

# **Lake Ontario Long Term Biological Monitoring Program: 1981, 1982 Data Base.**

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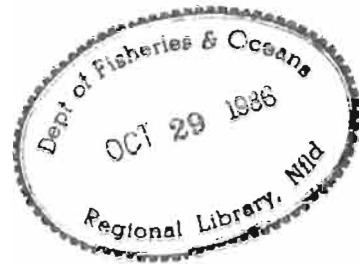
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ABSTRACT

Johannsson, Ora E., R. M. Dermott, R. Feldkamp, and J. E. Moore, 1985. Lake Ontario Long Term Biological Monitoring Program: 1981, 1982 data base. Can. Data Rep. Fish. Aquat. Sci. 552 i-iv, 1-103.

The Bioindex, or Long Term Biological Monitoring Program, was developed to: 1) determine normal seasonal patterns and annual ranges of abundance, community structure, and when possible, productivity of the biological components - phytoplankton, zooplankton, and benthos; 2) relate the biological components to variations in the physical, nutrient, and biological environment; and, 3) assess the adopted sampling strategy for long term monitoring. The data bases from the first two years are summarized in this document.

## RESUME

Johannsson, Ora E., R. M. Dermott, R. Feldkamp, and J. E. Moore, 1985. Lake Ontario Long Term Biological Monitoring Program: 1981, 1982 data base. Can. Data Rep. Fish. Aquat. Sci. 552.

Le Bioindex, ou programme de surveillance biologique à longue date, a trois objectifs principaux: 1) déterminer les tendances saisonnières normales et les variations annuelles de la quantité, de la structure des communautés et, si c'est possible, de la productivité des composants biologiques (phytoplancton, zooplancton et benthos); 2) établir la relation entre les composants biologiques et les variations de l'environnement physique, biologique et chimique; 3) évaluer la valeur de la méthode d'échantillonnage utilisée pour la surveillance à long terme. Les données récoltées au cours des deux premières années de l'étude sont résumées dans ce rapport.

## INTRODUCTION

The Bioindex, or Long Term Biological Monitoring Program is a preliminary or experimental program in biological monitoring on Lake Ontario. 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. Biological monitoring is an integrative monitoring strategy. Ecosystems respond to stress with compensatory changes in community structure and function mediated at the population level e.g., Boesch and Rosenberg (1981). Therefore, changes in ecosystem health (or state) can be detected by monitoring changes in the biotic communities (Nicholls et al., 1980; Dillon et al., 1978).

An analysis of the first two years of data and assessment of the program is presented by Johannsson et al. (1985). The present report summarizes the data on which that report is based.

## METHODS

### STATION SELECTION

Four Bioindex sampling stations were selected to represent distinct regions or influences within the open water area of Lake Ontario based on the earlier work of Patalas (1969), Munawar and Nauwerck (1971), Stadelmann et al. (1974), and El-Shaarawi and Kwiatkowski (1977). Station 41 is located in the more stable, less productive, mid-lake region; station 12, is in the area of upwelling events on the north shore of the western basin; station 81 is in the more productive eastern basin; station 93 is within the influence of the Niagara River, the single largest source (84 percent) to the lake (Fig. 1). In order to maximize the continuity of data in the Federal Government data base on Lake Ontario, the exact locations were chosen to coincide with permanent, long-term surveillance stations.

### SAMPLING PROGRAM

During the 1970s 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 (CHLA). 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. Consequently, the Bioindex Program was formulated to study a few sites in detail. Samples were collected weekly from mid-March until the

end of November. Table 1 presents an overview of the sampling regime, and indicates the parameters measured, the sampling depths, and the type of samples collected. All physical and chemical parameter measurements were obtained from discrete depth samples, while zooplankton and phytoplankton were collected with integrating samplers. Chemical biomass indicators such as POC, PON and CHLA were measured in both discrete and integrated samples.

All samples were collected in duplicate. The filtering and sample preparations were completed on board ship and the chemical analyses were performed later by the Great Lakes Water Quality Laboratory (IWD). In May 1982, GF/C filters used to measure chlorophyll concentrations were replaced by the more efficient Millipore filters (Munawar *et al.*, 1982). The analyses were then conducted by personnel of the Great Lakes Fisheries Research Branch. Zooplankton were identified and enumerated by Dr. W. T. Geiling, phytoplankton by Mr. D. Beliveau, and benthos by Dr. S. Kakonge.

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

#### A) Physical Parameters

Temperature: (EBT) a temperature profile from surface to bottom was obtained with an electronic bathythermograph ( $^{\circ}\text{C}$ ).

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

Dissolved Oxygen: (DISSO<sub>2</sub>) The oxygen concentration of the water was determined by Winkler titration using the modified Winkler iodometric measure. ( $\text{g O}_2 \cdot \text{m}^{-3}$ )

Euphotic Depth: (EU) 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:

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

To convert C<sub>1.0</sub> to C<sub>.25</sub>:

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

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

$$\text{Light Attenuation (K)} = 0.185 * C_{.25} + 0.02$$

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

$$EU = \frac{\ln(I_o) - \ln x (I_{eu})}{K} \quad \text{where:} \quad I_o = 100\% \text{ subsurface radiation}$$

$$I_{eu} = \% \text{ radiation at depth EU (1\%)}$$

Secchi Disc Depth: (SECCHI) The vertical transparency was measured as the depth of disappearance of a 30 cm diameter white disc. (m)

Conductivity: (COND) Specific conductance was measured with a conductivity meter at ambient temperature and converted to 25°C.  
(umhos.cm<sup>-1</sup>)

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

Alkalinity: (ALKA) The sample was filtered through a GF/C filter, mixed with HCl, and then mixed with oxygen. The resulting CO<sub>2</sub> was separated from the liquid phase and measured with an infrared detector. (gCaCO<sub>3</sub>.m<sup>-3</sup>)

Chloride: (CL) The chloride concentrations of filtered samples (0.45  $\mu$  membrane filters) were determined using the autoanalyzer mercuric thiocyanate method. (gCl.m<sup>-3</sup>)

B) Nutrient Parameters

Total Phosphorus: (TP) A 110 ml water sample was preserved with 1 ml of 30% H<sub>2</sub>SO<sub>4</sub> and later digested in acid persulfate. The phosphorous concentration was determined colorimetrically using the ammonium molybdate-stannous chloride method. (gP.m<sup>-3</sup>)

Soluble Reactive Phosphorus: (SRP) A 110 ml sample was filtered through a 0.45  $\mu$  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. (gP.m<sup>-3</sup>)

Total Filtered Phosphorus: (TFP) A 110 ml water sample was filtered through a 0.45  $\mu$  membrane filter, preserved with 1 ml of 30% H<sub>2</sub>SO<sub>4</sub>, and analyzed as per TP. (gP.m<sup>-3</sup>)

Total Kjeldahl Nitrogen: (TKJN) A 110 ml water sample was filtered through a 0.45  $\mu$  membrane filter. The filtrate was digested with H<sub>2</sub>SO<sub>4</sub> and an oxidant at 300°C in an autoanalyzer system. The concentration of the resultant (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> was determined colorimetrically using salicylate and dichloroisocyanurate. (gN.m<sup>-3</sup>)

Ammonia: ( $\text{NH}_3$ ) A 110 ml sample was filtered through a 0.45  $\mu$  membrane filter and the N content determined by an automated alkaline phenol method. ( $\text{gN.m}^{-3}$ )

Nitrate Nitrite: ( $\text{NO}_3\text{NO}_2$ ) The sample was filtered through a 0.45  $\mu$  membrane filter and the N content determined by the autoanalyzer cadmium reduction method. ( $\text{gN.m}^{-3}$ )

Soluble Reactive Silica: (SRS) The sample was filtered through a 0.45  $\mu$  membrane filter and the Si concentration determined by the autoanalyzer heteropoly-blue method. ( $\text{gSiO}_2\text{.m}^{-3}$ )

### C) Biological Parameters

Dissolved Organic Carbon: (DOC) The concentration of DOC in a GF/C-filtered sample was determined by an automated ultraviolet method. ( $\text{gC.m}^{-3}$ )

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

( $\text{gC.m}^{-3}$ )

Particulate Organic Nitrogen: (PON) The particulate nitrogen concentration was determined on the same filter, using the same equipment as the POC. ( $\text{gN.m}^{-3}$ )

Seston Dry Weight: (SDW) Dry weight was determined for integrated epilimnetic samples. The particulate matter retained by a precombusted ( $500^\circ\text{C}$ ) GF/C filter was dried to constant weight at  $105^\circ\text{C}$ . ( $\text{g.m}^{-3}$ )

Suspended Inorganic Matter: (SIM) The filter in the above analysis (SDW) was combusted at 550°C, cooled and weighed. The SIM was calculated from the difference. ( $\text{g} \cdot \text{m}^{-3}$ )

Chlorophyll a Uncorrected (CHLAU): Two methods were employed. From March 1981 until May, 1982, the GF/C filtration/acetone extraction method described by Strickland and Parsons (1968) was used. After that date the samples were filtered through 0.45  $\mu$  Millipore filters which required the acetone extraction period to be extended to 17 h. ( $\text{mg} \cdot \text{m}^{-3}$ )

Chlorophyll a Corrected (CHLAC): The phaeophytin concentration was determined by acidification of the above sample (Strickland and Parsons, 1968), and the CHLAC concentration determined by difference (CHLAU-phaeophytins). ( $\text{mg} \cdot \text{m}^{-3}$ )

Phytoplankton: Integrated 250 ml whole-water samples were preserved with Lugol's solution, and the phytoplankton identified and enumerated using the Utermöhl inverted microscope technique (Utermöhl 1958, in Munawar et al., 1974). A 15 ml aliquot was settled and examined using light/dark illumination and a Prior 29331 microscope fitted with Wild optics and condenser. At least 200 units/sample were counted at 300 x, 600 x, and 1500 x magnification by the strip method providing an estimate of total cell numbers within  $\pm$  14 percent (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  $\pm$  22.8 percent in 1982 (N=33 pairs) and  $\pm$  15.8 percent in 1981 (N=17 pairs). The most commonly used taxonomic references were Anton and Duthie (1981), Findlay and Kling (1979), Haworth and Barber (1981), Hustedt (1930), Lind and Brook (1980), Nygaard (1977), Patrick and Reimer (1966, 1975), Prescott (1970), Prescott et al., (1975), Schoeman and Archibald (1976-1979), Smith (1950), Taft and Taft (1971) and Webber (1971).

Zooplankton: Samples were collected with a 30 cm diameter 70  $\mu$  nitex mesh net. This net was lost in September, 1982 and replaced by a 25 cm diameter 64  $\mu$  mesh net for the remainder of the year. The net was lowered to the same depth as the phytoplankton samples, and hauled vertically through the water column at  $0.5 \text{ m.sec}^{-1}$ . The zooplankton were preserved in four percent sugared formaldehyde, and identified under a dissecting microscope using a stratified counting system (Cooley et al., 1986). The adult calanoids and cyclopoids, and the cladocera were identified, and the number of individuals and eggs/species recorded. The calanoid and cyclopoid nauplii and copepodites were counted, but not identified to species.

Benthos: During 1981 and 1982 three stations were sampled monthly: stations 81, 93a (Niagara - 70 m), and 41. During 1983, samples were only collected during April, July, and November. Stations 12 and 93 were also included. Five Ponar grab samples were collected each date and sieved using a 250  $\mu$  screen. Samples collected during April, July, and November were examined to enumerate all species present, and determine their dry biomasses.

Pontoporeia sp. was enumerated in all samples and sorted into 1 mm size classes. The average length of each 1 mm size class of Pontoporeia sp. was measured, and length-weight relationships calculated for each station. Enumeration also included the number of gravid females present, numbers of eggs per female, and number of young present each month.

Using the mean lengths, growth rates of the young of the year were calculated. From the monthly numbers and weights of each size class, the biomass (standing stock) at each station was calculated as well as the total production of the populations based on the size frequency method (Krueger and Martin, 1980).

The respiration rates of different-sized Pontoporeia sp. were measured in laboratory experiments. Populations from each station were maintained in their native sediments at 5 and 10°C for several weeks. Respiration was measured using the micro-Winkler technique and was related to animal size and temperature.

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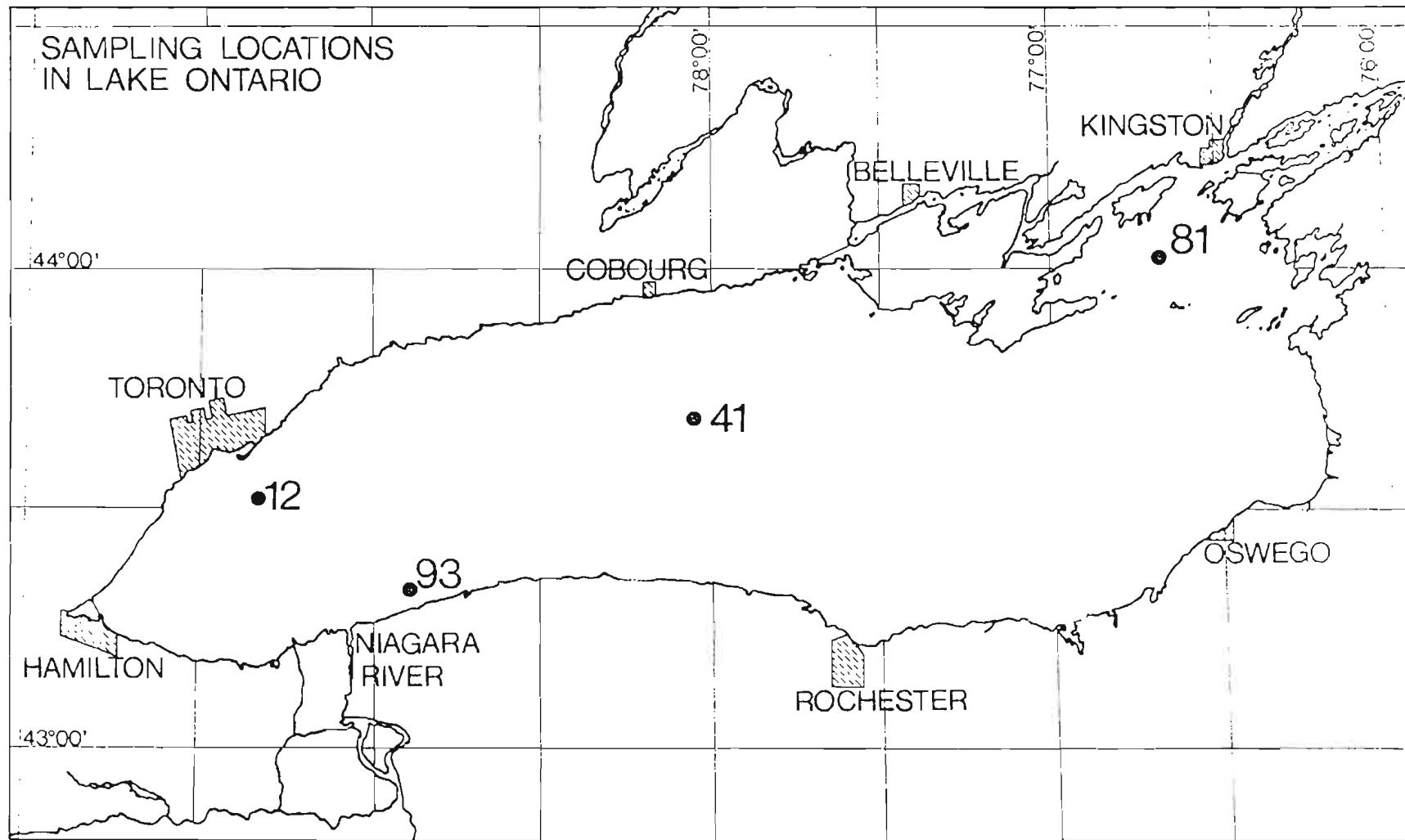


Figure 1. Location of Bioindex sampling sites in Lake Ontario.

TABLE 1: Bioindex sampling regime and number of samples at stations 12, 41, 81 and 93 in 1981 and 1982. Group A parameters were measured from integrated water samples. Group B parameters were taken with a rosette sampler at discrete depths.

Sampling Regime	Sampling Depth(m)	Station No. and Sounding Depth			
		12 110m	41 128m	81 37m	93 17-20m
<b>Isothermal Conditions</b>					
Discrete Depth Samples	1	2	2	2	2
	10	2	2	2	2
	25	2	2	-	-
Integrated Samples	0 to 20	2	2	2	2
<b>Stratified Conditions</b>					
Discrete Depth Samples	1	2	2	2	2
	1 m above thermocline	2	2	2	2
Integrated Samples	0 to 1 m above thermocline or 0 to 20 m whichever was less	2	2	2	2

Group A: Phytoplankton, Zooplankton, Chla, POC, PON, Ash W, Dry W.

Group B: pH, Alka, Cond, TP, TFP, SRP, TKJN, PON, NH<sub>3</sub>, NO<sub>3</sub>NO<sub>2</sub>, Cl, SRS, Chla, POC.

TABLE 2a. Mean epilimnetic values of the physical parameters measured at four stations in 1981 and 1982.

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1981	12								
75	1.7	94.6	13.6	26.5	102.0	-99.9	-99.9		
83	1.8	96.0	13.7	26.2	102.0	37.5	.4		
89	2.0	96.4	13.9	27.3	102.0	30.0	.3		
96	2.6	97.0	14.0	27.5	102.0	27.9	.3		
105	2.4	96.7	13.6	27.4	102.0	29.2	.3		
111	2.8	97.9	13.7	27.1	102.0	32.9	.3		
117	3.0	97.7	13.6	27.2	102.0	29.2	.3		
124	3.9	91.0	13.7	26.9	102.0	32.9	.3		
131	3.3	91.7	13.6	26.7	102.0	27.6	.3		
149	3.9	94.3	13.6	27.1	102.0	26.2	.3		
149	6.8	93.2	14.3	26.7	7.0	26.2			
154	9.4	93.8	14.7	26.8	6.0	16.8	3.7		
160	10.7	92.8	14.0	27.2	7.0	11.9	3.0		
166	10.8	97.7	15.1	26.9	6.5	9.1	1.4		
173	15.9	81.8	13.8	26.8	6.0	8.0	1.5		
182	13.4	92.3	13.6	27.4	7.0	12.7	1.8		
187	20.2	86.5	11.9	26.1	3.0	19.8	6.6		
194	19.9	87.5	12.6	27.8	6.0	16.2	2.7		
202	15.8	90.5	13.1	27.1	4.0	9.7	2.4		
208	19.9	81.7	10.4	26.1	6.0	7.5	1.3		
216	21.0	80.5	11.9	26.2	4.0	8.4	2.1		
222	20.2	84.5	10.9	26.2	9.0	7.0	0.8		
229	19.4	85.9	9.1	28.3	10.0	10.0	1.0		
236	20.7	84.7	10.2	26.8	11.0	9.1	0.8		
245	21.0	85.2	9.9	25.5	12.0	15.1	1.3		
251	20.1	82.8	10.4	26.3	20.0	13.6	0.7		
257	20.0	83.9	11.1	26.3	12.0	13.5	1.1		
266	15.0	90.6	10.1	26.9	11.0	14.6	0.5		
272	14.2	90.5	10.2	26.3	26.0	16.2	0.6		
286	7.0	96.4	11.6	27.1	102.0	19.0	0.2		
292	7.7	95.1	11.8	26.3	102.0	20.7	0.6		
299	6.7	95.2	11.7	26.9	102.0	23.7	0.6		
306	6.4	92.9	11.8	26.6	33.0	18.2	0.1		
314	7.6	94.2	11.8	26.6	102.0	13.6	0.1		
321	6.6	95.3	12.2	26.7	102.0	24.9	0.2		
327	5.5	93.1	12.1	26.9	102.0	21.1	0.2		
334	5.1	94.1	12.0	27.1	102.0	26.2	0.3		
341	5.3	94.0	12.1	27.1	102.0	19.9	0.2		

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1981	41								
78		1.2	96.0	14.2	26.2	126.0	-99.9	-99.9	
62		1.4	97.0	14.0	26.0	126.0	27.6	27.6	.2
90		1.4	96.9	14.3	27.3	126.0	22.6	22.6	.2
99		1.7	96.0	14.2	27.1	126.0	45.0	45.0	.4
106		2.0	98.0	14.2	27.4	126.0	26.2	26.2	.2
112		2.1	98.0	14.0	26.2	126.0	23.7	23.7	.2
118		2.4	97.0	13.8	27.0	126.0	26.4	26.4	.2
125		2.6	92.2	14.0	26.8	126.0	29.2	29.2	.2
133		3.1	92.3	13.5	26.6	126.0	27.6	27.6	.2
141		3.6	94.8	13.4	27.7	126.0	27.8	27.8	.2
147		3.7	93.9	13.7	26.8	126.0	30.9	30.9	.2
154		4.9	92.0	13.5	26.8	126.0	25.8	25.8	.2
161		11.2	92.5	13.1	27.0	7.0	12.7	12.7	
167		13.2	88.0	13.4	27.4	9.5	15.7	15.7	
174		9.8	94.0	12.9	26.6	11.0	14.6	14.6	
181		15.2	92.5	12.5	27.2	14.0	14.6	14.6	
188		16.1	86.4	12.6	27.5	6.0	11.6	11.6	
194		18.2	89.3	11.8	27.4	5.0	13.9	13.9	
203		18.0	84.7	11.7	26.2	6.0	12.3	12.3	
208		19.3	85.0	11.4	26.6	7.0	10.3	10.3	
217		20.5	80.0	9.9	26.2	9.0	7.5	7.5	
223		22.0	81.4	9.8	26.5	5.0	7.6	7.6	
231		19.8	85.4	9.6	26.9	6.0	10.0	10.0	
237		20.3	83.6	9.7	26.3	9.0	12.3	12.3	
244		20.9	83.5	10.0	26.2	10.0	10.9	10.9	
259		18.1	85.6	10.4	18.0	12.0	16.2	16.2	
268		14.0	91.0	10.5	18.8	22.0	19.8	19.8	
272		13.6	91.0	10.3	26.6	30.0	19.0	19.0	
279		10.6	92.5	10.4	26.9	28.0	18.1	18.1	
287		9.2	93.3	11.3	26.7	28.0	20.7	20.7	
294		9.1	92.4	11.9	26.4	46.0	21.6	21.6	
300		8.7	92.9	11.1	26.7	63.0	24.9	24.9	
307		9.4	91.3	11.5	26.5	43.0	22.6	22.6	
315		8.1	96.3	11.9	26.5	50.5	24.9	24.9	
322		8.6	92.9	11.9	26.5	41.0	20.8	20.8	
328		7.9	91.0	11.5	26.7	52.0	22.1	22.1	
335		6.5	91.4	11.6	27.0	126.0	29.2	29.2	
345		6.0	93.0	12.0	27.8	126.0	19.9	19.9	

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1981	81								
75		.3	96.3	15.6	24.3	35.0	22.8		.7
83		.6	96.0	14.7	25.0	35.0	12.3	.4	
90		1.4	96.7	15.0	26.5	35.0	16.8	.5	
98		2.2	97.0	14.7	26.1	35.0	25.3	.7	
107		3.4	98.0	13.9	26.2	35.0	15.1	.4	
112		4.0	97.4	13.6	26.2	29.5	15.1	.5	
118		4.1	97.0	13.4	26.5	35.0	16.2	.5	
125		5.5	92.0	13.5	26.3	35.0	22.6	.6	
132		6.2	92.7	12.9	26.4	35.0	22.6	.6	
142		8.6	95.4	12.4	27.0	35.0	14.8	.4	
148		11.9	93.0	12.3	25.8	7.0	14.0		2.0
155		12.1	97.3	12.4	26.1	13.0	14.6		1.1
161		11.5	93.8	11.7	25.6	10.0	15.6		1.6
167		14.0	90.9	11.7	25.7	6.8	16.3		2.4
174		13.5	93.7	11.1	25.1	6.0	17.5		1.1
181		15.5	93.1	11.2	25.5	19.0	14.1		.7
188		19.5	86.3	12.1	25.7	5.0	11.6		2.3
195		20.1	87.7	10.4	25.7	10.0	10.2		1.0
204		17.0	84.5	9.9	24.5	9.0	7.3		.8
211		19.6	85.0	9.1	25.9	16.0	15.1		.8
217		21.0	82.0	9.6	26.0	15.0	8.0		.5
223		22.5	83.6	9.3	26.0	14.0	12.0		.9
230		20.0	84.5	8.6	27.3	15.0	16.2		1.1
237		20.5	81.9	8.9	27.5	19.0	15.1		.8
244		20.3	85.0	9.2	26.2	18.0	15.1		.8
252		19.0	84.4	9.3	26.2	26.0	18.2		.7
258		18.0	88.6	10.3	18.0	15.0	18.2		1.2
267		18.3	92.5	9.5	20.7	28.0	19.8		.7
273		13.6	91.3	10.5	26.4	27.0	16.2		.6
278		13.7	93.8	9.9	25.4	35.0	13.8		.4
287		12.1	91.3	10.4	26.2	35.0	17.5		.5
293		11.6	90.9	10.6	25.8	35.0	10.6		.3
300		10.9	92.0	10.4	26.5	35.0	19.8		.6
307		10.3	91.7	11.1	26.1	35.0	19.8		.6
315		9.2	93.2	11.2	26.3	35.0	17.5		.6
322		8.7	93.3	10.9	26.2	35.0	16.9		.5
328		7.8	91.1	11.6	26.5	31.0	16.8		
335		6.4	92.0	11.6	26.8	35.0	16.2		.5
342		5.7	93.0	12.0	26.8	35.0	13.0		.4

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1981	93								
78		.3	97.6	14.7	23.6	17.0	7.4		.4
82		.6	98.0	14.8	19.1	13.5	6.4		.5
89		2.9	97.0	14.8	24.3	17.0	11.9		.7
98		3.7	96.7	14.1	27.0	22.0	11.6		1.4
104		1.2	96.8	13.8	25.2	18.5	16.6		.9
112		1.6	88.9	14.2	18.1	19.5	7.3		.4
117		1.4	85.9	14.8	17.2	20.2	6.9		.3
124		6.2	86.5	13.7	18.5	17.0	7.5		.4
134		7.4	88.6	13.2	18.3	18.0	6.1		.3
141		10.5	93.1	12.7	21.7	16.0	9.4		.6
146		12.2	90.8	12.5	18.9	18.0	10.6		.6
153		13.5	92.6	11.9	21.1	7.1	12.3		1.0
162		15.2	92.4	10.6	21.9	18.5	10.9		.6
166		17.7	91.0	10.7	21.9	12.0	10.6		.9
175		18.3	93.8	9.6	19.5	12.0	8.4		.7
180		18.3	93.3	10.7	20.6	10.0	8.0		.8
189		20.9	90.5	10.4	20.5	10.0	13.6		1.4
195		22.8	90.3	9.8	19.9	15.5	15.6		1.0
204		21.7	87.7	9.7	19.1	7.0	16.8		.4
211		19.8	87.0	10.7	27.2	3.0	11.2		.7
218		22.6	87.5	9.3	20.8	15.0	11.6		.8
224		22.6	90.8	9.2	21.0	15.5	11.8		.7
229		21.0	89.3	8.7	23.9	14.5	14.1		1.0
238		21.2	87.4	9.3	22.8	13.0	15.6		.2
243		20.8	87.8	9.6	22.7	20.5	14.1		.7
257		21.0	88.4	9.9	22.3	13.5	11.7		.9
268		16.6	94.7	10.6	19.7	15.0	8.9		.6
279		13.4	94.4	10.3	27.2	20.5	9.7		.5
288		11.0	95.7	10.9	22.9	5.0	14.1		2.8
294		11.3	96.4	10.9	19.2	11.0	4.7		.4
301		9.0	95.5	11.4	22.8	17.5	13.2		.8
307		9.7	95.6	12.0	20.9	17.0	12.7		.7
315		8.8	97.2	11.8	20.5	17.0	8.6		.5
322		9.0	98.6	11.5	18.8	16.0	11.8		.6
329		6.2	95.3	12.2	22.1	17.5	10.8		.6
336		5.6	94.8	12.2	24.7	19.0	7.3		.4
346		3.0	96.0	13.1	24.4	20.0	3.6		.2

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	Cond umhos	pH	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1982	12										
67		1.8	96.1	283.4	8.1	13.6	26.6	102.0	-99.9	-99.9	
76		1.9	97.7	324.0	7.9	13.5	26.9	102.0	-99.9	-99.9	
83		1.9	93.0	300.1	-99.9	13.6	28.0	102.0	-99.9	-99.9	
90		1.9	95.0	318.5	8.1	13.5	26.5	102.0	-99.9	-99.9	
97		1.9	96.9	297.4	8.1	13.5	26.7	102.0	-99.9	-99.9	
105		1.9	95.3	296.3	8.0	13.5	27.1	102.0	-99.9	-99.9	
116		1.9	95.5	294.1	7.9	13.8	26.3	102.0	-99.9	-99.9	
124		2.0	98.7	323.5	7.9	13.7	26.4	102.0	-99.9	-99.9	
130		2.0	93.7	310.8	7.2	13.8	26.8	102.0	-99.9	-99.9	
141		2.0	96.0	305.8	8.1	13.9	26.6	102.0	-99.9	-99.9	
147		2.0	96.9	340.7	-99.9	13.8	26.0	102.0	-99.9	-99.9	
151		3.3	89.7	338.8	7.4	14.1	27.2	102.0	-99.9	-99.9	
158		3.8	88.7	339.3	7.2	14.3	26.6	102.0	-99.9	-99.9	
168		9.2	95.0	354.5	8.0	14.0	26.4	102.0	-99.9	-99.9	
172		8.9	95.6	340.6	7.5	13.4	26.4	102.0	-99.9	-99.9	
179		12.7	91.5	334.0	8.2	14.9	25.8	102.0	-99.9	-99.9	
186		16.0	87.3	322.5	8.1	13.3	26.1	102.0	-99.9	-99.9	
197		11.3	93.3	339.0	8.5	13.7	26.7	102.0	-99.9	-99.9	
203		18.6	87.0	330.5	7.9	12.4	27.2	102.0	-99.9	-99.9	
207		16.4	90.3	331.5	8.1	13.4	27.5	102.0	-99.9	-99.9	
215		18.4	86.2	319.4	7.8	10.5	26.0	102.0	-99.9	-99.9	
221		20.9	86.1	320.0	7.5	10.1	25.0	102.0	-99.9	-99.9	
231		15.2	93.7	326.0	8.1	11.2	26.9	102.0	-99.9	-99.9	
235		9.9	77.3	334.8	7.7	12.5	26.7	102.0	-99.9	-99.9	
242		10.7	86.7	333.0	7.4	12.5	29.1	102.0	-99.9	-99.9	
250		10.5	88.4	328.2	7.6	11.9	26.8	102.0	-99.9	-99.9	
260		13.7	94.2	346.9	8.2	11.6	25.1	102.0	-99.9	-99.9	
266		14.4	97.1	329.9	7.9	11.2	25.3	102.0	-99.9	-99.9	
271		14.2	93.3	322.9	7.5	11.2	24.0	102.0	-99.9	-99.9	
277		13.9	91.4	334.7	7.6	11.1	24.8	102.0	-99.9	-99.9	
287		13.6	89.1	328.8	8.0	10.2	25.5	102.0	-99.9	-99.9	
291		13.6	84.1	331.4	7.3	9.9	25.5	102.0	-99.9	-99.9	
298		10.0	94.9	328.5	7.7	11.0	28.5	102.0	-99.9	-99.9	
305		4.6	98.1	338.6	7.6	12.6	26.1	102.0	-99.9	-99.9	
313		5.7	96.3	331.8	-99.9	12.2	25.9	102.0	-99.9	-99.9	
322		5.9	98.7	336.5	7.9	12.6	25.9	102.0	-99.9	-99.9	
326		5.8	87.3	331.0	-99.9	12.4	28.5	102.0	-99.9	-99.9	

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	Cond umhos	pH	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1982	41										
69		• 9	95.4	314.0	8.2	13.6	26.7	126.0	-99.9	-99.9	-99.9
77		• 7	97.2	319.5	8.3	13.8	26.9	126.0	-99.9	-99.9	-99.9
84		• 9	97.6	330.5	-99.9	13.8	26.2	126.0	-99.9	-99.9	-99.9
91		• 9	96.9	320.0	8.1	13.8	26.6	126.0	27.6	38.6	38.6
104		1.2	95.2	298.4	8.0	13.6	26.9	126.0	26.6	38.6	38.6
119		1.7	96.2	304.5	8.2	13.9	26.5	126.0	30.9	32.9	32.9
124		2.2	96.7	314.4	7.9	13.9	26.5	126.0	32.9	38.6	38.6
131		2.6	92.3	318.3	7.9	13.9	26.6	126.0	32.9	38.6	38.6
138		2.4	97.7	305.7	8.1	14.0	26.8	126.0	45.0	45.0	45.0
148		2.5	83.4	353.8	-99.9	13.8	26.9	126.0	35.0	35.0	35.0
152		2.8	95.6	322.5	7.6	13.9	26.9	126.0	43.4	43.4	43.4
158		3.2	88.3	337.6	7.1	14.1	26.6	126.0	35.0	35.0	35.0
166		3.4	95.7	316.7	8.2	13.8	26.6	126.0	-99.9	-99.9	-99.9
173		4.1	94.6	336.2	7.3	14.0	26.6	126.0	-99.9	-99.9	-99.9
180		12.4	94.0	336.3	8.1	13.3	26.6	126.0	18.9	18.9	18.9
187		14.9	93.9	328.0	8.2	12.7	26.5	20.5	11.9	11.9	11.9
194		14.6	93.4	326.1	8.5	12.5	26.3	10.0	14.5	14.5	14.5
202		20.6	87.3	298.0	8.1	11.9	26.6	5.0	18.2	18.2	18.2
207		20.5	81.5	322.5	8.1	11.9	26.4	8.0	29.2	29.2	29.2
216		19.4	83.7	318.3	7.9	10.2	26.6	8.0	16.2	16.2	16.2
221		-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	5.0	-99.9	-99.9	-99.9
229		18.9	89.1	325.5	8.5	10.2	26.4	9.0	8.6	10.0	10.0
236		13.9	73.2	337.5	7.6	13.1	25.3	6.0	10.9	10.9	10.9
242		15.1	86.5	325.8	7.7	10.8	25.8	11.0	10.9	10.9	10.9
251		14.5	90.8	329.0	7.5	10.6	26.6	21.0	11.6	11.6	11.6
257		19.1	93.7	323.0	8.5	11.3	23.7	21.0	12.5	12.5	12.5
266		15.9	96.1	322.7	7.5	10.4	25.3	19.0	22.1	22.1	22.1
271		15.4	87.2	323.2	7.5	10.1	25.7	20.0	11.6	11.6	11.6
278		15.7	84.6	328.4	7.5	10.4	25.3	21.0	24.9	24.9	24.9
286		14.9	88.4	312.6	8.3	10.3	25.7	26.0	12.5	12.5	12.5
292		9.3	84.6	320.9	7.2	11.1	26.0	24.0	32.9	32.9	32.9
298		6.8	97.0	334.0	7.7	11.9	26.7	126.0	35.0	35.0	35.0
306		8.9	95.3	332.5	7.8	11.8	25.8	126.0	35.0	35.0	35.0
313		6.7	95.7	333.5	-99.9	11.9	26.0	126.0	8.2	8.2	8.2
320		5.2	97.7	327.8	7.9	12.7	26.3	126.0	15.0	15.0	15.0
326		7.2	89.4	328.7	-99.9	11.8	25.9	126.0	-99.9	-99.9	-99.9

TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	Cond umhos	pH	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1982	81										
90		97.0	348.9	8.1	14.4	26.8	35.0	17.5	18.3	1.0	
118		97.3	305.2	8.0	14.2	25.4	35.0	18.0	18.0	1.0	
125		91.9	314.8	7.9	14.1	25.0	35.0	19.0	19.0	1.0	
131		88.6	327.8	7.8	14.0	25.6	35.0	20.0	20.0	1.0	
140		96.4	321.0	8.4	14.2	26.7	16.0	21.8	21.8	1.0	
147		9.4	337.3	7.9	12.7	25.7	16.0	19.0	19.0	1.0	
152		10.4	97.4	324.6	7.6	13.2	26.7	7.0	20.0	1.0	
159		10.6	91.0	338.1	7.7	12.1	26.1	10.5	19.0	1.0	
167		12.3	93.6	326.8	8.6	11.9	26.1	10.0	19.0	1.0	
173		12.2	95.0	340.7	7.6	11.8	26.4	10.0	14.1	1.0	
180		14.1	96.8	334.2	7.9	11.5	26.4	10.0	17.0	1.0	
187		15.1	95.0	302.0	8.1	11.8	22.5	7.0	16.0	1.0	
196		15.8	92.9	317.8	8.6	11.6	22.5	17.0	18.0	1.0	
202		19.6	91.3	330.6	8.0	10.8	22.5	6.5	19.0	1.0	
208		20.7	92.7	318.4	7.9	9.9	22.5	9.5	11.0	1.0	
216		20.1	84.5	309.0	7.8	9.2	22.4	15.0	11.0	1.0	
222		20.9	85.7	320.0	7.8	9.5	22.4	18.0	10.0	1.0	
230		20.4	87.8	312.0	8.6	9.6	25.0	11.0	10.0	0.7	
236		18.4	77.9	329.4	7.5	8.8	24.5	24.5	17.0	0.7	
243		18.8	85.3	316.4	7.5	8.4	24.5	26.0	17.0	0.7	
251		18.0	88.5	328.7	7.4	9.4	22.6	23.0	19.0	-99.9	
259		17.6	89.5	332.6	8.2	9.4	22.6	25.0	13.0	0.6	
266		16.0	90.7	327.0	7.8	10.2	22.6	19.0	24.0	-99.9	
272		15.5	87.5	326.0	7.8	10.2	21.1	21.1	11.9	0.6	
278		15.4	91.3	331.8	7.8	9.9	23.0	23.0	19.0	0.6	
287		12.6	92.7	309.5	7.8	10.4	22.5	29.5	11.7	1.0	
292		12.1	84.8	303.0	7.8	10.4	22.6	18.0	16.0	1.0	
299		11.4	90.1	331.0	7.8	10.6	22.6	35.0	21.0	1.0	
306		11.4	92.6	331.6	8.0	10.9	22.6	35.0	19.0	1.0	
313		10.3	94.9	322.9	-99.9	10.7	22.6	35.0	14.0	1.0	
321		9.8	97.3	318.5	8.0	11.0	22.6	35.0	14.0	1.0	
327		8.6	77.6	332.1	-99.9	11.0	22.6	35.0	23.0	0.7	

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TABLE 2a. Continuing

Year	Station	Julian Date	EBT °C	Alka G·M <sup>-3</sup>	Cond umhos	pH	DissO <sub>2</sub> G·M <sup>-3</sup>	CL G·M <sup>-3</sup>	Mixing Depth M	Euphotic Depth M	Ratio DZDM
1982	93										
70		4	97.9	273.0	8.1	14.1	25.6	15.5	15.1	1.0	-99.9
77		1.22	94.7	311.4	8.0	14.0	28.7	20.0	9.7	2.0	-99.9
83		1.22	93.4	303.1	8.1	14.5	20.1	20.0	9.7	2.3	-99.9
89		1.6	75.3	306.9	8.1	15.5	20.0	11.0	17.5	1.5	-99.9
95		1.6	96.3	272.2	8.1	14.4	20.0	21.0	17.5	1.5	-99.9
104		1.6	94.7	269.6	8.0	14.7	18.7	21.0	17.5	1.5	-99.9
120		1.6	92.6	266.0	8.0	14.7	19.0	21.0	17.5	1.5	-99.9
125		1.6	83.8	276.3	7.9	15.0	18.0	17.0	5.3	5.3	-99.9
131		1.6	69.4	244.9	7.0	15.0	18.0	18.0	6.5	6.5	-99.9
136		1.6	-99.3	256.2	8.1	14.9	18.0	17.0	9.4	9.4	-99.9
147		1.6	91.7	299.9	8.1	13.9	20.0	18.0	9.4	9.4	-99.9
152		1.6	88.8	291.8	8.1	13.1	19.0	19.0	9.7	9.7	-99.9
159		1.6	86.3	320.3	7.9	12.9	16.0	16.0	10.3	10.3	-99.9
166		1.6	92.1	300.4	8.1	12.1	19.0	19.0	12.5	12.5	-99.9
173		1.6	96.7	320.9	7.8	11.4	21.0	21.0	17.5	17.5	-99.9
180		1.6	93.8	315.6	7.8	11.6	21.0	21.0	9.1	9.1	-99.9
188		1.6	92.5	302.3	8.1	12.3	21.0	21.0	13.6	13.6	-99.9
194		1.6	84.3	295.0	8.1	12.8	19.0	18.0	14.0	14.0	-99.9
202		1.6	89.1	297.0	7.9	10.5	19.0	19.0	13.6	13.6	-99.9
208		1.6	93.0	319.9	7.8	10.0	21.0	21.0	10.2	10.2	-99.9
216		1.6	86.9	306.6	7.7	10.3	21.0	21.0	8.2	8.2	-99.9
221		1.6	90.2	324.7	8.5	9.0	23.0	23.0	8.0	8.0	-99.9
229		1.6	91.3	317.0	7.6	9.0	21.0	21.0	13.6	13.6	-99.9
235		1.6	86.0	317.9	7.6	10.0	22.0	22.0	13.6	13.6	-99.9
243		1.7	91.3	326.0	7.1	11.3	21.0	21.0	16.0	16.0	-99.9
252		1.7	97.7	337.9	6.1	11.6	21.0	21.0	17.0	17.0	-99.9
257		1.7	92.3	331.0	7.4	11.0	24.0	24.0	20.0	20.0	-99.9
265		1.7	96.1	317.2	7.6	10.8	22.0	22.0	9.2	9.2	-99.9
272		1.7	94.1	329.3	7.5	10.4	22.0	22.0	13.4	13.4	-99.9
277		1.7	89.8	304.6	7.4	11.4	21.0	21.0	18.0	18.0	-99.9
285		1.7	94.6	317.9	7.4	10.5	21.0	21.0	17.0	17.0	-99.9
291		1.7	81.2	323.7	7.9	10.4	22.0	22.0	19.0	19.0	-99.9
299		1.7	94.3	327.1	7.9	10.5	21.0	21.0	16.5	16.5	-99.9
305		1.7	97.7	304.6	-99.9	19.0	21.0	18.0	19.0	16.2	-99.9
312		1.7	93.9	269.9	8.0	11.9	18.0	18.0	6.0	6.0	-99.9
320		1.7	96.6	328.5	-99.9	12.1	25.0	16.0	16.2	16.2	-99.9
327		1.7	95.1								

TABLE 2b. Mean epilimnetic values of the chemical parameters measured at four stations in 1981 and 1982.

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1981	12							
	75	.015	.010	.170	.002	.350	.491	
	83	.013	.009	.151	.002	.350	.477	
	89	.014	.009	.166	.004	.339	.520	
	96	.015	.007	.161	.004	.330	.344	
	105	.013	.009	.181	.002	.361	.439	
	111	.015	.008	.152	.004	.350	.340	
	117	.015	.008	.199	.019	.343	.292	
	124	.013	.009	.205	.018	.372	.414	
	131	.013	.009	.181	.009	.353	.371	
	140	.013	.010	.172	.010	.333	.342	
	149	.020	.007	.182	.011	.302	.287	
	153	.020	.008	.228	.008	.205	.229	
	160	.020	.010	.275	.034	.196	.161	
	166	.022	.008	.229	.011	.118	.158	
	173	.019	.009	.236	.018	.014	.115	
	182	.016	.009	.170	.013	.194	.121	
	187	.011	.008	.235	.004	.068	.075	
	194	.016	.008	.257	.032	.149	.078	
	202	.015	.007	.330	.030	.175	.108	
	208	.013	.006	.246	.008	.107	.061	
	216	.031	.009	.231	.009	.040	.177	
	222	.021	.009	.222	.016	.045	.124	
	229	.019	.007	.211	.020	.069	.114	
	236	.016	.008	.292	.028	.041	.169	
	245	.017	.007	.229	.006	.062	.114	
	251	.019	.009	.289	.021	.067	.171	
	257	.021	.009	.253	.013	.030	.206	
	269	.015	.007	.284	.008	.138	.229	
	272	.014	.006	.214	.008	.169	.203	
	286	.012	.007	.190	.001	.333	.426	
	292	.010	.006	.188	.003	.297	.413	
	299	.011	.005	.178	.001	.304	.511	
	306	.010	.005	.231	.007	.258	.300	
	314	.012	.006	.204	.010	.272	.301	
	321	.010	.005	.180	.011	.305	.257	
	327	.011	.007	.193	.014	.326	.431	
	334	.011	.008	.200	.011	.332	.485	
	341	.010	.008	.161	.002	.337	.388	

TABLE 2b. Continuing

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1981	41							
	78	.014	.010	.172	.003	.343	.418	
	82	.014	.007	.177	.003	.338	.372	
	90	.013	.007	.177	.000	.334	.279	
	99	.014	.007	.161	.004	.336	.900	
	106	.015	.008	.153	.004	.348	.320	
	112	.013	.007	.165	.007	.335	.203	
	118	.013	.007	.170	.007	.340	.216	
	125	.013	.007	.180	.900	.354	.216	
	133	.013	.008	.193	.008	.354	.261	
	141	.012	.008	.193	.009	.304	.179	
	147	.012	.008	.168	.012	.327	.186	
	154	.014	.006	.165	.006	.335	.189	
	161	.017	.008	.228	.010	.197	.042	
	167	.016	.007	.213	.012	.115	.055	
	174	.015	.008	.191	.005	.221	.060	
	181	.015	.007	.210	.009	.168	.075	
	188	.017	.007	.211	.007	.053	.068	
	194	.014	.010	.235	.008	.139	.106	
	203	.015	.007	.252	.013	.030	.065	
	208	.014	.006	.207	.003	.063	.062	
	217	.017	.006	.215	.007	.044	.060	
	223	.016	.006	.219	.005	.026	.066	
	231	.017	.007	.197	.006	.063	.119	
	237	.015	.008	.255	.006	.051	.097	
	244	.020	.008	.219	.004	.050	.094	
	259	.012	.006	.202	.003	.085	.216	
	268	.011	.006	.249	.004	.165	.135	
	272	.012	.006	.211	.002	.182	.261	
	279	.011	.005	.204	.008	.224	.267	
	287	.011	.006	.201	.001	.265	.273	
	294	.011	.006	.218	.003	.246	.311	
	300	.013	.006	.197	.004	.227	.263	
	307	.011	.005	.214	.005	.235	.201	
	315	.010	.006	.177	.005	.261	.227	
	322	.013	.007	.199	.006	.241	.198	
	328	.010	.006	.180	.004	.259	.227	
	335	.012	.008	.198	.005	.295	.376	
	345	.011	.008	.176	.002	.300	.345	

TABLE 2b. Continuing

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1981	81							
	80	.015	.006	.244	.006	.293	.394	
	83	.013	.005	.186	.002	.287	.197	
	90	.013	.005	.184	.900	.266	.067	
	98	.013	.005	.181	.006	.244	.052	
	107	.013	.005	.170	.009	.258	.067	
	112	.015	.005	.181	.005	.259	.032	
	118	.012	.005	.183	.008	.261	.034	
	125	.013	.005	.190	.006	.269	.043	
	132	.011	.005	.197	.012	.268	.046	
	142	.011	.005	.177	.012	.242	.033	
	148	.009	.005	.189	.016	.229	.030	
	155	.012	.006	.203	.009	.222	.900	
	161	.012	.005	.219	.009	.212	.046	
	167	.011	.005	.227	.010	.137	.049	
	174	.010	.007	.256	.024	.186	.064	
	181	.017	.008	.221	.009	.164	.123	
	188	.018	.009	.248	.006	.080	.086	
	195	.018	.008	.258	.018	.083	.106	
	204	.020	.008	.261	.017	.033	.100	
	211	.016	.009	.274	.035	.066	.141	
	217	.017	.009	.243	.011	.037	.166	
	223	.016	.007	.250	.008	.031	.148	
	230	.015	.007	.244	.021	.063	.171	
	237	.014	.007	.243	.009	.031	.184	
	244	.016	.007	.232	.007	.071	.154	
	252	.014	.007	.280	.013	.090	.127	
	258	.013	.007	.208	.003	.065	.233	
	267	.014	.008	.270	.006	.133	.350	
	273	.013	.007	.210	.002	.177	.371	
	278	.017	.010	.233	.008	.189	.420	
	287	.014	.009	.226	.007	.182	.316	
	293	.018	.008	.221	.003	.157	.326	
	300	.017	.008	.221	.012	.164	.336	
	307	.014	.008	.226	.011	.184	.348	
	315	.014	.007	.193	.005	.213	.267	
	322	.014	.008	.191	.006	.206	.323	
	328	.014	.008	.198	.010	.207	.332	
	335	.014	.008	.234	.015	.231	.311	
	342	.014	.008	.180	.003	.256	.322	

TABLE 2b. Continuing

Year	Station	Julian Date	TP	TFP	TKJN	NH <sub>3</sub>	NO <sub>3</sub> NO <sub>2</sub>	SRS
			G·M <sup>-3</sup>	G·M <sup>-3</sup>				
1981	93							
	78	.020	.008	.173	.013	.314	.266	
	82	.013	.009	.230	.022	.243	.152	
	89	.015	.009	.182	.005	.309	.184	
	99	.014	.007	.162	.001	.299	.254	
	103	.014	.007	.214	.013	.321	.222	
	112	.020	.006	.216	.028	.310	.166	
	117	.023	.007	.234	.030	.339	.096	
	124	.021	.006	.220	.015	.437	.087	
	134	.021	.005	.221	.032	.351	.063	
	142	.016	.007	.198	.016	.279	.041	
	146	.017	.007	.215	.030	.289	.049	
	153	.014	.006	.195	.012	.275	.071	
	162	.015	.006	.248	.033	.232	.120	
	166	.016	.011	.232	.019	.185	.128	
	175	.024	.011	.263	.042	.263	.196	
	180	.019	.008	.226	.010	.220	.206	
	189	.015	.007	.263	.035	.188	.144	
	195	.012	.006	.256	.027	.175	.118	
	204	.014	.007	.182	.014	.115	.150	
	211	.015	.007	.230	.017	.135	.089	
	218	.016	.007	.236	.014	.106	.226	
	224	.019	.008	.245	.018	.099	.240	
	229	.015	.007	.235	.025	.096	.234	
	238	.013	.006	.224	.008	.075	.152	
	243	.016	.007	.277	.041	.135	.171	
	257	.016	.007	.224	-99.900	.069	.222	
	268	.018	.007	.275	.008	.119	.316	
	279	.012	.006	.206	.007	.142	.221	
	288	.013	.006	.196	.002	.212	.307	
	294	.020	.006	.277	.027	.093	.231	
	301	.014	.006	.211	.011	.188	.250	
	307	.013	.005	.239	.014	.175	.176	
	315	.015	.007	.242	.028	.120	.123	
	316	.016	.006	.257	.026	.127	.128	
	322	.027	.010	.252	.030	.145	.164	
	329	.018	.006	.243	.027	.190	.223	
	336	.014	.006	.224	.020	.261	.285	
	346	.019	.005	.188	.004	.302	.202	

TABLE 2b. Continuing

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	SRP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1982	12								
	67	.013	.010	.007	-99.900	-99.900	.003	.362	.503
	76	.016	.011	.000	.233	.004	.287	.555	
	83	.012	.010	.003	.190	.004	.246	.530	
	92	.014	.010	.004	.206	.005	.364	.517	
	95	.012	.010	.002	.185	.029	.352	.535	
	105	.012	.009	.002	.193	.014	.359	.498	
	116	.012	.009	.006	-99.900	.003	.364	.467	
	124	-99.900	-99.900	.002	.190	.001	.342	.597	
	130	-99.900	-99.900	.001	.198	.019	.342	.466	
	141	.013	.009	.001	.210	.046	.409		
	148	-99.900	-99.900	.004	.213	.012	.342	.496	
	151	-99.900	-99.900	.002	.218	.011	.342	.497	
	158	.012	.007	.001	.277	.007	.325	.443	
	168	.014	.006	.001	.219	.016	.246	.230	
	172	.016	.006	.001	.250	.018	.259	.186	
	179	.022	.007	.001	.282	.004	.104	.125	
	186	.015	.007	.001	.294	.012	.106	.087	
	197	.015	.007	.001	.215	.009	.234	.093	
	203	.012	.007	.002	.227	.043	.160	.085	
	207	.012	.008	.003	.208	.017	.219	.280	
	215	.011	.006	.002	.291	.030	.141	.284	
	221	.011	.006	2.00E-004	.373	.032	.127	.085	
	231	.016	.006	.001	.283	.032	.204	.363	
	235	.014	.007	4.00E-004	.251	.019	.135	.177	
	242	.015	.005	3.00E-004	.400	.050	.258	.215	
	250	.016	.007	3.00E-004	.463	.096	.289	.263	
	260	.018	.007	.001	.282	.013	.194	.136	
	266	.013	.006	2.00E-004	.367	.028	.237	.246	
	271	.018	.006	.001	.371	.048	.199	.192	
	277	.017	.008	.001	.394	.056	.189	.117	
	287	.015	.010	.003	.332	.043	.176	.196	
	291	.017	.007	.001	.360	.059	.178	.164	
	298	.012	.006	4.00E-004	.252	.014	.264	.265	
	305	.018	.010	.005	.447	.024	.386	.627	
	313	.012	.006	.001	.321	.017	.340	.590	
	322	.011	.006	.001	.243	.030	.331	.358	
	326	.011	.006	.002	.352	.040	.346	.482	

TABLE 2b. Continuing

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	SRP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1982	41	69	.013	.010	.006	.185	.005	.325	.510
	77	.013	.011	.002	.194	.003	.278	.480	
	84	.012	.011	.002	.182	.004	.335	.435	
	91	.013	.010	.004	.167	.006	.367	.428	
	104	.013	.010	.002	.194	.002	.368	.448	
	119	.013	.009	.005	-99.900	.002	.365	.414	
	124	-99.900	-99.900	.004	.190	.005	.319	.430	
	131	-99.900	-99.900	.001	.200	.003	.332	.415	
	138	.013	.009	.001	.202	.023	.344	.391	
	148	-99.900	-99.900	.005	.272	.022	.355	.385	
	152	-99.900	-99.900	.002	.257	.009	.334	.445	
	158	.013	.007	.002	.313	.009	.322	.360	
	166	.012	.009	.003	.182	.015	.312	.328	
	173	.013	.009	.002	.288	.017	.334	.329	
	180	.017	.006	.001	.276	.008	.150	.077	
	187	.023	.009	.003	.298	.001	.206	.115	
	194	.011	.007	.001	.180	.004	.216	.198	
	202	.010	.009	.002	.330	.024	.111	.090	
	207	.008	.007	.002	.321	.028	.116	.077	
	216	.014	.004	.001	.271	.068	.094	.083	
	229	.014	.011	.001	.264	.029	.121	.091	
	236	.014	.007	2.00E-004	.239	.076	.195	.062	
	242	.017	.005	4.00E-004	.416	.063	.144	.140	
	251	.021	.010	2.00E-004	.428	.028	.179	.133	
	257	.012	.009	.001	.246	.003	.157	.120	
	266	.017	.009	2.00E-004	.371	.015	.220	.190	
	271	.017	.008	.001	.398	.070	.137	.129	
	278	.011	.006	.001	.517	.049	.143	.486	
	286	.013	.008	.002	.287	.035	.142	.118	
	292	.016	.010	2.00E-004	.375	.038	.242	.322	
	298	.011	.007	.002	.251	.005	.320	.540	
	306	.011	.008	.001	.279	.007	.268	.210	
	313	.011	.006	.001	.311	.029	.300	.425	
	320	.013	.010	.003	.318	.037	.357	.525	
	326	.011	.006	4.00E-004	.346	.028	.294	.298	

TABLE 2b. Continuing

Year	Station	Julian Date	TP G·M <sup>-3</sup>	TFP G·M <sup>-3</sup>	SRP G·M <sup>-3</sup>	TKJN G·M <sup>-3</sup>	NH <sub>3</sub> G·M <sup>-3</sup>	NO <sub>3</sub> NO <sub>2</sub> G·M <sup>-3</sup>	SRS G·M <sup>-3</sup>
1982	81								
90	.013	.005	4.00E-004	-99.900	.004	.321	.224		
118	.013	.006	.001	-99.900	.003	.302	.196		
145	-99.900	-99.900	.001	.205	.010	.261	.165		
131	-99.900	-99.900	2.00E-004	.224	.010	.265	.116		
140	.012	.005	2.00E-004	.263	.001	.260	.068		
147	-99.900	-99.900	3.00E-004	.293	.015	.276	.112		
152	-99.900	-99.900	.001	.266	.014	.245	.116		
159	.011	.005	.001	.322	.031	.241	.047		
167	.012	.007	.001	.225	.018	.193	.066		
173	.012	.006	4.00E-004	.267	.010	.203	.077		
180	.013	.007	.001	.267	.004	.160	.050		
187	.015	.006	.001	.353	.002	.164	.080		
196	.015	.007	.001	.215	.020	.180	.292		
202	.012	.007	.001	.330	.023	.191	.098		
208	.015	.008	.001	.357	.069	.128	.095		
216	.015	.007	.002	.271	.034	.086	.084		
222	.018	.010	2.00E-004	.363	.123	.076	.155		
230	.020	.012	4.00E-004	.275	.036	.045	.297		
236	.017	.008	2.00E-004	.298	.080	.098	.233		
243	.015	.005	.001	.407	.041	.076	.390		
251	.020	.012	2.00E-004	.409	.035	.116	.396		
259	.015	.007	4.00E-004	.252	.017	.095	.256		
266	.023	.015	4.00E-004	.359	.051	.110	.267		
272	.016	.008	-99.900	.372	.075	.121	.281		
278	.013	.007	4.00E-004	.339	.035	.111	.263		
287	.016	.009	.002	.218	.014	.249	.571		
292	.022	.009	.001	.345	.036	.169	.565		
299	.016	.007	.001	.338	.022	.193	.345		
306	.019	.006	.001	.396	.050	.163	.347		
313	.017	.007	.002	.348	.044	.173	.525		
320	.018	.012	.002	.237	.036	.212	.574		
327	.015	.009	.002	.503	.024	.211	.551		

TABLE 2b. Continuing

Year	Station	Julian Date	TP	TFP	SRP	TKJN	NH <sub>3</sub>	NO <sub>3</sub> NO <sub>2</sub>	SRS
			G·M <sup>-3</sup>	G·M <sup>-3</sup>					
1982	93								
	78	.015	.010	.003	.199	.007	.282	.439	
	77	.018	.011	.006	.226	.016	.291	.466	
	83	.016	.008	.001	.216	.013	.346	.457	
	89	.017	.006	4.00E-004	.202	.007	.339	.332	
	95	.025	.008	.001	.203	.024	.354	.326	
	104	.015	.008	.001	.263	.031	.336	.310	
	120	.017	.008	.004	.99	.026	.900	.220	
	125	.021	.010	.003	.230	.049	.328	.339	
	131	-99.900	-99.900	.001	.243	.055	.348	.272	
	138	.024	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900
	140	.021	.009	2.00E-004	.207	.022	.322	.178	
	141	.021	.006	2.00E-004	.270	.074	.321	.188	
	147	-99.900	-99.900	.001	.389	.063	.336	.197	
	152	-99.900	-99.900	.001	.319	.036	.281	.118	
	159	.016	.005	.001	.555	.032	.287	.209	
	166	.016	.009	.001	.261	.040	.282	.096	
	173	.015	.007	4.00E-004	.286	.011	.237	.089	
	180	.016	.007	.001	.278	.003	.151	.097	
	188	.017	.007	.004	.307	.005	.103	-99.900	
	194	.014	.009	.001	.220	.009	.228	.182	
	202	.014	.007	.001	.319	.046	.163	.205	
	208	.012	.008	.001	.405	.092	.168	.129	
	216	.014	.006	.002	.384	.026	.188	.105	
	221	.016	.007	2.00E-004	.312	.108	.155	.163	
	229	.015	.014	.001	.268	.061	.176	.231	
	235	.017	.008	2.00E-004	.264	.046	.179	.202	
	243	.015	.006	2.00E-004	.424	.064	.190	.236	
	252	.019	.016	2.00E-004	.338	.012	.316	.420	
	257	.013	.006	4.00E-004	.246	.021	.232	.151	
	265	.014	.007	3.00E-004	.423	.045	.211	.170	
	272	.018	.008	.001	.364	.049	.183	.204	
	277	.016	.009	.001	.389	.057	.177	.266	
	285	.015	.010	.001	.301	.047	.183	.373	
	291	.017	.009	.001	.381	.061	.171	.290	
	299	.043	.006	4.00E-004	.343	.037	.203	.270	
	305	.022	.011	.001	.365	.035	.210	.243	
	312	.038	.018	.002	.450	.072	.218	.550	
	320	.026	.012	.004	.281	.050	.225	.426	
	327	.012	.009	.002	.519	.036	.358	.655	

TABLE 2c. Mean epilimnetic values of the biological parameters measured at four stations in 1981 and 1982.

Year	Station	Julian Date	IPON G·M <sup>-3</sup>	IPOC G·M <sup>-3</sup>	ICH LAU MG·M <sup>-3</sup>	ICH LAC MG·M <sup>-3</sup>	DOC G·M <sup>-3</sup>	DRY G·M <sup>-3</sup>	LOI G·M <sup>-3</sup>
1981	12								
	75	.819	.131	-99.9	-99.9	2.044	-99.900	-99.900	
	83	.824	.168	2.3	2.2	2.000	.100	.700	
	89	.8299	.191	2.4	2.1	2.000	-99.900	-99.600	
	96	.8059	.302	2.6	2.0	2.000	2.100	1.100	
	105	.8410	.287	2.2	1.4	2.000	.800	-99.900	
	111	.8305	.193	2.0	1.6	2.000	-99.900	-99.900	
	117	.8035	.233	1.7	1.5	2.000	.100	-99.900	
	124	.8028	.215	1.7	1.4	2.000	1.100	.500	
	131	.840	.205	1.7	1.4	2.000	1.000	.500	
	140	.850	.292	1.5	1.4	2.000	-99.900	-99.900	
	149	.8600	.381	1.5	1.4	2.000	-99.900	-99.900	
	153	.8325	.820	1.5	1.4	2.000	.100	1.600	
	160	.838	.860	1.5	1.4	2.000	2.200	1.300	
	166	.889	1.140	1.5	1.4	2.000	3.300	1.300	
	173	.158	.949	1.5	1.4	2.000	1.800	.500	
	182	.125	.675	1.5	1.4	2.000	1.800	-99.900	
	187	.871	.410	1.5	1.4	2.000	1.800	1.700	
	194	-99.900	.469	1.5	1.4	2.000	1.500	1.700	
	202	.121	.713	1.5	1.4	2.000	3.300	1.200	
	208	.891	.511	1.5	1.4	2.000	1.500	1.200	
	216	.175	.937	1.5	1.4	2.000	4.800	1.200	
	222	.199	1.020	1.5	1.4	2.000	4.600	1.200	
	229	.888	.436	1.5	1.4	2.000	4.000	1.200	
	236	.138	.859	1.5	1.4	2.000	3.500	1.200	
	245	.145	.634	1.5	1.4	2.000	8.300	1.200	
	251	-99.900	-99.900	1.5	1.4	2.000	9.200	1.200	
	257	.1292	.759	1.5	1.4	2.000	8.400	1.200	
	269	.885	.570	1.5	1.4	2.000	1.700	1.700	
	272	.885	.460	1.5	1.4	2.000	1.6	1.300	
	286	.852	.350	1.5	1.4	2.000	1.430	1.200	
	292	.853	.295	1.5	1.4	2.000	1.000	1.200	
	299	.853	.334	1.5	1.4	2.000	1.000	1.000	
	306	.851	.543	1.5	1.4	2.000	1.000	1.000	
	314	.845	.267	1.5	1.4	2.000	1.000	1.000	
	321	.849	.264	1.5	1.4	2.000	1.000	.800	
	327	.836	.221	1.5	1.4	2.000	1.000	.600	
	334	-99.900	-99.900	1.5	1.4	2.000	1.000	.600	
	341	-99.900	-99.900	-99.9	-99.9	2.000	-99.900	-99.900	

TABLE 2c. Continuing

Year	Station	Julian Date	IPON	IPOC	ICHLAU	ICHLAC	DOC	DRY	LOI
			G·M <sup>-3</sup>	G·M <sup>-3</sup>	MG·M <sup>-3</sup>	MG·M <sup>-3</sup>	G·M <sup>-3</sup>	G·M <sup>-3</sup>	G·M <sup>-3</sup>
1981	41	78	.027	.184	3.0	2.8	2.108	-99.900	-99.900
		82	.032	.211	3.4	2.014	.100		
		96	.043	.270	5.9	2.303			
		99	.041	.230	5.2	2.128	-99.100	-99.900	
		106	.024	.168	2.9	2.6	2.300	.100	-99.900
		112	-99.900	-99.900	-99.9	-99.9	2.390	-99.900	-99.900
		118	.035	.207	2.6	2.000	-99.900		-99.900
		125	.040	.196	2.1	2.140			
		133	.035	.210	1.8	2.164	1.100		
		141	.038	.217	1.8	2.169	-99.900		
		147	.035	.238	1.7	2.206	-99.900		
		154	-99.900	-99.900	-99.9	-99.9	2.350	-99.900	-99.900
		161	.122	.758	5.3	2.150	.900		
		167	-99.900	-99.900	3.6	2.132	1.500		
		174	.898	.666	4.7	2.000	1.400		
		181	.105	.642	4.1	2.100	1.700		
		188	.127	.682	6.5	2.114	3.400	2.500	
		194	.077	.551	1.9	2.300	1.800	1.500	
		203	.117	.753	5.6	2.374	5.300	2.400	
		208	.093	.578	2.6	2.150	3.300	1.900	
		217	.105	.540	3.7	2.478	3.300	2.000	
		223	.108	.680	2.9	2.360	7.000	2.200	
		231	.123	.642	2.4	2.432	2.500	2.100	
		237	.690	.545	2.4	3.156	2.200	2.000	
		244	.112	.811	1.6	2.886	1.000	-99.900	
		259	.078	.557	1.4	2.715	1.500	-99.900	
		266	.069	.422	1.1	2.078	0.800	-99.900	
		272	.073	.451	1.0	2.064	1.200	-99.900	
		279	.067	.465	0.8	2.200	1.300	-99.900	
		287	.869	.392	6.0	2.180	1.100	-99.900	
		294	.660	.337	5.7	1.926	1.100	0.900	
		300	.053	.288	5.8	2.800	0.900	0.800	
		307	.057	.385	5.3	1.936	1.000	-99.900	
		315	.049	.338	4.3	2.000	1.900	1.800	
		322	.061	.481	6.3	2.136	1.300	1.200	
		328	.040	.237	3.7	2.050	0.700	-99.900	
		335	-99.900	-99.900	-99.9	-99.9	2.036	-99.900	-99.900
		345	-99.900	-99.900	-99.9	-99.9	2.800	-99.900	-99.900

TABLE 2c. Continuing

Year	Station	Julian Date	IPON G·M <sup>-3</sup>	IPOC G·M <sup>-3</sup>	ICH LAU MG·M <sup>-3</sup>	ICH LAC MG·M <sup>-3</sup>	DOC G·M <sup>-3</sup>	DRY G·M <sup>-3</sup>	LOI G·M <sup>-3</sup>
1981	81								
	86	.076	.509	-99.9	-99.9				
	83	.077	.432	8.7	8.7				
	90	.075	.524	9.0	6.7				
	98	.081	.520	7.1	6.7				
	107	.093	.583	6.3	6.0				
	112	.081	.533	4.5	6.0				
	118	.075	.461	4.0	6.0				
	125	.081	.421	3.0	6.0				
	132	.089	.450	2.8	6.0				
	142	.091	.560	2.9	6.0				
	148	.080	.541	2.9	6.0				
	155	.083	.527	4.2	4.1				
	161	.093	.585	3.7	4.1				
	167	.089	.576	5.2	4.1				
	174	.106	.518	5.5	4.1				
	181	.141	.725	10.4	10.4				
	188	.113	.617	6.9	6.5				
	195	.112	.579	5.1	4.6				
	204	.118	.632	7.6	7.0				
	211	.086	.375	6.6	6.3				
	217	.131	.609	9.2	8.3				
	223	.143	.651	5.2	5.7				
	230	.097	.413	5.9	5.9				
	237	.084	.496	7.1	6.3				
	244	.091	.586	3.0	4.0				
	252	.076	.471	3.8	4.0				
	258	.088	.548	7.3	4.4				
	267	.047	.301	2.9	3.0				
	273	.075	.472	6.2	5.0				
	278	.035	.213	5.0	4.4				
	287	.078	.421	7.6	6.4				
	293	.088	.466	5.3	4.4				
	300	.065	.353	5.3	4.4				
	307	.066	.349	4.5	4.4				
	315	.065	.349	5.8	4.4				
	322	.054	.304	5.8	4.4				
	328	.055	.326	4.9	4.4				
	335	.048	.297	4.7	4.4				
	342	.047	.276	7.4	4.4				

TABLE 2c. Continuing

Year	Station	Julian Date	IPON	IPOC	ICHLAU	ICHLAC	DOC	DRY	LOI
			G·M <sup>-3</sup>	G·M <sup>-3</sup>	MG·M <sup>-3</sup>	MG·M <sup>-3</sup>	G·M <sup>-3</sup>	G·M <sup>-3</sup>	G·M <sup>-3</sup>
1981	93	78	.059	.375	3.4	3.2	2.013	-99.900	-99.900
		82	.049	.300	2.1	1.9	2.000	3.100	1.700
		89	.067	.453	5.7	5.5	2.224	2.700	1.800
		99	.075	.400	6.2	6.9	2.100	-99.900	-99.900
		103	-99.900	-99.900	4.1	3.6	2.997	3.700	2.300
		112	.067	.394	3.7	3.7	2.041	4.500	1.400
		117	.092	.535	4.5	3.8	2.338	-99.900	-99.900
		124	.180	.878	9.3	8.7	2.329	4.300	2.100
		134	.130	.651	6.7	6.2	2.236	6.200	1.800
		142	.098	.530	4.4	4.1	2.261	-99.900	-99.900
		146	.134	.697	5.6	5.6	2.361	-99.900	-99.900
		153	.068	.434	3.6	3.6	2.468	-99.900	-99.900
		162	.089	.513	3.2	3.0	2.088	2.700	1.000
		166	.093	.536	3.7	3.3	2.285	2.400	1.200
		175	.058	.354	3.1	2.7	2.013	3.600	1.100
		180	-99.900	-99.900	-99.9	-99.9	2.275	-99.900	-99.900
		189	-99.900	-99.900	-99.9	-99.9	2.350	-99.900	-99.900
		195	.071	.453	2.5	2.2	2.252	1.800	1.300
		204	-99.900	-99.900	-99.9	-99.9	2.350	-99.900	-99.900
		211	-99.900	-99.900	-99.9	-99.9	2.483	-99.900	-99.900
		218	.100	.482	4.9	4.2	2.460	2.500	1.400
		224	.157	.582	5.7	5.8	2.350	3.200	1.700
		229	.105	.595	4.8	4.4	2.474	1.800	1.400
		238	.067	.410	4.2	3.4	2.965	1.600	1.200
		243	-99.900	-99.900	-99.9	-99.9	2.853	-99.900	-99.900
		257	-99.900	-99.900	-99.9	-99.9	2.528	-99.900	-99.900
		268	.074	.489	4.3	3.6	2.132	3.400	1.700
		279	-99.900	-99.900	-99.9	-99.9	2.255	-99.900	-99.900
		288	-99.900	-99.900	-99.9	-99.9	2.375	-99.900	-99.900
		294	-99.900	-99.900	-99.9	-99.9	2.032	-99.900	-99.900
		301	-99.900	-99.900	-99.9	-99.9	2.000	-99.900	-99.900
		307	.065	.421	5.8	4.9	1.957	2.400	1.100
		315	.065	.409	5.7	4.7	2.208	5.200	1.700
		316	.069	.457	5.2	4.2	2.227	5.600	1.400
		322	.093	.611	5.1	3.7	2.400	11.000	1.900
		329	-99.900	-99.900	-99.9	-99.9	2.187	-99.900	-99.900
		336	-99.900	-99.900	-99.9	-99.9	2.015	-99.900	-99.900
		346	-99.900	-99.900	-99.9	-99.9	2.000	-99.900	-99.900

TABLE 2c. Continuing

Year	Station	Julian Date	IPON	IPOC	DOC	DRY	LOI
			G·M <sup>-3</sup>				
1982	12	67	.017	.149	2.050	-99.900	-99.900
		76	.015	.128	1.950	.800	-99.900
		83	.017	.144	1.988	-99.900	-99.900
		92	-99.900	-99.900	2.000	-99.900	-99.900
		95	.021	.148	1.814	-99.900	-99.900
		105	.017	.117	1.900	.800	-99.900
		116	.021	.136	2.014	.700	-99.900
		124	.024	.168	2.100	.600	.500
		130	-99.900	-99.900	1.936	7.000	-99.900
		141	.024	.135	2.161	.600	-99.900
		148	.027	.182	1.950	1.000	.600
		151	-99.900	-99.900	1.986	1.000	.700
		158	.027	.183	2.131	1.200	.700
		168	.069	.525	1.900	1.300	-99.900
		172	.113	.823	2.000	1.500	1.300
		179	.158	.795	2.250	2.700	2.400
		186	.132	.820	2.283	2.900	2.200
		197	-99.900	-99.900	2.450	-99.900	-99.900
		203	-99.900	-99.900	2.500	-99.900	-99.900
		207	-99.900	-99.900	2.150	-99.900	-99.900
		215	.069	.410	2.157	2.200	1.500
		221	.060	.353	2.900	3.000	1.800
		231	.096	.559	2.000	1.900	1.400
		235	.094	.532	2.313	2.200	1.700
		242	.085	.483	1.900	1.800	1.500
		250	.051	.252	2.200	1.800	1.600
		260	-99.900	-99.900	2.074	-99.900	-99.900
		266	.080	.426	2.150	2.100	1.600
		271	.079	.388	2.367	1.500	1.100
		277	.106	.545	2.100	2.300	2.000
		287	.053	.297	2.313	2.800	1.000
		291	.052	.369	2.056	1.800	1.100
		298	.027	.299	2.250	1.200	.900
		305	.015	.120	2.073	.600	.500
		313	.032	.210	2.260	.900	.700
		322	.033	.239	2.028	1.100	1.000
		326	.035	.411	2.013	.800	.700

TABLE 2c. Continuing

Year	Station	Julian Date	IPON G·M <sup>-3</sup>	IPOC G·M <sup>-3</sup>	DOC G·M <sup>-3</sup>	DRY G·M <sup>-3</sup>	LOI G·M <sup>-3</sup>
1982	41	69	.016	.127	2.000	-99.900	-99.900
		77	.015	.124	2.000	1.600	1.000
		84	.018	.130	2.050	1.400	.600
		91	.017	.093	1.900	.600	-99.900
		104	.016	.100	1.930	.400	-99.900
		119	.023	.115	2.100	.400	-99.900
		124	.031	.200	2.100	.400	-99.900
		131	.033	.195	1.920	.300	.300
		138	.026	.151	1.994	-99.900	-99.900
		148	.024	.154	2.205	.900	.600
		152	.017	.141	1.943	.800	.600
		158	.018	.105	2.000	.600	-99.900
		166	.030	.193	1.900	.400	-99.900
		173	-99.900	-99.900	1.970	1.100	.700
		180	.110	.596	2.230	1.700	-99.900
		187	.097	.554	2.150	2.000	1.800
		194	.088	.553	2.245	1.700	1.000
		202	-99.900	-99.900	2.450	-99.900	-99.900
		207	.081	.275	2.166	1.400	1.300
		216	.085	.444	2.100	1.500	1.000
		229	.067	.378	2.050	1.600	1.100
		236	.063	.463	2.200	2.100	1.700
		242	.098	.584	2.075	3.200	2.600
		251	.045	.279	2.050	2.000	1.500
		257	-99.900	-99.900	3.100	-99.900	-99.900
		266	.076	.432	2.174	1.900	1.700
		271	.060	.352	2.250	1.600	1.300
		278	.056	.372	2.248	1.100	1.000
		286	.062	.432	2.663	1.000	.900
		292	.033	.258	2.036	1.000	.900
		298	.026	.193	2.500	.800	.800
		306	.038	.245	2.350	.800	.700
		313	.032	.207	2.250	.800	.700
		320	.023	.142	2.400	.600	.400
		326	.035	.216	2.100	.500	.400

TABLE 2c. Continuing

Year	Station	Julian Date	IPON	IPOC	DOC	DRY	LOI
			G·M <sup>-3</sup>				
1982	81	90	.045	.262	2.125	1.800	1.200
		118	.067	.359	2.200	-99.900	-99.900
		125	.075	.509	2.538	1.400	1.100
		131	.058	.332	2.276	1.300	1.000
		140	.073	.470	2.316	3.000	2.000
		147	.059	.410	2.467	1.200	-99.900
		152	.074	.301	2.029	1.200	-99.900
		159	.054	.297	2.126	1.200	1.100
		167	.101	.643	2.100	1.300	-99.900
		173	.103	.474	2.316	1.400	-99.900
		180	-99.900	-99.900	2.583	-99.900	-99.900
		187	.111	.661	2.850	1.700	-99.900
		196	-99.900	-99.900	2.516	-99.900	-99.900
		202	.031	.187	2.619	1.500	1.400
		208	.117	.398	2.297	2.700	1.600
		216	.077	.421	2.280	2.100	1.500
		222	.081	.404	2.450	1.800	1.300
		230	.075	.494	2.096	3.700	2.700
		236	.112	.631	2.430	2.400	1.900
		243	.067	.483	2.274	1.400	1.300
		251	.034	.260	2.230	1.700	1.200
		259	.074	.424	2.190	1.600	1.500
		266	.080	.494	2.108	1.800	1.600
		272	.067	.400	2.258	1.500	1.400
		278	.040	.241	2.255	1.200	1.100
		287	-99.900	-99.900	2.313	-99.900	-99.900
		292	.058	.355	2.050	1.500	1.100
		299	.030	.199	2.893	1.000	.900
		306	.104	.462	2.450	1.700	1.400
		313	.069	.440	2.448	3.300	.800
		320	.057	.368	2.349	1.200	.700
		327	.053	.309	2.224	1.300	.900

TABLE 2c. Continuing

Year	Station	Julian Date	IPON	IPOC	DOC	DRY	LOI
			G·M <sup>-3</sup>				
1982	93	70	-99.900	-99.900	2.000	-99.900	-99.900
		77	.034	.252	1.951	.5000	1.400
		83	.037	.265	2.200	5.600	1.600
		89	.043	.232	2.614	1.400	.800
		95	.031	.202	1.900	17.000	2.600
		104	.034	.238	2.031	3.400	1.200
		120	.032	.190	2.064	-99.900	-99.900
		125	.052	.338	2.369	2.800	.800
		131	.046	.284	2.174	2.600	.700
		138	.057	.261	-99.900	-99.900	-99.900
		140	.059	.362	2.130	3.0200	1.600
		141	.062	.387	2.350	4.0200	1.600
		147	.092	.560	2.274	2.8000	1.200
		152	.077	.451	2.420	3.0000	1.800
		159	.084	.425	2.389	2.0300	1.300
		166	.074	.444	2.093	1.0700	1.000
		173	.091	.515	2.200	2.4000	1.400
		180	.084	.450	2.150	2.0400	1.700
		188	.147	.832	2.566	4.0800	2.300
		194	.070	.407	2.526	2.1000	1.200
		202	-99.900	-99.900	2.650	-99.900	-99.900
		208	.125	.406	2.200	2.5000	1.400
		216	.078	.464	2.350	2.6000	1.600
		221	.087	.474	2.271	3.700	2.300
		229	.064	.380	2.180	2.000	1.700
		235	.078	.413	2.478	2.0000	1.500
		243	.096	.555	2.123	2.4000	1.800
		252	.020	.139	2.000	1.500	.900
		257	.071	.429	2.105	3.100	2.200
		265	.078	.383	2.100	2.300	1.600
		272	.084	.525	2.107	2.100	1.600
		277	.044	.273	2.274	1.800	1.200
		285	.066	.396	2.553	2.100	1.2000
		291	.055	.376	2.1E9	4.400	1.2000
		299	.037	.272	3.050	1.700	1.6000
		305	.059	.476	2.350	2.200	1.200
		312	.093	.756	3.079	17.000	2.200
		320	.024	.163	2.292	20.300	4.900
		327	.027	.193	1.952	1.900	.800

TABLE 3. List of phytoplankton species, observed at the Bioindex stations, which contributed more than one percent of the sample biomass at some time.

	<u>1981</u>	<u>1982</u>		<u>1981</u>	<u>1982</u>
CHRYSTOPHYTA					
BACILLARIOPHYCEAE			DINOPHYCEAE		
Asterionella spp.	x	x	Ceratium hirudinella	x	x
A. formosa	x	x	Glenodinium spp.	x	x
Cyclotella spp.	x	-	Gymnodinium helveticum	x	x
Cymatopleura solea	x	-	G. uberrimum	x	x
Diatoma elongata	x	x	Peridinium aciculiferum	x	x
Fragilaria capucina	x	x	P. cinctum	x	x
F. crotonensis	x	x			
Melosira binderana	x	x	CYANOPHYTA		
M. islandica	x	x			
Nitzschia acicularis	x	x	CYANOPHYCEAE		
N. linearis	x	x			
Stephanodiscus astrea			Anabaena spp.	x	x
var. minutula	x	x	Merismopedia spp.	-	x
S. niagareae	x	x	Oscillatoria limnetica	x	x
S. hantzschii	x	x	O. minima	x	-
Synedra acus	x	x			
S. ulna	x	x	CHLOROPHYTA		
Tabellaria fenestrata	x	x			
T. flocculosa	x	x	CHLOROPHYCEAE		
CHRYSTOPHYCEAE			Ankistrodesmus		
Chrysocromulina parva	x	x	convolutus	-	x
Dinobryon divergens	x	x	Closterium aciculare	x	x
D. sertularia	x	x	C. microporum	x	x
D. sertularia var.			Cosmarium spp.	-	x
protuberans	-	x	Mougeotia spp.	x	x
D. sociale	-	x	Oocystis spp.	-	x
PYRROPHYTA			O. borgei	x	-
CRYPTOPHYCEAE			Pandorina morum	x	-
Cryptomonas spp.	-	x	Pediastrum duplex var.		
C. curvata	-	x	clathratum	x	x
C. erosa	x	x	P. simplex var.		
C. reflexa	-	x	duodenarium	x	x
Katablepharis ovalis	x	x	Scenedesmus bijuga	x	x
Rhodomonas minuta	x	x	S. ecornis	x	-
			Sphaerocystis schroeteri	x	x
			Staurastrum paradoxum	x	x
			Ulothrix spp.	-	x
			U. variabilis	x	-
			EUGLENOPHYTA		
			EUGLENOPHYCEAE		
			Phacus spp.	-	x
			Lepocinclis fusiformis	-	x

TABLE 4. Mean epilimnetic concentrations of algal classes at four stations in Lake Ontario in 1981 and 1982.

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1981	12	75	.8844	0	.0029	.0787	.0614	0	.2404	.3878
	83	.8188	.0019	.0026	.0952	.1170	.0011	.2970	.5335	
	89	.0284	.0023	.0024	.0549	.0787	.0050	.2898	.4485	
	96	.8092	0	.0068	.1086	.1060	0	.8504	1.0860	
	105	.0155	0	.0099	.0651	.1267	0	.2812	.4983	
	111	.0099	.8674	.0014	.1084	.2000	0	.4543	.8413	
	117	.8193	0	.0015	.0959	.2240	0	.5215	.8621	
	124	.0206	0	.0033	.0605	.1726	0	.1694	.4464	
	131	.0214	0	.0057	.0655	.1314	.0010	.2648	.5098	
	140	.0087	0	.0042	.0653	.1391	.0010	.2795	.4977	
	149	.0132	0	.0029	.2410	.3966	.0008	.2462	.9007	
	153	.8471	0	.0084	.5580	.8230	.0116	.1829	1.6310	
	160	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	166	.0405	0	.0083	.3250	.0950	.5480	.0466	1.0635	
	173	.1856	0	.0519	.5069	.4424	.1845	.0620	1.4390	
	182	.0643	0	.1217	.7340	.3843	.0787	.1915	1.5745	
	187	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	194	.0381	0	.0131	.0516	.0499	.0785	.0131	2.2423	
	202	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	208	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	216	.1274	0	.0043	.9617	.6451	0	.0347	1.7731	
	222	.1482	0	.0048	.6400	.1472	0	.0005	.9408	
	229	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	236	.1429	0	.0062	.2843	.1755	0	.0105	.6194	
	245	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	251	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	257	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	269	.2640	0	.0163	.7850	.6046	.0045	.1314	1.8058	
	272	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800	-99.9800
	286	.8229	0	.0045	.6082	.1336	.0015	.0869	.8577	
	292	.0776	0	.0070	.3816	.1711	.0020	.2282	.8677	
	299	.0685	.8838	.0059	.2642	.1110	0	.3658	.8384	
	306	.6656	0	.0081	.5298	.1188	0	.2102	.9245	
	314	.8767	0	.0080	.5238	.1470	.0087	.3189	1.0751	
	321	.1244	.8838	.0102	.3288	.0907	0	.1612	.7182	
	327	.0262	0	.0120	.2114	.0270	0	.1223	.3989	
	334	.8184	0	.0041	.0778	.0593	0	.1146	.2742	
	341	.8205	.8839	.0057	.0837	.0774	.0028	.1132	.3863	

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO G·M <sup>-3</sup>	EUGLENO G·M <sup>-3</sup>	CYANO C·M <sup>-3</sup>	CRYPTO G·M <sup>-3</sup>	DINO G·M <sup>-3</sup>	CHRYSO G·M <sup>-3</sup>	BACILL G·M <sup>-3</sup>	TOTAL G·M <sup>-3</sup>
1981	41									
	78	.0157	.0021		.0022	.0546	.0541		.4751	.6037
	82	.0282	0		.0016	.0785	.0768		.7860	.9711
	90	.0093			.0053	.0513	.1416	.0003	.9063	1.1140
	99	.0183			.0032	.0447	.0705		.9468	1.0835
	106	.0106			.0013	.0493	.0737		.3923	.5272
	112	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	116	.0136			.0017	.0662	.3261		.5922	.9997
	125	.0151			.0015	.0345	.2321		.2517	.5348
	133	.0153			.0029	.0418	.1838	.0007	.2103	.4539
	141	.0605			.0056	.0780	.2226		.2548	.6215
	147	.0062			.0027	.0462	.1323		.1391	.3285
	154	.0370			.0152	.1221	.5399	.0042	.2436	.9620
	161	.0344			.0273	.1806	.3822	.2235	.1948	1.0427
	167	.0183			.0855	.2113	.3209	.2362	.2225	1.0946
	174	.0429			.1045	.3104	.1904	.0207	.1822	.8511
	181	.0585			.1133	.4620	.6254	.4345	.1589	1.8525
	188	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	194	.0974			.0247	.2740	.0431	.1136	.0095	.5623
	203	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	208	.0255			.0017	.1726	.0356	.0058	.0023	.2434
	217	.0443			.2046	.1991	.1550		.0332	.6363
	223	.0752			.0107	.1512	.2023		.0047	.4441
	231	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	237	.1374			.0017	.3460	.1613		.8043	.6507
	244	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	259	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	268	.1281			.0091	.3640	.0589		.0359	.5990
	272	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	279	.1612			.0166	.4850	.1107	.0113	.2477	1.0324
	287	.1160			.0092	.5149	.1779	.0045	.1195	.9410
	294	.0591			.0184	.5019	.1062	.0014	.0839	.7706
	300	.1169			.0120	.3757	.0330		.2477	.7853
	307	.0788			.0069	.7096	.0903		.1478	1.0335
	315	.0665			.0078	.5765	.0985	.0007	.2044	.9564
	322	.0648			.0107	.5623	.0828		.0894	.6101
	328	.1218			.0199	.3479	.1172		.1822	.7890
	335	.0563			.0028	.1804	.0125		.1618	.4338
	345	.0227			.0036	.1447	.0730		.0355	.2794

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1981	81									
	60	.8978	0		.0037	.1183	.3682	.0105	1.9898	2.5875
	63	.0511			.0013	.0688	.2588	.0399	2.0204	2.4403
	90	.0235	.0050		.0064	.1136	.3862	.0168	1.4301	1.9835
	98	.0191			.0083	.1619	.5206	.0146	1.4428	2.1673
	107	.0297	.0025		.0146	.1463	.3534	.0331	.6858	1.2655
	112	.0336			.0236	.2059	.3804	.0653	.6771	1.3860
	118	.0641			.0097	.1545	.7364	.1525	.5300	1.6470
	125	.0569			.0342	.0997	.6943	.0650	.4087	1.3589
	132	.0195			.0005	.0592	.6817	.0872	.2528	1.1808
	142	.0506			.0454	.0588	.1453	.0597	.0622	.4220
	148	.1336			.0290	.1087	.3445	.1168	.1077	.8424
	155	.1398			.0775	.3190	.4727	.4360	.1266	1.5716
	161	.0812			.2258	.3990	.3931	.0759	.1434	1.3183
	167	.0566			.0632	.4435	.5103	.3390	.0981	1.5107
	174	.1166			.0400	.3120	.2903	.1396	.0972	.956
	181	.4793			.0415	.3680	.3170	.1610	.0862	1.4493
	188	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	195	.3556			.0772	.2774	.0649	.2258	.0223	.0232
	204	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	211	.1499			.0259	.5007	.0378	0	.0161	.7304
	217	.2978			.1722	.7794	.3651	.0099	.0397	1.6642
	223	.3214			.0294	.1137	.1799	0	.0162	.6605
	230	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	237	.4271			.0166	.3720	.1892	0	.0209	.10259
	244	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	252	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	258	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	267	.1510			.0156	.2933	.0754	.0011	.1003	.6367
	273	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	278	.2278			.0548	.5860	.2779	.0015	.1469	1.2950
	287	.1991			.0297	.6980	.1846	0	.1571	1.2687
	293	.0983			.0120	.2989	.1180	.0016	.1809	.7091
	300	.0972			.0087	.4631	.1817	0	.0945	.8452
	307	.1111			.0094	.0552	.0322	0	.1564	.6143
	315	.0968			.0066	.6265	.0289	.0007	.2234	.9829
	322	.0689			.0076	.4842	.0672	0	.1898	.7377
	328	.0556			.0040	.3886	.0368	0	.0895	.5737
	335	.0480			.0052	.314	.0567	0	.1505	.5118
	342	.0239			.0110	.2763	.0340	0	.0361	.3412

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1981	93	78	.0356	0	.0037	.1819	.1323	.0012	1.3694	1.7241
		82	.0366	0	.0007	.0307	.2578	.0006	.1908	.5172
		89	.0309	.0035	.0042	.1009	.4501	0	1.1223	1.7119
		99	.0176	0	.0050	.1929	.2911	0	1.0495	1.5560
		103	.0167	0	.0028	.0878	.2524	.0022	.3795	.7413
		112	.0169	0	.0068	.0343	.3275	.0036	.5339	.9230
		117	.0503	0	.0090	.0975	.4434	.0582	.5089	1.4673
		124	.0930	0	.0598	.0929	1.0387	.0500	.3437	1.7761
		134	.1300	0	.0019	.3020	.6336	.3875	.4185	1.8735
		142	.0814	0	.0167	.4863	1.0965	.3817	.2091	2.2717
		146	.1115	0	.0095	.2880	.3808	.8920	.2085	1.8903
		153	.1469	0	.0691	1.1010	.7819	.5722	.3234	2.9944
		162	.0336	0	.0070	.2120	.2629	.0100	.0449	.5705
		166	.0651	0	.0148	.3561	.3785	.0289	.0152	.8587
		175	.1089	0	.0074	.1594	.0143	.0030	.0535	.3465
		180	.3105	0	.0341	.4230	.1421	.0440	.1131	1.0668
		189	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		195	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		204	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		211	.0385	0	.0024	.1275	.0687	.0066	.0057	.2494
		218	.1159	0	.4427	.3180	.1110	0	.0337	1.0213
		224	.1318	0	.0165	.6370	.5865	.0051	.0267	1.4036
		229	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		238	.3400	0	.0118	.0682	.2230	.0010	.0650	.7090
		243	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		257	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		268	.2206	0	.1390	.3269	.1448	.0175	.1648	1.0136
		279	.1640	0	.0192	.1509	.0056	.0182	.1833	.5412
		288	.0375	0	.0152	.1229	.0164	.0008	.0987	.2915
		294	.0774	0	.0357	.1417	.0759	.0023	.2507	.5837
		301	.0973	0	.0195	.5751	.0713	.0015	.3992	1.1638
		307	.0383	0	.0140	.5438	.0306	0	.5135	1.1403
		315	.0607	0	.0174	.3462	.1096	0	.3770	.9110
		316	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		322	.0416	0	.0016	.1805	.0748	.0076	.7352	.0413
		329	.0308	0	.0317	.2459	.1121	0	.6507	1.0711
		336	.0249	0	.0212	.1619	.0533	0	.3576	.6189
		346	.0222	0	.0168	.1590	.0433	.0012	.5548	.7965

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1982	12									
	67	.0229	0		.0037	.0807	.0769	0	.0773	.2614
	76	.0029	.0080		.0019	.0156	.0083		.0309	.0077
	83	.0135	0		.0034	.0756	.0193	0	.0544	.1662
	92	.0173			.0032	.0128	.0543		.0568	.2343
	95	.0081	0		.0022	.0636	.0397	0	.0631	.1767
	105	.0167			.0034	.0793	.0426	.0002	.0745	.2166
	116	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	124	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	130	.0363	0		.0009	.0916	.0297	0	.2069	.3653
	141	.0158			.0027	.0759	.0532	.0002	.2724	.4202
	148	.0355			.0022	.0485	.0145	.0002	.3448	.4456
	151	.0583			.0015	.0572	.0516	.0001	.5154	.6761
	158	.0435			.0038	.0920	.0884	0	.5394	.7671
	168	.1218			.0190	.3520	.3838	.4834	.1597	.5197
	172	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	179	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	186	.1680	0		.0393	.3077	.2421	.4305	.0527	.12402
	197	.0806	0		.0946	.3539	.0934	.1018	.3500	.1073
	203	.1276			.0680	.4270	.3186	.0289	.6788	.1648
	207	.0821			.1441	.2066	.4994	.0429	.4607	.1435
	215	.0952			.0665	.1324	.2527	.0364	.0221	.6053
	221	.2063			.0464	.0995	.1113	.0230	.0028	.4094
	231	.0995			.0421	.2642	.0196	.0086	.0945	.5286
	235	.1092			.1532	.3c14	.0814	.0048	.1456	.8856
	242	.0891			.0233	.5324	.1303	.0003	.0566	.8320
	250	.0957			.0179	.5212	.0184	0	.0734	.7266
	260	.1040			.0358	.4348	.0731	.0011	.1291	.7779
	266	.2548			.0311	.4707	.0974	.0004	.0786	.9329
	271	.1061			.0235	.7382	.1276	.0027	.1017	.0987
	277	.1139	0		.0166	.3727	.0685	.0009	.0262	.5988
	287	.1765			.0103	.2048	.0297	.0011	.0475	.4698
	291	.1961			.0062	.2658	.0428	.0002	.0351	.5662
	298	.0691			.0018	.1585	.0582	.0002	.0472	.3549
	305	.0086			.0018	.0637	.0888	0	.0394	.1942
	313	.0470	0		.0027	.2780	.0818	.0009	.1882	.5985
	322	.0440			.0066	.2563	.0476	0	.0876	.4421
	326	.0394	0		.0012	.1693	.0451	0	.0644	.3193

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1982	41									
	69	.0106	0		.0050	.0715	.0086	0	.1133	.2090
	77	.0121			.0027	.0558	.0408	.0001	.1324	.2438
	84	.0255			.0023	.0852	.0664	0	.1015	.2809
	91	.0201			.0041	.0586	.0443	0	.2136	.3407
	104	.0165			.0018	.0759	.0202	0	.2190	.3333
	119	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	124	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	131	.0531			.0042	.0764	.0763	.0001	.6004	.8106
	138	.0329			.0029	.0693	.0386	.0001	.3309	.4748
	148	.0509			.0022	.0688	.0537	0	.5425	.7181
	152	.0395			.0027	.0647	.0475	0	.5556	.6999
	158	.0623			.0062	.0731	.0890	0	.5005	.7310
	166	.0793			.0269	.2501	.3905	.2434	.1828	.1.1730
	173	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	180	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	187	.1081			.0429	.1957	.1314	.0964	.3140	.8885
	194	.2113			.0788	.3510	.1837	.1501	.2487	.1.2236
	202	.1661			.0453	.3588	.1839	.0577	.1526	.9643
	207	.0434			.0078	.1537	.0326	.0360	.0057	.2793
	216	.0750			.0076	.0688	.0422	.0011	.0015	.1962
	229	.0744			.0203	.1442	.0644	.0017	.0051	.3101
	236	.0495			.0295	.2353	.1255	.0104	.0024	.4525
	242	.3793			.0429	.2468	.2036	.0035	.0170	.8932
	251	.3095			.0215	.1770	.0928	0	.0261	.6269
	257	.2786			.0246	.2902	.1439	.0073	.0360	.7805
	266	.3911			.0424	.6597	.4364	.0019	.0413	.1.5727
	271	.2136			.0249	.4934	.1308	0	.0276	.6904
	278	.4378			.0290	.5437	.1233	0	.0916	.1.2254
	286	.2904			.0112	.2905	.1003	.0016	.0646	.7585
	292	.1554			.0369	.1706	.0994	0	.0766	.5389
	298	.0605			.0051	.1663	.0349	.0025	.0287	.2981
	306	.0545			.0067	.1963	.0434	.0027	.0355	.3410
	313	.0630			.0036	.2034	.0782	.0014	.0362	.3657
	320	.0371			.0012	.0855	.0210	.0010	.0345	.1003
	326	.0722			.0012	.2061	.0607	.0005	.0548	.3955

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1982	81									
	90	.8151	0	-99.9000	.0091	.1473	.1682	.0038	1.4647	1.8081
	116	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	125	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	131	.8697	0	.0127	.2819	.8995	.8240	.8542	2.0420	
	140	.1128	0	.0190	.1752	.5256	.1159	.3451	1.2936	
	147	.0615	0	.0146	.1550	.3006	.6607	.2506	1.4131	
	152	.8593	0	.0195	.1564	.2873	.1540	.5645	.9139	
	159	.0534	0	.0306	.1577	.1272	.0474	.2225	.6387	
	167	.0399	0	.0437	.1794	.2074	.0430	.4655	.9789	
	173	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	180	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	187	.8451	0	.0856	.1703	.1428	.6058	.2748	1.3243	
	196	.0626	0	.0427	.3150	.2698	.4812	.2237	1.3948	
	202	.0553	0	.0451	.2657	.8918	.3243	.0358	.8179	
	208	.1293	0	.0218	.3289	.1249	.0143	.0351	.6542	
	216	.1863	0	.0046	.4086	.1832	.0001	.0059	.6946	
	222	.1808	0	.0328	.2119	.0400	0	.0041	.4696	
	230	.3179	0	.0384	.7478	.4315	0	.0144	1.5500	
	236	.5852	0	.0196	.3017	.1107	.0018	.0092	1.0283	
	243	.2619	0	.0186	.5151	.1232	.0004	.0307	.9500	
	251	.2935	0	.0097	.3624	.1594	.0017	.0481	.8747	
	259	.3811	0	.0089	.3367	.1588	.0030	.0648	.9533	
	266	.2858	0	.0259	.2994	.1232	.0056	.0619	.8019	
	272	.4495	0	.0337	.2663	.1656	.0124	.1239	1.0714	
	278	.2375	0	.0241	.4841	.1786	.0039	.2326	1.1608	
	287	.3101	0	.0677	.4736	.2404	.0055	.0775	1.1748	
	292	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
	299	.0843	0	.0044	.3757	.0556	.0008	.0735	.5943	
	306	.1192	0	.0157	.9275	.1621	.0021	.1038	1.3303	
	313	.0672	0	.0030	.3367	.1038	.0003	.1172	.6462	
	320	.0449	0	.0003	.3380	.0674	.0007	.0563	.5075	
	327	.8790	0	.0002	.1998	.0289	0	.0980	.4058	

TABLE 4. Continuing

Year	Station	Julian Date	CHLORO	EUGLENO	CYANO	CRYPTO	DINO	CHRYSO	BACILL	TOTAL
			G·M <sup>-3</sup>							
1982	93	70	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		77	.0889	.0164	.0015	.0949	.0644		.4655	.6517
		83	.0360	.0135	.0053	.0861	.0617		.4070	.6096
		89	.0070		.0023	.0718	.0647	.0005	1.0341	1.1804
		95	.0274		.0253	.0635	.1049		1.0275	1.2485
		104	.0103		.0009	.0544	.1241		.2443	.4339
		120	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		125	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		131	.0214		.0005	.0230	.2028	.0017	.4705	.7198
		138	.0359		.0058	.1350	.1846	.0061	.5372	.9046
		140	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		141	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		147	.0661		.0017	.1118	.5828	.0349	.8243	1.6216
		152	.1691		.0087	.2958	.4057	.0257	.2730	1.1780
		159	.0635		.0068	.2212	.1228	.0237	.5414	.9793
		166	.1610		.0423	.4881	.3601	.1130	.1287	1.2932
		173	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		180	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
		188	.1976		.0155	.2920	.0752	.2254	.0606	.8663
		194	.1827		.0048	.2020	.0832	.1469	.0321	.6517
		202	.1368		.0172	.1467	.1151	.0172	.1915	.6245
		208	.1506		.0315	.1206	.1056	.0070	.0093	.4246
		216	.1676		.0331	.1681	.1858	.0146	.0165	.5857
		221	.2184		.0226	.1666	.1404	.0052	.0140	.5672
		229	.1851		.0167	.2404	.1463	.0004	.0086	.5975
		235	.2594		.0101	.1651	.1363	.0033	.0184	.5925
		243	.1988		.0420	.3912	.0963	.398	.0467	.8148
		252	.0562		.0181	.0745	.0757	.0039	.0539	.2123
		257	.1446		.0309	.3045	.1069	.0033	.0761	.6662
		265	.0690		.0288	.1373	.0417	.0051	.0457	.3276
		272	.1639		.1968	.5643	.1683	.0041	.0523	1.1566
		277	.2465		.0225	.2667	.1267	.0030	.0173	.6828
		285	.1620		.0246	.3220	.0573	.0018	.1319	.6996
		291	.1712		.0210	.2748	.0926	.0044	.1312	.6952
		299	.1586		.0048	.2772	.0265	.0011	.1359	.6044
		305	.0821		.0103	.6053	.0854	.0015	.3408	1.1253
		312	.2740		.0319	.2747	.0823	.0062	.4802	1.1514
		320	.1412		.0163	.1630	.0516	.0001	.8827	1.2548
		327	.0438		.0063	.0528	.0192	.0002	.2766	.3989

TABLE 5a. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, CYANOPHYCEAE, CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE, AND BACILLARIOPHYCEAE.

STATION 12 1981

	BIOMASS (G*M-3)												DATE																
	MAR 18	MAR 4	MAR 0	APR 6	APR 15	APR 21	APR 29	MAY 5	MAY 12	MAY 18	JUN 3	JUN 10	JUN 16	JUN 23	JUN 30	JUL 4	AUG 5	AUG 10	AUG 14	SEP 26	OCT 14	OCT 19	OCT 27	NOV 3	NOV 11	NOV 18	NOV 24	NOV 30	DEC 7
PANDORINA MORUM	0.000323																												
PEDIASTRUM SIMPLEX VAR DUODENARIUM	0.001124																												
PEDIASTRUM DUPLEX VAR CLATHRATUM	0.001409																												
SCENEDESMUS ECORNIS	0.000171																												
STAURASTRUM PARADOXUM VAR PARVUM	0.007880																												
ULOTHRIX VARIABILIS	0.001303																												
MOUGEOTIA SPP	0.002492																												
SPHAEROCYSTIS SCHROETERI	0.002905																												
COELASTRUM MICROPORUM	0.002322																												
OOCYSTIS BORGEI	0.002850	2																											
OSCILLATORIA MINIMA	0.001109	3																											
OSCILLATORIA LIMNETICA	0.009182		1																										
ANABAENA SPP	0.000360																												
CRYPTOMONAS EROSA	0.183131																												
RHODOMONAS MINUTA	0.133712	1		1		1	1																						
KATABLEPHARIS OVALIS	0.002822	1																											
GYMNONIDIUM HELVETICUM	0.070800	2	4	2	3	2	3	3	4	3	2	10	15	8	1	6	4												
GYMNONIDIUM UBERRIMUM	0.018317	1		2	2	10	19	8	6	3	11	15	24	1	6	4	8	2											
PERIDINIUM CINCTUM	0.004583								1		2	5	10	4	2	1	3	16	5	3	11	6	4	3	6	2	2		
PERIDINIUM ACICULIFERUM	0.060696								1		1	2	2	9	6	1	4	31	4	3	5	5	4	4	2	1	2		
GLENODINIUM SPP	0.046671	1				3	1	1	2	1	2	2	20	9	9	3	15	17	3	1	4	1	4	2	1	2	2		
CERATIUM HIRUNDINELLA	0.019167					1	2	1	2	1	2	2	9	9	3	15	17	3	11	9	73	5	5	4	2	1	2		
DINOBRYON SERTULARIA	0.005431																		19	49	16	6	7						
ASTERIONELLA FORMOSA	0.007731	1	1	5	1		2	2	1	2		2	9	10	3	3	1			6	2	6	10	3	7	2	4	5	1
DIATOMA ELONGATA	0.010362											1	8	17	5	4	28	3		1	2	2	6	3	7	3	2	1	4
CYCLOTELLA SPP	0.008236	51	26	21																									
MELOSIRA BINDERANA	0.014215	3	20	3	49	4	5	5	7	1																			
MELOSIRA ISLANDICA	0.048609	3	3	7	7	4	8	15	7	13	15	9																	
FRAGILARIA CAPUCINA	0.001696																												
FRAGILARIA CROTONENSIS	0.006236																												
NITZSCHIA ACICULARIS	0.006196	8	2	5	1	1		1	1	1	2	7	16	6	11	3	21			3	9	5	13	24	7	6	5	4	8
STEPHANODISCUS ASTRAEA VAR MINUTULA	0.037394	3	3	30	9	6	3													2	1	3	2	2	3	2	3	2	2
STEPHANODISCUS HANTZSCHII	0.02705	1	2	13	15	5	2													40	3		5	2					
STEPHANODISCUS NIAGARAE	0.005453					18	54	27																					
CYMATOPLEURA SOLEA	0.000000																												
TABELLARIA FENESTRATA	0.022684																												
SYNEDRA ULNA	0.026086	4	4	6	15	5	11	19	4	4	5	4	2		2	1	8			4	5	16	12	25	5	2	8		
SYNEDRA ACUS	0.007733					3		1	1	4		21	42	16	4					2				1					

TABLE 5b. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, CYANOPHYCEAE, CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE, AND BACILLARIOPHYCEAE.

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TABLE 5C. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, CYANOPHYCEAE,  
CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE, AND BACILLARIOPHYCEAE.

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	BIOMASS (G*M-3)		DATE																								
	M	M	A	A	A	P	P	M	M	J	J	J	J	J	A	A	S	O	O	O	N	N	N	N	D		
	A	A	R	R	R	R	R	Y	A	U	U	U	U	L	U	G	P	C	T	T	O	V	O	V	E		
	2	2	3	1	2	2	2	1	2	1	3	0	6	3	4	5	6	4	9	7	3	1	8	4	8		
	1	4	1	8	5	1	8	5	2	1	3	0	6	3	4	8	5	6	4	9	7	3	1	8	4	8	
PANDORINA MORUM	0.002458																										
PEDIASTRUM SIMPLEX VAR	0.0003178																										
DUODENARIUM																											
PEDIASTRUM DUPLEX VAR	0.0006973																										
CLATHRATUM																											
SCENEDESmus ECORNIS	0.0000231																										
STAURASTRUM PARADOXUM	0.0008197																										
VAR PARVUM																											
ULOTHRIX VARIABILIS	0.0005489																										
MOUGEOTIA SPP	0.018579	6	1																								
SPHAEROCYSTIS SCHROETERI	0.004060																										
COELASTRUM MICROPORUM	0.006780																										
OOCYSTIS BORGEI	0.008918	1																									
OSCILLATORIA MINIMA	0.011835																										
OSCILLATORIA LIMNETICA	0.006867																										
ANABAENA SPP	0.006133																										
CRYPTOMONAS EROSA	0.189057																										
RHODOMONAS MINUTA	0.118721	1	1	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
KATABLEPHARIS OVALIS	0.010058	1	1	2	2	2	2	4	2	2	1	4	2	4	1	1	1	25	5	2	1	4	1	3	4	1	
GYMNOBINIUM HELVETICUM	0.060635	5	3	3	6	2	4	4	2	5	5	18	10	10	10	2											
GYMNOBINIUM UBERRIMUM	0.049150	5	1	9	9	3	10	24	22	5	5	18	10	6	5	1											
PERIDINIUM CINCTUM	0.015148																										
PERIDINIUM ACICULIFERUM	0.085649	5	6	2	9	9	3	7	9	21	1	1	2	1	1	1	1	33	23	19							
GLENODINIUM SPP	0.042665	2	6	2	9	9	3	6	4	1	1	3	6	13	7	23	3	4	2	2	3						
CERATIUM HIRUNDINELLA	0.012910																	2	16	4	10	44	16	1	8		
DINOBRYON SERTULARIA	0.005714																										
ASTERIONELLA FORMOSA	0.009455	2	3	4	3	3	3	2	1	1	1	1	1	3													
DIATOMA ELONGATA	0.007184	3	6	10	4	2	9	5	3	3	1	5	12	11	4	8	5										
CYCLOTELLA SPP	0.007996	21	48	28																							
MELOSIRA BINDERANA	0.188355	21	21	19	16	5	5	4	2																		
MELOSIRA ISLANDICA	0.018519	21	14	18	20	3	5	6	3	3																	
FRAGILARIA CAPUCINA	0.005137		8	6	8	25		15																			
FRAGILARIA CROTONENSIS	0.012676	3	11	2	2	2	6	5	12	2	2	6	5	5	10	1		3	1	1	2	9	1	1	2	6	
NITZSCHIA ACICULARIS	0.003805	3	3	2	4	2	5	5	13	13	3	6	5	4	10	2											
STEPHANO DISCUS ASTRAEA	0.019374	2		15	2	5	4											1	2		1	9	5	5	3	5	9
VAR MINUTULA																											
STEPHANO DISCUS HANTZSCHII	0.005562	3	5	4	16	12	16	4	13									2	5	2	1	2	4	2	6	1	
STEPHANO DISCUS NIAGARAE	0.025756	17	26	7	7													3	5	9	3	6	6	3	3		
CYMATOPLEURA SOLEA	0.000000																										
TABELLARIA FENESTRATA	0.053457	11	2	7	9	6	6	6	5	2	5	3	1	2	2			3	2	3	2	3	3	1	3		
SYNEDRA ULNA	0.014153	36	34	6	8	3	7	1										17	17								
SYNEDRA ACUS	0.001007		9	9		11	34																				

TABLE 5d. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, CYANOPHYCEAE, CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE, AND BACILLARIOPHYCEAE.

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	BIOMASS (G*M-3)												DATE																
	MAR 19	MAR 4	MAR 1	APR 9	APR 5	APR 21	APR 28	MAY 5	MAY 12	MAY 19	MAY 26	JUN 3	JUN 10	JUN 16	JUN 23	JUN 30	JUL 7	AUG 14	AUG 21	SEP 25	OCT 6	OCT 13	OCT 19	OCT 27	NOV 3	NOV 11	NOV 18	NOV 25	NOV 30
DORINA MORUM	0.000000																												
IASTRUM SIMPLEX VAR DUODENARIUM	0.007999																												
IASTRUM DUPLEX VAR CLATHRATUM	0.004032																											3	
NEDESMUS ECORNIS	0.001848																												
URASTRUM PARADOXUM VAR PARVUM	0.002401																										11	16	
THRIX VARIABILIS	0.008553																										2	4	
GEOTIA SPP	0.005555																										1		
AEROCYSTIS SCHROETERI	0.004391																										2	4	
LASTRUM MICROPORUM	0.004331																										3		
YSTIS BORGEI	0.006176																										18		
ILLATORIA MINIMA	0.001417																										32	1	
ILLATORIA LIMNETICA	0.003412	6		1		2		1	14	8	7	5	5	1	8			8	2							6	9		
BAENA SPP	0.019692																	72	7	1	20	1	1	1	1	1			
PTOMONAS EROSA	0.129961	2		1	1	1		1	1	3	6	3	5	2	2	1	4	1	5	10	5	2	2	1	2	4	1		
DOMONAS MINUTA	0.109188	2		1	3	1		1	1	5	6	4	6	3	7	3	6	1	3	6	2	2	1	2	3	2	2		
ABLEPHARIS OVALIS	0.006091							1	6	8	7	16	20	3	4	1	5	2	5	8	2	2	1	1					
NODINIUM HELVETICUM	0.072015	2	1	3	6	2		5	7	28	10	3	3	8	1	10		2											
NODINIMUM UBERRIMUM	0.038347	2	4	8	9	5	9	9	3	19	7	2	2	8	1	10			2	60	1								
IDINIUM CINCTUM	0.002497																										39		
IDINIUM ACICULIFERUM	0.098500	5	8	1	3	5	10	28	4	9	1	2		7	9		6	4	3	6	2	3							
NODINIUM SPP	0.033642	3	1														8	65	18							4	2		
ATIUM HIRUNDINELLA	0.012790																										3	2	
OBRYON SERTULARIA	0.006335																												
ERIONELLA FORMOSA	0.007087	4	1	6	8	6	3	2	5																				
TOMA ELONGATA	0.010129	6		1	5	2	7	9	1	2	16			1	1	2	2	4				1	3	3	1	2	9		
LOTELLA SPP	0.004690	55	4	40																							18		
OSIRA BINDERANA	0.071595	33	32	16	3	3	1	2																					
OSIRA ISLANDICA	0.017166	29	29	16	10	6	3		1	1																1			
GILARIA CAPUCINA	0.008718	29						5		5																11	36		
GILARIA CROTONENSIS	0.005667																										8	2	
ZSCHIA ACICULARIS	0.007855	6	2	10	4	2	1	23	8	4	6	1	1	1	1	8		6	34	8	3	8	7	9	1	12	9		
PHANODISCUS ASTRAEA	0.039062	9	4	22	8	4	4	2	1	2	2							1	4	7	2				4	1	2	4	4
PHANODISCUS RANTZSCHII	0.008136	9	30	3	4	10	9	5	5	5	1	2					3	13											
PHANODISCUS NIAGARAE	0.113237	2	1					5	5	5	3	1	2																
ATOPLEURA SOLEA	0.002465							21											29										
ELLARIA FENESTRATA	0.032580	19	1	7	42	12	3	10	7	7	4	7	5				1		1	3	2		1	5	7	3	15		
EDRA ULNA	0.017292	19	1	7	42	12	3	6									11												
EDRA ACUS	0.001510	6	6	5	11			23	16																6				

TABLE 5e. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, EUGLENOPHYCEAE, CYANOPHYCEAE,  
CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE AND BACILLARIOPHYCEAE.

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	BIOMASS (G*M^-3)		DATE																														
	M	A	M	A	P	A	P	M	M	A	M	J	J	J	J	A	A	A	A	S	S	S	O	O	O	O	N	N	N				
	R	R	R	R	R	R	R	Y	Y	Y	Y	J	J	L	L	G	G	G	G	E	E	E	C	C	C	C	O	O	O				
	8	7	4	2	5	5	1	1	2	3	1	7	7	5	4	3	9	9	3	7	7	3	8	4	4	8	1	9	7				
OOCYSTIS SPP	0.016476															6	19	5	2		1	20	1	8	8	13	4	1	4	4			
STAURASTRUM PARADOXUM	0.004258															8				6	16	4	10	13	10	11							
PEDIASTRUM SIMPLEX VAR DUODENARIUM	0.000861																			74	16	8											
COSMARIUM SPP	0.005728																																
SCENEDESMUS BIJUGA	0.002285	2	2	3	1	1	2	2	2	6	3	4	2	1	7	9	5	3	2	3	6	1	6	11	6	1	5	19	8				
ULOTHRIX SPP	0.000555	6																															
SPHAEROCYSTIS SCHROETERI	0.003315																																
PHACUS SPP	0.000243	100																															
OSCILLATORIA LIMNETICA	0.016529															3	6	16	12	21	4	25	1	1	2	4	2	6	4	5			
MERISMOPEDIA SPP	0.001883															2	4	3	17	9	10	23	11	2	8	6	4	5	2				
ANABAENA SPP	0.005347																31	21	2														
KATABLEPHARIS OVALIS	0.014217															4	9	7	8	4	1	1	1	3	5	5	6	8	8	5			
CRYPTOMONAS EROSA	0.111072	1	1	1	1	1	1	1	1	1	1	4	4	4	5	4	4	4	2	1	2	4	1	3	4	6	3	1					
RHODOMONAS MINUTA	0.112622															1	4	3	3	5	1	3	5	7	8	5	5	12	3	1			
CRYPTOMONAS CURVATA	0.007119															2	1	7	10	6	1	5	1	2	9	14	1	7	3	1			
GLENODINIUM SPP	0.024040															1	1	2	2	1	3	2	1	4	1	2	1	1	5	3			
CERATIUM HIRUNDINELLA	0.006006																			16													
PERIDINIUM ACICULIFERUM	0.018904															32	1	1	3	7	4	5	2	6	26	25	6	5	12	1			
PERIDINIUM CINCTUM	0.001347																																
GYMNODINIUM UBERRIMUM	0.003991																8	11	9	3	23	56	1										
GYMNODINIUM HELVETICUM	0.048201	3		2	2	2		1									16	9	3	7	19	1											
DINOBYRON SERTULARIA	0.003718																	40	45	8	2	2											
FRAGILARIA CAPUCINA	0.002615																	15	32														
FRAGILARIA CROTONENSIS	0.006404		1															1	6	6	3	8	15	9	6	2	3	8	9	2	1		
TABELLARIA FENESTRATA	0.017601																		11	1	10	18	8	8	7	3	6	4	3	1	4		
NITZSCHIA LINEARIS	0.009021	4	1	3	5	2	4	6	15	15	17	12	3																				
MELOSIRA ISLANDICA	0.075321					1	1	7	8	10	15	16							4	16	9		1										
MELOSIRA BINDERANA	0.001063	10		35														25															
DIATOMA ELONGATA	0.020079																	18	6	20	20	23		7									
STEPHANO DISCUS ASTRAEA VAR MINUTULA	0.005839	10		2	2		1	2		1	3	2																					
STEPHANO DISCUS NIAGARAE	0.000741																																
STEPHANO DISCUS HANTZSCHII	0.003445	11	2	2	3	1	3		4	11	20	20								6	9		3	2	1	1	2	100					
SYNEDRA ULNA	0.005176	11	2	16	3	10	3		4	11	20	20																		7	2	15	1

TABLE 5f. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, EUGLENOPHYCEAE, CYANOPHYCEAE, CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE AND BACILLARIOPHYCEAE.

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TABLE 5g. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, EUGLENOPHYCEAE, CYANOPHYCEAE,  
CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE AND BACILLARIOPHYCEAE.

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	BIOMASS (G*M <sup>-3</sup> )		DATE																										
	M A R 3	M A Y 1	M A Y 2	J U N 1	J U N 8	J U N 6	J U L 6	J U L 5	J U L 1	J U L 2	A U G 7	A U G 4	A U G 1	A U G 8	A U G 4	S E P 1	S E P 3	S E P 2	O C T 5	O C T 4	O C T 1	N O V 6	N O V 2	N O V 1	N O V 7	N O V 3			
	1	1	7	1	8	6	6	5	1	2	4	3	8	1	3	7	3	22	9	1	8	2	1	7	17	5	2	4	1
OOCYSTIS SPP	0.043471																												
STAURASTRUM PARADOXUM	0.011292																												
PEDIASTRUM SIMPLEX VAR DUODENARIUM	0.001882																												
COSMARIUM SPP	0.005932	2																											
SCENEDESMUS BIJUGA	0.001615	3	9	11	8	5	1	2	4	3	1	8	1	3	7	3	22	9	1	8	2	1	7	17	5	2	4	1	
ULOTHRIX SPP	0.003659																												
SPHAEROCYSTIS SCHROETERI	0.033391																												
PHACUS SPP	0.000000																												
OSCILLATORIA LIMNETICA	0.006881	4	3	10	7	9	15	14	12	17	1	6	7	39	16	4	2	1	10	12	1	28	1	6					
MERISMOPEDIA SPP	0.000994																												
ANABAENA SPP	0.008347																												
KATABLEPHARIS OVALIS	0.010883		5	3	3	3	3	2	3	5	4	3	1	1	3	5	5	4	2	5	8	6	2	7	2	2	2		
CRYPTOMONAS EROSA	0.182907	1	1	1	1	1	1	2	1	2	3	4	6	3	13	4	7	5	5	4	3	6	5	4	4	1	1		
RHODOMONAS MINUTA	0.121633	2	6	4	1	2	1	1	2	5	2	3	1	1	1	3	1	6	3	1	2	3	6	4	20	7	3		
CRYPTOMONAS CURVATA	0.013609	5	4	1	8	1	13	8	1	1	1	1	4	6	6	3	9	4	2	1	6	2							
GLENODINIUM SPP	0.040350	5	26	1	4	4	5	10	6	13	3	4	4	4	27	5	3	6	2	5	4	10	16	1	2	3	1	1	
CERATIUM HIRUNDINELLA	0.047787																												
PERIDINUM ACICULIFERUM	0.045797	2	26	16	2	9	1	4	4	3	3	3	2	3	1	1	1	6	2	5	4	10	16	1	2	3	1		
PERIDINUM CINCTUM	0.015504																												
GYMNODINIUM UBERRIMUM	0.018150	7	28	34	14	12	1	1	4	4	4	4	4	9	6	6	13	11	7	11	9						6		
GYMNODINIUM HELVETICUM	0.033048	3	15	15	16	3	4	2		8																			
DINOBYRON SERTULARIA	0.006764	1	2	7	10	1	1	33	27	13																			
FRAGILARIA CAPUCINA	0.006224		6					31	2	3																	2		
FRAGILARIA CROTONENSIS	0.014632	7	7	3	11	4	3	18	9	6	1																		
TABELLARIA FENESTRATA	0.042871	25	12	8	4	3	1	8	5	6	1	2																	
NITZSCHIA LINEARIS	0.003839	18	6	26	18	8	11	2																					
MELOSIRA ISLANDICA	0.022657	32	29	4	6	8	5	12																					
MELOSIRA BINDERANA	0.043630	63	25	3	3	3	2																						
DIATOMA ELONGATA	0.025046		2	9	7	15	14	14	17	16																			
STEPHANODISCUS ASTREA	0.014869	18	1																										
STEPHANODISCUS ASTREA VAR MINUTULA																													
STEPHANODISCUS NIAGARAE	0.008691	8						8																					
STEPHANODISCUS HANTZSCHII	0.001392	1	6	6	6	3	2																						
SYNEDRA ULNA	0.004660	44	4	11	6	3																							

TABLE 5h. MEAN DAILY BIOMASS AND PERCENTAGE OF SEASONAL BIOMASS PER SAMPLE FOR ALGAL SPECIES CONTRIBUTING GREATER THAN 5% TO A SAMPLE IN THE YEAR. THE SPECIES ARE SUBDIVIDED INTO CHLOROPHYCEAE, EUGLENOPHYCEAE, CYANOPHYCEAE, CRYPTOPHYCEAE, DINOPHYCEAE, CHRYSOPHYCEAE AND BACILLARIOPHYCEAE.

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	BIOMASS (G*M <sup>-3</sup> )		DATE																									
	M A R 1 8	M A R 2 4	M A R 3 5	A P R 1 5	A P R 4 5	M A Y 1 1	M A Y 1 1	M A J 8 7	J U N 1 1	J U N 8 1	J U N 5 7	J U L 1 3	J U L 1 1	J U L 2 7	A U G 4 9	A U G 1 8	A U G 2 3	A U G 3 1	S E P 1 9	S E P 2 7	S E P 2 2	O C T 1 4	O C T 1 4	O C T 1 8	O C T 2 6	N O V 1 1	N O V 8 7	N O V 1 2
OOCYSTIS SPP	0.024680																											
STAURASTRUM PARADOXUM	0.013821																											
PEDIASTRUM SIMPLEX VAR DUODENARIUM	0.0003429																											
COSMARIUM SPP	0.010405																											
SCENEDESMUS BIJUGA	0.0001025	4	5		1	1	1	3	4	9	3	4	12	3	2	7	3	10	1	6	3	8	3	3	8	5	1	4
ULOTHRIX SPP	0.0002067																											
SPHAEROCYSTIS SCHROETERI	0.012397																											
PHACUS SPP	0.000000																											
OSCILLATORIA LIMNETICA	0.0003350	1	4	1	1																							1
MERISMOPEDIA SPP	0.001399																											
ANABAENA SPP	0.010002																											
KATABLEPHARIS OVALIS	0.010167																											
CRYPTOMONAS EROSA	0.116822	1																										
RHODOMONAS MINUTA	0.082039	1	1	1	1	1																						
CRYPTOMONAS CURVATA	0.006881	1	1	1	1	1																						
GLENODINIUM SPP	0.018915																											
CERATIUM HIRUNDINELLA	0.011517																											
PERIDINIUM ACICULIFERUM	0.056284	1	2	1	5	5	7	7	27	10		1	1	2	1	2	2	3	3	5	1	1	2	5	1	1	1	
PERIDINIUM CINCTUM	0.013689																											
GYMNOBINIUM UBERRIMUM	0.006305																											
GYMNOBINIUM HELVETICUM	0.027565	4	1	3		10	13	14	16	2	12		23		7													
DINOBRYON SERTULARIA	0.001470																											
FRAGILARIA CAPUCINA	0.000495																											
FRAGILARIA CROTONENSIS	0.007294	1																										
TABELLARIA FENESTRATA	0.015386																											
NITZSCHIA LINEARIS	0.005611	12	4	6	3		15	12	14	20																		2
MELOSIRA ISLANDICA	0.022937	5	9	8	11	1	2	2	29																			
MELOSIRA BINDERANA	0.015614	5	4	23	42	11	1	1	4																			
DIATOMA ELONGATA	0.007151	1	2				3	2	5	7	41	11	3	11														
STEPHANODISCUS ASTRAEA VAR MINUTULA	0.024760	10	1	5		2	10	13	8	3	2	1	1	3	1													
STEPHANODISCUS NIAGARAE	0.102034																											
STEPHANODISCUS HANTZSCHII	0.044518	15	17	26	11	7	4	4	7	1	3	5																
SYNEDRA ULNA	0.014669	8	3	72	2	8	8	3																				

Table 6. Average benthic populations, dry biomass (mg) per  $\text{m}^2$ , and diversity indexes at the sampled stations in Lake Ontario, during early spring, July and November, 1981 - 1983.

Listed for each station are the site number, depth (m), date as month and year, number of replicate Ponars collected, average of the total number of organisms per  $\text{m}^2$ , average dry biomass ( $\text{mg} \cdot \text{m}^{-2}$ ) calculated as shell free weight for the molluscs, the H diversity for the numbers, biomass (wt) and species diversity (D). For each of the taxa present, the average number, Standard Error (in brackets) and dry weight as milligrams per  $\text{m}^2$  are listed.

SITE=	41 -125.M	D=	381	REPS=	5	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D	no.	S.E.	mg. dry
	TAXA					2511	827.87		.4582	.4084	.7664			
STYLODRILUS HERINGIANUS	221	(57.0)	65.77	IMM TUBIFICIDS + HAIRS		10	( 2.5)	2.83	PISIDIUM SPP		23 ( 9.3)	1.58		
CALANOID	15	(10.9)	.07	MYSIS		15	( 7.1)	15.27	PONTOPOREIA		2223 (58.0)	742.01		
HETERO. OLIVERI	4	( 4.0)	.34											
SITE=	41 -126.M	D=	781	REPS=	5	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D	no.	S.E.	mg. dry
	TAXA					2926	1174.60		.7865	.6456	1.0023			
STYLODRILUS HERINGIANUS	355	(23.0)	106.41	TUBIFEX TUBIFEX		26	( 1.9)	6.99	LIMNODRILUS HOFFMEISTER		12 ( 0.8)	3.40		
PISIDIUM SPP	39	(10.6)	2.91	CALANOID		30	(10.4)	.14	MYSIS		76 (19.7)	76.36		
PONTOPOREIA	2334	(345 )	972.35	HETEROTRISOCOCLADIUS SP		27	(27.0)	3.65	HETERO. OLIVERI		27 (14.1)	2.39		
SITE=	41 -125.M	D=	1181	REPS=	5	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D	no.	S.E.	mg. dry
	TAXA					2220	848.77		.7343	.6023	.7787			
STYLODRILUS HERINGIANUS	497	(131 )	149.32	IMM TUBIFICIDS + HAIRS		12	( 3.1)	2.64	PISIDIUM SPP		53 (18.3)	3.70		
CALANOID	4	( 4.0)	.15	CANDONA		4	( 4.0)	.12	MYSIS		15 ( 7.0)	15.27		
PONTOPOREIA	1635	(221 )	677.57											
SITE=	81 - 35.M	D=	381	REPS=	5	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D	no.	S.E.	mg. dry
	TAXA					10457	2664.64		.3169	.4195	1.1885			
NEMATODA	8	( 8.0)	.08	TURBELLARIA		54	(30.2)	53.17	IMM TUBIFICIDS + HAIRS		131 (25.0)	36.72		
IMM TUBIFICIDS NO HAIRS	99	(18.6)	30.06	TUBIFEX TUBIFEX		66	(12.4)	36.81	LIMNODRILUS HOFFMEISTER		55 (10.3)	28.43		
L. MAUMEENSIS	11	( 2.0)	5.74	PISIDIUM SPP		117	(62.2)	11.01	CALANOID		11 ( 7.5)	.05		
ASELLUS	8	( 8 )	5.07	PONTOPOREIA		9893	(674 )	2457.19	HETERO. OLIVERI		4 ( 4.0)	.31		

Table 6. (continued)

SITE= 81 - 35.M D= 781 REPS= 5 TOT.NO/M TAXA	TOT.WT	MG	H NO.	H WT.	D				
	4944	3496.46	.4887	.3849	1.4108				
TURBELLARIA	8 ( 8.0 )	7.43	IMM TUBIFICIDS + HAIRS	142 (65.2 )	39.64	IMM TUBIFICIDS NO HAIRS	33 (15.2 )	9.98	
TUBIFEX TUBIFEX	120 (54.8 )	67.22	LIMNODRILUS HOFFMEISTER	98 (45.5 )	50.97	SPHAERIUM SPP	4 ( 4.0 )	63.05	
PISIDIUM SPP	15 (10.9 )	1.42	MYSIS	4 ( 4.0 )	3.82	PONTOPOREIA	4470 (999 )	3245.70	
TRICHOPTERA (CADDIS FLY)	4 ( 4.0 )	3.88	HETEROTRISSO. CHANGI	4 ( 4.0 )	.34	CHIRONOMUS SPP	38 (10.9 )	3.00	
SITE= 81 - 35.M D=1181 REPS= 5 TOT.NO/M TAXA	TOT.WT	MG	H NO.	H WT.	D				
	7592	3729.97	.7694	.4667	1.0073				
NEMATODA	4 ( 4.0 )	.30	IMM TUBIFICIDS + HAIRS	255 (120 )	71.06	IMM TUBIFICIDS NO HAIRS	542 (111 )	164.88	
TUBIFEX TUBIFEX	64 (15.3 )	19.69	P. MOLDAVIENSIS	64 (13.1 )	.56	LIMNODRILUS HOFFMEISTER	159 (31.7 )	82.48	
PISIDIUM SPP	284 (75.9 )	26.65	CALANOID	7 ( 7.0 )	.10	PONTOPOREIA	6205 (999 )	3358.90	
GAMMARUS SPP	8 ( 4.6 )	5.35							
SITE= 93(22)- 35.M D=381 REPS=4 TOT.NO/M TAXA	TOT.WT	MG	H NO.	H WT.	D				
	7958	6321.11	.	.	2.004				
IMM TUBIFICIDS + HAIRS	4287 (225 )	1185.47	IMM TUBIFICIDS NO HAIRS	2339 (123 )	710.23	PELOSCOLEX MULTISETOSUS	422 (22.1 )	138.50	
HELOBDELLA STAGNALIS	25 ( 8.3 )	32.81	GLOSSOPHONIA SPP	5 ( 5.0 )	6.31	PHYSA SPP	5 ( 5.0 )	0.60	
SPHAERIUM SPP	301 (36.0 )	4017.10	PISIDIUM CASERTANUM	25 (11.6 )	2.33	PISIDIUM HENSLOWI	50 (23.2 )	4.51	
PISIDIUM LILLIJEBORGI	69 (31.9 )	7.48	PISIDIUM NITIDUM	5 ( 5.0 )	0.48	PISIDIUM IDAHOENSE	5 ( 5.0 )	1.60	
CANDONA	44 (34.9 )	1.01	HARPACTICOID	5 ( 5.0 )	0.13	ASELLUS	220 (45.3 )	148.10	
GAMMARUS FASCIATUS	63 ( 5.0 )	44.20	PONTOPOREIA	13 ( 5.0 )	2.99	PROCLADIUS SPP	50 (16.6 )	8.29	
CHIRONOMUS SPP	25 (16.6 )	8.97							
SITE= 93 - 18.M D= 581 REPS= 3 TOT.NO/M TAXA	TOT.WT	MG	H NO.	H WT.	D				
	2192	1838.72	2.1295	1.5463	1.6899				
IMM TUBIFICIDS + HAIRS	283 (49.2 )	78.81	IMM TUBIFICIDS NO HAIRS	425 (75.2 )	129.06	TUBIFEX TUBIFEX	212 (36.9 )	118.60	
ILYODRILUS TEMPLETONI	71 (12.1 )	19.72	PELOSCOLEX MULTISETOSUS	495 (86.4 )	163.36	LIMNODRILUS HOFFMEISTER	353 (61.0 )	182.86	
VALVATA TRICARINATA	13 (13.0 )	13.04	SPHAERIUM SPP	69 (58.0 )	1057.80	PISIDIUM SPP	101 (22.6 )	10.08	
MYSIS	13 (13.0 )	12.67	ASELLUS	25 (12.4 )	16.88	PONTOPOREIA	82 (22.6 )	19.69	
PROCLADIUS SPP	44 ( 6.2 )	10.88	HETEROTRISSO. CHANGI	6 ( 6.0 )	5.27				
SITE= 93 - 70.M D= 781 REPS= 5 TOT.NO/M TAXA	TOT.WT	MG	H NO.	H WT.	D				
	5093	2449.72	1.1100	1.0416	1.2887				
STYLODRILUS HERINGIANUS	610 (290 )	133.17	IMM TUBIFICIDS + HAIRS	244 (116 )	67.93	TUBIFEX TUBIFEX	203 (96.5 )	178.31	
HELOBDELLA STAGNALIS	27 (21.0 )	22.00	GYRAULUS SPP	4 ( 4.0 )	.40	PISIDIUM SPP	242 (147 )	22.74	
MYSIS	38 (12.5 )	38.17	ASELLUS	53 (47.2 )	35.30	PONTOPOREIA	3595 (999 )	1837.40	
GAMMARUS SPP	15 (12.6 )	10.69	TRICHOPTERA (CADDIS FLY)	4 ( 4.0 )	3.88	HETEROTRISSO. CHANGI	58 (28.5 )	99.73	

Table 6. (continued)

SITE	M	D	REPS	TOT.	NO/M	TOT.	WT	MG	H	NO.	H	WT.	D	no.	S.E.	mg.	dry		
				TAXA		7152	3672.45	.9163	.	.5816	2.1408								
NEMATODA				4	( 4.0)		.01	STYLODRILUS HERINGIANUS		291	( 78.7)	60.99	IMM TUBIFICIDS + HAIRS	194	( 52.4)	54.11			
IMM TUBIFICIDS NO HAIRS				65	( 17.5)	19.90		TUBIFEX TUBIFEX		97	( 26.2)	54.25	PELOSCOLEX MULTISETOSUS	32	( 8.8)	10.64			
POTOMOTHRIX VEJDOVSKYI				129	( 34.3)	1.14		P. MOLDAVIENSIS		32	( 8.8)	2.30	LIMNODRILUS HOFFMEISTER	32	( 9.4)	16.54			
HELOBDELLA STAGNALIS				4	( 4.0)	4.01		PHYSA SPP		8	( 5.6)	29.94	GYRAULUS SPP	11	( 11.0)	.01			
AMNICOLA SPP				8	( 8.0)	7.82		SPHAERIUM SPP		8	( 4.7)	126.10	PISIDIUM SPP	498	( 143)	4.58			
MYSIS				4	( 4.0)	3.82		ASELLUS		8	( 8.0)	5.07	PONTOPOREIA	5701	( 959)	3266.97			
GAMMARUS SPP				11	( 11.0)	.52		PROCLADIUS SPP		15	( 6.9)	3.73							
SITE	-	41	-	125.M	D=	382	REPS	=	5	TOT.	NO/M	TOT.	WT	MG	H	NO.	H	WT.	D
					TAXA							2363	931.47		.5937		.5064		.7724
TURBELLARIA				4	( 4.0)		3.71	STYLODRILUS HERINGIANUS		370	( 62.3)	101.01	TUBIFEX TUBIFEX		8	( 2.6)	2.14		
PISIDIUM SPP				27	( 7.5)	1.13		CALANOID		4	( 4.0)	.01	MYSIS		23	( 13.9)	22.90		
PONTOPOREIA				1927	( 323 )	800.57													
SITE	-	41	-	125.M	D=	782	REPS	=	4	TOT.	NO/M	TOT.	WT	MG	H	NO.	H	WT.	D
					TAXA							2174	899.68		.4739		.4503		.5205
STYLODRILUS HERINGIANUS				202	( 27.1)	54.81		PISIDIUM SPP			14	( 7.0)	.94	CALANOID		5	( 4.7)	.01	
MYSIS				52	( 14.2)	50.50		PONTOPOREIA			1901	( 62.3)	793.42						
SITE	-	41	-	125.M	D=	1182	REPS	=	4	TOT.	NO/M	TOT.	WT	MG	H	NO.	H	WT.	D
					TAXA							3788	994.09		.5532		.6210		.6068
STYLODRILUS HERINGIANUS				506	( 42.1)	136.72		IMM TUBIFICIDS + HAIRS			15	( 0.2)	3.22	PISIDIUM SPP		63	( 4.4)	4.41	
CALANOID				6	( 6.0)	.16		MYSIS			27	( 12.6)	42.55	PONTOPOREIA		3171	( 187)	807.03	
SITE	-	81	-	35.M	D=	482	REPS	=	4	TOT.	NO/M	TOT.	WT	MG	H	NO.	H	WT.	D
					TAXA							11268	2748.41		.4069		.5146		.8575
STYLODRILUS HERINGIANUS				35	( 6.1)	7.33		IMM TUBIFICIDS + HAIRS			35	( 6.0)	9.78	IMM TUBIFICIDS NO HAIRS		386	( 67.5)	117.47	
TUBIFEX TUBIFEX				34	( 6.00)	18.55		LIMNODRILUS SPP			34	( 6.2)	18.18	LIMNODRILUS HOFFMEISTER		175	( 30.6)	90.86	
L. CLAPAREDEIANIS				34	( 6.0)	18.28		PISIDIUM SPP			165	( 70.8)	15.55	PONTOPOREIA		10370	( 497)	2452.41	

SITE=	D=	REPS=	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D	no.	S.E.	mg. dry
			TAXA	21851	5516.22	.9030	.9094	1.2010		
NEMATODA	6 ( 6.0)	.04	IMM TUBIFICIDS + HAIRS	61 ( 8.3)	17.12	IMM TUBIFICIDS NO HAIRS	61 ( 8.2)	18.57		
TUBIFEX TUBIFEX	184 (24.8)	77.51	LIMNODRILUS HOFFMEISTER	92 (12.3)	47.52	L. ANGUSTIPENIS	13 ( 4.1)	6.97		
L. CLAPAREDEIANIS	15 ( 2.0)	7.92	PISIDIUM SPP	326 (53.5)	30.53	CANDONA	54 (18.9)	.18		
MYSIS	18 (14.1)	18.86	PONTOPOREIA	10502 (569 )	2645.56					
SITE=	81 - 35.M	D=1182	REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D		
			TAXA	7461	2729.35	.9635	.7117	.7850		
NEMATODA	6 ( 6.0)	.03	IMM TUBIFICIDS + HAIRS	797 (125 )	207.41	IMM TUBIFICIDS NO HAIRS	332 (48.7)	101.14		
TUBIFEX TUBIFEX	84 (12.6)	45.41	P. MOLDAVIENSIS	83 (13.5)	.65	L. CLAPAREDEIANIS	83 (12.5)	43.04		
PISIDIUM SPP	580 (70.9)	57.42	MYSIS	13 ( 5.5)	10.72	PONTOPOREIA	5489 (326 )	2263.56		
CANDONA	30 (23.2)	.90								
SITE=	93A - 70.M	D= 382	REPS= 5	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D		
			TAXA	7138	3544.47	.7152	.4189	1.0143		
STYLODRILUS HERINGIANUS	257 (34.7)	64.42	IMM TUBIFICIDS + HAIRS	66 ( 9.2)	18.41	IMM TUBIFICIDS NO HAIRS	130 (18.5)	40.18		
TUBIFEX TUBIFEX	142 (16.2)	78.67	P. MOLDAVIENSIS	62 ( 6.9)	5.30	LIMNODRILUS HOFFMEISTER	124 (13.9)	36.03		
PISIDIUM SPP	300 (72.7)	26.78	MYSIS	8 ( 4.7)	7.64	PONTOPOREIA	6041 (440 )	3266.35		
HETEROTRISSOCIADIUS CHANGI	8 ( 4.7)	.69								
SITE=	93A - 70.M	D= 782	REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D		
			TAXA	8476	2964.45	.5231	.3991	.9950		
STYLODRILUS HERINGIANUS	102 (15.9)	21.99	TUBIFEX TUBIFEX	127 (20.4)	71.02	LIMNODRILUS HOFFMEISTER	47 ( 7.5)	24.41		
PISIDIUM SPP	538 (163 )	52.74	CALANOID	5 ( 5.0)	.02	MYSIS	38 ( 7.0)	38.18		
ASELLUS	5 ( 5.0)	3.18	PONTOPOREIA	7497 (343 )	2739.98	TRICHOPTERA (CADDIS FLY)	5 ( 5.0)	2.63		
HETEROTRISSOCIADIUS CHANGI	112 (32.2)	10.30								
SITE=	93A - 70.M	D=1182	REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D		
			TAXA	5541.0	2445.51	.8711	.5724	1.0441		
STYLODRILUS HERINGIANUS	336 (23.9)	72.30	IMM TUBIFICIDS + HAIRS	144 (10.2)	39.77	IMM TUBIFICIDS NO HAIRS	24 ( 1.7)	7.27		
TUBIFEX TUBIFEX	72 ( 5.2)	40.09	PELOSCOLEX MULTISETOSUS	23 ( 1.8)	8.17	LIMNODRILUS HOFFMEISTER	48 ( 3.4)	25.33		
L. ANGUSTIPENIS	23 ( 1.6)	12.40	PISIDIUM SPP	535 (163 )	50.24	MYSIS	19 ( 0 )	19.09		
PONTOPOREIA	4317 (579 )	2170.85								

Table 6. (continued)

SITE=	12 -104.M	D= 483 REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D	no.	S.E.	mg. dry
	TAXA		2703	758.11	.8464	.8020	.7593			
STYLODRILUS HERINGIANUS	510 (93.5)	161.90	LIMNODRILUS HOFFMEISTER	151 (21.6)	35.90	PISIDIUM LILLIJEBOrgI	14 ( 9.0)	6.91		
P. CONVENTUS	14 ( 9.0)	3.30	PONTOPOREIA	1961 (473 )	546.70	HETERO. OLIVERI	48 (19.0)	3.10		
MICROPSECTRA	5 ( 5.0)	.30								
SITE=	12 -104.M	D= 783 REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D			
	TAXA		527	109.65	.8978	.8246	.4787			
STYLODRILUS HERINGIANUS	113 (33.4)	10.30	MYSIS	18 (13.3)	15.00	PONTOPOREIA	358 (80.1)	81.00		
HETERO. OLIVERI	38 (16.1)	3.35								
SITE=	12 -104.M	D=1183 REPS= 3	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D			
	TAXA		2302	749.90	.8414	.7545	1.0334			
STYLODRILUS HERINGIANUS	397 (36.9)	105.60	IMM TUBIFICIDS + HAIRS	24 (12.2)	12.20	LIMNODRILUS HOFFMEISTER	38 (14.6)	18.60		
PISIDIUM LILLIJEBOrgI	56 (14.7)	6.20	P. NITIDUM	12 ( 4.7)	1.10	CANDONA	18 (18.0)	.50		
MYSIS	18 ( 0 )	13.80	PONTOPOREIA	1733 (104 )	591.40	HETERO. OLIVERI	6 ( 6.0)	.50		
SITE=	41 -125.M	D= 483 REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D			
	TAXA		1907	504.90	.6289	.4559	.3972			
STYLODRILUS HERINGIANUS	474 (55.2)	68.00	P. CONVENTUS	18 ( 9.0)	1.30	MYSIS	5 ( 5.0)	3.80		
PONTOPOREIA	1410 (179 )	431.80								
SITE=	41 -125.M	D=1183 REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D			
	TAXA		1366	633.20	.5578	.3998	.6926			
STYLODRILUS HERINGIANUS	177 (17.9)	43.90	LIMNODRILUS spp	6 ( 6.0)	2.70	P. CONVENTUS	6 ( 6.0)	.35		
CANDONA	12 ( 6.2)	.40	MYSIS	18 ( 5.1)	15.00	PONTOPOREIA	1147 (52.5)	570.80		
SITE=	81 - 35.M	D= 483 REPS= 4	TOT.NO/M	TOT.WT MG	H NO.	H WT.	D			
	TAXA		4326	1835.90	1.2228	.6456	1.1944			
STYLODRILUS HERINGIANUS	44 (12.4)	13.20	TUBIFICIDS + HAIRS	306 (85.4)	17.00	TUBIFICIDS NO HAIRS	576 (161 )	196.00		
PISIDIUM LILLIJEBOrgI	48 ( 7.2)	5.20	P. CASERTANUM	78 (11.7)	7.00	P. NITIDUM	96 (14.5)	8.60		
P. VENTRICOSUM	120 (18.9)	10.80	CYTHERISSA	5 ( 5.0)	.10	CANDONA	33 (14.1)	1.00		
ASELLUS	122 (70.2)	39.00	PONTOPOREIA	2898 (476 )	1538.00	GAMMARUS FASCIATUS	5 ( 5.0)	1.42		

Table 6. (continued)

SITE=	81 - 35.M	D=	783	REPS=	4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D		no.	S.E.	mg.	dry
TAXA							1747.10		.5615	.4424		1.3798				
NEMATODA				18	(13.3)		.10	STYLODRILUS HERINGIANUS		24 ( 5.9)	10.30	TUBIFICIDS + HAIRS		92 (22.8)	38.00	
TUBIFICIDS	NO	HAIRS		190	(47.3)		79.00	P. NITIDUM		23 ( 9.0)	2.20	CALANOID		89 (53.1)	2.60	
CYTHERISSA				18	(10.9)		.40	CANDONA		108 (46.5)	3.20	MYSIS		5 ( 5.0)	3.70	
ASELLUS				33	(20.9)		16.00	PONTOPOREIA		5343 (977 )	1588.00	PROCLADIUS BELLUS		9 ( 9.0)	.90	
HETEROTRISSO.	CHANGI			33	(20.9)		2.70									
SITE=	81 - 35.M	D=	1183	REPS=	3	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D					
TAXA							1718.44		.6576	.4681		1.3186				
NEMATODA				6	( 6.0)		.04	PHAGOCATES GRACILIS		6 ( 6.0)	4.00	STYLODRILUS HERINGIANUS		50 (13.4)	22.00	
TUBIFIDS	+ HAIRS			201	(59.8)		86.00	LIMNODRILUS HOFFMEISTER		75 (10.9)	34.00	PISIDIUM LILLIJEBORGII		94 (37.8)	8.90	
P. CONVENTUS				12	(12.0)		.90	P. VENTRICOSUM		100 (25.1)	9.40	CYTHERISSA		6 ( 6.0)	.10	
CANDONA				25	( 6.6)		.80	ASELLUS		6 ( 6.0)	3.60	PONTOPOREIA		3615 (451 )	1548.70	
SITE=	93A	70.M	D=	483	REPS=	4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D				
TAXA							1502.80		.7260	.6574		.7221				
STYLODRILUS HERINGIANUS				259	(28.1)		68.90	IMM TUBIFICIDS + HAIRS		96 (10.4)	40.00	IMM TUBIFICIDS NO HAIRS		208 (22.6)	87.00	
PISIDIUM LILLIJEBORGII				14	(11.4)		1.50	P. NITIDUM		108 (49.4)	9.70	MYSIS		28 ( 9.4)	27.00	
PONTOPOREIA				3346	(404 )		1268.70	HETEROTRISSOC CHANGI		5 ( 5.0)	0.40					
SITE=	93A	- 70.M	D=	783	REPS=	4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D				
TAXA							2314.10		.3479	.2031		.6009				
STYLODRILUS HERINGIANUS				103	( 9.8)		26.00	IMM TUBIFICIDS + HAIRS		39 ( 3.5)	17.00	IMM TUBIFICIDS NO HAIRS		85 ( 7.0)	37.00	
P. NITIDUM				47	(12.2)		4.40	PONTOPOREIA		3825 (1893)	2229.00	HETEROTRISSO. CHANGI		9 ( 9.0)	.70	
SITE=	93A	- 70.M	D=	1183	REPS=	4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D				
TAXA							1544.90		.6107	.5869		.8958				
STYLODRILUS HERINGIANUS				132	(21.7)		292.00	IMM TUBIFICIDS NO HAIRS		94 (39.2)	3.20	LIMNODRILUS HOFFMEISTER		25 (16.4)	13.80	
PISIDIUM LILLIJEBORGII				69	( 8.3)		6.90	P. CONVENTUS		5 ( 5.0)	.40	P. NITIDUM		5 ( 5.0)	.60	
PONTOPOREIA				2131	(96.2)		1227.00	HETEROTRISSO. CHANGI		12 ( 5.1)	1.00					

Table 6. (continued)

SITE= 93 - 15.M	D= 483	REPS= 4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D		no.	S.E.	mg.	dry
TAXA				6701	5082.80	1.6542	1.5502	2.043					
IMM TUBIFICIDS + HAIRS	289	(75.7)	85.00	IMM TUBIFICIDS	NO HAIRS	3245	(850 )	1646.00	PELOSCOLEX MULTISETOSUS	263	(68.9)	80.60	
BULIMUS TENTACULATA	5	( 5.0)	78.00	SPHAERIUM	NITIDUM	603	(130 )	1858.00	S. CORNEUM	259	(146 )	710.00	
PISIDIUM LILLIJEBORGII	19	(11.2)	18.00	P. CASERTANUM		23	(11.8)	2.10	P. IDAHOENSE	5	( 4.0)	.70	
P. HENSLOWI	18	(13.3)	1.80	ASELLUS		80	( 9.0)	22.30	PONTOPOREIA	1458	(207 )	533.00	
GAMMARUS FASCIATUS	42	(15.5)	11.80	PROCLADIUS	SPP	9	( 5.4)	.90	MONODIAMESIA	19	( 7.7)	3.30	
HETEROTRISSO. CHANGI	287	(82.3)	23.00	MICROPSECTRA		5	( 5.0)	.20	PARACLADOPELMA	61	( 9.0)	5.30	
CHIR. ANTHRACINUS GRP.	14	( 9.2)	2.80										
SITE= 93 - 20.M	D= 783	REPS= 4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D					
TAXA				9131	9554.30	1.4955	1.0542	2.193					
IMM TUBIFICIDS + HAIRS	204	(36.3)	85.00	IMM TUBIFICIDS	NO HAIRS	2439	(435 )	586.70	VALVATA TRICARINATA	9	( 5.4)	5.60	63
SPHAERIUM SPP	70	(39.6)	253.00	S.	NITIDUM	1949	(237 )	6890.00	S. CORNEUM	184	(27.2)	684.00	
PISIDIUM SPP	37	(13.3)	3.70	PISIDIUM LILLIJEBORGII		52	(29.2)	5.70	P. IDAHOENSE	5	( 5.0)	.90	
P. VENTRICOSUM	103	(38.2)	8.30	P. HENSLOWI		42	(19.4)	3.40	CALANOID	18	(13.3)	.50	
CANDONA	9	( 5.4)	.30	ASELLUS		85	(36.5)	58.30	PONTOPOREIA	3854	(631 )	883.00	
GAMMARUS FASCIATUS	5	( 5.0)	1.20	HEXAGENIA LIMBATA		5	( 5.0)	77.00	PROCLADIUS BELLUS	42	( 7.7)	5.30	
HETEROTRISSO. CHANGI	5	( 5.0)	.30	PARACLADOPELMA		14	( 9.0)	1.20	PHAENOPSECTRA (TRIBELOS)	5	( 5.0)	.90	
SITE= 93 - 15.M	D=1183	REPS= 4	TOT.NO/M	TOT.WT	MG	H NO.	H WT.	D					
TAXA				4309	3602.70	1.4399	1.5239	2.031					
NEMATODA	12	( 6.2)	.10	IMM TUBIFICIDS + HAIRS		125	(20.5)	34.60	IMM TUBIFICIDS NO HAIRS	1605	(262 )	498.00	
HELOBDELLA STAGNALIS	12	( 6.0)	10.50	VALVATA SINCERA		5	( 5.0)	.60	S. RHOMBOIDEUM	12	(11.7)	45.00	
S. NITIDUM	207	(32.7)	639.00	S. CORNEUM		320	(28.8)	1261.00	P. CASERTANUM	37	(13.3)	3.50	
P. CONVENTUS	5	( 5.0)	.30	P. VARIABLE		5	( 5.0)	.40	CANDONA	5	( 5.0)	.10	
ASELLUS	56	(10.9)	33.70	PONTOPOREIA		1831	(106 )	1046.30	GAMMARUS FASCIATUS	31	(12.5)	21.70	
PROCLADIUS SPP	5	( 5.0)	1.20	HETEROTRISSO. CHANGI		25	( 6.2)	2.30	CHIR. ANTHRACINUS GRP.	5	( 5.0)	4.30	

Table 7. List of the benthic species collected in Lake Ontario, and their number of occurrences. The maximum number of date X site combinations is 33.

	SAMPLE OCCURRENCE		SAMPLE OCCURRENCE
NEMATODA	8		
TURBELLARIA (PHAGOCATES)	4	CALANOID	11
STYLODRILUS HERINGIANUS	23	CYTHERISSA	3
IMM TUBIFICIDS + HAIRS	22	CANDONA	12
IMM TUBIFICIDS NO HAIRS	17	MYSIS	21
TUBIFEX TUBIFEX	15	ASELLUS	11
ILYODRILUS TEMPLETONI	1	PONTOPOREIA	33
PELOSCOLEX MULTISETOSUS	5	GAMMARUS FASCIATUS	6
POTOMOTHRIX VEJDOVSKYI	1	HEXAGENIA LIMBATA	1
P. MOLDAVIENSIS	4	TRICHOPTERA (CADDIS FLY)	3
LIMNODRILUS SPP	2	PROCLADIUS SPP	4
LIMNODRILUS HOFFMEISTER	15	PROCLADIUS BELLUS	2
L. ANGUSTIPENIS	2	MONODIAMESIA	1
L. CLAPAREDEIANIS	3	HETEROTRISOCCLADIUS SP	2
L. MAUMEENSIS	1	HETERO. OLIVERI	6
HELOBDELLA STAGNALIS	3	HETEROTRISSO. CHANGI	11
GLOSSOPHONIA SPP	1	MICROPSECTRA	2
PHYSA SPP	2	PARACLADOPELMA	2
GYRAULUS SPP	2	CHIRONOMUS SPP	1
BULIMUS TENTACULATA	1	CHIR. ANTHRACINUS GRP.	2
VALVATA TRICARINATA	2	PHAENOPSECTRA (TRIBELOS)	1
VALVATA SINCERA	1		
AMNICOLA SPP	1		
SPHAERIUM SPP	5	NUMBER OF SPECIES = 56	
S. RHOMBOIDEUM	1		
S. NITIDUM	3		
S. CORNEUM	3		
PISIDIUM SPP	19		
PISIDIUM LILLIJEBORGI	8		
P. CASERTANUM	3		
P. CONVENTUS	6		
P. IDAHOENSE	2		
P. NITIDUM	6		
P. VARIABLE	2		
P. VENTRICOSUM	4		
P. HENSLOWI	2		

Table 8. Pontoporeia populations in Lake Ontario, 1981 - 1983 reported as 1 mm size classes. Listed as number, S.E., and wet biomass (mg) per Ponar (0.053 m<sup>-2</sup>), corrected for the number of eggs hatched.

Table 8A: Kingston Basin, Stn 81 (35m).

Date	Size	Number	S.E.	Biomass	Date	Size	Number	S.E.	Biomass
		per Ponar		mg. wet			per Ponar		mg. wet
<b>Mar 81</b>									
J- 1	168.0	8.9		3.15	J- 1	.6	.1		.01
J- 2	.4	.1		.02	J- 2	18.0	5.2		.72
J- 3	7.8	2.4		.91	J- 3	34.4	4.9		3.38
J- 4	73.8	11.9		16.40	J- 4	14.4	3.5		3.29
J- 5	167.4	26.0		71.73	J- 5	41.6	6.1		17.02
J- 6	97.6	18.3		71.29	J- 6	91.2	8.3		64.72
J- 7	9.2	2.5		9.65	J- 7	35.0	3.9		38.60
J- 8	.4	.2		.59	J- 8	33.8	1.8		50.94
SUM-	524.6			173.74	SUM-	269.0			178.68
<b>May 81</b>									
J- 1	150.0	3.6		2.19	J- 1	0.0	0.0		0.00
J- 2	3.9	.7		.09	J- 2	25.7	4.0		1.08
J- 3	1.2	.5		.16	J- 3	138.0	11.6		16.63
J- 4	8.4	1.9		1.85	J- 4	29.0	5.4		6.54
J- 5	43.6	11.5		18.47	J- 5	16.0	1.9		7.59
J- 6	72.2	12.3		52.73	J- 6	46.3	4.9		35.79
J- 7	46.2	10.1		52.87	J- 7	28.2	5.2		31.23
J- 8	14.8	2.6		23.91	J- 8	49.2	11.0		78.61
SUM-	340.3			152.27	SUM-	332.4			177.46
<b>June 81</b>									
J- 1	24.0	.8		0.00	J- 1	0.0	0.0		0.00
J- 2	150.0	.2		7.11	J- 2	12.7	2.9		.60
J- 3	1.0	.4		.12	J- 3	42.0	11.5		4.09
J- 4	6.0	5.0		1.52	J- 4	106.7	13.0		24.58
J- 5	29.0	3.8		12.71	J- 5	42.7	7.5		19.26
J- 6	61.2	7.7		45.13	J- 6	77.0	8.5		57.05
J- 7	37.2	10.3		41.88	J- 7	17.7	2.4		21.34
J- 8	11.0	3.6		17.13	J- 8	29.5	3.1		51.17
SUM-	319.4			125.62	SUM-	328.3			178.08
<b>July 81</b>									
J- 1	0.0	0.0		0.00	J- 1	480.2	4.7		4.79
J- 2	79.2	2.6		3.31	J- 2	.4	.2		.01
J- 3	19.3	4.3		1.40	J- 3	5.9	2.3		.85
J- 4	1.6	.6		.40	J- 4	23.4	4.2		5.20
J- 5	18.6	2.5		8.20	J- 5	154.0	17.0		65.61
J- 6	138.0	41.4		98.41	J- 6	17.0	4.4		13.26
J- 7	30.8	4.9		35.82	J- 7	11.2	2.5		13.13
J- 8	16.0	4.9		27.07	J- 8	15.6	3.5		27.15
SUM-	303.5			174.62	SUM-	707.7			130.01
<b>Aug 81</b>									
J- 1	0.0	0.0		0.00					
J- 2	14.5	5.1		.56					
J- 3	110.5	40.2		9.94					
J- 4	8.5	1.5		2.06					
J- 5	25.8	8.3		11.12					
J- 6	70.3	29.1		51.10					
J- 7	48.5	11.4		54.60					
J- 8	21.8	6.0		35.98					
SUM-	299.9			165.35					

Table 8A. Stn 81 continued.

Date	Size	Number	S.E.	Biomass	Date	Size	Number	S.E.	Biomass
		per Ponar		mg. wet			per Ponar		mg. wet
<b>May 82</b>									
J= 1	240.0	4.5		5.26	J= 1	1.3	.5		0.02
J= 2	.4	.2		.02	J= 2	31.0	2.8		1.45
J= 3	4.4	.9		.59	J= 3	37.7	5.5		4.00
J= 4	71.0	6.4		14.99	J= 4	29.7	1.6		7.44
J= 5	179.2	12.7		79.47	J= 5	100.7	8.2		43.40
J= 6	26.4	2.1		20.41	J= 6	53.7	.7		40.16
J= 7	20.0	1.6		23.54	J= 7	9.3	1.6		9.92
J= 8	8.2	1.2		13.15	J= 8	7.0	.5		12.44
SUM=	549.6			157.42	SUM=	270.4			118.82
<b>June 82</b>									
J= 1	300.0	4.5		7.93	J= 1	59.0	0.0		1.11
J= 2	132.8	3.2		5.56	J= 2	0.0	0.0		0.00
J= 3	2.6	.4		.33	J= 3	19.9	0.0		3.18
J= 4	38.0	7.9		9.86	J= 4	30.5	0.0		10.61
J= 5	120.0	11.5		48.80	J= 5	52.1	0.0		31.72
J= 6	63.2	7.6		48.17	J= 6	35.6	0.0		34.60
J= 7	17.0	1.3		18.21	J= 7	25.0	0.0		34.96
J= 8	9.2	1.7		14.54	J= 8	21.3	0.0		38.39
SUM=	682.8			153.41	SUM=	243.4			154.56
<b>July 82</b>									
J= 1	92.3	.9		2.24					
J= 2	63.3	5.6		2.05					
J= 3	2.0	.6		.25					
J= 4	29.3	5.2		6.65					
J= 5	79.3	13.1		35.77					
J= 6	61.5	7.8		47.31					
J= 7	15.8	3.9		18.15					
J= 8	12.8	3.9		21.20					
SUM=	356.3			133.63					
<b>Aug 82</b>									
J= 1	79.0	.4		1.35					
J= 2	13.5	5.8		.53					
J= 3	8.3	1.2		.69					
J= 4	17.0	2.4		3.75					
J= 5	117.5	18.6		50.35					
J= 6	44.3	2.0		35.05					
J= 7	14.3	3.7		15.51					
J= 8	12.0	1.6		20.38					
SUM=	305.9			127.55					
<b>Sept 82</b>									
J= 1	6.8	3.0		.20					
J= 2	39.8	9.0		2.15					
J= 3	77.0	9.9		10.40					
J= 4	34.0	6.3		7.28					
J= 5	86.8	11.1		36.77					
J= 6	77.3	21.8		57.82					
J= 7	15.5	4.0		17.09					
J= 8	5.0	3.5		7.82					
SUM=	342.2			139.53					

Table 8B. Niagara area, Stn 93A (70m).

Date	Size	Number per Ponar	S.E.	Biomass mg. wet	Date	Size	Number per Ponar	S.E.	Biomass mg. wet
<b>Apr 81</b>									
J= 1	131.0	4.9		2.54	J= 1	0.0	0.0		0.00
J= 2	4.6	2.0		.19	J= 2	13.8	1.8		.62
J= 3	35.5	1.2		5.20	J= 3	42.6	7.7		4.44
J= 4	108.5	10.2		28.90	J= 4	44.6	2.4		12.50
J= 5	55.9	6.9		25.56	J= 5	78.8	6.7		38.05
J= 6	18.3	5.3		16.25	J= 6	39.2	5.8		35.67
J= 7	10.4	1.7		13.21	J= 7	9.0	1.7		12.45
J= 8	5.4	.4		9.66	J= 8	1.4	.4		2.80
SUM=	369.6			101.50	SUM=	229.4			106.52
<b>May 81</b>									
J= 1	116.0	38.3		2.43	J= 1	0.0	0.0		0.00
J= 2	6.5	.9		.20	J= 2	19.2	2.7		1.13
J= 3	26.3	6.5		3.82	J= 3	65.8	4.5		7.86
J= 4	96.2	16.0		24.88	J= 4	21.4	5.2		4.02
J= 5	54.7	13.4		27.86	J= 5	118.8	14.7		56.00
J= 6	15.0	1.5		12.68	J= 6	46.4	2.9		38.46
J= 7	2.3	.6		3.04	J= 7	12.2	1.7		16.10
J= 8	1.7	.5		3.40	J= 8	.6	.4		.99
SUM=	318.7			78.31	SUM=	284.4			124.56
<b>June 81</b>									
J= 1	6.0	.9		.13	J= 1	0.0	0.0		0.00
J= 2	72.0	.9		2.39	J= 2	3.2	1.1		.19
J= 3	.7	.3		.08	J= 3	18.2	5.4		2.01
J= 4	46.0	9.0		11.90	J= 4	152.6	30.0		39.18
J= 5	37.3	4.3		18.55	J= 5	29.8	7.2		14.82
J= 6	21.7	2.3		18.53	J= 6	88.0	12.1		76.26
J= 7	4.7	1.1		6.07	J= 7	26.2	4.4		35.47
J= 8	1.3	.6		2.47	J= 8	2.6	.9		5.21
SUM=	189.7			60.12	SUM=	320.6			173.14
<b>July 81</b>									
J= 1	0.0	0.0		0.00	J= 1	0.0	0.0		0.00
J= 2	13.0	2.8		.48	J= 2	.8	.4		.04
J= 3	11.4	2.7		1.44	J= 3	6.6	1.4		.66
J= 4	15.8	4.3		4.18	J= 4	116.8	18.8		33.21
J= 5	42.6	9.3		22.86	J= 5	44.4	9.9		23.28
J= 6	88.2	30.8		77.18	J= 6	28.8	6.5		24.11
J= 7	14.0	2.1		16.36	J= 7	19.8	4.4		25.25
J= 8	5.0	1.8		9.01	J= 8	4.0	.9		8.74
SUM=	190.0			131.52	SUM=	221.2			115.30
<b>Aug 81</b>									
J= 1	.7	.0		.02					
J= 2	15.6	1.8		.64					
J= 3	33.0	5.8		2.45					
J= 4	31.2	7.0		8.07					
J= 5	65.4	7.9		33.11					
J= 6	78.4	11.9		72.37					
J= 7	12.2	2.2		15.36					
J= 8	1.2	.4		2.10					
SUM=	237.7			134.12					
<b>Mar 82</b>									
J= 1	0.0	0.0		0.00					
J= 2	.8	.4		.04					
J= 3	6.6	1.4		.66					
J= 4	116.8	18.8		33.21					
J= 5	44.4	9.9		23.28					
J= 6	28.8	6.5		24.11					
J= 7	19.8	4.4		25.25					
J= 8	4.0	.9		8.74					
SUM=	221.2			115.30					

Table 8B. Stn 93 continued.

Date	Size	Number	S.E.	Biomass	Date	Size	Number	S.E.	Biomass
		per Ponar		mg. wet			per Ponar		mg. wet
<b>May 82</b>					<b>Nov 82</b>				
J= 1	270.2	4.9	6.37		J= 1	0.0	0.0	0.00	
J= 2	92.2	1.0	3.90		J= 2	4.3	1.3	.19	
J= 3	2.6	.8	.35		J= 3	53.0	6.8	6.03	
J= 4	66.8	8.1	16.65		J= 4	28.7	4.1	13.45	
J= 5	82.8	11.9	37.17		J= 5	88.0	9.9	44.03	
J= 6	37.6	4.3	33.39		J= 6	44.7	3.7	38.73	
J= 7	6.8	1.8	8.23		J= 7	8.7	.6	10.49	
J= 8	3.8	1.0	7.33		J= 8	1.0	.4	1.93	
SUM=	562.8		113.40		SUM=	228.4		114.86	
<b>June 82</b>					<b>Apr 83</b>				
J= 1	60.3	0.0	1.44		J= 1	2.3	0.0	.04	
J= 2	232.0	.9	8.51		J= 2	0.0	0.0	0.00	
J= 3	0.0	0.0	0.00		J= 3	27.9	0.0	5.69	
J= 4	20.3	.4	5.14		J= 4	51.3	0.0	14.17	
J= 5	97.5	6.8	47.07		J= 5	53.7	0.0	30.00	
J= 6	55.3	3.9	49.11		J= 6	24.7	0.0	22.15	
J= 7	28.8	3.5	35.94		J= 7	9.2	0.0	11.89	
J= 7	28.8	3.5	35.94		J= 8	3.1	0.0	6.21	
J= 8	8.3	1.5	16.81		SUM=	172.2		90.14	
SUM=	502.5		164.02						
<b>July 82</b>									
J= 1	.8	.4	0.00						
J= 2	116.3	11.0	5.64						
J= 3	3.0	.7	.33						
J= 4	42.5	3.8	10.83						
J= 5	121.0	2.3	63.82						
J= 6	51.3	5.4	48.50						
J= 7	8.5	1.8	10.75						
J= 8	1.8	.4	3.22						
SUM=	345.2		143.10						
<b>Aug 82</b>									
J= 1	12.8	.7	.31						
J= 2	62.6	4.1	2.35						
J= 3	9.7	1.6	1.06						
J= 4	4.3	.3	1.32						
J= 5	163.0	6.6	74.99						
J= 6	51.0	11.2	48.91						
J= 7	11.5	5.5	13.56						
J= 8	1.3	.7	2.24						
SUM=	316.2		144.74						
<b>Sept 82</b>									
J= 1	.3	.2	.01						
J= 2	8.8	3.4	.43						
J= 3	18.5	2.5	2.23						
J= 4	22.8	4.8	7.76						
J= 5	66.3	7.3	32.01						
J= 6	47.3	7.4	42.62						
J= 7	19.3	3.3	23.06						
J= 8	2.0	1.1	3.58						
SUM=	185.3		111.69						

Table 8C. Open lake, Stn 41 (125m).

Date	Size	Number per Ponar	S.E.	Biomass mg. wet	Date	Size	Number per Ponar	S.E.	Biomass mg. wet
Mar 81					Sept 81				
J= 1	30.0	.9	.52		J= 1	228.0	4.0	5.38	
J= 2	6.8	.9	.17		J= 2	10.3	1.7	.40	
J= 3	10.4	1.6	.69		J= 3	11.8	1.0	.89	
J= 4	12.8	.9	3.30		J= 4	16.0	1.7	2.97	
J= 5	18.4	1.5	6.14		J= 5	12.0	1.7	4.17	
J= 6	33.6	1.9	21.11		J= 6	27.0	3.2	18.27	
J= 7	5.4	.5	5.27		J= 7	12.2	.2	12.24	
J= 8	.2	.0	.26		J= 8	9.0	2.0	13.53	
SUM=	117.6		37.47		SUM=	326.3		57.86	
May 81					Oct 81				
J= 1	89.2	1.9	1.15		J= 1	0.0	0.0	0.00	
J= 2	10.4	1.4	.44		J= 2	140.0	1.6	5.93	
J= 3	11.4	1.5	.82		J= 3	2.4	.5	.16	
J= 4	12.0	1.5	2.08		J= 4	16.5	4.4	3.21	
J= 5	16.8	1.9	6.34		J= 5	17.0	2.7	6.10	
J= 6	30.4	1.2	19.62		J= 6	26.5	3.3	18.03	
J= 7	13.2	1.8	13.25		J= 7	10.0	1.0	10.85	
J= 8	.6	.5	.91		J= 8	6.0	.4	8.77	
SUM=	184.0		44.59		SUM=	218.4		53.03	
June 81					Nov 81				
J= 1	12.0	1.3	.23		J= 1	0.0	0.0	0.00	
J= 2	78.0	1.3	3.66		J= 2	16.8	2.3	.69	
J= 3	4.6	.3	.38		J= 3	10.6	3.2	.71	
J= 4	13.0	2.1	2.29		J= 4	9.9	1.9	1.57	
J= 5	13.0	2.5	5.00		J= 5	21.0	3.2	7.82	
J= 6	36.8	5.1	25.43		J= 6	17.4	3.3	11.41	
J= 7	14.6	1.2	14.58		J= 7	6.0	.8	6.39	
J= 8	0.0	0.0	0.00		J= 8	4.6	.7	7.00	
SUM=	172.0		51.56		SUM=	86.3		35.59	
July 81					Mar 82				
J= 1	0.0	0.0	0.00		J= 1	10.0	.5	.25	
J= 2	9.7	2.8	.41		J= 2	17.5	2.7	.77	
J= 3	5.6	1.4	.39		J= 3	25.3	4.6	1.91	
J= 4	10.6	1.4	1.88		J= 4	16.7	3.2	2.45	
J= 5	23.8	6.4	8.42		J= 5	17.0	3.3	6.53	
J= 6	49.6	2.7	33.57		J= 6	22.5	2.0	14.60	
J= 7	17.0	2.6	18.11		J= 7	16.5	2.7	16.79	
J= 8	7.2	.6	10.87		J= 8	7.3	2.0	10.84	
SUM=	123.5		73.65		SUM=	132.8		54.15	
Aug 81									
J= 1	15.0	.2	.35						
J= 2	1.2	.2	.05						
J= 3	1.6	.4	.11						
J= 4	10.4	1.9	1.74						
J= 5	30.4	6.2	11.32						
J= 6	38.4	2.4	25.85						
J= 7	22.2	2.5	23.33						
J= 8	9.4	1.8	12.74						
SUM=	128.6		75.50						

Table 8C. Stn 41 continued.

Date	Size	Number per Ponar	S.E.	Biomass mg. wet	Date	Size	Number per Ponar	S.E.	Biomass mg. wet
<b>May 82</b>									
J= 1	10.0	.4	0.06		J= 1	50.0	5.8	0.26	
J= 2	8.6	3.4	.39		J= 2	25.0	1.0	1.19	
J= 3	18.0	2.0	1.25		J= 3	9.0	.3	.78	
J= 4	19.2	2.1	3.89		J= 4	19.3	1.4	3.11	
J= 5	14.8	1.9	5.07		J= 5	38.0	3.9	12.20	
J= 6	16.0	1.0	10.77		J= 6	13.3	2.6	8.91	
J= 7	10.6	.8	10.54		J= 7	9.0	2.1	9.24	
J= 8	5.2	1.3	7.72		J= 8	4.7	.7	7.27	
SUM=	102.4		39.63		SUM=	168.3		42.70	
<b>June 82</b>									
J= 1	15.0	.5	0.11		J= 1	2.9	1.3	.07	
J= 2	8.0	.6	.38		J= 2	8.7	2.8	.44	
J= 3	26.3	2.7	1.79		J= 3	7.3	1.5	.75	
J= 4	7.3	1.4	1.15		J= 4	54.0	13.0	8.78	
J= 5	12.3	2.6	4.97		J= 5	21.8	5.0	6.99	
J= 6	20.0	3.8	12.50		J= 6	7.4	1.5	4.89	
J= 7	3.8	1.0	3.67		J= 7	4.4	.5	5.29	
J= 8	1.3	.5	1.84		J= 8	7.9	1.9	12.21	
SUM=	94.0		26.30		SUM=	114.4		39.42	
<b>July 82</b>									
J= 1	6.0	.4	.15						
J= 2	10.2	.9	.41						
J= 3	6.8	1.3	.53						
J= 4	35.8	3.2	6.97						
J= 5	9.8	2.1	3.81						
J= 6	15.8	1.7	10.36						
J= 7	11.2	1.2	11.03						
J= 8	5.0	1.2	8.71						
SUM=	100.6		41.98						
<b>Aug 82</b>									
J= 1	20.0	.5	0.12						
J= 2	9.5	.4	.50						
J= 3	13.0	2.2	1.14						
J= 4	31.8	1.8	5.37						
J= 5	13.3	1.0	4.30						
J= 6	12.3	1.3	8.50						
J= 7	8.3	1.7	8.02						
J= 8	4.5	1.3	6.63						
SUM=	112.7		34.47						
<b>Sept 82</b>									
J= 1	35.0	.6	1.02						
J= 2	16.8	.7	.56						
J= 3	4.8	.8	.42						
J= 4	17.8	1.7	2.73						
J= 5	45.5	3.6	16.00						
J= 6	19.3	1.3	12.66						
J= 7	11.5	2.7	11.22						
J= 8	8.6	.8	14.47						
SUM=	159.3		59.07						

TABLE 9. List of the zooplankton species found at the four Bioindex stations in Lake Ontario in 1981 and 1982.

CLADOCERA

*Alona guttata*  
*Alona quadrangularis*  
*Bosmina longirostris*  
*Ceriodaphnia lacustris*  
*Ceriodaphnia quadrangula*  
*Chydorus sphaericus*  
*Daphnia ambigua*  
*Daphnia galeata mendotae*  
*Daphnia longiremis*  
*Daphnia pulex*  
*Daphnia retrocurva*  
*Diaphanosoma birgei*  
*Eubosmina coregoni*  
*Holopedium gibberum*  
*Ilyocryptus spinifer*  
*Leptodora kindtii*  
*Leydigia quadrangularis*  
*Polyphemus pediculus*  
*Simocephalus vetulus*

COPEPODA

CYCLPOIDA

*Cyclops bicuspidatus thomasi*  
*Cyclops vernalis*  
*Eucyclops agilis*  
*Mesocyclops edax*  
*Tropocyclops prasinus mexicanus*

CALANOIDA

*Diaptomus ashlandii*  
*Diaptomus minutus*  
*Diaptomus oregonensis*  
*Diaptomus sicilis*  
*Diaptomus siciloides*  
*Limnocalanus macrurus*

HARPACTICOIDA

*Eurytemora affinis*

TABLE 108. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 12 1981

MAR 16 MAR 23 MAR 30 DENSITY (NO. M-3) APR 6 APR 13 APR 21 APR 27 MAY 4 MAY 11

## CLADOCERA

BOSMINA LONGIROSTRIS			1	5		4		1		1
BOSMINA LONGIROSTRIS	EGG		1	1						
EUBOSMINA COREGONI			2	4						
EUBOSMINA COREGONI	EGG		1	6						
DAPHNIA RETROCURVA										
DAPHNIA RETROCURVA	EGG									
DAPHNIA LONGIREMIS										
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE										
DAPHNIA GALEATA MENDOTAE	EGG									
DAPHNIA PULEX										
CERIODAPHNIA LACUSTRIS										
CERIODAPHNIA LACUSTRIS	EGG									
CERIODAPHNIA QUADRANGULA										
CHYDORUS SPHAERICUS										
CHYDORUS SPHAERICUS	EGG									
DIAPHANOSOMA BIRGEI										
DIAPHANOSOMA BIRGEI	EGG									
HOLOPEDIUM GIBBERUM										
HOLOPEDIUM GIBBERUM	EGG									
ALONA QUADRANGULARIS										
ALONA GUTTATA										
SIMOCEPHALUS VETULUS										
ILYOCRYPTUS SPINIFER										
LEYDIGIA QUADRANGULARIS										
LEYDIGIA QUADRANGULARIS	EGG									
POLYPHEMUS PEDICULUS										
POLYPHEMUS PEDICULUS	EGG									
LEPTODORA KINTDTII										

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI		257	197	175	305	161	319	292	184	209
CYCLOPS BICUSPIDATUS THOMASI	EGG	144	265	387	1558	1028	1886	3848	1840	1541
CYCLOPS VERNALIS										
TROPOCYCLOPS PRASINUS MEXICANUS		30	17	15	36	13	26	19	16	16
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	13							10	16
MESOCYCLOPS EDAX										
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		575	326	202	342	106	230	138	60	65
CYCLOPOID NAUPLII		80	57	16	43	42	151	130	77	876
LIMNOCALANUS MACRURUS			1	1		1				3
LIMNOCALANUS MACRURUS	COPEPODITE	21	15	20	31	124	77	57	34	59
LIMNOCALANUS MACRURUS	NAUPLI	537	347	228	223		134	58	52	31
DIAPTOMUS SICILIS		8	2	3	12	10	13	6	8	12
DIAPTOMUS SICILIS	EGG	20		5	67	84	52	63	62	70
DIAPTOMUS OREGONENSIS		2	2	1	4	2			2	2
DIAPTOMUS OREGONENSIS	EGG								4	
DIAPTOMUS SICILOIDES										
DIAPTOMUS MINUTUS			1				1			2
DIAPTOMUS MINUTUS	EGG									
DIAPTOMUS ASHLANDII										
DIAPTOMUS ASHLANDII	EGG									
EURYTEMORA AFFINIS										
EURYTEMORA AFFINIS	EGG									
CALANOID COPEPODITES		84	38	69	102	71	210	141	180	194
CALANOID NAUPLII		495	566	153	356	546	409	406	429	426
HARPACTICOID COPEPODITES										

TABLE 10a. Continued

STATION 12 1981		MAY 20	MAY 26	JUN 2	DENSITY (NO. M-3)	JUN 9	JUN 15	JUN 22	JUN 29	JUL 6	JUL 13
<b>CLADOCERA</b>											
BOSMINA LONGIROSTRIS			1			212	70	242	354	1241	5941
BOSMINA LONGIROSTRIS	EGG	5				30	47	436	401	1941	4102
EUBOSMINA COREGORNI											47
EUBOSMINA COREGORNI	EGG										
DAPHNIA RETROCURVA							23				
DAPHNIA RETROCURVA	EGG										
DAPHNIA LONGIREMIS											
DAPHNIA LONGIREMIS	EGG										
DAPHNIA GALEATA MENDOTAE											
DAPHNIA GALEATA MENDOTAE	EGG										
DAPHNIA PULEX											
CERIODAPHNIA LACUSTRIS											
CERIODAPHNIA LACUSTRIS	EGG										
CERIODAPHNIA QUADRANGULA											
CHYDORUS SPHAERICUS											
CHYDORUS SPHAERICUS	EGG										
DIAPHANOSOMA BIRGEI											
DIAPHANOSOMA BIRGEI	EGG										
HOLOPEDIUM GIBBERUM											
HOLOPEDIUM GIBBERUM	EGG										
ALONA QUADRANGULARIS											
ALONA GUTTATA											
SIMOCEPHALUS VETULUS											
ILYOCRYPTUS SPINIFER											
LEYDIGIA QUADRANGULARIS											
LEYDIGIA QUADRANGULARIS	EGG										
POLYPHEMUS PEDICULUS											
POLYPHEMUS PEDICULUS	EGG										
LEPTODORA KINTDTII											
<b>COPEPODA</b>											
CYCLOPS BICUSPIDATUS THOMASI		261	167			30	94		494	15	11
CYCLOPS BICUSPIDATUS THOMASI	EGG	2144	274						766		
CYCLOPS VERNALIS										5	
TROPOCYCLOPS PRASINUS MEXICANUS		12	49	165		392	566	67		137	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG					363	1320	181		1283	
MESOCYCLOPS EDAX											
EUCYCLOPS AGILIS											
CYCLOPOID COPEPODITES		27	409	20655		45592	54890	5273	4692	795	2970
CYCLOPOID NAUPLII		3723	5839	131285		33710	24709	2354	2334	4328	7685
LIMNOCALANUS MACRURUS											
LIMNOCALANUS MACRURUS	COPEPODITE	83	3								
LIMNOCALANUS MACRURUS	NAUPLI	34			11						
DIAPTOMUS SICILIS		16	1								
DIAPTOMUS SICILIS	EGG	144									
DIAPTOMUS OREGONENSIS			9								
DIAPTOMUS OREGONENSIS	EGG	26									
DIAPTOMUS SICILOIDES											
DIAPTOMUS MINUTUS											
DIAPTOMUS MINUTUS	EGG										
DIAPTOMUS ASHLANDII											
DIAPTOMUS ASHLANDII	EGG										
EURYTEMORA AFFINIS											
EURYTEMORA AFFINIS	EGG										
CALANOID COPEPODITES		412	341	977	2698	141	51	81	31	81	
CALANOID NAUPLII		626	432	978	4274	117	101	23	31	58	
HARPACTICOID COPEPODITES											

TABLE 10 a. Continued

STATION 12 1981

## CLADOCERA

		JUL 21	JUL 27	AUG 4	DENSITY AUG 10	(NO. M-3) AUG 17	AUG 24	AUG 31	SEP 8	SEP 14
BOSMINA LONGIROSTRIS		7412	154826	121381	62105	96199	12072	18956	3889	910
BOSMINA LONGIROSTRIS	EGG	8006	25351	12731	13863	18787	4998	2545	459	326
EUBOSMINA COREGONI								70	849	273
EUBOSMINA COREGONI	EGG			1308	396	650	5140	11034	388	344
DAPHNIA RETROCURVA						56	613	3960	22209	601
DAPHNIA RETROCURVA	EGG								1555	69
DAPHNIA LONGIREMIS										
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE										
DAPHNIA GALEATA MENDOTAE	EGG									
DAPHNIA PULEX										
CERIODAPHNIA LACUSTRIS				176	362	1018	2734	9620	1344	522
CERIODAPHNIA LACUSTRIS	EGG			34	222	2376	2216	6507	425	327
CERIODAPHNIA QUADRANGULA										
CHYDORUS SPAERICUS										
CHYDORUS SPAERICUS	EGG									
DIAPHANOSOMA BIRGEI										
DIAPHANOSOMA BIRGEI	EGG									
HOLOPEDIUM GIBBERUM									69	18
HOLOPEDIUM GIBBERUM	EGG								70	
ALONA QUADRANGULARIS										
ALONA GUTTATA										
SIMOCEPHALUS VETULUS										
ILVOCRYPTUS SPINIFER										
LEYDIGIA QUADRANGULARIS										
LEYDIGIA QUADRANGULARIS	EGG									
POLYPHEMUS PEDICULUS				18	26					
POLYPHEMUS PEDICULUS	EGG			212	105					
LEPTODORA KINTII				18	8				34	

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI		13	27	212	388	1118	236	10752	8559	726
CYCLOPS BICUSPIDATUS THOMASI	EGG			184	608	684	15985	3749	1237	
CYCLOPS VERNALIS			27							
TROPOCYCLOPS PRASINUS MEXICANUS			198	18	34	98	897	601	12308	406
TROPOCYCLOPS PRASINUS MEXICANUS	EGG		1442		198	942	1131	3535		
MESOCYCLOPS EDAX										
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		4130	10865	5728	3165	15645	14995	36216	92805	4402
CYCLOPOID NAUPLII		2659	12562	8063	1113	3734	15655	13863	39612	3217
LIMNOCALANUS MACRURUS	COPEPODITE									
LIMNOCALANUS MACRURUS	NAUPLI									
DIAPATOMUS SICILIS										
DIAPATOMUS SICILIS	EGG									
DIAPATOMUS OREGONENSIS									34	
DIAPATOMUS OREGONENSIS	EGG									
DIAPATOMUS SICILOIDES										
DIAPATOMUS MINUTUS										
DIAPATOMUS MINUTUS	EGG									
DIAPATOMUS ASHLANDII										
DIAPATOMUS ASHLANDII	EGG									
EURYTEMORA AFFINIS										
EURYTEMORA AFFINIS	EGG									
CALANOID COPEPODITES		20		18	8					
CALANOID NAUPLII		13		34	26					
HARPACTICOID COPEPODITES				27						

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TABLE 10a. Continued

STATION 12 1981

## CLADOCERA

		SEP 24	SEP 29	OCT 5	DENSITY OCT 13	(NO. M-3) OCT 19	OCT 26	NOV 2	NOV 10	NOV 17
BOSMINA LONGIROSTRIS		3077	5035	-1	905	919	1824	2730	1767	329
BOSMINA LONGIROSTRIS	EGG	1909	2913	-1	445	551	622	340	183	74
EUBOSMINA COREGORONI		955	1583	-1	98	395	91	692	1230	399
EUBOSMINA COREGORONI	EGG	477	1358	-1	41	296	56	495	734	466
DAPHNIA RETROCURVA		7569	5206	-1	445	679	784	791	91	95
DAPHNIA RETROCURVA	EGG	2050	1244	-1	232	374	317	290	41	
DAPHNIA LONGIREMIS				-1						
DAPHNIA LONGIREMIS	EGG			-1						
DAPHNIA GALEATA MENDOTAE				-1						
DAPHNIA GALEATA MENDOTAE	EGG			-1						
DAPHNIA PULEX				-1						
CERIODAPHNIA LACUSTRIS		1026	622	-1	48	31	41	20	4	
CERIODAPHNIA LACUSTRIS	EGG	601	354	-1	6	6				4
CERIODAPHNIA QUADRANGULA				-1						
CHYDORUS SPAERICUS				-1						
CHYDORUS SPAERICUS	EGG			-1						
DIAPHANOSOMA BIRGEI				-1						
DIAPHANOSOMA BIRGEI	EGG			-1						
HOLOPEDIUM GIBBERUM				-1						
HOLOPEDIUM GIBBERUM	EGG			-1						
ALONA QUADRANGULARIS				-1						
ALONA GUTTATA				-1						
SIMOCEPHALUS VETULUS				-1						
ILYOCRYPTUS SPINIFER				-1						
LEYDIGIA QUADRANGULARIS				-1						
LEYDIGIA QUADRANGULARIS	EGG			-1						
POLYPHEMUS PEDICULUS				-1						
POLYPHEMUS PEDICULUS	EGG			-1						
LEPTODORA KINDTII				-1						

## COPEPODA

		10 115	4074	-1	1336	919	1061	1740	608	374
CYCLOPS BICUSPIDATUS THOMASI	EGG	20866	6224	-1	1081	3535	2631	5899	204	459
CYCLOPS VERNALIS				-1						
TROPOCYCLOPS PRASINUS MEXICANUS		3077	4045	-1	580	834	573	1328	1300	368
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	1980	820	-1						
MESOCYCLOPS EDAX				-1						
EUCYCLOPS AGILIS				-1						
CYCLOPOID COPEPODITES		43855	24220	-1	4612	3820	1895	5319	7610	1909
CYCLOPOID NAUPLII		7807	7185	-1	3649	2490	2630	4469	4100	2009
LIMNOCALANUS MACRURUS	COPEPODITE			-1						
LIMNOCALANUS MACRURUS	NAUPLI			-1			4			
DIAPTOMUS SICILIS				-1						
DIAPTOMUS SICILIS	EGG			-1						
DIAPTOMUS OREGONENSIS		34		-1			6		15	4
DIAPTOMUS OREGONENSIS	EGG	459		-1						
DIAPTOMUS SICILOIDES				-1						
DIAPTOMUS MINUTUS				-1						
DIAPTOMUS MINUTUS	EGG			-1						
DIAPTOMUS ASHLANDII				-1						
DIAPTOMUS ASHLANDII	EGG			-1						
EURYTEMORA AFFINIS			13	-1					11	
EURYTEMORA AFFINIS	EGG			-1						
CALANOID COPEPODITES		176	183	-1	34	38	49	34	36	24
CALANOID NAUPLII		141	70	-1	13	22	20	48	6	66
HARPACTICOID COPEPODITES				-1						

4

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TABLE 10b. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 41 1981

## CLADOCERA

	MAR 16	MAR 23	MAR 30	DENSITY (NO. M-3)	APR 6	APR 13	APR 21	APR 27	MAY 4	MAY 11
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BOSMINA LONGIROSTRIS  
 BOSMINA LONGIROSTRIS  
 EUBOSMINA COREGONI  
 EUBOSMINA COREGONI  
 DAPHNIA RETROCURVA  
 DAPHNIA RETROCURVA  
 DAPHNIA LONGIREMIS  
 DAPHNIA LONGIREMIS  
 DAPHNIA GALEATA MENDOTAE  
 DAPHNIA GALEATA MENDOTAE  
 DAPHNIA PULEX  
 CERIODAPHNIA LACUSTRIS  
 CERIODAPHNIA LACUSTRIS  
 CERIODAPHNIA QUADRANGULA  
 CHYDORUS SPAERICUS  
 CHYDORUS SPAERICUS  
 DIAPHANOSOMA BIRGEI  
 DIAPHANOSOMA BIRGEI  
 HOLOPEDIUM GIBBERUM  
 HOLOPEDIUM GIBBERUM  
 ALONA QUADRANGULARIS  
 ALONA GUTTATA  
 SIMOCEPHALUS VETULUS  
 ILYOCRYPTUS SPINIFER  
 LEYDIGIA QUADRANGULARIS  
 LEYDIGIA QUADRANGULARIS  
 POLYPHEMUS PEDICULUS  
 POLYPHEMUS PEDICULUS  
 LEPTODORA KINDTII

EGG

6

5

6

1

1

2

2

4

1

4

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI  
 CYCLOPS BICUSPIDATUS THOMASI  
 CYCLOPS VERNALIS  
 TROPOCYCLOPS PRASINUS MEXICANUS  
 TROPOCYCLOPS PRASINUS MEXICANUS EGG  
 MESOCYCLOPS EDAX  
 EUCCYCLOPS AGILIS  
 CYCLOPOID COPEPODITES  
 CYCLOPOID NAUPLII  
 LIMNOCALANUS MACRURUS  
 LIMNOCALANUS MACRURUS COPEPODITE  
 LIMNOCALANUS MACRURUS NAUPLI  
 DIAPTOMUS SICILIS  
 DIAPTOMUS SICILIS  
 DIAPTOMUS OREGONENSIS  
 DIAPTOMUS OREGONENSIS  
 DIAPTOMUS SICILOIDES  
 DIAPTOMUS MINUTUS  
 DIAPTOMUS MINUTUS  
 DIAPTOMUS ASHLANDII  
 DIAPTOMUS ASHLANDII  
 EURYTEMORA AFFINIS  
 EURYTEMORA AFFINIS  
 CALANOID COPEPODITES  
 CALANOID NAUPLII  
 HARPACTICOID COPEPODITES

EGG

67

420

601

1838

515

865

612

703

531

6428

4991

31

749

2153

17456

1641

10859

7812

16

21

34

21

189

264

20

134

126

90

274

1884

4141

1

4

5

27

48

13

45

13

27

10

8

5

27

13

26

37

9

35

34

44

19

52

63

27

13

20

13

2

5

6

326

20

12

18

96

48

30

58

5

31

31

15

5

6

2

5

5

20

12

5

5

5

6

19

31

31

31

15

5

5

5

5

19

1

559

459

14

176

91

78

342

44

284

TABLE 10b. Continued

STATION 41 1981

## CLADOCERA

TABLE 10 b. Continued

STATION 41 1981

## CLADOCERA

		JUL 21	JUL 27	AUG 4	DENSITY AUG 10	(NO. M-3) AUG 17	AUG 24	AUG 31	SEP 8	SEP 14
BOSMINA LONGIROSTRIS		15373	74130	125059	247573	59756	23484	62719	-1	117
BOSMINA LONGIROSTRIS	EGG	7073	37536	46969	90009	2716	3395	17448	-1	116
EUBOSMINA COREGONI					1415	452		58	-1	601
EUBOSMINA COREGONI	EGG							58	-1	624
DAPHNIA RETROCURVA			94	637	1238	17881	5728	8487	-1	6601
DAPHNIA RETROCURVA	EGG			1342	3005	9393	1662	2711	-1	1886
DAPHNIA LONGIREMIS					88				-1	
DAPHNIA LONGIREMIS	EGG								-1	
DAPHNIA GALEATA MENDOTAE									-1	
DAPHNIA GALEATA MENDOTAE	EGG								-1	
DAPHNIA PULEX									-1	
CERIODAPHNIA LACUSTRIS				283	2828	5941	760	5894	-1	341
CERIODAPHNIA LACUSTRIS	EGG			495	4598	2206	406	5717	-1	294
CERIODAPHNIA QUADRANGULA									-1	
CHYDORUS SPHAERICUS									-1	11
CHYDORUS SPHAERICUS	EGG								-1	
DIAPHANOSOMA BIRGEI									-1	
DIAPHANOSOMA BIRGEI	EGG								-1	
HOLOPEDIUM GIBBERUM									-1	
HOLOPEDIUM GIBBERUM	EGG								-1	
ALONA QUADRANGULARIS									-1	
ALONA GUTTATA									-1	
SIMOCEPHALUS VETULUS									-1	
ILYOCRYPTUS SPINIFER									-1	
LEYDIGIA QUADRANGULARIS									-1	
LEYDIGIA QUADRANGULARIS	EGG								-1	
POLYPHEMUS PEDICULUS									-1	
POLYPHEMUS PEDICULUS	EGG								-1	
LEPTODORA KINTTII						18			-1	11

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI		7215	16598	25463	17595	19919	9195	2828	-1	7733
CYCLOPS BICUSPIDATUS THOMASI	EGG	1885	3017	38620	42883	33726	1697	1473	-1	6744
CYCLOPS VERNALIS									-1	
TROPOCYCLOPS PRASINUS MEXICANUS		23	425	88	509	530	1649	-1	4669	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	472	1131		1697	1255	1591	-1	472	
MESOCYCLOPS EDAX									-1	23
EUCYCLOPS AGILIS									-1	
CYCLOPOID COPEPODITES		23390	18013	90541	74273	64510	26597	14619	-1	25559
CYCLOPOID NAUPLII		98274	7356	13296	1945	6394	18956	16505	-1	9337
LIMNOCALANUS MACRURUS	COPEPODITE NAUPLI								-1	
LIMNOCALANUS MACRURUS									-1	
DIAPTOMUS SICILIS									-1	
DIAPTOMUS SICILIS	EGG								-1	
DIAPTOMUS OREGONENSIS					88	56	36		-1	139
DIAPTOMUS OREGONENSIS	EGG								-1	223
DIAPTOMUS SICILOIDES									-1	
DIAPTOMUS MINUTUS									-1	
DIAPTOMUS MINUTUS	EGG								-1	
DIAPTOMUS ASHLANDII									-1	
DIAPTOMUS ASHLANDII	EGG								-1	
EURYTEMORA AFFINIS									-1	
EURYTEMORA AFFINIS	EGG								-1	
CALANOID COPEPODITES		70	70		177	282	52	116	-1	94
CALANOID NAUPLII		141	117		226	36	412	-1		23
HARPACTICOID COPEPODITES									-1	

TABLE 10b. Continued

STATION 41 1981

## CLADOCERA

TABLE 10 C. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 81 1981

MAR 16 MAR 23 MAR 30 DENSITY (NO. M-3) APR 6 APR 13 APR 21 APR 27 MAY 4 MAY 11

## CLADOCERA

## COPEPODA

TABLE 10 C. Continued

STATION 81 1981

## CLADOCERA

TABLE 10C. Continued

STATION 81 1981

## CLADOCERA

		JUL 21	JUL 27	AUG 4	DENSITY (NO. M-3)	AUG 10	AUG 17	AUG 24	AUG 31	SEP 8	SEP 14
BOSMINA LONGIROSTRIS		54576	21149	13109	70106	91484	6281	902	388	282	
BOSMINA LONGIROSTRIS	EGG	17605	7213	6317	15405	5187	4413	549	281	300	
EUBOSMINA COREGORNI		754	70	1319	1570	2358	1866	216	706	3055	
EUBOSMINA COREGORNI	EGG		141	942	629	943	2885	176	706	1923	
DAPHNIA RETROCURVA		532	856	6319	16191	80638	15166	6523	9195	5017	
DAPHNIA RETROCURVA	EGG	94	467	1319	5186	7544	7356	11317	1838	1395	
DAPHNIA LONGIREMIS		125									
DAPHNIA LONGIREMIS	EGG	31									
DAPHNIA GALEATA MENDOTAE								27			
DAPHNIA GALEATA MENDOTAE	EGG										
DAPHNIA PULEX											
CERIODAPHNIA LACUSTRIS		1069	937	4858	15718	16976	2659	313	494	94	
CERIODAPHNIA LACUSTRIS	EGG	1445	1008	3583	11002	3890	2348		212	94	
CERIODAPHNIA QUADRANGULA											
CHYDORUS SPHAERICUS		375	26	283		236	27			19	
CHYDORUS SPHAERICUS	EGG	62		117						9	
DIAPHANOSOMA BIRGEI				23				38			
DIAPHANOSOMA BIRGEI	EGG			47							
HOLOPEDIUM GIBBERUM								38			
HOLOPEDIUM GIBBERUM	EGG							38			
ALONA QUADRANGULARIS											
ALONA GUTTATA											
SIMOCEPHALUS VETULUS											
ILYOCRYPTUS SPINIFER											
LEYDIGIA QUADRANGULARIS											
LEYDIGIA QUADRANGULARIS	EGG			23							
POLYPHEMUS PEDICULUS				1013							
POLYPHEMUS PEDICULUS	EGG		8		79		27		70	9	
LEPTODORA KINDTII											
COPEPODA											
CYCLOPS BICUSPIDATUS THOMASI		753	734	1933	9509	20748	15393	9117	8630	1868	
CYCLOPS BICUSPIDATUS THOMASI	EGG	1477	662	1367	6287	19805	28181	25622	5234	2830	
CYCLOPS VERNALIS			8						34		
TROPOCYCLOPS PRASINUS MEXICANUS		534	309	1130	2278	8488	2687	1218	3961	1206	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	4841	1123	5799	3615	32184	3027	550	1166	999	
MESOCYCLOPS EDAX							27	77	34		
EUCYCLOPS AGILIS											
CYCLOPOID COPEPODITES		15592	34872	39990	42440	119778	29424	25779	34235	21956	
CYCLOPOID NAUPLII		7544	14288	14241	22320	65076	59530	30808	22634	13204	
LIMNOCALANUS MACRURUS											
LIMNOCALANUS MACRURUS	COPEPODITE										
LIMNOCALANUS MACRURUS	NAUPLI										
DIAPTOMUS SICILIS								38			
DIAPTOMUS SICILIS	EGG										
DIAPTOMUS OREGONENSIS									212	9	
DIAPTOMUS OREGONENSIS	EGG								565		
DIAPTOMUS SICILOIDES											
DIAPTOMUS MINUTUS											
DIAPTOMUS MINUTUS	EGG										
DIAPTOMUS ASHLANDII											
DIAPTOMUS ASHLANDII	EGG										
EURYTEMORA AFFINIS		31	26	23	79		27		34		
EURYTEMORA AFFINIS	EGG	18	612				425				
CALANOID COPEPODITES		125	388	495	313	118	339	393	141	75	
CALANOID NAUPLII		63	60	188	79	472	169	431	211	66	
HARPACTICOID COPEPODITES											

TABLE 10C. Continued

STATION 81 1981

## CLADOCERA

TABLE 10 d. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

TABLE 10d. Continued

STATION 93 1981

## CLADOCERA

TABLE 10d. Continued

STATION 93 1981

## CLADOCERA

		JUL 21	JUL 27	AUG 4	DENSITY (NO. M-3)	AUG 10	AUG 17	AUG 24	AUG 31	SEP 8	SEP 14
BOSMINA LONGIROSTRIS		19927	26256	250498	77606	26142	27970	15731	-1	2757	
BOSMINA LONGIROSTRIS	EGG	9820	1470	65641	30112	2885	25222	1697	-1	1500	
EUBOSMINA COREGORNI								13	-1	34	
EUBOSMINA COREGORNI	EGG								-1	13	
DAPHNIA RETROCURVA				1980	2778	8743	10670	13353	-1	1088	
DAPHNIA RETROCURVA	EGG			2734	2323	678	7517	1131	-1	140	
DAPHNIA LONGIREMIS		5							-1		
DAPHNIA LONGIREMIS	EGG								-1		
DAPHNIA GALEATA MENDOTAE			15						-1		
DAPHNIA GALEATA MENDOTAE	EGG								-1		
DAPHNIA PULEX									-1		
CERIODAPHNIA LACUSTRIS				20	660	555	4541	11963	5658	-1	786
CERIODAPHNIA LACUSTRIS	EGG				1415	555	4669	11236	2490	-1	672
CERIODAPHNIA QUADRANGULA									-1		
CHYDORUS SPAHERICUS									-1		
CHYDORUS SPAHERICUS	EGG								-1		
DIAPHANOSOMA BIRGEI							40		-1	13	
DIAPHANOSOMA BIRGEI	EGG								-1		
HOLOPEDIUM GIBBERUM									-1	6	
HOLOPEDIUM GIBBERUM	EGG								-1	50	
ALONA QUADRANGULARIS									-1		
ALONA GUTTATA									-1		
SIMOCEPHALUS VETULUS									-1		
ILYOCRYPTUS SPINIFER									-1		
LEYDIGIA QUADRANGULARIS									-1		
LEYDIGIA QUADRANGULARIS	EGG								-1		
POLYPHEMUS PEDICULUS									-1		
POLYPHEMUS PEDICULUS	EGG								-1		
LEPTODORA KINTDTII								40	13	-1	20
COPEPODA											
CYCLOPS BICUSPIDATUS THOMASI		30	608	2735	7276	699	1658	919	-1	134	
CYCLOPS BICUSPIDATUS THOMASI	EGG			19806	11166	2291	2223	1202	-1	466	
CYCLOPS VERNALIS									-1		
TROPOCYCLOPS PRASINUS MEXICANUS		181	27	659	555	1337	1252	578	-1	1159	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	1878		3488	1111	3713	8810	2928	-1	1627	
MESOCYCLOPS EDAX		5					40		-1		
EUCYCLOPS AGILIS									-1		
CYCLOPOID COPEPODITES		4022	22635	29237	28901	17655	24898	10977	-1	4130	
CYCLOPOID NAUPLII		2445	91	5752	12429	5305	12448	3592	-1	2744	
LIMNOCALANUS MACRURUS									-1		
LIMNOCALANUS MACRURUS	COPEPODITE								-1		
LIMNOCALANUS MACRURUS	NAUPLI								-1		
DIAPTOMUS SICILIS									-1		
DIAPTOMUS SICILIS	EGG								-1		
DIAPTOMUS OREGONENSIS					50				-1		
DIAPTOMUS OREGONENSIS	EGG				808				-1		
DIAPTOMUS SICILOIDES									-1		
DIAPTOMUS MINUTUS									-1		
DIAPTOMUS MINUTUS	EGG								-1		
DIAPTOMUS ASHLANDII									-1		
DIAPTOMUS ASHLANDII	EGG								-1		
EURYTEMORA AFFINIS			6		151		20	687	-1		
EURYTEMORA AFFINIS	EGG							11034	-1		
CALANOID COPEPODITES		65	41	1415	405	233	1898		-1	587	
CALANOID NAUPLII		35	6	849	50	148	565		-1	1562	
HARPACTICOID COPEPODITES									-1		

TABLE 10d. Continued

STATION 93 1981

## CLADOCERA

		SEP 24	SEP 29	OCT 5	DENSITY (NO. M-3)	OCT 13	OCT 19	OCT 26	NOV 2	NOV 10	NOV 17
BOSMINA LONGIROSTRIS		5549	-1	1508	274	487	3262	734	1386	1562	
BOSMINA LONGIROSTRIS	EGG	3427	-1	785	113	328	1149	409	960	1026	
EUBOSMINA COREGORNI		1033	-1	1005	28	348	348	167	452	381	
EUBOSMINA COREGORNI	EGG	434	-1	605	23	324	169	141	269	310	
DAPHNIA RETROCURVA		5767	-1	1980	2659	49	3791	197	70	24	
DAPHNIA RETROCURVA	EGG	2067	-1	2027	1513	34	1923	56	9	31	
DAPHNIA LONGIREMIS		-1									13
DAPHNIA LONGIREMIS	EGG	-1									
DAPHNIA GALEATA MENDOTAE		-1					9		4		4
DAPHNIA GALEATA MENDOTAE	EGG	-1									11
DAPHNIA PULEX		-1									
CERIODAPHNIA LACUSTRIS		1469	-1	205	11	34	113	9	23	10	
CERIODAPHNIA LACUSTRIS	EGG	979	-1	31							6
CERIODAPHNIA QUADRANGULA		-1									
CHYDORUS SPAERICUS		-1									
CHYDORUS SPAERICUS	EGG	-1				34	19	11	38	10	
DIAPHANOSOMA BIRGEI		-1				15	19	4	13	4	
DIAPHANOSOMA BIRGEI	EGG	-1									
HOLOPEDIUM GIBBERUM		-1									
HOLOPEDIUM GIBBERUM	EGG	-1									
ALONA QUADRANGULARIS		-1									
ALONA GUTTATA		-1									4
SIMOCEPHALUS VETULUS		-1					4				
ILYOCRYPTUS SPINIFER		-1									1
LEYDIGIA QUADRANGULARIS		-1									
LEYDIGIA QUADRANGULARIS	EGG	-1									
POLYPHEMUS PEDICULUS		-1									
POLYPHEMUS PEDICULUS	EGG	-1									
LEPTODORA KINTTII		-1									

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI		3047	-1	229	510	81	763	222	76	59	
CYCLOPS BICUSPIDATUS THOMASI	EGG	4544	-1	298	312	51	1669	1330	273	73	
CYCLOPS VERNALIS		-1									4
TROPOCYCLOPS PRASINUS MEXICANUS		4462	-1	3300	923	148	1395	140	292	91	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	1469	-1	313							
MESOCYCLOPS EDAX		-1									
EUCYCLOPS AGILIS		-1									
CYCLOPOID COPEPODITES		21002	-1	5941	703	397	5319	791	569	264	
CYCLOPOID NAUPLII		2448	-1	3269	62	92	4602	438	160	24	
LIMNOCALANUS MACRURUS		-1			4						
LIMNOCALANUS MACRURUS	COPEPODITE	-1									
LIMNOCALANUS MACRURUS	NAUPLI	-1									
DIAPTOMUS SICILIS		-1			6				6		
DIAPTOMUS SICILIS	EGG	-1							16		
DIAPTOMUS OREGONENSIS		27	-1	16	6			9	23	38	201
DIAPTOMUS OREGONENSIS	EGG	-1							50		27
DIAPTOMUS SICILOIDES		-1									
DIAPTOMUS MINUTUS		-1									
DIAPTOMUS MINUTUS	EGG	-1									
DIAPTOMUS ASHLANDII		-1									
DIAPTOMUS ASHLANDII	EGG	-1									
EURYTEMORA AFFINIS		27	-1	15		51	37	37			13
EURYTEMORA AFFINIS	EGG	-1									
CALANOID COPEPODITES		462	-1	156	45	494	310	106	113	144	
CALANOID NAUPLII		190	-1	86	1	98	55	20	13	8	
HARPACTICOID COPEPODITES		-1							4		

TABLE 10 C. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 12 1982

## CLADOCERA

BOSMINA LONGIROSTRIS		14	3	1	1	
BOSMINA LONGIROSTRIS	EGG	10				2
EUBOSMINA COREGONI		3		1		
EUBOSMINA COREGONI	EGG					
DAPHNIA RETROCURVA						
DAPHNIA RETROCURVA	EGG					
DAPHNIA LONGIREMIS						
DAPHNIA LONGIREMIS	EGG					
DAPHNIA GALEATA MENDOTAE						
DAPHNIA GALEATA MENDOTAE	EGG					
DAPHNIA AMBIGUA						
DAPHNIA SP.						
CERIODAPHNIA LACUSTRIS						
CERIODAPHNIA LACUSTRIS	EGG					
CERIODAPHNIA QUADRANGULA						
CHYDORUS SPHAERICUS						
CHYDORUS SPHAERICUS	EGG					
DIAPHANOSOMA BIRGEI						
HOLOPEDIUM GIBBERUM						
HOLOPEDIUM GIBBERUM	EGG					
ALONA QUADRANGULARIS						
ALONA GUTTATA						
ILYOCRYPTUS SPINIFER						
POLYPHEMUS PEDICULUS						
POLYPHEMUS PEDICULUS	EGG					
LEPTODORA KINDTII						

## COPEPODA

TABLE 10 e. Continued

STATION 12 1982

## CLADOCERA

## COPEPODA

TABLE 10 e. Continued

STATION 12 1982

## CLADOCERA

		AUG 17	AUG 23	AUG 30	DENSITY SEP 7	(NO. M-3) SEP 14	SEP 22	SEP 28	OCT 4	OCT 12
BOSMINA LONGIROSTRIS	EGG	537590	48553	267776	154971	201455	314883	89183	354177	13722
BOSMINA LONGIROSTRIS	EGG	105631	20032	101859	30477	47534	108649	14939	95867	849
EUBOSMINA COREGONI				56			616		333	1839
EUBOSMINA COREGONI	EGG						716		999	424
DAPHNIA RETROCURVA	EGG	236	14		101	1132	1823	566	12982	8276
DAPHNIA RETROCURVA	EGG		28		151	1132	1383	283	21637	990
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE	EGG					283	100	169	666	
DAPHNIA GALEATA MENDOTAE	EGG							226	1331	
DAPHNIA AMBIGUA	EGG									
DAPHNIA SP.										
CERIODAPHNIA LACUSTRIS	EGG	943		21		101	566	465	509	333
CERIODAPHNIA LACUSTRIS	EGG	471					2615	735	333	955
CERIODAPHNIA QUADRANGULA										35
CHYDORUS SPAERICUS	EGG									
CHYDORUS SPAERICUS	EGG									
DIAPHANOSOMA BIRGEI										
HOLOPEDIUM GIBBERUM										212
HOLOPEDIUM GIBBERUM	EGG									672
ALONA QUADRANGULARIS										
ALONA GUTTATA										
ILYOCRYPTUS SPINIFER										
POLYPHEMUS PEDICULUS	EGG	236	14						113	
POLYPHEMUS PEDICULUS	EGG		49							
LEPTODORA KINTDTII										

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	EGG	2475	381	4725	9700	8205	9607	1584	11983	4315
CYCLOPS BICUSPIDATUS THOMASI	EGG	4008	834	3508	33751	50647	5268	1528	36949	7144
CYCLOPS VERNALIS										
TROPOCYCLOPS PRASINUS MEXICANUS		236		56				56		1981
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	1768								424
MESOCYCLOPS EDAX										
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		30416	1711	65642	54163	46968	95571	71527	98530	49798
CYCLOPOID NAUPLII		28530	2858	44591	12025	19806	3081	5489	17309	8276
LIMNOCALANUS MACRURUS										
LIMNOCALANUS MACRURUS	COPEPODITE									
LIMNOCALANUS MACRURUS	NAUPLI									
DIAPTOMUS SICILIS	EGG									
DIAPTOMUS SICILIS	EGG									
DIAPTOMUS OREGONENSIS	EGG				202					
DIAPTOMUS OREGONENSIS	EGG				859					
DIAPTOMUS SICILOIDES										
DIAPTOMUS MINUTUS										
DIAPTOMUS ASHLANDII										
EURYTEMORA AFFINIS	EGG		14					113	666	
EURYTEMORA AFFINIS	EGG	707	14					226	666	672
CALANOID COPEPODITES		236			101			126	56	666
CALANOID NAUPLII										424
HARPACTICOID COPEPODITES										

TABLE 10 e. Continued

STATION 12 1982

	OCT 18	OCT 25	NOV 1	DENSITY (NO. M-3)	NOV 8	NOV 16	NOV 22
				NOV	NOV	NOV	NOV
BOSMINA LONGIROSTRIS	12166	2245	27	343	309	60	
BOSMINA LONGIROSTRIS	283	169		57	26	14	
EUBOSMINA COREGONI	1273	292	15	488	937	124	
EUBOSMINA COREGONI	672	75	2	367	424	117	
DAPHNIA RETROCURVA	2582	613	20	134	212	10	
DAPHNIA RETROCURVA	141	47		24	9		
DAPHNIA LONGIREMIS							
DAPHNIA LONGIREMIS	EGG						
DAPHNIA GALEATA MENDOTAE		176	47	2	14	26	32
DAPHNIA GALEATA MENDOTAE	EGG					71	
DAPHNIA AMBIGUA							
DAPHNIA SP.							
CERIODAPHNIA LACISTRIS		354	9		3		
CERIODAPHNIA LACISTRIS	EGG						
CERIODAPHNIA QUADRANGULA					3		
CHYDORUS SPAERICUS							
CHYDORUS SPAERICUS							
DIAPHANOSOMA BIRGEI	EGG						
HOLOPEDIUM GIBBERUM		35	19	3			
HOLOPEDIUM GIBBERUM	EGG						
ALONA QUADRANGULARIS							
ALONA GUTTATA							
ILYOCRYPTUS SPINIFER							
POLYPHEMUS PEDICULUS							
POLYPHEMUS PEDICULUS	EGG						
LEPTODORA KINTDTII							

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	5340	877	69	544	495	240
CYCLOPS BICUSPIDATUS THOMASI	2511	1160	91	728	1282	162
CYCLOPS VERNALIS						
TROPOCYCLOPS PRASINUS MEXICANUS	495	179	15	152	53	113
TROPOCYCLOPS PRASINUS MEXICANUS	EGG					
MESOCYCLOPS EDAX						
EUCYCLOPS AGILIS						
CYCLOPOID COPEPODITES	62813	7847	686	6875	10787	5291
CYCLOPOID NAUPLII	1450	2358	346	4074	2387	1867
LIMNOCALANUS MACRURUS	COPEPODITE NAUPLI		1			
LIMNOCALANUS MACRURUS						
DIAPTOMUS SICILIS		28	70	10	79	110
DIAPTOMUS SICILIS	EGG	113	118	113	185	155
DIAPTOMUS OREGONENSIS		35		3	26	35
DIAPTOMUS OREGONENSIS	EGG					
DIAPTOMUS SICILOIDES						
DIAPTOMUS MINUTUS						
DIAPTOMUS ASHLANDII						
EURYTEMORA AFFINIS	71	9	7	17	9	
EURYTEMORA AFFINIS	EGG		14			
CALANOID COPEPODITES	247	198	52	102	115	74
CALANOID NAUPLII	35	75	212	233	318	99
HARPACTICOID COPEPODITES						

TABLE 10F. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 41 1982

## CLADOCERA

		MAR 8	MAR 17	MAR 24	DENSITY (NO. M-3)	MAR 31	APR 5	APR 14	MAY 4	MAY 10	MAY 18
BOSMINA LONGIROSTRIS		5	1	5	1	-1		7			
BOSMINA LONGIROSTRIS	EGG					-1					
EUBOSMINA COREGORNI		5	1	6	7	-1		4			
EUBOSMINA COREGORNI	EGG					-1					
DAPHNIA RETROCURVA						-1					
DAPHNIA RETROCURVA	EGG					-1					
DAPHNIA LONGIREMIS						-1					
DAPHNIA LONGIREMIS	EGG					-1					
DAPHNIA GALEATA MENDOTAE						-1					
DAPHNIA GALEATA MENDOTAE	EGG					-1					
DAPHNIA AMBIGUA						-1					
DAPHNIA SP.						-1					
CERIODAPHNIA LACUSTRIS						-1					
CERIODAPHNIA LACUSTRIS	EGG					-1					
CERIODAPHNIA QUADRANGULA						-1					
CHYDORUS SPHAERICUS						1	-1				
CHYDORUS SPHAERICUS	EGG					-1					
DIAPHANOSOMA BIRGEI						-1					
HOLOPEDIUM GIBBERUM						-1					
HOLOPEDIUM GIBBERUM	EGG					-1					
ALONA QUADRANGULARIS						-1					
ALONA GUTTATA						-1					
ILYOCRYPTUS SPINIFER						-1					
POLYPHEMUS PEDICULUS						-1					
POLYPHEMUS PEDICULUS	EGG					-1					
LEPTODORA KINTDTII						-1					
COPEPODA											
CYCLOPS BICUSPIDATUS THOMASI		95	76	140	318	-1	718	747	622	1358	
CYCLOPS BICUSPIDATUS THOMASI	EGG	30	56	55	71	-1	1821	2965	4199	11725	
CYCLOPS VERNALIS						-1					
TROPOCYCLOPS PRASINUS MEXICANUS		26	15	52	18	-1	37	20	27	31	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG					-1					
MESOCYCLOPS EDAX						-1					
EUCYCLOPS AGILIS						-1					
CYCLOPOID COPEPODITES		1421	628	1335	1312	-1	1393	243	229	379	
CYCLOPOID NAUPLII		414	145	334	143	-1	283	141	215	201	
LIMNOCALANUS MACRURUS		2	4	17	3	-1	3				
LIMNOCALANUS MACRURUS	COPEPODITE	3				-1					
LIMNOCALANUS MACRURUS	NAUPLI	62	41	44	18	-1	77	11	9		
DIAPTOMUS SICILIS		5	5	28	1	-1	4	8	16	3	
DIAPTOMUS SICILIS	EGG		83	39		-1	51	93	120	99	
DIAPTOMUS OREGONENSIS		2		1		-1	2		9	23	
DIAPTOMUS OREGONENSIS	EGG					-1			44	263	
DIAPTOMUS SICILOIDES						-1					
DIAPTOMUS MINUTUS						-1					
DIAPTOMUS ASHLANDII						-1					
EURYTEMORA AFFINIS						-1					
EURYTEMORA AFFINIS	EGG					-1					
CALANOID COPEPODITES		34	15	45	21	-1	56	28	44	23	
CALANOID NAUPLII		281	165	184	50	-1	187	113	215	150	
HARPACTICOID COPEPODITES						-1					

TABLE 10 f. Continued

STATION 41 1982

## CLADOCERA

TABLE 10f. Continued

STATION 41 1982

## CLADOCERA

		AUG 17	AUG 23	AUG 30	DENSITY SEP 7	(NO. M-3) SEP 14	SEP 22	SEP 28	OCT 4	OCT 12
BOSMINA LONGIROSTRIS		23107	129021	166483	43483	28577	91056	26722	18705	9408
BOSMINA LONGIROSTRIS	EGG	6696	29830	76055	10424	1556	16205	3929	4244	1697
EUBOSMINA COREGORNI		23		35		71	1222	314	707	6719
EUBOSMINA COREGORNI	EGG									
DAPHNIA RETROCURVA		23	586	4626	5547	2546	43213	9510	6366	14571
DAPHNIA RETROCURVA	EGG		50	4194	5286	1945	9002	3536	2593	5093
DAPHNIA LONGIREMIS				106					79	
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE								78	39	70
DAPHNIA GALEATA MENDOTAE	EGG									
DAPHNIA AMBIGUA										
DAPHNIA SP.										
CERIODAPHNIA LACUSTRIS		59	404	2581	1340	1061	28294	4244	2004	1344
CERIODAPHNIA LACUSTRIS	EGG	47	151	2914	1712	1450	10803	1729	786	495
CERIODAPHNIA QUADRANGULA				37						
CHYDORUS SPAHERICUS										
CHYDORUS SPAHERICUS	EGG									
DIAPHANOSOMA BIRGEI										
HOLOPEDIUM GIBBERUM										
HOLOPEDIUM GIBBERUM	EGG							257	118	79
ALONA QUADRANGULARIS								257		282
ALONA GUTTATA										212
ILYOCRYPTUS SPINIFER										
POLYPHEMUS PEDICULUS		12								
POLYPHEMUS PEDICULUS	EGG									
LEPTODORA KINTDTII						3				
COPEPODA										
CYCLOPS BICUSPIDATUS THOMASI		554	3941	3933	6180	3324	7781	6052	2908	7993
CYCLOPS BICUSPIDATUS THOMASI	EGG	837	3921	3063	13142	6826	7716	7741	6051	15137
CYCLOPS VERNALIS				56						
TROPOCYCLOPS PRASINUS MEXICANUS		35	50	495	856	212	1929	1218	943	2829
TROPOCYCLOPS PRASINUS MEXICANUS	EGG			990			3472		236	70
MESOCYCLOPS EDAX										
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		12732	24373	30784	36336	17966	92599	38511	38040	59418
CYCLOPOID NAUPLII		17259	13055	13666	15860	9337	8552	6012	16819	13157
LIMNOCALANUS MACRURUS										
LIMNOCALANUS MACRURUS	COPEPODITE			151						
LIMNOCALANUS MACRURUS	NAUPLI									
DIAPTONUS SICILIS										
DIAPTONUS SICILIS	EGG									
DIAPTONUS OREGONENSIS										
DIAPTONUS OREGONENSIS	EGG									
DIAPTONUS SICILOIDES										
DIAPTONUS MINUTUS										
DIAPTONUS ASHLANDII										
EURYTEMORA AFFINIS		23					707	39	39	70
EURYTEMORA AFFINIS	EGG									
CALANOID COPEPODITES		295	91	92	111	180	1222	314	314	990
CALANOID NAUPLII		129		183	186	3	386	118	471	495
HARPACTICOID COPEPODITES										

TABLE 10 f. Continued

STATION 41 1982

	OCT 18	OCT 25	NOV 1	DENSITY (NO. M-3)	NOV 8	NOV 16	NOV 22
BOSMINA LONGIROSTRIS	748	1743	735	202	106	552	
BOSMINA LONGIROSTRIS	65	88	49	3	7	14	
EUBOSMINA COREGONI	363	916	311	389	329	1994	
EUBOSMINA COREGONI	81	123	205	318	180	1429	
DAPHNIA RETROCURVA	1263	820	778	152	131	255	
DAPHNIA RETROCURVA	46	534	212	21	3	70	
DAPHNIA LONGIREMIS					3		
DAPHNIA LONGIREMIS						3	
DAPHNIA GALEATA MENDOTAE		24	141	7	3	3	28
DAPHNIA GALEATA MENDOTAE		16					28
DAPHNIA AMBIGUA							
DAPHNIA SP.							
CERIODAPHNIA LACUSTRIS		100	177			3	14
CERIODAPHNIA LACUSTRIS							
CERIODAPHNIA QUADRANGULA							
CHYDORUS SPAHERICUS		16					
CHYDORUS SPAHERICUS							
DIAPHANOSOMA BIRGEI							
HOLOPEDIUM GIBBERUM		26	46	14			
HOLOPEDIUM GIBBERUM		48				3	
ALONA QUADRANGULARIS							
ALONA GUTTATA							
ILYOCRYPTUS SPINIFER							
POLYPHEMUS PEDICULUS							
POLYPHEMUS PEDICULUS							
LEPTODORA KINTDTII		EGG					

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	1206	6373	658	597	170	1471
CYCLOPS BICUSPIDATUS THOMASI	547	15158	1421	714	647	3353
CYCLOPS VERNALIS						
TROPOCYCLOPS PRASINUS MEXICANUS	206	1135	198	378	78	976
TROPOCYCLOPS PRASINUS MEXICANUS			49	21		
MESOCYCLOPS EDAX						
EUCYCLOPS AGILIS						
CYCLOPOID COPEPODITES	4769	22833	5885	9648	2560	28294
CYCLOPOID NAUPLII	477	6281	2942	3508	884	9620
LIMNOCALANUS MACRURUS						
LIMNOCALANUS MACRURUS		COPEPODITE NAUPLI				
DIAPTOMUS SICILIS	5	145		3	24	14
DIAPTOMUS SICILIS					56	
DIAPTOMUS OREGONENSIS	31	77		10	24	99
DIAPTOMUS OREGONENSIS	86				53	113
DIAPTOMUS SICILOIDES					3	
DIAPTOMUS MINUTUS						
DIAPTOMUS ASHLANDII						
EURYTEMORA AFFINIS			77	7	3	7
EURYTEMORA AFFINIS						
CALANOID COPEPODITES	52	315	127	64	57	297
CALANOID NAUPLII	21	109	332	145	230	664
HARPACTICOID COPEPODITES						

TABLE 10 Q. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 81 1982

## CLADOCERA

	MAR 8	MAR 17	MAR 24	DENSITY (NO. M <sup>-3</sup> )	MAR 31	APR 5	APR 14	MAY 4	MAY 10	MAY 18
BOSMINA LONGIROSTRIS	-1	-1	-1	22	-1	-1	-1	6	28	70
BOSMINA LONGIROSTRIS	EGG	-1	-1	-1	-1	-1	-1	2	2	192
EUBOSMINA COREGONI	-1	-1	-1	65	-1	-1	-1	3	5	8
EUBOSMINA COREGONI	EGG	-1	-1	-1	5	-1	-1	-1	2	4
DAPHNIA RETROCURVA	-1	-1	-1	-1	-1	-1	-1	-1	-1	27
DAPHNIA RETROCURVA	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA LONGIREMIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA LONGIREMIS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA GALEATA MENDOTAE	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA GALEATA MENDOTAE	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA AMBIGUA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DAPHNIA SP.	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
CERIODAPHNIA LACUSTRIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
CERIODAPHNIA LACUSTRIS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
CERIODAPHNIA QUADRANGULA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
CHYDORUS SPAHERICUS	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
CHYDORUS SPAHERICUS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
DIAPHANOSOMA BIRGEI	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
HOLOPEDIUM GIBBERUM	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
HOLOPEDIUM GIBBERUM	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
ALONA QUADRANGULARIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
ALONA GUTTATA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
ILYOCRYPTUS SPINIFER	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
POLYPHEMUS PEDICULUS	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
POLYPHEMUS PEDICULUS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	-1
LEPTODORA KINTDTII	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	-1	-1	-1	922	-1	-1	470	403	534	
CYCLOPS BICUSPIDATUS THOMASI	EGG	-1	-1	2569	-1	-1	4459	6083	4169	
CYCLOPS VERNALIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	
TROPOCYCLOPS PRASINUS MEXICANUS	-1	-1	-1	82	-1	-1	3	9	19	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	
MESOCYCLOPS EDAX	-1	-1	-1	-1	-1	-1	-1	-1	-1	
EUCYCLOPS AGILIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	
CYCLOPOID COPEPODITES	-1	-1	-1	1618	-1	-1	150	364	943	
CYCLOPOID NAUPLII	-1	-1	-1	110	-1	-1	76	339	7074	
LIMNOCALANUS MACRURUS	-1	-1	-1	3	-1	-1	-1	-1	-1	
LIMNOCALANUS MACRURUS	COPEPODITE	-1	-1	-1	-1	-1	11	9	4	
LIMNOCALANUS MACRURUS	NAUPLI	-1	-1	14	-1	-1	25	23	4	
DIAPTOMUS SICILIS	-1	-1	-1	8	-1	-1	8	5		
DIAPTOMUS SICILIS	EGG	-1	-1	127	-1	-1	-1	37		
DIAPTOMUS OREGONENSIS	-1	-1	-1	6	-1	-1	-1	6		
DIAPTOMUS OREGONENSIS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	
DIAPTOMUS SICILOIDES	-1	-1	-1	-1	-1	-1	-1	-1	-1	
DIAPTOMUS MINUTUS	-1	-1	-1	-1	-1	-1	-1	-1	-1	
DIAPTOMUS ASHLANDII	-1	-1	-1	-1	-1	-1	-1	-1	-1	
EURYTEMORA AFFINIS	-1	-1	-1	-1	-1	-1	-1	-1	-1	
EURYTEMORA AFFINIS	EGG	-1	-1	-1	-1	-1	-1	-1	-1	
CALANOID COPEPODITES	-1	-1	-1	-1	-1	-1	-1	-1	-1	
CALANOID NAUPLII	-1	-1	-1	8	-1	-1	8	40	11	
HARPACTICOID COPEPODITES	-1	-1	-1	-1	-1	-1	-1	28	28	106

TABLE 10g. Continued

STATION 81 1982		MAY 27	MAY 31	JUN 7	DENSITY (NO. M-3)		JUL 21	JUL 26	AUG 3	AUG 9
					JUN 28	JUL 13				
<b>CLADOCERA</b>										
BOSMINA LONGIROSTRIS		13	12	88	329	12166	13536	16835	21590	131851
BOSMINA LONGIROSTRIS	EGG	21	40	230	636	15052	5432	1238	3613	24899
EUBOSMINA COREGORI		2	2	51	29			57		
EUBOSMINA COREGORI	EGG			8	67	51		9		
DAPHNIA RETROCURVA		2	2	12	65			172	234	3254
DAPHNIA RETROCURVA	EGG	3	12	6	3	157		155	60	1768
DAPHNIA LONGIREMIS										71
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE										
DAPHNIA GALEATA MENDOTAE	EGG									
DAPHNIA AMBIGUA										
DAPHNIA SP.		2			2		11	93	179	11318
CERIODAPHNIA LACUSTRIS								274	212	6508
CERIODAPHNIA LACUSTRIS	EGG									
CERIODAPHNIA QUADRANGULA										
CHYDORUS SPAHERICUS				2	46	24				
CHYDORUS SPAHERICUS	EGG	1		26	16	11	159	5		
DIAPHANOSOMA BIRGEI										
HOLOPEDIUM GIBBERUM										
HOLOPEDIUM GIBBERUM	EGG									
ALONA QUADRANGULARIS										
ALONA GUTTATA										
ILYOCRYPTUS SPINIFER										
POLYPHEMUS PEDICULUS										
POLYPHEMUS PEDICULUS	EGG				2					
LEPTODORA KINDTII										
<b>COPEPODA</b>										
CYCLOPS BICUSPIDATUS THOMASI		9	148	132	293	1301	5	919	1110	2900
CYCLOPS BICUSPIDATUS THOMASI	EGG	26	123	204	1471	14798	7	2087	446	3749
CYCLOPS VERNALIS										
TROPOCYCLOPS PRASINUS MEXICANUS		5	5	6				66	114	283
TROPOCYCLOPS PRASINUS MEXICANUS	EGG			49				866	380	3466
MESOCYCLOPS EDAX										
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		1253	711	1689	477	6394	418	4925	2459	23484
CYCLOPOID NAUPLII		865	329	100	76	1740	368	2966	1088	18957
LIMNOCALANUS MACRURUS										
LIMNOCALANUS MACRURUS	COPEPODITE	2		2						
LIMNOCALANUS MACRURUS	NAUPLI	2	5	4						
DIAPTOMUS SICILIS										
DIAPTOMUS SICILIS	EGG				2					
DIAPTOMUS OREGONENSIS					2	2				
DIAPTOMUS OREGONENSIS	EGG									
DIAPTOMUS SICILOIDES										
DIAPTOMUS MINUTUS					2					
DIAPTOMUS ASHLANDII										
EURYTEMORA AFFINIS								17	11	
EURYTEMORA AFFINIS	EGG	21	51	51	19	35	5	17	27	
CALANOID COPEPODITES		45	40	27	2	7	11	53	11	990
CALANOID NAUPLII										707
HARPACTICOID COPEPODITES										

TABLE 10g. Continued

STATION 81 1982

## CLADOCERA

		AUG 17	AUG 23	AUG 30	DENSITY SEP 7	(NO. M-3) SEP 14	SEP 22	SEP 28	OCT 4	OCT 12
BOSMINA LONGIROSTRIS		90541	-1	262	1556	1556	5658	6720	11813	9973
BOSMINA LONGIROSTRIS	EGG	32695	-1	56	389	1167	3234	2210	4102	2900
EUBOSMINA COREGONI		314	-1	311	1238	1061	7477	2255	4951	7639
EUBOSMINA COREGONI	EGG	157	-1	141	318	672	3637	1414	3749	1839
DAPHNIA RETROCURVA		10767	-1	17174	16198	9124	108326	14235	9691	8347
DAPHNIA RETROCURVA	EGG	3615	-1	10751	6649	7498	50121	3183	3607	3041
DAPHNIA LONGIREMIS			-1							
DAPHNIA LONGIREMIS	EGG		-1					202	44	
DAPHNIA GALEATA MENDOTAE			-1							
DAPHNIA GALEATA MENDOTAE	EGG		-1							
DAPHNIA AMBIGUA			-1							
DAPHNIA SP.			-1							
CERIODAPHNIA LACUSTRIS		16505	-1	2850	2299	2228	11520	2696	2334	1521
CERIODAPHNIA LACUSTRIS	EGG	19805	-1	1117	1768	2228	5052	1812	778	70
CERIODAPHNIA QUADRANGULA			-1							
CHYDORUS SPAEERICUS			-1	35	212	3		44	39	
CHYDORUS SPAEERICUS	EGG		-1		35			44		
DIAPHANOSOMA BIRGEI			-1		106					
HOLOPEDIUM GIBBERUM			-1		35	70	202	132	71	141
HOLOPEDIUM GIBBERUM	EGG		-1							212
ALONA QUADRANGULARIS			-1							
ALONA GUTTATA			-1							
ILYOCRYPTUS SPINIFER			-1							
POLYPHEMUS PEDICULUS			-1							
POLYPHEMUS PEDICULUS	EGG		-1							
LEPTODORA KINTDTII			-1	17	70					
COPEPODA										
CYCLOPS BICUSPIDATUS THOMASI		11396	-1	9959	15632	10256	100242	9637	6154	9478
CYCLOPS BICUSPIDATUS THOMASI	EGG	6209	-1	6960	30487	29426	286984	19275	17648	22918
CYCLOPS VERNALIS			-1							
TROPOCYCLOPS PRASINUS MEXICANUS		1257	-1	502	1874	1344	5457	1857	2617	5234
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	2515	-1	2228	1909	742	1414		813	
MESOCYCLOPS EDAX			-1						35	
EUCYCLOPS AGILIS			-1							
CYCLOPOID COPEPODITES		33953	-1	43148	37065	15844	202101	21751	30275	47251
CYCLOPOID NAUPLII		16504	-1	18419	14147	4208	29709	7162	11459	9832
LIMNOCALANUS MACRURUS			-1							
LIMNOCALANUS MACRURUS	COPEPODITE		-1							
LIMNOCALANUS MACRURUS	NAUPLI		-1							
DIAPATOMUS SICILIS			-1							35
DIAPATOMUS SICILIS	EGG		-1							
DIAPATOMUS OREGONENSIS			-1	74		70	606	44		
DIAPATOMUS OREGONENSIS	EGG		-1	735		460				
DIAPATOMUS SICILOIDES			-1							
DIAPATOMUS MINUTUS			-1							
DIAPATOMUS ASHLANDII			-1							
EURYTEMORA AFFINIS			-1	130	70	176	202		176	35
EURYTEMORA AFFINIS	EGG		-1	2723	70	1414				
CALANOID COPEPODITES		786	-1	92	318	247	3637	309	849	565
CALANOID NAUPLII		550	-1	279	247	354	1617	575	424	212
HARPACTICOID COPEPODITES			-1							

TABLE 10Q. Continued

STATION 81 1982

	OCT 18	OCT 25	NOV 1	DENSITY (NO. M-3)	NOV 8	NOV 16	NOV 22
BOSMINA LONGIROSTRIS	7967	10751	10327	5729	1096	750	
BOSMINA LONGIROSTRIS	EGG	596	1924	1273	1485	449	254
EUBOSMINA COREGORNI		6701	4216	17825	11813	10214	16184
EUBOSMINA COREGORNI	EGG	1935	2009	12025	8559	7682	6903
DAPHNIA RETROCURVA		1973	1231	3926	1591	534	877
DAPHNIA RETROCURVA	EGG	409	608	707	336		127
DAPHNIA LONGIREMIS	EGG			70			42
DAPHNIA LONGIREMIS	EGG						42
DAPHNIA GALEATA MENDOTAE			56	35	71		141
DAPHNIA GALEATA MENDOTAE	EGG		28		88		141
DAPHNIA AMBIGUA							
DAPHNIA SP.							
CERIODAPHNIA LACUSTRIS		37	113	177	53		28
CERIODAPHNIA LACUSTRIS	EGG			70			
CERIODAPHNIA QUADRANGULA							
CHYDORUS SPAHERICUS		335	42				
CHYDORUS SPAHERICUS	EGG						
DIAPHANOSOMA BIRGEI							
HOLOPEDIUM GIBBERUM		74	42			17	
HOLOPEDIUM GIBBERUM	EGG		28			70	
ALONA QUADRANGULARIS							
ALONA GUTTATA							
ILYOCRYPTUS SPINIFER							
POLYPHEMUS PEDICULUS							
POLYPHEMUS PEDICULUS	EGG						
LEPTODORA KINDTII							
<b>COPEPODA</b>							
CYCLOPS BICUSPIDATUS THOMASI		4356	1132	6436	2476	615	1641
CYCLOPS BICUSPIDATUS THOMASI	EGG	6701	1768	11105	3236	1220	3791
CYCLOPS VERNALIS							
TROPOCYCLOPS PRASINUS MEXICANUS		1154	1118	1627	1485	569	1174
TROPOCYCLOPS PRASINUS MEXICANUS	EGG					35	
MESOCYCLOPS EDAX							
EUCYCLOPS AGILIS					17		
CYCLOPOID COPEPODITES		31421	19919	61115	44846	11021	33839
CYCLOPOID NAUPLII		4914	7809	27587	5800	2150	3225
LIMNOCALANUS MACRURUS				35			
LIMNOCALANUS MACRURUS	COPEPODITE						
LIMNOCALANUS MACRURUS	NAUPLI						
DIAPTOMUS SICILIS					53	7	14
DIAPTOMUS SICILIS	EGG						
DIAPTOMUS OREGONENSIS		37			35	31	127
DIAPTOMUS OREGONENSIS	EGG	521					127
DIAPTOMUS SICILOIDES							14
DIAPTOMUS MINUTUS							
DIAPTOMUS ASHLANDII							
EURYTEMORA AFFINIS			56	70	17	14	70
EURYTEMORA AFFINIS	EGG		594				
CALANOID COPEPODITES		596	212	636	371	205	269
CALANOID NAUPLII		260	99	212	35	113	42
HARPACTICOID COPEPODITES							

TABLE 10h. SEASONAL TRENDS IN ZOOPLANKTON POPULATIONS IN LAKE ONTARIO. MISSING CRUISES ARE FLAGGED AS -1.

STATION 93 1982

## CLADOCERA

	MAR 8	MAR 17	MAR 24	DENSITY (NO. M-3)	MAR 31	APR 5	APR 14	MAY 4	MAY 10	MAY 18
BOSMINA LONGIROSTRIS	35	19	22	-1	22	21	57	51	44	
BOSMINA LONGIROSTRIS	EGG	1	3	-1		5	4	4	86	
EUBOSMINA COREGONI				-1					3	
EUBOSMINA COREGONI	EGG			-1					2	
DAPHNIA RETROCURVA				-1					3	
DAPHNIA RETROCURVA	EGG			-1					14	
DAPHNIA LONGIREMIS	6	1	2	-1	4	5	4			
DAPHNIA LONGIREMIS	EGG	1	1	-1	1	3				
DAPHNIA GALEATA MENDOTAE		1		-1	1					
DAPHNIA GALEATA MENDOTAE	EGG			-1						
DAPHNIA AMBIGUA				-1						
DAPHNIA SP.				-1						
CERIODAPHNIA LACUSTRIS				-1						
CERIODAPHNIA LACUSTRIS	EGG			-1						
CERIODAPHNIA QUADRANGULA				-1						
CHYDORUS SPAHERICUS		1		-1		1				
CHYDORUS SPAHERICUS	EGG			-1						
DIAPHANOSOMA BIRGEI				-1						
HOLOPEDIUM GIBBERUM				-1						
HOLOPEDIUM GIBBERUM	EGG			-1						
ALONA QUADRANGULARIS				-1						
ALONA GUTTATA				-1						
ILYOCRYPTUS SPINIFER				-1						
POLYPHEMUS PEDICULUS				-1						
POLYPHEMUS PEDICULUS	EGG			-1						
LEPTODORA KINTDTII				-1						

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	59	84	25	-1	55	47	816	943	732	
CYCLOPS BICUSPIDATUS THOMASI	EGG	4	5	-1	26	21	6015	6896	13369	
CYCLOPS VERNALIS				-1						
TROPOCYCLOPS PRASINUS MEXICANUS	109	68	33	-1	67	90	44	4	7	
TROPOCYCLOPS PRASINUS MEXICANUS	EGG			-1						
MESOCYCLOPS EDAX				-1						
EUCYCLOPS AGILIS				-1						
CYCLOPOID COPEPODITES	628	462	262	-1	299	414	525	898	997	
CYCLOPOID NAUPLII	223	110	181	-1	96	201	1051	1275	1549	
LIMNOCALANUS MACRURUS	1	6	5	-1						
LIMNOCALANUS MACRURUS	COPEPODITE		3	-1				16		
LIMNOCALANUS MACRURUS	NAUPLI	32	63	36	-1	2	7			
DIAPTOMUS SICILIS	3	45	4	-1	3			12		
DIAPTOMUS SICILIS	EGG	27	369	34	-1	8		57		
DIAPTOMUS OREGONENSIS	11	3	4	-1	45	23		6	9	
DIAPTOMUS OREGONENSIS	EGG		3	-1				34	5	
DIAPTOMUS SICILOIDES				-1						
DIAPTOMUS MINUTUS	1	1		-1				2	2	
DIAPTOMUS ASHLANDII				-1			4	4	4	
EURYTEMORA AFFINIS				-1						
EURYTEMORA AFFINIS	EGG			-1						
CALANOID COPEPODITES	11	25	10	-1	5	2	20	9	32	
CALANOID NAUPLII	42	64	49	-1	3	4	44	18	19	
HARPACTICOID COPEPODITES				-1						

TABLE 10 h. Continued

STATION 93 1982

## CLADOCERA

TABLE 10 h. Continued

STATION 93 1982

## CLADOCERA

		AUG 17	AUG 23	AUG 30	DENSITY SEP 7	(NO. M-3) SEP 14	SEP 22	SEP 28	OCT 4	OCT 12
BOSMINA LONGIROSTRIS		108032	620856	61762	4776	19806	3310	445916	28973	11986
BOSMINA LONGIROSTRIS	EGG	11832	42037	28456	1811	5658	1876	291996	11770	3215
EUBOSMINA COREGORI		193	404	283	28	118	295	1344	127	78
EUBOSMINA COREGORI	EGG	128	1010		28		101	1556	56	53
DAPHNIA RETROCURVA		675	2223	646	334	1250	23	4527	1457	2075
DAPHNIA RETROCURVA	EGG	997	707	646	283	1886		2546	919	849
DAPHNIA LONGIREMIS										
DAPHNIA LONGIREMIS	EGG									
DAPHNIA GALEATA MENDOTAE		64				70		70	14	13
DAPHNIA GALEATA MENDOTAE	EGG								28	
DAPHNIA AMBIGUA										
DAPHNIA SP.										
CERIODAPHNIA LACISTRIS		2604	21625	323	51	117	330	6224	311	230
CERIODAPHNIA LACISTRIS	EGG	1801	14551	242	17	94	403	13298	481	39
CERIODAPHNIA QUADRANGULA					11					
CHYDORUS SPAERICUS										
CHYDORUS SPAERICUS	EGG									
DIAPHANOSOMA BIRGEI										
HOLOPEDIUM GIBBERUM				202						
HOLOPEDIUM GIBBERUM	EGG									
ALONA QUADRANGULARIS										
ALONA GUTTATA										
ILYOCRYPTUS SPINIFER										
POLYPHEMUS PEDICULUS		32								
POLYPHEMUS PEDICULUS	EGG									
LEPTODORA KINTII										

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	EGG	14147	1010	3678	13038	2735	141	4739	1174	168
CYCLOPS BICUSPIDATUS THOMASI	EGG	38454	5254	2263	48802	9384	75	8417	1910	271
CYCLOPS VERNALIS										
TROPOCYCLOPS PRASINUS MEXICANUS		128	808	81	22	70	73	495	141	91
TROPOCYCLOPS PRASINUS MEXICANUS	EGG	482	11317				42	636		
MESOCYCLOPS EDAX		32			5					
EUCYCLOPS AGILIS										
CYCLOPOID COPEPODITES		43213	26879	11075	10185	29426	407	16552	12223	4032
CYCLOPOID NAUPLII		5465	5658	1778	135	9054	186	3112	4555	1251
LIMNOCALANUS MACRURUS				4042						
LIMNOCALANUS MACRURUS	COPEPODITE									
LIMNOCALANUS MACRURUS	NAUPLI									
DIAPTOMUS SICILIS					34					
DIAPTOMUS SICILIS	EGG									
DIAPTOMUS OREGONENSIS		32		40	322	94				
DIAPTOMUS OREGONENSIS	EGG				1522	165				
DIAPTOMUS SICILOIDES										
DIAPTOMUS MINUTUS										
DIAPTOMUS ASHLANDII					22					
EURYTEMORA AFFINIS					62					
EURYTEMORA AFFINIS	EGG				707					
CALANOID COPEPODITES		610	637	202	645	448	281	5376	255	69
CALANOID NAUPLII		418	252	647	68	188	315	1485	297	47
HARPACTICOID COPEPODITES										

TABLE 10h. Continued

STATION 93 1982

	OCT 18	OCT 25	NOV 1	DENSITY (NO. M-3)	NOV 8	NOV 16	NOV 22
BOSMINA LONGIROSTRIS	6215	2101	3996	1331	353	107	
BOSMINA LONGIROSTRIS	EGG	632	104	778	449	102	20
EUBOSMINA COREGORNI		924	332	831	740	184	147
EUBOSMINA COREGORNI	EGG	391	145	247	283	25	28
DAPHNIA RETROCURVA		1674	1352	8205	308	173	6
DAPHNIA RETROCURVA	EGG	632	249	990	108	17	
DAPHNIA LONGIREMIS				88			
DAPHNIA LONGIREMIS	EGG			17			
DAPHNIA GALEATA MENDOTAE		221	62	601	507	14	12
DAPHNIA GALEATA MENDOTAE	EGG	70	41	371	216		
DAPHNIA AMBIGUA							
DAPHNIA SP.							
CERIODAPHNIA LACUSTRIS		170		42	141	25	
CERIODAPHNIA LACUSTRIS	EGG	47				16	
CERIODAPHNIA QUADRANGULA					50	7	2
CHYDORUS SPAHERICUS							
CHYDORUS SPAHERICUS	EGG						
DIAPHANOSOMA BIRGEI					17		
HOLOPEDIUM GIBBERUM		61		21	35		
HOLOPEDIUM GIBBERUM	EGG						
ALONA QUADRANGULARIS						2	
ALONA GUTTATA					8		
ILYOCRYPTUS SPINIFER					8		
POLYPHEMUS PEDICULUS							
POLYPHEMUS PEDICULUS	EGG						
LEPTODORA KINTDTII							

## COPEPODA

CYCLOPS BICUSPIDATUS THOMASI	1296	1227	1697	174	102	77
CYCLOPS BICUSPIDATUS THOMASI	EGG	1169	4598	6543	607	240
CYCLOPS VERNALIS				8		
TROPOCYCLOPS PRASINUS MEXICANUS	339	145	283	183	14	24
TROPOCYCLOPS PRASINUS MEXICANUS	EGG		141			
MESOCYCLOPS EDAX						
EUCYCLOPS AGILIS						
CYCLOPOID COPEPODITES	28898	8322	16693	424	459	651
CYCLOPOID NAUPLII	1391	2372	10964	108	17	65
LIMNOCALANUS MACRURUS						
LIMNOCALANUS MACRURUS	COPEPODITE MAUPLI					2
DIAPTOMUS SICILIS		23		17	8	46
DIAPTOMUS SICILIS	EGG				141	186
DIAPTOMUS OREGONENSIS		23		141	99	501
DIAPTOMUS OREGONENSIS	EGG			389	158	103
DIAPTOMUS SICILOIDES					71	143
DIAPTOMUS MINUTUS						
DIAPTOMUS ASHLANDII						
EURYTEMORA AFFINIS		23			8	14
EURYTEMORA AFFINIS	EGG					
CALANOID COPEPODITES	165	166	318	150	14	67
CALANOID NAUPLII	66	187	247	25		59
HARPACTICOID COPEPODITES						