil											R					1
Leptodiaptomus minutus	Minut					R	X				X	R			X	X	6
Leptodiaptomus ashlandii	Ash	R			X		R				R	R					5
Eurytemora affinis	Euryt	R	X	X	X	X	X	X	R	X	R	X		X	R	X	14
Epischura lacustris	Epi														X	R	2
Calanoid nauplii	Calnp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Calanoid copepodid	Calcop	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15

[a] Veligers were not counted in 1994.
[b] Differentiation was not made between adult and juvenile stages of *Limnocalanus macrurus* as of 1993.

Table 159. List of zooplankton taxa observed in Lake Ontario at station 81 between 1981-1995 and total number of years a taxon was detected in the samples. Taxon codes and abbreviations are used in Tables 175-189. "X" denotes a species commonly present in a given sampling year, and "R" indicates rare species which were observed on one or two occasions.

Taxon	Code	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	No. Years
Bosmina longirostris	Bos	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Eubosmina coregoni	Eubcor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Eubosmina longispina	Eublon									R	X	X					3
Daphnia retrocurva	Dret	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Daphnia galeata mendotae	Dgm	R	X	X	R	R	X	X	R	R	X	R	X		X	X	14
Daphnia longiremis	Dlong	X	R	X	R	R	R	X	R								8
Daphnia ambigua	Dambig			R													1
Daphnia pulex	Dpul													R			1
Daphnia sp.	D.sp		R								R	R			X	R	6
Ceriodaphnia lacustris	Cerl	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Ceriodaphnia sp.	Cer.sp								X								1
Chydorus sphaericus	Chydor	X	X	X	X	X	X	X	X	X	X	X	X				12
Diaphanosoma birgei	Diaph	X	R	X	R	R	X	R	X	X	R	R		X	R	X	14
Holopedium gibberum	Holo	R	X	R	R	X	X	X	X	X	X	X	R	X	X	X	15
Polyphemus pediculus	Poly	R	R	R	X	X	R	X	R	X	X	X					11
Leptodora kindtii	Lepto	X	X	R	R	X	R	X		X	X	R		X	X	X	13
Bythotrephes cederstroemi	Bytho							R							X		2
Simocephalus vetulus	Simo	R															1
Veligers [a]	Velig													X		X	–
Diacyclops thomasi	Diac	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Cyclops vernalis	Vern	X	R			X	R			R	R	R			R		8
Tropocyclops extensus	Tropo	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Mesocyclops edax	Meso	X	R	X	R	R	X			R					R		8
Cyclopoid nauplii	Cycnp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Cyclopoid copepodid	Cyccop	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Limnocalanus macrurus [b]	Limno	X	R	R	X	R	X	R	R	R	X		X	X	X	X	14
Limnocalanus macrurus nauplii [b]	L.np	X	X	R	X	X	X	X	X	X	X	X					–
Limnocalanus macrurus copepodid [b]	L.cop	X	X	R	X	X	X	X	X	X	X	X					–
Leptodiaptomus sicilis	Sic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Skistodiaptomus oregonensis	Oregon	X	X	X	X	X	X	X	X	X	X	X	X		X	X	14
Leptodiaptomus minutus	Minut	X	R		R		R			R	X	R	R		X	X	10
Leptodiaptomus ashlandii	Ash										R						1
Eurytemora affinis	Euryt	X	X	X	X	X	X	X	R	X	X	X		X	X	X	14
Epischura lacustris	Epi														R	R	2
Calanoid nauplii	Calnp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
Calanoid copepodid	Calcop	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15

[a] Veligers were not counted in 1994.
[b] Differentiation was not made between adult and juvenile stages of *Limnocalanus macrurus* as of 1993.

Table 160. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1981. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dgm, Dlong, Cerq, Chydor, Lepto, Meso, Ash, and Euryt.

Date	Bos	Eubcor	Dret	Cerl	Diac	Tropo	Cycnp	Cyccop	Limno	L.np	L.cop	Sic	Oregon	Calnp
01-APR-81	5	2	0	0	675	8	30	467	3	21	7	12	6	30
09-APR-81	6	0	0	0	1680	20	123	814	0	48	25	58	18	161
16-APR-81	0	0	0	0	471	27	115	372	5	0	44	25	11	83
22-APR-81	1	0	0	0	791	20	82	269	0	24	12	12	5	72
28-APR-81	0	0	0	0	559	31	251	261	12	34	42	19	6	313
01-MAY-81	1	1	0	0	713	17	1909	35	8	9	14	14	3	45
13-MAY-81	3	0	0	0	538	22	4194	171	0	36	27	12	4	288
21-MAY-81	1	1	0	0	1182	8	10717	329	0	27	27	7	7	91
03-JUN-81	7	0	0	0	594	20	18221	3961	0	11	4	0	0	134
10-JUN-81	71	0	0	0	2895	0	37051	43519	0	0	0	0	21	250
16-JUN-81	93	0	0	0	6933	93	24849	54728	0	0	0	0	45	93
23-JUN-81	74	0	0	0	697	18	6553	9864	0	0	0	0	9	84
30-JUN-81	652	0	0	0	2057	0	5436	3759	0	0	0	0	0	54
07-JUL-81	1005	0	5	0	1544	30	25513	6180	0	0	0	0	0	36
13-JUL-81	7568	0	0	0	12719	0	21344	19855	0	0	0	0	0	0
22-JUL-81	20228	0	0	0	9493	0	129309	30776	0	0	0	0	0	186
27-JUL-81	97539	0	124	0	21839	31	9680	23702	0	0	0	0	0	155
05-AUG-81	164551	0	838	372	33504	559	17495	119133	0	0	0	0	0	0
11-AUG-81	301663	1724	1509	3446	21440	108	2371	90501	0	0	0	0	108	0
19-AUG-81	76408	579	22864	7597	25470	651	8176	82487	0	0	0	0	72	289
25-AUG-81	31295	0	7634	1013	12254	707	25261	35442	0	0	0	0	48	48
01-SEP-81	83972	78	11363	7891	3787	2208	22098	19573	0	0	0	0	0	552
16-SEP-81	174	888	9755	504	11428	6900	13798	37772	0	0	0	0	206	35
25-SEP-81	4864	921	7515	4716	4824	4567	10978	31684	0	0	0	0	0	144
29-SEP-81	4383	3582	5669	346	3798	3475	9304	30372	0	0	0	0	26	346
06-OCT-81	5323	1913	3157	381	6786	2925	7120	17036	80	0	0	0	48	113
14-OCT-81	7776	3706	4337	635	9214	3737	15890	25767	0	0	0	0	0	166
21-OCT-81	2106	2367	5834	194	4862	5444	11537	27614	0	0	0	15	46	31
27-OCT-81	4092	2161	1763	166	6186	6920	13707	23420	15	0	0	0	48	15
31-OCT-81	2683	2507	1674	80	4773	5731	17850	28455	15	0	0	0	21	61
SWM[a]	28626	595	3079	1042	7254	1426	15924	25415	4	7	7	6	28	137

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 160. Continued.

Date	Calcop	Tzoop
01-APR-81	28	1293
09-APR-81	92	3045
16-APR-81	52	1204
22-APR-81	32	1319
28-APR-81	92	1620
01-MAY-81	64	2831
13-MAY-81	190	5485
21-MAY-81	253	12651
03-JUN-81	247	23197
10-JUN-81	862	84668
16-JUN-81	0	86834
23-JUN-81	92	17391
30-JUN-81	54	12011
07-JUL-81	0	34312
13-JUL-81	14	61501
22-JUL-81	93	190086
27-JUL-81	93	153163
05-AUG-81	0	336453
11-AUG-81	216	423086
19-AUG-81	361	224955
25-AUG-81	70	113772
01-SEP-81	155	151677
16-SEP-81	139	81600
25-SEP-81	257	70469
29-SEP-81	214	61513
06-OCT-81	235	45117
14-OCT-81	1035	72261
21-OCT-81	142	60191
27-OCT-81	214	58707
31-OCT-81	205	64056
SWM[a]	187	83737

Table 161. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton from surface waters of Lake Ontario: station 41, 1982. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dlong, Cerq, Poly, Lepto, and Vern.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Chydor	Holo	Diac	Tropo	Cycnp	Cyccop	Limno	L.np	L.cop
01-APR-82	1	6	0	0	0	1	0	291	16	131	1200	3	17	0
14-APR-82	7	4	0	0	0	0	0	656	34	259	1274	3	71	15
04-MAY-82	0	0	0	0	0	0	0	757	20	143	246	0	11	8
11-MAY-82	0	0	0	0	0	0	0	630	27	218	232	0	10	6
18-MAY-82	0	0	0	0	0	0	0	1376	31	204	384	0	0	0
28-MAY-82	0	0	0	0	0	0	0	509	20	717	186	0	6	7
01-JUN-82	0	0	0	0	0	0	0	301	19	642	86	2	2	2
07-JUN-82	0	0	0	0	0	0	0	1533	29	2536	304	0	0	2
29-JUN-82	105	0	0	0	0	12	0	47	23	19917	16288	0	0	0
13-JUL-82	1966	0	12	0	0	6	0	1204	18	3909	9726	0	0	0
21-JUL-82	521	0	0	0	0	0	0	228	0	1422	1258	0	0	0
26-JUL-82	4176	0	0	0	0	0	0	95	0	11181	3741	0	0	0
04-AUG-82	166787	62	62	0	0	0	0	6267	0	2668	17126	0	0	0
09-AUG-82	148496	447	3355	0	13418	0	0	5368	2124	21022	34887	0	0	0
17-AUG-82	31620	32	32	0	81	0	0	758	49	23618	17423	0	0	0
24-AUG-82	185263	0	842	0	580	0	0	5659	73	18747	34997	0	0	218
30-AUG-82	254202	54	7063	0	3942	0	0	6005	756	20867	47004	0	0	0
08-SEP-82	80682	0	10292	0	2487	0	0	11467	1589	29428	67420	0	0	0
14-SEP-82	51942	129	4628	0	1928	0	0	6043	386	16971	32655	0	0	0
23-SEP-82	160381	2152	76114	0	49835	0	453	13705	3398	15064	163098	0	0	0
28-SEP-82	48201	567	17154	142	7655	0	213	10916	2197	10845	69466	0	0	0
05-OCT-82	33655	1272	11454	71	3606	0	142	5232	1697	30262	68442	0	0	0
13-OCT-82	17232	12307	26689	129	2462	0	517	14640	5183	24098	108830	0	0	0
19-OCT-82	1825	886	3082	60	244	39	63	2944	503	1164	11639	0	0	0
25-OCT-82	4283	2250	2015	348	435	0	113	15655	2788	15429	56086	0	0	0
31-OCT-82	2435	1141	1948	100	109	0	54	5135	1064	9318	24943	0	0	0
SWM[a]	39251	664	5342	24	2806	2	49	3801	689	10308	26292	< 1	7	9

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 161. Continued.

Date	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-82	1	0	0	46	20	1734
14-APR-82	4	2	0	171	52	2550
04-MAY-82	8	0	0	114	28	1336
11-MAY-82	17	10	0	218	45	1411
18-MAY-82	3	23	0	152	23	2196
28-MAY-82	9	4	0	179	59	1696
01-JUN-82	21	0	0	107	39	1220
07-JUN-82	2	4	0	84	47	4541
29-JUN-82	0	0	0	186	59	36636
13-JUL-82	0	0	0	105	139	17085
21-JUL-82	4	0	0	25	91	3549
26-JUL-82	0	0	0	14	3	19211
04-AUG-82	0	0	0	62	0	193033
09-AUG-82	0	0	223	1566	1119	232024
17-AUG-82	0	0	32	177	404	74227
24-AUG-82	0	0	0	0	131	246509
30-AUG-82	0	0	0	280	140	340313
08-SEP-82	0	0	0	345	207	203916
14-SEP-82	0	0	0	6	328	115018
23-SEP-82	0	0	1246	680	2152	488278
28-SEP-82	0	0	71	213	567	168208
05-OCT-82	0	0	71	848	566	157318
13-OCT-82	0	0	129	907	1814	214937
19-OCT-82	12	76	0	51	128	22717
25-OCT-82	356	190	190	269	774	101181
31-OCT-82	89	48	61	684	429	47557
SWM[a]	14	10	64	256	304	89893

Table 162. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1983. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dlong, Cerq, Chydor, Poly, Lepto, Vern, and Limno.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Holo	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop	Sic	Oregon
01-APR-83	10	6	0	0	0	0	201	6	28	336	3	0	2	2
06-APR-83	9	5	0	0	0	0	253	6	27	324	3	0	2	2
12-APR-83	2	1	0	0	0	0	231	11	34	175	3	1	4	0
22-APR-83	0	0	0	0	0	0	121	0	14	72	3	3	3	0
26-APR-83	0	0	0	0	0	0	194	9	77	228	4	7	4	0
04-MAY-83	0	0	0	0	0	0	1750	20	203	1617	0	0	24	8
10-MAY-83	44	44	0	11	0	0	1998	32	4865	2085	0	0	0	0
17-MAY-83	10	25	0	0	0	0	1568	47	6561	3219	0	5	0	15
25-MAY-83	10	0	0	0	0	0	557	62	5200	4126	0	0	31	0
01-JUN-83	77	25	0	0	0	0	2734	52	33220	27029	0	0	0	25
08-JUN-83	224	112	0	0	0	0	447	55	114814	108561	0	0	0	0
15-JUN-83	1943	134	0	0	0	0	804	403	21443	113654	0	0	0	0
29-JUN-83	42441	745	372	0	0	0	34996	0	4839	168276	0	0	0	0
06-JUL-83	30379	55	0	55	0	0	3071	279	29933	29038	0	0	0	0
13-JUL-83	54801	224	0	0	0	0	3500	149	32166	58971	0	0	0	0
21-JUL-83	113117	470	134	0	0	0	3350	336	5495	30021	0	0	0	0
26-JUL-83	287708	0	447	0	0	0	12509	0	59864	125091	0	0	0	0
03-AUG-83	144078	838	5863	0	12564	0	5026	2513	5863	98843	0	0	0	0
10-AUG-83	155626	884	55412	0	32422	0	5601	3537	4716	71918	0	0	0	0
16-AUG-83	20191	962	100953	0	75956	0	5768	20191	59610	84609	0	0	0	962
23-AUG-83	2411	0	12613	0	2226	0	7048	1391	25967	36726	0	0	0	185
31-AUG-83	4156	407	14097	0	978	0	896	3992	82	91910	0	0	0	0
08-SEP-83	94	611	5828	0	140	0	376	30830	13535	54517	0	0	0	0
14-SEP-83	6131	1022	9878	0	2810	0	2044	18052	4088	64716	0	0	0	0
21-SEP-83	195	244	9177	0	293	0	732	21869	8591	24213	0	0	0	98
28-SEP-83	7060	673	1891	0	42	0	379	1261	9415	16139	0	0	0	0
06-OCT-83	1266	475	4050	0	158	32	5062	1455	9873	13669	0	0	32	729
13-OCT-83	4106	8212	9741	0	191	0	10504	1815	20627	37432	0	0	0	287
19-OCT-83	19989	15230	12137	0	58	119	2082	17134	1843	26178	0	0	0	178
26-OCT-83	8274	15662	5025	0	0	0	7683	9161	44919	72107	0	0	0	0
31-OCT-83	14780	20581	3953	168	84	84	5466	14698	15771	56843	0	0	0	84
SWM[a]	29671	1673	7847	4	3980	6	4559	4453	17600	49775	< 1	1	3	82

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 162. Continued.

Date	Euryt	Calnp	Calcop	Tzoop
01-APR-83	0	23	30	648
06-APR-83	0	20	34	685
12-APR-83	0	14	38	513
22-APR-83	0	9	37	261
26-APR-83	0	32	99	653
04-MAY-83	0	24	809	4456
10-MAY-83	0	44	423	9546
17-MAY-83	0	20	464	11934
25-MAY-83	0	72	1651	11709
01-JUN-83	0	25	335	63522
08-JUN-83	0	279	0	224492
15-JUN-83	0	670	470	139521
29-JUN-83	0	372	372	252414
06-JUL-83	0	55	112	92978
13-JUL-83	0	0	0	149811
21-JUL-83	0	201	201	153325
26-JUL-83	224	224	0	486067
03-AUG-83	0	418	418	276426
10-AUG-83	0	1178	1178	332472
16-AUG-83	0	6730	6730	382661
23-AUG-83	0	93	928	89589
31-AUG-83	0	571	244	117333
08-SEP-83	0	704	941	107578
14-SEP-83	0	2385	1788	112914
21-SEP-83	98	1024	1270	67804
28-SEP-83	0	714	209	37783
06-OCT-83	0	570	601	37973
13-OCT-83	96	2674	1241	96926
19-OCT-83	0	834	1785	97567
26-OCT-83	0	3547	2955	169333
31-OCT-83	0	1852	1851	136213
SWM[a]	13	768	834	121270

Table 163. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1984. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dgm and Poly.

Date	Bos	Eubcor	Dret	Cerl	Diaph	Diac	Tropo	Cycnp	Cyccop	Limno	L.np	L.cop	Sic	Oregon
01-APR-84	4	16	0	0	0	1408	94	868	4244	1	24	15	52	69
03-APR-84	5	16	0	0	0	1434	86	894	4264	0	23	16	48	74
17-APR-84	7	9	0	0	0	689	86	326	801	0	7	14	5	12
25-APR-84	0	0	0	0	0	396	80	144	447	0	5	5	5	9
02-MAY-84	2	0	0	0	0	934	46	138	933	5	4	23	30	13
07-MAY-84	0	3	0	0	0	1104	54	362	907	0	13	31	13	15
14-MAY-84	0	0	0	0	0	1062	44	495	1156	0	5	20	13	13
23-MAY-84	0	0	0	0	0	2022	88	588	1321	0	5	31	0	15
30-MAY-84	0	0	0	0	0	1816	0	80	1506	31	0	36	110	23
05-JUN-84	5	0	0	0	0	1052	28	588	702	0	0	3	15	8
13-JUN-84	214	26	0	0	0	403	375	37313	7291	0	0	0	0	0
19-JUN-84	67	0	0	0	0	0	67	14475	10508	0	0	0	0	0
26-JUN-84	391	0	0	0	0	8042	224	25018	66566	0	0	0	0	55
05-JUL-84	1016	0	0	0	0	22	89	4111	4021	0	0	0	0	0
10-JUL-84	4557	0	0	0	0	13	26	4236	2197	0	0	0	0	0
18-JUL-84	15189	0	0	22	0	1251	0	10364	5808	0	0	0	22	0
25-JUL-84	9918	17	0	0	0	134	17	38733	8443	0	0	0	0	0
30-JUL-84	313618	0	0	0	0	318980	670	2011	69022	0	0	0	0	0
08-AUG-84	829170	0	3574	7595	0	2680	2680	178700	300217	0	0	0	0	0
14-AUG-84	893530	0	7277	16008	0	1819	2546	16371	157168	0	0	0	0	0
21-AUG-84	154708	0	7413	4942	0	1075	1182	9025	61882	0	0	0	0	0
27-AUG-84	37282	0	8245	2689	59	2987	298	19119	76955	0	0	0	0	179
04-SEP-84	5462	546	65537	4369	546	22392	19661	96122	469684	0	0	0	0	1365
11-SEP-84	10168	192	16115	96	192	1535	16115	7865	62543	0	0	0	0	0
18-SEP-84	1357	0	10313	305	0	1357	4749	1798	30122	0	0	0	0	34
09-OCT-84	14288	100	20639	1984	0	17464	6152	26989	57947	0	0	0	100	100
15-OCT-84	29186	1326	36703	5748	0	18130	3537	14593	38914	0	0	0	0	884
24-OCT-84	4275	100	5468	299	0	4375	472	12726	38774	0	0	0	74	324
31-OCT-84	4275	1198	4103	154	0	2584	744	7918	28443	0	0	0	31	196
SWM[a]	76507	105	7233	1515	27	14381	2365	18820	53746	1	2	6	18	118

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 163. Continued.

Date	Ash	Euryt	Calnp	Calcop	Tzoop
01-APR-84	2	0	173	31	7003
03-APR-84	3	0	186	16	7067
17-APR-84	3	0	84	54	2097
25-APR-84	0	0	205	102	1397
02-MAY-84	0	0	151	66	2345
07-MAY-84	0	0	227	207	2936
14-MAY-84	0	0	310	330	3449
23-MAY-84	0	0	196	217	4484
30-MAY-84	0	0	85	650	4339
05-JUN-84	0	0	150	185	2738
13-JUN-84	0	0	321	429	46372
19-JUN-84	0	0	107	13	25237
26-JUN-84	0	0	670	167	101133
05-JUL-84	0	0	145	22	9426
10-JUL-84	0	0	26	54	11109
18-JUL-84	0	0	45	112	32814
25-JUL-84	0	0	100	17	57380
30-JUL-84	0	0	0	670	704971
08-AUG-84	0	0	893	5808	1331317
14-AUG-84	0	0	728	364	1095811
21-AUG-84	0	0	0	429	240655
27-AUG-84	0	59	239	418	148531
04-SEP-84	0	0	1911	4642	692237
11-SEP-84	0	144	432	671	116069
18-SEP-84	0	0	339	509	50883
09-OCT-84	0	0	1588	1488	148838
15-OCT-84	0	222	2653	1769	153666
24-OCT-84	0	49	373	871	68178
31-OCT-84	0	50	307	697	50700
SWM[a]	< 1	17	484	773	176119

Table 164. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1985. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dgm, Diaph, Lepto, and Minut.

Date	Bos	Eubcor	Dret	Cerl	Chydor	Holo	Poly	Diac	Tropo	Meso	Cycnp	Cyccop	Limno	L.np
01-APR-85	1	4	0	0	0	0	0	133	39	0	382	1051	0	47
04-APR-85	2	5	0	0	0	0	0	112	28	0	239	469	0	47
09-APR-85	0	2	0	0	0	0	0	514	39	0	271	686	0	28
15-APR-85	0	3	0	0	0	0	0	582	14	0	191	447	5	16
22-APR-85	0	0	0	0	0	0	0	633	28	0	102	540	5	14
29-APR-85	9	0	0	0	0	0	0	1229	112	0	363	1117	0	47
06-MAY-85	0	0	0	0	0	0	0	537	33	0	65	299	3	18
13-MAY-85	0	0	0	0	0	0	0	702	31	0	196	444	0	52
21-MAY-85	0	0	0	0	0	0	0	902	25	0	645	362	0	90
28-MAY-85	0	0	0	0	0	0	0	1032	62	0	2208	495	0	20
07-JUN-85	230	0	0	0	0	0	0	1455	421	0	20218	9650	0	0
11-JUN-85	325	0	0	0	0	0	0	307	0	20	9650	26958	0	0
17-JUN-85	1025	0	0	0	0	0	0	2838	118	0	9934	27436	0	0
25-JUN-85	61	0	0	0	0	0	0	829	12	0	1779	1682	0	0
02-JUL-85	26805	0	0	0	0	0	0	128664	336	0	26805	107220	0	0
09-JUL-85	871	0	0	0	0	0	0	5495	0	0	17558	14876	0	0
15-JUL-85	81755	0	0	0	0	0	0	5947	0	0	9549	34846	0	0
22-JUL-85	13403	0	22	0	0	0	0	8130	0	0	8936	34132	0	0
29-JUL-85	214441	0	0	0	0	0	336	8712	0	0	9829	32166	0	0
07-AUG-85	58205	0	526	143	0	0	383	1579	430	47	12062	45951	0	0
12-AUG-85	181707	0	6705	670	0	0	167	6538	503	0	26820	69733	0	0
19-AUG-85	72211	204	10954	4666	0	102	0	6694	3449	0	58418	151723	0	0
26-AUG-85	12716	0	6661	908	0	0	0	5753	1211	0	4541	78719	0	0
04-SEP-85	21333	0	10170	1550	0	124	0	931	1302	0	16868	58542	0	0
10-SEP-85	4229	258	6705	825	0	26	0	2269	2991	0	1599	18773	0	0
16-SEP-85	1646	339	28264	6195	0	0	0	8905	13551	0	15874	88276	0	0
25-SEP-85	13807	1057	30285	15588	0	279	0	2505	20041	55	7794	70367	0	0
30-SEP-85	14975	375	7937	2096	0	112	0	4418	3370	0	1685	30848	0	0
07-OCT-85	14884	416	9329	1056	0	55	0	3998	4110	0	7553	26657	0	0
15-OCT-85	261	1432	9201	999	0	0	0	3645	3385	0	8158	23608	0	0
22-OCT-85	627	1594	4326	285	57	0	0	1594	2561	0	7968	15710	0	0
28-OCT-85	126	1199	875	0	26	26	0	1150	1025	0	3099	11396	0	0
31-OCT-85	126	1199	875	0	26	26	0	1150	1025	0	3099	11396	0	0
SWM[a]	24190	219	4387	1159	2	23	30	7199	1960	4	9434	32309	< 1	11

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 164. Continued.

Date	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-85	5	18	22	0	552	64	2320
04-APR-85	4	13	5	0	372	52	1347
09-APR-85	5	24	22	0	216	131	1938
15-APR-85	16	5	26	0	242	54	1601
22-APR-85	5	135	69	0	429	116	2077
29-APR-85	84	65	47	0	596	186	3855
06-MAY-85	23	18	23	0	82	88	1190
13-MAY-85	10	31	113	0	609	258	2447
21-MAY-85	13	0	0	0	477	207	2721
28-MAY-85	20	20	62	0	289	165	4373
07-JUN-85	0	0	0	0	230	38	32243
11-JUN-85	0	0	0	0	58	76	37393
17-JUN-85	0	0	0	0	197	316	41864
25-JUN-85	0	0	0	0	232	109	4703
02-JUL-85	0	0	336	0	167	167	290500
09-JUL-85	0	33	50	17	84	318	39303
15-JUL-85	0	0	0	0	167	84	132349
22-JUL-85	0	0	89	0	0	134	64846
29-JUL-85	0	0	0	112	558	336	266488
07-AUG-85	0	0	47	47	336	287	120045
12-AUG-85	0	0	84	0	0	167	293094
19-AUG-85	0	0	0	0	811	1115	310344
26-AUG-85	0	0	76	0	681	832	112098
04-SEP-85	0	0	124	0	744	1365	113053
10-SEP-85	0	0	155	0	413	954	39196
16-SEP-85	0	0	436	48	1743	1598	166876
25-SEP-85	0	0	1224	112	1114	1448	165676
30-SEP-85	0	37	412	0	562	1535	68361
07-OCT-85	0	27	306	27	473	2499	71392
15-OCT-85	0	43	261	43	1737	2952	55722
22-OCT-85	0	0	171	0	1879	1993	38765
28-OCT-85	0	26	75	0	1274	850	21146
31-OCT-85	0	26	75	0	1274	850	21146
SWM[a]	6	15	138	14	554	675	82330

Table 165. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1986. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dgm, Chydor, Lepto, Limno, and Ash.

Date	Bos	Eubcor	Dret	Cerl	Holo	Poly	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop	Sic	Oregon
01-APR-86	0	0	0	0	0	0	147	17	1334	1678	41	5	13	31
10-APR-86	0	0	0	0	0	0	147	17	1334	1678	41	5	13	31
15-APR-86	0	0	0	0	0	0	825	79	2256	2493	311	13	126	68
29-APR-86	0	0	0	0	0	0	539	20	471	727	56	31	38	30
05-MAY-86	0	0	0	0	0	0	626	15	306	1075	64	68	37	33
12-MAY-86	0	0	0	0	0	0	355	18	148	690	40	62	2	15
20-MAY-86	0	0	0	0	0	0	791	26	53	806	15	154	7	15
26-MAY-86	0	0	0	0	0	0	355	24	60	634	15	24	9	27
02-JUN-86	0	0	0	0	0	0	438	5	2090	690	5	0	5	5
09-JUN-86	81	0	27	0	0	0	639	134	32833	15991	0	0	27	53
17-JUN-86	223	37	37	0	0	0	187	75	22685	17612	0	0	0	0
24-JUN-86	958	0	0	0	0	0	7199	76	3217	22057	0	0	0	38
02-JUL-86	1287	41	13	0	0	0	804	0	201	550	0	0	0	54
07-JUL-86	858	13	0	0	0	0	93	13	3646	336	0	0	0	0
21-JUL-86	121293	418	167	0	0	0	1592	0	62992	62322	0	0	0	0
28-JUL-86	345249	0	9382	268	0	134	1341	134	46105	68621	0	0	0	0
05-AUG-86	1072	336	27341	2145	0	268	1207	134	9918	39671	0	0	0	67
12-AUG-86	425	219	15337	771	62	62	565	189	3395	8297	0	0	0	15
21-AUG-86	2981	224	23841	1863	0	224	894	969	5514	28609	0	0	0	0
27-AUG-86	3411	2073	14183	2341	66	267	5619	2341	12576	34786	0	0	0	468
09-SEP-86	1183	637	7641	637	0	91	2092	1092	13462	24014	0	0	0	364
16-SEP-86	2481	7236	79397	2481	206	0	7030	12406	3102	84359	0	0	0	5583
22-SEP-86	463	740	7961	371	93	0	2592	1203	11849	31473	0	0	0	556
29-SEP-86	2144	2725	3396	312	0	0	1207	5542	11440	16445	0	0	0	268
22-OCT-86	739	4136	7877	48	48	0	1477	1427	12999	20481	0	0	0	147
31-OCT-86	739	4136	7877	48	48	0	1477	1427	12999	20481	0	0	0	147
SWM[a]	18936	1007	7374	427	19	41	1555	1168	11624	19900	23	12	11	275

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 165. Continued.

Date	Minut	Euryt	Calnp	Calcop	Tzoop
01-APR-86	2	0	565	23	3856
10-APR-86	2	0	565	23	3856
15-APR-86	0	0	2121	155	8446
29-APR-86	2	0	646	202	2762
05-MAY-86	2	0	537	291	3054
12-MAY-86	0	0	187	134	1652
20-MAY-86	0	0	388	493	2747
26-MAY-86	0	0	121	299	1568
02-JUN-86	0	0	108	130	3478
09-JUN-86	0	0	399	212	50397
17-JUN-86	0	0	821	335	42011
24-JUN-86	0	0	0	114	33659
02-JUL-86	0	0	0	41	2991
07-JUL-86	0	0	41	0	5000
21-JUL-86	0	84	838	587	250295
28-JUL-86	0	134	804	1072	473245
05-AUG-86	0	0	938	603	83700
12-AUG-86	0	0	2435	361	32134
21-AUG-86	0	0	819	819	66756
27-AUG-86	0	7559	1404	1338	88433
09-SEP-86	0	136	954	319	52623
16-SEP-86	0	0	2068	6202	212553
22-SEP-86	0	0	1481	1018	59893
29-SEP-86	0	0	1207	2011	46699
22-OCT-86	0	48	984	2117	52528
31-OCT-86	0	48	984	2117	52528
SWM[a]	< 1	357	862	856	64448

Table 166. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1987. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Diaph, Bytho, and Limno.

Date	Bos	Eubcor	Dret	Dgm	Dlong	Cerl	Holo	Poly	Lepto	Diac	Tropo	Cycnp	Cyccop	L.np
01-APR-87	0	0	0	0	0	0	0	0	0	526	21	484	1410	147
14-APR-87	0	0	0	0	0	0	0	0	0	526	21	484	1410	147
27-APR-87	0	0	0	0	0	0	0	0	0	263	0	821	400	126
05-MAY-87	11	0	0	0	0	0	0	0	0	396	24	1236	582	82
13-MAY-87	24	0	0	0	0	0	0	0	0	1586	0	4850	2473	0
20-MAY-87	0	0	0	0	0	0	0	0	0	1625	35	9674	2971	137
27-MAY-87	0	0	0	0	0	0	0	0	0	1610	70	10821	582	0
03-JUN-87	0	0	0	46	0	0	0	0	0	1073	46	24625	15857	0
10-JUN-87	1021	276	0	0	0	0	0	0	0	703	21	5276	8254	0
17-JUN-87	4239	137	0	0	0	0	0	0	0	9163	0	3350	17779	0
24-JUN-87	6836	403	134	167	33	0	0	67	0	19032	0	18228	17424	0
01-JUL-87	22516	750	964	161	0	54	0	134	80	4288	26	7720	18871	0
08-JUL-87	447	536	6791	149	0	30	0	5004	59	6076	89	1787	17632	0
17-JUL-87	224	149	22338	2159	0	0	0	75	0	8488	521	1862	13403	0
21-JUL-87	201	336	13403	14207	0	0	0	0	0	3618	268	938	7371	0
29-JUL-87	67	336	40208	1005	0	0	67	0	0	2949	0	268	2747	0
06-AUG-87	105	264	32082	501	0	26	53	0	132	738	3378	554	9497	0
12-AUG-87	74	74	13249	248	0	0	0	0	25	791	3955	5735	11469	0
19-AUG-87	63	280	3610	31	0	15	0	0	46	15	2241	8840	14940	0
26-AUG-87	603	331	4708	0	0	0	0	0	30	603	513	9053	14242	0
02-SEP-87	438	334	4174	22	0	63	0	0	0	375	7348	6847	19370	0
10-SEP-87	1731	1471	3029	0	0	65	43	0	22	109	1515	1688	5107	0
16-SEP-87	1249	200	1330	0	0	13	0	0	0	93	146	2075	3405	0
15-OCT-87	9588	5452	7707	0	0	565	188	0	0	15415	1504	18046	30455	0
31-OCT-87	9588	5452	7707	0	0	565	188	0	0	15415	1504	18046	30455	0
SWM[a]	2746	986	6052	547	1	91	33	197	13	4364	894	6914	11438	27

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 166. Continued.

Date	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-87	41	10	0	0	1684	231	4555
14-APR-87	41	10	0	0	1684	231	4555
27-APR-87	106	10	41	0	2000	390	4157
05-MAY-87	46	0	24	0	1469	489	4359
13-MAY-87	0	46	93	0	817	886	10775
20-MAY-87	172	0	104	0	1797	4007	20522
27-MAY-87	0	0	46	0	1960	3357	18445
03-JUN-87	0	0	46	0	1819	3731	47242
10-JUN-87	0	0	21	0	703	979	17254
17-JUN-87	0	0	68	0	274	1709	36720
24-JUN-87	0	0	100	33	336	1608	64399
01-JUL-87	0	0	26	80	80	321	56072
08-JUL-87	0	0	0	447	328	447	39822
17-JUL-87	0	0	149	297	818	297	50780
21-JUL-87	0	0	0	67	536	470	41414
29-JUL-87	0	0	201	0	536	670	49054
06-AUG-87	0	0	105	0	659	422	48517
12-AUG-87	0	0	74	25	272	890	36880
19-AUG-87	0	0	0	0	249	1308	31638
26-AUG-87	0	0	0	0	603	694	31381
02-SEP-87	0	0	0	0	272	105	39347
10-SEP-87	0	0	0	0	195	195	15170
16-SEP-87	0	0	27	13	134	66	8752
15-OCT-87	0	0	377	188	2632	2255	94372
31-OCT-87	0	0	377	188	2632	2255	94372
SWM[a]	16	3	94	60	1100	1116	36632

Table 167. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1988. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Eublon, Dgm, Cer.sp, Chydor, Poly, and Euryt.

Date	Bos	Eubcor	Dret	Cerl	Holo	Lepto	Diac	Tropo	Cycnp	Cyccop	Limno	L.np	L.cop	Sic
01-APR-88	0	8	0	0	0	0	253	0	362	572	0	185	25	17
06-APR-88	0	8	0	0	0	0	253	0	362	572	0	185	25	17
20-APR-88	20	0	0	0	0	0	782	0	121	922	0	380	20	60
27-APR-88	0	0	0	0	0	0	390	0	210	421	0	253	41	10
06-MAY-88	5	5	0	0	0	0	1064	15	163	971	0	5	33	42
11-MAY-88	0	0	0	0	0	0	910	0	2051	537	0	11	24	24
19-MAY-88	0	0	0	0	0	0	1511	0	3897	679	22	0	0	0
26-MAY-88	0	0	0	0	0	0	817	0	5317	1002	0	0	0	24
02-JUN-88	46	0	0	0	0	0	6062	0	43654	15297	0	0	24	0
08-JUN-88	480	53	0	0	0	0	1758	0	41788	35392	0	0	0	0
16-JUN-88	193	5	0	0	0	0	20	0	155	199	0	0	0	0
22-JUN-88	584	0	0	0	0	0	47	9	5667	2834	0	0	0	0
30-JUN-88	180	8	0	0	0	0	47	0	1317	541	8	0	0	0
06-JUL-88	1709	0	0	0	0	0	6701	0	1809	4355	17	0	0	67
14-JUL-88	12866	0	55	0	0	45	1451	0	9650	18228	0	0	0	0
20-JUL-88	54325	0	1341	0	0	45	3529	0	12866	38957	0	0	0	0
28-JUL-88	5897	0	336	0	0	0	897	13	1447	5737	0	0	0	0
04-AUG-88	77557	45	3395	134	0	0	89	0	358	12688	0	0	0	0
11-AUG-88	23815	0	775	286	0	0	0	41	1265	2365	0	0	0	0
18-AUG-88	65267	0	8497	145	0	0	579	0	7144	22785	0	0	0	0
25-AUG-88	27805	0	18620	3724	0	248	248	248	22840	30289	0	0	0	0
31-AUG-88	10688	315	27663	6602	0	0	3772	2200	16975	50298	0	0	0	0
09-SEP-88	4191	0	7762	1009	78	78	1164	389	9315	30118	0	0	0	0
15-SEP-88	11048	225	10371	4960	0	0	1579	3608	11950	34272	0	0	0	0
22-SEP-88	22037	489	33789	4897	1469	0	4897	3917	19588	72477	0	0	0	0
28-SEP-88	827	165	36396	1820	662	248	3970	497	14558	86026	0	0	0	0
06-OCT-88	2879	442	77937	3543	1993	0	11071	1771	28340	86793	0	0	0	0
31-OCT-88	2879	442	77937	3543	1993	0	11071	1771	28340	86793	0	0	0	0
SWM[a]	10799	103	15444	1243	341	21	2911	588	11415	27071	2	39	6	9

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 167. Continued.

Date	Oregon	Calnp	Calcop	Tzoop
01-APR-88	0	446	109	1977
06-APR-88	0	446	109	1977
20-APR-88	40	762	621	3727
27-APR-88	21	526	137	2010
06-MAY-88	5	103	284	2696
11-MAY-88	24	408	432	4421
19-MAY-88	0	306	460	6875
26-MAY-88	0	443	443	8046
02-JUN-88	0	163	630	65875
08-JUN-88	0	321	480	80271
16-JUN-88	0	14	14	601
22-JUN-88	0	38	114	9295
30-JUN-88	0	141	212	2454
06-JUL-88	0	0	1508	16167
14-JUL-88	11	45	67	42417
20-JUL-88	0	179	0	111241
28-JUL-88	0	13	26	14367
04-AUG-88	0	45	89	94400
11-AUG-88	0	327	408	29281
18-AUG-88	0	97	218	104731
25-AUG-88	0	1242	496	105760
31-AUG-88	0	943	628	120084
09-SEP-88	0	544	620	55269
15-SEP-88	0	902	677	79592
22-SEP-88	0	1958	1958	167478
28-SEP-88	165	413	745	146492
06-OCT-88	0	3321	2435	220527
31-OCT-88	0	3321	2435	220527
SWM[a]	9	812	713	71526

Table 168. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1989. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Lepto and Limno.

Date	Bos	Eubcor	Eublon	Dret	Dgm	Cerl	Holo	Poly	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop
01-APR-89	0	0	0	0	0	0	0	0	314	30	539	420	195	30
04-APR-89	0	0	0	0	0	0	0	0	314	30	539	420	195	30
19-APR-89	0	0	0	0	0	0	0	0	379	50	625	625	230	33
26-APR-89	33	0	0	0	0	0	0	0	218	51	202	656	84	117
04-MAY-89	35	0	0	0	0	0	0	0	302	35	729	1031	196	302
10-MAY-89	0	0	0	0	0	0	0	0	432	114	2002	819	92	22
18-MAY-89	0	0	0	0	0	0	0	0	355	57	2648	392	46	27
25-MAY-89	18	522	0	0	0	0	0	0	1101	57	6864	1866	0	37
01-JUN-89	233	10960	0	0	0	0	0	0	3647	126	35615	9498	0	0
07-JUN-89	313	179	0	0	0	0	0	0	1876	403	140816	52180	0	45
15-JUN-89	0	103	25	333	0	0	0	0	4723	0	55436	48866	0	25
21-JUN-89	346	70	0	0	17	0	0	0	4082	70	22966	40951	0	0
29-JUN-89	13289	2567	0	303	38	0	0	0	4304	642	22954	45003	0	0
06-JUL-89	9228	879	659	768	0	0	0	0	549	495	32957	17578	0	0
13-JUL-89	26805	1089	0	2346	0	0	0	0	754	167	27475	26136	0	0
19-JUL-89	6147	429	71	2716	0	71	71	0	3717	429	6433	19300	0	0
27-JUL-89	483	318	0	341	22	43	0	5976	55	341	2109	8964	0	0
02-AUG-89	2255	516	0	4317	0	354	96	193	32	2062	22682	13661	0	0
11-AUG-89	8073	0	0	145	0	116	0	0	359	97	59	4696	0	0
17-AUG-89	99533	0	0	1037	0	1555	0	0	311	311	4977	16382	0	0
24-AUG-89	55528	0	0	12248	0	11840	0	0	5307	8983	16331	52669	0	0
30-AUG-89	106917	0	0	42636	0	45916	164	164	5739	4591	30174	72152	0	0
08-SEP-89	33587	0	0	33036	0	9911	275	0	1652	16518	5231	22574	0	0
14-SEP-89	3333	202	0	18177	0	2928	101	0	2928	14946	10099	21814	0	0
21-SEP-89	1447	66	0	6254	32	1317	0	0	889	1053	66	3620	0	0
27-SEP-89	6911	15042	0	13416	0	2846	0	0	3658	14230	18295	30897	0	0
05-OCT-89	2479	4779	176	2655	0	973	797	0	2479	2922	9558	8674	0	0
11-OCT-89	3516	5331	114	1928	0	1361	568	0	3062	906	9299	16331	0	0
31-OCT-89	3516	5331	114	1928	0	1361	568	0	3062	906	9299	16331	0	0
SWM[a]	12716	1794	43	4928	4	2797	112	209	1989	2356	16703	18986	36	22

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 168. Continued.

Date	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-89	45	15	0	314	494	2395
04-APR-89	45	15	0	314	494	2395
19-APR-89	33	17	0	526	443	2959
26-APR-89	134	51	0	506	539	2592
04-MAY-89	427	35	0	462	427	3980
10-MAY-89	68	0	0	410	500	4458
18-MAY-89	37	27	0	196	253	4038
25-MAY-89	75	130	0	317	540	11527
01-JUN-89	22	170	0	170	742	61183
07-JUN-89	45	224	0	2680	3307	202067
15-JUN-89	0	52	0	719	1386	111667
21-JUN-89	17	17	0	554	726	69816
29-JUN-89	0	0	0	755	339	90195
06-JUL-89	0	0	0	439	549	64100
13-JUL-89	0	0	0	336	84	85192
19-JUL-89	0	0	0	71	429	39884
27-JUL-89	0	0	0	55	187	18896
02-AUG-89	0	32	96	225	612	47132
11-AUG-89	0	0	9	9	29	13594
17-AUG-89	0	0	0	311	1037	125454
24-AUG-89	0	0	0	409	817	164132
30-AUG-89	0	0	0	328	493	309274
08-SEP-89	0	0	0	2478	550	125813
14-SEP-89	0	1010	0	1212	1010	77760
21-SEP-89	0	32	0	131	131	15039
27-SEP-89	0	0	0	22767	1423	129484
05-OCT-89	89	354	0	884	1238	38058
11-OCT-89	0	681	114	1474	1133	45817
31-OCT-89	0	681	114	1474	1133	45817
SWM[a]	34	143	16	1403	737	65028

Table 169. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1990. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Eublon, Poly, Ash, and Euryt.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Chydor	Holo	Lepto	Diac	Tropo	Cycnp	Cyccop	Limno	L.np
01-APR-90	0	13	0	0	0	0	0	0	997	13	588	1332	50	141
03-APR-90	0	13	0	0	0	0	0	0	997	13	588	1332	50	141
19-APR-90	0	21	0	0	0	0	0	0	394	21	290	311	0	207
25-APR-90	0	0	0	0	0	0	0	0	323	0	643	537	37	70
03-MAY-90	32	32	0	0	0	0	0	0	388	32	777	388	0	162
09-MAY-90	0	0	0	0	0	0	0	0	312	0	1049	595	0	28
17-MAY-90	0	0	0	0	0	0	0	0	107	0	2037	530	0	63
24-MAY-90	0	0	0	0	0	0	0	0	1117	0	8198	622	0	124
31-MAY-90	0	0	0	0	0	0	0	0	731	0	1147	537	0	0
06-JUN-90	0	121	0	0	0	0	0	0	2548	181	63055	6610	0	60
14-JUN-90	54	13	7	0	0	7	7	0	100	0	3270	550	0	0
20-JUN-90	1924	44	0	0	0	0	0	0	2974	44	20637	33580	0	0
28-JUN-90	6812	0	31	0	0	0	0	0	1230	31	31287	10345	0	0
05-JUL-90	29285	0	106	0	0	0	0	0	3289	106	75545	38198	0	0
18-JUL-90	69735	98	2008	98	0	0	49	0	14300	0	93240	51714	0	0
26-JUL-90	615	0	21074	175	0	0	0	0	4830	88	17563	20020	0	0
02-AUG-90	0	0	29014	26	26	0	0	26	5949	288	11271	28388	0	0
10-AUG-90	0	135	16327	0	45	89	0	45	942	45	1749	9689	0	0
24-AUG-90	221	221	6533	0	28	0	0	55	693	443	7750	12179	0	0
30-AUG-90	10303	359	8028	0	1917	0	60	60	899	3235	1138	31628	0	0
07-SEP-90	479	240	11119	0	287	0	0	48	910	1534	5943	33742	0	0
12-SEP-90	210	630	29774	0	262	52	52	52	2726	3249	12581	46967	0	0
27-SEP-90	68	33	933	17	0	0	0	0	1070	323	1902	6655	0	0
12-OCT-90	1845	1145	11205	0	0	63	0	0	9423	4838	10950	25975	0	63
25-OCT-90	5678	7682	5678	0	0	84	0	0	2838	7180	15696	25048	0	0
31-OCT-90	5678	7682	5678	0	0	84	0	0	2838	7180	15696	25048	0	0
SWM[a]	5973	608	6155	13	89	16	7	12	2758	1120	16656	16926	4	38

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 169. Continued.

Date	L.cop	Sic	Oregon	Minut	Calnp	Calcop	Tzoop
01-APR-90	25	116	13	0	691	0	3977
03-APR-90	25	116	13	0	691	0	3977
19-APR-90	41	62	41	0	705	62	2155
25-APR-90	107	0	37	0	1323	357	3433
03-MAY-90	129	32	0	65	1134	388	3558
09-MAY-90	170	56	0	0	822	312	3346
17-MAY-90	42	107	0	0	828	318	4032
24-MAY-90	61	0	0	0	2237	559	12917
31-MAY-90	49	98	0	0	1220	390	4173
06-JUN-90	0	0	0	0	1395	1940	75910
14-JUN-90	0	7	0	0	114	7	4134
20-JUN-90	0	0	0	0	962	1224	61389
28-JUN-90	0	0	0	0	252	283	50272
05-JUL-90	0	0	0	0	159	265	146953
18-JUL-90	0	0	0	0	0	49	231289
26-JUL-90	0	0	439	175	88	351	65416
02-AUG-90	0	0	0	0	496	53	75536
10-AUG-90	0	0	45	0	1256	583	30952
24-AUG-90	0	0	28	28	221	830	29228
30-AUG-90	0	0	0	0	419	659	58705
07-SEP-90	0	0	0	0	240	240	54783
12-SEP-90	0	0	210	52	1258	1101	99176
27-SEP-90	0	17	85	0	52	170	11325
12-OCT-90	0	0	318	510	1210	1338	68880
25-OCT-90	0	0	0	0	418	1502	71804
31-OCT-90	0	0	0	0	418	1502	71804
SWM[a]	22	20	60	46	698	560	51781

Table 170. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1991. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Chydor, Diaph, Poly, Lepto, Sicil, Minut, and Ash.

Date	Bos	Eubcor	Eublon	Dret	Cerl	Holo	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop	Sic	Oregon
01-APR-91	4	25	0	0	0	0	183	4	674	817	21	0	0	32
03-APR-91	4	25	0	0	0	0	183	4	674	817	21	0	0	32
16-APR-91	0	17	0	0	0	0	1603	17	579	2046	443	34	239	0
23-APR-91	35	54	0	0	0	0	604	89	994	1954	0	54	54	107
30-APR-91	0	18	0	0	0	0	924	0	2201	4120	70	0	18	70
09-MAY-91	0	0	0	0	0	0	1896	0	1924	3338	29	56	56	29
15-MAY-91	0	177	0	0	0	0	4974	58	7579	5449	0	0	0	0
24-MAY-91	58	58	0	0	0	0	8053	119	81488	7463	0	0	0	0
29-MAY-91	205	0	0	0	0	0	1722	68	71576	17068	0	68	0	68
05-JUN-91	434	146	0	0	0	0	1591	146	101931	68340	0	0	0	434
11-JUN-91	2123	125	0	63	0	0	250	94	11734	31706	0	0	0	0
20-JUN-91	1035	106	0	26	0	0	14430	0	23343	48384	0	0	0	636
26-JUN-91	18624	72	0	501	0	0	14613	72	87104	19484	0	0	0	0
05-JUL-91	248005	221	221	4871	0	0	13729	886	85030	53144	0	0	0	0
18-JUL-91	186743	0	0	8276	0	0	4033	425	11035	30558	0	0	0	0
06-AUG-91	632	189	0	20715	253	126	2274	1389	15663	43451	0	0	0	0
14-AUG-91	0	96	0	21412	382	382	1243	3632	11470	30205	0	0	0	96
28-AUG-91	253	278	0	1769	0	0	77	2450	6669	25869	0	0	0	0
11-SEP-91	679	111	0	235	46	6	46	470	535	3134	0	0	0	20
03-OCT-91	2983	1093	0	2183	728	0	1165	583	6258	7130	0	0	0	38
10-OCT-91	1100	805	0	1339	616	0	589	482	911	3163	0	0	0	26
17-OCT-91	697	617	0	756	577	0	438	278	10027	13209	0	0	0	0
23-OCT-91	6669	2548	121	2729	1274	0	4607	1031	16976	29102	0	0	0	60
30-OCT-91	2014	863	144	288	144	0	432	268	6083	10195	0	0	0	0
31-OCT-91	2014	863	144	288	144	0	432	268	6083	10195	0	0	0	0
SWMa	28245	299	18	3754	169	28	3263	677	21308	20389	25	7	16	58

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 170. Continued.

Date	Euryt	Calnp	Calcop	Tzoop
01-APR-91	0	114	68	1942
03-APR-91	0	114	68	1942
16-APR-91	0	1091	307	6377
23-APR-91	0	320	89	4352
30-APR-91	0	373	159	7955
09-MAY-91	0	198	169	7693
15-MAY-91	0	177	207	18621
24-MAY-91	0	533	1126	98898
29-MAY-91	0	1238	895	92905
05-JUN-91	0	4634	2897	180554
11-JUN-91	0	125	250	46469
20-JUN-91	0	80	504	88544
26-JUN-91	0	716	358	141544
05-JUL-91	221	443	443	407213
18-JUL-91	0	213	0	241281
06-AUG-91	0	568	694	85955
14-AUG-91	0	669	478	70068
28-AUG-91	0	303	1138	38805
11-SEP-91	6	79	248	5615
03-OCT-91	38	73	255	22523
10-OCT-91	26	108	455	9621
17-OCT-91	0	59	159	26818
23-OCT-91	121	302	788	66328
30-OCT-91	41	124	41	20636
31-OCT-91	41	124	41	20636
SWMa	20	478	478	79232

Table 171. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: Station 41, 1992. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: Dpul, Chydor, Holo, and Euryt.

Date	Bos	Eubcor	Dret	Cerl	Diac	Tropo	Cycnp	Cyccop	Sic	Oregon	Calnp	Calcop	Tzoop
01-APR-92	248	99	0	0	1640	25	646	2733	50	0	50	273	5764
08-APR-92	93	31	0	0	1456	0	31	1766	0	0	186	62	3625
15-APR-92	0	0	0	0	1598	0	326	1141	0	0	196	326	3587
28-APR-92	19	0	0	0	698	19	116	931	19	19	175	310	2306
07-MAY-92	116	39	0	0	757	0	136	854	0	0	0	136	2038
14-MAY-92	30	59	0	0	3316	0	888	1629	30	30	503	829	7314
22-MAY-92	0	0	0	0	1245	0	2425	1835	0	0	98	557	6160
26-MAY-92	27	0	0	0	1072	0	1581	1366	0	0	134	429	4609
04-JUN-92	13825	3130	0	0	13564	261	7825	15911	0	0	391	1826	56733
10-JUN-92	39	0	0	0	1240	39	4961	5426	0	0	39	233	11977
18-JUN-92	1838	689	0	0	460	689	18382	114890	0	0	0	115	137063
25-JUN-92	2288	1736	0	0	7573	0	5680	124958	0	0	0	552	142787
02-JUL-92	26033	1972	0	0	4043	0	1578	66266	0	0	99	296	100287
09-JUL-92	13618	42	0	0	1619	0	789	18933	0	0	0	0	35001
16-JUL-92	19439	185	132	0	898	0	5282	9402	0	0	26	53	35417
22-JUL-92	31537	24	343	0	318	24	3232	8423	0	0	0	49	43950
30-JUL-92	55560	93	93	0	648	0	347	12779	0	0	0	23	69543
13-AUG-92	419420	0	0	0	225	0	5692	8838	0	0	0	75	434250
19-AUG-92	33985	0	40	0	40	0	728	18125	0	0	0	40	52958
27-AUG-92	52020	140	210	0	140	70	489	3706	0	0	0	0	56775
02-SEP-92	48014	0	0	0	755	0	970	27888	0	0	72	108	77807
11-SEP-92	77662	185	5732	185	6287	0	1849	59910	0	0	185	185	152180
16-SEP-92	35792	208	5410	0	1249	416	1873	10197	0	0	0	0	55145
30-SEP-92	3966	256	11260	1216	640	0	1407	34802	64	0	384	192	54187
08-OCT-92	18829	102	0	443	682	273	136	25378	34	34	34	239	46184
15-OCT-15	289	96	1181	0	868	96	338	46290	0	0	24	24	49206
22-OCT-92	900	0	1230	90	720	180	120	3899	0	60	120	270	7589
31-OCT-92	900	0	1230	90	720	180	120	3899	0	60	120	270	7589
SWM[a]	47177	616	3024	688	2331	204	2241	25459	44	32	158	326	79394

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 172. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: Station 41, 1993. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes.

Date	Bos	Eubcor	Dret	Cerl	Holo	Lepto	Velig	Diac	Tropo	Cycnp	Cyccop	Limno	Sic	Euryt
01-APR-93	0	23	6	0	0	0	0	2790	37	317	539	2	340	0
03-APR-93	0	23	6	0	0	0	0	2790	37	317	539	2	340	0
07-APR-93	31	23	9	0	0	0	0	2148	13	546	325	0	155	0
14-APR-93	0	15	2	0	2	0	0	2671	21	942	711	0	202	0
21-APR-93	0	5	5	0	0	0	5	2157	27	770	513	0	95	0
28-APR-93	0	10	0	0	0	0	8	2274	12	1460	1333	2	568	30
06-MAY-93	0	3	0	0	0	0	4	2273	16	1304	919	25	807	10
12-MAY-93	0	4	2	0	0	0	1	1896	9	728	784	9	383	0
20-MAY-93	84	8	33	8	0	0	0	1611	8	1053	959	8	377	0
27-MAY-93	136	37	61	764	0	0	0	1621	59	1103	586	25	314	0
03-JUN-93	148	102	66	31	5	0	5	3158	340	27977	11816	0	46	0
09-JUN-93	0	25	12	5	0	0	0	2434	62	10897	5692	0	106	0
17-JUN-93	215	75	35	5	0	0	35	2153	115	7739	4837	0	5	0
23-JUN-93	0	121	49	0	0	0	0	36136	73	15036	13217	0	819	0
01-JUL-93	4817	233	446	0	0	21	528	5390	21	2886	15109	0	42	0
07-JUL-93	0	0	251	0	0	0	0	12501	126	6910	9737	63	188	0
15-JUL-93	12292	19	86	0	0	10	29	460	29	5859	3255	0	19	0
21-JUL-93	0	0	255	0	0	0	165	946	75	33232	11095	0	15	15
29-JUL-93	89975	189	1320	0	0	0	189	18486	94	17071	15845	0	94	0
05-AUG-93	41043	974	6216	599	0	0	300	5093	524	20072	19174	0	225	0
12-AUG-93	74666	1229	4916	768	0	0	0	12598	1229	9525	20433	0	768	0
18-AUG-93	69930	326	10578	3526	0	0	0	18805	1045	5876	11361	0	131	0
26-AUG-93	29066	900	20706	5659	257	0	0	24436	4630	12604	25208	0	0	0
01-SEP-93	39989	1563	27484	7815	130	0	0	17584	6643	24488	32433	0	1042	0
10-SEP-93	4583	239	21041	1395	0	72	0	28573	10760	14585	64439	0	96	0
15-SEP-93	280	40	3704	180	0	0	0	4705	641	1682	4715	0	330	0
23-SEP-93	456	506	63959	810	202	51	0	58292	12448	6578	47059	0	0	0
30-SEP-93	0	957	14870	383	0	0	0	18508	1659	8935	20933	0	128	0
07-OCT-93	2762	451	12341	78	39	0	0	19980	2742	2155	7150	20	196	0
14-OCT-93	7223	732	5592	67	0	0	996	20472	1798	10386	15578	0	300	33
27-OCT-93	8448	1847	2546	90	30	0	30	13881	2696	10086	11983	0	250	0
31-OCT-93	8448	1847	2546	90	30	0	30	13881	2696	10086	11983	0	250	0
SWM[a]	16707	432	6940	1425	96	41	758	12616	1491	10490	13445	36	345	19

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period.

Table 172. Continued.

Date	Calnp	Calcop	Tzoop
01-Apr-93	317	192	4563
03-Apr-93	317	192	4563
07-Apr-93	155	170	3575
14-Apr-93	279	509	5354
21-Apr-93	219	504	4295
28-Apr-93	568	353	6610
06-May-93	298	584	6239
12-May-93	215	374	4404
20-May-93	189	244	4582
27-May-93	178	178	5062
03-Jun-93	4753	178	48620
09-Jun-93	1348	101	20682
17-Jun-93	1623	45	16847
23-Jun-93	2668	1122	69241
01-Jul-93	85	149	29199
07-Jul-93	691	440	30907
15-Jul-93	153	38	22220
21-Jul-93	5857	60	51550
29-Jul-93	1603	94	144771
05-Aug-93	1198	524	95642
12-Aug-93	154	461	126747
18-Aug-93	588	261	122427
26-Aug-93	772	514	124752
01-Sep-93	1303	782	161256
10-Sep-93	598	199	146580
15-Sep-93	0	771	17048
23-Sep-93	708	708	191777
30-Sep-93	894	64	67331
07-Oct-93	490	215	48619
14-Oct-93	1897	300	64378
27-Oct-93	1598	250	53705
31-Oct-93	1598	250	53705
SWM[a]	1186	381	66408

Table 173. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1994. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: D.sp, Bytho, Limno, and Euryt.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Holo	Lepto	Diac	Tropo	Cycnp	Cyccop	Sic	Oregon	Minut
01-APR-94	0	0	0	0	0	0	0	354	10	417	534	78	10	0
12-APR-94	0	0	0	0	0	0	0	354	10	417	534	78	10	0
19-APR-94	14	0	14	0	0	0	0	1518	28	1194	2347	70	42	14
26-APR-94	0	0	0	0	0	0	0	1199	29	980	1551	133	19	0
05-MAY-94	10	0	0	0	0	0	0	2274	20	1288	2012	50	10	0
12-MAY-94	0	0	0	0	0	0	0	1022	32	2350	833	21	32	0
19-MAY-94	18	0	0	0	0	0	0	2599	18	15596	1519	73	128	18
26-MAY-94	0	0	0	0	0	0	0	752	7	8935	634	26	59	0
02-JUN-94	0	0	0	0	0	0	0	1468	11	18740	605	22	54	11
06-JUN-94	0	0	0	0	0	0	0	1071	30	31012	739	38	0	8
16-JUN-94	58	0	0	0	0	0	0	3476	58	50941	5550	29	88	29
30-JUN-94	2098	0	0	0	0	0	0	10491	117	129165	95125	0	0	0
14-JUL-94	23026	0	640	0	0	0	3	1599	40	55965	41574	0	0	0
28-JUL-94	86010	0	4887	0	0	0	43	27041	0	68417	55385	0	326	0
11-AUG-94	42898	0	17787	0	0	0	35	11160	0	131832	25808	0	349	0
18-AUG-94	93478	0	42490	0	0	0	38	12747	0	38568	35953	0	327	0
25-AUG-94	73478	0	21611	0	0	0	31	11286	0	26414	43703	0	0	0
31-AUG-94	38154	942	43807	0	0	942	129	9892	707	31560	69714	0	0	0
09-SEP-94	587	6692	12209	6	235	1996	69	2935	1409	19723	27941	0	0	0
14-SEP-94	11575	2181	46301	1	336	503	75	6710	0	15098	46972	0	0	0
22-SEP-94	1299	1299	27936	1	0	325	63	7471	1299	17866	70164	0	325	0
06-OCT-94	2996	8801	17601	1	0	0	17	5617	2247	17976	48122	0	374	0
13-OCT-94	2228	2865	7162	1	159	477	6	8912	955	30556	69070	0	477	0
20-OCT-94	4080	4469	3109	0	0	389	2	7967	1360	26815	48383	0	583	0
31-OCT-94	4080	4469	3109	0	0	389	2	7967	1360	26815	48383	0	583	0
SWM[a]	17020	1219	9410	0	23	173	20	6650	393	37505	33476	22	157	3

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 173. Continued.

Date	Epi	Calnp	Calcop	Tzoop
01-APR-94	0	359	73	1834
12-APR-94	0	359	73	1834
19-APR-94	0	1335	295	6871
26-APR-94	0	933	238	5082
05-MAY-94	0	1570	584	7818
12-MAY-94	0	801	274	5365
19-MAY-94	0	1611	348	21929
26-MAY-94	0	1033	262	11709
02-JUN-94	0	1209	324	22443
06-JUN-94	0	905	377	34179
16-JUN-94	0	1168	555	61953
30-JUN-94	0	3264	1982	242242
14-JUL-94	120	640	120	123726
28-JUL-94	0	652	326	243086
11-AUG-94	0	1046	349	231265
18-AUG-94	0	1307	327	225236
25-AUG-94	0	961	0	177484
31-AUG-94	0	2355	707	198909
09-SEP-94	0	3287	1291	78379
14-SEP-94	0	2013	671	132437
22-SEP-94	325	7146	650	136170
06-OCT-94	187	2809	4119	110868
13-OCT-94	0	4456	3342	130667
20-OCT-94	0	5246	2332	104735
31-OCT-94	0	5246	2332	104735
SWM[a]	34	2089	907	109101

Table 174. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 41, 1995. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 158 for taxon codes. Additional rare species: D.sp, and Epi.

Date	Bos	Eubcor	Dret	Holo	Lepto	Velig	Diac	Tropo	Cycnp	Cyccop	Limno	Sic	Oregon	Minut
01-APR-95	0	0	0	0	0	13	466	13	233	272	16	178	16	0
11-APR-95	0	0	0	0	0	13	466	13	233	272	16	178	16	0
19-APR-95	0	0	0	0	0	14	455	7	435	428	1	82	37	0
26-APR-95	0	0	0	0	0	0	544	6	1087	343	1	84	55	0
04-MAY-95	0	0	0	0	0	0	1485	0	6755	495	7	36	153	7
11-MAY-95	0	0	9	0	0	9	1024	5	7357	237	0	19	71	5
18-MAY-95	0	0	16	0	0	0	1503	16	13684	528	16	64	280	8
24-MAY-95	0	0	0	0	0	0	2217	0	16408	382	6	25	204	0
02-JUN-95	0	0	0	0	0	0	3795	0	109107	13993	0	44	133	0
07-JUN-95	0	0	0	0	0	0	1982	0	63948	15730	0	0	64	0
16-JUN-95	553	0	0	0	0	0	6854	111	58373	51297	7	28	28	0
21-JUN-95	2919	0	13	0	0	0	403	0	32209	44690	0	0	0	0
29-JUN-95	7623	0	61	0	0	0	8592	0	72120	69700	0	0	106	0
10-JUL-95	5082	282	25412	0	71	0	17506	0	40096	51956	0	0	706	0
24-JUL-95	3567	102	69304	0	140	0	5605	0	37911	22828	0	0	13	0
01-AUG-95	34249	298	17274	0	186	0	5212	149	27995	23528	0	0	112	0
11-AUG-95	3966	220	47011	0	92	1763	1542	1616	24093	26736	0	0	37	37
16-AUG-95	67	468	25420	201	435	535	1539	2074	20604	21139	0	0	201	17
30-AUG-95	311	414	8386	13	104	0	1708	2951	20707	28576	0	0	324	39
14-SEP-95	192	512	1854	16	80	1535	959	11638	15347	29926	0	0	96	0
21-SEP-95	692	1482	7016	0	0	395	4447	7214	16208	34788	0	0	321	74
26-SEP-95	2329	233	6289	0	29	24227	6872	8269	14443	37739	0	0	349	0
04-OCT-95	3109	834	2124	19	0	16230	3640	1668	11073	13196	9	0	190	0
10-OCT-95	5684	2516	8293	0	6	2236	3541	8106	20873	16585	0	0	233	0
23-OCT-95	5010	1323	1607	1	12	1701	236	496	20796	1217	0	9	3	0
31-OCT-95	5010	1323	1607	1	12	1701	236	496	20796	1217	0	9	3	0
SWM[a]	3338	396	10198	11	55	1666	3541	1869	26420	21220	3	25	160	7

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 174. Continued.

Date	Euryt	Calnp	Calcop	Tzoop
01-APR-95	0	1398	142	2734
11-APR-95	0	1398	142	2734
19-APR-95	0	815	187	2447
26-APR-95	0	1178	233	3530
04-MAY-95	0	815	488	10242
11-MAY-95	0	1062	303	10092
18-MAY-95	0	639	448	17201
24-MAY-95	0	713	408	20363
02-JUN-95	0	2372	1127	130572
07-JUN-95	0	2558	991	85274
16-JUN-95	0	1769	995	120013
21-JUN-95	0	2416	528	83177
29-JUN-95	0	968	847	160017
10-JUL-95	35	9036	424	150605
24-JUL-95	13	6115	1631	147227
01-AUG-95	37	3872	596	113507
11-AUG-95	37	2351	808	108544
16-AUG-95	0	6154	3679	81997
30-AUG-95	52	4556	5073	73211
14-SEP-95	16	3581	1726	65942
21-SEP-95	12	3558	3558	79371
26-SEP-95	0	1398	1572	79523
04-OCT-95	0	2124	531	38518
10-OCT-95	0	2982	2143	70961
23-OCT-95	0	1134	260	32105
31-OCT-95	0	1134	260	32105
SWM[a]	10	2892	1276	73087

Table 175. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1981. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dgm, Cer.sp, Holo, Poly, and Simo.

Date	Bos	Eubcor	Dret	Dlong	Cerl	Chydor	Diaph	Lepto	Diac	Vern	Tropo	Meso	Cycnp	Cyccop
01-APR-81	2	7	0	0	0	0	0	0	470	0	45	0	35	384
08-APR-81	0	8	0	0	0	0	0	0	798	0	49	0	94	655
17-APR-81	5	5	0	0	0	0	0	0	1098	0	94	0	87	441
22-APR-81	8	1	0	0	0	0	0	0	604	0	35	0	78	394
28-APR-81	26	0	0	0	0	0	0	0	628	0	15	0	1391	172
05-MAY-81	11	7	0	7	0	0	0	0	610	0	90	0	5344	153
12-MAY-81	14	7	0	4	0	8	0	0	241	0	37	0	13933	1609
22-MAY-81	34	25	0	0	0	27	0	0	60	0	57	0	11940	6569
28-MAY-81	424	35	0	0	0	100	0	0	21	7	186	0	15858	10801
04-JUN-81	385	30	0	0	0	56	0	0	18	0	82	0	6105	4564
10-JUN-81	599	11	0	0	0	72	0	0	21	0	30	0	1924	2130
16-JUN-81	1361	11	0	0	0	92	0	0	220	0	24	0	1931	1348
23-JUN-81	1927	0	13	0	0	20	0	0	239	7	7	0	3377	4761
30-JUN-81	29250	639	13	0	0	359	0	0	159	0	53	0	12392	5532
07-JUL-81	78389	0	74	0	29	193	0	29	5122	0	72	0	8161	9411
14-JUL-81	72783	0	186	0	138	186	0	0	6003	91	511	0	21780	37043
23-JUL-81	71811	992	701	165	1407	494	0	0	991	0	703	0	9926	20516
30-JUL-81	27828	93	1127	0	1233	34	0	11	966	11	407	0	18801	45884
05-AUG-81	17249	1736	8314	0	6392	372	31	0	2543	0	1487	0	18738	52618
11-AUG-81	92245	2066	21304	0	20682	0	0	104	12512	0	2998	0	29368	55842
18-AUG-81	120374	3103	106103	0	22337	311	0	0	27300	0	11169	0	85626	157603
25-AUG-81	8995	2672	21718	0	3808	39	0	39	22042	0	3848	39	85245	42135
01-SEP-81	1323	317	9565	0	460	0	56	0	13370	0	1786	113	45176	37801
09-SEP-81	586	1065	13865	0	745	0	0	106	13012	52	5972	52	34127	51619
15-SEP-81	435	4706	7729	0	145	29	15	15	2877	0	1858	0	20339	33821
24-SEP-81	1350	7037	7433	0	817	0	0	0	7375	0	3884	0	12274	28940
30-SEP-81	4238	3640	2696	0	667	0	0	0	5346	0	2695	0	7277	27458
05-OCT-81	11649	8922	4088	0	1738	0	0	0	2960	0	19537	0	5917	21605
14-OCT-81	32704	12848	6033	0	2289	0	0	0	6813	0	34264	0	17521	57238
20-OCT-81	11969	12468	4687	0	374	24	0	0	5735	0	12169	0	12767	30424
27-OCT-81	8820	10091	829	0	57	0	0	0	4083	0	5006	0	11710	22802
31-OCT-81	7561	9586	1397	0	85	0	0	0	3822	0	5744	0	9192	21507
SWM[a]	19956	2398	7076	7	2010	80	3	10	4749	6	3647	7	17244	25298

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 175. Continued.

Date	Limno	L.np	L.cop	Sic	Oregon	Minut	Euryt	Calnp	Calcop	Tzoop
01-APR-81	9	64	16	37	13	2	0	65	19	1168
08-APR-81	8	290	87	73	35	5	0	258	82	2442
17-APR-81	0	0	220	0	55	0	0	119	62	2186
22-APR-81	0	92	96	35	35	0	0	99	71	1548
28-APR-81	6	108	125	19	6	0	0	376	110	2988
05-MAY-81	4	11	50	64	22	0	0	211	194	6779
12-MAY-81	0	67	79	0	11	0	0	157	143	16309
22-MAY-81	0	26	50	0	0	0	0	140	225	19153
28-MAY-81	0	0	7	0	0	0	0	128	49	27613
04-JUN-81	0	0	5	0	0	0	0	61	99	11406
10-JUN-81	0	0	0	0	0	0	0	113	226	5126
16-JUN-81	0	0	0	0	0	0	0	82	127	5195
23-JUN-81	0	0	0	0	0	7	0	20	160	10537
30-JUN-81	0	0	0	0	0	0	13	53	557	49018
07-JUL-81	0	0	0	0	43	0	118	43	176	101863
14-JUL-81	0	0	0	0	0	0	0	0	372	139092
23-JUL-81	0	0	0	0	0	0	41	83	164	107995
30-JUL-81	0	0	0	0	0	0	34	80	511	97019
05-AUG-81	0	0	0	0	0	0	31	248	652	110412
11-AUG-81	0	0	0	0	0	0	104	104	413	237741
18-AUG-81	0	0	0	0	0	0	0	621	155	534702
25-AUG-81	0	0	0	0	0	0	39	242	486	191349
01-SEP-81	0	0	0	56	0	0	0	633	576	111233
09-SEP-81	0	0	0	0	320	0	52	318	213	122103
15-SEP-81	0	0	0	0	15	0	0	102	116	72200
24-SEP-81	0	0	0	0	0	0	0	225	338	69674
30-SEP-81	0	0	0	0	11	0	0	92	242	54362
05-OCT-81	0	0	0	0	0	0	22	186	188	76813
14-OCT-81	0	0	0	47	0	0	0	144	1509	171410
20-OCT-81	0	0	0	24	24	0	24	100	397	91183
27-OCT-81	0	0	0	0	0	0	20	78	115	63611
31-OCT-81	0	0	0	14	29	0	38	79	155	59210
SWM[a]	1	22	24	11	19	< 1	16	170	288	83043

Table 176. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1982. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dlong, D.sp, Diaph, Poly, Vern, Meso, Limno, and Minut.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Chydor	Holo	Lepto	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop
05-MAY-82	6	3	0	0	0	0	0	0	477	3	77	152	25	11
11-MAY-82	28	6	0	0	0	0	0	0	410	9	345	370	23	9
20-MAY-82	88	10	34	0	0	0	0	0	668	24	8843	1179	5	5
27-MAY-82	16	0	1	0	0	1	0	0	11	7	1082	1567	3	3
01-JUN-82	16	3	3	0	0	0	0	0	186	7	411	889	7	0
08-JUN-82	116	3	3	0	0	3	0	0	174	8	132	2223	5	3
29-JUN-82	433	68	16	0	3	61	0	3	386	0	101	628	0	0
15-JUL-82	16009	38	86	0	0	32	0	0	1713	0	2289	8414	0	0
21-JUL-82	17811	0	0	0	14	14	0	0	7	0	484	551	0	0
27-JUL-82	22151	76	227	0	122	210	0	0	1210	88	3903	6480	0	0
04-AUG-82	28409	0	308	0	236	7	0	0	1461	150	1432	3236	0	0
10-AUG-82	173488	0	4282	0	14892	0	0	0	3816	372	24943	30900	0	0
18-AUG-82	119134	414	14168	0	21717	0	0	0	14995	1655	21716	44675	0	0
31-AUG-82	383	455	25098	0	4166	52	0	26	14554	734	26917	63055	0	0
08-SEP-82	2339	1860	24337	0	3454	319	53	106	23487	2816	21255	55688	0	0
16-SEP-82	2406	1641	14106	0	3445	5	109	0	15856	2078	6506	24494	0	0
23-SEP-82	8975	11860	171816	320	18272	0	320	0	158994	8655	47121	320552	0	0
29-SEP-82	10901	3658	23093	71	4374	71	215	0	15634	3012	11618	35285	0	0
05-OCT-82	19610	8220	16087	0	3875	65	118	0	10216	4345	19022	50257	0	0
14-OCT-82	17156	13141	14358	0	2616	0	243	0	16305	9004	16914	81279	0	0
19-OCT-82	13986	11764	3464	0	65	588	131	0	7647	2027	8627	55160	0	0
26-OCT-82	19433	7620	2225	102	204	77	77	0	2046	2021	14115	36003	0	0
31-OCT-82	19292	25893	5859	76	294	22	22	0	9148	2742	40736	91597	0	0
SWM[a]	21192	2639	12700	19	3502	63	48	7	11738	1503	10788	34792	2	1

[a] No SWM was calculated for the April 1st to October 31st period as zooplankton were not sampled until May 5th. Rare species were observed on one or two sampling dates.

Table 176. Continued.

Date	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
05-MAY-82	8	6	0	41	8	818
11-MAY-82	6	0	0	29	11	1245
20-MAY-82	0	0	0	133	79	11068
27-MAY-82	0	0	0	57	27	2774
01-JUN-82	0	3	0	51	64	1637
08-JUN-82	0	3	0	36	67	2775
29-JUN-82	0	0	0	3	26	1726
15-JUL-82	0	0	0	9	47	28637
21-JUL-82	0	0	0	15	7	18905
27-JUL-82	0	0	23	70	23	34583
04-AUG-82	0	0	14	14	36	35304
10-AUG-82	0	0	0	930	1303	254927
18-AUG-82	0	0	0	724	1034	240232
31-AUG-82	0	108	191	408	134	136281
08-SEP-82	0	0	106	372	479	136697
16-SEP-82	0	109	273	547	383	71958
23-SEP-82	0	961	320	2565	5769	756501
29-SEP-82	0	71	0	933	502	109440
05-OCT-82	0	0	293	704	1409	134221
14-OCT-82	61	0	61	365	973	172477
19-OCT-82	0	65	0	457	1046	105027
26-OCT-82	0	0	102	179	384	84588
31-OCT-82	0	0	123	333	957	197094
SWM[a]	3	51	60	355	562	100025

Table 177. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1983. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dambig, Holo, Poly, Lepto, Limno, L.np, and L.cop.

Date	Bos	Eubcor	Dret	Dgm	Dlong	Cerl	Chydor	Diaph	Diac	Tropo	Meso	Cycnp	Cyccop	Sic
01-APR-83	1	74	0	0	0	0	0	0	572	8	0	93	139	14
06-APR-83	0	78	0	0	0	0	0	0	641	6	0	13	46	19
12-APR-83	13	26	0	0	0	0	0	0	459	0	0	157	301	0
21-APR-83	10	68	0	0	0	0	0	0	1021	10	0	114	281	6
26-APR-83	0	62	0	0	0	0	0	0	1073	4	0	2225	432	6
04-MAY-83	0	603	43	0	0	0	0	0	3189	86	0	26890	2844	0
10-MAY-83	5	57	0	0	5	0	0	0	1159	5	0	2814	1137	5
17-MAY-83	62	217	0	0	0	0	0	0	1241	20	0	13983	6206	0
25-MAY-83	104	129	0	0	0	0	52	0	7550	155	0	36613	25650	0
01-JUN-83	104	655	0	17	17	0	52	0	776	0	0	7929	8964	17
07-JUN-83	828	2038	0	0	0	0	1338	0	1146	64	0	63153	53476	0
14-JUN-83	12286	1341	0	112	0	0	558	0	1229	112	0	21891	42441	0
28-JUN-83	56826	403	1541	0	67	0	67	0	134	268	0	72374	66476	0
05-JUL-83	94488	670	336	0	0	0	167	0	336	418	0	36857	18763	0
12-JUL-83	68621	1341	1943	0	0	134	201	0	1408	804	0	24661	53074	0
19-JUL-83	59567	297	3797	0	0	818	75	0	297	893	0	2904	32762	0
26-JUL-83	74518	938	13403	0	0	3016	0	0	3551	2346	0	8846	91674	0
04-AUG-83	351146	670	41547	0	0	34846	0	0	20774	24125	0	9382	115262	0
09-AUG-83	50036	536	18228	179	0	22874	0	179	2680	5897	0	44317	60043	0
17-AUG-83	1675	2680	17088	0	0	1005	0	0	11392	6366	0	84436	77734	0
23-AUG-83	2576	2897	190608	0	0	4186	644	0	1610	17386	0	13845	167426	0
30-AUG-83	1695	1695	75444	0	0	213	0	636	10173	39840	213	2543	64424	0
07-SEP-83	693	832	13587	0	0	208	208	208	485	11091	0	12478	23013	0
13-SEP-83	2701	3946	15786	0	0	0	3531	208	9762	16200	0	13293	104681	0
20-SEP-83	5503	4794	5682	0	0	0	0	0	3373	28405	0	18819	75274	0
27-SEP-83	7052	16399	6068	0	0	493	984	0	1148	30175	0	12791	38703	0
06-OCT-83	4583	4328	1018	0	0	42	340	22	192	10524	0	5941	15447	0
12-OCT-83	8691	4085	1304	0	0	0	261	0	261	11124	0	4693	13209	0
19-OCT-83	5186	11086	3174	0	0	44	90	0	894	28967	0	4024	10907	0
27-OCT-83	34205	37902	6471	0	0	463	924	0	1156	48071	231	9014	28196	0
31-OCT-83	42769	35401	3928	0	0	281	435	0	639	32719	77	13882	21541	0
SWM[a]	29344	3584	13486	12	4	2200	314	42	2980	9621	15	19836	41199	2

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 177. Continued.

Date	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-83	14	0	10	30	955
06-APR-83	13	0	6	30	853
12-APR-83	0	0	13	40	1007
21-APR-83	0	0	13	66	1590
26-APR-83	4	0	4	150	3960
04-MAY-83	43	0	0	173	33871
10-MAY-83	10	0	20	77	5294
17-MAY-83	0	0	10	72	21812
25-MAY-83	25	0	259	9102	79639
01-JUN-83	0	0	35	69	18634
07-JUN-83	128	0	191	64	122424
14-JUN-83	0	0	112	112	80192
28-JUN-83	0	0	0	67	198224
05-JUL-83	0	0	0	0	152034
12-JUL-83	0	0	0	67	152254
19-JUL-83	75	75	0	224	101785
26-JUL-83	0	0	201	670	199163
04-AUG-83	1675	336	0	336	600097
09-AUG-83	0	0	714	536	206218
17-AUG-83	0	0	1675	4355	208406
23-AUG-83	0	0	1610	1932	404721
30-AUG-83	213	0	1908	213	199209
07-SEP-83	0	0	693	554	64052
13-SEP-83	622	208	2285	3531	176754
20-SEP-83	355	0	1776	1420	145398
27-SEP-83	0	164	1803	2460	118240
06-OCT-83	0	0	297	848	43581
12-OCT-83	87	0	826	1391	45932
19-OCT-83	0	44	1162	1654	67230
27-OCT-83	0	463	2774	3697	173566
31-OCT-83	0	154	1051	2877	155753
SWM[a]	105	42	608	1152	124546

Table 178. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1984. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dgm, Dlong, Diaph, Holo, Lepto, Meso, and Minut.

Date	Bos	Eubcor	Dret	Cerl	Chydor	Poly	Diac	Tropo	Cycnp	Cyccop	Limno	L.np	L.cop	Sic
01-APR-84	18	88	0	0	0	0	1537	271	984	3118	5	15	0	21
05-APR-84	6	42	0	0	0	0	1910	275	812	3192	6	13	0	30
17-APR-84	4	19	0	0	0	0	4266	76	197	1754	0	6	6	23
25-APR-84	4	4	0	0	0	0	1335	26	85	550	4	30	6	4
03-MAY-84	5	31	0	0	0	0	2875	67	176	1314	0	26	15	37
08-MAY-84	119	10	0	0	0	0	3889	42	724	1137	0	0	15	15
15-MAY-84	31	42	0	0	0	0	2110	72	3392	197	0	0	0	10
23-MAY-84	19	0	0	0	0	0	140	25	11663	624	0	0	0	6
29-MAY-84	13	0	0	0	0	0	85	10	1737	610	0	0	0	0
05-JUN-84	280	25	0	0	0	0	51	51	17214	14566	0	0	0	0
13-JUN-84	1287	429	0	0	536	0	1072	0	12866	60901	0	0	0	0
19-JUN-84	3150	25	0	0	59	0	8	17	318	3083	0	0	0	0
26-JUN-84	5183	112	0	0	380	0	0	0	826	2100	0	0	0	0
04-JUL-84	6522	0	0	0	122	0	22	33	3529	1028	0	0	0	0
10-JUL-84	20372	0	20	47	58	9	9	114	6816	3983	0	0	0	0
17-JUL-84	56183	54	26	26	107	188	54	349	16726	22516	0	0	0	0
24-JUL-84	75768	179	328	1280	328	59	328	507	2739	14534	0	0	0	0
31-JUL-84	332383	447	1563	4691	224	0	2234	1117	2680	55397	0	0	0	0
08-AUG-84	84704	0	7237	2814	0	268	737	1139	21443	63796	0	0	0	0
14-AUG-84	194188	297	14296	25613	0	0	2829	1787	4914	89350	0	0	0	0
21-AUG-84	2407	963	35140	12757	121	0	11071	3490	28400	88570	0	0	0	0
28-AUG-84	1820	1138	52768	2274	0	0	7961	6254	37302	86429	0	0	0	0
11-SEP-84	3958	1784	35391	466	233	0	9314	8227	12727	55879	0	0	0	0
25-SEP-84	2696	13071	2860	164	898	0	3185	3104	8496	17972	0	0	0	0
10-OCT-84	13850	2553	1774	129	1732	0	2944	6406	14889	23198	0	0	0	0
24-OCT-84	11001	1926	2108	92	137	0	92	4401	963	20167	0	0	0	0
31-OCT-84	24712	11332	3218	147	325	0	564	6836	3890	12598	0	0	0	0
SWM[a]	28427	1608	7296	1673	271	17	2655	2131	8926	26048	< 1	3	1	5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 178. Continued.

Date	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-84	73	0	25	50	6203
05-APR-84	76	0	19	59	6441
17-APR-84	125	0	26	30	6531
25-APR-84	4	0	42	36	2129
03-MAY-84	93	0	67	83	4789
08-MAY-84	155	0	67	57	6230
15-MAY-84	176	0	72	10	6113
23-MAY-84	6	0	51	13	12546
29-MAY-84	3	0	10	5	2474
05-JUN-84	0	0	128	101	32416
13-JUN-84	54	0	268	697	78110
19-JUN-84	0	0	42	159	6862
26-JUN-84	0	0	22	134	8758
04-JUL-84	0	22	45	67	11391
10-JUL-84	0	0	0	47	31477
17-JUL-84	26	0	80	188	96524
24-JUL-84	0	30	328	447	96855
31-JUL-84	0	0	1787	447	402971
08-AUG-84	0	0	336	737	183212
14-AUG-84	0	0	893	1787	335955
21-AUG-84	121	0	482	1684	185205
28-AUG-84	0	0	569	1251	197766
11-SEP-84	544	78	698	1707	131006
25-SEP-84	40	40	409	1634	54570
10-OCT-84	42	129	303	1341	69291
24-OCT-84	45	137	320	1055	42442
31-OCT-84	73	63	305	1479	65542
SWM[a]	75	26	303	674	80140

Table 179. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1985. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dgm, Dlong, Diaph, Meso, and Limno.

Date	Bos	Eubcor	Dret	Cerl	Chydor	Holo	Poly	Lepto	Diac	Vern	Tropo	Cycnp	Cyccop	L.np
01-APR-85	8	67	0	0	0	0	0	0	492	0	49	95	527	34
02-APR-85	5	56	0	0	0	0	0	0	438	0	51	102	428	31
10-APR-85	0	13	0	0	0	0	0	0	74	0	10	59	125	23
16-APR-85	15	15	0	0	0	0	0	0	265	0	5	41	331	15
23-APR-85	0	36	0	0	0	0	0	0	331	0	20	107	255	31
30-APR-85	25	13	0	0	0	0	0	0	484	0	19	13	357	38
07-MAY-85	46	31	0	0	0	0	0	0	51	0	5	433	138	31
14-MAY-85	20	20	0	0	10	0	0	0	81	0	20	2872	346	122
22-MAY-85	113	11	0	0	23	0	0	0	0	0	34	4301	2399	79
29-MAY-85	225	0	0	0	0	0	0	0	0	0	11	922	4803	0
07-JUN-85	43	0	3	0	3	0	0	0	10	0	5	23	1467	0
18-JUN-85	1742	14	0	0	29	0	0	0	138	0	5	5	129	0
25-JUN-85	4083	21	0	0	11	0	0	0	908	0	32	546	1443	0
03-JUL-85	2609	214	0	0	54	0	36	0	0	0	107	464	375	0
11-JUL-85	17691	41	13	80	93	0	0	0	1153	26	0	4717	9221	0
16-JUL-85	60043	67	0	201	100	0	0	0	33	0	167	2479	6366	0
23-JUL-85	31592	143	216	1125	24	24	120	0	742	47	263	13403	25082	0
30-JUL-85	177986	268	2145	1162	89	89	179	0	2770	89	1341	4378	57184	0
09-AUG-85	73905	0	5457	8233	0	0	0	0	4404	0	575	4595	31783	0
13-AUG-85	95158	0	4245	3797	0	0	0	0	1563	0	1899	16083	20550	0
20-AUG-85	58816	134	9325	6994	0	0	0	0	5380	0	2107	7532	44113	0
27-AUG-85	5183	777	14857	5356	0	86	0	0	7083	0	5183	17621	65647	0
06-SEP-85	406	1165	5775	2432	0	0	0	101	5977	0	0	6484	36472	0
10-SEP-85	899	3681	15754	941	0	0	0	42	16782	0	16782	14727	70212	0
17-SEP-85	559	13387	33467	1488	140	0	0	47	1488	0	16361	22311	35327	0
24-SEP-85	107	1579	7511	490	320	43	0	0	7339	0	5292	6486	23555	0
01-OCT-85	1582	4412	1873	1082	500	124	0	0	291	0	3496	11655	22978	0
08-OCT-85	3764	15056	13344	4619	1455	42	0	0	3593	0	13002	14028	40376	0
16-OCT-85	36387	20137	8126	3798	2296	43	0	0	1679	0	14483	10951	37447	0
22-OCT-85	1630	4525	1449	544	588	0	0	0	1042	0	2716	3258	14121	0
29-OCT-85	2285	1865	163	0	232	24	0	0	630	0	793	1305	5688	0
31-OCT-85	2285	1865	163	0	232	24	0	0	630	0	793	1305	5688	0
SWM[a]	19279	2218	4072	1412	197	17	12	6	2065	6	2719	5605	18609	12

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 179. Continued.

Date	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-85	0	32	69	0	94	37	1504
02-APR-85	0	36	71	0	102	41	1361
10-APR-85	0	8	5	0	33	5	355
16-APR-85	0	5	5	0	81	36	814
23-APR-85	10	25	5	0	46	36	902
30-APR-85	6	13	13	0	64	38	1083
07-MAY-85	0	0	0	0	168	41	944
14-MAY-85	51	0	0	0	204	153	3899
22-MAY-85	23	0	0	0	385	192	7560
29-MAY-85	0	0	0	0	150	247	6358
07-JUN-85	0	0	3	0	5	18	1580
18-JUN-85	0	0	0	0	0	43	2107
25-JUN-85	0	0	0	0	41	51	7136
03-JUL-85	0	0	0	0	268	18	4146
11-JUL-85	0	0	13	26	13	107	33195
16-JUL-85	0	0	0	0	33	167	69657
23-JUL-85	0	0	24	24	24	336	73187
30-JUL-85	0	0	0	0	89	89	247859
09-AUG-85	0	0	96	47	96	718	129909
13-AUG-85	0	0	0	0	0	112	143407
20-AUG-85	0	0	359	45	314	807	135926
27-AUG-85	0	0	346	173	691	1814	124816
06-SEP-85	0	0	51	51	912	709	60535
10-SEP-85	0	0	342	0	985	1285	142432
17-SEP-85	0	0	93	0	1022	1302	126990
24-SEP-85	0	21	320	86	406	1196	54750
01-OCT-85	0	0	41	41	479	687	49242
08-OCT-85	0	0	299	428	1026	2995	114026
16-OCT-85	0	0	43	88	1016	3004	139498
22-OCT-85	0	0	44	135	453	1177	31682
29-OCT-85	0	0	24	0	187	232	13428
31-OCT-85	0	0	24	0	187	232	13428
SWM[a]	3	3	72	39	306	588	57240

Table 180. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1986. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dlong, Poly, Lepto, Vern, and Minut.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Chydor	Diaph	Holo	Diac	Tropo	Meso	Cycnp	Cyccop	Limno
01-APR-86	0	7	0	0	0	0	0	0	1066	49	0	112	1414	12
09-APR-86	0	7	0	0	0	0	0	0	1066	49	0	112	1414	12
16-APR-86	0	24	0	0	0	0	0	0	1017	75	0	409	745	12
22-APR-86	0	2	0	0	0	0	0	0	71	32	0	92	195	0
30-APR-86	7	0	0	0	0	0	0	0	409	32	0	124	533	0
06-MAY-86	38	38	0	0	0	0	0	0	450	0	0	1881	862	0
13-MAY-86	48	0	0	0	0	0	0	0	225	19	0	5015	617	0
21-MAY-86	79	13	52	0	0	0	0	0	313	38	0	8671	2298	0
27-MAY-86	254	19	0	0	0	19	0	0	117	38	0	2742	8071	0
03-JUN-86	456	102	0	0	0	0	0	0	162	0	0	383	4113	0
10-JUN-86	1013	88	0	0	0	0	0	0	29	15	0	412	1381	0
17-JUN-86	871	50	25	0	0	8	0	0	25	0	0	520	486	0
24-JUN-86	4672	497	0	0	76	0	0	0	0	0	0	6892	842	0
03-JUL-86	117942	1451	224	0	112	336	0	0	5696	112	0	27699	61651	0
08-JUL-86	29868	958	0	0	0	575	0	0	96	0	0	1628	6701	0
17-JUL-86	64868	0	603	0	67	201	0	0	3686	0	0	14475	21712	0
23-JUL-86	62800	459	1838	0	1072	114	0	0	345	230	0	918	4672	0
29-JUL-86	165425	958	2967	0	1341	479	0	0	1053	479	0	2297	99562	0
06-AUG-86	139387	251	8042	0	10387	0	0	84	1508	670	0	1508	26136	0
14-AUG-86	6780	709	20183	0	3942	79	79	158	32797	867	0	13561	90191	0
20-AUG-86	12625	908	4208	0	2056	192	144	0	2439	956	0	8608	24866	0
26-AUG-86	366	1280	13171	0	1464	427	244	0	2440	4635	0	9513	23415	0
03-SEP-86	1128	5414	19251	0	1128	0	0	0	5414	3459	0	1955	16243	0
11-SEP-86	82	2849	6838	0	61	0	0	0	2606	5861	0	5699	21491	0
16-SEP-86	1102	11338	28345	0	1575	0	0	158	4094	11338	0	9449	78103	0
23-SEP-86	1293	10985	9854	0	324	243	0	0	2747	11956	81	5654	40066	0
30-SEP-86	373	2156	3815	0	332	41	0	41	2737	5722	0	2820	13104	0
07-OCT-86	6816	9372	7669	0	341	42	0	85	766	12270	0	1619	41240	0
15-OCT-86	836	7741	2287	88	219	307	0	43	6509	5981	0	8972	25684	0
21-OCT-86	9376	17307	8294	44	135	0	0	90	2975	6130	44	2480	38583	0
31-OCT-86	9376	17307	8294	44	135	0	0	90	2975	6130	44	2480	38583	0
SWM[a]	21409	2936	4728	6	846	100	15	24	2796	2481	5	4858	22415	1

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 180. Continued.

Date	L.np	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-86	49	12	19	156	0	36	75	3007
09-APR-86	49	12	19	156	0	36	75	3007
16-APR-86	192	44	19	156	0	100	24	2818
22-APR-86	90	0	0	32	0	58	22	594
30-APR-86	49	32	32	49	0	168	100	1533
06-MAY-86	117	60	0	254	0	373	215	4288
13-MAY-86	10	19	10	19	0	127	79	6188
21-MAY-86	52	65	27	13	0	196	275	12094
27-MAY-86	19	0	0	19	0	608	98	12006
03-JUN-86	0	15	0	0	0	133	162	5525
10-JUN-86	0	0	0	0	0	133	338	3410
17-JUN-86	0	0	0	8	8	17	84	2101
24-JUN-86	0	0	0	0	0	383	575	13938
03-JUL-86	0	0	0	112	336	0	2680	218350
08-JUL-86	0	0	0	0	0	862	96	40784
17-JUL-86	0	0	0	167	0	33	134	105946
23-JUL-86	0	0	0	0	153	268	958	73829
29-JUL-86	0	0	0	0	96	192	2107	276955
06-AUG-86	0	0	0	0	0	251	336	188559
14-AUG-86	0	0	0	1655	1892	867	3705	177466
20-AUG-86	0	0	0	144	48	287	192	57673
26-AUG-86	0	0	0	60	60	609	1158	58843
03-SEP-86	0	0	0	1354	151	752	1429	57678
11-SEP-86	0	0	0	184	61	223	407	46360
16-SEP-86	0	0	0	473	158	1889	2047	150068
23-SEP-86	0	0	0	324	243	566	1374	85709
30-SEP-86	0	0	0	41	0	249	1161	32592
07-OCT-86	0	0	0	42	85	639	3408	84396
15-OCT-86	0	0	0	88	131	572	1891	61351
21-OCT-86	0	0	0	90	90	676	2705	89020
31-OCT-86	0	0	0	90	90	676	2705	89020
SWM[a]	19	8	4	187	117	384	995	64334

Table 181. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1987. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Diaph, Bytho, and Limno.

Date	Bos	Eubcor	Dret	Dgm	Dlong	Cerl	Chydor	Holo	Poly	Lepto	Diac	Tropo	Cycnp	Cyccop
01-APR-87	78	294	0	0	0	0	0	0	0	0	667	32	589	976
15-APR-87	78	294	0	0	0	0	0	0	0	0	667	32	589	976
22-APR-87	92	61	0	0	0	0	0	0	0	0	433	0	1455	1270
29-APR-87	56	34	0	0	46	0	0	0	0	46	720	22	3243	1105
05-MAY-87	48	127	0	0	38	0	0	0	0	10	402	10	4702	665
12-MAY-87	156	177	19	19	19	0	0	0	0	38	490	19	13319	5877
21-MAY-87	244	269	98	0	0	0	0	0	0	0	196	25	6463	8717
26-MAY-87	392	196	0	0	25	0	25	0	0	0	171	0	5975	11754
02-JUN-87	4200	2949	179	22	22	22	89	0	0	0	0	157	8042	6166
09-JUN-87	4242	746	12	12	36	0	12	0	0	0	0	46	979	1118
16-JUN-87	26447	447	358	0	0	0	0	0	0	0	6791	0	11795	15725
23-JUN-87	42084	637	637	33	0	67	33	0	33	0	268	0	12599	7237
30-JUN-87	39955	411	886	0	0	63	32	0	63	0	379	95	9357	22507
07-JUL-87	27954	526	718	47	0	526	0	0	718	0	143	718	10530	35612
16-JUL-87	83826	426	3229	0	0	913	0	0	0	0	183	304	14378	18763
21-JUL-87	120239	96	4787	47	192	622	0	47	47	0	622	909	862	26805
28-JUL-87	57439	96	2729	0	0	1005	0	0	0	0	575	766	8999	11488
11-AUG-87	1005	1592	14072	376	0	376	0	42	0	84	1675	3016	19099	46238
18-AUG-87	161	483	5468	26	0	589	0	188	0	0	0	3538	2305	13938
09-SEP-87	2516	2224	1931	0	0	467	351	0	0	0	175	2750	5850	14978
15-SEP-87	722	941	1349	0	0	31	31	0	0	0	299	941	2511	9791
23-SEP-87	209	194	1551	0	0	0	81	0	0	0	1131	1163	3037	8465
29-SEP-87	3246	1333	782	0	0	203	667	29	0	0	261	1681	1189	5451
14-OCT-87	8532	3808	380	0	0	229	686	76	0	0	420	876	6857	15235
20-OCT-87	12031	8080	717	90	0	224	360	90	0	0	270	1301	8438	13645
31-OCT-87	12031	8080	717	90	0	224	360	90	0	0	270	1301	8438	13645
SWM[a]	15531	1343	1867	32	11	248	123	27	31	7	627	966	6578	12753

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 181. Continued.

Date	L.np	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-87	433	46	32	139	0	696	185	4165
15-APR-87	433	46	32	139	0	696	185	4165
22-APR-87	404	156	248	92	0	1302	185	5698
29-APR-87	124	158	22	34	0	326	270	6207
05-MAY-87	38	127	38	38	0	167	567	6979
12-MAY-87	0	196	79	98	0	177	431	21115
21-MAY-87	73	98	25	0	0	906	662	17777
26-MAY-87	0	48	0	0	25	956	1175	20742
02-JUN-87	0	0	0	0	0	1429	1207	24484
09-JUN-87	0	0	0	0	12	36	268	7518
16-JUN-87	0	0	0	403	45	45	849	62904
23-JUN-87	0	0	0	33	33	268	603	64564
30-JUN-87	0	0	0	63	32	63	442	74346
07-JUL-87	0	0	0	0	47	430	1436	79408
16-JUL-87	0	0	0	0	0	304	913	123239
21-JUL-87	0	0	0	0	0	336	1005	156618
28-JUL-87	0	0	0	0	0	0	383	83480
11-AUG-87	0	0	0	125	293	712	3183	91890
18-AUG-87	0	0	0	26	54	455	750	27983
09-SEP-87	0	0	0	59	0	703	526	32531
15-SEP-87	0	0	0	15	0	157	330	17118
23-SEP-87	0	0	0	32	0	371	468	16702
29-SEP-87	0	0	0	29	0	552	579	16002
14-OCT-87	0	0	0	0	114	191	1104	38508
20-OCT-87	0	0	0	0	0	224	1301	46771
31-OCT-87	0	0	0	0	0	224	1301	46771
SWM[a]	56	30	16	52	30	455	797	41580

Table 182. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1988. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dgm, Dlong, Poly, Limno, and Euryt.

Date	Bos	Eubcor	Dret	Cerl	Cer.sp	Chydor	Diaph	Holo	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop
01-APR-88	32	153	0	0	0	0	0	0	2623	92	397	1343	122	0
08-APR-88	32	153	0	0	0	0	0	0	2623	92	397	1343	122	0
19-APR-88	29	61	0	0	0	0	0	0	1178	29	122	725	241	29
26-APR-88	61	0	0	0	0	0	0	0	589	0	355	465	263	46
05-MAY-88	123	0	0	0	0	0	0	0	783	0	1200	881	73	48
10-MAY-88	60	0	0	0	0	0	0	0	254	0	1900	450	333	137
18-MAY-88	215	23	0	0	0	0	0	0	119	23	12994	5925	48	23
25-MAY-88	127	0	0	0	0	0	0	0	108	19	4623	8306	0	10
01-JUN-88	215	29	10	0	0	19	0	0	225	19	665	6504	10	29
07-JUN-88	363	38	0	0	0	29	0	0	76	0	497	3139	0	0
15-JUN-88	971	50	17	0	0	17	0	0	167	0	218	1809	0	0
21-JUN-88	5495	67	0	0	11	112	0	0	22	0	2279	279	0	0
05-JUL-88	16351	50	67	17	0	50	33	0	520	84	2949	8042	0	0
12-JUL-88	11437	11	11	55	0	22	0	0	11	22	1162	3484	0	0
19-JUL-88	67191	45	0	89	0	0	0	45	0	89	1386	1162	0	0
27-JUL-88	74414	50	300	250	0	0	0	50	100	150	1300	3400	0	0
03-AUG-88	161545	0	3172	536	0	0	0	0	89	224	893	8399	0	0
10-AUG-88	15268	43	2530	279	0	0	0	0	21	86	1072	7549	0	0
17-AUG-88	576	0	7193	645	0	0	101	0	407	950	882	13029	0	0
30-AUG-88	2047	2047	10605	931	0	0	373	94	1396	1675	5395	15444	0	0
08-SEP-88	3395	2424	11316	1132	0	0	0	0	161	3718	10670	21825	0	0
13-SEP-88	1312	2933	2780	1467	0	0	0	0	232	927	10500	27793	0	0
21-SEP-88	12142	3834	2557	4154	0	319	0	0	1598	7350	12781	41219	0	0
27-SEP-88	37800	17071	7925	14632	0	4268	0	2439	1829	25607	11584	41457	0	0
05-OCT-88	17728	3596	1255	2508	167	1338	0	0	0	6773	5351	17393	0	0
20-OCT-88	4767	1529	2067	405	181	359	0	181	855	5935	5036	21221	0	0
31-OCT-88	4767	1529	2067	405	181	359	0	181	855	5935	5036	21221	0	0
SWM[a]	15607	1316	2136	990	25	265	26	104	606	2278	3760	10695	42	11

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 182. Continued.

Date	Sic	Oregon	Calnp	Calcop	Tzoop
01-APR-88	61	92	153	92	5161
08-APR-88	61	92	153	92	5161
19-APR-88	61	61	302	212	3049
26-APR-88	280	15	280	217	2569
05-MAY-88	73	25	48	221	3475
10-MAY-88	19	19	431	117	3719
18-MAY-88	0	0	525	477	20373
25-MAY-88	10	0	187	156	13544
01-JUN-88	0	0	225	373	8323
07-JUN-88	0	0	38	114	4296
15-JUN-88	0	0	67	100	3417
21-JUN-88	0	0	33	89	8386
05-JUL-88	0	17	0	50	28230
12-JUL-88	0	0	0	0	16214
19-JUL-88	0	0	89	224	70319
27-JUL-88	0	0	450	100	80564
03-AUG-88	0	0	224	536	175617
10-AUG-88	0	0	107	214	27170
17-AUG-88	0	34	68	339	24225
30-AUG-88	0	94	837	1023	41960
08-SEP-88	0	0	1940	647	57230
13-SEP-88	0	77	1467	1621	51108
21-SEP-88	0	0	1278	2557	89789
27-SEP-88	0	0	7316	3048	174977
05-OCT-88	0	0	335	585	57029
20-OCT-88	0	0	359	90	42985
31-OCT-88	0	0	359	90	42985
SWM[a]	20	20	600	480	38981

Table 183. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1989. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Eublon, Dgm, Vern, Meso, Limno, and Minut.

Date	Bos	Eubcor	Dret	Cerl	Chydor	Diaph	Holo	Poly	Lepto	Diac	Tropo	Cycnp	Cyccop	L.np
01-APR-89	24	0	0	0	0	0	0	0	0	472	100	148	942	297
05-APR-89	24	0	0	0	0	0	0	0	0	472	100	148	942	297
19-APR-89	49	0	0	0	0	0	0	0	0	1190	100	372	1635	496
25-APR-89	0	0	0	0	0	0	0	0	0	124	0	197	521	496
03-MAY-89	60	0	0	0	0	0	0	0	0	529	60	254	998	392
09-MAY-89	38	0	0	0	0	0	0	0	0	979	19	490	1235	137
17-MAY-89	117	0	0	0	0	0	0	0	0	313	38	4231	2115	19
24-MAY-89	440	221	0	0	98	0	0	0	0	196	0	30558	13712	0
31-MAY-89	415	25	0	0	98	0	0	0	0	98	0	5877	21890	0
06-JUN-89	954	78	0	0	309	0	0	0	0	26	26	6804	19795	0
14-JUN-89	2354	49	0	0	245	0	0	0	0	212	16	2158	5296	0
20-JUN-89	7639	84	17	0	50	0	0	0	0	100	0	2680	3820	0
28-JUN-89	3824	71	0	0	107	0	0	0	0	0	0	2930	3432	0
05-JUL-89	54325	238	59	0	89	0	0	0	0	89	30	12628	8101	0
12-JUL-89	26805	0	429	1930	54	0	0	214	54	0	912	11580	19729	0
18-JUL-89	37229	0	596	2680	75	0	0	297	75	0	1266	16083	27401	0
26-JUL-89	77039	695	2084	5957	99	0	397	99	0	1291	397	2879	80217	0
01-AUG-89	43186	149	3425	7595	149	0	149	0	0	297	1936	23232	14593	0
10-AUG-89	30251	0	10339	16466	766	0	0	0	0	4212	5361	222482	41357	0
16-AUG-89	2383	1588	17472	10325	0	596	0	0	0	2184	5559	27401	54008	0
23-AUG-89	852	2387	13637	5284	341	681	0	0	0	2216	5795	3750	48410	0
29-AUG-89	3058	4282	24877	4078	0	0	203	0	0	1427	20392	3058	34666	0
07-SEP-89	1526	2669	4804	1753	76	153	0	0	0	1906	5948	4728	14639	0
13-SEP-89	3115	7344	9012	3784	557	112	333	0	0	2114	4562	9569	18916	0
20-SEP-89	4074	3915	2557	1997	0	80	0	0	0	400	4634	5592	15020	0
26-SEP-89	1508	3351	3519	4860	1006	0	335	0	167	1006	5027	15751	16086	0
05-OCT-89	6932	2113	4734	1692	169	0	85	0	0	3805	5579	5242	28576	0
11-OCT-89	6319	6319	1904	1819	87	0	87	0	0	1819	2337	5367	11945	0
18-OCT-89	6607	3143	1853	1128	241	0	0	0	0	1692	1934	9992	15471	0
31-OCT-89	6607	3143	1853	1128	241	0	0	0	0	1692	1934	9992	15471	0
SMW[a]	10958	1392	3428	2422	165	50	53	20	10	1054	2505	15282	17888	73

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 183. Continued.

Date	L.cop	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-89	75	24	75	0	49	75	2283
05-APR-89	75	24	75	0	49	75	2283
19-APR-89	24	75	100	0	100	124	4265
25-APR-89	75	49	24	0	273	348	2107
03-MAY-89	294	60	38	0	137	412	3233
09-MAY-89	275	19	19	0	333	254	3798
17-MAY-89	275	38	60	0	392	254	7854
24-MAY-89	48	0	0	0	588	490	46352
31-MAY-89	0	0	0	0	465	244	29113
06-JUN-89	0	0	0	0	207	103	28302
14-JUN-89	0	0	0	0	1357	1830	13516
20-JUN-89	0	0	0	0	67	184	14642
28-JUN-89	0	0	0	0	143	500	11007
05-JUL-89	0	0	0	30	120	328	76038
12-JUL-89	0	0	0	54	54	321	62137
18-JUL-89	0	0	0	75	75	447	86300
26-JUL-89	0	0	0	0	99	1291	172543
01-AUG-89	0	0	0	0	745	149	95602
10-AUG-89	0	0	0	383	766	1149	333530
16-AUG-89	0	0	0	0	795	397	122709
23-AUG-89	0	0	0	341	1704	512	85911
29-AUG-89	0	0	0	203	1224	408	97877
07-SEP-89	0	0	0	76	991	991	40262
13-SEP-89	0	0	0	333	1335	3560	64646
20-SEP-89	0	0	160	0	560	320	39308
26-SEP-89	0	0	167	0	1341	1843	55965
05-OCT-89	0	0	0	169	760	1776	61633
11-OCT-89	0	0	0	0	692	1645	40339
18-OCT-89	0	0	0	0	161	1371	43592
31-OCT-89	0	0	0	0	161	1371	43592
SMW[a]	37	10	24	55	522	765	56874

Table 184. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1990. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: D.sp, Diaph, Vern, and Ash.

Date	Bos	Eubcor	Eublon	Dret	Dgm	Cerl	Chydor	Holo	Poly	Lepto	Diac	Tropo	Cycnp	Cyccop
01-APR-90	0	25	0	0	0	0	0	0	0	0	103	0	178	178
04-APR-90	0	25	0	0	0	0	0	0	0	0	103	0	178	178
18-APR-90	0	0	0	0	0	0	0	0	0	0	755	0	755	403
24-APR-90	0	155	0	0	0	0	0	0	0	0	1631	155	1476	1088
02-MAY-90	58	145	0	0	0	0	0	0	0	0	549	30	1357	404
08-MAY-90	84	29	0	0	0	0	0	0	0	0	29	29	3246	141
15-MAY-90	74	74	0	0	0	0	0	0	0	0	335	0	8648	783
23-MAY-90	326	64	0	64	0	0	0	0	0	0	1044	64	8356	3918
29-MAY-90	1085	262	0	38	0	0	112	0	0	0	374	0	8686	20368
05-JUN-90	1863	310	0	124	61	61	124	0	0	0	559	61	11676	27329
12-JUN-90	4896	1225	0	36	0	0	0	0	0	0	139	384	10914	13713
19-JUN-90	4787	103	0	52	0	26	52	0	0	0	26	0	2810	4370
26-JUN-90	16148	101	0	101	0	0	202	0	0	0	0	0	36332	9486
11-JUL-90	82506	573	0	2165	0	128	128	0	0	0	2419	128	40744	82506
17-JUL-90	84074	404	0	2991	0	324	0	0	81	0	7761	0	21343	87955
24-JUL-90	54683	804	0	18228	134	7505	0	403	403	0	2279	134	14743	57899
31-JUL-90	27530	215	0	8948	0	6194	0	43	0	0	86	215	7570	11184
08-AUG-90	19505	451	0	23479	0	7946	0	0	0	0	994	361	9753	13906
14-AUG-90	12792	175	0	11391	0	1752	0	876	0	88	351	1052	11215	9463
22-AUG-90	70	1106	0	22937	70	1106	0	1451	0	0	6771	1174	18238	32055
28-AUG-90	243	727	0	7231	0	265	0	221	0	22	904	948	16932	31396
06-SEP-90	218	1000	0	16346	0	131	392	87	0	87	565	1000	5565	19128
11-SEP-90	39	588	39	15987	0	0	79	0	39	39	1175	705	1019	26019
18-SEP-90	240	1261	30	6966	0	30	150	0	0	0	420	751	4565	19940
26-SEP-90	2351	8775	0	2272	0	78	2351	0	0	0	1763	1371	9089	26014
02-OCT-90	1560	2451	149	1932	0	0	2006	0	0	0	2525	2600	1783	30008
11-OCT-90	2954	6518	0	2954	0	0	916	0	0	0	2648	4074	4278	9168
16-OCT-90	8148	17112	0	6112	0	306	814	102	0	0	3666	4380	19150	46448
23-OCT-90	7073	9498	0	8488	0	304	454	252	0	0	2022	3738	12530	28294
31-OCT-90	7073	9498	0	8488	0	304	454	252	0	0	2022	3738	12530	28294
SWM[a]	12593	1918	7	5385	9	881	272	118	17	8	1439	835	11177	21928

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 184. Continued.

Date	Limno	L.np	L.cop	Sic	Oregon	Minut	Euryt	Calnp	Calcop	Tzoop
01-APR-90	25	230	50	78	0	50	0	128	78	1120
04-APR-90	25	230	50	78	0	50	0	128	78	1120
18-APR-90	0	755	0	101	202	0	0	403	101	3474
24-APR-90	76	698	0	76	76	0	0	2174	76	7683
02-MAY-90	30	203	87	289	0	0	0	1560	318	5030
08-MAY-90	0	141	0	55	0	0	0	2743	141	6635
15-MAY-90	0	112	74	38	0	0	0	1044	335	11518
23-MAY-90	0	195	195	64	0	131	0	1959	718	17097
29-MAY-90	74	74	186	0	38	0	0	1460	1011	33769
05-JUN-90	0	0	124	0	0	0	0	1117	2361	45771
12-JUN-90	0	0	0	0	0	0	0	420	175	31902
19-JUN-90	0	0	0	0	0	0	0	234	208	12668
26-JUN-90	0	0	0	0	0	50	0	50	50	62520
11-JUL-90	0	0	0	0	0	0	64	64	319	211741
17-JUL-90	0	0	0	0	0	0	0	81	404	205418
24-JUL-90	0	0	0	0	0	0	0	403	268	157881
31-JUL-90	0	0	0	0	0	0	43	731	258	63015
08-AUG-90	0	0	0	0	0	0	0	271	541	77208
14-AUG-90	0	0	0	0	0	0	0	1227	351	50734
22-AUG-90	0	0	0	0	138	70	0	483	1174	86841
28-AUG-90	0	0	0	0	66	0	0	948	1279	61183
06-SEP-90	0	0	0	0	44	0	0	652	652	45864
11-SEP-90	0	0	0	0	235	0	39	744	705	47454
18-SEP-90	0	0	0	0	0	0	0	510	961	35825
26-SEP-90	0	0	0	0	0	0	0	940	1058	56063
02-OCT-90	0	0	0	0	0	0	0	1262	1783	48058
11-OCT-90	0	0	0	0	0	0	0	916	916	35342
16-OCT-90	0	0	0	102	0	0	0	1324	3362	111026
23-OCT-90	0	0	0	0	50	50	151	607	2323	75833
31-OCT-90	0	0	0	0	50	50	151	607	2323	75833
SWM[a]	7	93	24	28	31	14	14	817	766	58381

Table 185. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1991. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dgm, D.sp, Diaph, Lepto, Vern, and Minut.

Date	Bos	Eubcor	Eublon	Dret	Cerl	Chydor	Holo	Poly	Diac	Tropo	Cycnp	Cyccop	L.np	L.cop
01-APR-91	95	128	0	0	0	0	0	0	478	0	190	605	478	0
04-APR-91	95	128	0	0	0	0	0	0	478	0	190	605	478	0
17-APR-91	86	0	0	0	0	0	0	0	723	0	377	464	261	30
23-APR-91	0	151	29	0	0	0	0	0	854	29	395	700	151	90
30-APR-91	33	169	0	0	0	0	0	0	1011	67	4447	2561	472	136
07-MAY-91	123	303	0	123	0	60	0	0	545	0	18433	4063	123	123
14-MAY-91	0	152	31	0	0	90	0	0	274	31	8974	2212	121	60
22-MAY-91	654	131	64	0	0	131	0	0	131	0	16715	10708	0	195
28-MAY-91	1369	384	0	0	0	219	0	0	55	0	19715	26724	0	0
04-JUN-91	25707	2061	0	121	0	303	0	0	60	121	12126	19644	0	0
12-JUN-91	17622	294	0	110	0	404	0	0	1835	0	11749	8224	0	0
18-JUN-91	31553	230	0	191	114	77	0	77	77	0	38600	6357	0	0
25-JUN-91	80704	196	0	98	0	0	0	98	0	98	20764	10970	0	0
03-JUL-91	86849	1206	0	16619	68	0	0	268	1809	134	17691	77199	0	0
09-JUL-91	89391	1215	0	10041	81	0	0	0	1377	81	17489	42751	0	0
16-JUL-91	120534	1910	0	20796	2546	0	213	0	2334	213	10186	57720	0	0
23-JUL-91	85654	193	0	9839	2315	0	0	0	579	193	4438	20835	0	0
08-AUG-91	156	1406	0	23130	78	0	0	0	3985	547	4844	24694	0	0
13-AUG-91	249	1296	0	18942	49	0	49	0	1545	1545	5782	16948	0	0
20-AUG-91	75	905	0	19308	1282	226	377	0	75	12671	8145	21119	0	0
28-AUG-91	1524	1455	0	1212	347	139	35	0	35	1802	1108	9700	0	0
05-SEP-91	11512	4222	0	1792	1535	255	63	0	129	5245	1280	11769	0	0
11-SEP-91	3210	603	0	170	278	46	124	15	46	509	956	1760	0	0
01-OCT-91	2929	3756	0	2610	1783	255	0	0	319	636	3693	9931	0	0
10-OCT-91	3306	1753	0	1555	1587	132	165	0	629	496	2051	6614	0	0
16-OCT-91	6571	4460	0	2503	1565	1095	79	0	1877	2503	4224	12518	0	0
23-OCT-91	18378	8193	0	4096	996	0	111	0	2546	3765	13287	36315	0	0
28-OCT-91	5217	4555	0	703	165	42	42	0	662	1408	6625	10435	0	0
31-OCT-91	5217	4555	0	703	165	42	42	0	662	1408	6625	10435	0	0
SWM[a]	21351	1463	4	4999	605	123	45	15	861	1103	8496	15818	61	21

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 185. Continued.

Date	Sic	Oregon	Euryt	Calnp	Calcop	Tzoop
01-APR-91	255	33	0	255	63	2578
04-APR-91	255	33	0	255	63	2578
17-APR-91	30	57	0	405	116	2548
23-APR-91	90	122	0	212	29	2854
30-APR-91	100	33	0	506	236	9773
07-MAY-91	0	60	0	365	485	24803
14-MAY-91	0	0	0	514	424	12883
22-MAY-91	0	0	0	456	654	29838
28-MAY-91	0	0	0	548	273	49287
04-JUN-91	0	0	0	910	1697	62751
12-JUN-91	0	0	0	37	294	40569
18-JUN-91	0	0	0	39	77	77393
25-JUN-91	0	0	0	98	196	113220
03-JUL-91	0	0	0	268	603	202711
09-JUL-91	0	0	0	1053	647	164126
16-JUL-91	0	0	0	1274	1910	219635
23-JUL-91	0	0	0	386	193	124623
08-AUG-91	0	78	0	625	625	60170
13-AUG-91	0	149	0	548	449	47551
20-AUG-91	75	75	0	1207	1282	66825
28-AUG-91	0	35	0	831	555	18777
05-SEP-91	0	0	0	1022	1280	40104
11-SEP-91	0	15	15	93	355	8194
01-OCT-91	0	0	64	1019	1210	28204
10-OCT-91	0	0	0	99	562	18950
16-OCT-91	0	0	0	235	548	38179
23-OCT-91	0	0	111	443	443	88685
28-OCT-91	0	0	0	0	165	30018
31-OCT-91	0	0	0	0	165	30018
SWM[a]	21	24	8	508	578	56104

Table 186. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: Station 81, 1992. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Holo and Minut.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Chydor	Diac	Tropo	Cycnp	Cyccop	Limno	Sic	Oregon	Calnp
01-APR-92	71	57	0	14	0	0	481	0	99	707	14	85	71	57
07-APR-92	71	127	0	0	0	0	835	0	297	1174	28	28	14	14
29-APR-92	0	0	0	0	0	0	4855	35	70	1091	0	106	0	70
05-MAY-92	48	239	48	0	0	0	5064	0	143	13569	0	96	96	0
12-MAY-92	409	0	0	0	0	0	3273	0	993	1227	0	175	0	643
20-MAY-92	49	99	25	0	0	0	3547	0	4237	2316	25	49	0	74
28-MAY-92	156	156	0	0	0	0	1245	0	19244	7897	0	0	0	78
02-JUN-92	584	319	266	0	0	0	4993	0	1116	25072	0	106	0	159
09-JUN-92	9186	3545	1128	161	0	0	2740	0	23206	112164	0	0	0	483
16-JUN-92	9355	662	397	0	0	0	88	44	9178	29300	0	0	0	530
24-JUN-92	7578	0	919	0	0	0	402	0	19749	36742	0	0	0	0
30-JUN-92	4891	69	52	0	0	0	86	0	379	7440	0	0	0	0
08-JUL-92	853	388	0	78	0	155	3953	0	39681	48981	0	233	0	78
14-JUL-92	24214	0	0	0	36	0	0	0	890	10967	0	36	0	0
21-JUL-92	28959	171	68	0	0	34	0	0	0	2937	0	0	0	0
28-JUL-92	18292	54	54	0	0	0	377	54	269	16678	0	0	0	54
11-AUG-92	51229	0	262	0	0	0	899	0	374	13481	0	0	0	0
18-AUG-92	11510	64	515	0	43	0	215	21	215	12198	0	0	0	0
25-AUG-92	29026	0	34980	0	6698	0	7815	2977	744	205412	0	0	0	372
01-SEP-92	5725	72	5507	1159	0	0	3406	72	652	21740	0	0	0	0
10-SEP-92	775	163	11256	0	408	82	2488	122	367	24797	0	0	0	0
15-SEP-92	2443	229	6872	0	382	0	6414	76	2214	36651	0	0	0	0
30-SEP-92	2843	5330	4501	0	2369	2013	1184	711	474	13265	0	0	0	355
07-OCT-92	2525	2092	13124	0	1659	0	1371	216	6349	17315	0	0	0	0
14-OCT-92	871	1691	2921	0	871	154	820	359	308	12916	0	51	0	154
20-OCT-92	1304	815	1402	0	489	98	946	522	228	5608	0	0	0	98
31-OCT-92	1304	815	1402	0	489	98	946	522	228	5608	0	0	0	98
SWM[a]	9169	739	5104	299	1658	390	2746	326	5331	29614	26	81	54	254

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 186. Continued.

Date	Calcop	Tzoop
01-APR-92	57	1713
07-APR-92	28	2616
29-APR-92	70	6297
05-MAY-92	191	19494
12-MAY-92	117	6837
20-MAY-92	197	10618
28-MAY-92	233	29009
02-JUN-92	319	32934
09-JUN-92	483	153096
16-JUN-92	530	50084
24-JUN-92	115	65505
30-JUN-92	103	13020
08-JUL-92	233	94633
14-JUL-92	71	36214
21-JUL-92	376	32545
28-JUL-92	54	35886
11-AUG-92	112	66357
18-AUG-92	129	24910
25-AUG-92	372	288396
01-SEP-92	145	38478
10-SEP-92	41	40499
15-SEP-92	76	55357
30-SEP-92	474	33519
07-OCT-92	577	45228
14-OCT-92	564	21680
20-OCT-92	424	11934
31-OCT-92	424	11934
SWM[a]	236	53452

Table 187. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1993. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Dpul.

Date	Bos	Eubcor	Dret	Cerl	Diaph	Holo	Lepto	Velig	Diac	Tropo	Cycnp	Cyccop	Limno	Sic
01-APR-93	7	47	84	0	0	2	0	32	1032	68	64	254	39	257
07-APR-93	7	47	84	0	0	2	0	32	1032	68	64	254	39	257
15-APR-93	42	40	17	4	0	2	0	21	3735	15	477	647	8	403
20-APR-93	11	23	0	0	0	0	0	4054	1103	45	866	1732	0	450
27-APR-93	9	9	6	0	0	0	0	849	4296	51	129	746	51	566
04-MAY-93	26	35	4	0	0	0	0	43	5362	56	1716	1423	22	318
11-MAY-93	5	40	20	5	0	0	0	874	7390	0	4119	499	40	689
18-MAY-93	34	28	45	0	0	0	0	65	3482	31	6043	468	55	282
26-MAY-93	65	34	55	31	0	3	0	31	5321	34	12569	1991	23	512
01-JUN-93	136	136	136	88	0	0	0	1286	3299	377	21528	5927	32	325
08-JUN-93	375	80	174	0	0	0	0	496	6701	201	35182	17624	34	251
15-JUN-93	1768	247	175	0	0	10	21	0	12555	0	24004	45718	0	10
22-JUN-93	4052	136	237	7	0	14	0	1068	7851	41	4242	34824	0	0
29-JUN-93	10653	183	504	344	0	0	0	160	2635	92	2978	7698	0	0
06-JUL-93	10473	82	327	35	0	0	0	1754	2491	8	14736	8526	0	0
13-JUL-93	6525	136	340	51	0	8	0	85	2235	34	1386	4923	0	0
20-JUL-93	53474	306	1608	460	0	51	0	1872	18040	979	4936	8424	0	51
27-JUL-93	36937	680	2266	340	0	85	0	6458	14163	963	6345	11840	0	57
04-AUG-93	29878	1118	9946	3076	0	120	120	5393	11864	1718	4314	8628	0	0
10-AUG-93	1769	906	11016	7564	0	37	43	1983	14247	2570	5067	8519	0	661
17-AUG-93	11287	1364	29395	15628	0	310	558	744	13023	16744	2977	13395	0	0
24-AUG-93	1368	2393	36926	3647	0	370	185	68	35900	4787	15956	18349	0	11
31-AUG-93	0	7750	49822	2003	0	633	369	6449	14709	22618	17240	28786	0	264
08-SEP-93	530	2107	13414	118	8	28	24	1251	10061	7503	1023	7730	0	20
14-SEP-93	364	6403	5602	412	49	170	0	1496	13023	9240	2910	12296	0	97
22-SEP-93	1034	8643	14455	749	0	150	30	345	13706	10411	4344	9886	0	0
29-SEP-93	1736	4196	7524	405	0	116	0	6060	5585	5730	868	9405	0	0
06-OCT-93	6634	10588	24661	1776	0	1005	34	4758	23857	16753	10186	26403	0	134
13-OCT-93	4826	2786	4765	440	37	61	0	2566	17472	4826	7392	6720	0	232
20-OCT-93	10963	6467	6388	331	0	205	16	852	20190	8281	11436	8676	0	0
26-OCT-93	3811	3242	2735	78	0	171	0	343	17813	4068	2899	7667	0	210
31-OCT-93	3811	3242	2735	78	0	171	0	343	17813	4068	2899	7667	0	210
SWM[a]	7692	2159	8541	894	42	153	96	3926	9157	4423	7723	10170	33	245

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 187. Continued.

Date	Euryt	Calnp	Calcop	Tzoop
01-APR-93	0	257	114	4482
07-APR-93	0	257	114	4482
15-APR-93	0	318	297	12031
20-APR-93	8	1403	520	16376
27-APR-93	0	656	141	14169
04-MAY-93	17	819	487	20613
11-MAY-93	30	749	614	29274
18-MAY-93	17	2395	138	26101
26-MAY-93	10	2906	331	47808
01-JUN-93	24	9170	122	83886
08-JUN-93	0	12665	318	147706
15-JUN-93	10	4817	419	179508
22-JUN-93	0	3736	179	111706
29-JUN-93	23	825	229	52488
06-JUL-93	4	3719	105	82766
13-JUL-93	0	2914	509	38207
20-JUL-93	204	3106	979	187108
27-JUL-93	57	1643	1190	159590
04-AUG-93	320	1198	879	151751
10-AUG-93	881	1395	808	112949
17-AUG-93	0	1488	2605	218292
24-AUG-93	11	2393	171	245002
31-AUG-93	264	4903	264	315699
08-SEP-93	71	1023	341	89253
14-SEP-93	0	2255	0	117138
22-SEP-93	75	3745	30	134861
29-SEP-93	0	984	839	90836
06-OCT-93	302	2546	2949	260414
13-OCT-93	220	2993	855	109816
20-OCT-93	79	10016	0	166948
26-OCT-93	140	3600	0	93211
31-OCT-93	140	3600	0	93211
SWM[a]	108	2670	633	58665

Table 188. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1994. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: Diaph, Vern, Meso, and Epi.

Date	Bos	Eubcor	Dret	Dgm	D.sp	Cerl	Holo	Lepto	Bytho	Diac	Tropo	Cycnp	Cyccop	Limno
01-APR-94	65	16	0	0	0	0	0	0	0	1239	179	1402	1940	33
13-APR-94	65	16	0	0	0	0	0	0	0	1239	179	1402	1940	33
19-APR-94	0	19	0	0	0	0	0	0	0	3326	78	1303	1556	0
10-MAY-94	291	23	12	0	23	0	0	0	0	1805	35	9547	722	35
18-MAY-94	243	10	0	0	78	0	0	0	0	873	19	29341	893	0
25-MAY-94	277	16	0	0	114	0	0	0	0	1449	49	42842	2409	0
31-MAY-94	442	78	26	0	26	0	0	0	0	755	52	34254	10516	0
07-JUN-94	1344	269	67	0	67	0	0	0	0	761	0	33504	20962	0
14-JUN-94	1092	182	0	0	0	0	0	0	0	2305	121	18076	25355	0
28-JUN-94	13115	160	260	0	0	0	20	1	0	600	0	27990	14395	0
12-JUL-94	20461	534	1957	0	0	178	178	1	0	489	0	67611	23308	0
26-JUL-94	70157	388	2471	0	0	48	48	2	0	1841	0	24807	17830	0
09-AUG-94	18418	550	57452	3	275	1924	0	44	0	6048	1100	49480	29963	0
17-AUG-94	5977	690	19769	153	0	8505	0	59	0	7816	0	37699	42296	0
23-AUG-94	842	281	12777	1	0	140	0	73	0	5335	281	25132	18393	0
30-AUG-94	0	5502	42293	11	0	0	688	164	0	10315	344	33009	40230	0
07-SEP-94	1129	2964	31048	15	141	423	565	92	0	3387	1694	16653	30202	0
13-SEP-94	1030	8696	5492	0	0	0	1487	46	0	1945	2975	18193	15904	0
21-SEP-94	1149	3829	4978	15	191	96	574	12	0	1819	1245	17615	20296	0
27-SEP-94	2168	5347	7514	2	0	0	867	12	4	3179	2168	13150	22543	0
05-OCT-94	661	850	1511	1	0	0	472	9	38	2456	3022	13411	12656	0
12-OCT-94	924	1294	2033	0	0	0	0	6	22	3881	3511	17556	28089	0
19-OCT-94	81	163	0	1	0	0	0	1	23	976	1302	9927	17819	0
31-OCT-94	81	163	0	1	0	0	0	1	23	976	1302	9927	17819	0
SWM[a]	8384	1118	7539	7	36	415	172	18	4	2570	689	23775	16803	5

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 188. Continued.

Date	Sic	Oregon	Minut	Euryt	Epicop	Calnp	Calcop	Tzoop
01-APR-94	98	16	0	0	0	1777	114	6879
13-APR-94	98	16	0	0	0	1777	114	6879
19-APR-94	97	39	0	0	0	2548	117	9084
10-MAY-94	116	35	0	0	0	2515	361	15520
18-MAY-94	58	49	10	0	29	1863	349	33814
25-MAY-94	49	16	0	0	0	1693	228	49141
31-MAY-94	52	0	0	0	26	3436	703	50366
07-JUN-94	0	0	0	0	22	2150	358	59505
14-JUN-94	0	0	0	0	0	1334	789	49254
28-JUN-94	0	0	20	10	20	320	120	57031
12-JUL-94	0	0	0	0	0	712	356	115785
26-JUL-94	0	0	48	48	0	388	97	118173
09-AUG-94	0	0	0	0	0	1924	1924	169104
17-AUG-94	0	0	0	230	0	4597	230	128020
23-AUG-94	0	140	0	0	0	2387	421	66205
30-AUG-94	0	0	0	0	0	3438	1719	137713
07-SEP-94	0	141	0	0	0	3669	1976	94099
13-SEP-94	0	0	114	0	0	5607	2060	63550
21-SEP-94	0	0	0	191	0	4021	2393	58425
27-SEP-94	0	289	0	0	0	2023	2890	62156
05-OCT-94	94	283	0	94	0	5667	4156	45383
12-OCT-94	0	0	0	0	462	3696	1663	63137
19-OCT-94	0	0	81	0	0	2116	2034	34524
31-OCT-94	0	0	81	0	0	2116	2034	34524
SWM[a]	29	37	15	21	19	2332	1005	64993

Table 189. Seasonal densities (number·m^{-3}) and weighted means (SWM) for zooplankton species from surface waters of Lake Ontario: station 81, 1995. Samples collected by vertical net haul. Data corrected for net efficiency. See text for sampling protocols and Table 159 for taxon codes. Additional rare species: D.sp, and Epi.

Date	Bos	Eubcor	Dret	Dgm	Cerl	Diaph	Holo	Lepto	Velig	Diac	Tropo	Cycnp	Cyccop	Limno
01-APR-95	0	10	0	0	0	0	0	0	20	805	20	224	744	41
06-APR-95	0	10	0	0	0	0	0	0	20	805	20	224	744	41
11-APR-95	0	10	0	0	0	0	0	0	122	1610	51	82	632	71
20-APR-95	12	6	0	0	0	0	0	0	987	674	6	944	331	18
25-APR-95	17	0	9	0	0	0	0	0	69	1145	17	1388	399	52
03-MAY-95	110	0	0	0	0	0	0	0	1495	951	17	15219	255	17
10-MAY-95	166	0	0	0	0	0	0	0	2657	921	0	19567	377	15
17-MAY-95	80	13	0	13	0	0	0	0	39134	748	27	48971	722	13
25-MAY-95	89	30	15	7	0	0	30	0	97722	489	0	32493	4921	15
01-JUN-95	534	89	59	7	0	0	0	4	117172	267	15	33207	18500	4
06-JUN-95	484	51	25	6	0	0	0	3	107625	1248	0	18955	30981	0
15-JUN-95	734	41	109	0	0	0	0	14	18915	462	27	4511	6794	0
20-JUN-95	1480	211	121	0	0	0	8	8	10146	2325	0	15098	9300	0
28-JUN-95	3035	45	113	0	0	0	0	0	6522	34	0	52178	6975	0
14-JUL-95	27680	159	159	0	20	0	2	2	24180	318	20	26089	12726	0
27-JUL-95	64526	175	14026	0	409	0	58	11	2338	4442	175	19638	47693	0
02-AUG-95	4683	493	36973	0	123	0	15	169	20705	6162	246	29086	31551	0
10-AUG-95	814	814	27391	0	0	68	68	169	10305	3526	542	21425	22238	0
15-AUG-95	725	846	17651	0	121	0	30	121	32883	1874	635	11848	8704	0
23-AUG-95	71	1694	18917	0	141	18	35	229	14965	1624	2400	15529	18353	0
29-AUG-95	430	573	8171	0	143	0	0	143	37273	681	3297	22937	11898	0
07-SEP-95	635	494	2965	0	0	35	35	18	32470	741	2753	18917	14823	0
12-SEP-95	0	2267	12556	44	0	131	44	131	63832	8371	8545	19184	40462	0
20-SEP-95	945	4537	6239	12	12	24	0	24	77138	2836	5104	28738	19661	0
27-SEP-95	2435	4000	10436	22	0	0	22	43	52877	5740	10088	23308	14610	0
04-OCT-95	1168	1168	7496	0	0	0	0	0	47509	6814	3212	28038	17133	0
11-OCT-95	1449	1495	3035	0	45	0	11	3	25002	589	4348	14675	7428	0
20-OCT-95	3080	1902	2265	23	45	0	0	1	19568	1540	6160	14857	13950	0
31-OCT-95	3080	1902	2265	23	45	0	0	1	19568	1540	6160	14857	13950	0
SWM[a]	5719	788	5721	5	42	9	12	36	30081	1973	1834	20718	13478	8

[a] SWM is the seasonally weighted mean calculated over the April 1st to October 31st period. Rare species were observed on one or two sampling dates.

Table 189. Continued.

Date	Sic	Oregon	Minut	Euryt	Calcop	Calnp	Calcop	Tzoop
01-APR-95	46	143	0	0	112	326	112	2471
06-APR-95	46	143	0	0	112	326	112	2471
11-APR-95	41	122	0	0	153	734	153	3506
20-APR-95	67	141	0	6	86	343	86	2636
25-APR-95	35	95	0	0	182	451	182	3790
03-MAY-95	68	136	0	0	289	1359	289	18420
10-MAY-95	91	106	0	0	287	3623	287	25153
17-MAY-95	13	107	0	0	281	2138	281	53127
25-MAY-95	15	15	0	0	771	2846	771	41735
01-JUN-95	0	15	0	0	445	474	445	53618
06-JUN-95	0	19	0	0	1045	408	1045	53226
15-JUN-95	0	0	0	0	734	109	734	13534
20-JUN-95	0	8	0	0	362	845	362	29766
28-JUN-95	0	0	0	11	226	1087	226	63706
14-JUL-95	2	2	0	20	636	954	636	68792
27-JUL-95	0	0	0	29	818	1403	818	153404
02-AUG-95	0	46	0	108	2958	2958	2958	115571
10-AUG-95	0	34	34	34	1627	4882	1627	83664
15-AUG-95	0	60	30	30	1572	3869	1572	48116
23-AUG-95	0	159	18	18	1059	7059	1059	67323
29-AUG-95	0	143	36	36	2294	10322	2294	61104
07-SEP-95	0	71	53	18	1694	4800	1694	48053
12-SEP-95	0	1700	0	131	9940	2442	9940	105948
20-SEP-95	0	260	0	24	2080	5672	2080	76167
27-SEP-95	0	174	0	130	1565	8349	1565	80922
04-OCT-95	0	97	12	24	1460	1558	1460	68182
11-OCT-95	0	3	0	6	1268	3623	1268	37979
20-OCT-95	23	23	45	23	2718	2174	2718	48829
31-OCT-95	23	23	45	23	2718	2174	2718	48829
SWM[a]	14	119	9	23	1336	2660	1336	85921

Table 190. Summary of significant trends for 1991-1995 Bioindex data for station 41, prestratified period. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Tclad = cladocerans. Tclan = calanoids.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Iindicators				
Phytoplankton	Increase	0.024	ns	ns
Chrysophyceae	Increase	0.034	0.029	ns
POC	Increase	0.016	ns	ns
PON	Increase	0.047	ns	ns
Chl_{un}	Increase	0.016	ns	ns
Nutrients				
TP	Decrease	0.003	0.003	ns
TFP	Decrease	0.003	0.003	ns
SRP	Decrease	0.029	ns	ns
N:P	Increase	(0.060)	0.012	ns
DOC	Increase	0.005	0.011	ns
Physical Parameters				
Z_{eu}	Decrease	0.024	ns	ns
Z_m:Z_{eu}	Increase	0.024	ns	ns
ε_{par}	Increase	0.023	ns	ns
Conductivity	Decrease	ns	0.037	ns
Chloride	Decrease	<0.001	<0.001	0.001
Photosynthetic Parameters				
I_k	Increase			0.047
Zooplankton				
Tzoop	Increase	ns	0.048	ns
Tclad	Increase	0.007	0.018	ns
Tcalan	Increase	0.007	0.002	ns

Table 191. Summary of significant trends for 1991-1995 Bioindex data for station 41, stratified period. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Tcyclo = total cyclopoids.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Indicators				
Cryptophyceae	Decrease	0.011	0.006	ns
Dinophyceae	Increase	ns	0.010	0.029
POC	Decrease	0.016	0.004	ns
PON	Decrease	0.047	0.018	ns
Nutrients				
TP	Decrease	0.003	0.002	ns
TFP	Decrease	0.003	0.002	ns
SRP	Increase	ns	0.049	ns
NO_3/NO_2	Increase	0.012	0.006	ns
N:P	Increase	0.023	0.004	ns
DOC	Increase	0.016	0.003	ns
Physical Parameters				
ε_{par}	Decrease	ns	0.007	ns
Secchi	Increase	ns	0.038	ns
Conductivity	Decrease	ns	0.048	ns
Chloride	Decrease	<0.001	<0.001	0.001
Zooplankton				
Tzoop	Decrease/ Increase	0.048	ns	0.016
Tcyclo	Decrease/ Increase	0.023	ns	0.029

Table 192. Summary of significant trends for 1991-1995 Bioindex data for station 41, all season. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Zprod = June 15 - Oct 31 epilimnetic zooplankton production.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Indicators				
Cryptophyceae	Decrease	ns	0.008	ns
POC	Decrease	ns	0.023	ns
PON	Decrease	ns	0.008	ns
Nutrients				
TP	Decrease	0.001	<0.001	ns
TFP	Decrease	0.003	0.001	ns
SRP	Decrease	0.029	ns	ns
NO_3 NO_2	Increase	ns	0.018	ns
N:P	Increase	0.011	<0.001	ns
DOC	Increase	0.009	0.011	ns
Physical Parameters				
Z_m	Increase	ns	ns	0.016
Z_{eu}	Increase	ns	ns	0.048
ε_{par}	Decrease	ns	ns	0.048
Secchi	Increase	ns	0.042	ns
Conductivity	Decrease	ns	0.029	ns
Chloride	Decrease	<0.001	<0.001	0.001
Zooplankton				
Tzoop	Decrease	0.064*	ns	ns
Tclad	Decrease	0.114**	0.047	ns
Tcyclo	Increase	ns	ns	0.048
Tcalan	Increase	ns	0.038	ns
Zprod	Decrease	0.064	0.038	ns

* These group is marginally significant, with comparisons between 1981 and 1991 (p=0.044) and between 1981 and 1993 (p=0.049) resulting in siginifcant relationships.
** Comparisons were significant between 1981 and 1990 (p=0.032), and between 1981 and 1991 (p=0.029).

Table 193. Summary of significant trends for 1991-1995 Bioindex data for station 81, prestratified period. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Tcyclo = total cyclopoids. Tcalan = total calanoids.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Indicators				
Dinophyceae	Decrease	0.023	0.008	ns
Diatoms	Increase	0.034	ns	ns
POC	Decrease	ns	0.048	0.016
PON	Decrease	ns	0.002	0.005
Nutrients				
TP	Decrease	0.003	0.001	ns
TFP	Decrease	0.008	0.001	ns
SRP	Increase	*	*	ns
SRS	Increase	ns	ns	0.002
NO_3 NO_2	Increase	0.016	<0.001	0.016
N:P	Increase	0.029	0.006	ns
DOC	Increase	0.009	0.005	ns
Physical Parameters				
Z_{eu}	Decrease	0.016	ns	ns
Z_m:Z_{eu}	Increase	0.047	ns	ns
ε_{par}	Increase/ Decrease	0.033	ns	0.048
Secchi	Increase	ns	0.002	0.047
Conductivity	Decrease	ns	0.029	ns
Chloride	Decrease	<0.001	<0.001	<0.001
Photosynthetic Parameters				
I_k	Increase			0.016
Zooplankton				
Tzoop	Increase	ns	0.018	0.009
Tcyclo	Increase	ns	0.013	0.009
Tcalan	Increase	**	0.004	ns

* Comparisons were significant between 1981 and 1993 (p=0.039) and between 1981 and 1994 (p=0.014).

** All 1981-1990s comparisons were significant except for 1981-1992.

Table 194. Summary of significant trends for 1991-1995 Bioindex data for station 81, stratified period. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Tclad = total cladocerans.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Indicators				
Tot. Phytoplankton	Decrease	0.011	0.010	ns
Cryptophyceae	Decrease	0.001	<0.001	0.016
POC	Decrease	0.011	0.001	0.047
PON	Decrease	<0.001	<0.001	0.016
Chl_{un}	Decrease	0.016	0.008	ns
Nutrients				
TP	Decrease	0.029	0.001	ns
TFP	Decrease	0.008	0.001	ns
NO_3 NO_2	Increase	0.002	<0.001	ns
N:P	Increase	ns	0.012	ns
Physical Parameters				
Z_{eu}	Increase	ns	ns	0.048
ε_{par}	Decrease	ns	ns	0.029
Secchi	Increase	ns	0.033	ns
Chloride	Decrease	<0.001	<0.001	0.005
Zooplankton				
Tzoop	Decrease	0.007	ns	ns
Tclad	Decrease	0.011	<0.001	ns
Tcyclo	Decrease	0.024	(0.060)	ns

Table 195. Summary of significant trends for 1991-1995 Bioindex data for station 81, all season. The time period of 1981-1992 comprises sampling prior to the establishment of *Dreissena*, and hence reflects changes in nutrient levels. The time interval of 1981-1995 represents the entire sampling period. The time period of 1987-1995 may reflect *dreissenid* effects. Variable abbreviations as listed in yearly data tables (Tables 1-189). Zprod = June 15 - Oct 31 epilimnetic zooplankton production.

Variable	Trend	1981-92	1981-95	1987-95
Phytoplankton and Biomass Indicators				
Tot. Phytoplankton	Decrease	ns	0.013	ns
Cryptophyceae	Decrease	0.005	0.001	ns
Dinophyceae	Decrease	0.016	<0.001	ns
Diatom	Increase	0.016	ns	ns
POC	Decrease	0.005	<0.001	0.005
PON	Decrease	0.001	<0.001	0.029
Chl_{un}	Decrease	0.023	0.001	0.009
Nutrients				
TP	Decrease	0.002	<0.001	0.018
TFP	Decrease	0.003	<0.001	ns
NO_3 NO_2	Increase	0.007	<0.001	0.016
N:P	Increase	0.011	<0.001	0.029
DOC	Increase	0.001	0.005	ns
Physical Parameters				
Temperature	Decrease	ns	ns	0.029
Z_{eu}	Increase	ns	ns	0.005
Z_m:Z_{eu}	Decrease	ns	ns	0.009
ε_{par}	Decrease	ns	ns	0.002
Secchi	Increase	0.047	<0.001	0.016
Conductivity	Decrease	ns	0.013	ns
Chloride	Decrease	<0.001	<0.001	0.005
Photosynthetic Parameters				
ΣP_{cldlss}	Increase			0.016
P^B_m	Increase			0.048
Zooplankton				
Tzoop	Decrease	0.011	ns	0.029
Tclad	Decrease	0.005	<0.001	ns
Tcalan	Decrease	ns	0.029	ns
Zprod	Decrease	0.002	<0.001	(0.018)

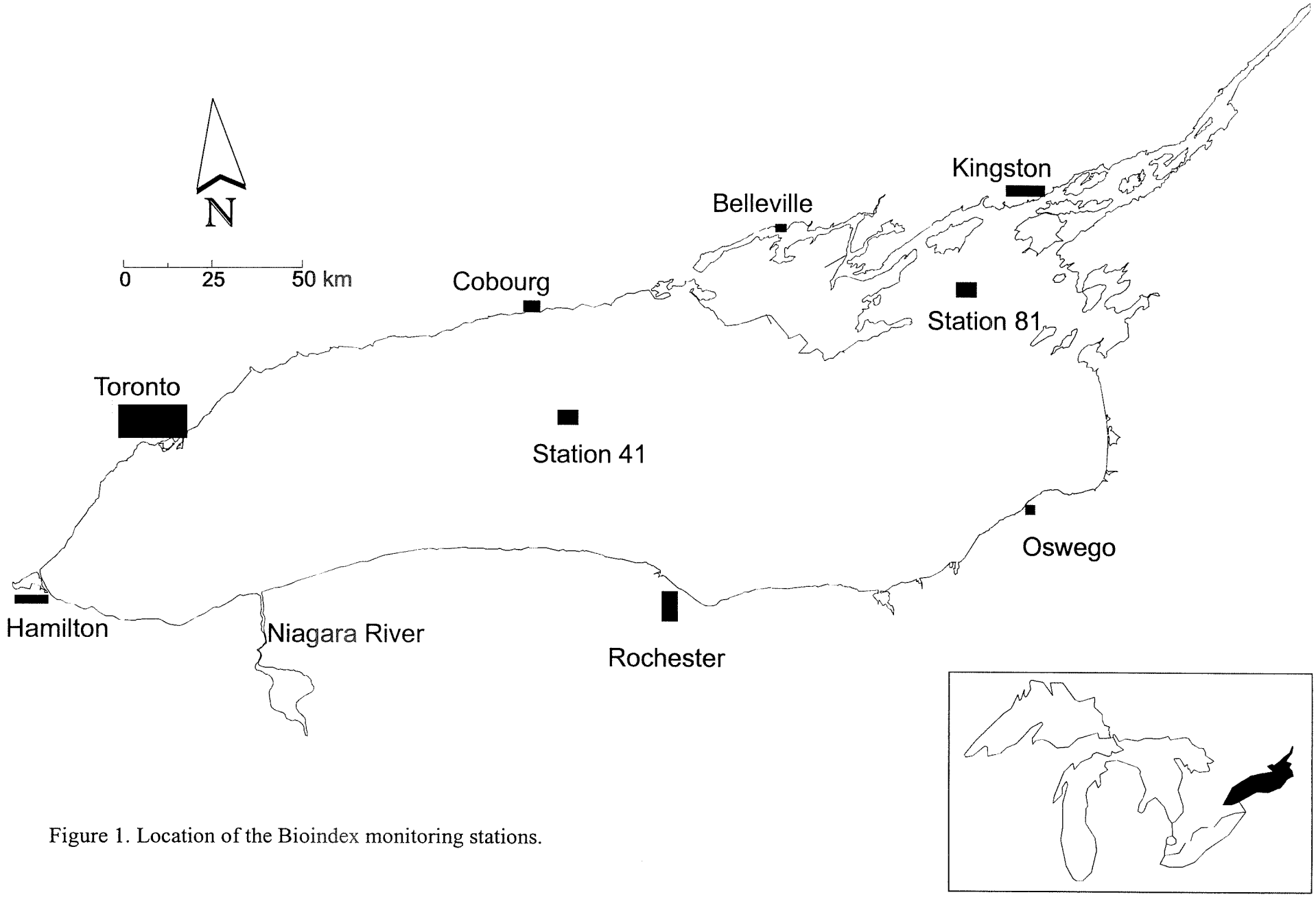

Figure 1. Location of the Bioindex monitoring stations.

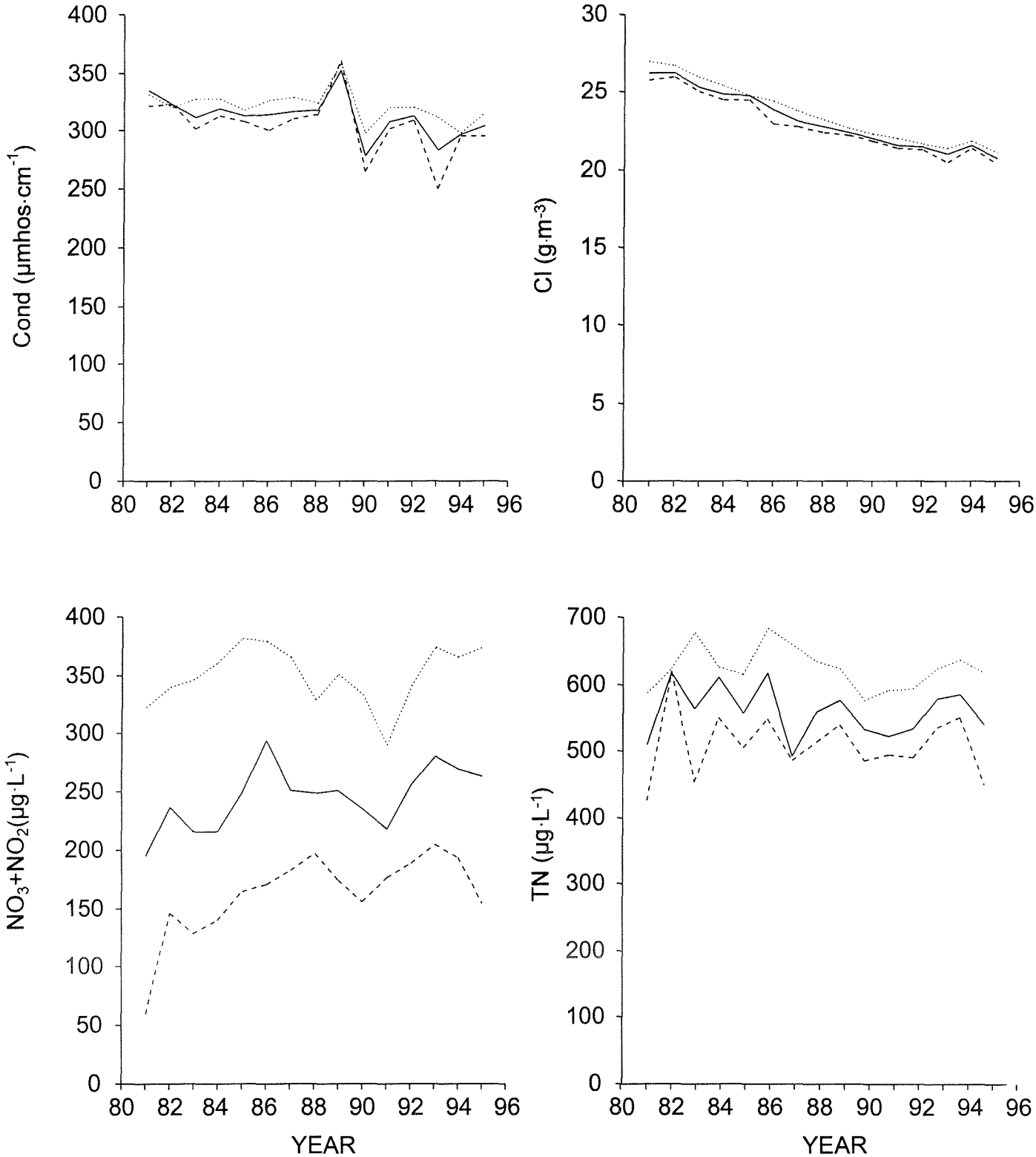

Figure 2. Seasonal means of conductivity (Cond), chloride (Cl), nitrates + nitrites (NO_3 + NO_2), and total nitrogen (TN) in the surface waters of station 41, Lake Ontario during three thermal periods: ——— Apr. - Oct., - - - - - - - stratified, ····· prestratified.

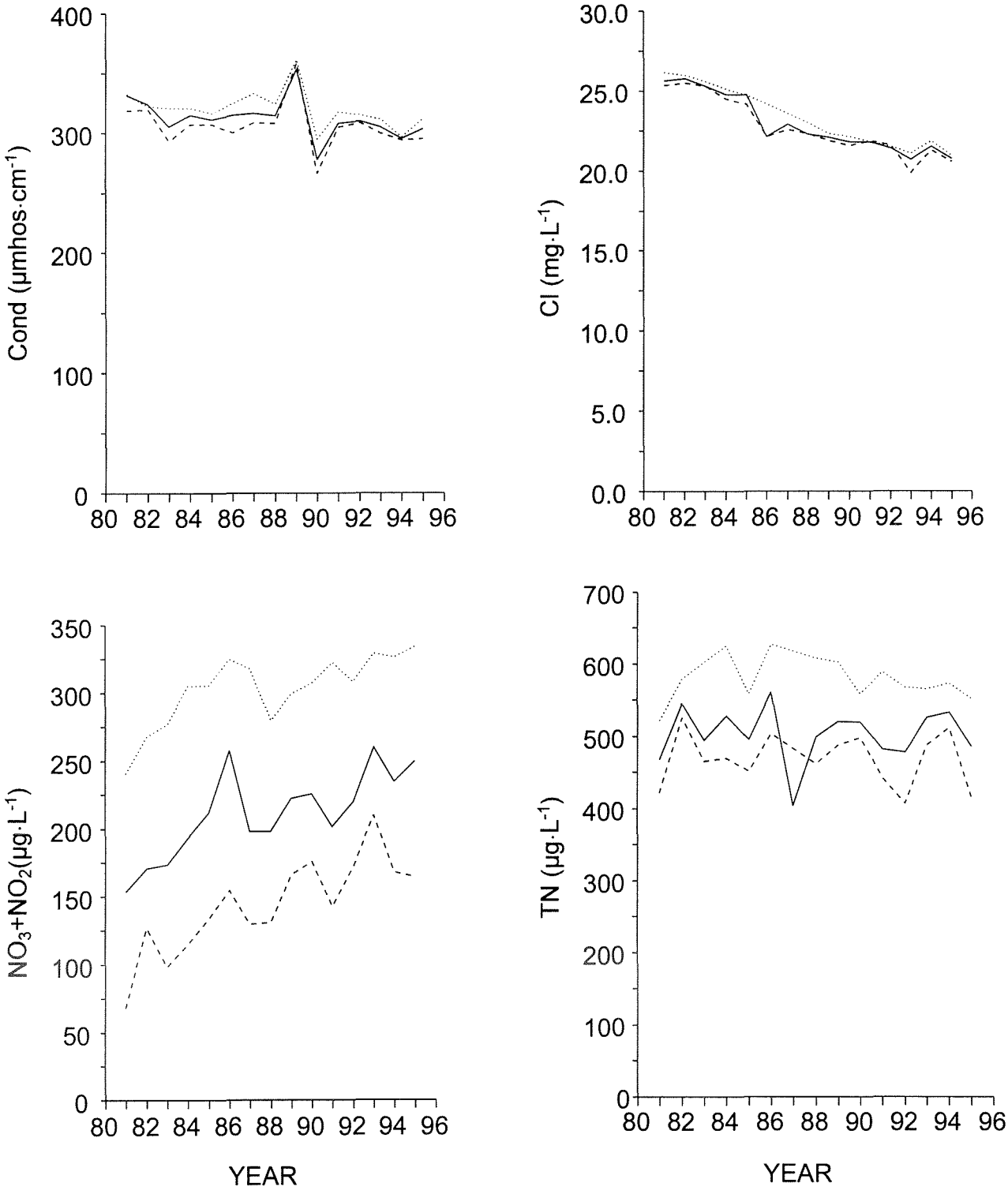

Figure 3. Seasonal means of conductivity (Cond), chloride (Cl), nitrates and nitrites (NO_2+NO_3) and total nitrogen (TN) in the surface waters of station 81, Lake Ontario, during three thermal periods: ——— Apr. - Oct., - - - - - - - stratified, ····· prestratified.

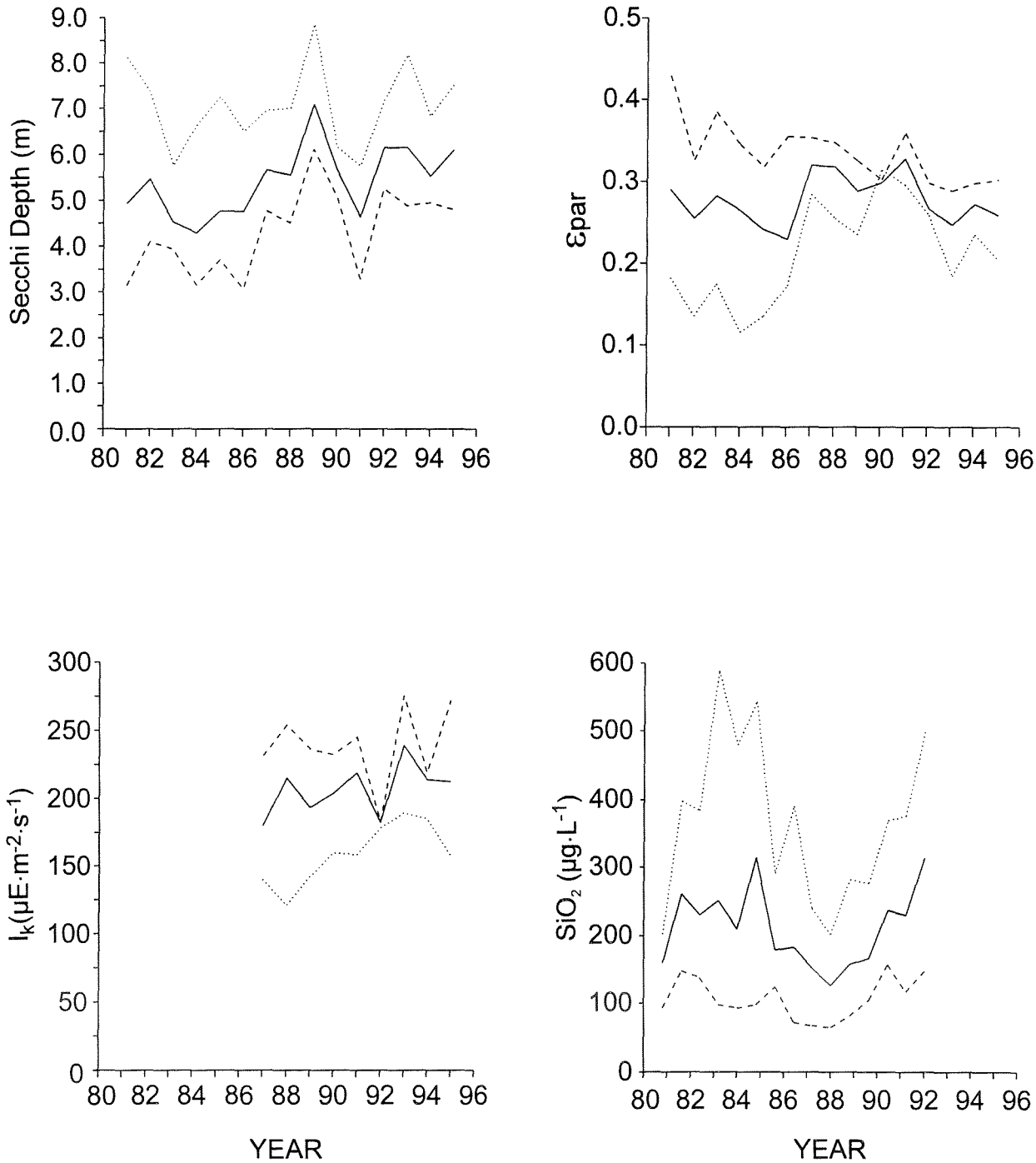

Figure 4. Seasonal mean of Secchi depth, the level of photosynthetically available radiation at the onset of light saturation (I_k) εpar, and soluble reactive silica (SiO_2), in the surface waters of station 41, Lake Ontario, during three thermal periods: ——— Apr. -Oct., - - - - - - stratified, ... prestratified.

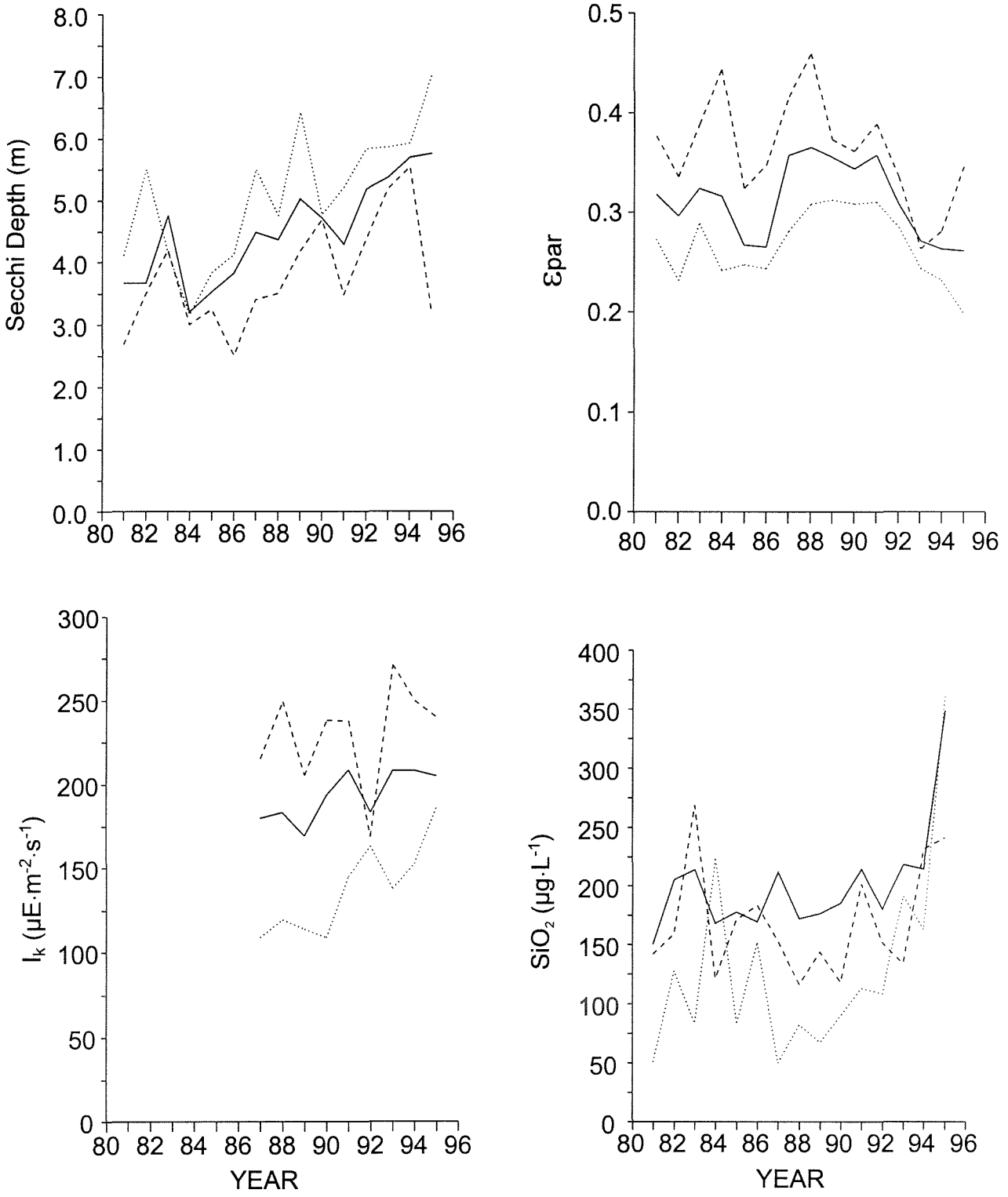

Figure 5. Seasonal means of Secchi depth, I_k, εpar and soluble reactive silica (SiO_2) in the surface waters of station 81, Lake Ontario, during three thermal periods:
——— Apr.-Oct., - - - - - - stratified, ····· prestratified.

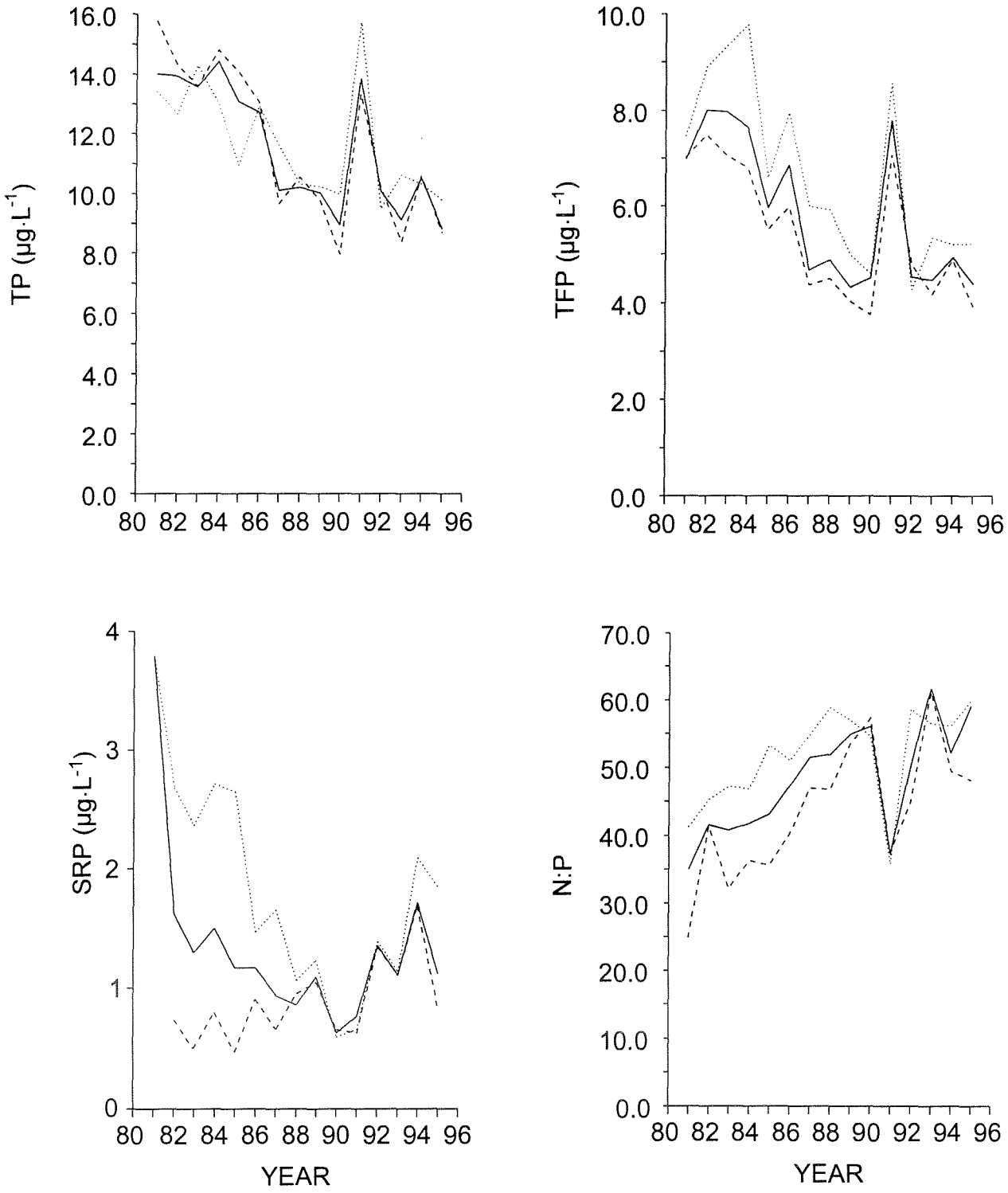

Figure 6. Seasonal means of total phosphorus (TP), total filtered phosphorus (TFP), soluble reactive phosphorus (SRP) and total nitrogen: total phosphorus ratio (N:P) in the surface waters of station 41, Lake Ontario during three thermal periods:
——— Apr.-Oct., ------- stratified, ····· prestratified.

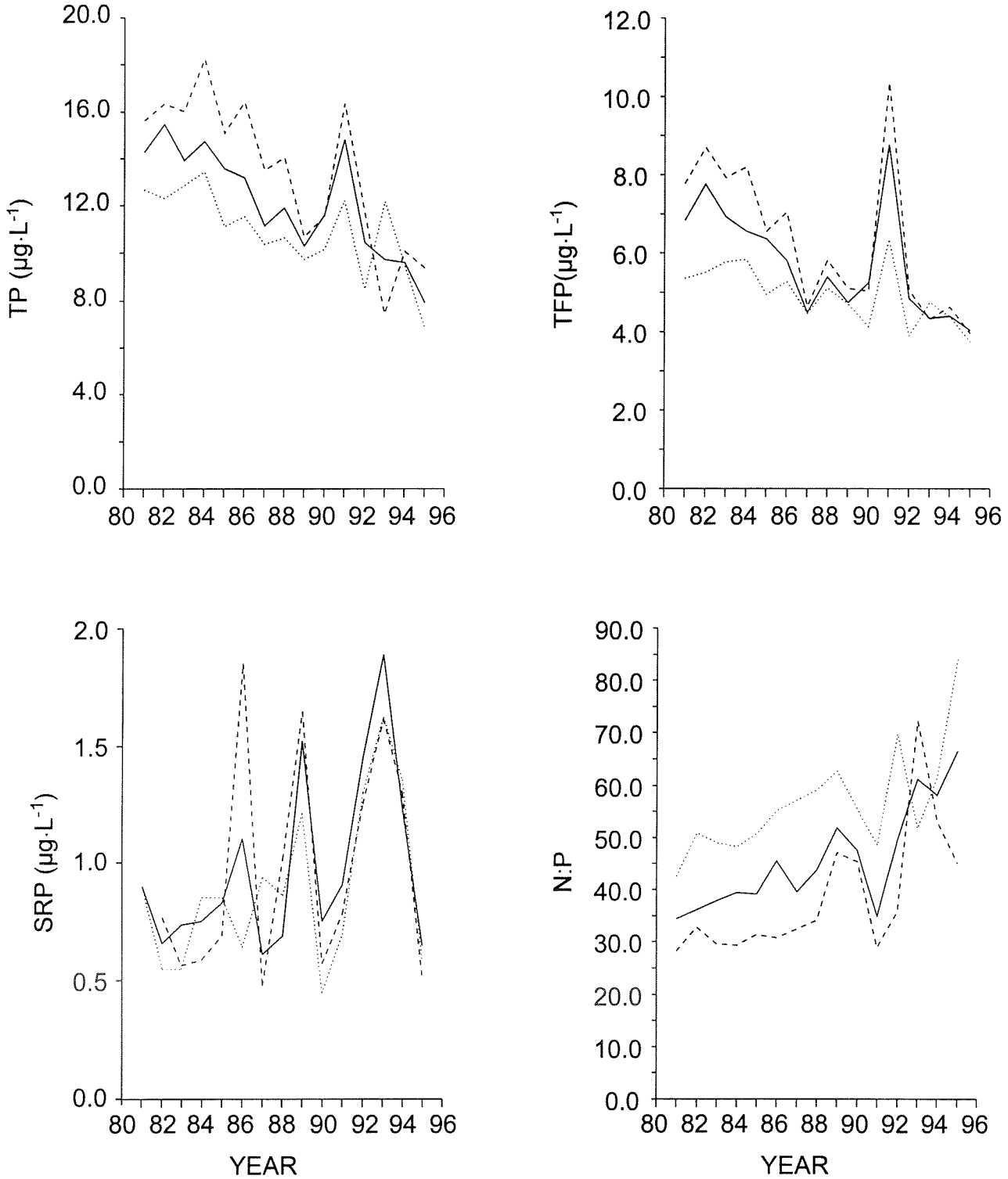

Figure 7. Seasonal means of total phoshphorus (TP), total filtered phosphorus (TFP), soluble reactive phoshphorus (SRP) and total nitrogen : total phosphorus (N:P) in the surface waters of station 81, Lake Ontario, during three thermal periods: ——— Apr. -Oct., - - - - - - - stratified, ····· prestratified.

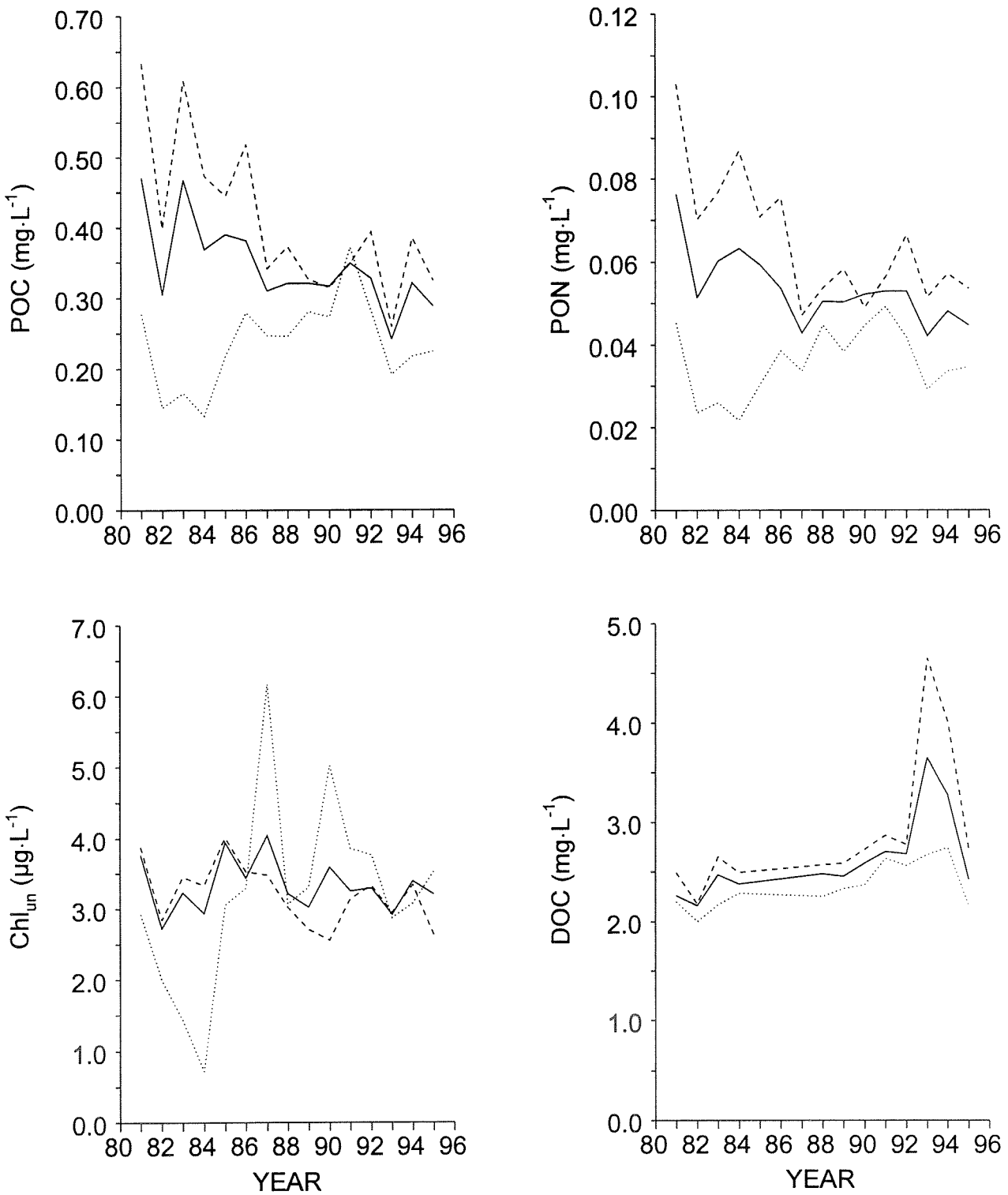

Figure 8. Seasonal means of particulate organic carbon (POC), particulate organic nitrogen (PON), chlorophyll *a* uncorrected Chl_{un}, and dissolved organic carbon (DOC) in the surface waters of station 41, Lake Ontario during three thermal periods: ——— Apr.-Oct., ------- stratified, ····· prestratified.

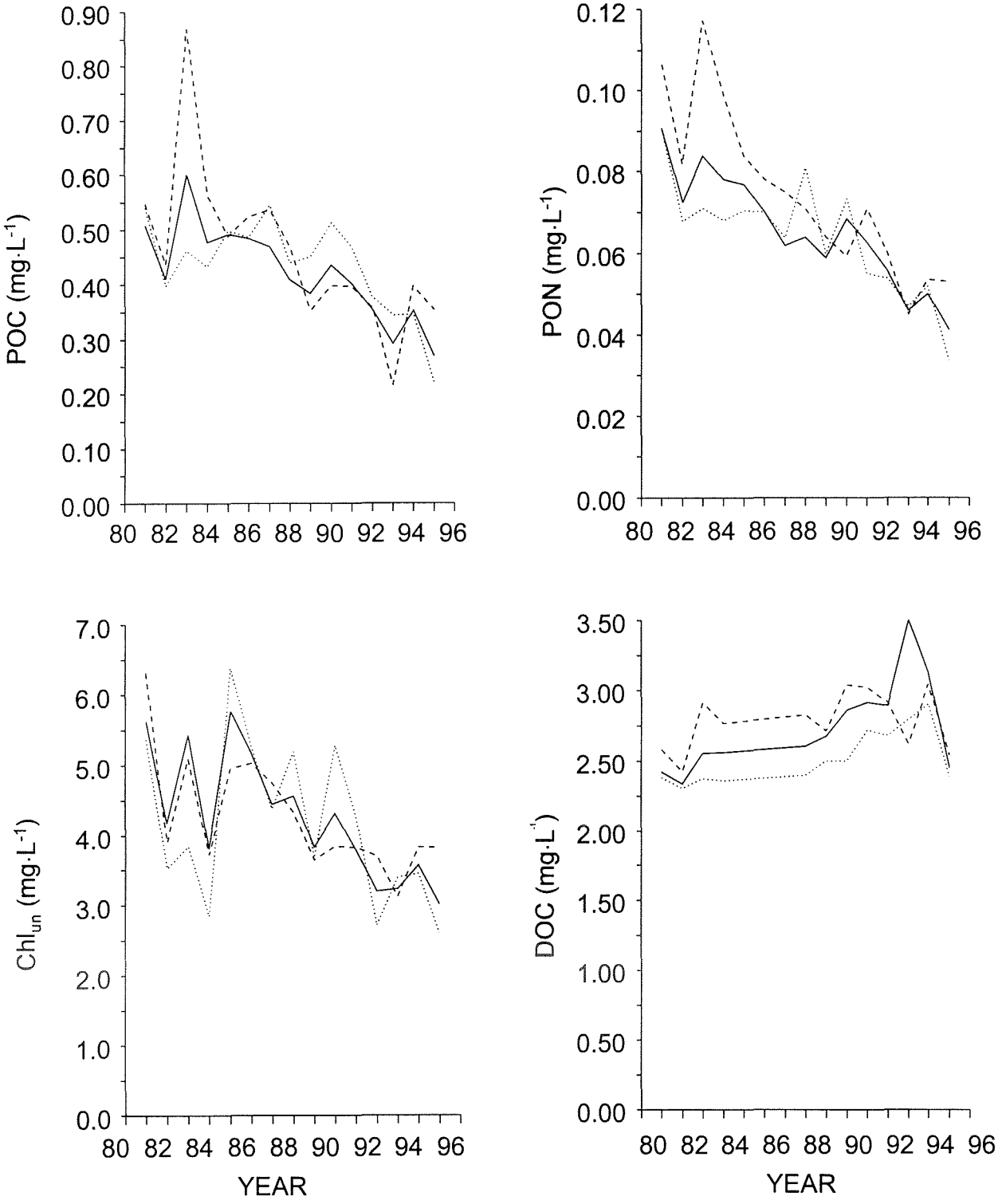

Figure 9. Seasonal means of particulate organic carbon (POC), particulate organic nitrogen (PON), chlorophyll *a* uncorrected (Chl_{un}), and dissolved organic carbon (DOC) in the surface waters of station 81, Lake Ontario, during three thermal periods: ——— Apr.-Oct., ------- stratified, ····· prestratified.

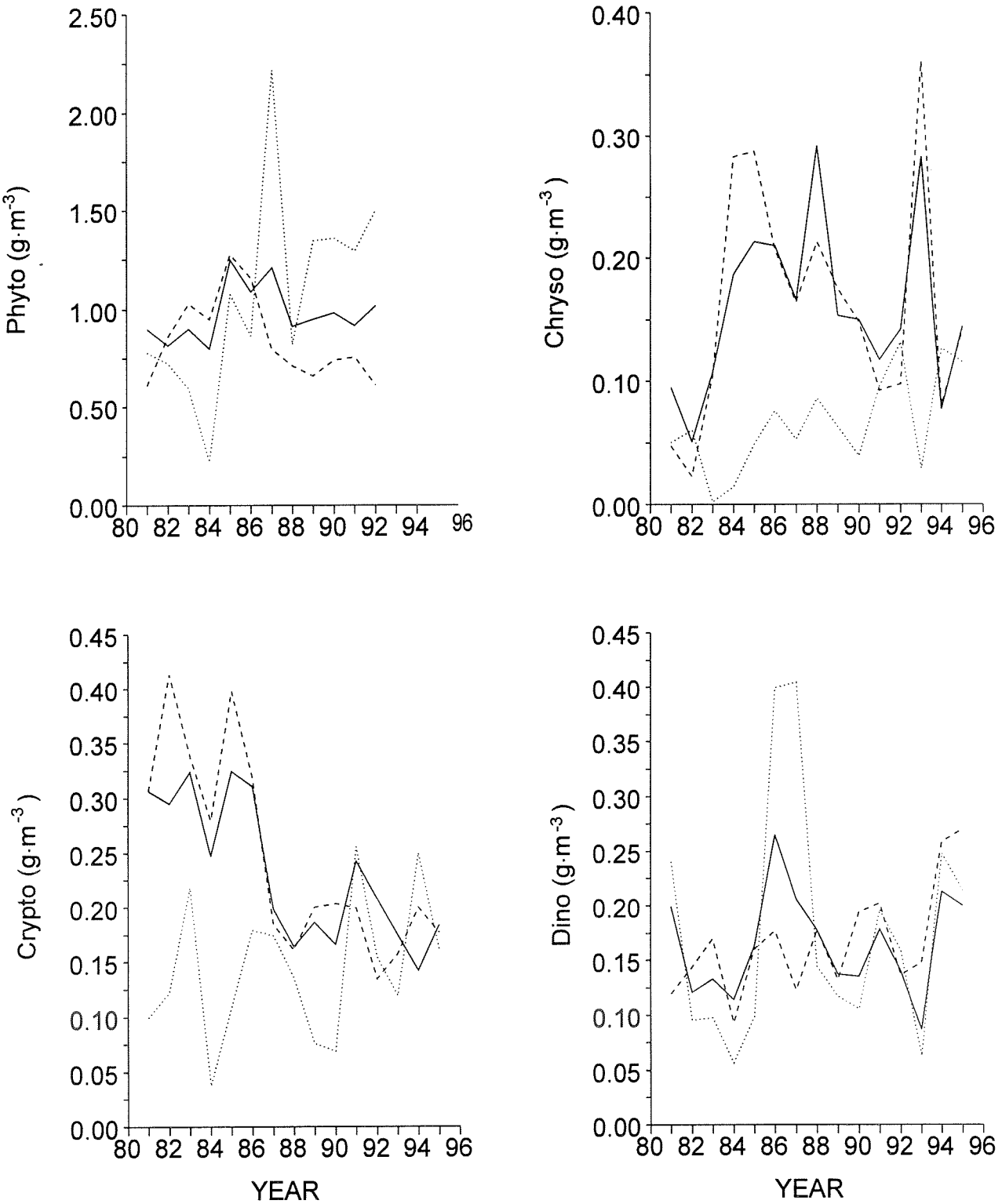

Figure 10. Seasonal means of biomass of total phytoplankton (Phyto), Chrysophyceae (Chryso), Cryptophyceae (Crypto), and Dinophyceae (Dino) in the surface waters of station 41, Lake Ontario, during three thermal periods: ——— Apr. - Oct., - - - - - - stratified, ····· prestratified.

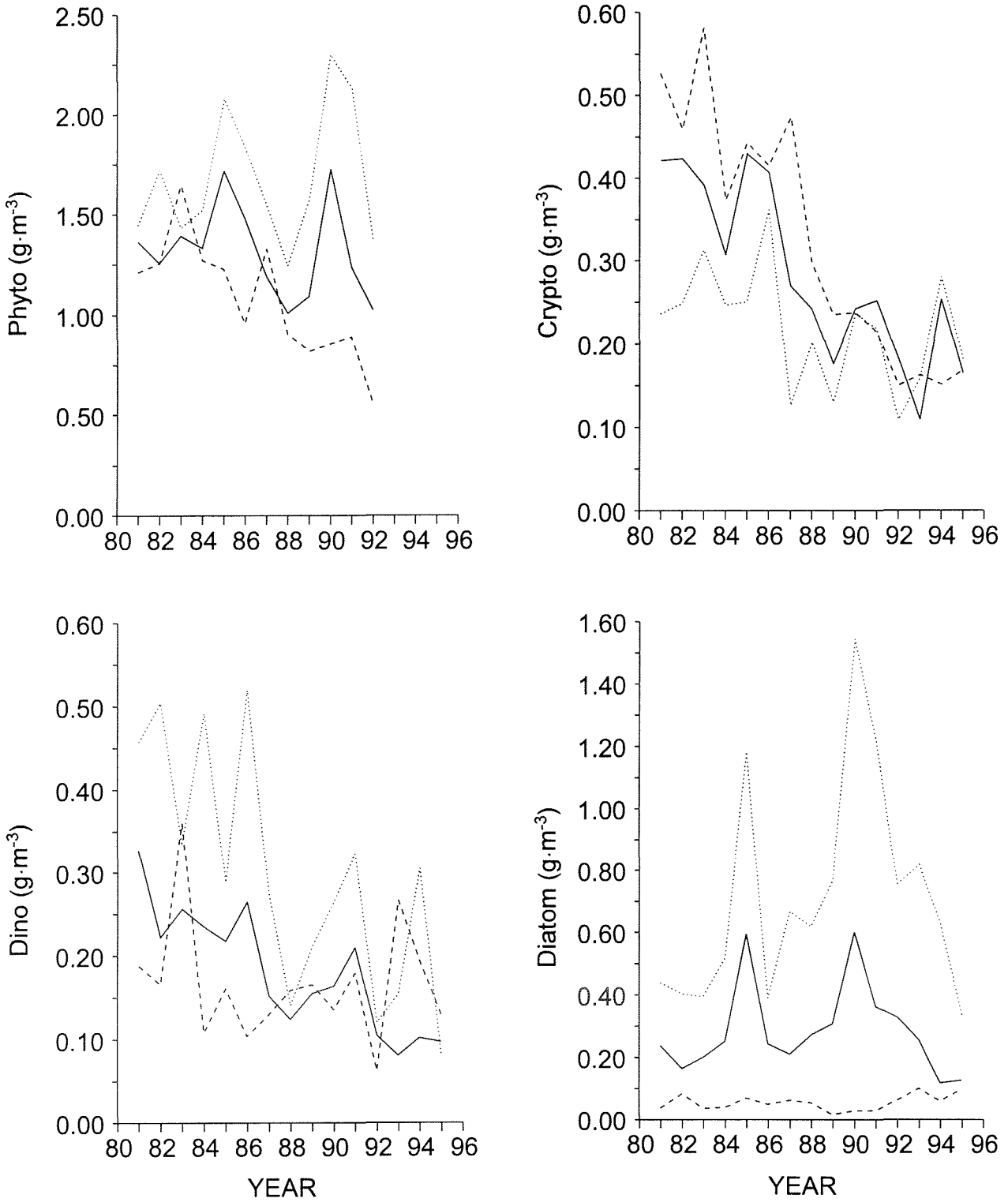

Figure 11. Seasonal means of biomass of total phytoplankton (Phyto), Cryptophyceae (Crypto), Dinophyceae (Dino) and Bacillariophyceae (Diatom) in the surface waters of station 81, Lake Ontario, during three thermal periods: ——— Apr. - Oct., - - - - - - stratified, ····· prestratified.

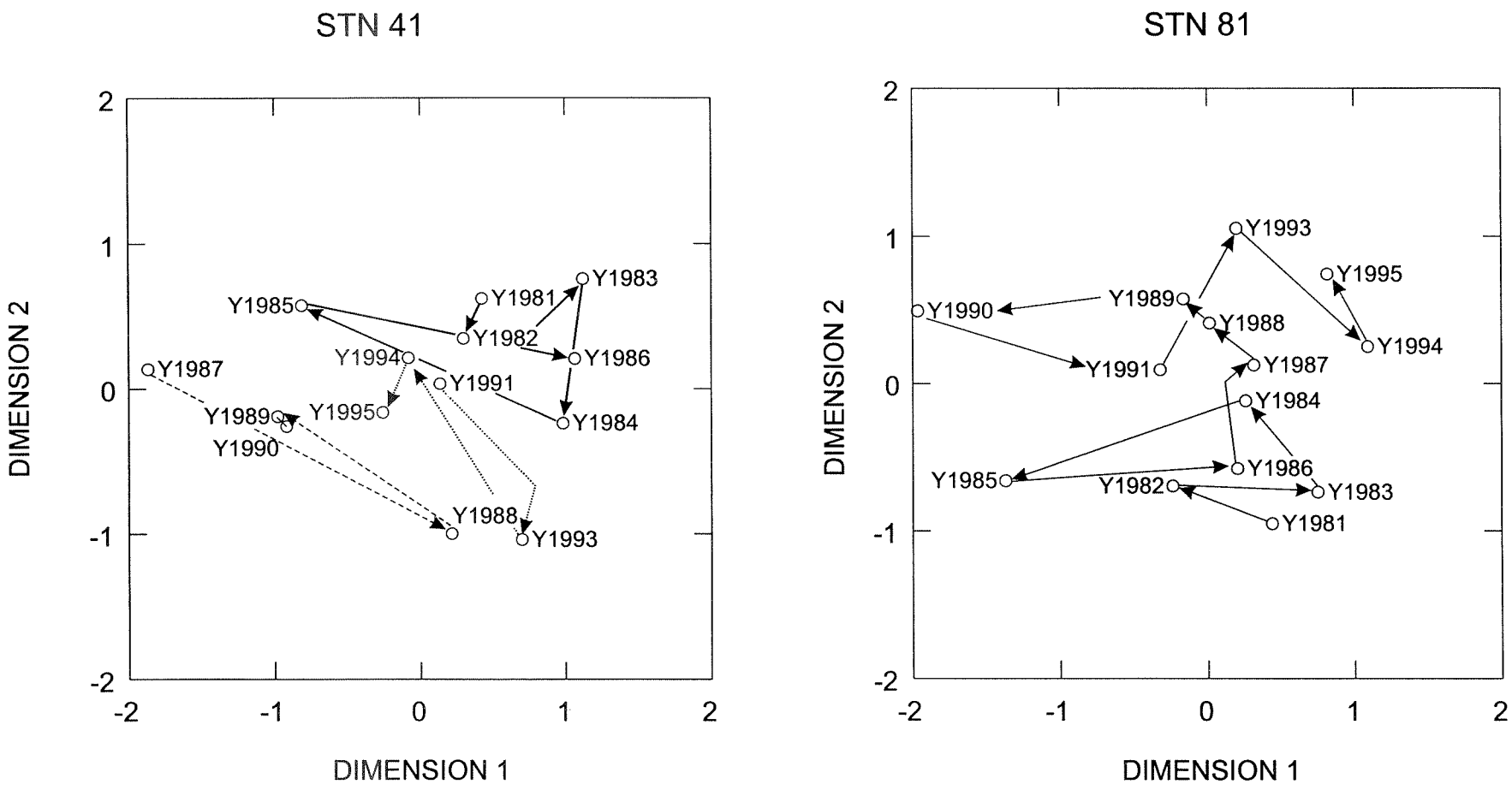

Figure 12. Phytoplankton community relationships through the 1981-1995 period as determined from multidimensional scaling of Euclidean distance-based dissimilarity matrices of the seasonally weighted mean biomasses of the 6 major phyoplankton groups.

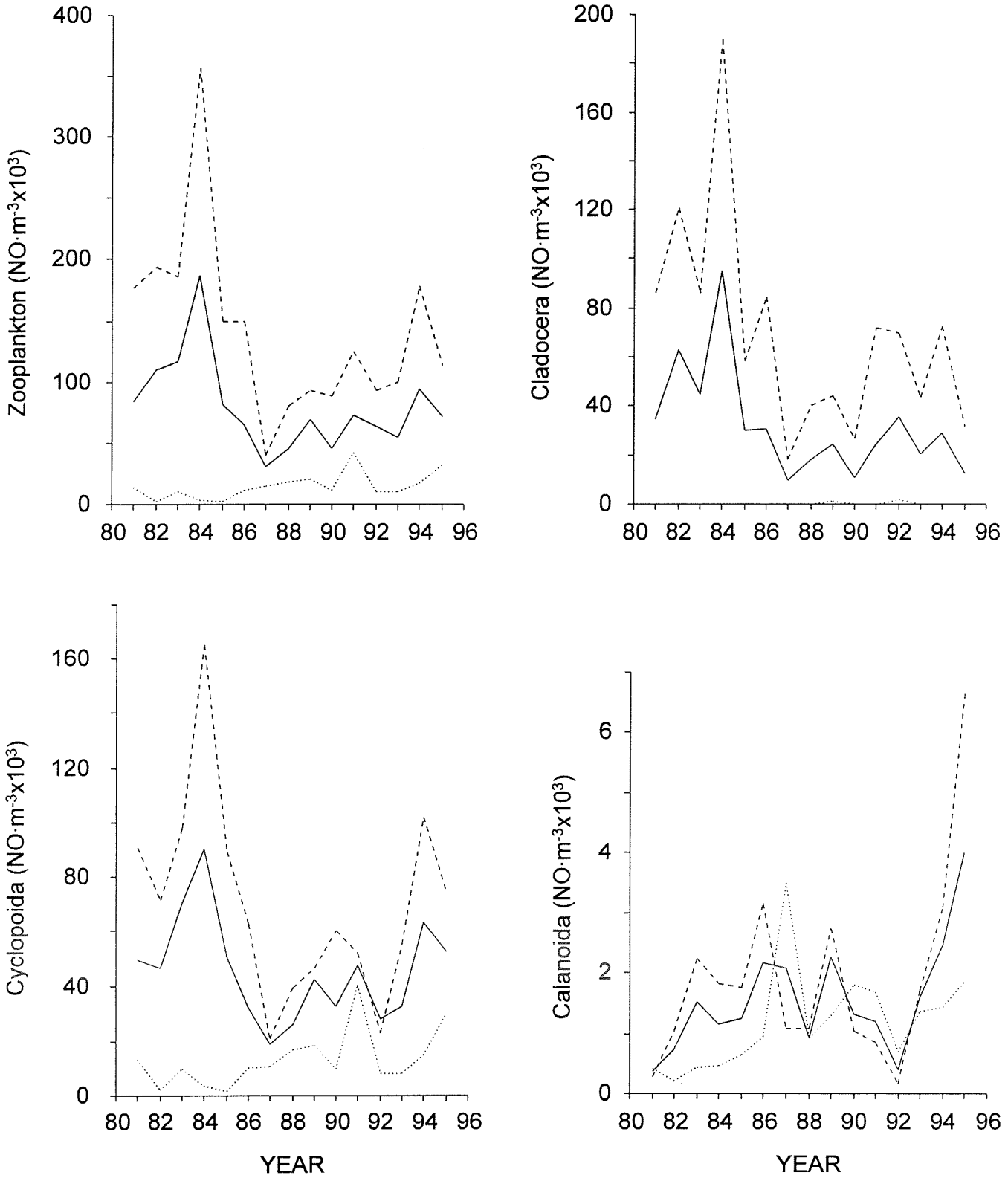

Figure 13. Seasonal means of total zooplankton, cladoceran, cyclopoid and calanoid densities in the surface waters of station 41, Lake Ontario during three thermal periods: ——— Apr. - Oct., ------- stratified, ····· prestratified.

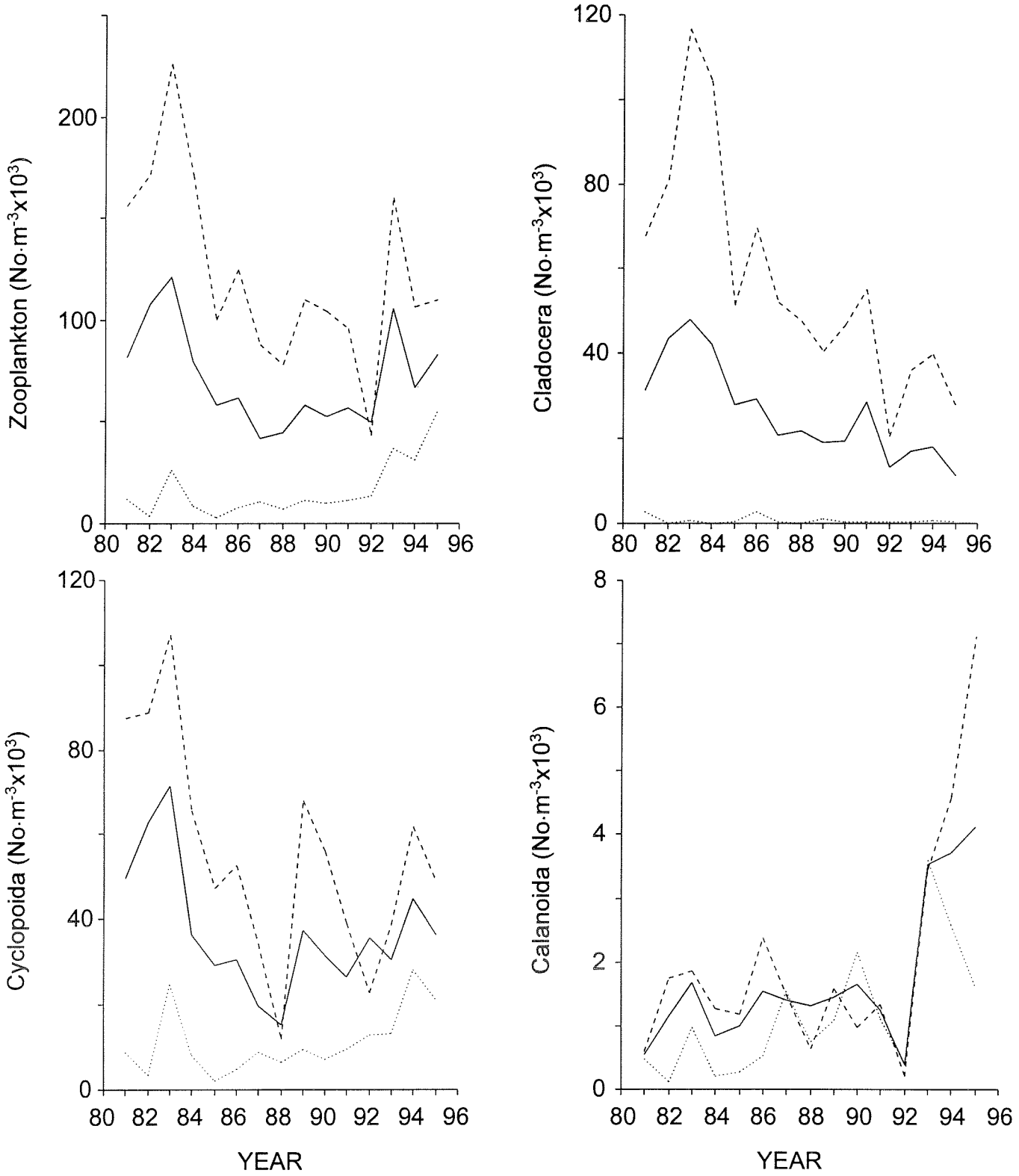

Figure 14. Seasonal means of total zooplankton, cladoceran, cyclopoid and calanoid densities in the surface waters of station 81, Lake Ontario during three thermal periods: ——— Apr. - Oct., ------- stratified, ····· prestratified.

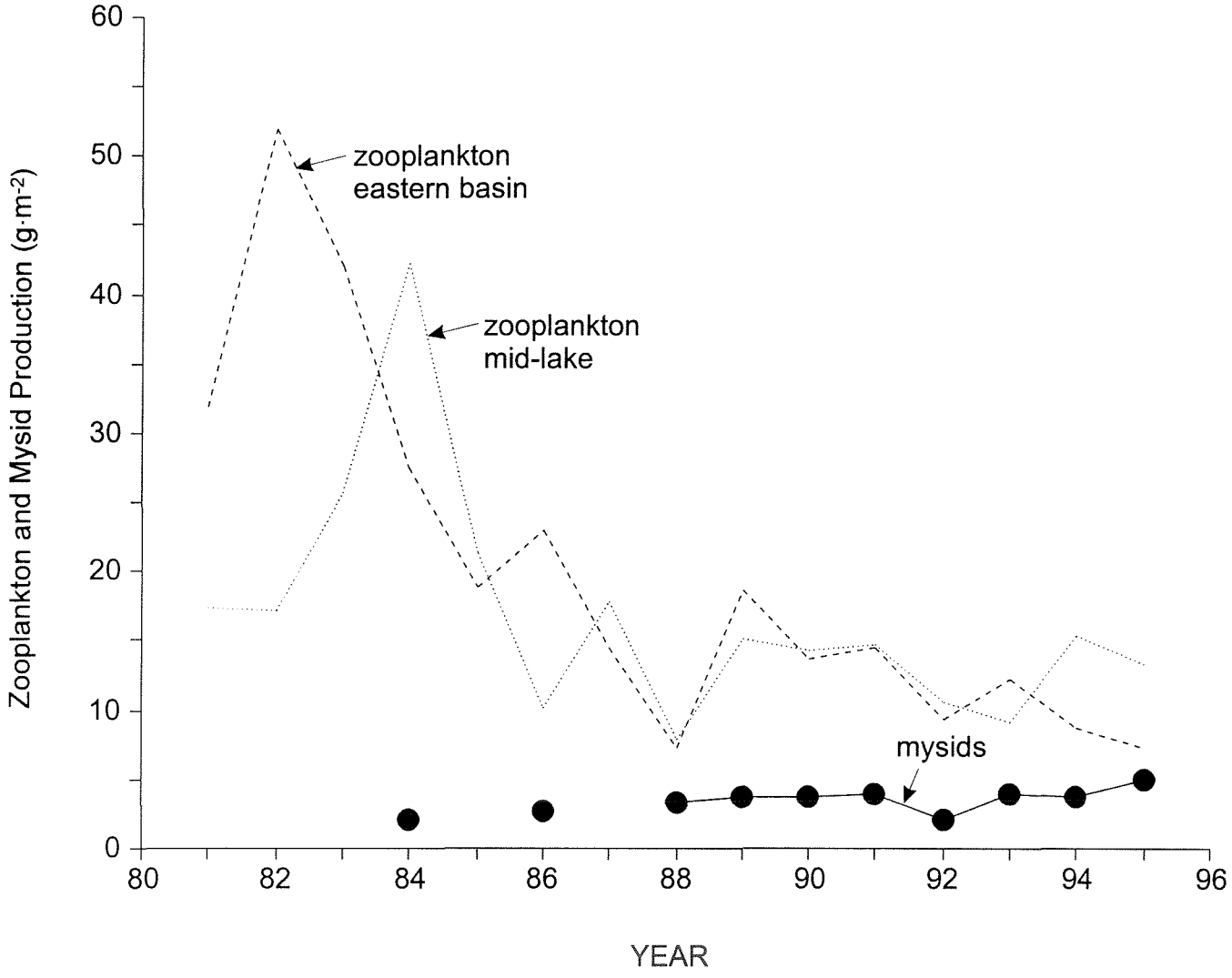

Figure 15. Seasonal (June 15 - Oct. 31) epilimnetic zooplantkton production at stations 41 (mid-lake) and 81 (eastern basin) in Lake Ontario. Annual mysid production at station 41.

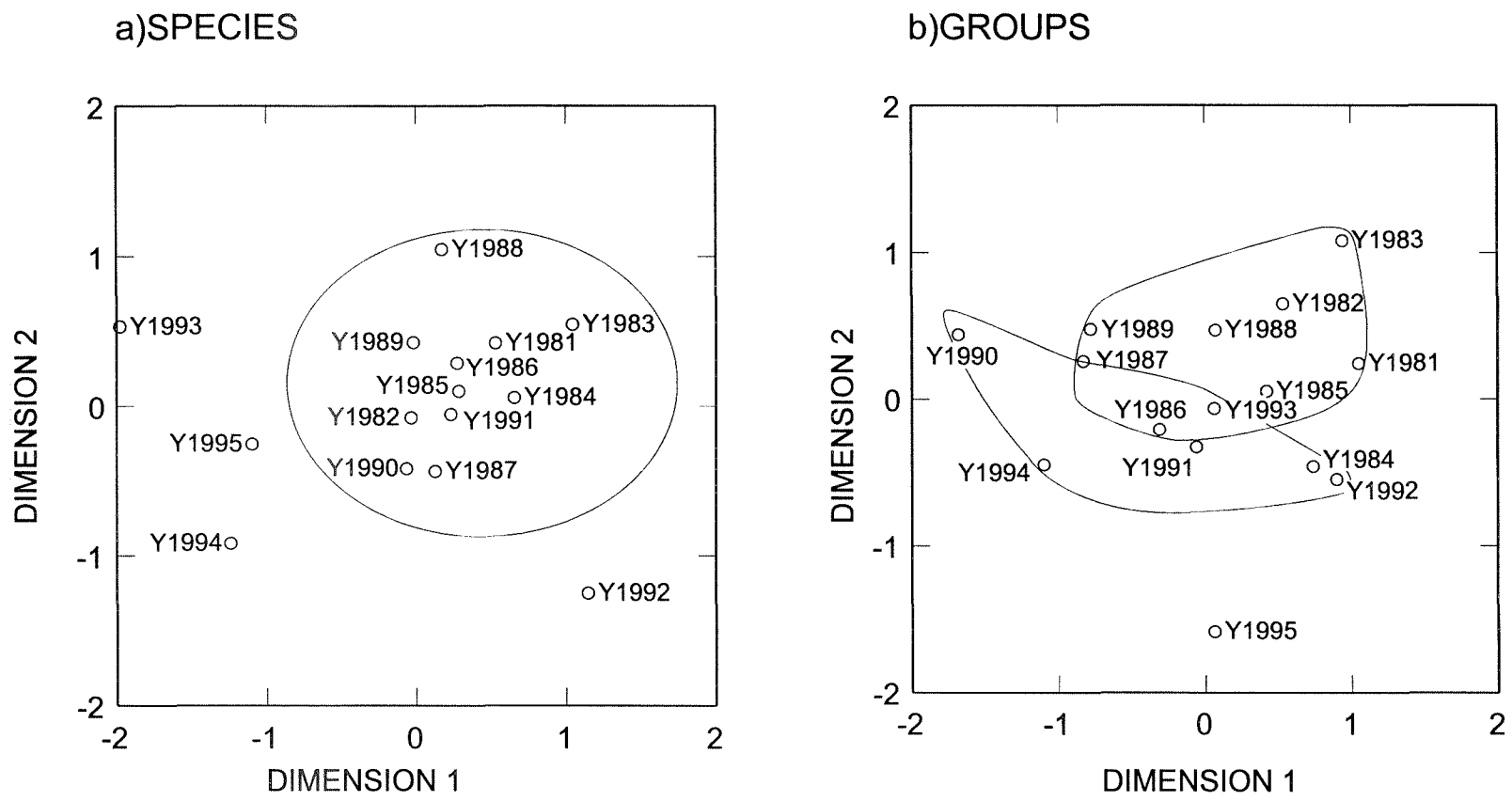

Figure 16. Zooplankton community relationships at station 81 through the 1981-1995 period as determined from multidimensional scaling of Euclidean distance-based dissimilarity matrices of the log transformed, seasonally weighted mean densities a) based on species data (no veligers or juvenile copepods included), b) based on zooplankton taxonomic groups (cladocerans, cyclopoids, calanoids).

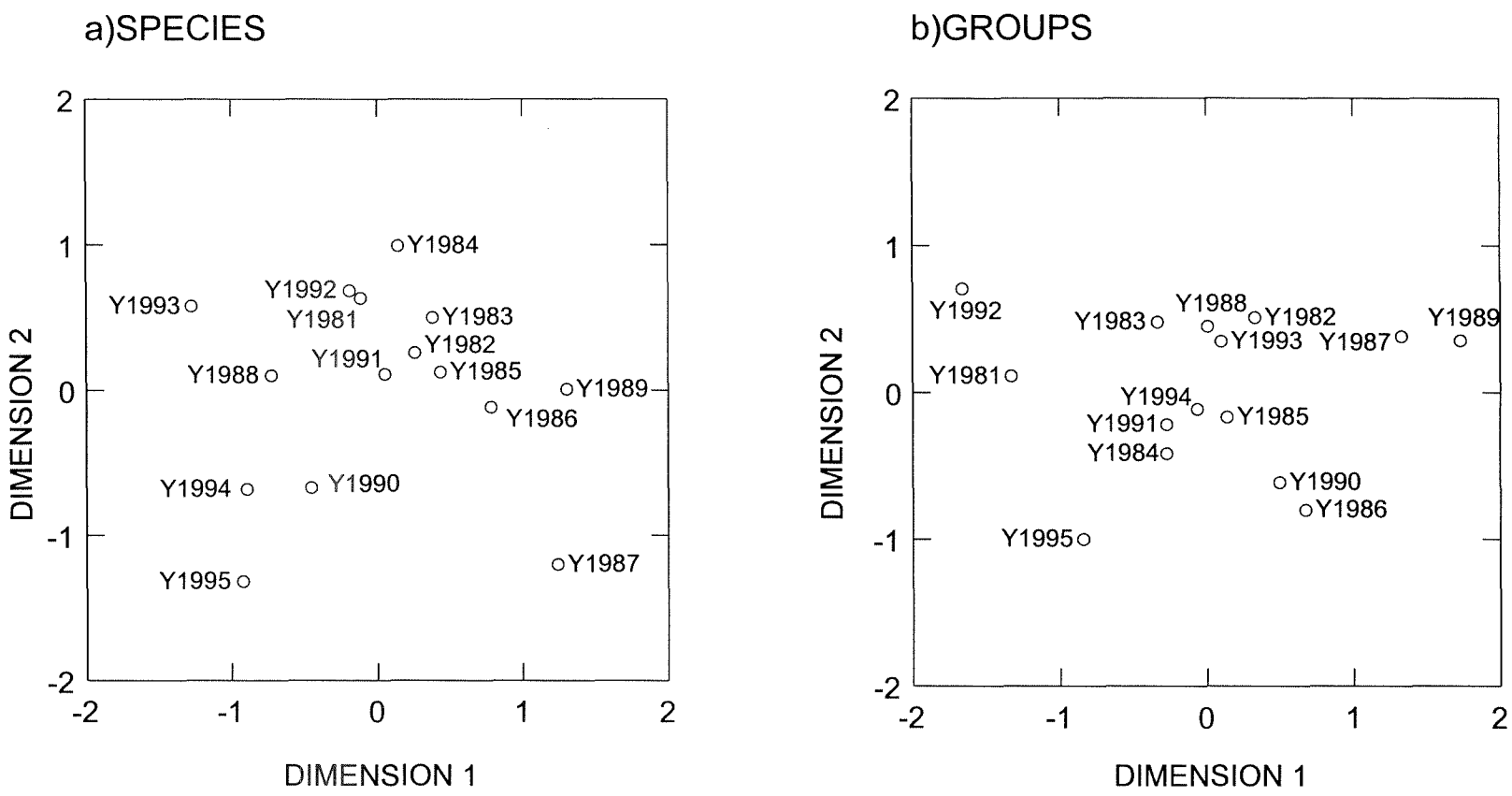

Figure 17. Zooplankton community relationships at station 41 through the 1981-1995 period as determined from multidimensional scaling of Euclidean distance-based dissimilarity matrices of the log transformed, seasonally weighted mean densities a) based on species data (no veligers or juvenile copepods included), b) based on zooplankton taxonomic groups (cladocerans, cyclopoids, calanoids).

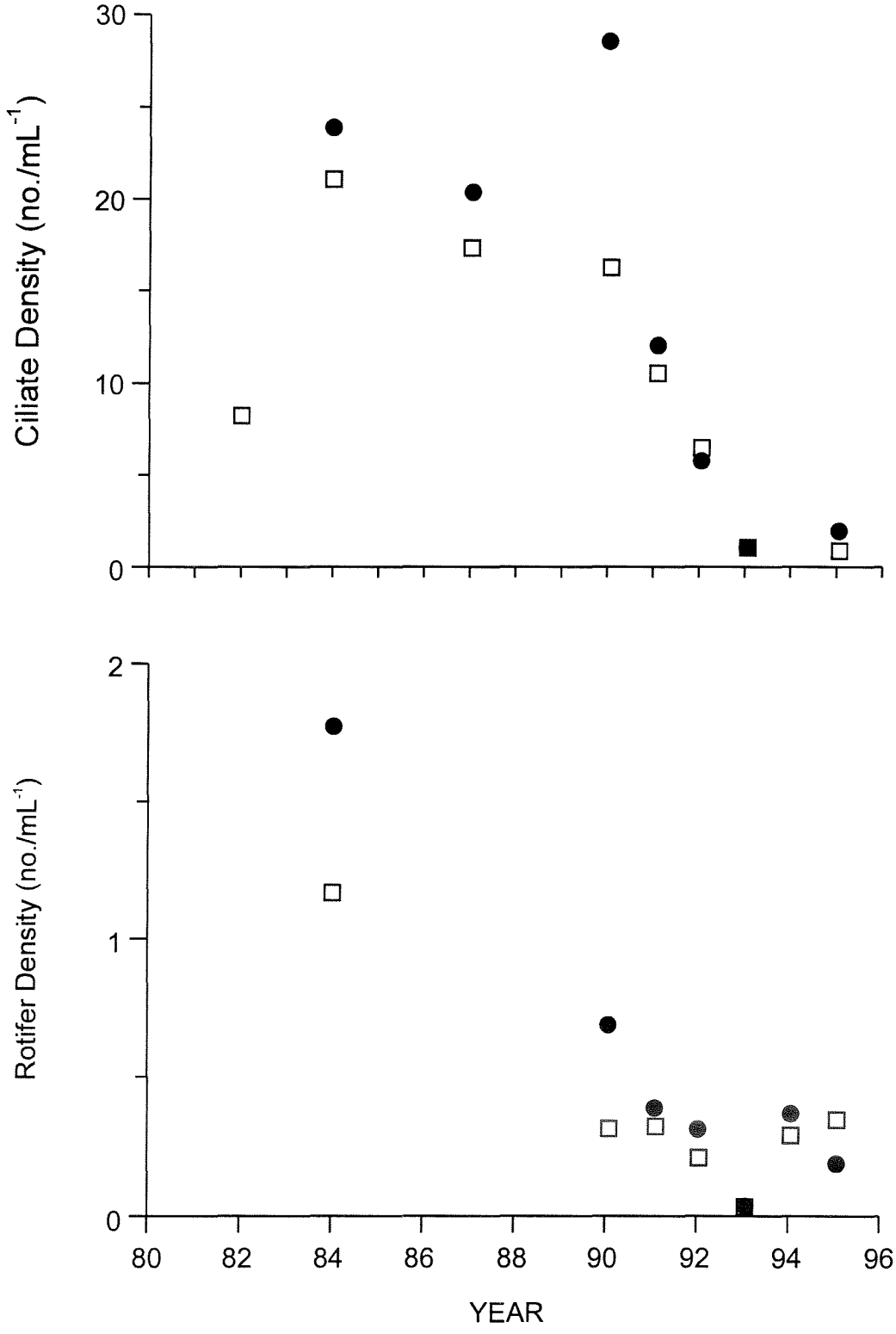

Figure 18. Seasonal mean densities of ciliates and rotifers in the surface waters of stations 41 and 81, Lake Ontario. □ station 41 ● station 81