March 2012

GAHCHO KUÉ PROJECT

2011 Lower Trophic Organisms Supplemental Monitoring Report

Submitted to:
De Beers Canada

REPORT

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Distribution:

1 copy to De Beers Canada Inc.

1 copy to Golder Associates Ltd.

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1.0 INTRODUCTION

De Beers Canada Inc. (De Beers) is proposing to develop the Gahcho Kué Project (Project), a diamond mine in the Northwest Territories (NWT). The Project is located in the North Slave region of the NWT at Kennedy Lake, approximately 140 kilometres (km) northeast of Łutselk'e and 280 km northeast of Yellowknife.

Baseline studies have been conducted to support the Environmental Impact Assessment (EIS) for the Project and the Environmental Impact Review (EIR) Process. These data were reported in the December 2010 EIS (De Beers 2010a). Baseline data reported in the 2010 EIS are sufficient to support the environmental assessment within the EIS. However, De Beers is committed to ongoing data collection in advance of regulatory approval of and the permitting process for the Project. As such, supplemental baseline data have been collected in 2011, and will continue to be collected and reported annually, until such time that these activities are no longer required prior to Project construction or evolve into future monitoring programs associated with an approved Project.

The purpose of collecting and reporting the supplemental baseline data for the Project is to support a consistent and transparent baseline program. In general, the goals of the supplemental data collection are to:

- reduce uncertainty and increase the level of confidence in impact predictions;
- broaden the baseline areas of investigation; and
- contribute to long-term future monitoring and adaptive management of the Project.

The focus of the 2011 supplemental data collection reported herein is lower trophic communities (e.g., phytoplankton, zooplankton, and benthic invertebrates). The purpose of this report is to provide supplemental baseline information on the lower trophic resources in the area of the Project. This report supplements the data presented in the EIS (De Beers 2010a, Annex J [Fisheries and Aquatic Resources Baseline] and Addendum JJ [Additional Fish and Aquatic Resources Baseline Information]). The supplemental information presented in this report was collected in late summer 2011 to enhance the existing baseline data (e.g., 2004, 2005, 2007, and 2010).

"Plankton" is a general term referring to small, usually microscopic organisms that live suspended in the water. For the purpose of this study, the term "phytoplankton" refers to the algal component of plankton and includes the following seven major taxonomic groups:

- cyanobacteria;
- Chlorophyceae (chlorophytes);
- Chrysophyceae (chrysophytes);
- Cryptophyceae (cryptophytes);
- Bacillariophyceae (diatoms);
- Dinophyceae (dinoflagellates); and
- Euglenophyceae (euglenoids).

The term “zooplankton” refers to microscopic animals and includes Rotifera (rotifers) and crustaceans, specifically Cladocera (cladocerans or water fleas), Cyclopoida (cyclopoid copepods), and Calanoida (calanoid copepods). Cyclopoid and calanoid copepods are considered separately because of taxonomic and ecological differences. Calanoids are typically herbivorous, feeding on phytoplankton; whereas cyclopoids are typically omnivorous, feeding on phytoplankton and small zooplankton (Brönmark and Hansson 1998). Additionally, calanoids are almost exclusively pelagic (i.e., open-water), while cyclopoids are dominated by littoral (i.e., near-shore) species, although a few pelagic species of cyclopoids can account for a major component of the planktonic community.

Benthic invertebrates are small aquatic animals that lack backbones; they live on the bottoms of waterbodies such as lakes and streams. Freshwater benthic invertebrates include mostly insect larvae, crustaceans, worms, leeches, snails, and clams. They form diverse communities often consisting of thousands of individuals per square metre. Benthic invertebrates live on the surface of the sediments or burrow into sediments, although some species are closely associated with aquatic plants. They are frequently sampled to monitor the environmental quality of lakes for the following reasons (Rosenberg and Resh 1993):

- they are present in nearly all waterbodies and are usually abundant;
- they remain in a small area throughout the aquatic phase of their life cycle;
- they obtain food by various means, including the filtering of fine particulates and feeding on algae, decaying organic material, aquatic plants, or other invertebrates;
- they have relatively long life cycles ranging from months to years, thereby integrating the effects of disturbances over a relatively long period;
- they are an important food source for organisms at higher trophic levels such as fish;
- they are sensitive to a large variety of disturbances, including the addition of sediment, toxins, nutrients, and organic material; low dissolved oxygen (DO) levels; and alteration of flow, substratum, and temperature;
- they respond to disturbances in a predictable manner;
- they can be relatively easily collected and identified; and,
- the wide range of species inhabiting any given location assures that animals of varying sensitivity are present.

This report describes results of plankton and benthic invertebrate sampling in August 2011, with a focus on deep open-water stations in East Lake (Reference Lake) and Lake N11, and open water locations in the L and M lakes (Lakes L2, M1, M2, M3, and M4).

2.0 STUDY AREAS

The LSA is a 739 square kilometres (km^2) area that includes the watersheds of the lakes and streams that may be directly affected by the Project (Figure 1). The regional study area (RSA) was defined as the Lockhart River watershed. The 2011 lower trophic field program was conducted within the local study area (LSA), with the exception of East Lake (Reference Lake), which is located outside of the LSA, but within the RSA. The study areas are described in Annex J, Section J2 of the 2010 EIS (De Beers 2010a).

LEGEND

- Gahcho Kué Project
- Winter Access Road
- Watercourse
- Waterbody
- K1 Lake Identifier
- Watershed Boundary
- Local Study Area
- Flow Direction

NOTES
Base data source: National Topographic Base Data (NTDB) 1:250,000

GAHCHO KUÉ PROJECT

Local Study Area

PROJECTION: UTM Zone 12	DATUM: NAD83
Scale: 1:250,000 (5 2.5 0 5 Kilometres)	

DE BEERS CANADA

FILE No: B2011-Fish-020-GIS		DATE: January 27, 2012
JOB NO: 11-1365-0001	REVISION NO: 1	
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Figure 1

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3.0 METHODS

This section summarizes the methods used during the 2011 lower trophic supplemental baseline field programs.

3.1 Lower Trophic Communities

3.1.1 Phytoplankton

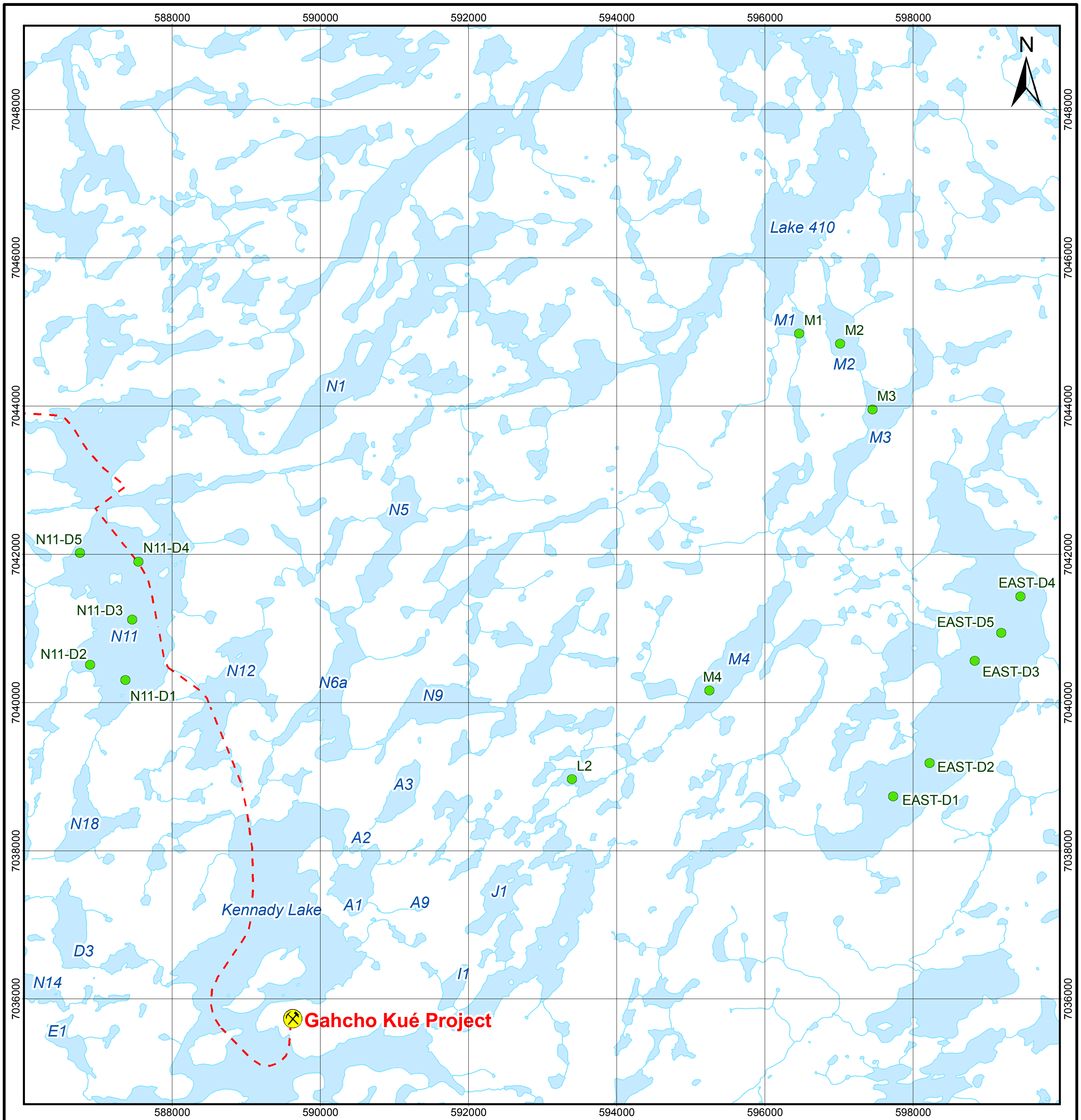
Phytoplankton samples were collected in August 2011. A single location was sampled in Lakes M1, M2, M3, M4 and L2. Samples were also collected from five stations in Lake N11 and East Lake (Reference Lake; Table 1 and Figure 2). Discrete water samples were collected at 2 metre (m) intervals within the euphotic zone at each site, using a Kemmerer® water sampler. The water samples were mixed thoroughly and used to fill a 250 millilitre (mL) amber Nalgene® bottle at each site. The samples were preserved with 10 mL formalin acetic acid solution and 5 mL acid Lugol's solution. Samples were stored in the dark and shipped immediately for taxonomic identification and analysis.

Secchi depths and limnological profiles (i.e., specific conductivity, dissolved oxygen, water temperature and pH) were also measured at each location using a YSI 600QS water meter (Appendix I, Table I-1).

Table 1 Phytoplankton Sampling Locations in Lakes, 2011

Watershed	Lake/Station	UTM Coordinates 12V NAD 83	
		Easting	Northing
M	M1	596466	7045014
	M2	597001	7044838
	M3	597425	7043953
	M4	595226	7040172
L	L2	593390	7038966
N	N11-D1	587363	7040300
	N11-D2	586942	7040514
	N11-D3	587460	7041112
	N11-D4	587546	7041905
	N11-D5	586853	7041956
East Lake (Reference Lake)	Ref Lake-D1	597734	7038738
	Ref Lake-D2	598219	7039180
	Ref Lake-D3	598832	7040567
	Ref Lake-D4	599424	7041434
	Ref Lake-D5	599198	7040935

UTM = Universal Transverse Mercator; NAD = North American Datum.



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LEGEND

- Gahcho Kué Project
- Winter Access Road
- Watercourse
- Waterbody
- Phytoplankton and Zooplankton Sampling Location

NOTES
Base data source: National Topographic Base Data (NTDB) 1:50,000

GAHCHO KUÉ PROJECT

Phytoplankton and Zooplankton Sampling Locations, 2011

PROJECTION: UTM Zone 12	DATUM: NAD83
Scale: 1:75,000 1,000 500 0 1,000 Metres	DE BEERS CANADA
FILE No: B2011-Fish-018-GIS	DATE: February 27, 2011
JOB NO: 11-1365-0001	REVISION NO: 1
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Figure 2

Phytoplankton samples were analyzed for taxonomic composition, abundance and biomass by Bio-Limno Research and Consulting Inc. (Bio-Limno), Halifax, Nova Scotia. Aliquots of 7 mL of the preserved phytoplankton samples were allowed to settle overnight in sedimentation chambers following the procedure of Lund et al. (1958). Algal units were counted from randomly selected transects on a Zeiss Axiovert 40 CFL inverted microscope. Counting units were individual cells, filaments, or colonies depending on the organization of the algae. A minimum of 400 units were counted for each sample. The majority of the samples were analyzed at 500 times magnification (500x), with initial scanning for large and rare organisms (e.g., *Ceratium* sp.) completed at 250x. Taxonomic identifications were based primarily on Geitler (1932); Skuja (1949); Findlay and Kling (1976); Anton and Duthie (1981); Huber-Pestalozzi (1961, 1972, 1982, 1983); Tikkanen (1986); Prescott (1982); Whitford and Schumacher (1984); Starmach (1985); Krammer and Lange-Bertalot (1986, 1988, 1991a,b); Komárek and Anagnostidis (1998a,b, 2005); and Wehr and Sheath (2003).

Fresh weight biomass was calculated from recorded abundance and specific biovolume estimates based on geometric solids (Rott 1981), assuming a specific gravity of 1 gram per cubic centimetre (g/cm^3). The biovolume (cubic millimetres per cubic metre [mm^3/m^3] wet weight) of each species was estimated from the average dimensions of 10 to 15 individuals. The biovolumes of colonial taxa were based on the number of individuals within each colony. All calculations for cell concentration and biomass were performed with Hamilton's (1990) computer program.

3.1.1.1 Data Analysis

Phytoplankton data were summarized as total taxonomic richness, abundance and biomass, and taxonomic richness, abundance and biomass of the major taxonomic groups:

- Chlorophyceae;
- Chrysophyceae;
- cyanobacteria;
- Cryptophyceae;
- Bacillariophyceae;
- Euglenophyceae; and
- Dinophyceae.

Community composition was summarized as relative abundance and biomass of each of the major taxonomic groups.

3.1.2 Zooplankton

Zooplankton samples were collected from the same waterbodies and stations as the phytoplankton samples (Table 1 and Figure 2). Five samples were collected at each site using a 25 centimetre (cm) diameter, 73 micron (µm) mesh plankton Wisconsin® net. The net was lowered to 1 m above the lake bottom allowing collection of the full water column. If the sites were too shallow for a full water column vertical haul, horizontal tows were completed. Haul or tow depths and/or lengths were recorded for each sample (Table 2) and were used to calculate the volume of water filtered through the net. Filtering efficiency was assumed to be 100percent

(%), based on the low productivity in the lakes sampled, which was expected to result in low suspended sediment concentrations.

The 250-mL sample bottles were filled with 125 mL of sample and preserved with one half of an Alka-Seltzer tablet to avoid shock or contortion of the zooplankters and then with 125 mL sugar formalin. Samples were stored in the dark and shipped immediately for taxonomic identification.

Table 2 Zooplankton Haul Depths in each Lake, August 2011

Watershed	Lake/Station	Depth/Length of Haul [m]
M	M1	3.5
	M2	4
	M3	6
	M4	7
L	L2	3
N	N11-D1	5.5
	N11-D2	5
	N11-D3	5
	N11-D4	5
	N11-D5	5
East Lake (Reference Lake)	Ref Lake-D1	5.9
	Ref Lake-D2	13
	Ref Lake-D3	14
	Ref Lake-D4	8
	Ref Lake-D5	5

Zooplankton samples were analyzed for abundance and biomass of crustaceans and rotifers by Salki Consultants Inc., Winnipeg, Manitoba. Each sample underwent three levels of analysis, as follows:

- 1/40 or 1/80 of each sample was examined under a compound microscope at 63x to 160x, and all specimens of crustaceans and rotifers were identified to the lowest taxonomic level (typically species) and assigned to size categories;
- a second sub-sample, representing 11 % of the sample volume, was examined under a stereoscope at 12x for the large species (i.e., *Heterocope septentrionales*, *Holopedium gibberum,* and *Daphnia middendorffiana*) and rare species, which were enumerated and assigned to size categories; and
- the entire sample was examined under the stereoscope to improve abundance estimates for the largest species (i.e., adult male and female *Heterocope septentrionales, Holopedium gibberum,* and *Daphnia middendorffiana*).

All Cyclopoida and Calanoida specimens (mature and immature) were identified to the species level, with the exception of nauplii, which were classified as either Calanoida or Cyclopoida. All Cladocera were identified to the species level. Rotifers were identified to genus. Zooplankton abundance was reported as individuals per litre (ind./L). Taxonomic identifications were based primarily on Brooks (1957), Wilson (1959), and Yeatman (1959).

Biomass estimates for each taxon were obtained using mean adult sizes determined during the analysis of the zooplankton samples and length-weight regression equations developed by Malley et al. (1989). Additional measurements were made on newly encountered species and to validate consistency of adult sizes. Zooplankton biomass was reported as milligrams (wet weight) per cubic metre (mg/m^3). Wet weights were converted to dry weight by assuming that dry weight equals 7% of wet weight, based on the results of Malley et al. (1989) (Appendix I Table I-7).

3.1.2.1 Data Analysis

Zooplankton data were summarized as total taxonomic richness, abundance and biomass, and taxonomic richness, abundance, and biomass of the major taxonomic groups:

- Calanoida
- Cyclopoida
- Cladocera
- Rotifera

Community composition was summarized as relative abundance and biomass of the major taxonomic groups.

3.1.3 Quality Control

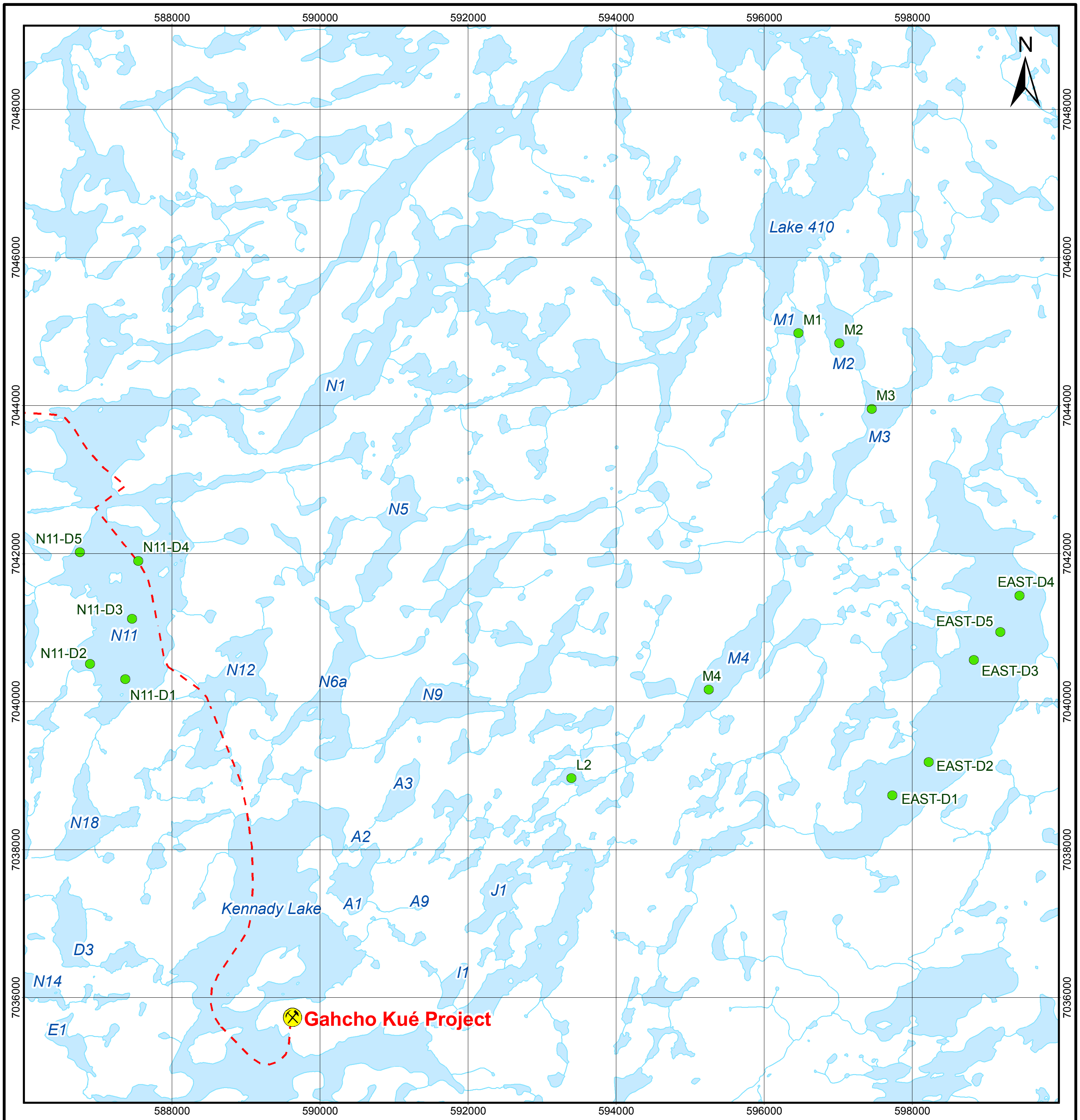
Seven samples, accounting for approximately 10% of the total number of zooplankton samples, were re-counted by the same taxonomist to verify counting efficiency (Appendix I Table I-6). The same procedure was not performed for phytoplankton samples collected in 2011, but is planned for 2012. Both the zooplankton and phytoplankton data were entered into electronic format by the taxonomist that did the counts and were double-checked upon entry; errors were corrected as necessary before transferring the electronic files.

3.1.4 Benthic Invertebrates

3.1.4.1 2011 Supplemental Sampling

In 2011, benthic invertebrate sampling was conducted to enhance available baseline data, including information on among-station variation in lakes within a habitat type, reference lake data, and information for the chain of L and M lakes located downstream of Kennady Lake.

Benthic invertebrate samples were collected in the open water areas of East (Reference) Lake, Lake N11 and the L and M Lakes (Lakes L2, M1, M2, M3, and M4) (Figure 3). In East Lake and Lake N11, five benthic invertebrate stations were sampled in open-water areas (i.e., non-littoral areas). In the L and M Lakes, a single open-water station was sampled for benthic invertebrates. Five replicate samples were collected at each station.



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LEGEND

- Gahcho Kué Project
- Winter Access Road
- Watercourse
- Waterbody
- Benthic Invertebrate Sampling Location

NOTES

Base data source: National Topographic Base Data (NTDB) 1:50,000

GAHCHO KUÉ PROJECT

Benthic Invertebrate Sampling Locations, 2011

PROJECTION:	DATUM:
UTM Zone 12	NAD83

Scale: 1:75,000

1,000 500 0 1,000

Metres

DE BEERS CANADA

FILE No:	DATE:
B2011-Fish-019-GIS	February 27, 2011

JOB NO:	REVISION NO:	OFFICE:	DRAWN:	CHECK:
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Figure 3

Field Methods

Benthic invertebrate samples were collected using a stainless steel Ekman Grab (15 x 15 x 15 cm) with a bottom sampling area of 0.0232 square metre (m^2), where bottom sediments were suitable (i.e., fine-grained). Each sample was sieved through a sieve bucket with a 250 µm mesh bottom. The material retained in the bucket was placed into individually labelled 1 litre (L) polyethylene jars and preserved with 10% neutral buffered formalin. Samples were shipped to a qualified taxonomist (J. Zloty, Ph.D., Summerland, British Columbia) for taxonomic identification and enumeration of invertebrates.

At each station, a sediment sample was collected and sent to Maxxam Analytics for determination of sediment particle size, total organic carbon (TOC) and moisture content. However, sediment samples were not collected at M1, M2 and L2 during the August 2011 sampling.

During the benthic invertebrate survey, the following supporting environmental information was recorded at each sampling station:

- Sampling date and time;
- Weather conditions (air temperature, wind velocity and wind direction);
- Global positioning system (GPS) coordinates as universal transverse Mercator (UTM) for each station;
- Water depth (m); and
- Vertical profiles of water temperature (°C), dissolved oxygen (DO; milligrams per litre [mg/L]), pH, and specific conductivity (microSiemens per centimetre [µS/cm]) at 1 m intervals

Station UTM coordinates were recorded using a hand-held Garmin GPS unit. Temperature, dissolved oxygen concentration, and specific conductivity were measured at each benthic invertebrate sampling site with a YSI-556 multi-parameter meter.

Laboratory Methods

Samples were processed according to standard protocols based on recommendations in Environment Canada (2002) and Gibbons et al. (1993). Benthic invertebrate samples were first washed through a sieve with a 250 µm mesh opening to remove preservative and fine sediments remaining after field sieving. Organic material was separated from inorganic material using elutriation. Inorganic material was checked for any remaining shelled or cased benthic invertebrates, which were removed and added to the organic material. The organic material was split into coarse and fine fractions using a set of nested sieves of 1 millimetre (mm) and 250 µm mesh size.

Invertebrates were identified to the lowest practical taxonomic level, typically genus, using recognized taxonomic keys (Brinkhurst 1986, Clifford 1991, Coffman and Ferrington Jr. 1996, Epler 2001, Maschwitz and Cook 2000, McAlpine et al. 1981, Merritt et al. 2008, Oliver and Roussel 1983, Pennak 1989, Soponis 1977, Wiederholm 1983). Organisms that could not be identified to the desired level, such as immature or damaged specimens, were reported as a separate category at the lowest taxonomic level possible, typically family. Organisms that required detailed microscopic examination for identification, such as midges (Chironomidae) and aquatic worms (Oligochaeta), were mounted on microscope slides using an appropriate mounting medium. Most common taxa were distinguishable based on gross morphology and required only a few slide mounts for verification. All rare or less common taxa were slide mounted for identification.

Invertebrates removed from the samples, sorted organic material, and archived samples are being stored for six years to allow possible comparisons, if necessary, with samples collected during subsequent programs.

3.1.4.2 Data Analysis

Data Entry and Screening

Raw benthic invertebrate data were received from the taxonomist in Microsoft Excel® spreadsheet format, with data entry already verified. Non-benthic organisms, such as calanoid copepods (Calanoida), cyclopoid copepods (Cyclopoida), water fleas (Cladocera) and terrestrial invertebrates were removed from the data set prior to data analysis. True fly (Diptera) pupae were also removed prior to data analysis. Abundance data received as number of organisms per sample were converted to density data consisting of number of organisms per square meter (organisms/m^2). Unusual abundance data were validated before data summary and analysis.

The following benthic invertebrate summary variables were calculated for each station:

- total invertebrate density;
- taxon richness;
- Simpson's index of diversity (diversity);
- evenness;
- densities of dominant taxa; and
- community composition (i.e., relative densities of major invertebrate taxa).

Richness is the total number of taxonomic groups within a station. It provides an indication of the diversity of benthic invertebrates in an area; a higher richness value usually indicates a more healthy and balanced community.

Simpson's index of diversity measures the proportional distribution of organisms in the community, given that not all organisms have the same success in the environment. Certain conditions may favour one organism over another (Simpson 1949). Simpson's index of diversity values range between 0 and 1, where lower values indicate a community dominated by fewer taxonomic groups (less diverse); these are often referred to as stressed communities. Values close to 1 indicate a community consisting of more taxa that are more evenly distributed among the taxonomic groups present. Simpson's index of diversity was calculated using the formula provided by Krebs (1999), as recommended by Environment Canada (2002) for environmental effects monitoring (EEM) programs:

$$D = 1 - \sum_{i=1}^{S} (p_i)^2$$

where:

D = Simpson's index of diversity;

S = the total number of taxa; and

p_i = the proportion of the i^{th} taxon.

Evenness is an index recommended by Environment Canada (2002) for analyzing EEM data. It is a measure of how evenly the total invertebrate density is distributed among the taxa present at the site. Evenness is also expressed as a value between one and zero, with one representing high evenness and zero representing low evenness. Evenness was calculated using the formula provided by Smith and Wilson(1996):

$$E = 1/ \sum_{i=1}^{S} (p_i)^2 / S$$

where:

E = Evenness;

p_i = the proportion of the i^{th} taxon; and

S = the total number of taxa.

Benthic invertebrate summary variables are presented in tabular and graphical format.

Spearman rank correlations were calculated between total benthic invertebrate density, richness, diversity and evenness, and selected habitat variables (total organic carbon, sediment particle size, and water depth). Statistically significant correlations were examined as scatter-plots to determine whether they represented consistent trends or resulted from one or a few atypical points with high leverage on the value of the correlation coefficient. SYSTAT 13 (SYSTAT 2009) was used to calculate Spearman rank correlations.

4.0 RESULTS

4.1 Lower Trophic Communities

4.1.1 Phytoplankton

4.1.1.1 Taxonomic Richness

Six major taxonomic groups (Chlorophyceae, Chrysophyceae, Cyanobacteria, Cryptophyceae, Bacillariophyceae, and Dinophyceae) were represented in the samples collected from the L, M, and N11 lakes and East Lake (Table 3; Appendix I, Tables I-2 and I-3). In general, phytoplankton taxonomic richness was similar among the lakes, with a range of 31 to 37 taxa. The greatest taxonomic richness was observed in East Lake and Lake M2 (37 taxa). Within these lakes, the greatest taxonomic richness was observed in the Chlorophyceae and Chrysophyceae (Table 3). The lowest taxonomic richness was observed in Lakes M1 and L2. In these lakes, the greatest taxonomic richness was observed in the Chrysophyceae (Table 3). Overall, the Chlorophyceae and Chrysophyceae were the most diverse groups, while the other groups appeared to have low taxonomic richness (Table 3).

Table 3 Total Number of Taxa Identified in Each Major Phytoplankton Group in each Lake, August 2011

Lake	Station	Chlorophyceae	Chrysophyceae	Cyanobacteria	Cryptophyceae	Bacillariophyceae	Euglenophyceae	Dinophyceae	Total Taxa
East Lake (Reference Lake)	D1	13	12	6	2	4	0	1	**39**
	D2	12	11	6	1	5	0	1	**36**
	D3	13	12	6	2	5	0	1	**39**
	D4	11	12	5	2	6	0	1	**37**
	D5	12	10	5	2	5	0	1	**35**
East Lake Mean		**12**	**11**	**6**	**2**	**5**	**0**	**1**	**37**
Lake L2	-	4	15	3	3	3	0	2	**31**
Lake M1	-	7	12	4	2	2	1	2	**31**
Lake M2	-	12	13	5	3	3	0	2	**37**
Lake M3	-	9	12	5	4	2	0	1	**33**
Lake M4	-	10	11	7	3	4	0	1	**36**
Lake N11	D1	14	9	7	2	2	0	1	**34**
	D2	13	9	6	2	2	0	1	**33**
	D3	14	9	7	2	2	0	1	**36**
	D4	14	10	5	1	2	0	0	**32**
	D5	14	12	6	2	2	0	1	**37**
Lake N11 Mean		**14**	**10**	**6**	**2**	**2**	**0**	**1**	**34**

4.1.1.2 Abundance and Biomass

Mean total phytoplankton abundance, biomass and community composition were similar among lakes (Figure 4; Figure 5; Figures 6 and 7). The highest mean abundance and variation around the mean was measured in Lake M1 (2,144,000 ind./L), while the lowest abundances were measured in East Lake (1,221,000 ind./L; Figure 4). The highest mean biomass and variation around the mean was observed in Lake L2 (782 mg/m^3), while the lowest biomass was measured in Lake M2 (332 mg/m^3) (Figure 5).

Abundances of the major phytoplankton groups were more variable among lakes than total abundance. Overall, phytoplankton abundance was dominated by Chlorophyceae (26 to 78%), followed closely by Chrysophyceae (4 to 36%) and cyanobacteria (3 to 38%), depending on lake (Figure 6). Chrysophycean abundance was high in Lakes M1, M2, M3, M4, L2 and East Lake, with the greatest abundance observed in Lake M1 (Figure 4). Abundance in Lake N11 was evenly divided amongst the Chrysophyceae, cyanobacteria and Chlorophyceae. Bacillariophyceae, Cryptophyceae, Euglenophyceae and Dinophyceae abundances were relatively low in all of the lakes (Figures 4 and 6).

Similar to abundance, biomass estimates of the major phytoplankton groups were more variable among lakes than total biomass. Overall, phytoplankton biomass was dominated by Chrysophyceae (15 to 57%), followed by Chlorophyceae (12 to 30%) and cyanobacteria (1 to 50%; Figure 7). Lakes L2, M1, M2, M3, and M4 were dominated by Chrysophycean biomass, while biomass in Lake N11 and East Lake were dominated by cyanobacteria and Chlorophyceae. Dinophyceae biomass was high in Lake L2 (304 mg/m^3) and at Station D2 in Lake N11 (207 mg/m^3) compared to the other lakes and stations (<100 mg/m^3). Overall, Bacillariophyceae biomass was low, with the highest bacillariophycean biomass observed in East Lake (150 mg/m^3; Figure 5). Euglenophycean and cryptophycean biomass were low in all lakes (Figures 5 and 7).

Figure 4 Total Phytoplankton Abundance (Mean ± Standard Deviation) and Abundances of Major Phytoplankton Groups in each Lake, August 2011

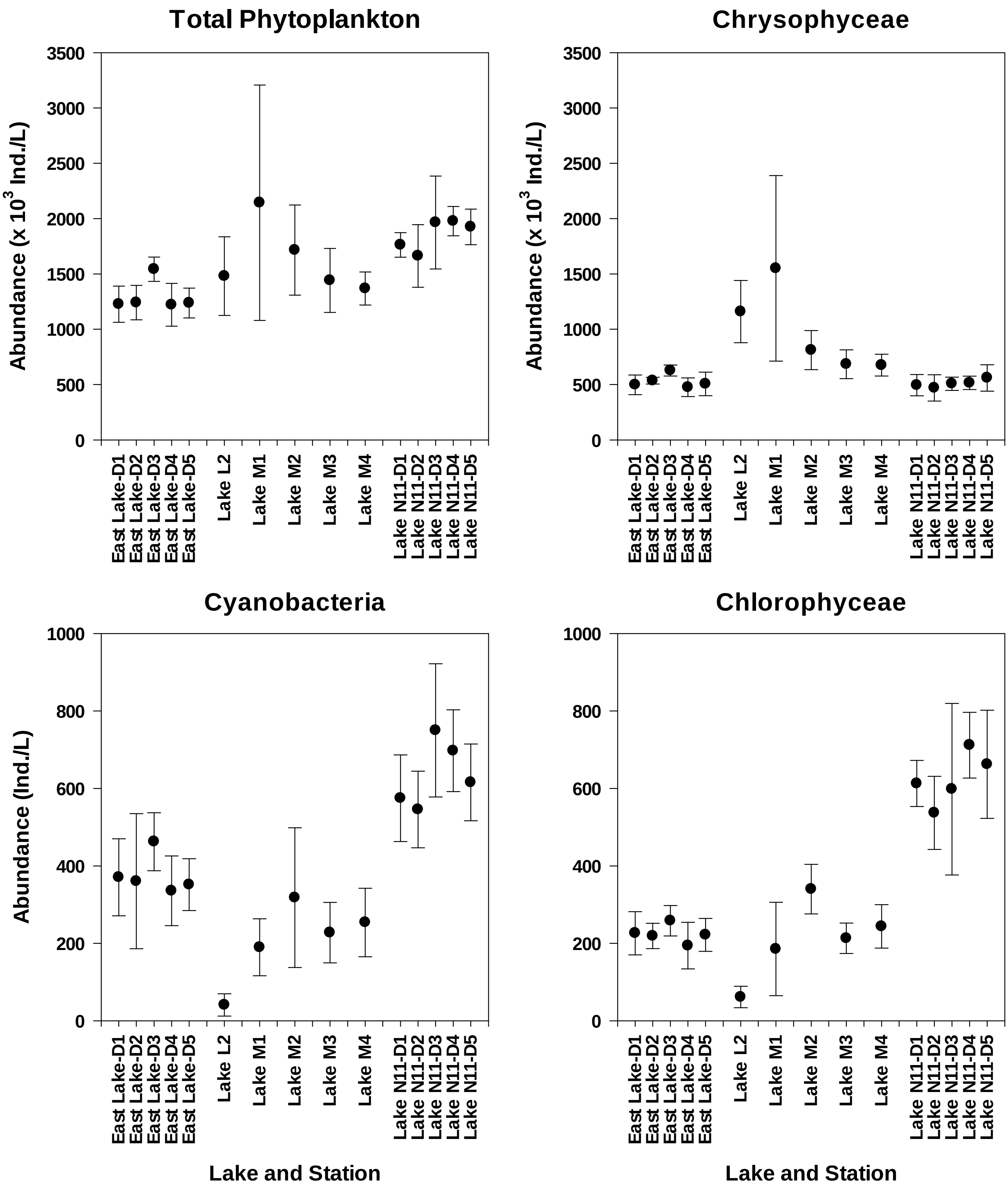


Figure 4 Total Phytoplankton Abundance (Mean ± Standard Deviation) and Abundances of Major Phytoplankton Groups in each Lake, August 2011 (continued)

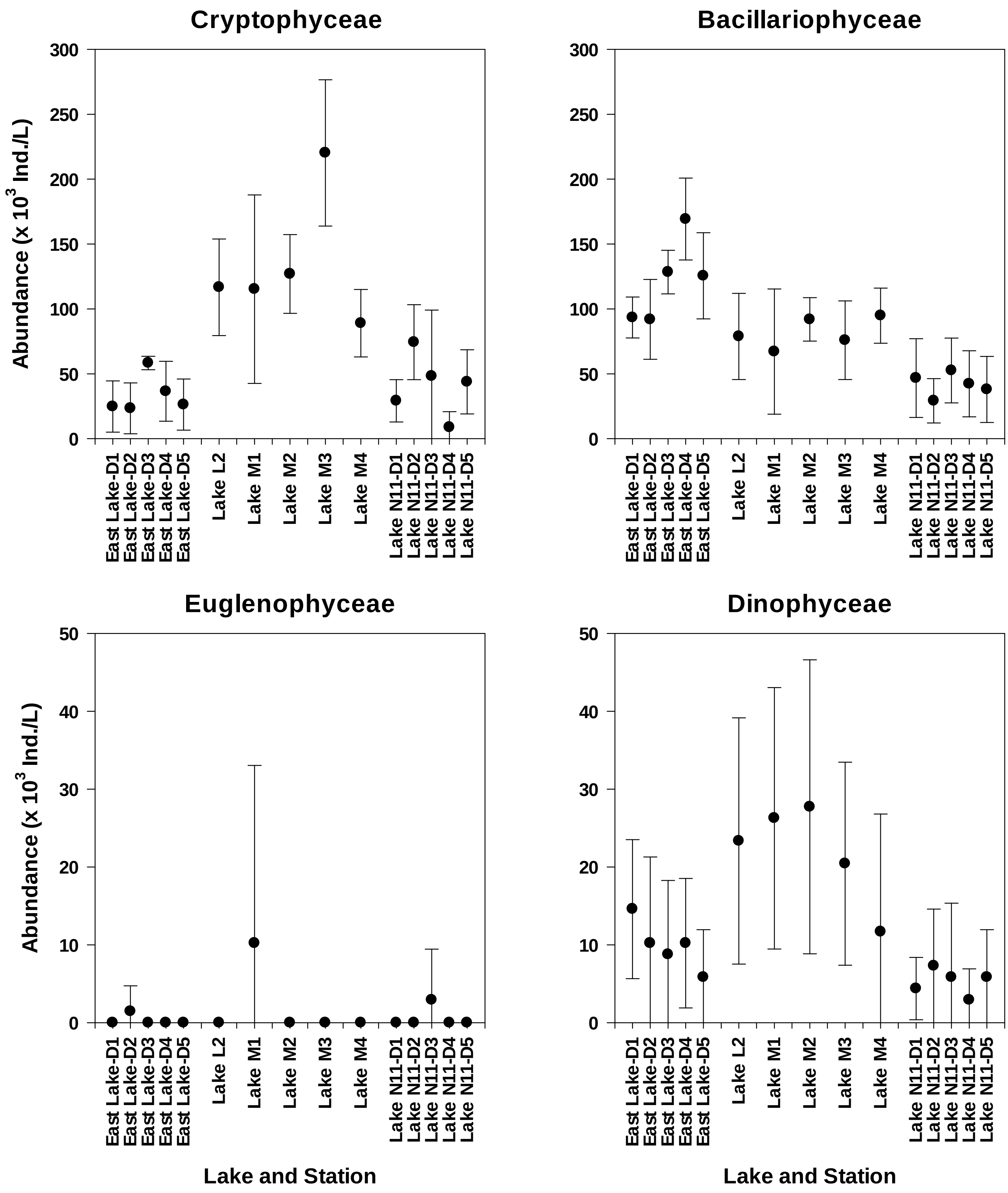


Figure 5 Total Phytoplankton Biomass (Mean ± Standard Deviation) and Biomass of Major Phytoplankton Groups in each Lake, August 2011

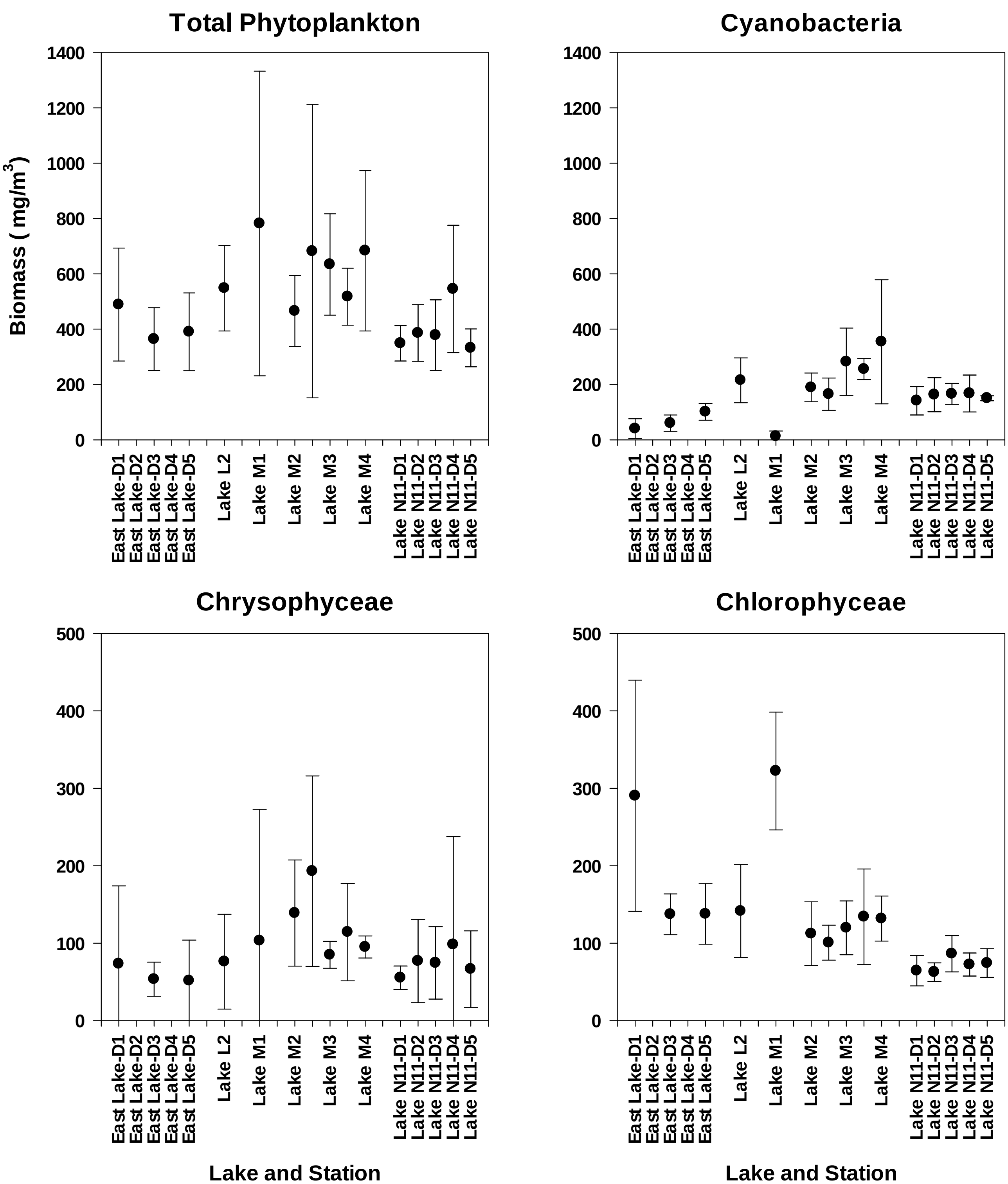


Figure 5 Total Phytoplankton Biomass (Mean ± Standard Deviation) and Biomass of Major Phytoplankton Groups in each Lake, August 2011 (continued)

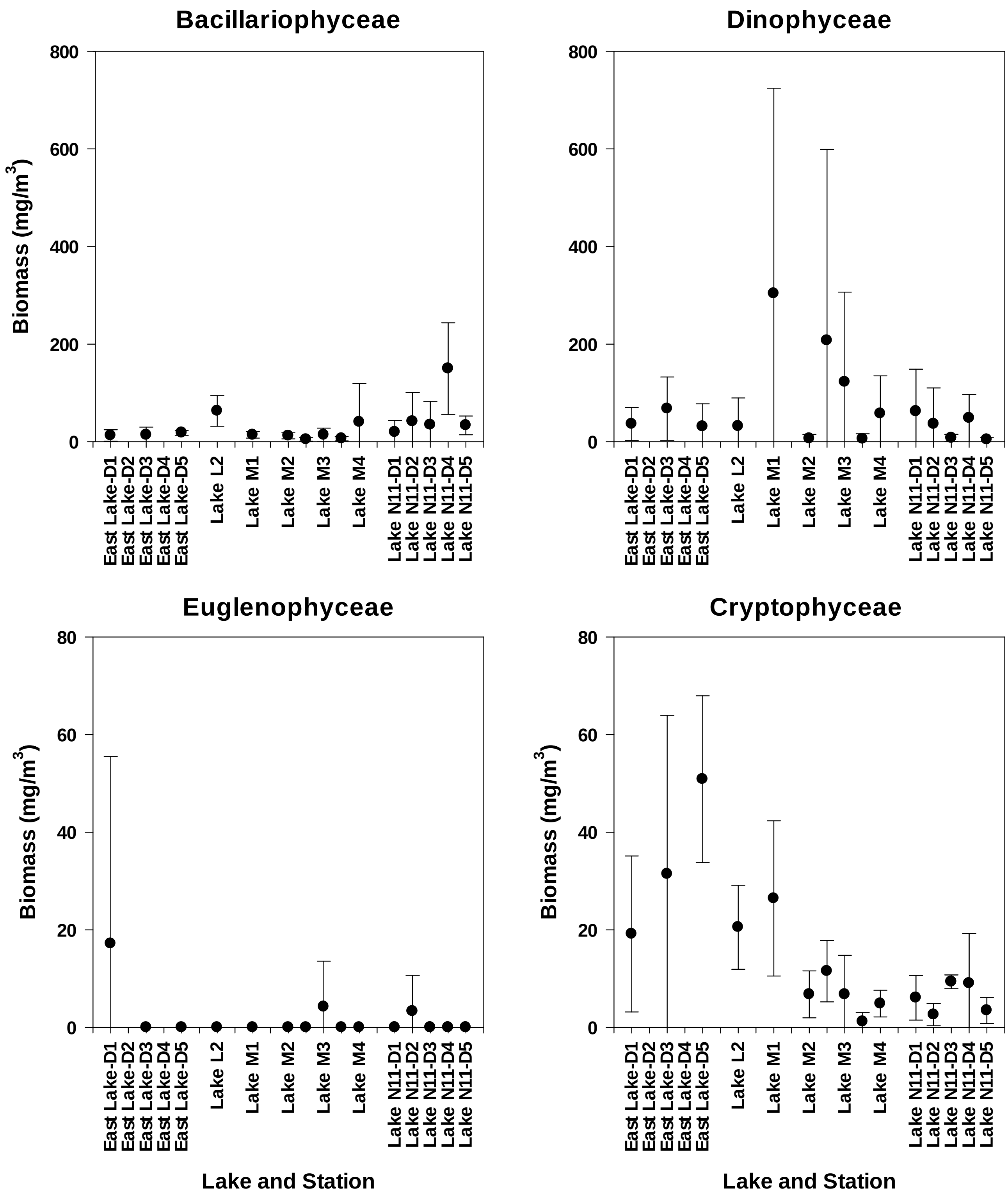


Figure 6 Variation in Relative Abundances of Major Phytoplankton Groups in each Lake, August 2011

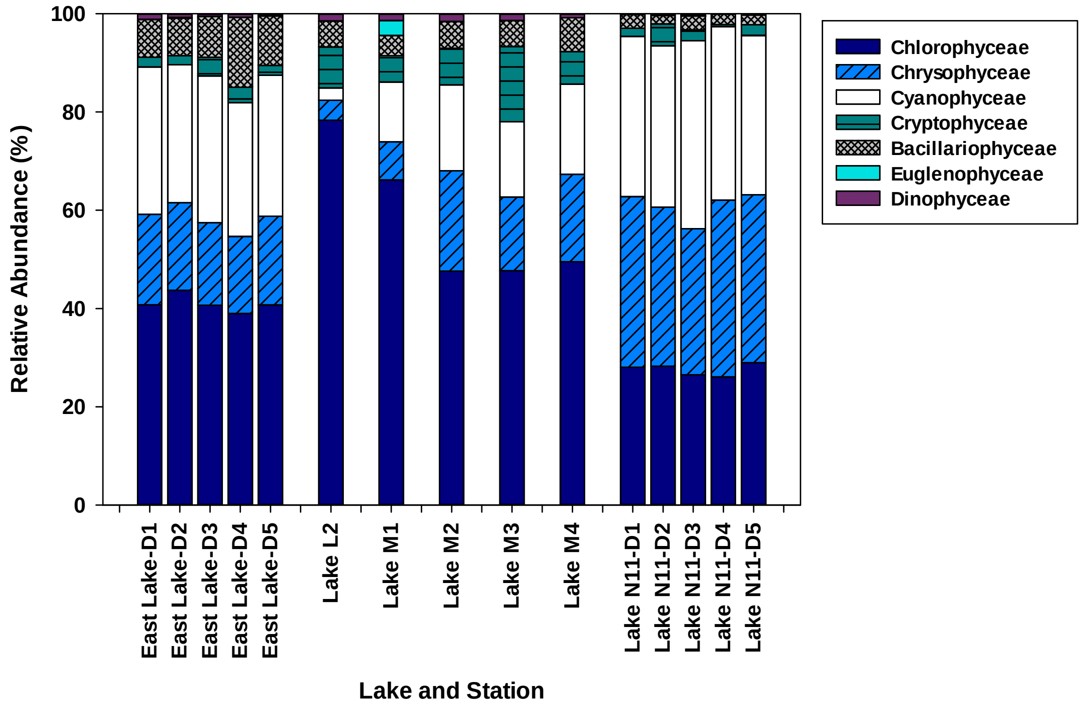
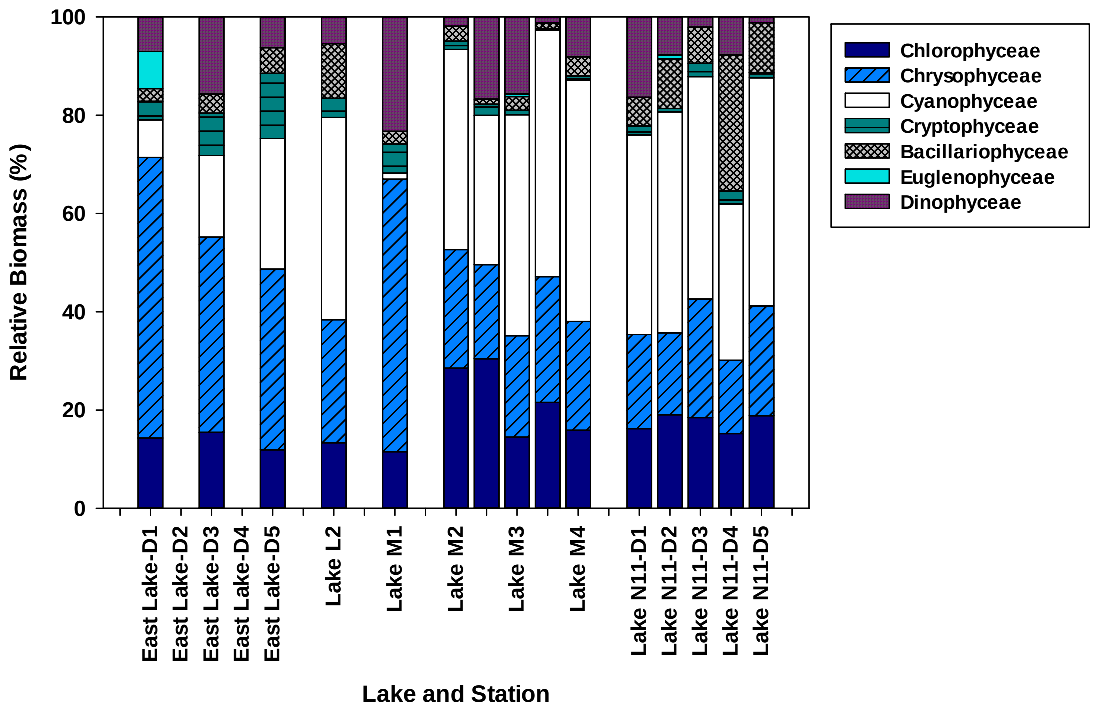


Figure 7 Variation in Relative Biomass of Major Phytoplankton Groups in each Lake, August 2011



4.1.2 Zooplankton

4.1.2.1 Richness

Four major taxonomic groups (Cladocera, Calanoida, Cyclopoida, and Rotifera) were represented in the samples collected from the L, M, and N11 lakes and East Lake in August 2011 (Table 4). Taxonomic richness was similar among the lakes, with a range of 12 to 14. Taxonomic richness was generally evenly distributed among major groups, with Cyclopoida and Cladocera having the lowest diversity (2 to 3 taxa) and Calanoida and Rotifera having the greatest diversity (about 4 taxa) (Table 4).

Table 4 Total Number of Taxa Identified in the Major Zooplankton Groups in each Lake, August 2011

Lakes	Station	Calanoida	Cyclopoida	Cladocera	Rotifera	Total Taxa
East Lake	**D1**	3	2	3	4	**12**
East Lake	**D2**	4	2	3	4	**13**
East Lake	**D3**	4	2	3	4	**12**
East Lake	**D4**	3	2	2	3	**9**
East Lake	**D5**	4	2	3	3	**12**
East Lake Mean		**4**	**2**	**3**	**4**	**12**
Lake L2	**-**	4	3	2	3	**13**
Lake M1	**-**	4	2	3	4	**13**
Lake M2	**-**	5	2	3	4	**14**
Lake M3	**-**	4	2	3	4	**14**
Lake M4	**-**	3	2	3	4	**12**
Lake N11	**D1**	4	2	2	4	**12**
Lake N11	**D2**	3	2	2	4	**12**
Lake N11	**D3**	3	3	2	4	**12**
Lake N11	**D4**	3	2	2	4	**11**
Lake N11	**D5**	3	2	2	4	**11**
Lake N11 Mean		**3**	**2**	**2**	**4**	**12**

Note: Cladocera, Calanoida, and Cyclopoida were identified to species where they could be; Rotifera were identified to genus.

4.1.2.2 Abundance and Biomass

Abundance, biomass and community composition of zooplankton were more variable among the lakes than phytoplankton (Figures 8 to 11; Appendix I, Tables I-4 and I-5). Total zooplankton abundance ranged from 14 ind./L in East Lake Station D3 to 108 ind./L in Lake M2 (Figure JJ4.3-5). Total zooplankton biomass ranged from 80 mg/m^3 in East Lake Station D4 to 1,931 mg/m^3 in Lake N11 at Station D1 (Figure 8).

Zooplankton abundance was dominated by rotifers and cyclopoid copepods (Figures 8 and 10). Overall, rotifers accounted for 31 to 81% of the total abundance, and cyclopoid copepods accounted for 6 to 51%. Cladocerans and calanoid copepods accounted for a small proportion (<1 to 19% and 4 to 16%, respectively) of the zooplankton community based on abundance.

Relative biomass of major zooplankton groups was highly variable among the lakes (Figures 9 and 11). Cladocera biomass dominated in Lake N11 (80 to 91%), while calanoid copepod biomass dominated in East Lake (45 to 70%) and Lake L2 (78%; Figure 11). Lakes M1 and M2 were co-dominated by calanoid copepods and cladocerans, while Lake M3 and M4 were dominated by cladocerans and sub-dominated by calanoid and cyclopoid copepods (Figure 11).

Despite rotifers being the most abundant group in the lakes, their small body size explains their low relative biomass. In contrast, the large size of calanoid copepods and Cladocera account for their larger contributions to total biomass, despite their low relative abundance.

Figure 8 Total Zooplankton Abundance (Mean ± Standard Deviation) and Abundance of Major Zooplankton Groups in each Lake and Station, August 2011

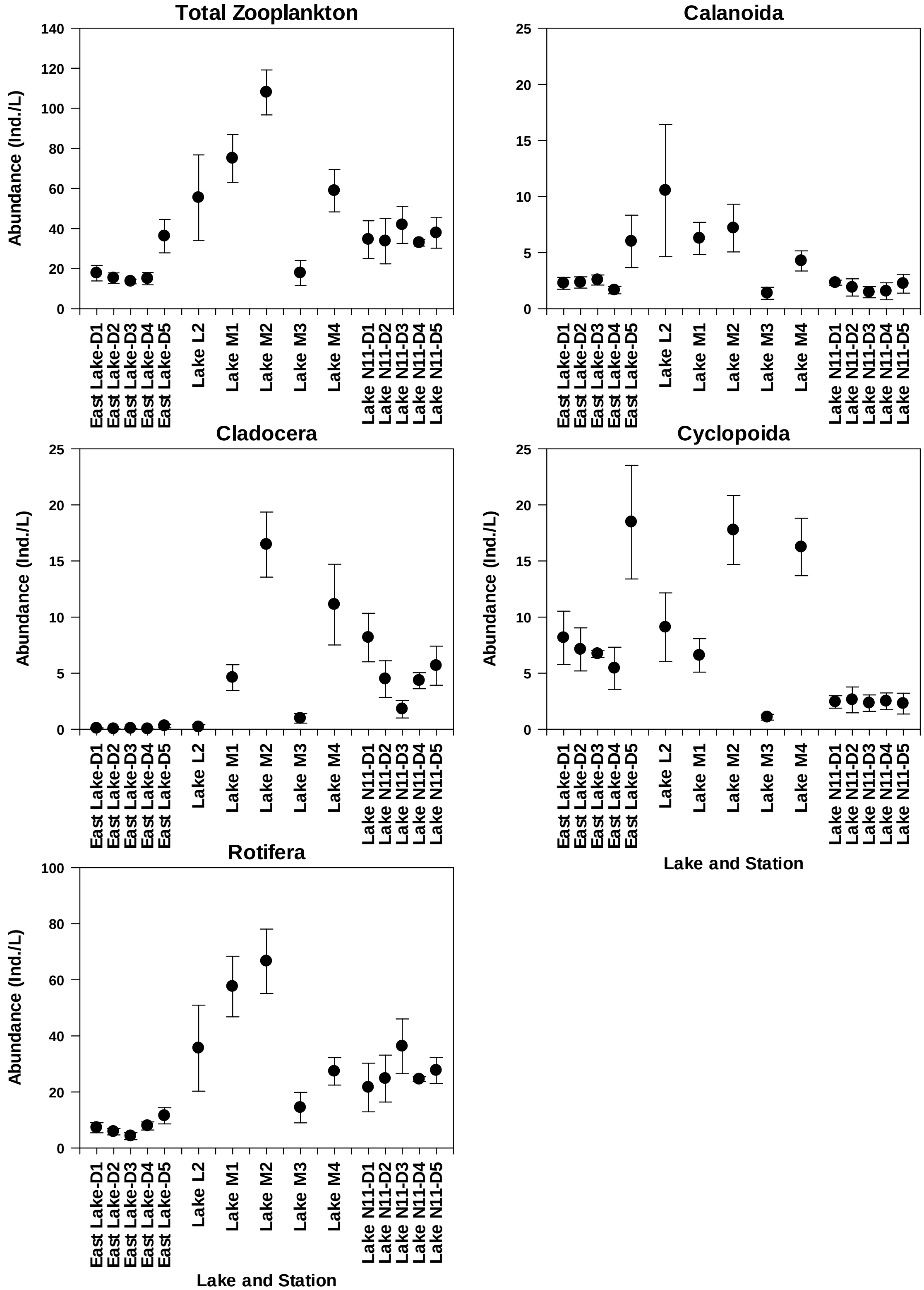


Figure 9 Total Zooplankton Biomass (Mean ± Standard Deviation) and Biomass of Major Zooplankton Groups in each Lake, August 2011

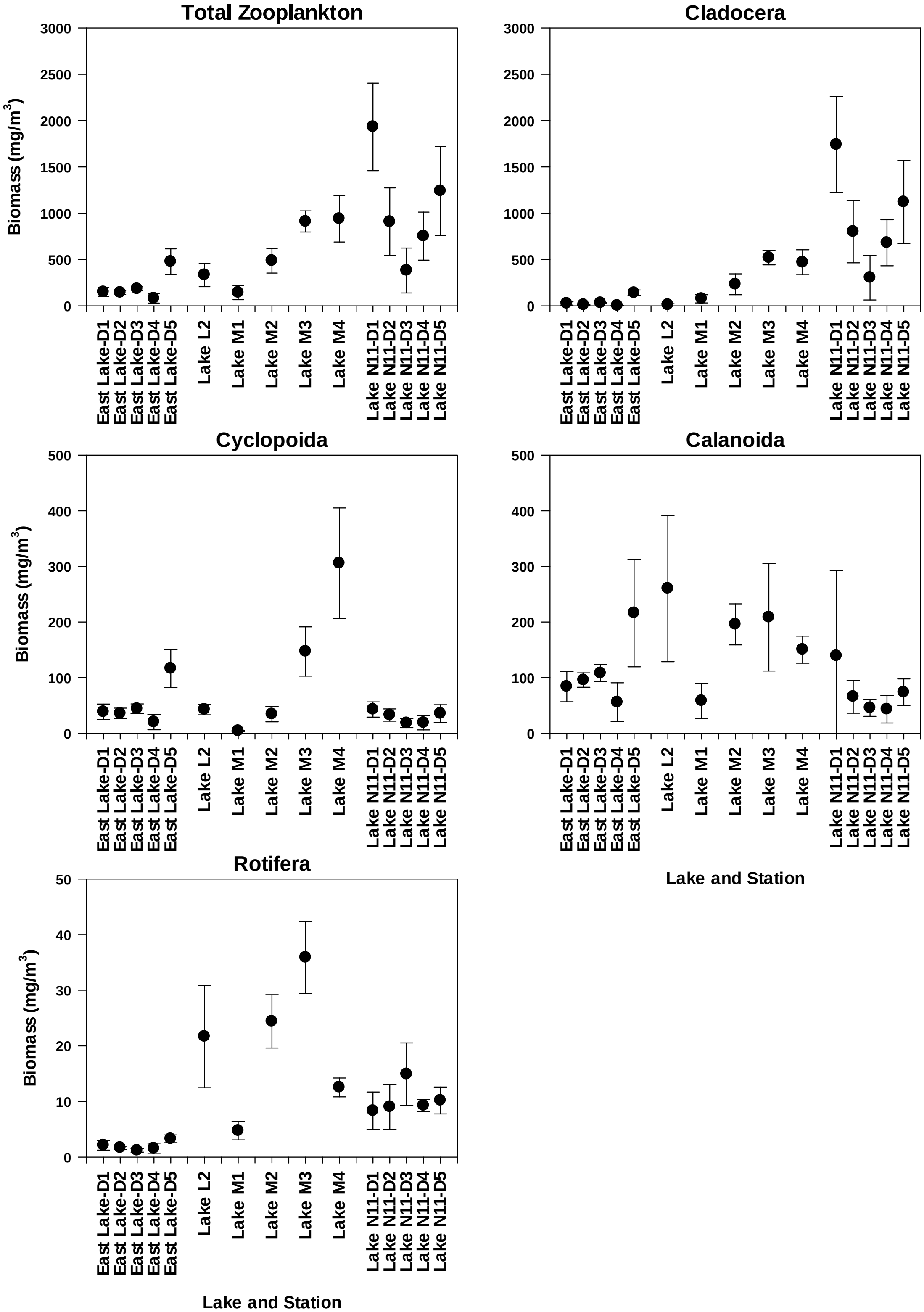


Figure 10 Relative Abundance of Major Zooplankton Groups in each Lake, August 2011

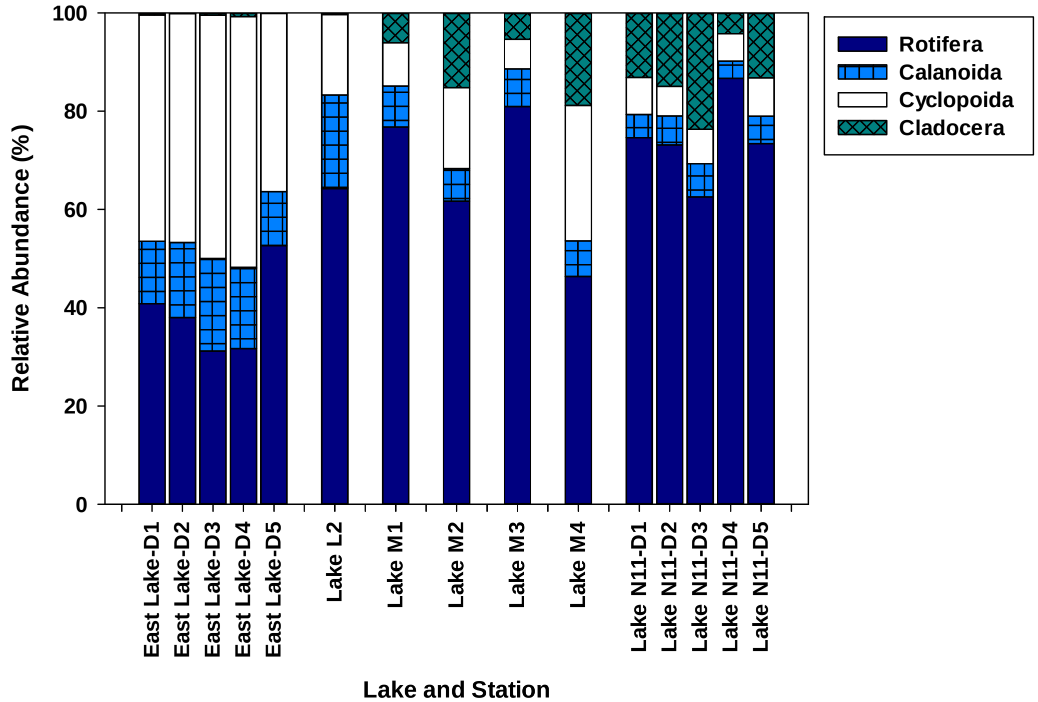
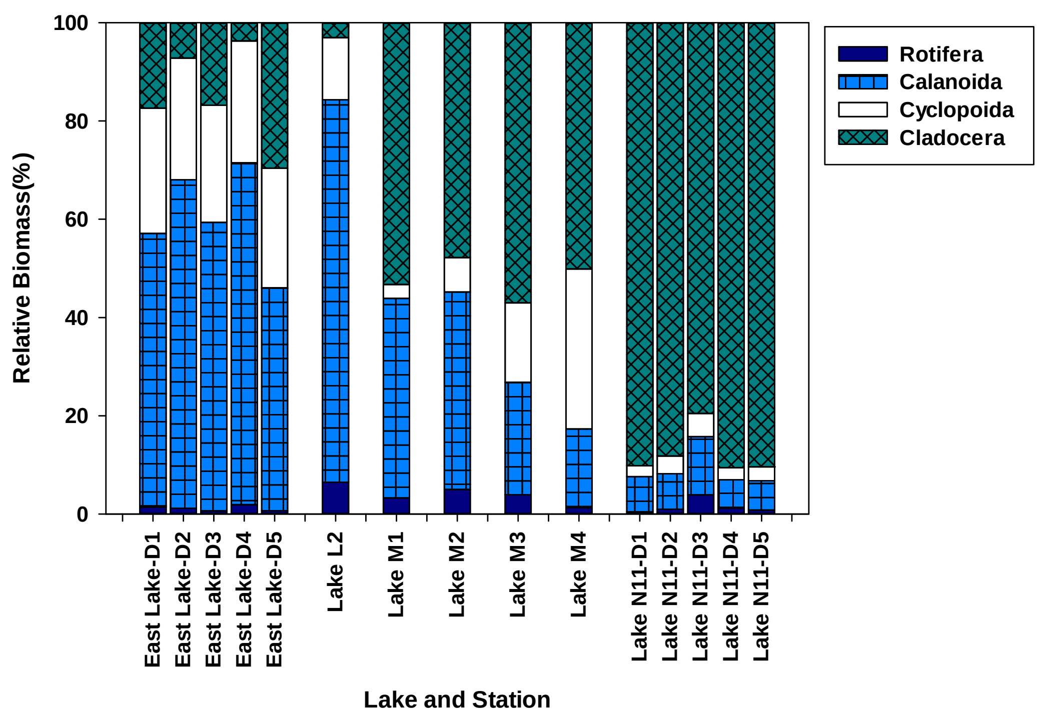


Figure 11 Relative Biomass of Major Zooplankton Groups in each Lake, August 2011



4.1.3 Benthic Invertebrates

4.1.3.1 Habitat Characteristics

Water depth at benthic invertebrate sites sampled in 2011 ranged from 7 to 15 m in East (Reference) Lake, from 2 to 12 m in the L and M Lakes, and from 6 to 7 m in Lake N11 (Appendix II, Table II-1). Water temperature, dissolved oxygen, specific conductivity and pH varied little with depth in the water column, indicating that the water column was well mixed in the lakes sampled. Surface water temperature ranged from 15.1 to 15.2°C in East Lake, from 9.6 to 13.6°C in the L and M lakes, and from 14.2 to 16.3°C in Lake N11. Surface DO ranged from 9.1 to 9.3 mg/L in East Lake, from 9.8 to 10.6 mg/L in the L and M lakes, and from 9.1 to 9.5 mg/L in Lake N11. Specific conductivity at the surface was low in all lakes, as expected in sub-arctic lakes. Specific conductivity was 15 µS/cm at all stations in East Lake, was 15 µS/cm in each of the L and M lakes, and ranged from 11 to 12 µS/cm in Lake N11. Surface pH ranged from 6.7 to 6.9 in East Lake, ranged from 6.6 to 6.9 in the L and M Lakes, and ranged from 6.1 to 6.8 in Lake N11.

Sediment characteristics were variable within and among lakes sampled in 2011 (Appendix II, Table II-1). Sediment data are available for two stations sampled in the L and M lakes (i.e., Lake M3 and Lake M4). Moisture content ranged from 71 to 92% in East Lake, from 87 to 97% in Lake N11, and from 90 to 92% in the L and M Lakes. Total organic carbon was variable in East Lake ranging from 3 to 13%. Total organic carbon was similar among stations in Lake N11, ranging from 9 to 16%, and in the L and M Lakes ranging from 13 to 15%. Bottom sediments in all lakes were dominated by sand, with sand content ranging from 62 to 87% in East Lake, from 63 to 67% in the L and M Lakes, and from 72 to 78% in Lake N11.

Spearman rank correlation analysis detected significant negative correlations between water depth, and total density and total richness (P<0.05, r_s>0.521, n=15) (Table 5). The range in water depths (2 to 15 m) at benthic sampling locations moderately influenced the benthic invertebrate community. In general, both benthic invertebrate density and richness decreased with increasing depth, which is consistent with habitat associations of benthic invertebrates in lakes.

Table 5 Spearman Rank Correlations Between Benthic Invertebrate Variables and Habitat Variables

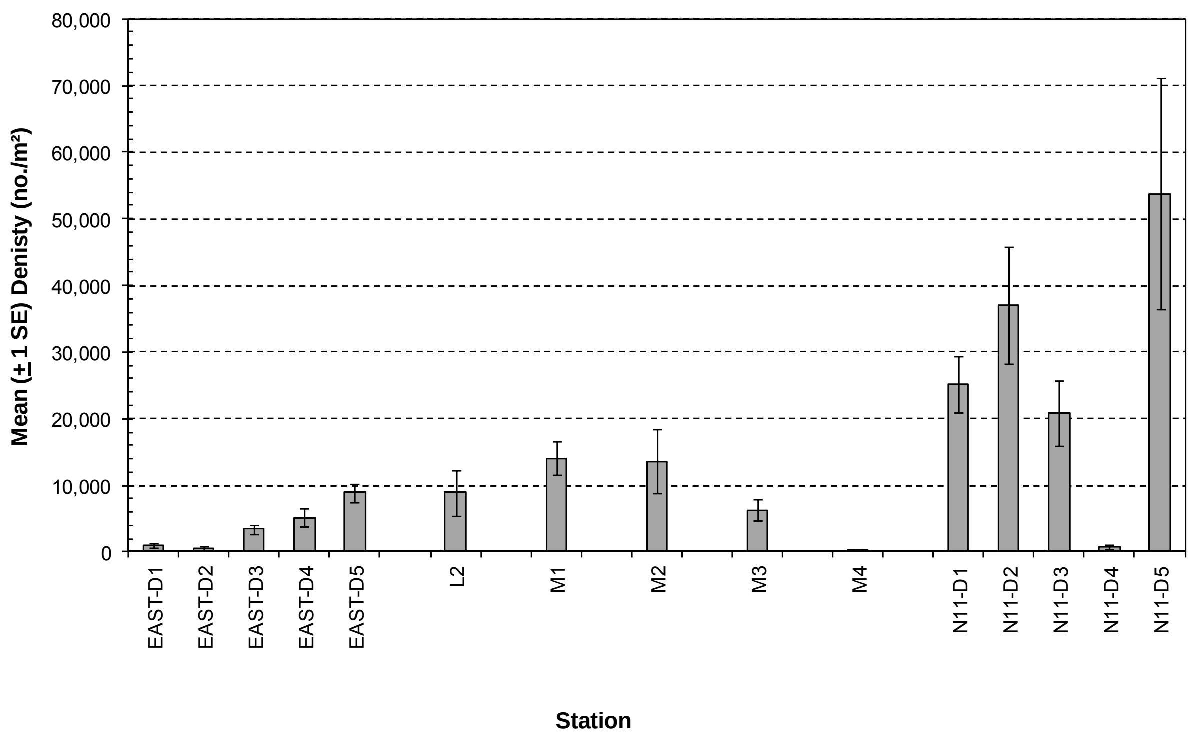
Variable	Water Depth	Total Organic Carbon	Percent Fines (silt + clay)
Total density	**-0.545**	0.086	-0.173
Total richness	**-0.567**	0.178	-0.074
Mean richness	-0.487	0.136	-0.088
Simpson's diversity index	-0.048	-0.473	-0.201
Evenness	0.195	-0.244	0.180

Note: Significant relationships (P<0.05, r_s>0.521, n=15) are **bolded**.

4.1.3.2 Benthic Invertebrate Community

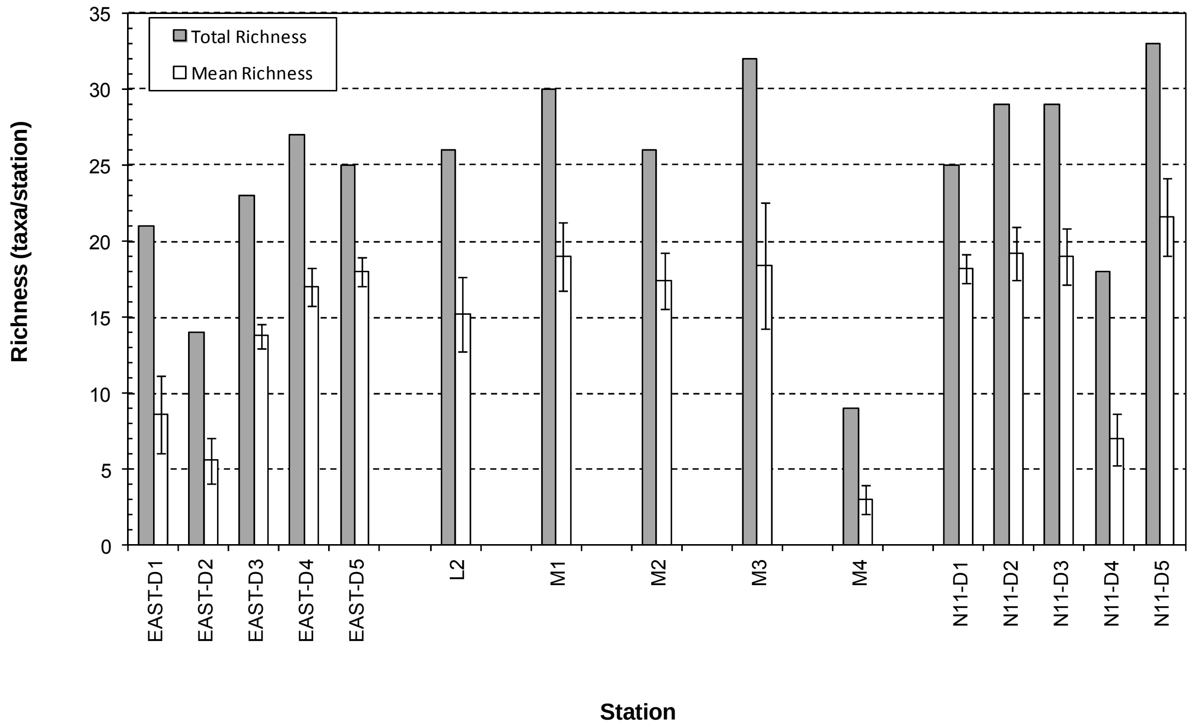
Total benthic invertebrate density was variable within and among lakes (Figure 12; Appendix II, Table II-2). Mean (± 1 SE) benthic invertebrate density ranged from 621 ± 325 to 8,914 ± 1,418 organisms/m² in East Lake, from 810 ± 316 to 53,776 ± 17,303 organisms/m² in Lake N11, and from 241 ± 84 to 14,095 ± 2,554 organisms/m² in the L and M lakes. In general, pooled means for stations in each lake were approximately 7 times greater in Lake N11 compared to East Lake, with only one station having a total density below 20,000 organisms/m² (Station N11-D4; 810 ± 316 organisms/m²). Mean density was approximately 2 times greater in the L and M lakes compared to East Lake, with only one site having a density below 5,000 organism/m² (Lake M4; 241 ± 84 organisms/m²). Densities in Lake N11 were higher than expected for a sub-Arctic lake, particularly for stations N11-D1, N11-D2, N11-D3 and N11-D5. The lake variation in density was also influenced by the variation in sample depth.

Figure 12 Mean Total Benthic Invertebrate Density at Lake Sampling Locations, Fall 2011



Richness ranged from low to moderate and varied within similar ranges among lakes. Total richness ranged from 14 to 27 taxa/station in East Lake, from 18 to 33 taxa/station in Lake N11, and from 9 to 30 taxa/station in the L and M Lakes (Figure 13; Appendix II, Figure II-2). Mean (± 1 SE) richness ranged from 6 ± 2 to 18 ± 1 taxa/station in East Lake, from 7 ± 2 to 22 ± 3 taxa/station in Lake N11, and from 3 ± 1 to 19 ± 2 taxa/station in the L and M Lakes. Overall, taxa richness was in the expected range for sub-Arctic lakes (Beaty et al. 2006).

Figure 13 Benthic Invertebrate Richness at Lake Sampling Locations, Fall 2011



Simpson's index of diversity values were generally high, with the exception of Lake N11, where diversity ranged from moderate to high. Diversity ranged from 0.83 to 0.90 in East Lake, from 0.81 to 0.91 in the L and M Lakes, and from 0.52 to 0.83 in Lake N11 (Figure 14; Appendix II Table II-2). Evenness was generally low to moderate in the lakes sampled, ranging from 0.26 to 0.53 in East Lake, from 0.29 to 0.59 in the L and M Lakes, and 0.06 to 0.33 in Lake N11. This indicated that a few taxa usually accounted for the majority of the total density observed at a station.

The benthic invertebrate community was dominated by the midges at all stations sampled in 2011, with the exception of station EAST-D2 in East Lake where the aquatic worms were dominant, and stations N11-D2 and N11-D3 in Lake N11, where the roundworms were co-dominant with the midges (Figure 15; Appendix II, Table II-3). Other abundant taxa included the roundworms, aquatic worms and clams (Pelecypoda). A combined total of 49 taxa were collected in the lakes sampled in Fall 2011, 30 of which were midges (Table 6). Dominance of the benthic invertebrate community by the midges is as expected for lakes in the sub-arctic region (Beaty et al. 2006, Danks 1981, Danks 2007).

Figure 14 Simpson's Index of Diversity and Evenness at Lake Sampling Locations, Fall 2011

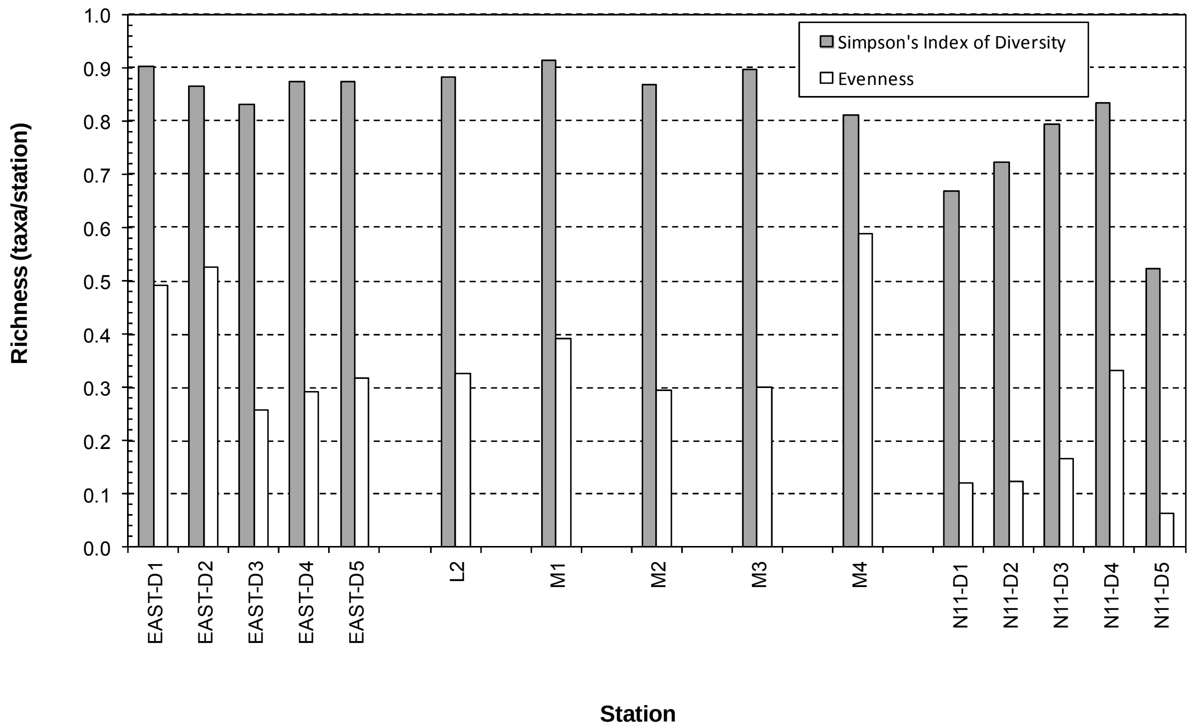


Figure 15 Benthic Invertebrate Community Composition at Lake Sampling Locations, Fall 2011

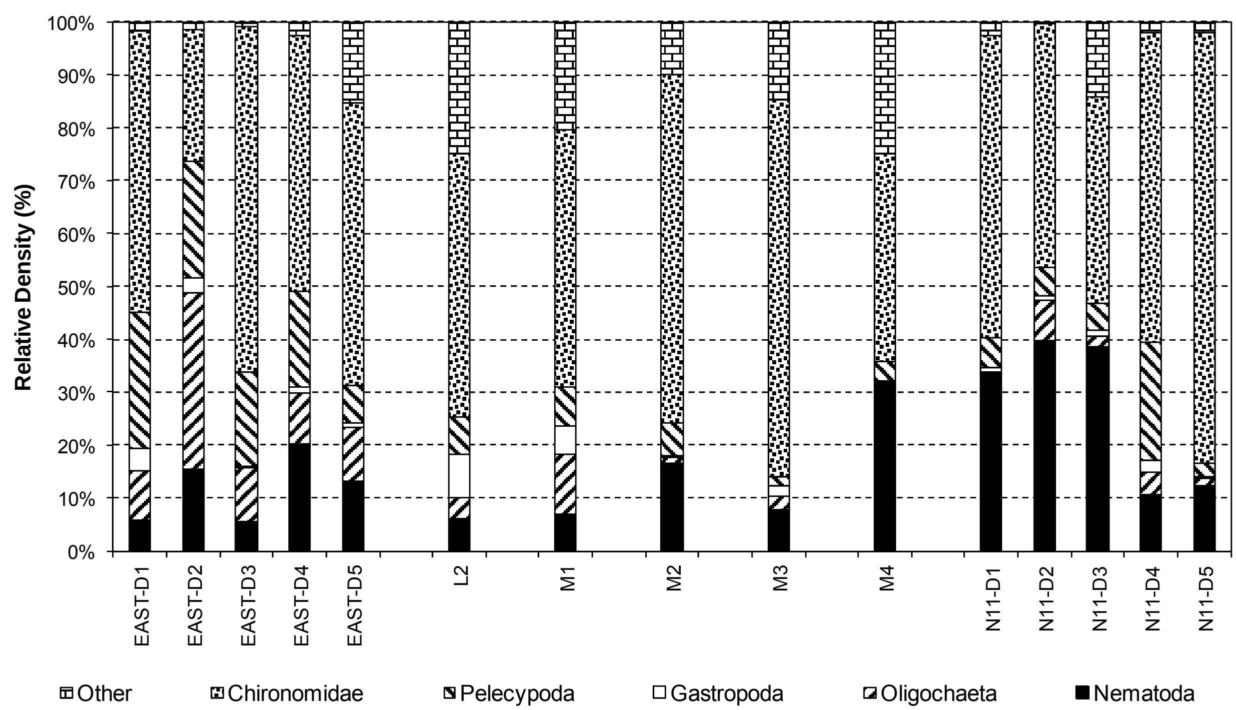


Table 6 List of Benthic Invertebrate Taxa Collected at Lake Sampling Locations, Fall 2011

Major Taxon	Family	Subfamily	Tribe	Genus/Species
Microturbellaria	Typhloplanidae	-	-	*Mesostoma*
Nematoda	-	-	-	-
Oligochaeta	Enchytraeidae	-	-	-
	Lumbriculidae	-	-	-
	Naididae	Naidinae	-	-
	Naididae	Tubificinae	-	-
Gastropoda	Valvatidae	-	-	*Valvata sincera*
Bivalvia	Pisidiidae	-	-	*Sphaerium*
		-	-	*Pisidium*
Hydracarina	-	-	-	-
Copepoda - Harpacticoida	-	-	-	-
Ostracoda	-	-	-	-
Trichoptera	Hydroptilidae	-	-	*Agraylea*
	Leptoceridae	-	-	*Oecetis*
	Limnephilidae	-	-	*Grensia praeterica*
	Phryganeidae	-	-	*Phryganea*
Diptera	Chironomidae	Tanypodinae	Pentaneurini	*Ablabesmyia*
				Thienemannimyia group
			Procladiini	*Procladius*
		Diamesinae	Protanypini	*Protanypus*
		Prodiamesinae	-	*Monodiamesa*
		Orthocladiinae	Orthocladiini	*Abyskomyia*
				Cricotopus / Orthocladius
				Heterotanytarsus
				Heterotrissocladius
				Parakiefferiella
				Psectrocladius
				Zalutschia
		Chironominae	Chironomini	*Chironomus*
				Cladopelma
				Cryptochironomus
				Dicrotendipes
				Microtendipes
				Pagastiella
				Parachironomus
				Polypedilum
				Sergenta
				Stictochironomus
			Pseudochironomini	*Pseudochironomus*
			Tanytarsini	*Cladotanytarsus*
				Corynocera
				Micropsectra
				Micropsectra / Tanytarsus
				Paratanytarsus
				Stempellinella
				Tanytarsus
	Ceratopogonidae	Ceratopogoninae	-	*Bezzia*
		Dasyheleinae		*Dasyhelea*
	Empididae	-	-	*Chelifera / Metachela*

- = not identified to this taxonomic level.

5.0 SUMMARY AND CONCLUSIONS

5.1 Lower Trophic Communities

5.1.1 Phytoplankton

In general, phytoplankton taxonomic richness, abundance, biomass and community composition were similar among the sampled lakes. The dominant algal groups by abundance and biomass were Chlorophyceae, Chrysophyceae and cyanobacteria. This is typical of lakes with low to moderate productivity (Wetzel 2001). Similarly, phytoplankton taxonomic richness was diverse in terms of the numbers of taxa present. This is often observed in low productivity lakes, where slower growth rates permit a greater number of species to coexist, compared to more productive waters (Wetzel 2001).

5.1.2 Zooplankton

Abundance, biomass and community composition of zooplankton were more variable among the lakes, compared to phytoplankton. Total zooplankton abundance ranged from 14 to 108 ind./L depending on the lake, and total zooplankton biomass ranged from 80 to 1,931 mg/m^3. Zooplankton abundance was dominated by rotifers and cyclopoid copepods, while biomass was dominated by Cladocera and calanoid copepods. Taxonomic richness was similar among lakes (range 12-14). Taxonomic richness was evenly distributed among groups, with Cyclopoida and Cladocera having the lowest taxonomic diversity, and Calanoida and Rotifera having the greatest taxonomic diversity. The zooplankton communities documented in the lakes sampled are similar to those in other sub-Arctic lakes, such as Lac de Gras (Golder 2010) and Snap Lake (De Beers 2010b).

5.1.3 Benthic Invertebrates

The benthic invertebrate communities of lakes were characterized by low to moderate density and richness during the fall 2011 sampling program, consistent with the generally low productivity typical of sub-Arctic lakes on the Canadian Shield. Overall, Simpson's diversity was high and evenness was low to moderate indicating that a few taxa accounted for most of the organisms present in lakes. Midges were the dominant taxa, with the aquatic worms, roundworms and fingernail clams also representing a considerable proportion of the benthic invertebrate community at some stations.

The benthic invertebrate community in the lakes sampled in the Gahcho Kué study area, with the exception of Lake N11, is consistent with that expected in the sub-Arctic region where low productivity is common due to low nutrient levels, low temperatures, and long ice covered periods. Lake N11 is moderately productive compared to other lakes historically sampled in the area (De Beers 2010a, Annex J and Addendum JJ). Also, a moderately strong relationship existed between water depth, and both total density and richness in the lakes sampled in fall 2011.

6.0 CLOSURE

We trust the above meets your present requirements. If you have any questions or require additional details, please contact the undersigned.

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8.0 ABBREVIATIONS

De Beers	De Beers Canada Inc.
DO	dissolved oxygen
EEM	environmental effects monitoring
EIR	Environmental impact review
EIS	Environmental impact assessment
GPS	Global positioning system
LSA	local study area
n	number
NWT	Northwest Territories
P	probability
Project	Gahcho Kué Project
QA/QC	quality assurance / quality control
RPD	relative percent difference
RSA	regional study area
SE	standard error
TOC	total organic carbon
UTM	Universal Transverse Mercator

8.1 Units of Measure

%	percent
<	less than
>	greater than
°C	degrees Celsius
µg/L	micrograms per litre
µm	micrometre
µS/cm	microSiemens per centimetre
cm	centimetre
g	gram
g/cm^3	grams per cubic centimetre
ind/L	individuals per litre
km	kilometre
km^2	square kilometre
L	litre
m	metre
m^2	square metre
m^3	cubic metre
mg/L	milligrams per litre

%	percent
mg/m^3	milligrams per cubic metre
mL	millilitre
mm	millimetre
mm^3	cubic millimetres
mm^3/m^3	cubic millimetres per cubic metre wet weight
org/m^2	number of organisms per square metre

9.0 GLOSSARY

Benthic Invertebrates	Animals without backbones that live on river and lake bottoms. Benthic refers to the bottom, and these animals are also called zoobenthos.
Calanoida	An order of copepods; small planktonic animals that are a component of zooplankton.
Chlorophyta	Green algae; a component of phytoplankton.
Chrysophyta	Golden-brown algae; a component of phytoplankton.
Cladocera	A group of small planktonic animals (crustaceans) also known as water fleas; a component of zooplankton.
Colonial	Individuals of the same species clustered together to form a group.
Conductivity	A measure of the resistance of a solution to electrical flow; an indirect measure of the salinity of the water.
Copepoda	An order of planktonic crustacean; a component of zooplankton.
Cryptophyta	Flagellated algae also known as cryptomonads; a component of phytoplankton.
Cyanobacteria	Blue-green algae; a component of phytoplankton.
Cyclopoida	An order of copepods; small planktonic animals.
Diatom	A group of algae that are encased within a frustule made of silica; a component of phytoplankton.
Dissolved Oxygen	Oxygen dissolved within the water column.
Diversity	A numerical index that incorporates evenness and richness; the diversity index measures the proportional distribution of organisms in the community.
Enumeration	The act of counting individuals.
Euglenophyta	Euglena; a component of phytoplankton.
Evenness	A measure of how evenly the total invertebrate abundance is distributed among the different types of organisms present at the site.
Limnology Profiles	Refers to measurements of water temperature, conductivity, pH, and dissolved oxygen in the water column of a lake.
Littoral	The shallow, shoreline area of a lake.
Lower trophic	Organisms in an ecosystem that form the bottom of the food chain (benthic invertebrates, zooplankton, and phytoplankton) upon which fish depend as food.
Pelagic	Relating to fish or other aquatic organisms that live offshore in the middle or lower part of the water column.

Periphyton	Algae and small crustaceans that live attached to rocks and other substrates projecting from the bottom of a stream or lake.
pH	A measure of the acidity or alkalinity of water.
Phytoplankton	Small, usually microscopic, plants that live in the water column of lakes and make their food through primary production.
Plankton	Small, often microscopic, plants (phytoplankton) and animals (zooplankton) that live in the open water column of lakes. They are an important food source for many larger animals.
Richness	The number of different types of animals present in a sample or at a location.
Rotifera	A large class of the pseudocoelomate phylum Aschelminthes; a component of zooplankton.
Secchi Depth	A measure of water clarity, measured by lowering a 20 cm diameter disk (Secchi disk) with alternating black and white coloured quadrants. The shallowest depth at which the disk is no longer visible is the Secchi depth.
Substrate	The bottom of a waterbody, usually consisting of sediments of various particle sizes (e.g., sand, silt, clay, gravel, cobble, boulder) and organic material (e.g., living or dead plant material).
Taxon	A group of organisms at the same level of the standard biological classification system; the plural of taxon is taxa.
Terrestrial	Living or growing on land.
Total Organic Carbon (TOC)	Total organic carbon is composed of both dissolved and particulate forms. Total organic carbon is often calculated as the difference between Total Carbon (TC) and Total Inorganic Carbon (TIC). Total organic carbon has a direct relationship with both biochemical and chemical oxygen demands, and varies with the composition of organic matter present in the water. Organic matter in soils, aquatic vegetation and aquatic organisms are major sources of organic carbon.
Watershed	The upstream land area drained by a river network.
Yellow Springs Instrument (YSI)	A meter that measures temperature, conductivity and dissolved oxygen in water.
Zooplankton	Small, sometimes microscopic, animals that live in the water column of lakes and mainly eat primary producers (phytoplankton).

APPENDIX I

Plankton - Supporting Data, 2011

Table I-1: Water Quality Profiles at Plankton Sampling Locations in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011

Lake	Station	Maximum Depth [m]	Secchi Depth [m]	Depth [m]	Temperature [°C]	Dissolved Oxygen [mg/L]	Specific Conductivity [µS/cm]	pH
Lake M1	-	2.0	2.0	0.3	9.6	10.6	14.0	6.8
				1.0	9.6	10.5	14.0	6.7
				1.5	9.6	10.6	14.0	6.0
Lake M2	-	4.5	3.0	0.3	13.5	9.8	14.0	6.7
				1.0	13.5	9.8	14.0	6.7
				1.5	13.5	9.8	14.0	6.6
				2.0	13.5	9.8	14.0	6.5
				2.5	13.5	9.8	14.0	6.5
				3.0	13.5	9.8	14.0	6.5
				3.8	13.6	9.8	14.0	6.5
				4.0	13.6	9.8	14.0	6.4
				4.5	13.6	9.8	14.0	6.4
Lake M3	-	7.3	3.2	0.3	14.3	9.8	14.0	6.6
				1.0	14.3	9.8	14.0	6.7
				2.0	14.3	9.8	14.0	6.7
				3.0	14.3	9.8	14.0	6.6
				4.0	14.3	9.8	14.0	6.7
				5.0	14.3	9.8	14.0	6.7
				6.0	14.3	9.8	14.0	6.6
Lake M4	-	12.5	7.0	0.5	13.6	9.8	14.0	6.7
				1.0	13.6	9.8	14.0	6.7
				2.0	13.6	9.8	14.0	6.7
				3.0	13.5	9.9	14.0	6.6
				4.0	13.6	9.8	14.0	6.7
				5.0	13.5	9.8	14.0	6.7
				6.0	13.5	9.8	14.0	6.7
				7.0	13.5	9.8	14.0	6.7
				8.0	13.5	9.8	14.0	6.6
				9.0	13.6	9.5	14.0	6.6
				10.0	13.6	9.5	14.0	6.6
				11.0	14.0	9.5	14.0	6.7

Table I-1: Water Quality Profiles at Plankton Sampling Locations in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011 (continued)

Lake	Station	Maximum Depth [m]	Secchi Depth [m]	Depth [m]	Temperature [°C]	Dissolved Oxygen [mg/L]	Specific Conductivity [µS/cm]	pH
Lake L2	-	3.8	3.8	0.3	12.2	10.5	14.0	6.9
				1.0	11.7	10.5	14.0	6.8
				1.5	11.6	10.5	14.0	6.7
				2.0	11.5	10.5	14.0	6.7
				2.5	11.4	10.5	14.0	6.7
				3.0	11.3	10.5	14.0	6.7
				3.5	11.4	9.7	15.0	6.4
Lake N11	D1	6.5	6.0	0.3	16.1	9.4	11.0	6.5
				1.0	16.1	9.3	11.0	6.6
				2.0	16.1	9.3	11.0	6.6
				3.0	16.1	9.3	11.0	6.6
				4.0	16.1	9.3	11.0	6.6
				5.0	16.0	9.3	11.0	6.6
				6.0	15.9	9.3	11.0	6.6
	D2	6.2	5.8	0.3	14.2	9.5	12.0	6.7
				1.0	14.2	9.5	12.0	6.7
				2.0	14.2	0.9	12.0	6.7
				3.0	14.2	0.9	12.0	6.7
				4.0	14.2	0.9	12.0	6.7
				5.0	14.2	0.9	12.0	6.7
	D3	6.5	Bottom	0.3	16.3	9.1	11.0	6.8
				1.0	16.3	9.1	11.0	6.8
				2.0	16.3	9.1	11.0	6.8
				3.0	16.3	9.1	11.0	6.8
				4.0	16.3	9.1	11.0	6.8
				5.0	16.3	9.1	11.0	6.8
				6.0	16.3	9.0	11.0	6.8

Table I-1: Water Quality Profiles at Plankton Sampling Locations in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011 (continued)

Lake	Station	Maximum Depth [m]	Secchi Depth [m]	Depth [m]	Temperature [°C]	Dissolved Oxygen [mg/L]	Specific Conductivity [µS/cm]	pH
Lake N11	D4	6.0	5.8	0.3	15.9	9.2	12.0	6.1
				1.0	15.9	9.1	12.0	6.2
				2.0	15.9	9.1	12.0	6.2
				3.0	15.9	9.1	12.0	6.3
				4.0	15.9	9.1	12.0	6.3
				5.0	15.9	9.1	12.0	6.3
	D5	5.6	5.0	0.3	15.3	9.3	12.0	6.3
				1.0	15.3	9.3	12.0	6.3
				2.0	15.3	9.3	12.0	6.3
				3.0	15.3	9.3	12.0	6.3
				4.0	15.3	9.2	12.0	6.3
				5.0	15.3	9.2	12.0	6.3
East Lake (REF)	D1	6.9	Bottom	0.3	15.2	9.3	15.0	6.9
				1.0	15.1	9.3	15.0	6.9
				2.0	15.1	9.3	15.0	6.9
				3.0	15.1	9.3	15.0	6.9
				4.0	15.1	9.3	15.0	6.9
				5.0	15.1	9.3	15.0	6.9
				6.0	15.0	9.3	15.0	6.9
	D2	14.2	7.8	0.3	15.2	9.3	15.0	6.8
				1.0	15.2	9.2	15.0	6.8
				2.0	15.2	9.2	15.0	6.8
				3.0	15.2	9.2	15.0	6.8
				4.0	15.2	9.2	15.0	6.8
				5.0	15.2	9.2	15.0	6.8
				6.0	15.2	9.2	15.0	6.8
				7.0	15.2	9.2	15.0	6.8
				8.0	15.2	9.2	15.0	6.8
				9.0	15.2	9.2	15.0	6.8
				10.0	15.2	9.2	15.0	6.8

Table I-1: Water Quality Profiles at Plankton Sampling Locations in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011 (continued)

Lake	Station	Maximum Depth [m]	Secchi Depth [m]	Depth [m]	Temperature [°C]	Dissolved Oxygen [mg/L]	Specific Conductivity [µS/cm]	pH
East Lake (REF)	D2	14.2	7.8	11.0	15.2	9.2	15.0	6.8
				12.0	15.1	9.2	15.0	6.8
				13.0	15.1	9.2	15.0	6.8
				14.0	15.1	9.2	15.0	6.8
	D3	15.3	7.4	0.3	15.1	9.3	15.0	6.8
				1.0	15.1	9.3	15.0	6.8
				2.0	15.1	9.3	15.0	6.8
				3.0	15.1	9.3	15.0	6.8
				4.0	15.1	9.2	15.0	6.8
				5.0	15.1	9.2	15.0	6.8
				6.0	15.1	9.2	15.0	6.8
				7.0	15.1	9.2	15.0	6.8
				8.0	15.1	9.2	15.0	6.8
				9.0	15.1	9.2	15.0	6.8
				10.0	15.1	9.2	15.0	6.8
				11.0	15.1	9.2	15.0	6.8
				12.0	15.1	9.2	15.0	6.8
				13.0	15.0	9.2	15.0	6.8
				14.0	15.0	9.2	15.0	6.8
				15.0	15.0	9.2	15.0	6.8
	D4	9.0	7.5	0.3	15.1	9.1	15.0	6.8
				1.0	15.1	9.1	15.0	6.8
				2.0	15.1	9.1	15.0	6.8
				3.0	15.1	9.1	15.0	6.8
				4.0	15.1	9.1	15.0	6.8
				5.0	15.1	9.1	15.0	6.8
				6.0	15.1	9.1	15.0	6.8
				7.0	15.1	9.1	15.0	6.8
				8.0	15.1	9.1	15.0	6.8

Table I-1: Water Quality Profiles at Plankton Sampling Locations in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011 (continued)

Lake	Station	Maximum Depth [m]	Secchi Depth [m]	Depth [m]	Temperature [°C]	Dissolved Oxygen [mg/L]	Specific Conductivity [µS/cm]	pH
East Lake (REF)	D5	14.9	7.8	0.3	15.1	9.2	15.0	6.7
				1.0	15.1	9.2	15.0	6.7
				3.0	15.1	9.2	15.0	6.7
				5.0	15.1	9.1	15.0	6.8
				7.0	15.1	9.1	15.0	6.8
				9.0	15.1	9.1	15.0	6.8
				11.0	15.1	9.1	15.0	6.8
				13.0	15.1	9.1	15.0	6.8
				14.0	15.1	9.1	15.0	6.8

Notes: m = metre; °C = degrees Celsius; mg/L = milligrams per litre; µS/cm = microSiemens per centimetre.

Table I-2 Phytoplankton Abundance (ind./L) in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011

Lake	Lake M1					Lake M2
Station	A	B	C	D	E	A
Date sampled	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	18-Aug-11
CHLOROPHYCEAE	**182317**	**14584**	**350054**	**160441**	**218778**	**269831**
Ankistrodesmus bernardii Komarek	0	0	0	0	0	0
Ankistrodesmus falcatus (Corda) Ralfs	0	0	0	0	0	0
Ankistrodesmus falcatus var. *mirabilis* West	0	0	14585	0	0	0
Ankistrodesmus fusiformis Corda	0	0	0	0	0	0
Ankistrodesmus gracilis (Reinsch) Kors.	0	0	0	0	0	0
Ankyra judayi (G.M. Smith) Fott	0	0	14585	0	0	0
Ankistrodesmus spiralis (Turner) Lemmermann	0	0	0	0	0	0
Ankistrodesmus stipitatus (Chod.)	0	0	0	0	0	0
Arthrodesmus convergens Ehrenberg	0	0	0	0	0	0
Arthrodesmus incus (Brebisson) Hassall	0	0	0	0	0	0
Arthrodesmus incus var. *ralfsii* (W. West) Teiling	0	0	0	0	0	0
Arthrodesmus triangularis Lagerheim	0	7292	0	0	0	0
Botryococcus sudeticus Lemmermann	0	0	0	0	0	0
Chlamydomonas sagitula Skuja	0	0	0	0	7292	7292
Chlamydomonas sp.	0	0	0	0	0	0
Cosmarium regnesii Reinsch	0	0	0	0	0	0
Cosmaruim bioculatum Brebisson	0	0	0	0	0	7292
Cosmarium margaritatum (Lund.) Roy and Biss	0	0	0	0	0	0
Cosmarium phaseolus Brebisson	0	0	0	0	0	0
Cosmarium sp.	0	0	0	0	0	0
Cosmarium subcrenatum Hantz.	0	0	0	0	0	0
Crucegenia apiculata (Lemmermann) Schmidle	0	0	0	0	0	0
Crucegenia quadrata Morren	7292	0	0	0	0	0
Crucegenia rectangularis (A. Braun) Gay	0	0	0	0	0	0
Crucegenia sp.	0	0	0	0	0	0
Crucegenia tetrapedia (Kirchner) W. and G.S. West	0	0	0	0	7292	0
Dictyosphaerium pulchellum Skuja	0	0	0	0	0	0
Dictyosphaerium subsolitarium Van Goor	0	0	0	0	0	0
Elakatothrix gelatinosa Wille	0	0	0	0	0	0
Elakatothrix genevensis (Reverdin) Hindak	36464	0	29171	0	43757	36464
Euastrum ansatum Ehrenberg	0	0	0	0	0	0
Euastrum denticulatum (Kirchner) Gay	0	0	0	0	0	0
Eudorina sp.	0	0	0	0	0	0
Franceia Droescheri (Lemm.) G.M. Smith	0	0	0	0	0	0
Gloeocystis planctonica (W. and G.S. West) Lemmermann	0	0	0	0	7292	0
Gloeocystis sp	0	0	29171	0	7292	21878
Gloeotilia sp.	0	0	0	0	0	0
Kirchneriella contorta (Schmidle) Bohlin	0	0	0	0	0	0
Kirchneriella lunaris (Kirchn.) Moeb.	0	0	0	0	0	0
Korshikoviella sp.	21878	0	0	14585	7292	21878
Lagerheimia genevensis (Chod.) Chod.	0	0	0	0	0	0
Monoraphidium braunii Naegeli	0	0	0	0	0	14585
Monoraphidium contortum (Thuret) Komarkova-Legenerova	0	0	0	0	0	0
Monoraphidium convolutum (Corda)	0	0	0	0	0	0
Monoraphidium dybowskii (Wolosz) Hindak and Kom.-Legn.	21878	0	43757	0	65636	51050
Monoraphidium griffithii (Berkeley) Komarkova-Legenerova	0	0	0	0	0	0
Monoraphidium irregulare (G.M. Smith) Komarkova-Legenerova	0	0	0	14585	0	0
Monoraphidium minutum (Nag.) Komarkova-Legenerova	0	0	0	14585	0	0
Monoraphidium sp.	0	0	0	0	0	0
Mougeotia sp.	0	0	14585	0	0	0
Oocystis parva W. and G.S. West	0	0	0	0	0	0
Oocystis borgei Snow	0	0	0	0	0	0
Oocystis lacustris Chodat	0	0	0	0	0	0
Oocystis parva W. and G.S. West	65636	0	116687	72929	21878	51050
Oocystis pusilla Hansgirg	14585	0	29171	43757	21878	51050
Oocystis solitaria Wittrock	7292	0	14585	0	0	0
Pediastrum tetras (Ehrenberg) Ralfs	0	0	0	0	0	7292
Quadrigula lacustris (Chodat) G.M. Smith	0	0	0	0	0	0
Quadrigula pfitzeri (Schoeder) G. M. Smith	0	0	0	0	0	0
Scenesdesmus ecornis var. *bicellularis* (Ehrenberg) Chodat	0	0	43757	0	7292	0
Scenedesmus obliquus (Turpin) Kuetzing	0	0	0	0	14585	0
Scenedesmus opoliensis P. Richter	0	0	0	0	0	0
Sphaerocystis schroeteri Chodat	0	0	0	0	0	0
Spondylosium planum (Wolle) W. and G.S. West	0	7292	0	0	7292	0
Spondylosium pygaeum Rabenhorst	0	0	0	0	0	0
Staurastrum sp.	0	0	0	0	0	0
Tetraedron minimum (A. Braun) Hansgirg	0	0	0	0	0	0
Tetraedron muticum (A. Braun) Hansgrig)	0	0	0	0	0	0
Tetraedron mimimum var. *tetralobulatum* Reins	7292	0	0	0	0	0
CHRYSOPHYCEAE	**1713834**	**123974**	**2348331**	**1823237**	**1743009**	**882440**
Bitrichia chodatii (Reverdin) Chodat	14585	0	0	14585	0	7292
Bitrichia ollula (Fott) Bourrelly	0	0	0	0	0	0
Chrysolykos planctonicus Mack	7292	0	0	29171	36464	0
Chrysolykos skujae (Nauwerck) Bourrelly	0	0	0	0	0	0
Chromulina sp.	94808	43757	116687	102101	87515	87515
Chromulina sp. 2	0	0	0	0	0	0
Desmarella moniliformis Kent	14585	0	0	0	0	7292
Dicronema cf. *vlklanum* Prauser	14585	0	0	0	7292	0
Dinobryon acuminatum Ruttner	0	0	0	0	0	0
Dinobryon bavaricum Imhof	14585	0	102101	87515	51050	29171
Dinobryon borgei Lemmermann	29171	0	14585	0	0	0
Dinobryon crenulatum W. and G.S. West	0	0	0	0	0	0
Dinobryon dilatatum Hillard	7292	0	14585	29171	7292	0
Dinobryon divergens Imhof	0	0	0	0	0	7292
Dinobryon sp (loose monad)	43757	0	0	0	29171	14585
Dinobryon sociale var. *americana* (Brunthaler) Bachmann	0	0	0	0	0	0
Dinobryon sociale Ehrenberg	87515	0	0	14585	36464	0
Dinobryon sociale var. *stipitatum* (Stein) Lemmermann	0	0	0	0	0	0
Dinobryon bavaricum var. *Vanhoffenii* (Bachm.) Krieg.	0	0	0	0	0	0
Epipyxis sp.	14585	0	0	29171	0	0
Kephyrion boreale Skuja	0	0	0	0	14585	0
Kephyrion boreale Skuja	7292	7292	0	0	0	0
Mallomonas pseudocoronata Prescott	0	0	0	0	0	0
Mallomonas sp.	0	0	0	0	0	0
Monosiga varians Skuja	72929	0	0	0	80222	21878
Ochromonas sp.	102101	7292	43757	160445	51050	36464
Pedinella sp.	0	0	0	0	0	0
Pseudokephyrion attenuatum Hilliard	0	0	0	0	0	0
Pseudokephyrion auroreum Nicholls	0	0	0	0	0	0
Pseudokephyrion ellipsoideum (Pascher) Schmid	0	0	0	0	0	0
Pseudokephyrion minutissimum Conrad	0	0	0	0	7292	0
Spiniferomonas sp.	0	0	0	0	0	0
Stichogloea doederleinii (Schmidle) Wille	14585	21877	29170	14585	29170	14584
Stichogloea globosa Starmach	0	0	0	0	0	0
Synura sp.	0	0	0	0	0	0
Uroglena sp.	7292	0	14585	0	0	0
Unidentified naked Chrysophyte sp. (*Ochromonas* /*Chromulina*)-la	612610	36464	1035603	933501	590731	291719
Unidentified naked Chrysophyte sp. (*Ochromonas* /*Chromulina*)-sm	488629	7292	889743	408407	568852	284426
Unidentified *Erkenia/Chrysochromulina* complex	65636	0	87515	0	145859	80222
CYANOBACTERIA	**189610**	**94806**	**291717**	**218786**	**153149**	**401111**
Anabaena flos-aquae Brebisson	0	0	0	0	0	0
Anabaena inaequalis (Kuetzing) Bornet and Flahault	7292	0	0	0	0	0
Anabaena sp.	7292	0	0	0	0	0
Aphanocapsa delicatissima West and West	21878	80222	131273	14585	21878	94808
Aphanocapsa elachista W. and G.S. West	58343	7292	43757	0	7292	0
Aphanocapsa sp	0	0	0	0	0	0
Aphanothece clathrata W and G.S. West	0	0	0	0	0	0
Aphanothece sp	7292	0	0	29171	0	7292
Chroococcus limneticus var. *distans* G. M. Smith	14585	0	0	0	0	0
Cyanodictyon sp (rod)	0	0	0	0	0	0
Cyanodictyon sp (spherical)	0	0	0	0	0	0
Limnothrix sp	14585	0	0	29171	14585	0
Merismopedia tenuissima Lemmermann	58343	0	116687	145859	109394	291719
Phormidium formosum (Bory ex Gomont) Anagnostidis et Komarek	0	0	0	0	0	0
Planktolyngya limnetica Lemmermann	0	0	0	0	0	0

Table I-3 Phytoplankton Biomass (mg/m³) in East Lake, Lake N11 and the L and M Lakes of the Gahcho Kué Project, Fall 2011

Lake	Lake M1				
Station	A	B	C	D	E
Date sampled	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11
CHLOROPHYCEAE	**12.56**	**56.30**	**249.57**	**6.67**	**41.03**
Ankistrodesmus bernardii Komarek	0	0	0	0	0
Ankistrodesmus falcatus (Corda) Ralfs	0	0	0	0	0
Ankistrodesmus falcatus var. *mirabilis* West	0	0	1.51	0	0
Ankistrodesmus fusiformis Corda	0	0	0	0	0
Ankistrodesmus gracilis (Reinsch) Kors.	0	0	0	0	0
Ankyra judayi (G.M. Smith) Fott	0	0	0.55	0	0
Ankistrodesmus spiralis (Turner) Lemmermann	0	0	0	0	0
Ankistrodesmus stipitatus (Chod.)	0	0	0	0	0
Arthrodesmus convergens Ehrenberg	0	0	0	0	0
Arthrodesmus incus (Brebisson) Hassall	0	0	0	0	0
Arthrodesmus incus var. *ralfsii* (W. West) Teiling	0	0	0	0	0
Arthrodesmus triangularis Lagerheim	0	45.82	0	0	0
Botryococcus sudeticus Lemmermann	0	0	0	0	0
Chlamydomonas sagitula Skuja	0	0	0	0	0.17
Chlamydomonas sp	0	0	0	0	0
Cosmarium regnesii Reinsch	0	0	0	0	0
Cosmaruim bioculatum Brebisson	0	0	0	0	0
Cosmarium margaritatum (Lund.) Roy & Biss	0	0	0	0	0
Cosmarium phaseolus Brebisson	0	0	0	0	0
Cosmarium sp	0	0	0	0	0
Cosmarium subcrenatum Hantz.	0	0	0	0	0
Crucegenia apiculata (Lemmermann) Schmidle	0	0	0	0	0
Crucegenia quadrata Morren	1.96	0	0	0	0
Crucegenia rectangularis (A. Braun) Gay	0	0	0	0	0
Crucegenia sp	0	0	0	0	0
Crucegenia tetrapedia (Kirchner) W. & G.S. West	0	0	0	0	3.82
Dictyosphaerium pulchellum Skuja	0	0	0	0	0
Dictyosphaerium subsolitarium Van Goor	0	0	0	0	0
Elakatothrix gelatinosa Wille	0	0	0	0	0
Elakatothrix genevensis (Reverdin) Hindak	2.06	0	1.24	0	2.58
Euastrum ansatum Ehrenberg	0	0	0	0	0
[illegible]					
Dinobryon acuminatum Ruttner	0	0	0	0	0
Dinobryon bavaricum Imhof	5.77	0	38.95	36.66	22.34
Dinobryon borgei Lemmermann	1.10	0	0.48	0	0
Dinobryon crenulatum W. et. G.S. West	0	0	0	0	0
Dinobryon dilatatum Hillard	0.24	0	0.48	0.96	0.31
Dinobryon divergens Imhof	0	0	0	0	0
Dinobryon sp (loose monad)	4.40	0	0	0	2.69
Dinobryon sociale var. *americana* (Brunthaler) Bachman	0	0	0	0	0
Dinobryon sociale Ehrenberg	32.08	0	0	24.82	14.89
Dinobryon sociale var. *stipitatum* (Stein) Lemmermann	0	0	0	0	0
Dinobryon bavaricum var. *Vanhoffenii* (Bachm.) Krieg.	0	0	0	0	0
Epipyxis sp	0.48	0	0	0.96	0
Kephyrion boreale Skuja	0	0	0	0	0.95
Kephyrion boreale Skuja	0.24	0.24	0	0	0
Mallomonas pseudocoronata Prescott	0	0	0	0	0
Mallomonas sp	0	0	0	0	0
Monosiga varians Skuja	1.72	0	0	0	1.89
Ochromonas sp	28.82	2.06	13.47	45.28	11.55
Pedinella sp	0	0	0	0	0
Pseudokephyrion attenuatum Hilliard	0	0	0	0	0
Pseudokephyrion auroreum Nicholls	0	0	0	0	0
Pseudokephyrion ellipsoideum (Pascher) Schmid	0	0	0	0	0
Pseudokephyrion minutissimum Conrad	0	0	0	0	0.82
Spiniferomonas sp	0	0	0	0	0
Stichogloea doederleinii (Schmidle) Wille	8.25	22.96	6.32	2.75	9.20
Stichogloea globosa Starmach	0	0	0	0	0
Synura sp	0	0	0	0	0
Uroglena sp	4.89	0	5.87	0	0
Unidentified naked Chrysophyte sp (*Ochromonas /Chron*	172.89	14.66	292.27	287.40	166.72
Unidentified naked Chrysophyte sp (*Ochromonas /Chron*	11.51	0.17	20.96	3.42	13.40
Unidentified *Erkenia/Chrysochromulina* complex	0.55	0	0.73	0	0.92
CYANOBACTERIA	**95.93**	**16.08**	**55.72**	**24.47**	**8.92**
Anabaena flos-aquae Brebisson	0	0	0	0	0
Anabaena inaequalis (Kuetzing) Bornet & Flahault	9.55	0	0	0	0
Anabaena sp.	15.72	0	0	0	0
Aphanocapsa delicatissima West & West	9.78	11.55	33.60	2.44	2.44
Aphanocapsa elachista W. & G.S. West	31.55	0.41	16.50	0	0.82
Aphanocapsa sp	0	0	0	0	0
Aphanothece clathrata W & G.S. West	0	0	0	0	0
Aphanothece sp	4.12	0	0	9.62	0
Chroococcus limneticus var. *distans* G. M. Smith	20.96	0	0	0	0
Cyanodictyon sp (rod)	0	0	0	0	0
Cyanodictyon sp (spherical)	0	0	0	0	0
Limnothrix sp	2.06	0	0	4.58	2.29
Merismopedia tenusissima Lemmermann	2.20	0	5.62	7.82	3.36
Phormidium formosum (Bory ex Gomont) Anagnostidis et	0	0	0	0	0
Planktolyngya limnetica Lemmermann	0	0	0	0	0
Pseudanabaena limnetica Komarek	0	0	0	0	0
Rhabdoderma lineare Schmidle & Lauterborn	0	4.12	0	0	0
Snowella arachnoidea Komarek et Hindak	0	0	0	0	0
Snowella lacustris (Chodat) Komarek et Hindak	0	0	0	0	0
Woronichinia compacta (Lemmermann) Komarek et Hind	0	0	0	0	0
CRYPTOPHYCEAE	**44.98**	**2.10**	**11.85**	**16.44**	**20.35**
Cryptomonas erosa Ehrenberg	0	0	0	0	0
Cryptomonas marsonii Skuja	24.44	0	0	0	6.36
Cryptomonas reflexa Skuja	0	0	0	0	0
Cryptomonas tenuis Pascher	0	0	0	0	0
Cryptomonas sp (colourless)	0	0	0	0	0
Katablepharis ovalis Skuja	7.94	2.10	1.34	2.69	9.41
Rhodomonas lens Pascher & Ruttner	0	0	0	0	0
Rhodomonas minuta Skuja	12.60	0	10.50	13.75	4.58
BACILLARIOPHYCEAE	**32.42**	**5.87**	**13.38**	**3.27**	**8.26**
Achnanthes minutissima Kuetzing	0	0	0	0	0.20
Anomoeoneis vitrea (Grunow) Ross	0	0	0	0	0
Aulacoseira spp.	0	0	0	0	0
Cyclotella bodanica Grunow	0	0	0	0	0
Cymbella sp	0	0	0	0	0
Diatoma tenue C. Agardh	0	0	0	0	0
Navicula pupula Kuetzing	0	0	0	0	0
Navicula sp	0	0	0	0	0
Nitzschia acicularis (Kuetzing) W. Smith	0	0	0	0	0
Nitzschia clausii Hantzsch	0	0	0	3.27	0
Nitzschia inconspicua Grunow	0	0	0	0	0
Nitzschia sp	0.16	0	0	0	0
Rhizosolenia longiseta Ehrenberg	0	0	0.18	0	0
Synedra sp	1.28	0	0	0	0
Synedra ulna (Nitzsch) Ehr.	0	0	0	0	0
Tabellaria flocculosa (Roth) Kuetzing	0	0	0	0	0
Centric Diatom 4 um *(Cyclotella/Stephanodiscus)*	1.28	0	0.37	0	2.20
Centric Diatom 6-14 um *(Cyclotella/Stephanodiscus)*	29.69	5.87	12.83	0	5.87
EUGLENOPHYCEAE	**0**	**85.78**	**0**	**0**	**0**
Anisonema sp	0	38.49	0	0	0
Euglena sp	0	29.33	0	0	0
Rhabdomonas sp	0	17.96	0	0	0
Trachemolomas volvocina Ehrenberg	0	0	0	0	0
DINOPHYCEAE	**91.95**	**8.80**	**39.10**	**9.16**	**32.81**
Amphidinium sp	0	0	0	0	0
Glenodinium sp	0	0	29.94	0	0
Gymnodinium aeroginosum Stein	0	0	0	0	0
Gymnodinium ordinatum Skuja	9.16	0	9.16	9.16	5.87
Gymnodinium sp	4.58	8.80	0	0	0
Peridinium cinctum (O.F. Muller) Ehrenberg	0	0	0	0	0
Peridinium pusillum (Penard) Lemmermann	78.20	0	0	0	26.94
TOTAL BIOMASS	**577**	**227**	**769**	**492**	**380**

Notes: mg/m³ = milligrams per cubic meter; sp. = one species in the genera; spp. = numerous species in the genera; µm = micrometers

Table I-4 Zooplankotn Abundance (Ind./L) inEast Lake, Lake N11 and M and L Lakes,, August 2011

Lake	M1					M2					M3				
Stations															
Station Replicates	M1A	M1B	M1C	M1D	M1E	M2A	M2B	M2C	M2D	M2E	M3A	M3B	M3C	M3D	M3E
Date	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0	0.0162	0.0162	0.0040	0.0040	0.0035	0.0071	0.0035	0.0106	0.0106	0.0024	0	0	0	0
H.s. adult male	0.0040	0.0202	0.0081	0	0	0.0035	0.0071	0	0.0035	0.0035	0	0	0	0	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1887	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	**0.0040**	**0.0364**	**0.0243**	**0.0040**	**0.0040**	**0.0071**	**0.0142**	**0.0035**	**0.0142**	**0.0142**	**0.0024**	**0**	**0**	**0.1887**	**0**
Epischura lacustris S.A. Forbes															
E.l. adult female	0.0526	0.1407	0.1407	0.0445	0.0485	0.2771	0.1847	0.1539	0.3079	0.0924	0	0.0410	0.1026	0.1437	0.0616
E.l. adult male	0.0040	0	0	0.0040	0.0081	0.2155	0.0924	0.0924	0.2155	0.0308	0.0205	0.0205	0.0821	0.1231	0.0821
E.l. immature 0.5-1.0 mm	0	0.1618	0.3235	0.0809	0	0	0.8493	0	0	0.2831	0.1887	0	0.1887	0.1887	0.1887
Total *E. lacustris*	**0.0566**	**0.3025**	**0.4643**	**0.1294**	**0.0566**	**0.4926**	**1.1263**	**0.2463**	**0.5234**	**0.4062**	**0.2092**	**0.0616**	**0.3734**	**0.4555**	**0.3324**
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	0.0404	0	0.0809	0.0162	0.0202	0.1231	0.0308	0.0308	0.1231	0.0308	0.1437	0.1847	0.2258	0.2258	0.1642
D.p. gravid female	0.0040	0.0081	0.0121	0.0040	0.0121	0	0.0616	0	0.0308	0.0071	0.0071	0.0616	0.0821	0.0410	0.0616
D.p. adult male	0.0202	0.1407	0.0704	0.0162	0.0162	0.0924	0.0308	0.0924	0.0308	0	0.2258	0.3079	0.3694	0.3489	0.3284
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0.1887	0	0	0
D.p. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	**0.0647**	**0.1488**	**0.1634**	**0.0364**	**0.0485**	**0.2155**	**0.1231**	**0.1231**	**0.1847**	**0.0379**	**0.3765**	**0.7429**	**0.6773**	**0.6157**	**0.5541**
Diaptomus minutus Lilljeborg															
D.m. adult female	0.4853	0.1618	0.2426	0.2426	0	0.8493	0.2831	1.1323	0.5662	0.5662	0.3774	0.1887	0.3774	0.1887	0.3774
D.m. gravid female	0.0243	0.0704	0.0526	0.0202	0.0283	0.1847	0.2155	0.1539	0.2155	0.0924	0	0.0205	0.1026	0	0.0616
D.m. adult male	0.0809	0.1618	0.0809	0.0809	0.0809	0.2831	0.5662	1.1323	1.1323	1.1323	0.9436	0.5662	0.5662	0.9436	0.9436
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0.0809	0.3235	0.4044	0.1618	0.1618	1.9816	0.5662	1.4154	1.4154	0.5662	0.3774	0	0.3774	0.1887	0
D.m. immature 0.75 mm	0.2426	0.3235	0.2426	0.5662	0.1618	1.1323	0.8493	2.5478	0.8493	0.2831	3.3970	3.9632	2.2647	7.5490	4.7181
D.m. immature 0.5 mm	0	0.4044	0	0.0809	0.0809	1.4154	0.8493	1.4154	0.5662	0.8493	0	0.3774	0.1887	0.3774	0
Total *D. minutus*	**0.9140**	**1.4454**	**1.0232**	**1.1526**	**0.5136**	**5.8464**	**3.3294**	**7.7972**	**4.7449**	**3.4894**	**5.0955**	**5.1161**	**3.8771**	**9.2475**	**6.1007**
Calanoid nauplius	**0**	**0.1618**	**0**	**0**	**0.0809**	**0.2831**	**0.8493**	**0.2831**	**0.2831**	**0.8493**	**0.7549**	**0.3774**	**0.1887**	**0.1887**	**0.3774**
Total Calanoida (Ind/L)	**1.0393**	**2.0948**	**1.6751**	**1.3224**	**0.7037**	**6.8447**	**5.4423**	**8.4533**	**5.7502**	**4.7969**	**6.4385**	**6.2979**	**5.1165**	**10.6962**	**7.3647**
Cyclopoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0	0	0.2831	0	0	0	0.0035	0.0205	0	0	0.0205	0
C. s. gravid female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0205
C. s. adult male	0	0	0	0	0	0	0.2831	0	0	0	0.1887	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0.1887	0	0.1887	0.1887
C. s. immature 1.0 mm	0	0	0	0	0	0	0	0	0.2831	0	1.5098	0.7549	0	0.7549	1.5098
C. s. immatue 0.75 mm	0	0.0809	0	0.1618	0	0	0.2831	0.2831	0.2831	0.0308	2.2647	2.4534	1.6985	2.0760	1.1323
C. s. immature 0.5 mm	0	0	0	0	0.0809	0.2831	0.2831	0	0	0	0.3774	0.3774	0	0	0.1887
Total *C. scutifer*	**0**	**0.0809**	**0**	**0.1618**	**0.0809**	**0.5662**	**0.8493**	**0.2831**	**0.5662**	**0.0343**	**4.3612**	**3.7745**	**1.6985**	**3.0401**	**3.0401**
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
***Macrocyclops albidus* Jurine**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Small unidentified cyclopoids	**0**	**0**	**0**	**0**	**0.0809**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cyclopoid nauplius	**1.1323**	**1.1323**	**1.3750**	**0.5662**	**0.7279**	**7.0771**	**3.6801**	**7.3602**	**7.0771**	**5.3786**	**16.7964**	**16.9851**	**12.4558**	**13.5881**	**13.0219**
Total Cyclopoida (Ind/L)	**1.1323**	**1.2132**	**1.3750**	**0.7279**	**0.8897**	**7.6433**	**4.5294**	**7.6433**	**7.6433**	**5.4130**	**21.1576**	**20.7596**	**14.1543**	**16.6282**	**16.0620**
CLADOCERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]															
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.1847	0	0	0.0118	0.0094	0.0118
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.5662	2.6421	2.2647	2.0760	1.6985	1.3211
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.5662	2.8309	2.0760	2.2647	1.8872	3.7745
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**1.3171**	**5.4730**	**4.3406**	**4.3524**	**3.5952**	**5.1073**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0.1887	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.2831	1.3211	0.1887	0.5662	1.1323	0.9436
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.6985	4.1519	3.9632	8.1151	5.4730	8.8700
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.5662	3.2083	2.2647	2.6421	2.4534	1.6985
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**2.5478**	**8.6813**	**6.4166**	**11.3234**	**9.2475**	**11.5121**
[illegible]															
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	1.3211	0.3774	1.5098	0.5662	0.7549
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	1.6985	1.1323	1.3211	1.5098	2.0760
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**0**	**3.0196**	**1.5098**	**2.8309**	**2.0760**	**2.8309**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**0**	**0**	**0.0024**	**0**	**0**	**0**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**3.8648**	**17.1739**	**12.2694**	**18.5067**	**14.9186**	**19.4503**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22.3638	10.0024	9.0587	10.7573	11.7009	13.3994
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.9816	0.3774	0.3774	0.3774	0.1887	0.1887
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.2463	1.3211	2.0760	2.6421	1.5098	1.6985
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23.4961	40.1982	45.1050	58.5044	63.4112	59.8254
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0.1887	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**52.1**	**51.9**	**56.6**	**72.3**	**77.0**	**75.1**
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**66.2**	**96.7**	**95.9**	**110.1**	**119.2**	**118.0**

Lake	M4					L2					Lake N11				
Stations											D1	D1	D1	D1	D1
Station Replicates	M4A	M4B	M4C	M4D	M4E	L2A	L2B	L2C	L2D	L2E	N11D1A	N11D1B	N11D1C	N11D1D	N11D1E
Date	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0	0.0040	0	0	0	0.0047	0.0047	0	0	0.0047	0	0	0	0.0026	0
H.s. adult male	0	0.0020	0	0	0	0	0	0.0410	0.0047	0	0	0.4118	0	0	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0.4118	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	**0**	**0.0061**	**0**	**0**	**0**	**0.0047**	**0.0047**	**0.0410**	**0.0047**	**0.0047**	**0**	**0.8235**	**0**	**0.0026**	**0**
Epischura lacustris S.A. Forbes															
E.l. adult female	0.0528	0.0880	0.0528	0.0352	0.1056	0	0	0	0	0	0.0026	0	0	0.1029	0.0224
E.l. adult male	0.0176	0	0.3235	0.0352	0.0176	0	0.0410	0	0	0	0	0	0	0	0
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0.3774	0	0	0	0	0	0	0	0	0
Total *E. lacustris*	**0.0704**	**0.0880**	**0.3763**	**0.0704**	**0.1231**	**0.3774**	**0.0410**	**0**	**0**	**0**	**0.0026**	**0**	**0**	**0.1029**	**0.0224**
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	1.2941	0.6471	0.1759	0.9706	0.6471	0.2052	0.0425	0	0.1231	0	0.1029	0.5147	0.1029	0.3088	0
D.p. gravid female	0.0142	0.0880	0.0182	0.0352	0.0176	0.0094	0.0142	0.0821	0.0142	0.0094	0.0077	0	0	0	0.0224
D.p. adult male	0.3235	0.3235	0.3870	0.6471	1.2941	0.1642	0.0236	0.0821	0.3694	0.1231	0.3088	0.4118	0.3088	0.2059	0
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1029	0
D.p. immature 1.0 mm	0	0.3235	0.3235	0	0	0	0	0	0.1887	0	0.2059	0.1029	0.5147	0	0.2059
D.p. immature 0.75 mm	0	0	0	0	0	0.3774	0	0	0	0	0	0.1029	0	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	**1.6318**	**1.3821**	**0.9047**	**1.6528**	**1.9588**	**0.7563**	**0.0802**	**0.1642**	**0.6954**	**0.1326**	**0.6254**	**1.1323**	**0.9265**	**0.6176**	**0.2283**
Diaptomus minutus Lilljeborg															
D.m. adult female	0	0	0	0.3235	0	1.8872	0.3774	0	2.2647	1.5098	0.1029	0.3088	0.1029	0.4118	0.4118
D.m. gravid female	0	0.0528	0	0	0	0.3284	0.3284	0.0410	0.2873	0.2873	0.1343	0.1343	0.0448	0.0672	0.1567
D.m. adult male	0	0.6471	0	0	0	1.5098	0.3774	0.1887	1.5098	1.8872	0.6176	0.1029	0.5147	0.5147	0.4118
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0.3235	1.1323	2.2647	0	0.5662	0	0	0	0	0	0
D.m. immature 0.75 mm	3.2353	1.6176	1.6176	2.5882	2.2647	6.4166	2.2647	3.0196	12.2670	5.2843	0.5147	0.2059	0.4118	0.4118	0.6176
D.m. immature 0.5 mm	0	0	0	0	0	0.7549	1.5098	0	0.9436	0.3774	0.1029	0	0.1029	0.1029	0
Total *D. minutus*	**3.2353**	**2.3175**	**1.6176**	**2.9117**	**2.5882**	**12.0293**	**7.1224**	**3.2494**	**17.8386**	**9.3461**	**1.4726**	**0.7520**	**1.1771**	**1.5083**	**1.5979**
Calanoid nauplius	**0**	**0**	**0**	**0**	**0.3235**	**0**	**0**	**0**	**0.3774**	**0.3774**	**0.2059**	**0**	**0.1029**	**0**	**0.3088**
Total Calanoida (Ind/L)	**4.9374**	**3.7935**	**2.8986**	**4.6349**	**4.9936**	**13.1677**	**7.2484**	**3.4546**	**18.9162**	**9.8608**	**2.3064**	**2.7078**	**2.2065**	**2.2315**	**2.1574**
Cyclopoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0	0	0	0	0	0	0	0.2059	0	0	0	0
C. s. gravid female	0	0	0	0	0	0	0	0	0	0	0.0051	0.0180	0.0051	0.0206	0.0448
C. s. adult male	0	0	0	0	0	0	0	0	0	0	0	0.1029	0	0	0
C. s. immature 2.0 mm	0.3235	0	0	0	0.6471	0	0	0.1887	0	0	0	0	0.1029	0	0
C. s. immature 1.0 mm	3.8823	2.2647	2.2647	4.8529	3.2353	0.3774	0	0.1887	0	0	0.3088	0.1029	0.4118	0.3088	0.2059
C. s. immatue 0.75 mm	7.1176	4.5294	1.6176	4.8529	1.6176	0	0.3774	0.1887	0	0	0.8235	0.5147	0.6176	0.6176	0.6176
C. s. immature 0.5 mm	0	0.3235	0	0.3235	0	0	0	0.1887	0	0	0.1029	0	0	0	0
Total *C. scutifer*	**11.3234**	**7.1176**	**3.8823**	**10.0293**	**5.4999**	**0.3774**	**0.3774**	**0.7549**	**0**	**0**	**1.4463**	**0.7386**	**1.1375**	**0.9471**	**0.8683**
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0.0047	0.0094	0.0821	0	0.0142	0	0	0	0	0
C. c. immature	0	0	0	0	0	0.3774	1.1323	0.7549	1.8872	1.5098	0	0	0	0	0
Total *C. capillatus*	**0**	**0**	**0**	**0**	**0**	**0.3821**	**1.1418**	**0.8370**	**1.8872**	**1.5239**	**0**	**0**	**0**	**0**	**0**
***Macrocyclops albidus* Jurine**	**0**	**0**	**0**	**0**	**0**	**0.0047**	**0.0047**	**0**	**0**	**0.0047**	**0**	**0**	**0**	**0**	**0**
Small unidentified cyclopoids	**0**	**0**	**0**	**0**	**0**	**0.7549**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cyclopoid nauplius	**7.7646**	**7.7646**	**9.3823**	**8.7352**	**9.7058**	**7.9264**	**9.0587**	**3.0196**	**10.9460**	**6.4166**	**1.3382**	**0.8235**	**1.7500**	**1.2353**	**1.8529**
Total Cyclopoida (Ind/L)	**19.0881**	**14.8822**	**13.2646**	**18.7645**	**15.2057**	**9.4456**	**10.5827**	**4.6115**	**12.8332**	**7.9453**	**2.7845**	**1.5621**	**2.8875**	**2.1823**	**2.7212**
CLADOCERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0.0047	0	0.0821	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0**	**0**	**0**	**0**	**0.0047**	**0**	**0.0821**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]															
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0.0528	0.0020	0	0	0.0047	0	0	0	4.4264	2.0588	2.9853	2.8823	2.3676
[illegible]	1.6176	1.2941	0.9706	0.6471	1.6176	0.0047	0	0.1231	0.0410	0.0410	0.8235	1.0294	0.6176	0.4118	0.5147
[illegible]	4.5294	0.9706	0.9706	0.6471	1.2941	0	0	0	0	0	1.5441	1.1323	1.0294	1.2353	1.6470
[illegible]	**6.1470**	**2.2647**	**1.9939**	**1.2961**	**2.9117**	**0.0047**	**0.0047**	**0.1231**	**0.0410**	**0.0410**	**6.7941**	**4.2206**	**4.6323**	**4.5294**	**4.5294**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0.0224	0.0026	0	0	0
[illegible]	0.3235	0	0.3235	0	0.9706	0	0	0.0410	0	0	0.6176	0.1567	0.1029	0.1029	0.1029
[illegible]	4.2058	3.5588	0.6471	1.9412	4.2058	0	0	0	0	0	3.8088	1.9559	1.8529	2.1617	3.0882
[illegible]	0.6471	1.9412	1.2941	0	0.3235	0	0.3774	0	0	0	0.6176	0.1029	0.3088	0.4118	0.5147
[illegible]	0.3235	0	0	0.3235	0	0	0	0	0	0	0	0	0.1029	0	0
[illegible]	**5.4999**	**5.4999**	**2.2647**	**2.2647**	**5.4999**	**0**	**0.3774**	**0.0410**	**0**	**0**	**5.0665**	**2.2181**	**2.3676**	**2.6764**	**3.7058**
[illegible]															
[illegible]	0.0352	0.0880	0.0352	1.2941	0.3235	0	0	0	0	0	0	0	0	0	0
[illegible]	3.2353	1.2941	1.6176	2.2647	1.6176	0	0	0	0	0.0410	0	0	0	0	0
[illegible]	1.9412	1.2941	0.9706	3.2353	0.3235	0	0	0.1887	0	0	0	0	0	0	0
[illegible]	0	0	0	0.3235	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**5.2116**	**2.6762**	**2.6234**	**7.1176**	**2.2647**	**0**	**0**	**0.1887**	**0**	**0.0410**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1029**	**0**	**0**
[illegible]	**16.8586**	**10.4408**	**6.8820**	**10.6784**	**10.6764**	**0.0094**	**0.3822**	**0.4350**	**0.0410**	**0.0821**	**11.8605**	**6.4387**	**7.1029**	**7.2058**	**8.2352**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	12.9411	5.8235	8.0882	9.0587	11.6470	12.8332	8.3038	2.4534	7.5490	11.3234	8.7499	4.2206	6.6911	6.4852	13.5881
[illegible]	1.2941	0.3235	0	1.2941	0.6471	0	0	0	0	0.7549	3.5000	2.3676	3.2941	2.6764	5.8676
[illegible]	0.6471	0.6471	1.2941	0.6471	0.6471	29.0635	16.9851	9.2475	28.3086	32.0830	0.2059	0	0.1029	0.1029	0
[illegible]	18.4410	14.8822	14.8822	14.8822	18.1175	4.1519	4.1519	0.9436	2.2647	7.5490	6.3823	7.7205	9.9852	8.3382	17.1910
[illegible]	0	0	0	0	0.3235	0	0	0	0	0	0	0.1029	0.1029	0.1029	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**33.3**	**21.7**	**24.3**	**25.9**	**31.4**	**46.0**	**29.4**	**12.6**	**38.1**	**51.7**	**18.8**	**14.4**	**20.2**	**17.7**	**36.6**
[illegible]	**74.2**	**50.8**	**47.3**	**60.0**	**62.3**	**68.7**	**47.7**	**21.1**	**69.9**	**69.6**	**35.8**	**25.1**	**32.4**	**29.3**	**49.8**

Lake	Lake N11					Lake N11					Lake N11				
Stations	D2	D2	D2	D2	D2	D3	D3	D3	D3	D3	D4	D4	D4	D4	D4
Station Replicates	N11D2A	N11D2B	N11D2C	N11D2D	N11D2E	N11D3A	N11D3B	N11D3C	N11D3D	N11D3E	N11D4A	N11D4B	N11D4C	N11D4D	N11D4E
Date	16-Aug-11	16-Aug-11	16-Aug-11	16-Aug-11	16-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0	0	0.0028	0	0	0	0	0	0	0	0	0	0	0	0
H.s. adult male	0	0	0	0	0	0	0	0	0.0028	0.0057	0	0	0	0	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	**0**	**0**	**0.0028**	**0**	**0**	**0**	**0**	**0**	**0.0028**	**0.0057**	**0**	**0**	**0**	**0**	**0**
Epischura lacustris S.A. Forbes															
E.l. adult female	0	0	0	0.0057	0	0	0	0.0028	0	0	0	0	0	0	0
E.l. adult male	0.0246	0	0	0	0	0	0	0.0028	0	0.0028	0	0	0	0	0.0028
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0.0028	0	0
Total *E. lacustris*	**0.0246**	**0**	**0**	**0.0057**	**0**	**0**	**0**	**0.0057**	**0**	**0.0028**	**0**	**0**	**0.0028**	**0**	**0.0028**
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	0.2265	0.0493	0.0985	0.1132	0.2265	0.1231	0.0739	0.1231	0.0246	0.0246	0.0739	0.0493	0	0.0739	0.1478
D.p. gravid female	0.0057	0.0028	0.0028	0.1132	0.0057	0.0057	0	0.0028	0.0028	0.0028	0.0028	0	0.0028	0	0.0057
D.p. adult male	0.4529	0.2217	0.0493	0.5662	0.5662	0.1132	0.0493	0.0493	0.0493	0.1970	0.1970	0.0493	0	0.0985	0.0493
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0.2265	0	0.1132	0.2265	0.1132	0	0.1132	0.5662	0	0.1132	0.2265	0.2265	0	0	0.1132
D.p. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1132
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	**0.9115**	**0.2737**	**0.2638**	**1.0191**	**0.9115**	**0.2420**	**0.2364**	**0.7414**	**0.0767**	**0.3377**	**0.5002**	**0.3250**	**0.0028**	**0.1724**	**0.4292**
Diaptomus minutus Lilljeborg															
D.m. adult female	0.1132	0.2265	0	0.2265	0.2265	0.1132	0.2265	0.4529	0.0246	0.1132	0.1132	0	0	0.1132	0.2265
D.m. gravid female	0.1970	0.1478	0.0985	0.1231	0.0493	0.0679	0.0985	0.0246	0.1478	0.0985	0.0739	0.0493	0.0739	0.0493	0.0739
D.m. adult male	0.4529	0.2265	0.1132	0.6794	0.7926	0.3397	0.1132	0.5662	0.4529	0.3397	1.0191	0.7926	0.1132	0.3397	0.5662
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 0.75 mm	0.4529	0.2265	0.3397	0.3397	0	0.6794	0.4529	0.3397	0.6794	0	0.7926	0.5662	0.1132	0.2265	0.1132
D.m. immature 0.5 mm	0.1132	0	0	0.1132	0.1132	0	0.1132	0	0	0	0	0	0.1132	0	0.1132
Total *D. minutus*	**1.3294**	**0.8272**	**0.5515**	**1.4819**	**1.1816**	**1.2003**	**1.0044**	**1.3834**	**1.3047**	**0.5515**	**1.9989**	**1.4081**	**0.4136**	**0.7287**	**1.0930**
Calanoid nauplius	**0.3397**	**0.1132**	**0.1132**	**0**	**0.1132**	**0**	**0**	**0.1132**	**0.1132**	**0**	**0.1132**	**0**	**0.1132**	**0.3397**	**0.1132**
Total Calanoida (Ind/L)	**2.6052**	**1.2142**	**0.9314**	**2.5067**	**2.2064**	**1.4423**	**1.2408**	**2.2437**	**1.4975**	**0.8977**	**2.6123**	**1.7331**	**0.5325**	**1.2408**	**1.6382**
Cyclopoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. gravid female	0.0246	0	0.0028	0.0057	0.0057	0	0	0.0028	0.0028	0.0246	0.0057	0.0085	0	0	0.0493
C. s. adult male	0.1132	0.1132	0.1132	0.1132	0	0.0246	0	0.1132	0.1132	0	0	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 1.0 mm	0.2265	0.1132	0.2265	0.2265	0.1132	0.2265	0	0	0.1132	0	0	0	0	0	0.2265
C. s. immatue 0.75 mm	0.1132	0.6794	0.3397	0.9059	0.4529	0	0.2265	0.3397	0.4529	0.1132	0.1132	1.1323	0.3397	0	0.3397
C. s. immature 0.5 mm	0	0	0.1132	0.2265	0	0	0	0	0	0	0	0.1132	0	0	0
Total *C. scutifer*	**0.4776**	**0.9059**	**0.7955**	**1.4777**	**0.5718**	**0.2511**	**0.2265**	**0.4558**	**0.6822**	**0.1379**	**0.1189**	**1.2541**	**0.3397**	**0**	**0.6154**
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
***Macrocyclops albidus* Jurine**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Small unidentified cyclopoids	**0**	**0**	**0**	**0**	**0**	**0.1132**	**0.1132**	**0.1132**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cyclopoid nauplius	**1.3588**	**1.0191**	**2.0382**	**3.0573**	**1.3588**	**1.5853**	**1.3588**	**2.9441**	**1.8117**	**1.8117**	**2.6044**	**2.1515**	**2.4912**	**1.5853**	**1.2456**
Total Cyclopoida (Ind/L)	**1.8364**	**1.9250**	**2.8337**	**4.5350**	**1.9306**	**1.9496**	**1.6985**	**3.5131**	**2.4940**	**1.9496**	**2.7233**	**3.4055**	**2.8309**	**1.5853**	**1.8610**
CLADOCERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0.0028	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0.0246	0	0	0	0	0	0	0	0.0246	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0.0028**	**0**	**0.0246**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0246**	**0**	**0**	**0**
[illegible]															
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0.7926	1.2456	0.9059	2.2647	1.4720	0.7926	0.0821	0.3202	1.0191	0.1724	1.1323	0.6794	1.0191	0.6794	1.8117
[illegible]	0.4529	0.3397	0.2265	0.4529	0	0.3397	0.2265	0.0985	0.5662	0.0493	0.9059	0.2265	0.6794	0.4529	0.3397
[illegible]	0.6794	0.7926	0.4529	0.7926	1.2456	0.4529	0.3397	0.9059	0.3397	0.5662	0.4529	0.7926	0.2265	0.1132	0.2265
[illegible]	**1.9250**	**2.3779**	**1.5853**	**3.5103**	**2.7176**	**1.5853**	**0.6483**	**1.3246**	**1.9250**	**0.7878**	**2.4912**	**1.6985**	**1.9250**	**1.2456**	**2.3779**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0.0028	0	0	0.0246	0.0493	0.0085	0.0057	0.0057
[illegible]	0	0	0	0.3397	0.4529	0	0.1132	0.0493	0.1132	0	0.0739	0.1970	0.0985	0.0739	0.1132
[illegible]	1.5853	1.1323	1.2456	2.3779	0.6794	0.4529	0.4529	0	0.3397	0.2265	1.5853	2.6044	1.2456	1.8117	2.2647
[illegible]	0.3397	0.2265	0.2265	1.0191	0.5662	0.2265	0	0	0.5662	0.1132	0.6794	0.1132	0.2265	0.4529	0.2265
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**1.9250**	**1.3588**	**1.4720**	**3.7367**	**1.6985**	**0.6794**	**0.5662**	**0.0521**	**1.0191**	**0.3397**	**2.3632**	**2.9639**	**1.5791**	**2.3442**	**2.6100**
[illegible]															
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**3.8500**	**3.7396**	**3.0573**	**7.2716**	**4.4161**	**2.2647**	**1.2144**	**1.3766**	**2.9441**	**1.1275**	**4.8544**	**4.6870**	**3.5040**	**3.5898**	**4.9880**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	10.6440	7.2470	8.4926	12.2293	10.3043	13.0219	11.7764	13.0219	8.2661	10.4176	12.2293	7.4735	6.7941	10.5308	11.5499
[illegible]	4.6426	4.1897	4.6426	6.7941	4.0764	7.0205	5.8882	7.0205	4.4161	5.7749	6.5676	2.3779	3.3970	4.1897	3.3970
[illegible]	0.3397	1.0191	1.3588	0.6794	0.2265	1.5853	1.4720	0.6794	0.1132	0.7926	1.1323	0.2265	0.3397	0.1132	0
[illegible]	7.2470	9.1720	5.5485	19.8160	4.9823	11.2102	33.7438	15.5131	16.3057	13.1352	5.0955	13.1352	13.7013	10.4175	9.7381
[illegible]	0	0	0	0	0	0	0.1132	0	0	0	0.1132	0	0	0.1132	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**22.9**	**21.6**	**20.0**	**39.5**	**19.6**	**32.8**	**53.0**	**36.2**	**29.1**	**30.1**	**25.1**	**23.2**	**24.2**	**25.4**	**24.7**
[illegible]	**31.2**	**28.5**	**26.9**	**53.8**	**28.1**	**38.5**	**57.1**	**43.4**	**36.0**	**34.1**	**35.3**	**33.0**	**31.1**	**31.8**	**33.2**

Lake	Lake N11					East Lake (Reference)					East Lake (Reference)				
Stations	D5	D5	D5	D5	D5	D1	D1	D1	D1	D1	D2	D2	D2	D2	D2
Station Replicates	N11D5A	N11D5B	N11D5C	N11D5D	N11D5E	REFD1A	REFD1B	REFD1C	REFD1D	REFD1E	REFD2A	REFD2B	REFD2C	REFD2D	REFD2E
Date	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0	0	0	0	0	0.0144	0.0096	0.0240	0.0048	0.0072	0.0054	0.0109	0.0131	0.0033	0.0087
H.s. adult male	0	0	0	0	0	0.0048	0	0.0120	0.0072	0.0072	0.0011	0.0065	0.0087	0.0054	0.0076
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0.0436	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	**0**	**0**	**0**	**0**	**0**	**0.0192**	**0.0096**	**0.0360**	**0.0120**	**0.0144**	**0.0501**	**0.0174**	**0.0218**	**0.0087**	**0.0163**
Epischura lacustris S.A. Forbes															
E.l. adult female	0	0	0	0	0	0.0209	0	0.0209	0	0	0.0076	0.0379	0.0284	0.0095	0.0474
E.l. adult male	0	0	0	0	0	0	0	0	0	0	0.0011	0	0.0095	0.0095	0.0095
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0	0	0	0	0	0.0022	0	0.0436	0	0
Total *E. lacustris*	**0**	**0**	**0**	**0**	**0**	**0.0209**	**0**	**0.0209**	**0**	**0**	**0.0109**	**0.0379**	**0.0814**	**0.0189**	**0.0568**
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	0.1970	0.1970	0.1724	0.1724	0.3397	0.0960	0.2296	0.1919	0.1919	0.4798	0.2178	0.5662	0.5226	0.6533	0.6097
D.p. gravid female	0.0028	0.0028	0.0057	0.0085	0.0057	0.0626	0.0120	0.0408	0.0312	0.0626	0.0076	0.0663	0.0189	0.0095	0.0284
D.p. adult male	0.1231	0.1231	0.1724	0.1724	0.3397	0.2879	0.3339	1.0556	0.3838	0.6717	0.2613	0.3484	0.4355	0.6968	0.1742
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0.3397	0.3397	0	0.3397	0.3397	0	0	0.0960	0	0	0	0.0436	0.0436	0	0.0871
D.p. immature 0.75 mm	0	0.2265	0	0	0.1132	0	0.0960	0	0	0	0.0436	0.0436	0.0436	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	**0.6627**	**0.8892**	**0.3505**	**0.6930**	**1.1380**	**0.4465**	**0.6715**	**1.3842**	**0.6070**	**1.2141**	**0.5302**	**1.0680**	**1.0642**	**1.3596**	**0.8995**
Diaptomus minutus Lilljeborg															
D.m. adult female	0.4529	0	0.2265	0.3397	0.1132	0	0	0	0	0	0	0	0.0871	0.0044	0
D.m. gravid female	0.1478	0.1231	0.0985	0.0739	0.0493	0.0209	0	0	0	0	0.0436	0	0	0	0
D.m. adult male	0.6794	0.5662	0.4529	0.4529	1.0191	0	0	0	0	0	0	0.0095	0	0	0
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0.1132	0	0	0	0	0	0	0	0	0	0
D.m. immature 0.75 mm	0.1132	0.2265	0.3397	0.3397	1.0191	1.6313	0.8637	1.5354	1.9192	0.8637	0.8275	1.6114	1.2194	1.3065	1.2630
D.m. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. minutus*	**1.3933**	**0.9158**	**1.1176**	**1.2062**	**2.3139**	**1.6522**	**0.8637**	**1.5354**	**1.9192**	**0.8637**	**0.8710**	**1.6209**	**1.3065**	**1.3109**	**1.2630**
Calanoid nauplius	**0.1132**	**0**	**0.1132**	**0**	**0.2265**	**0**	**0**	**0**	**0**	**0**	**0.0436**	**0**	**0**	**0**	**0**
Total Calanoida (Ind/L)	**2.1693**	**1.8050**	**1.5813**	**1.8992**	**3.6784**	**2.1387**	**1.5447**	**2.9765**	**2.5382**	**2.0922**	**1.5058**	**2.7442**	**2.4740**	**2.6981**	**2.2356**
Cyclopoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0.0246	0	0	0	0	0	0	0	0	0	0	0.0436
C. s. gravid female	0.0028	0.0028	0.0057	0	0.0085	0	0	0	0	0	0	0	0	0	0
C. s. adult male	0	0.1132	0	0.0246	0	0	0	0	0	0	0.0436	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 1.0 mm	0	0.2265	0.2265	0	0.4529	0	0	0	0.0960	0.0960	0	0.0436	0.0436	0	0
C. s. immatue 0.75 mm	0.9059	0.4529	0.6794	0.6794	1.4720	1.0556	0.4798	1.1515	0.0960	0.1919	0.4791	0.9581	0.7404	0.5226	0.3049
C. s. immature 0.5 mm	0	0	0	0	0	0.0960	0	0.3838	0.0960	0	0.1307	0.3484	0.2613	0.0871	0.1307
Total *C. scutifer*	**0.9087**	**0.7955**	**0.9115**	**0.7287**	**1.9335**	**1.1515**	**0.4798**	**1.5354**	**0.2879**	**0.2879**	**0.6533**	**1.3501**	**1.0452**	**0.6097**	**0.4791**
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0.0436	0	0	0	0
Total *C. vernalis*	0	0	0	0	0	0	0	0	0	0	**0.0436**	0	0	0	0
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0	0.0417	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	**0**	**0**	**0**	**0**	**0**	**0**	**0.0417**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
***Macrocyclops albidus* Jurine**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Small unidentified cyclopoids	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cyclopoid nauplius	**2.3779**	**1.3588**	**0.4529**	**0.6794**	**1.2456**	**8.6365**	**4.7981**	**9.5961**	**7.7729**	**6.1415**	**3.7454**	**6.4021**	**8.6668**	**6.5327**	**6.0101**
Total Cyclopoida (Ind/L)	**3.2866**	**2.1543**	**1.3645**	**1.4081**	**3.1791**	**9.7880**	**5.3196**	**11.1315**	**8.0607**	**6.4294**	**4.4423**	**7.7522**	**9.7120**	**7.1425**	**6.4892**
CLADOCERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0.0011	0	0	0
[illegible]	0	0	0	0	0.0028	0.0024	0	0.0096	0	0	0.0011	0.0022	0.0087	0.0095	0.0033
[illegible]	0	0	0	0	0	0.0024	0	0.0024	0.0024	0.0024	0.0044	0.0022	0.0098	0.0022	0
[illegible]	0	0	0	0	0	0.0024	0	0	0	0	0.0022	0.0044	0.0044	0.0033	0.0011
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0.0011	0.0011	0
[illegible]	**0**	**0**	**0**	**0**	**0.0028**	**0.0072**	**0**	**0.0120**	**0.0024**	**0.0024**	**0.0076**	**0.0098**	**0.0240**	**0.0160**	**0.0044**
[illegible]															
[illegible]	0	0	0	0	0	0	0.0096	0.0240	0.0024	0.0024	0.0065	0.0022	0.0054	0.0022	0.0022
[illegible]	1.3588	0.9059	1.9250	2.0382	2.9441	0.0336	0.0417	0.0120	0.0024	0.0096	0.0065	0	0.0033	0.0011	0
[illegible]	0.7926	0.5662	0.3397	0.4529	1.2456	0	0	0	0	0	0	0	0	0	0.0011
[illegible]	1.3588	1.4720	1.2456	1.2456	1.8117	0	0	0	0	0	0	0	0	0	0
[illegible]	**3.5103**	**2.9441**	**3.5103**	**3.7367**	**6.0014**	**0.0336**	**0.0513**	**0.0360**	**0.0048**	**0.0120**	**0.0131**	**0.0022**	**0.0087**	**0.0033**	**0.0033**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0.0057	0.0246	0.0057	0.0057	0.0209	0.0209	0	0	0	0.0011	0.0011	0.0011	0	0.0022
[illegible]	0.2265	0.0493	0.2265	0	0.1132	0.0960	0	0	0	0.0144	0	0.0044	0.0095	0.0095	0
[illegible]	1.6985	0.7926	1.2456	0.7926	2.0382	0	0	0.0209	0.0417	0.0072	0	0.0011	0	0	0.0095
[illegible]	0.4529	0.1132	0.2265	0.2265	0.3397	0	0	0	0	0	0	0	0	0.0095	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**2.3779**	**0.9608**	**1.7231**	**1.0248**	**2.4968**	**0.1168**	**0.0209**	**0.0209**	**0.0417**	**0.0216**	**0.0011**	**0.0065**	**0.0106**	**0.0189**	**0.0117**
[illegible]															
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0.0048**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**5.8882**	**3.9049**	**5.2334**	**4.7615**	**8.5011**	**0.1576**	**0.0770**	**0.0689**	**0.0489**	**0.0360**	**0.0218**	**0.0185**	**0.0432**	**0.0382**	**0.0193**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	9.7381	13.5881	9.7381	7.1338	10.6440	5.9496	5.8536	6.0456	4.1263	5.3738	4.3552	3.3970	4.2681	6.3150	3.4406
[illegible]	7.5867	5.5485	5.2088	4.4161	5.5485	0.1919	0.1919	0.0960	0.2879	0.6717	0.4791	0.2613	0.3049	0.3484	0.3920
[illegible]	0.1132	0.4529	0	0.1132	0.1132	0.0960	0.0960	0	0.0960	0	0.1307	0	0.0436	0.2178	0
[illegible]	10.8705	9.0587	7.4735	12.4558	18.1175	3.4546	0.9596	1.6313	0.1919	0.7677	0.5226	1.3065	0.7839	0.9581	1.4808
[illegible]	0	0.1132	0.1132	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**28.3**	**28.8**	**22.5**	**24.1**	**34.4**	**9.7**	**7.1**	**7.8**	**4.7**	**6.8**	**5.5**	**5.0**	**5.4**	**7.8**	**5.3**
[illegible]	**39.7**	**36.6**	**30.7**	**32.2**	**49.8**	**21.8**	**14.0**	**21.9**	**15.3**	**15.4**	**11.5**	**15.5**	**17.6**	**17.7**	**14.1**

Lake	East Lake (Reference)					East Lake (Reference)					East Lake (Reference)				
Stations	D3	D3	D3	D3	D3	D4	D4	D4	D4	D4	D5	D5	D5	D5	D5
Station Replicates	REFD3A	REFD3B	REFD3C	REFD3D	REFD3E	REFD4A	REFD4B	REFD4C	REFD4D [(a)]	REFD4E	REFD5A	REFD5B	REFD5C	REFD5D	REFD5E
Date	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11	17-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0.0101	0.0233	0.0273	0.0243	0.0152	0.0088	0.0035	0.0177	0.0035	0.0142	0.0255	0.0028	0.0481	0.0368	0.0594
H.s. adult male	0.0051	0.0101	0.0121	0.0071	0.0131	0.0142	0	0.0106	0	0.0035	0.0142	0	0.0170	0.0226	0.0226
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	**0.0152**	**0.0334**	**0.0394**	**0.0313**	**0.0283**	**0.0230**	**0.0035**	**0.0283**	**0.0035**	**0.0177**	**0.0396**	**0.0028**	**0.0651**	**0.0594**	**0.0821**
Epischura lacustris S.A. Forbes															
E.l. adult female	0	0	0.0111	0.0404	0	0	0.0035	0.0018	0	0.0018	0.0493	0	0.1132	0.0246	0
E.l. adult male	0	0.0404	0.0020	0	0	0	0.0018	0	0	0	0.0493	0	0	0	0
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *E. lacustris*	**0**	**0.0404**	**0.0131**	**0.0404**	**0**	**0**	**0.0053**	**0.0018**	**0**	**0.0018**	**0.0985**	**0**	**0.1132**	**0.0246**	**0**
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	0.9301	0.4853	0.6875	0.4853	0.5662	0.6369	0.4246	0.2831	0.0708	0.6369	1.4720	0.0453	1.2456	1.5853	1.0191
D.p. gravid female	0.0352	0.0404	0.0352	0.0176	0.0352	0.0230	0.0053	0.0053	0	0.0265	0.0493	0	0.0739	0.0246	0.0246
D.p. adult male	0.2831	0.3235	0.6471	0.6066	0.4448	0.1415	0.3539	0	0	0.4246	0.4529	0.0311	1.0191	1.3588	1.1323
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0.1618	0	0.0404	0	0	0	0	0	0	0.0708	0	0.1132	0.1132	0.2265	0.3397
D.p. immature 0.75 mm	0	0.0404	0	0	0	0	0	0	0	0	0	0	0.1132	0	0
D.p. immature 0.5 mm	0	0	0	0.0404	0	0.0708	0	0	0	0	0	0.0028	0.1132	0	0
Total *D. pribilofensis*	**1.4102**	**0.8897**	**1.4102**	**1.1499**	**1.0462**	**0.8723**	**0.7838**	**0.2884**	**0.0708**	**1.1589**	**1.9742**	**0.1925**	**2.6783**	**3.1952**	**2.5158**
Diaptomus minutus Lilljeborg															
D.m. adult female	0	0	0	0	0	0	0	0	0	0.1415	0	0	0.1132	0	0
D.m. gravid female	0	0	0	0	0	0	0	0	0	0	0.0246	0	0	0	0
D.m. adult male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 0.75 mm	1.5368	1.2537	1.4963	1.3750	0.8493	0.7785	0.8493	0.9200	0	0.7077	2.4912	2.4912	5.0955	4.0764	3.9632
D.m. immature 0.5 mm	0.0404	0.0404	0	0	0	0	0	0	0	0	0	0.3397	0.1132	0	0
Total *D. minutus*	**1.5772**	**1.2941**	**1.4963**	**1.3750**	**0.8493**	**0.7785**	**0.8493**	**0.9200**	**0**	**0.8493**	**2.5158**	**2.8309**	**5.4352**	**4.0764**	**3.9632**
Calanoid nauplius	**0**	**0**	**0**	**0**	**0.0404**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.1132**	**0**	**0**
Total Calanoida (Ind/L)	**3.0025**	**2.2576**	**2.9590**	**2.5967**	**1.9642**	**1.6737**	**1.6419**	**1.2385**	**0.0743**	**2.0276**	**4.6282**	**3.0262**	**8.4051**	**7.3557**	**6.5611**
Cyclopoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1132
C. s. gravid female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. adult male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 1.0 mm	0	0	0.3235	0	0	0	0	0	0	0	0	0	0.1132	0.1132	0
C. s. immatue 0.75 mm	1.0919	0.6875	0.9706	1.2941	0.9301	0.5662	0.2123	0.3539	0.0708	0.6369	2.4912	1.6985	4.1897	2.6044	2.7176
C. s. immature 0.5 mm	0.1213	0.3235	0.3640	0.3235	0.1213	0.1415	0.1415	0.0708	0	0.0708	0.5662	0.3397	0.5662	0.7926	0.5662
Total *C. scutifer*	**1.2132**	**1.0110**	**1.6581**	**1.6176**	**1.0515**	**0.7077**	**0.3539**	**0.4246**	**0.0708**	**0.7077**	**3.0573**	**2.0382**	**4.8691**	**3.5103**	**3.3970**
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
***Macrocyclops albidus* Jurine**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Small unidentified cyclopoids	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cyclopoid nauplius	**5.8235**	**5.8235**	**5.2977**	**4.6911**	**5.3786**	**6.2279**	**2.6185**	**4.5294**	**0**	**6.1571**	**6.9073**	**12.2293**	**15.2866**	**23.0998**	**17.8910**
Total Cyclopoida (Ind/L)	**7.0367**	**6.8345**	**6.9558**	**6.3088**	**6.4301**	**6.9356**	**2.9724**	**4.9540**	**0.0708**	**6.8648**	**9.9646**	**14.2675**	**20.1557**	**26.6101**	**21.2880**
CLADOCERA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0.0010	0	0	0	0	0	0	0	0.0028	0	0	0
D. m. 2.5	0.0020	0.0061	0.0020	0.0081	0.0020	0.0018	0	0	0	0	0.0255	0.0028	0.0198	0.0057	0.0057
[illegible]	0.0020	0.0121	0.0131	0.0051	0.0030	0	0.0018	0.0088	0.0018	0.0018	0.0142	0.0170	0.0311	0.0396	0.0396
[illegible]	0.0091	0.0352	0.0088	0.0176	0.0176	0.0018	0.0018	0.0018	0	0.0035	0.0057	0.0142	0.0739	0.0246	0.0255
[illegible]	0.0176	0.0352	0.0088	0	0.0088	0.0035	0	0	0	0.0018	0.0246	0.0246	0.0246	0	0.0198
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0.1132	0	0.1132
[illegible]	**0.0307**	**0.0886**	**0.0328**	**0.0317**	**0.0314**	**0.0071**	**0.0035**	**0.0106**	**0.0018**	**0.0071**	**0.0699**	**0.0614**	**0.2627**	**0.0699**	**0.2038**
[illegible]															
[illegible]	0.0152	0.0071	0.0101	0.0061	0.0152	0	0.0018	0	0	0.0018	0.0623	0.0708	0.0510	0.0594	0.0340
[illegible]	0.0040	0.0081	0.0101	0.0091	0.0081	0	0	0	0	0	0.0453	0.0255	0.1189	0.0453	0.0340
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0.0192**	**0.0152**	**0.0202**	**0.0152**	**0.0233**	**0**	**0.0018**	**0**	**0**	**0.0018**	**0.1076**	**0.0962**	**0.1699**	**0.1047**	**0.0679**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0.0018	0.0053	0	0	0.0028	0.0028	0.0057	0.0246
[illegible]	0	0	0.0010	0	0.0020	0	0.0018	0	0.0018	0	0.0142	0.0057	0	0.0085	0.0493
[illegible]	0	0	0.0020	0.0088	0.0088	0.0018	0.0018	0.0035	0.0035	0.0035	0.0028	0.0028	0.0739	0.0028	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0**	**0.0030**	**0.0098**	**0.0108**	**0.0018**	**0.0035**	**0.0053**	**0.0106**	**0.0035**	**0.0170**	**0.0113**	**0.0767**	**0.0170**	**0.0739**
[illegible]															
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
[illegible]	**0.0499**	**0.1037**	**0.0560**	**0.0567**	**0.0655**	**0.0088**	**0.0088**	**0.0159**	**0.0124**	**0.0124**	**0.1945**	**0.1690**	**0.5093**	**0.1916**	**0.3456**
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	3.5588	2.0625	2.0220	1.9412	4.5294	6.1571	5.3079	7.5725	1.9108	6.5817	3.9632	7.3602	6.6808	8.0396	12.0028
[illegible]	0.5662	0.4448	0.4853	0.6471	0.8493	0.3539	0.4954	1.1323	0	0.9200	0.9059	1.6985	0.9059	2.4912	1.6985
[illegible]	0	0	0	0	0.0404	0.0708	0	0	0	0	0	0	0	0	0
[illegible]	0.2426	1.0515	1.0919	0.5662	0.9301	1.4154	0.0708	0.6369	0	0.7785	3.7367	1.0191	2.6044	1.3588	2.6044
[illegible]	0.0404	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	0	0	0.0404	0.0404	0	0	0	0	0	0	0	0.1132	0.1132	0	0
[illegible]	**4.4**	**3.6**	**3.6**	**3.2**	**6.3**	**8.0**	**5.9**	**9.3**	**1.9**	**8.3**	**8.6**	**10.2**	**10.3**	**11.9**	**16.3**
[illegible]	**14.5**	**12.8**	**13.6**	**12.2**	**14.8**	**16.6**	**10.5**	**15.6**	**2.1**	**17.2**	**23.4**	**27.7**	**39.4**	**46.0**	**44.5**

[illegible]

Table I-5 Zooplankton Biomass (mg/m^3) in East Lake, Lake N11 and M and L Lakes, August 2011

Lake	M1					M2					M3				
Stations															
Station Replicates	M1A	M1B	M1C	M1D	M1E	M2A	M2B	M2C	M2D	M2E	M3A	M3B	M3C	M3D	M3E
Date	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	20-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11	18-Aug-11
COPEPODA															
Calanoida															
Heterocope septentrionalis Juday and Muttkowski															
H.s. adult female	0	7.91	7.91	1.98	1.98	1.73	3.46	1.73	5.19	5.19	1.15	0	0	0	0
H.s. adult male	2.62	13.12	5.25	0	0	2.30	4.59	0	2.30	2.30	0	0	0	0	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	116.48	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	2.62	21.03	13.16	1.98	1.98	4.03	8.05	1.73	7.49	7.49	1.15	0	0	116.48	0
Epischura lacustris S.A. Forbes															
E.l. adult female	4.95	13.26	13.26	4.19	4.57	26.11	17.41	14.51	29.01	8.70	0	3.87	9.67	13.54	5.80
E.l. adult male	0.46	0	0	0.46	0.92	24.44	10.48	10.48	24.44	3.49	2.33	2.33	9.31	13.97	9.31
E.l. immature 0.5-1.0 mm	0	12.08	24.15	6.04	0	0	63.40	0	0	21.13	14.09	0	14.09	14.09	14.09
Total *E. lacustris*	5.41	25.34	37.42	10.69	5.49	50.55	91.29	24.98	53.45	33.33	16.42	6.20	33.07	41.60	29.20
Diaptomus pribilofensis Juday and Muttkowski															
D.p. adult female	2.34	0	4.67	0.93	1.17	7.11	1.78	1.78	7.11	1.78	8.30	10.67	13.04	13.04	9.49
D.p. gravid female	0.23	0.47	0.70	0.23	0.70	0	3.56	0	1.78	0.41	0.41	3.56	4.74	2.37	3.56
D.p. adult male	1.12	7.82	3.91	0.90	0.90	5.13	1.71	5.13	1.71	0	12.55	17.11	20.54	19.40	18.26
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	6.98	0	0	0
D.p. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	3.69	8.29	9.29	2.07	2.77	12.25	7.05	6.91	10.61	2.19	21.26	38.33	38.32	34.81	31.30
Diaptomus minutus Lilljeborg															
D.m. adult female	17.03	5.68	8.52	8.52	0	29.80	9.93	39.74	19.87	19.87	13.25	6.62	13.25	6.62	13.25
D.m. gravid female	0.84	2.43	1.82	0.70	0.98	6.39	7.45	5.32	7.45	3.19	0	0.71	3.55	0	2.13
D.m. adult male	2.42	4.84	2.42	2.42	2.42	8.48	16.95	33.91	33.91	33.91	28.26	16.95	16.95	28.26	28.26
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	3.23	12.90	16.13	6.45	6.45	79.02	22.58	56.45	56.45	22.58	15.05	0	15.05	7.53	0
D.m. immature 0.75 mm	4.51	6.02	4.51	10.53	3.01	21.06	15.79	47.37	15.79	5.26	63.17	73.69	42.11	140.37	87.73
D.m. immature 0.5 mm	0	2.47	0	0.49	0.49	8.64	5.18	8.64	3.45	5.18	0	2.30	1.15	2.30	0
Total *D. minutus*	28.03	34.34	33.39	29.11	13.35	153.38	77.89	191.42	136.92	89.99	119.72	100.28	92.06	185.08	131.36
Calanoid nauplius	0	0.47	0	0	0.24	0.83	2.49	0.83	0.83	2.49	2.21	1.11	0.55	0.55	1.11
Total Calanoida (Ind/L)	39.76	89.47	93.25	43.84	23.83	221.04	186.76	225.88	209.30	135.48	160.76	145.91	164.01	378.51	192.97
Cyclopoida															
Cyclops scutifer Sars															
C. s. adult female	0	0	0	0	0	30.28	0	0	0	0.38	2.20	0	0	2.20	0
C. s. gravid female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.43
C. s. adult male	0	0	0	0	0	0	15.73	0	0	0	10.49	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	15.10	0	15.10	15.10
C. s. immature 1.0 mm	0	0	0	0	0	0	0	0	14.67	0	78.26	39.13	0	39.13	78.26
C. s. immatue 0.75 mm	0	1.93	0	3.86	0	0	6.76	6.76	6.76	0.74	54.08	58.59	40.56	49.57	27.04
C. s. immature 0.5 mm	0	0	0	0	0.62	2.18	2.18	0	0	0	2.91	2.91	0	0	1.45
Total *C. scutifer*	0	1.93	0	3.86	0.62	32.46	24.67	6.76	21.43	1.11	147.93	115.73	40.56	106.01	124.29
Cyclops vernalis Fischer															
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*															
Cyclops capillatus Sars															
C.c. mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Macrocyclops albidus* Jurine**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small unidentified cyclopoids	0	0	0	0	0.45	0	0	0	0	0	0	0	0	0	0
Cyclopoid nauplius	3.11	3.11	3.78	1.56	2.00	19.44	10.11	20.22	19.44	14.78	46.15	46.66	34.22	37.33	35.78
Total Cyclopoida (Ind/L)	3.11	5.04	3.78	5.42	3.07	51.91	34.78	26.98	40.88	15.89	194.08	162.39	74.78	143.34	160.06
CLADOCERA															
Daphnia middendorffiana Fischer															
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. middendorfianna*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Holopedium gibberum Zaddach															
H. g. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. g. 2.0	19.54	37.77	37.77	26.05	17.37	181.77	66.10	49.57	82.62	99.15	0	0	6.33	5.06	6.33
H. g. 1.0	8.41	46.70	74.72	9.34	18.68	32.69	32.69	32.69	130.76	65.38	305.10	261.51	239.72	196.14	152.55
H. g. 0.5	2.96	5.92	1.48	2.96	0	31.07	25.89	10.36	10.36	10.36	51.79	37.98	41.43	34.53	69.05
Total *H. gibberum*	30.90	90.39	113.97	38.35	36.05	245.53	124.68	92.62	223.74	174.88	356.89	299.49	287.48	235.73	227.93
Eubosmina longispina															
E. l. 1.0	0	11.55	5.77	0	0	0	0	0	0	0	0	0	0	30.97	0
E. l. 0.75	10.44	15.90	2.27	0	2.27	18.27	0	0	18.27	18.27	85.27	12.18	36.54	73.09	60.90
E. l. 0.5	1.34	4.01	4.01	5.34	2.67	28.06	14.03	14.03	23.38	28.06	68.58	65.46	134.04	90.40	146.51
E. l. 0.25	0.13	0.13	0	0.26	0.13	3.18	1.36	3.18	2.73	0.91	5.16	3.64	4.25	3.94	2.73
E. l. male	0	2.67	0	0	1.34	0	0	0	0	0	0	0	0	0	0
Total *E. longispina*	11.91	34.25	12.05	5.60	6.41	49.51	15.39	17.21	44.38	47.24	159.00	81.28	174.83	198.40	210.14
Daphnia longiremis Sars															
D. l. 1.3mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l. 1.0 mm	0.28	0	0	0	0.28	0	19.91	0	2.16	0	92.90	26.54	106.18	39.82	53.09
D.l. 0.5 mm	0	0	0	0.82	0	0	0	0	0	0	8.60	5.73	6.69	7.65	10.51
D.l.male 1.2 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. longiremis*	0.28	0	0	0.82	0.28	0	19.91	0	2.16	0	101.51	32.28	112.87	47.46	63.60
***Ophryoxus gracilis* Sars**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Eurycercus lamellatus* (O.F. Muller)**	0	0	0	0	0	107.07	0	0	0	0	0	8.20	0	0	0
***Chydorus sphaericus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera (Ind/L)	43.09	124.64	126.02	44.77	42.74	402.11	159.98	109.83	270.28	222.12	617.40	421.26	575.18	481.59	501.68
ROTIFERA															
***Kellicottia* spp.**	1.92	3.02	3.47	1.04	1.70	5.76	3.94	7.04	6.85	4.79	2.14	1.94	2.31	2.51	2.87
***Keratella* spp.**	0.08	0.09	0.06	0.05	0.09	0	0.18	0.31	0.22	0.31	0.06	0.06	0.06	0.03	0.03
***Polyarthra* spp.**	1.65	1.16	2.14	0.80	1.78	3.86	2.57	3.43	2.57	3.22	1.00	1.57	2.00	1.14	1.29
***Conochilus* spp.**	1.46	0.78	1.12	0.34	0.87	7.81	17.83	16.48	20.21	14.10	24.12	27.06	35.10	38.05	35.90
***Lecane* spp.**	0.04	0	0	0	0	0	0.31	0	0.15	0	0	0	0	0.10	0
***Pleosoma* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Synchaeta* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Rotifera (Ind/L)	5.15	5.04	6.79	2.23	4.44	17.43	24.83	27.25	30.02	22.42	27.32	30.64	39.47	41.83	40.08
TOTAL ZOOPLANKTON BIOMASS	91	224	230	96	74	692	406	390	550	396	1000	760	853	1045	895

Lake	M4					L2				
Station Replicates	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Date	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H.s. adult female	0	1.98	0	0	0	2.31	2.31	0	0	2.31
H.s. adult male	0	1.31	0	0	0	0	0	26.64	3.06	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	0	3.29	0	0	0	2.31	2.31	26.64	3.06	2.31
E.l. adult female	4.97	8.29	4.97	3.32	9.95	0	0	0	0	0
E.l. adult male	2.00	0	36.69	3.99	2.00	0	4.66	0	0	0
E.l. immature 0.5-1.0 mm	0	0	0	0	0	28.18	0	0	0	0
Total *E. lacustris*	6.97	8.29	41.67	7.31	11.94	28.18	4.66	0	0	0
D.p. adult female	74.77	37.39	10.16	56.08	37.39	11.86	2.45	0	7.11	0
D.p. gravid female	0.82	5.08	1.05	2.03	1.02	0.55	0.82	4.74	0.82	0.55
D.p. adult male	17.99	17.99	21.52	35.97	71.94	9.13	1.31	4.56	20.54	6.85
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0	11.97	11.97	0	0	0	0	0	6.98	0
D.p. immature 0.75 mm	0	0	0	0	0	6.90	0	0	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	93.57	72.42	44.70	94.08	110.35	28.43	4.58	9.31	35.45	7.39
D.m. adult female	0	0	0	11.35	0	66.23	13.25	0	79.47	52.98
D.m. gravid female	0	1.83	0	0	0	11.36	11.36	1.42	9.94	9.94
D.m. adult male	0	19.38	0	0	0	45.21	11.30	5.65	45.21	56.51
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	12.90	45.16	90.31	0	22.58	0
D.m. immature 0.75 mm	60.16	30.08	30.08	48.13	42.11	119.31	42.11	56.15	228.10	98.26
D.m. immature 0.5 mm	0	0	0	0	0	4.61	9.21	0	5.76	2.30
Total *D. minutus*	60.16	51.28	30.08	59.48	55.01	291.87	177.54	63.22	391.05	219.99
Calanoid nauplius	0	0	0	0	0.95	0	0	0	1.11	1.11
Total Calanoida (Ind/L)	160.70	135.28	116.45	160.87	178.25	350.79	189.08	99.17	430.67	230.80
C. s. adult female	0	0	0	0	0	0	0	0	0	0
C. s. gravid female	0	0	0	0	0	0	0	0	0	0
C. s. adult male	0	0	0	0	0	0	0	0	0	0
C. s. immature 2.0 mm	25.89	0	0	0	51.79	0	0	15.10	0	0
C. s. immature 1.0 mm	201.25	117.39	117.39	251.56	167.71	19.57	0	9.78	0	0
C. s. immatue 0.75 mm	169.97	108.16	38.63	115.89	38.63	0	9.01	4.51	0	0
C. s. immature 0.5 mm	0	2.49	0	2.49	0	0	0	1.45	0	0
Total *C. scutifer*	397.11	228.05	156.02	369.94	258.12	19.57	9.01	30.85	0	0
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*										
C.c. mature	0	0	0	0	0	0.56	1.11	9.66	0	1.67
C. c. immature	0	0	0	0	0	2.08	6.25	4.17	10.41	8.33
Total *C. capillatus*	0	0	0	0	0	2.64	7.36	13.83	10.41	10.00
***Macrocyclops albidus* Jurine**	0	0	0	0	0	0.56	0.56	0	0	0.56
Small unidentified cyclopoids	0	0	0	0	0	4.17	0	0	0	0
Cyclopoid nauplius	21.33	21.33	25.78	24.00	26.66	21.78	24.89	8.30	30.07	17.63
Total Cyclopoida (Ind/L)	418.44	249.38	181.80	393.94	284.79	48.71	41.82	52.97	40.49	28.19
D. m. 3.0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0
D. m. 2.0	0	0	0	0	0	0	0	0	0	0
D. m. 1.5	0	0	0	0	0	0.92	0	16.02	0	0
D. m. 1.0	0	0	0	0	0	0	0	0	0	0
D. m. 0.5	0	0	0	0	0	0	0	0	0	0
Total *D. middendorfianna*	0	0	0	0	0	0.92	0	16.02	0	0
H. g. 3.0	0	0	0	0	0	0	0	0	0	0
H. g. 2.0	0	0	28.33	1.09	0	0	2.53	0	0	0
H. g. 1.0	186.80	149.44	112.08	74.72	186.80	0.54	0	14.22	4.74	4.74
H. g. 0.5	82.86	17.76	17.76	11.84	23.68	0	0	0	0	0
Total *H. gibberum*	269.66	167.19	158.16	87.64	210.47	0.54	2.53	14.22	4.74	4.74
E. l. 1.0	0	0	0	0	0	0	0	0	0	0
E. l. 0.75	20.88	0	20.88	0	62.64	0	0	2.65	0	0
E. l. 0.5	69.47	58.78	10.69	32.06	69.47	0	0	0	0	0
E. l. 0.25	1.04	3.12	2.08	0	0.52	0	0.61	0	0	0
E. l. male	5.34	0	0	5.34	0	0	0	0	0	0
Total *E. longispina*	96.74	61.90	33.65	37.41	132.63	0	0.61	2.65	0	0
D. l. 1.3mm	6.14	15.35	6.14	225.86	56.46	0	0	0	0	0
D.l. 1.0 mm	227.52	91.01	113.76	159.26	113.76	0	0	0	0	2.89
D.l. 0.5 mm	9.83	6.55	4.92	16.39	1.64	0	0	0.96	0	0
D.l.male 1.2 mm	0	0	0	43.23	0	0	0	0	0	0
Total *D. longiremis*	243.49	112.91	124.82	444.74	171.86	0	0	0.96	0	2.89
***Ophryoxus gracilis* Sars**	0	0	0	0	0	0	0	0	0	0
***Eurycercus lamellatus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0
***Chydorus sphaericus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0
Total Cladocera (Ind/L)	609.88	342.01	316.63	569.79	514.97	1.47	3.14	33.84	4.74	7.63
***Kellicottia* spp.**	2.77	1.25	1.73	1.94	2.50	2.75	1.78	0.53	1.62	2.43
***Keratella* spp.**	0.20	0.05	0	0.20	0.10	0	0	0	0	0.12
***Polyarthra* spp.**	0.49	0.49	0.98	0.49	0.49	22.01	12.86	7.00	21.43	24.29
***Conochilus* spp.**	11.06	8.93	8.93	8.93	10.87	2.49	2.49	0.57	1.36	4.53
***Lecane* spp.**	0	0	0	0	0.18	0	0	0	0	0
***Pleosoma* spp.**	0	0	0	0	0	0	0	0	0	0
***Synchaeta* spp.**	0	0	0	0	0	0	0	0	0	0
Total Rotifera (Ind/L)	14.53	10.72	11.64	11.56	14.13	27.25	17.13	8.09	24.41	31.37
TOTAL ZOOPLANKTON BIOMASS	1204	737	627	1136	992	428	251	194	500	298

Lake	Lake N11					Lake N11					Lake N11					Lake N11					Lake N11				
Stations	D1	D1	D1	D1	D1	D2	D2	D2	D2	D2	D3	D3	D3	D3	D3	D4	D4	D4	D4	D4	D5	D5	D5	D5	D5
Station Replicates	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Date	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H.s. adult female	0	0	0	1.26	0	0	0	1.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. adult male	0	267.24	0	0	0	0	0	0	0	0	0	0	0	1.84	3.67	0	0	0	0	0	0	0	0	0	0
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	64.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	0	331.93	0	1.26	0	0	0	1.38	0	0	0	0	0	1.84	3.67	0	0	0	0	0	0	0	0	0	0
E.l. adult female	0.24	0	0	9.70	2.11	0	0	0	0.53	0	0	0	0.27	0	0	0	0	0	0	0	0	0	0	0	0
E.l. adult male	0	0	0	0	0	2.79	0	0	0	0	0	0	0.32	0	0.32	0	0	0	0	0.32	0	0	0	0	0
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0	0	0	0	0	0	0
Total *E. lacustris*	0.24	0	0	9.70	2.11	2.79	0	0	0.53	0	0	0	0.59	0	0.32	0	0	0.21	0	0.32	0	0	0	0	0
D.p. adult female	5.95	29.74	5.95	17.84	0	13.08	2.85	5.69	6.54	13.08	7.11	4.27	7.11	1.42	1.42	4.27	2.85	0	4.27	8.54	11.38	11.38	9.96	9.96	19.63
D.p. gravid female	0.45	0	0	0	1.29	0.33	0.16	0.16	6.54	0.33	0.33	0	0.16	0.16	0.16	0.16	0	0.16	0	0.33	0.16	0.16	0.33	0.49	0.33
D.p. adult male	17.17	22.89	17.17	11.45	0	25.18	12.32	2.74	31.48	31.48	6.30	2.74	2.74	2.74	10.95	10.95	2.74	0	5.48	2.74	6.85	6.85	9.58	9.58	18.89
D.p. immature 2.0 mm	0	0	0	5.63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	7.62	3.81	19.04	0	7.62	8.38	0	4.19	8.38	4.19	0	4.19	20.95	0	4.19	8.38	8.38	0	0	4.19	12.57	12.57	0	12.57	12.57
D.p. immature 0.75 mm	0	1.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.07	0	4.14	0	0	2.07
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. pribilofensis*	31.18	58.32	42.16	34.92	8.91	46.97	15.33	12.78	52.94	49.08	13.74	11.20	30.97	4.32	16.73	23.77	13.96	0.16	9.75	17.86	30.96	35.10	19.87	32.61	53.48
D.m. adult female	3.61	10.84	3.61	14.45	14.45	3.97	7.95	0	7.95	7.95	3.97	7.95	15.89	0.86	3.97	3.97	0	0	3.97	7.95	15.89	0	7.95	11.92	3.97
D.m. gravid female	4.65	4.65	1.55	2.32	5.42	6.81	5.11	3.41	4.26	1.70	2.35	3.41	0.85	5.11	3.41	2.56	1.70	2.56	1.70	2.56	5.11	4.26	3.41	2.56	1.70
D.m. adult male	18.50	3.08	15.41	15.41	12.33	13.56	6.78	3.39	20.34	23.74	10.17	3.39	16.95	13.56	10.17	30.52	23.74	3.39	10.17	16.95	20.34	16.95	13.56	13.56	30.52
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.52
D.m. immature 0.75 mm	9.57	3.83	7.66	7.66	11.48	8.42	4.21	6.32	6.32	0	12.63	8.42	6.32	12.63	0	14.74	10.53	2.11	4.21	2.11	2.11	4.21	6.32	6.32	18.95
D.m. immature 0.5 mm	0.63	0	0.63	0.63	0	0.69	0	0	0.69	0.69	0	0.69	0	0	0	0	0	0.69	0	0.69	0	0	0	0	0
Total *D. minutus*	36.95	22.39	28.86	40.47	43.69	33.46	24.05	13.11	39.56	34.08	29.13	23.86	40.02	32.17	17.55	51.78	35.97	8.74	20.06	30.25	43.46	25.42	31.23	34.36	59.66
Calanoid nauplius	0.60	0	0.30	0	0.90	0.99	0.33	0.33	0	0.33	0	0	0.33	0.33	0	0.33	0	0.33	0.99	0.33	0.33	0	0.33	0	0.66
Total Calanoida (Ind/L)	68.98	412.65	71.32	86.35	55.61	84.22	39.71	27.61	93.03	83.49	42.87	35.06	71.90	38.66	38.28	75.88	49.93	9.45	30.80	48.77	74.75	60.53	51.44	66.96	113.80
C. s. adult female	22.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.63	0
C. s. gravid female	0.61	2.13	0.61	2.43	5.29	2.91	0	0.33	0.67	0.67	0	0	0.33	0.33	2.91	0.67	1.00	0	0	5.82	0.33	0.33	0.67	0	1.00
C. s. adult male	0	5.72	0	0	0	6.29	6.29	6.29	6.29	0	1.37	0	6.29	6.29	0	0	0	0	0	0	0	6.29	0	1.37	0
C. s. immature 2.0 mm	0	0	8.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 1.0 mm	16.01	5.34	21.34	16.01	10.67	11.74	5.87	11.74	11.74	5.87	11.74	0	0	5.87	0	0	0	0	0	11.74	0	11.74	11.74	0	23.48
C. s. immatue 0.75 mm	19.67	12.29	14.75	14.75	14.75	2.70	16.22	8.11	21.63	10.82	0	5.41	8.11	10.82	2.70	2.70	27.04	8.11	0	8.11	21.63	10.82	16.22	16.22	35.15
C. s. immature 0.5 mm	0.79	0	0	0	0	0	0	0.87	1.74	0	0	0	0	0	0	0	0.87	0	0	0	0	0	0	0	0
Total *C. scutifer*	59.10	25.48	44.94	33.19	30.71	23.65	28.39	27.35	42.08	17.35	13.11	5.41	14.74	23.31	5.61	3.37	28.92	8.11	0	25.67	21.97	29.18	28.63	20.23	59.63
C.v. immature 0.75 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*																									
C.c. mature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Macrocyclops albidus* Jurine**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small unidentified cyclopoids	0	0	0	0	0	0	0	0	0	0	0.62	0.62	0.62	0	0	0	0	0	0	0	0	0	0	0	0
Cyclopoid nauplius	3.68	2.26	4.81	3.39	5.09	3.73	2.80	5.60	8.40	3.73	4.36	3.73	8.09	4.98	4.98	7.16	5.91	6.84	4.36	3.42	6.53	3.73	1.24	1.87	3.42
Total Cyclopoida (Ind/L)	62.78	27.74	49.75	36.58	35.80	27.38	31.19	32.95	50.48	21.09	18.09	9.77	23.45	28.29	10.59	10.53	34.83	14.96	4.36	29.10	28.50	32.92	29.88	22.09	63.06
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.31
D. m. 1.5	0	0	0	0	0	0	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. m. 1.0	0	0	0	0	0	0	0	0	1.37	0	0	0	0	0	0	0	1.37	0	0	0	0	0	0	0	0
D. m. 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. middendorfianna*	0	0	0	0	0	0	0.55	0	1.37	0	0	0	0	0	0	0	1.37	0	0	0	0	0	0	0	1.31
H. g. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. g. 2.0	2375.94	1105.09	1602.38	1547.12	1270.85	425.46	668.58	486.24	1215.60	790.14	425.46	44.07	171.86	547.02	92.54	607.80	364.68	547.02	364.68	972.48	729.36	486.24	1033.26	1094.04	1580.28
H. g. 1.0	95.10	118.87	71.32	47.55	59.44	52.30	39.23	26.15	52.30	0	39.23	26.15	11.38	65.38	5.69	104.61	26.15	78.45	52.30	39.23	91.53	65.38	39.23	52.30	143.83
H. g. 0.5	28.25	20.72	18.83	22.60	30.13	12.43	14.50	8.29	14.50	22.79	8.29	6.21	16.57	6.21	10.36	8.29	14.50	4.14	2.07	4.14	24.86	26.93	22.79	22.79	33.15
Total *H. gibberum*	2499.29	1244.68	1692.53	1617.27	1360.42	490.19	722.31	520.68	1282.40	812.93	472.97	76.43	199.80	618.61	108.58	720.69	405.33	629.62	419.05	1015.85	845.75	578.55	1095.27	1169.13	1757.26
E. l. 1.0	3.67	0.42	0	0	0	0	0	0	0	0	0	0	0.46	0	0	4.04	8.08	1.39	0.93	0.93	0	0.93	4.04	0.93	0.93
E. l. 0.75	39.86	10.12	6.64	6.64	6.64	0	0	0	21.93	29.23	0	7.31	3.18	7.31	0	4.77	12.72	6.36	4.77	7.31	14.62	3.18	14.62	0	7.31
E. l. 0.5	62.91	32.31	30.61	35.71	51.01	26.18	18.70	20.57	39.28	11.22	7.48	7.48	0	5.61	3.74	26.18	43.02	20.57	29.93	37.41	28.06	13.09	20.57	13.09	33.67
E. l. 0.25	0.99	0.17	0.50	0.66	0.83	0.55	0.36	0.36	1.64	0.91	0.36	0	0	0.91	0.18	1.09	0.18	0.36	0.73	0.36	0.73	0.18	0.36	0.36	0.55
E. l. male	0	0	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *E. longispina*	107.44	43.01	39.45	43.01	58.48	26.73	19.07	20.94	62.84	41.37	7.85	14.79	3.64	13.83	3.92	36.09	64.00	28.69	36.35	46.01	43.40	17.38	39.60	14.39	42.45
D. l. 1.3mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l. 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l.male 1.2 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. longiremis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Ophryoxus gracilis* Sars**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Eurycercus lamellatus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Chydorus sphaericus* (O.F. Muller)**	0	0	0.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera (Ind/L)	2606.73	1287.68	1732.74	1660.28	1418.90	516.92	741.93	541.61	1346.62	854.29	480.82	91.22	203.45	632.44	112.51	756.78	470.71	658.31	455.41	1061.86	889.15	595.93	1134.87	1183.51	1801.02
***Kellicottia* spp.**	1.87	0.90	1.43	1.39	2.91	2.28	1.55	1.82	2.62	2.21	2.79	2.52	2.79	1.77	2.23	2.62	1.60	1.46	2.26	2.47	2.09	2.91	2.09	1.53	2.28
***Keratella* spp.**	0.55	0.37	0.52	0.42	0.92	0.73	0.66	0.73	1.07	0.64	1.10	0.93	1.10	0.69	0.91	1.03	0.37	0.53	0.66	0.53	1.19	0.87	0.82	0.69	0.87
***Polyarthra* spp.**	0.16	0	0.08	0.08	0	0.26	0.77	1.03	0.51	0.17	1.20	1.11	0.51	0.09	0.60	0.86	0.17	0.26	0.09	0	0.09	0.34	0	0.09	0.09
***Conochilus* spp.**	3.83	4.63	5.99	5.00	10.31	4.35	5.50	3.33	11.89	2.99	6.73	20.25	9.31	9.78	7.88	3.06	7.88	8.22	6.25	5.84	6.52	5.44	4.48	7.47	10.87
***Lecane* spp.**	0	0.06	0.06	0.06	0	0	0	0	0	0	0	0.06	0	0	0	0.06	0	0	0.06	0	0	0.06	0.06	0	0
***Pleosoma* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Synchaeta* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Rotifera (Ind/L)	6.41	5.96	8.08	6.95	14.15	7.62	8.49	6.91	16.09	6.01	11.82	24.87	13.72	12.33	11.62	7.63	10.03	10.47	9.31	8.85	9.89	9.62	7.45	9.78	14.11
TOTAL ZOOPLANKTON BIOMASS	2745	1734	1862	1790	1524	636	821	609	1506	965	554	161	313	712	173	851	565	693	500	1149	1002	699	1224	1282	1992

Lake	East Lake (Reference)					East Lake (Reference)					East Lake (Reference)					East Lake (Reference)					East Lake (Reference)				
Stations	D1	D1	D1	D1	D1	D2	D2	D2	D2	D2	D3	D3	D3	D3	D3	D4	D4	D4	D4	D4	D5	D5	D5	D5	D5
Station Replicates	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Date	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H.s. adult female	7.04	4.69	11.73	2.35	3.52	2.66	5.32	6.39	1.60	4.26	4.94	11.37	13.34	11.86	7.41	4.32	1.73	8.65	1.73	6.92	12.45	1.38	23.52	17.99	29.06
H.s. adult male	3.11	0	7.78	4.67	4.67	0.71	4.24	5.65	3.53	4.95	3.28	6.56	7.87	4.59	8.53	9.19	0	6.89	0	2.30	9.19	0	11.02	14.70	14.70
H.s. 4.0 mm F and M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 3.0mm	0	0	0	0	0	26.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H.s. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. septentrionales*	10.15	4.69	19.51	7.02	8.19	30.25	9.56	12.04	5.13	9.20	8.22	17.93	21.22	16.45	15.94	13.51	1.73	15.54	1.73	9.22	21.64	1.38	34.55	32.69	43.76
E.l. adult female	1.97	0	1.97	0	0	0.72	3.57	2.68	0.89	4.46	0	0	1.05	3.81	0	0	0.33	0.17	0	0.17	4.64	0	10.67	2.32	0
E.l. adult male	0	0	0	0	0	0.12	0	1.07	1.07	1.07	0	4.59	0.23	0	0	0	0.20	0	0	0	5.59	0	0	0	0
E.l. immature 0.5-1.0 mm	0	0	0	0	0	0.16	0	3.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *E. lacustris*	1.97	0	1.97	0	0	1.00	3.57	7.00	1.97	5.54	0	4.59	1.27	3.81	0	0	0.53	0.17	0	0.17	10.23	0	10.67	2.32	0
D.p. adult female	5.54	13.27	11.09	11.09	27.72	12.58	32.71	30.20	37.74	35.23	53.74	28.04	39.72	28.04	32.71	36.80	24.53	16.36	4.09	36.80	85.05	2.62	71.97	91.59	58.88
D.p. gravid female	3.62	0.69	2.36	1.80	3.62	0.44	3.83	1.09	0.55	1.64	2.03	2.34	2.03	1.02	2.03	1.33	0.31	0.31	0	1.53	2.85	0	4.27	1.42	1.42
D.p. adult male	16.00	18.57	58.68	21.34	37.34	14.53	19.37	24.21	38.74	9.68	15.74	17.99	35.97	33.72	24.73	7.87	19.67	0	0	23.61	25.18	1.73	56.66	75.54	62.95
D.p. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.p. immature 1.0 mm	0	0	3.55	0	0	0	1.61	1.61	0	3.22	5.99	0	1.50	0	0	0	0	0	0	2.62	0	4.19	4.19	8.38	12.57
D.p. immature 0.75 mm	0	1.75	0	0	0	0.80	0.80	0.80	0	0	0	0.74	0	0	0	0	0	0	0	0	0	0	2.07	0	0
D.p. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0.26	0	0.46	0	0	0	0	0	0.02	0.74	0	0
Total *D. pribilofensis*	25.17	34.28	75.68	34.23	68.68	28.35	58.32	57.91	77.03	49.78	77.50	49.10	79.22	63.04	59.48	46.46	44.51	16.66	4.09	64.56	113.08	8.56	139.89	176.94	135.83
D.m. adult female	0	0	0	0	0	0	0	3.06	0.15	0	0	0	0	0	0	0	0	0	0	4.97	0	0	3.97	0	0
D.m. gravid female	0.72	0	0	0	0	1.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.85	0	0	0	0
D.m. adult male	0	0	0	0	0	0	0.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.m. immature 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.52	0	0
D.m. immature 0.75 mm	30.33	16.06	28.55	35.69	16.06	15.39	29.96	22.67	24.29	23.48	28.57	23.31	27.82	25.57	15.79	14.48	15.79	17.11	0	13.16	46.32	46.32	94.75	75.80	73.69
D.m. immature 0.5 mm	0	0	0	0	0	0	0	0	0	0	0.25	0.25	0	0	0	0	0	0	0	0	0	2.07	0.69	0	0
Total *D. minutus*	31.06	16.06	28.55	35.69	16.06	16.89	30.25	25.73	24.45	23.48	28.82	23.56	27.82	25.57	15.79	14.48	15.79	17.11	0	18.13	47.17	48.39	103.93	75.80	73.69
Calanoid nauplius	0	0	0	0	0	0.13	0	0	0	0	0	0	0	0	0.12	0	0	0	0	0	0	0	0.33	0	0
Total Calanoida (Ind/L)	68.34	55.03	125.71	76.93	92.93	76.62	101.70	102.68	108.58	88.00	114.54	95.17	129.54	108.88	91.33	74.45	62.57	49.47	5.82	92.07	192.12	58.33	289.37	287.74	253.27
C. s. adult female	0	0	0	0	0	0	0	0	0	4.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.11
C. s. gravid female	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. adult male	0	0	0	0	0	2.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 2.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. s. immature 1.0 mm	0	0	0	4.97	4.97	0	2.26	2.26	0	0	0	0	16.77	0	0	0	0	0	0	0	0	0	5.87	5.87	0
C. s. immatue 0.75 mm	25.21	11.46	27.50	2.29	4.58	11.44	22.88	17.68	12.48	7.28	26.07	16.42	23.18	30.90	22.21	13.52	5.07	8.45	1.69	15.21	59.49	40.56	100.05	62.19	64.90
C. s. immature 0.5 mm	0.74	0	2.96	0.74	0	1.01	2.68	2.01	0.67	1.01	0.93	2.49	2.80	2.49	0.93	1.09	1.09	0.54	0	0.54	4.36	2.62	4.36	6.10	4.36
Total *C. scutifer*	25.95	11.46	30.45	8.00	9.56	14.87	27.82	21.95	13.15	12.94	27.01	18.91	42.75	33.39	23.15	14.61	6.16	8.99	1.69	15.76	63.85	43.18	110.28	74.16	81.37
C.v. immature 0.75 mm	0	0	0	0	0	0.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. vernalis*																									
C.c. mature	0	4.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C. c. immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *C. capillatus*	0	4.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Macrocyclops albidus* Jurine**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small unidentified cyclopoids	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclopoid nauplius	23.73	13.18	26.36	21.35	16.87	10.29	17.59	23.81	17.95	16.51	16.00	16.00	14.55	12.89	14.78	17.11	7.19	12.44	0	16.92	18.98	33.60	42.00	63.46	49.15
Total Cyclopoida (Ind/L)	49.67	29.55	56.82	29.36	26.43	25.40	45.41	45.76	31.10	29.46	43.01	34.91	57.30	46.28	37.92	31.72	13.35	21.44	1.69	32.67	82.82	76.77	152.27	137.63	130.52
D. m. 3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.59	0	0	0	0	0	0	0	4.45	0	0	0
D. m. 2.5	0	0	0	0	0	0	0.99	0	0	0	1.84	5.51	1.84	7.35	1.84	1.61	0	0	0	0	23.15	2.57	18.00	5.14	5.14
D. m. 2.0	1.11	0	4.45	0	0	0.51	1.01	4.04	4.40	1.52	0.94	5.63	6.10	2.35	1.41	0	0.82	4.10	0.82	0.82	6.57	7.88	14.45	18.39	18.39
D. m. 1.5	0.47	0	0.47	0.47	0.47	0.85	0.42	1.91	0.42	0	1.78	6.86	1.72	3.43	3.43	0.35	0.35	0.35	0	0.69	1.10	2.76	14.42	4.81	4.97
D. m. 1.0	0.13	0	0	0	0	0.12	0.24	0.24	0.18	0.06	0.98	1.96	0.49	0	0.49	0.20	0	0	0	0.10	1.37	1.37	1.37	0	1.11
D. m. 0.5	0	0	0	0	0	0	0	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0.81	0	0.81
Total *D. middendorfianna*	1.72	0	4.92	0.47	0.47	1.48	2.67	6.20	5.01	1.58	5.53	19.97	10.14	14.72	7.17	2.15	1.17	4.45	0.82	1.61	32.20	19.04	49.05	28.34	30.42
H. g. 3.0	0	13.48	33.70	3.37	3.37	9.18	3.06	7.65	3.06	3.06	21.30	9.94	14.20	8.52	21.30	0	2.49	0	0	2.49	87.48	99.41	71.58	83.51	47.72
H. g. 2.0	18.03	22.41	6.44	1.29	5.15	3.51	0	1.75	0.58	0	2.17	4.34	5.43	4.88	4.34	0	0	0	0	0	24.31	13.68	63.82	24.31	18.23
H. g. 1.0	0	0	0	0	0	0	0	0	0	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H. g. 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *H. gibberum*	18.03	35.89	40.14	4.66	8.52	12.68	3.06	9.40	3.64	3.18	23.47	14.28	19.63	13.41	25.64	0	2.49	0	0	2.49	111.80	113.09	135.40	107.82	65.95
E. l. 1.0	3.43	3.43	0	0	0	0.18	0.18	0.18	0	0.36	0	0	0	0.17	0	0	0	0.29	0.87	0	0	0.46	0.46	0.93	4.04
E. l. 0.75	6.19	0	0	0	0.93	0	0.28	0.61	0.61	0	0	0	0.07	0	0.13	0	0.11	0	0.11	0	0.91	0.37	0	0.55	3.18
E. l. 0.5	0	0	0.34	0.69	0.12	0	0.02	0	0	0.16	0	0	0.03	0.15	0.15	0.03	0.03	0.06	0.06	0.06	0.05	0.05	1.22	0.05	0
E. l. 0.25	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E. l. male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *E. longispina*	9.62	3.43	0.34	0.69	1.05	0.18	0.48	0.79	0.63	0.51	0	0	0.10	0.31	0.28	0.03	0.14	0.35	1.04	0.06	0.96	0.88	1.68	1.52	7.22
D. l. 1.3mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l. 1.0 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l. 0.5 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.l.male 1.2 mm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total *D. longiremis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Ophryoxus gracilis* Sars**	0	1.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Eurycercus lamellatus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Chydorus sphaericus* (O.F. Muller)**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera (Ind/L)	29.36	40.33	45.40	5.82	10.04	14.34	6.20	16.39	9.28	5.27	29.01	34.25	29.87	28.43	33.09	2.18	3.79	4.80	1.86	4.15	144.95	133.01	186.13	137.68	103.59
***Kellicottia* spp.**	1.27	1.25	1.30	0.88	1.15	0.93	0.73	0.91	1.35	0.74	0.76	0.44	0.43	0.42	0.97	1.32	1.14	1.62	0.41	1.41	0.85	1.58	1.43	1.72	2.57
***Keratella* spp.**	0.03	0.03	0.02	0.05	0.11	0.08	0.04	0.05	0.05	0.06	0.09	0.07	0.08	0.10	0.13	0.06	0.08	0.18	0	0.14	0.14	0.27	0.14	0.39	0.27
***Polyarthra* spp.**	0.07	0.07	0	0.07	0	0.10	0	0.03	0.16	0	0	0	0	0	0.03	0.05	0	0	0	0	0	0	0	0	0
***Conochilus* spp.**	2.07	0.58	0.98	0.12	0.46	0.31	0.78	0.47	0.57	0.89	0.15	0.63	0.66	0.34	0.56	0.85	0.04	0.38	0	0.47	2.24	0.61	1.56	0.82	1.56
***Lecane* spp.**	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Pleosoma* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
***Synchaeta* spp.**	0	0	0	0	0	0	0	0	0	0	0	0	0.03	0.03	0	0	0	0	0	0	0	0.08	0.08	0	0
Total Rotifera (Ind/L)	3.45	1.93	2.29	1.12	1.72	1.42	1.55	1.47	2.15	1.69	1.02	1.14	1.19	0.89	1.69	2.28	1.26	2.18	0.41	2.02	3.23	2.53	3.22	2.93	4.40
TOTAL ZOOPLANKTON BIOMASS	151	127	230	113	131	118	155	166	151	124	188	165	218	184	164	111	81	78	10	131	423	271	631	566	492

Notes: mg/m^3 = milligrams per cubic meter; sp. = one species in the genera; spp. = numerous species in the genera; mm = millimeters;
(a) Spoiled sample, removed from analysis.

Table I-6: Zooplankton Quality Control Samples Base on Abundance (ind./L) in East Lake and Lake N11, Fall 2011

Lake	Lake N11			Lake N11			Lake N11			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)		
Date	15-Aug-11			15-Aug-11			15-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11		
Station Replicates	N11D1A			N11D3C			N11D3E			REFD3C			REFD3D			REFD4A			REFD5A		
Stations	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)
COPEPODA																					
Calanoida																					
***Heterocope septentrionalis* Juday & Muttkowski**																					
H.s. adult female	0	0	-	0	0	-	0	0	-	0.03	0.03	0	0.02	0.02	0	0.01	0.01	0	0.03	0.03	0
H.s. adult male	0	0	-	0	0	-	0.01	0.01	0	0.01	0.01	0	0.01	0.01	0	0.01	0.01	0	0.01	0.01	0
H.s. 4.0 mm F & M	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
H.s. 3.0mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
H.s. 2.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
H.s. 1.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
Total *H. septentrionales*	**0**	**0**	-	**0**	**0**	-	**0.01**	**0.01**	0	**0.04**	**0.04**	0	**0.03**	**0.03**	0	**0.02**	**0.02**	0	**0.04**	**0.04**	0
***Epischura lacustris* S.A. Forbes**																					
E.l. adult female	0.00	0.00	0	0.00	0.00	0	0	0	-	0.01	0.01	0.0	0.04	0.01	38.9	0	0.00	50.0	0.05	0.02	16.7
E.l. adult male	0	0	-	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.2	0	0.01	50.0	0	0	-	0.05	0.02	16.7
E.l. immature 0.5-1.0 mm	0	0	-	0	0	-	0	0	-	0		-	0	0	-	0	0	-	0	0	-
Total *E. lacustris*	**0.00**	**0.00**	0	**0.01**	**0.01**	0	**0.00**	**0.00**	0	**0.01**	**0.01**	0.1	**0.04**	**0.01**	24.5	**0**	**0.00**	50.0	**0.10**	**0.05**	16.7
***Diaptomus pribilofensis* Juday & Muttkowski**																					
D.p. adult female	0.10	0.10	0	0.12	0.17	8.3	0.02	0.11	32.1	0.69	0.49	8.6	0.49	0.53	2.0	0.64	0.57	2.9	1.47	1.13	6.5
D.p. gravid female	0.01	0.01	0	0.00	0.00	0	0.00	0.00	0	0.04	0.02	16.7	0.02	0.02	0	0.02	0.02	2.0	0.05	0.02	16.7
D.p. adult male	0.31	0.41	7.1	0.05	0.07	10.0	0.20	0.07	22.7	0.65	0.32	16.7	0.61	0.53	3.6	0.14	0.64	31.8	0.45	1.13	21.4
D.p. immature 2.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
D.p. immature 1.0 mm	0.21	0	50.0	0.57	0.11	33.3	0.11	0.11	0	0.04	0.04	0	0	0.12	50.0	0	0.07	50.0	0	0.11	50.0
D.p. immature 0.75 mm	0	0	-	0	0	-	0	0	-	0	0.04	50.0	0	0	-	0	0	-	0	0	-
D.p. immature 0.5 mm	0	0	-	0	0	-	0	0	-	0	0	-	0.04	0	50.0	0.07	0	50.0	0	0	-
Total *D. pribilofensis*	**0.63**	**0.52**	4.5	**0.74**	**0.36**	17.2	**0.34**	**0.30**	2.7	**1.41**	**0.91**	10.8	**1.15**	**1.19**	0.9	**0.87**	**1.30**	9.8	**1.97**	**2.40**	4.9
***Diaptomus minutus* Lilljeborg**																					
D.m. adult female	0.10	0.41	30.0	0.45	0	-	0.11	0.11	0	0	0	-	0	0	-	0	0	-	0	0.11	50.0
D.m. gravid female	0.13	0.07	16.7	0.02	0.02	0	0.10	0.22	19.2	0	0	-	0	0	-	0	0	-	0.02	0	50.0
D.m. adult male	0.62	0.93	10.0	0.57	0.57	0	0.34	0.23	10.0	0	0	-	0	0	-	0	0	-	0	0	-
D.m. immature 2.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
D.m. immature 1.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
D.m. immature 0.75 mm	0.51	0.51	0	0.34	0.79	20.0	0	0.57	50.0	1.50	1.13	6.9	1.37	1.09	5.7	0.78	1.06	7.7	2.49	2.04	5.0

Table I-6: Zooplankton Quality Control Samples Base on Abundance (ind./L) in East Lake and Lake N11, Fall 2011 (continued)

Lake	Lake N11			Lake N11			Lake N11			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)		
Date	15-Aug-11			15-Aug-11			15-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11		
Station Replicates	N11D1A			N11D3C			N11D3E			REFD3C			REFD3D			REFD4A			REFD5A		
Stations	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)
D.m. immature 0.5 mm	0.10	0	50.0	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
Total *D. minutus*	**1.47**	**1.92**	6.6	**1.38**	**1.38**	0	**0.55**	**1.13**	17.2	**1.50**	**1.13**	6.9	**1.37**	**1.09**	5.7	**0.78**	**1.06**	7.7	**2.52**	**2.15**	3.9
Calanoid nauplius	**0.21**	**0.10**	16.7	**0.11**	**0.11**	0	**0**	**0**	-	**0**	**0.04**	50.0	**0**	**0**	-	**0**	**0**	-	**0**	**0.11**	50.0
Total Calanoida ind/L	**2.31**	**2.55**	2.5	**2.24**	**1.86**	4.6	**0.90**	**1.44**	11.6	**2.96**	**2.13**	8.1	**2.60**	**2.33**	2.7	**1.67**	**2.38**	8.7	**4.63**	**4.76**	0.7
Cyclopoida																					
***Cyclops scutifer* Sars**																					
C. s. adult female	0.21	0.10	16.7	0	0.11	50.0	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
C. s. gravid female	0.01	0.01	0	0.00	0.00	0	0.02	0.02	0	0	0	-	0	0	-	0	0	-	0	0	-
C. s. adult male	0	0	-	0.11	0	50.0	0	0.11	50.0	0	0	-	0	0	-	0	0	-	0	0	-
C. s. immature 2.0 mm	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
C. s. immature 1.0 mm	0.31	0.41	7.1	0	0	-	0	0	-	0.32	0	50.0	0	0	-	0	0	-	0	0.11	50.0
C. s. immatue 0.75 mm	0.82	1.65	16.7	0.34	0.11	25.0	0.11	0.23	16.7	0.97	0.69	8.5	1.29	0.57	19.6	0.57	0.35	11.5	2.49	1.81	7.9
C. s. immature 0.5 mm	0.10	0	50.0	0	0	-	0	0	-	0.36	0.40	2.6	0.32	0.20	11.5	0.14	0.14	0.0	0.57	0.57	0
Total *C. scutifer*	**1.45**	**2.17**	10.0	**0.46**	**0.23**	16.5	**0.14**	**0.36**	22.5	**1.66**	**1.09**	10.3	**1.62**	**0.77**	17.8	**0.71**	**0.50**	8.8	**3.06**	**2.49**	5.1
Small unidentified cyclopoids	**1.45**	**0.21**	37.5	**0.11**	**0.11**	0			-			-			-			-			-
Cyclopoid nauplius	**1.34**	**2.37**	13.9	**2.94**	**2.15**	7.8	**1.81**	**1.59**	3.3	**5.30**	**3.92**	7.5	**4.69**	**4.73**	0.2	**6.23**	**6.23**	0	**6.91**	**8.27**	4.5
Total Cyclopoida ind/L	**2.78**	**4.74**	13.0	**3.51**	**2.49**	8.5	**1.95**	**1.95**	0.0	**6.96**	**5.01**	8.1	**6.31**	**5.50**	3.4	**6.94**	**6.72**	0.8	**9.96**	**10.76**	1.9
CLADOCERA																					
***Daphnia middendorffiana* Fischer**																					
D. m. 3.0	0	0	-	0	0	-	0	0	-	0	0	-	0.00	0.00	0	0	0	-	0	0	-
D. m. 2.5	0	0	-	0	0	-	0	0	-	0.00	0.00	0	0.01	0.01	3.3	0.00	0.00	0	0.03	0.02	2.9
D. m. 2.0	0	0	-	0	0	-	0	0	-	0.01	0.01	1.9	0.01	0.01	8.3	0	0	-	0.01	0.01	0
D. m. 1.5	0	0	-	0	0	-	0	0	-	0.01	0.02	16.7	0.02	0.01	16.7	0.00	0.00	0	0.01	0.01	10.0
D. m. 1.0	0	0	-	0	0	-	0	0	-	0.01	0.01	0	0	0	-	0.00	0.00	0	0.02	0	50.0
D. m. 0.5	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
Total *D. middendorfianna*	**0**	**0**	-	**0**	**0**	-	**0**	**0**	-	**0.03**	**0.04**	6.5	**0.03**	**0.02**	7.0	**0.01**	**0.01**	0	**0.07**	**0.05**	10.7
***Holopedium gibberum* Zaddach**																		-			
H. g. 3.0	0	0	-	0	0	-	0	0	-	0.01	0.01	0	0.01	0.01	0	0	0	-	0.06	0.06	2.4
H. g. 2.0	4.43	4.01	2.4	0.32	0.44	8.1	0.17	0.27	11.1	0.01	0.01	0	0.01	0.01	2.9	0	0	-	0.05	0.04	3.3
H. g. 1.0	0.82	1.24	10.0	0.10	0.32	26.5	0.05	0.10	16.7	0	0	-	0	0	-	0	0	-	0	0	-
H. g. 0.5	1.54	1.44	1.7	0.91	1.13	5.6	0.57	1.25	18.8	0	0	-	0	0	-	0	0	-	0	0	-
Total *H. gibberum*	**6.79**	**6.69**	0.4	**1.32**	**1.90**	8.9	**0.79**	**1.62**	17.2	**0.02**	**0.02**	0	**0.02**	**0.01**	1.7	**0**	**0**	-	**0.11**	**0.10**	2.8

Table I-6: Zooplankton Quality Control Samples Base on Abundance (ind./L) in East Lake and Lake N11, Fall 2011 (continued)

Lake	Lake N11			Lake N11			Lake N11			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)			East Lake (Reference)		
Date	15-Aug-11			15-Aug-11			15-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11			17-Aug-11		
Station Replicates	N11D1A			N11D3C			N11D3E			REFD3C			REFD3D			REFD4A			REFD5A		
Stations	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)	A	B	RPD (%)
Eubosmina longispina																					
E. l. 1.0	0.02	0	50.0	0.00	0.00	0	0	0	-	0	0	-	0.00	0.00	0	0	0	-	0	0	-
E. l. 0.75	0.62	0.62	0	0.05	0.02	16.7	0	0	-	0.00	0.00	16.7	0	0.01	50.0	0	0	-	0.01	0.02	13.5
E. l. 0.5	3.81	2.16	13.8	0	1.13	50.0	0.23	1.25	34.6	0.00	0.00	0	0.01	0.01	0	0.00	0.00	-	0.00	0	50.0
E. l. 0.25	0.62	1.44	20.0	0	0.45	50.0	0.11	0.23	16.7	0	0	-	0	0	-	0	0	-	0	0	-
E. l. male	0	0.10	50.0	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0	-
Total *E. longispina*	**5.07**	**4.32**	4.0	**0.05**	**1.61**	46.9	**0.34**	**1.47**	31.3	**0.00**	**0.00**	7.1	**0.01**	**0.02**	15.5	**0.00**	**0.00**	0	**0.02**	**0.02**	9.2
Total Cladocera ind/L	**11.86**	**11.01**	1.8	**1.38**	**3.51**	21.8	**1.13**	**3.09**	23.2	**0.06**	**0.07**	4.4	**0.06**	**0.06**	0.0	**0.01**	**0.01**	0	**0.19**	**0.17**	3.9
ROTIFERA																					
***Kellicottia* spp.**	8.75	8.24	1.5	13.02	13.81	1.5	10.42	9.85	1.4	2.02	2.67	6.9	1.94	3.11	11.6	6.16	5.02	5.1	3.96	3.85	0.7
***Keratella* spp.**	3.50	3.91	2.8	7.02	8.38	4.4	5.77	5.21	2.6	0.49	0.57	3.8	0.65	0.69	1.5	0.35	0.71	16.7	0.91	1.13	5.6
***Polyarthra* spp.**	0.21	0	50.0	0.68	0.91	7.1	0.79	0.34	20.0	0	0	-	0	0	-	0.07	0.07	0	0	0	-
***Conochilus* spp.**	6.38	6.79	1.6	15.51	18.23	4.0	13.14	15.97	4.9	1.09	0.77	8.7	0.57	0.77	7.6	1.42	0.78	14.5	3.74	4.30	3.5
***Lecane* spp.**	0	0	-	0	0	-	0	0.11	50.0	0	0	-	0	0	-	0	0	-	0	0	-
***Pleosoma* spp.**	0	0.10	50.0		0.11	50.0			-			-			-			-			-
***Synchaeta* spp.**			-			-			-	0.04		50.0	0.04	0.04	0		0.07	50.0			-
Total Rotifera ind/L	**18.84**	**19.04**	0.3	**36.23**	**41.44**	3.4	**30.12**	**31.48**	1.1	**3.64**	**4.00**	2.4	**3.19**	**4.61**	9.1	**8.00**	**6.65**	4.6	**8.61**	**9.29**	1.9
TOTAL ZOOPLANKTON	**35.79**	**37.35**	1.1	**43.37**	**49.31**	3.2	**34.10**	**37.95**	2.7	**13.61**	**11.22**	4.8	**12.16**	**12.49**	0.7	**16.62**	**15.77**	1.3	**23.39**	**24.96**	1.6

Notes: ind./L = Individuals per litre; sp. = one species in the genera; spp. = numerous species in the genera; mm = millimetres; RPD = Relative Percent Difference

Table I-7: Zooplankton Biomass Length-Weight Regression Information for East Lake, Lake N11 and the L and M Lakes of the Gahcho Kue Project, Fall 2011

Instar Identification and Size Classes	Mean Length [mm]	Ln[a] (Length) [mm]	Regression Equation Number [b]	Calculated Ln (Weight) [µg]	Calculated Dry Weight [µg]	Calculated Wet Weight [µg]
***Heterocope septentrionalis* Juday and Muttkowski**						
H.s. adult female	2.7	1.0	R30	3.5	34.2	488.8
H.s. adult male	3.1	1.1	R30	3.8	45.4	649.0
H.s. 4.0 mm (male and female)	3.3	1.2	R30	4.0	52.9	756.2
H.s. 3.0mm	3.0	1.1	R30	3.8	43.2	617.2
H.s. 2.0 mm	1.8	0.6	R30	2.4	11.0	157.1
H.s. 1.0 mm	0.8	-0.3	R30	0.2	1.3	18.3
***Epischura lacustris* S.A. Forbes**						
E.l. adult female	1.5	0.4	R32	1.9	6.6	94.2
E.l. adult male	1.4	0.3	R32	2.1	7.9	113.4
E. l. immature	1.0	0.0	R32	1.7	5.2	74.7
***Diaptomus pribilofensis* Juday and Muttkowski**						
D.p. adult female	1.2	0.2	R30	1.4	4.0	57.8
D.p. gravid female	1.2	0.2	R30	1.4	4.0	57.8
D.p. adult male	1.2	0.2	R30	1.4	3.9	55.6
D.p. immature 2.0	1.2	0.1	R30	1.3	3.8	54.7
D.p. immature 1.0	1.0	0.0	R30	1.0	2.6	37.0
D.p. immature 0.75	0.8	-0.3	R30	0.2	1.3	18.3
D.p. immature 0.5	0.5	-0.7	R30	-0.8	0.5	6.5
***Diaptomus minutus* Lilljeborg**						
D.m. adult female	0.9	-0.1	R27	0.9	2.5	35.1
D.m. gravid female	0.9	-0.1	R27	0.9	2.4	34.6
D.m. adult male	0.9	-0.1	R27	0.7	2.1	29.9
D.m. immature 2.0	1.1	0.0	R27	1.2	3.3	46.9
D.m. immature 1.0	1.0	0.0	R27	1.0	2.8	39.9
D.m. immature 0.75	0.8	-0.3	R27	0.3	1.3	18.6
D.m. immature 0.5	0.5	-0.7	R27	-0.9	0.4	6.1
Calanoid nauplius	0.3	-1.2	R6	-1.6	0.2	2.9
***Cyclops scutifer* Sars**						
C. s. adult female	1.3	0.2	R94	2.0	7.5	107.0
C. s. gravid female	1.3	0.3	R94	2.1	8.3	118.2
C. s. adult male	1.0	0.0	R94	1.4	3.9	55.6

Table I-7: Zooplankton Biomass Length-Weight Regression Information for East Lake, Lake N11 and the L and M Lakes of the Gahcho Kue Project, Fall 2011 (continued)

Instar Identification and Size Classes	Mean Length [mm]	Ln[(a)] (Length) [mm]	Regression Equation Number [(b)]	Calculated Ln (Weight) [µg]	Calculated Dry Weight [µg]	Calculated Wet Weight [µg]
C. s. immature 2.0	1.2	0.1	R94	1.7	5.6	80.0
C. s. immature 1.0	1.0	0.0	R94	1.3	3.6	51.8
C. s. immatue 0.75	0.8	-0.3	R94	0.5	1.7	23.9
C. s. immature 0.5	0.5	-0.7	R94	-0.6	0.5	7.7
***Cyclops vernalis* Fischer**						
C.v. immature 0.75 mm	0.5	-0.7	R92	-1.0	0.4	5.5
***Cyclops capillatus* Sars**						
C.c. mature	1.6	0.5	R92	2.1	8.2	117.7
C. c. immature	0.5	-0.7	R92	-1.0	0.4	5.5
***Macrocyclops albidus* Jurine**	1.7	0.5	R92	2.1	8.4	119.5
Immature cyclopoid	0.5	-0.7	R92	-1.0	0.4	5.5
Cyclopoid nauplius	0.3	-1.3	R49	-1.6	0.2	2.7
***Daphnia middendorffiana* Fischer**						
D. m. 3.0	3.0	1.1	DsL885	4.7	110.1	1573.3
D. m. 2.5	2.5	0.9	DsL885	4.2	63.6	908.6
D. m. 2.0	2.0	0.7	DsL885	3.5	32.5	464.0
D. m. 1.5	1.5	0.4	DsL885	2.6	13.7	195.1
D. m. 1.0	1.0	0.0	DsL885	1.4	3.9	55.8
D. m. 0.5	0.5	-0.7	DsL885	-0.7	0.5	7.1
***Holopedium gibberum* Zaddach**						
H. g. 3.0	2.5	0.9	L223Hg	4.6	98.3	1404.7
H. g. 2.0	1.8	0.6	L223Hg	3.6	37.6	536.8
H. g. 1.0	1.0	0.0	L223Hg	2.1	8.1	115.5
H. g. 0.5	0.5	-0.7	L223Hg	0.2	1.3	18.3
Eubosmina longispina						
E. l. 1.0	1.0	0.0	L223Bl	2.4	11.5	164.1
E. l. 0.75	0.8	-0.3	L223Bl	1.5	4.5	64.5
E. l. 0.5	0.5	-0.7	L223Bl	0.1	1.2	16.5
E. l. 0.25	0.3	-1.4	L223Bl	-2.2	0.1	1.6
E. l. male	0.5	-0.7	L223Bl	0.1	1.2	16.5
***Daphnia longiremis* Sars**						
D. l. 1.3mm	1.3	0.3	L302	2.5	12.2	174.5

Table I-7: Zooplankton Biomass Length-Weight Regression Information for East Lake, Lake N11 and the L and M Lakes of the Gahcho Kue Project, Fall 2011 (continued)

Instar Identification and Size Classes	Mean Length [mm]	Ln[a] (Length) [mm]	Regression Equation Number [b]	Calculated Ln (Weight) [µg]	Calculated Dry Weight [µg]	Calculated Wet Weight [µg]
D.I. 1.0 mm	1.0	0.0	L302	1.6	4.9	70.3
D.I. 0.5 mm	0.5	-0.8	L302	-1.0	0.4	5.1
D.I.male 1.2 mm	1.2	0.2	L302	2.2	9.4	133.6
***Ophryoxus gracilis* Sars**	1.1	0.1	L223Bl	2.7	14.9	213.1
***Eurycercus lamellatus* (O.F. Muller)**	2.1	0.7	L223Cs	5.5	243.4	3477.8
***Chydorus sphaericus* (O.F.Muller)**	0.5	-0.8	L223Cs	-0.7	0.5	7.4
***Kellicottia* spp.**	0.1	-2.1	L224	-	0.0	0.2
***Keratella* spp.**	0.1	-2.3	L224	-	0.0	0.2
***Polyarthra* spp.**	0.1	-2.0	L227*	-	0.1	0.8
***Conochilus* spp.**	0.2	-1.7	L223	-	0.0	0.6
***Lecane* spp.**	0.1	-2.3	L227	-	0.0	0.5
***Pleosoma* spp.**	0.2	-1.5	L224*	-	0.1	1.0
***Synchaeta* spp.**	0.1	-2.1	L227*	-	0.0	0.7

(a) Length/DryWeight Regressions in form Lnw = Lna + bLnL from Lawrence et al. 1989.
R6 LnW= 0.9926-2.0997 LnL.
R27 LnW = 1.0542 -2.748 LnL.
R30 LnW =0.9772-2.5384 LnL.
R32 LnW = 1.1337 + 2.7882 LnL.
R49 LnW= 1.6388 - 2.4474 LnL.
R92 LnW= 0.8344-2.5760 LnL.
R94 LnW = 1.3169 - 2.7197 LnL.
DsL885 LnW = 1.3933 - 3.0114 LnL.
RL302 LnW = 1.6274 - 3.3367 LnL.
RL223Hg LnW = 2.1169 + 2.6972 LnL.
RL223Bl LnW = 2.4751 - 3.3614 LnL.
RL223Cs LnW = 3.1270 -3.3678 LnL.

(b) * = interpolated.

Notes: mm= millimeters; µg/L = micrograms per litre; spp = numerous species in the genera; - = information not available.

APPENDIX II

Benthic Invertebrates - Supporting Data, 2011

Table II-1: Habitat Data for Benthic Invertebrate Stations Sampled in East Lake, Lake N11, and the L and M Lakes of the Gahcho Kue Project, Fall 2011

Lake	Station	Date	UTM Coordinates (Zone 12V, NAD83)		Water Depth [m]	Field Water Quality Data								Sediment Chemistry Data					
						Water Temperature [°C]		Dissolved Oxygen [mg/L]		Specific Conductivity [µS/cm]		pH		Moisture Content [%]	Total Organic Carbon [%]	Sediment Particle Size			
			Easting	Northing		Surface	Bottom	Surface	Bottom	Surface	Bottom	Surface	Bottom			Sand [%]	Silt [%]	Clay [%]	Fines (silt + clay) [%]
East (Reference) Lake	EAST-D1	17-Aug-2011	597732	7038735	7.4 (reps A & B) 11.3 (reps C, D & E)	15.2	15.0	9.3	9.3	15.0	15.0	6.9	6.9	71	3	86	11	4	15
	EAST-D2	17-Aug-2011	598225	7039182	14.2	15.2	15.1	9.3	9.2	15.0	15.0	6.8	6.8	90	10	62	30	8	38
	EAST-D3	17-Aug-2011	598834	7040563	15.3	15.1	15.0	9.3	9.2	15.0	15.0	6.8	6.8	92	13	77	15	8	23
	EAST-D4	17-Aug-2011	599450	7041433	9.0	15.1	15.1	9.1	9.1	15.0	15.0	6.8	6.8	92	13	87	6	8	14
	EAST-D5	17-Aug-2011	599191	7040941	14.9	15.1	15.1	9.2	9.1	15.0	15.0	6.7	6.8	92	11	77	16	6	22
Lake N11	N11-D1	13-Aug-2011	587367	7040304	6.5	16.1	15.9	9.2	9.2	11.0	11.0	6.5	6.6	92	13	77	16	7	23
	N11-D2	16-Aug-2011	586893	7040510	6.2	14.2	14.2	9.5	9.4	12.0	12.0	6.7	6.7	91	9	74	22	4	26
	N11-D3	15-Aug-2011	587460	7041119	6.1	16.3	16.3	9.1	9.0	11.0	11.0	6.8	6.8	90	16	78	17	5	22
	N11-D4	14-Aug-2011	587543	7041902	6.1	15.9	15.9	9.2	9.1	12.0	12.0	6.1	6.3	87	16	75	18	8	26
	N11-D5	15-Aug-2011	586753	7042017	6.0	15.3	15.3	9.3	9.2	12.0	12.0	6.3	6.3	92	16	72	19	10	29
Lake M1	M1	20-Aug-2011	596462	7044978	2.0	9.6	9.6	10.6	10.6	14.0	14.0	6.8	6.7	-	-	-	-	-	-
Lake M2	M2	18-Aug-2011	597016	7044841	5.0	13.5	13.5	9.8	9.8	14.0	14.0	6.7	6.4	-	-	-	-	-	-
Lake M3	M3	18-Aug-2011	597452	7043954	7.0	13.6	14.3	9.8	9.8	14.0	14.0	6.6	6.7	90	13	63	24	14	38
Lake M4	M4	20-Aug-2011	595252	7040163	12.0	13.6	14.0	9.8	9.8	14.0	14.0	6.7	6.7	92	15	67	28	5	33
Lake L2	L2	20-Aug-2011	593396	7038967	3.8	12.2	11.4	10.5	9.7	14.0	15.0	6.9	6.4	-	-	-	-	-	-

Notes: - = not available.
Benthic invertebrates were sampled at two locations for station EAST-D1 because the first location did not have sufficient soft bottom substrate to sample more than two replicates.

Table II-2: Benthic Invertebrate Summary Variables for East Lake, Lake N11, and the L and M Lake of the Gahcho Kue Project, Fall 2011

Lake	Habitat Type	Station	Total Density (no./m²) (mean ± 1 SE)			Total Richness (taxa/station)	Mean Total Richness (taxa/station) (mean ± 1 SE)			Simpson's Diversity Index	Evenness
East (Reference) Lake	Deep Open-Water	EAST-D1	1,034	±	337	21	9	±	3	0.90	0.49
		EAST-D2	621	±	325	14	6	±	2	0.86	0.53
		EAST-D3	3,440	±	749	23	14	±	1	0.83	0.26
		EAST-D4	5,207	±	1,428	27	17	±	1	0.87	0.29
		EAST-D5	8,914	±	1,418	25	18	±	1	0.87	0.32
Lake N11	Deep Open-Water	N11-D1	25,190	±	4,158	25	18	±	1	0.67	0.12
		N11-D2	37,095	±	8,732	29	19	±	2	0.72	0.12
		N11-D3	20,819	±	4,857	29	19	±	2	0.79	0.17
		N11-D4	810	±	316	18	7	±	2	0.83	0.33
		N11-D5	53,776	±	17,303	33	22	±	3	0.52	0.06
Lake M1	Shallow Open-Water	M1	14,095	±	2,554	30	19	±	2	0.91	0.39
Lake M2	Shallow Open-Water	M2	13,595	±	4,769	26	17	±	2	0.87	0.29
Lake M3	Shallow Open-Water	M3	6,345	±	1,583	32	18	±	4	0.90	0.30
Lake M4	Shallow Open-Water	M4	241	±	84	9	3	±	1	0.81	0.59
Lake L2	Shallow Open-Water	L2	8,897	±	3,331	26	15	±	2	0.88	0.33

Notes: SE = standard error of the mean.
Deep Open-Water = open-water areas with water depths ranging from 6 to 10 m.
Shallow Open-Water = open-water areas with water depths less than 4 metres.

Table II-3: Percent Mean Relative Density of Major Taxa in East Lake, Lake N11, and the L and M Lakes Sampled for the Gahcho Kue Project, Fall 2011

Taxa	Reference Lake					Lake N11					Lake M1	Lake M2	Lake M3	Lake M4	Lake L2
	East-D1	East-D2	East-D3	East-D4	East-D5	N11-D1	N11-D2	N11-D3	N11-D4	N11-D5	M1	M2	M3	M4	L2
	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]
Nematoda	6	15	6	20	13	33	40	38	11	12	7	16	8	32	6
Oligochaeta	9	33	10	10	10	0	8	2	4	1	11	1	2	0	4
Gastropoda	4	3	0	1	1	1	1	1	2	0	6	0	2	0	8
Pelecypoda	26	22	18	18	7	6	6	5	22	3	7	6	2	4	7
Chironomidae	53	25	66	49	53	57	46	39	59	81	49	66	71	39	50
Other	2	1	1	3	15	2	0	14	2	2	20	10	15	25	25
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Note: % = percent.

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011

Major Taxon	Family	Subfamily	Tribe	Genus/Species	East (Reference) Lake D1					East (Reference) Lake D2					East (Reference) Lake D3					East (Reference) Lake D4				
					EAST-D1-A	EAST-D1-B	EAST-D1-C	EAST-D1-D	EAST-D1-E	EAST-D2-A	EAST-D2-B	EAST-D2-C	EAST-D2-D	EAST-D2-E	EAST-D3-A	EAST-D3-B	EAST-D3-C	EAST-D3-D	EAST-D3-E	EAST-D4-A	EAST-D4-B	EAST-D4-C	EAST-D4-D	EAST-D4-E
Microturbellaria	Typhloplanidae	-	-	*Mesostoma*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nematoda	-	-	-	-	0	1	0	1	5	0	10	1	0	0	3	5	3	7	4	12	36	47	0	26
Oligochaeta	Enchytraeidae	-	-	-	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbriculidae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	Naididae	Naidinae	-	-	2	2	0	0	3	2	12	3	0	1	3	4	8	7	8	4	1	10	2	6
	Naididae	Tubificinae	-	-	2	0	0	0	1	1	0	0	2	1	1	2	1	5	0	4	11	9	7	3
Gastropoda	Valvatidae	-	-	*Valvata sincera*	4	0	0	0	1	1	0	1	0	0	0	0	0	1	0	2	0	0	3	2
Bivalvia	Pisidiidae	-	-	(i/d)	5	2	5	0	4	2	5	0	3	0	3	3	4	9	2	3	10	19	12	7
		-	-	*Sphaerium*	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1	4	0	0
		-	-	*Pisidium*	2	0	4	1	7	1	4	0	0	0	7	12	6	19	4	4	11	12	11	14
Hydracarina	-	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3	0	1
Copepoda - Calanoida	-	-	-	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Copepoda - Cyclopoida	Cyclopidae	Cyclopinae	-	*Acanthocyclops*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	10	0	0
	Ergasilidae	-	-	*Ergasilus*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Copepoda - Harpacticoida	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	2	8	0	1
Ostracoda	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladocera	Bosminidae	-	-	*Bosmina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chydoridae	-	-	*Eurycercus*	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chydoridae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Daphnidae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Macrothricidae	-	-	-	7	16	0	0	0	1	0	0	1	0	1	0	1	0	1	0	2	11	1	1
	Sididae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichoptera	Hydroptilidae	-	-	*Agraylea*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leptoceridae	-	-	*Oecetis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limnephilidae	-	-	*Grensia praeterica*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Phryganeidae	-	-	*Phryganea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diptera	Chironomidae	-	-	(pupa)	2	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	1	0	0
		Tanypodinae	Pentaneurini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Ablabesmyia	0	3	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0
				Thienemannimyia group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Procladiini	*Procladius*	0	3	1	0	1	0	0	0	0	0	1	4	2	3	2	1	2	6	3	1
		Diamesinae	Protanypini	*Protanypus*	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
		Prodiamesinae	-	*Monodiamesa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
		Orthocladiinae	-	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Orthocladiini	*Abyskomyia*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
				Cricotopus / Orthocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
				Heterotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Heterotrissocladius	2	4	0	0	1	0	4	0	0	0	4	6	14	21	55	2	7	27	1	1
				Parakiefferiella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Psectrocladius	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0
				Zalutschia	0	0	0	0	0	0	0	0	0	0	1	0	3	1	3	0	1	0	1	0
		Chironominae	Chironomini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Chironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0	1
				Cladopelma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
				Cryptochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
				Dicrotendipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011 (continued)

Major Taxon	Family	Subfamily	Tribe	Genus/Species	East (Reference) Lake D1					East (Reference) Lake D2					East (Reference) Lake D3					East (Reference) Lake D4				
					EAST-D1-A	EAST-D1-B	EAST-D1-C	EAST-D1-D	EAST-D1-E	EAST-D2-A	EAST-D2-B	EAST-D2-C	EAST-D2-D	EAST-D2-E	EAST-D3-A	EAST-D3-B	EAST-D3-C	EAST-D3-D	EAST-D3-E	EAST-D4-A	EAST-D4-B	EAST-D4-C	EAST-D4-D	EAST-D4-E
Diptera (con't)	Chironomidae (con't)	Chironominae (con't)	Chironomini (con't)	*Microtendipes*	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1
				Pagastiella	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	2	2	1	1
				Parachironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Polypedilum	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Sergenta	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	3	2	2	2	5
				Stictochironomus	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Pseudochironomini	*Pseudochironomus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Tanytarsini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Cladotanytarsus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
				Corynocera	2	1	0	0	0	0	1	0	0	0	1	1	2	3	0	12	10	40	17	27
				Micropsectra	0	2	0	0	1	0	1	1	2	0	8	7	19	32	33	5	3	47	15	8
				Micropsectra / Tanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Paratanytarsus	17	5	0	0	1	1	2	1	1	0	2	0	0	2	1	3	1	4	1	3
				Stempellinella	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Tanytarsus	1	0	1	0	4	3	0	0	0	0	0	3	2	4	4	0	0	0	0	0
	Ceratopogonidae	Ceratopogoninae	-	*Bezzia*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Dasyheleinae		*Dasyhelea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Empididae	-	-	*Chelifera / Metachela*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terrestrial	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total					**57**	**49**	**12**	**2**	**30**	**12**	**45**	**7**	**9**	**2**	**37**	**55**	**69**	**119**	**126**	**61**	**108**	**270**	**80**	**112**

Major Taxon	Family	Subfamily	Tribe	Genus/Species	East (Reference) Lake D5					Lake N11-D1					Lake N11-D2					Lake N11-D3				
					EAST-D5-A	EAST-D5-B	EAST-D5-C	EAST-D5-D	EAST-D5-E	N11-D1-A	N11-D1-B	N11-D1-C	N11-D1-D	N11-D1-E	N11-D2-A	N11-D2-B	N11-D2-C	N11-D2-D	N11-D2-E	N11-D3-A	N11-D3-B	N11-D3-C	N11-D3-D	N11-D3-E
Microturbellaria	Typhloplanidae	-	-	*Mesostoma*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nematoda	-	-	-	-	8	25	41	19	41	108	328	131	221	190	20	379	394	440	472	157	160	109	84	418
Oligochaeta	Enchytraeidae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
	Lumbriculidae	-	-	-	0	0	0	0	0	1	1	1	0	0	0	3	4	1	8	0	0	0	0	4
	Naididae	Naidinae	-	-	19	22	27	8	19	0	0	3	1	0	1	64	65	74	56	4	8	4	4	17
	Naididae	Tubificinae	-	-	2	0	2	4	3	0	0	0	0	0	5	4	9	4	24	9	0	1	0	1
Gastropoda	Valvatidae	-	-	*Valvata sincera*	1	3	1	3	2	6	8	3	3	5	0	12	4	8	6	3	1	10	0	14
Bivalvia	Pisidiidae	-	-	(i/d)	6	12	4	2	3	0	29	8	25	18	0	53	27	43	59	12	20	6	7	25
		-	-	*Sphaerium*	0	0	0	0	0	4	1	2	0	4	1	3	1	0	0	0	0	2	0	0
		-	-	*Pisidium*	10	15	11	6	4	10	18	16	10	16	3	13	17	12	11	9	16	7	3	11
Hydracarina	-	-	-	-	0	2	8	0	10	0	8	0	0	4	0	0	0	0	0	0	0	16	0	0
Copepoda - Calanoida	-	-	-	-	0	1	1	1	1	0	8	0	0	0	1	0	0	8	0	4	4	4	2	8
Copepoda - Cyclopoida	Cyclopidae	Cyclopinae	-	*Acanthocyclops*	2	7	4	1	5	9	0	0	4	0	0	89	32	0	8	16	12	50	4	34
	Ergasilidae	-	-	*Ergasilus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Copepoda - Harpacticoida	-	-	-	-	1	44	21	19	52	16	8	11	20	4	4	0	0	0	0	108	48	105	18	48
Ostracoda	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011 (continued)

Major Taxon	Family	Subfamily	Tribe	Genus/Species	East (Reference) Lake D5					Lake N11-D1					Lake N11-D2					Lake N11-D3				
					EAST-D5-A	EAST-D5-B	EAST-D5-C	EAST-D5-D	EAST-D5-E	N11-D1-A	N11-D1-B	N11-D1-C	N11-D1-D	N11-D1-E	N11-D2-A	N11-D2-B	N11-D2-C	N11-D2-D	N11-D2-E	N11-D3-A	N11-D3-B	N11-D3-C	N11-D3-D	N11-D3-E
Cladocera	Bosminidae	-	-	*Bosmina*	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chydoridae	-	-	*Eurycercus*	0	0	0	0	0	7	0	0	1	0	0	3	0	0	0	0	2	12	1	3
	Chydoridae	-	-	-	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Daphnidae	-	-	-	0	0	0	0	0	7	1	2	2	0	0	16	2	3	6	0	7	14	0	2
	Macrothricidae	-	-	-	9	3	5	0	3	0	0	0	0	0	0	16	0	0	0	0	9	23	0	8
	Sididae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichoptera	Hydroptilidae	-	-	*Agraylea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leptoceridae	-	-	*Oecetis*	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0
	Limnephilidae	-	-	*Grensia praeterica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Phryganeidae	-	-	*Phryganea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diptera	Chironomidae	-	-	(pupa)	0	1	3	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		Tanypodinae	Pentaneurini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
				Ablabesmyia	0	1	0	0	0	9	3	1	0	1	0	5	18	9	18	5	1	15	0	1
				Thienemannimyia group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Procladiini	*Procladius*	6	1	4	0	2	22	14	4	16	19	6	41	38	33	41	16	32	26	10	39
		Diamesinae	Protanypini	*Protanypus*	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Prodiamesinae	-	*Monodiamesa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Orthocladiinae	-	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
			Orthocladiini	*Abyskomyia*	3	7	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Cricotopus / Orthocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
				Heterotanytarsus	0	0	0	0	0	4	8	0	0	8	0	16	0	8	0	0	4	0	0	0
				Heterotrissocladius	54	48	63	10	32	9	0	3	0	1	0	0	0	1	9	0	0	4	0	9
				Parakiefferiella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Psectrocladius	3	2	1	0	1	0	8	3	11	4	1	35	10	9	20	81	21	7	25	119
				Zalutschia	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Chironominae	Chironomin	(i/d)	0	0	0	0	0	1	2	0	4	1	0	0	0	0	0	0	0	0	0	0
				Chironomus	0	0	0	0	0	0	0	0	0	0	0	0	2	9	0	0	0	0	0	0
				Cladopelma	0	0	0	0	2	4	17	4	5	2	2	8	0	9	8	14	15	5	3	8
				Cryptochironomus	0	1	0	0	1	0	6	0	6	6	0	9	2	2	1	0	4	4	1	4
				Dicrotendipes	0	0	0	0	0	0	0	4	1	0	0	0	0	0	1	0	0	1	0	0
				Microtendipes	2	1	1	1	1	7	5	5	7	19	1	34	3	8	8	3	14	20	2	11
				Pagastiella	0	0	0	1	0	5	0	0	0	1	0	0	0	0	9	4	4	15	1	17
				Parachironomus	0	0	0	0	0	0	0	0	0	0	0	8	0	8	1	0	0	3	0	0
				Polypedilum	0	0	0	0	0	0	16	1	8	2	3	8	2	15	3	2	4	1	5	5
				Sergenta	5	2	4	0	1	0	0	0	0	0	0	0	0	0	0	1	6	0	0	8
				Stictochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Pseudochironomini	*Pseudochironomus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
			Tanytarsini	(i/d)	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8
				Cladotanytarsus	0	1	0	1	0	0	11	2	11	12	3	16	22	10	13	0	1	0	2	18
				Corynocera	6	22	21	3	15	214	395	139	310	241	13	283	491	228	272	35	68	57	23	69
				Micropsectra	41	57	37	9	32	9	8	0	0	5	0	0	16	0	1	0	0	4	0	8
				Micropsectra / Tanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	8
				Paratanytarsus	0	8	4	3	6	5	1	0	1	0	0	0	0	0	0	1	0	0	0	1
				Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Tanytarsus	1	1	2	3	0	10	8	0	1	5	0	32	32	16	48	0	8	8	2	16
	Ceratopogonidae	Ceratopogoninae	-	*Bezzia*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Dasyheleinae		*Dasyhelea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Empididae	-	-	*Chelifera / Metachela*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terrestrial	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total					**182**	**292**	**269**	**99**	**240**	**475**	**914**	**343**	**668**	**568**	**64**	**1,152**	**1,193**	**958**	**1,121**	**488**	**473**	**538**	**197**	**942**

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011 (continued)

Major Taxon	Family	Subfamily	Tribe	Genus/Species	Lake N11-D4					Lake N11-D5					Lake M1					Lake M2				
					N11-D4-A	N11-D4-B	N11-D4-C	N11-D4-D	N11-D4-E	N11-D5-A	N11-D5-B	N11-D5-C	N11-D5-D	N11-D5-E	M1-A	M1-B	M1-C	M1-D	M1-E	M2-A	M2-B	M2-C	M2-D	M2-E
Microturbellaria	Typhloplanidae	-	-	*Mesostoma*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nematoda	-	-	-	-	0	6	1	3	0	105	514	25	58	65	8	44	12	34	16	6	54	10	101	88
Oligochaeta	Enchytraeidae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbriculidae	-	-	-	0	0	0	2	0	2	0	2	1	0	5	8	5	2	3	1	0	1	2	1
	Naididae	Naidinae	-	-	0	0	0	1	0	18	24	0	16	15	16	59	31	8	0	0	0	0	8	0
	Naididae	Tubificinae	-	-	0	0	0	1	0	0	1	0	2	1	0	19	9	0	16	0	0	0	5	0
Gastropoda	Valvatidae	-	-	*Valvata sincera*	0	1	0	0	1	9	8	1	3	1	14	28	13	21	16	0	1	2	2	1
Bivalvia	Pisidiidae	-	-	(i/d)	0	1	0	5	0	16	47	5	14	5	21	29	11	10	13	6	10	1	16	18
		-	-	*Sphaerium*	0	0	0	0	0	2	1	2	0	0	0	1	1	4	0	0	0	0	0	0
		-	-	*Pisidium*	3	4	0	5	3	23	18	4	14	9	15	7	1	2	3	9	7	1	19	12
Hydracarina	-	-	-	-	0	0	0	0	0	12	27	0	2	0	0	18	8	24	8	4	12	0	18	3
Copepoda - Calanoida	-	-	-	-	0	0	0	0	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Copepoda - Cyclopoida	Cyclopidae	Cyclopinae	-	*Acanthocyclops*	0	1	0	0	0	28	34	0	0	0	0	16	4	0	8	2	1	0	20	41
	Ergasilidae	-	-	*Ergasilus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Copepoda - Harpacticoida	-	-	-	-	0	2	0	0	0	12	48	0	0	20	24	44	20	81	80	17	16	10	72	0
Ostracoda	-	-	-	-	0	0	0	0	0	0	0	0	0	0	8	1	0	8	0	1	0	0	0	1
Cladocera	Bosminidae	-	-	*Bosmina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
	Chydoridae	-	-	*Eurycercus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	Chydoridae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
	Daphnidae	-	-	-	0	0	0	0	0	2	0	0	2	4	0	0	0	0	0	0	0	0	0	0
	Macrothricidae	-	-	-	0	0	0	0	0	0	0	0	0	0	8	6	0	0	0	0	2	0	5	19
	Sididae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Trichoptera	Hydroptilidae	-	-	*Agraylea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leptoceridae	-	-	*Oecetis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limnephilidae	-	-	*Grensia praeterica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Phryganeidae	-	-	*Phryganea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Diptera	Chironomidae	-	-	(pupa)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Tanypodinae	Pentaneurini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Ablabesmyia	0	0	0	0	0	5	8	0	2	0	17	16	5	21	1	1	4	0	9	3
				Thienemannimyia group	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
			Procladiini	*Procladius*	0	3	1	1	3	39	50	10	27	19	26	13	1	9	11	13	21	1	31	39
		Diamesinae	Protanypini	*Protanypus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Prodiamesinae	-	*Monodiamesa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Orthocladiinae	-	(i/d)	0	0	0	0	0	0	8	0	0	0	0	4	4	0	0	0	0	0	8	4
			Orthocladiini	*Abyskomyia*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Cricotopus / Orthocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
				Heterotanytarsus	0	1	0	0	0	1	24	8	0	12	0	0	0	1	0	0	0	0	4	0
				Heterotrissocladius	0	0	0	0	0	0	10	0	0	1	0	0	0	0	0	0	2	0	0	0
				Parakiefferiella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Psectrocladius	0	1	0	0	0	28	27	1	17	1	59	60	4	59	16	0	24	0	45	46
				Zalutschia	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011 (continued)

Major Taxon	Family	Subfamily	Tribe	Genus/Species	Lake N11-D4					Lake N11-D5					Lake M1					Lake M2				
					N11-D4-A	N11-D4-B	N11-D4-C	N11-D4-D	N11-D4-E	N11-D5-A	N11-D5-B	N11-D5-C	N11-D5-D	N11-D5-E	M1-A	M1-B	M1-C	M1-D	M1-E	M2-A	M2-B	M2-C	M2-D	M2-E
Diptera (con't)	Chironomidae (con't)	Chironominae	Chironomini	(i/d)	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
				Chironomus	0	0	0	0	1	4	5	0	2	1	1	26	16	2	0	0	0	0	0	0
				Cladopelma	0	0	0	0	0	4	12	0	8	1	3	6	2	19	0	1	8	0	8	3
				Cryptochironomus	1	1	1	1	0	2	6	1	1	1	0	2	0	0	0	0	3	1	4	3
				Dicrotendipes	0	0	0	0	0	5	0	0	0	0	3	1	2	2	0	0	3	1	1	3
				Microtendipes	1	0	0	0	0	9	13	0	3	0	0	4	0	0	8	21	86	8	137	150
				Pagastiella	1	2	0	2	0	7	9	0	13	8	42	28	33	16	0	6	25	1	35	4
				Parachironomus	0	0	0	0	0	2	0	0	1	1	0	0	0	1	0	0	0	0	0	0
				Polypedilum	0	2	0	0	0	52	90	8	31	22	11	24	10	16	0	14	6	2	22	17
				Sergenta	0	0	0	1	0	2	0	1	0	1	1	0	0	1	0	0	0	0	0	3
				Stictochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Pseudochironomini	*Pseudochironomus*	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
			Tanytarsini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	0	4
				Cladotanytarsus	0	0	0	0	0	19	89	0	26	8	1	0	0	1	0	2	11	0	13	7
				Corynocera	3	11	0	14	1	1,097	1,385	250	1,199	230	0	0	0	0	0	3	13	0	15	25
				Micropsectra	0	0	0	2	0	13	64	0	16	4	0	0	0	0	0	0	0	0	0	0
				Micropsectra / Tanytarsus	0	0	0	0	0	0	8	0	16	4	0	0	0	0	0	0	0	0	0	0
				Paratanytarsus	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
				Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Tanytarsus	0	0	0	0	0	9	10	0	0	0	50	73	21	32	0	1	3	0	45	59
	Ceratopogonidae	Ceratopogoninae	-	*Bezzia*	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	1
		Dasyheleinae		*Dasyhelea*	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
	Empididae	-	-	*Chelifera / Metachela*	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Terrestrial	-	-	-	-	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total					**9**	**36**	**3**	**38**	**9**	**1,545**	**2,551**	**318**	**1,477**	**443**	**334**	**540**	**221**	**383**	**199**	**109**	**321**	**39**	**655**	**567**

Major Taxon	Family	Subfamily	Tribe	Genus/Species	Lake N11-D4					Lake N11-D5					Lake M1					Lake M2				
					N11-D4-A	N11-D4-B	N11-D4-C	N11-D4-D	N11-D4-E	N11-D5-A	N11-D5-B	N11-D5-C	N11-D5-D	N11-D5-E	M1-A	M1-B	M1-C	M1-D	M1-E	M2-A	M2-B	M2-C	M2-D	M2-E
Microturbellaria	Typhloplanidae	-	-	*Mesostoma*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nematoda	-	-	-	-	0	6	1	3	0	105	514	25	58	65	8	44	12	34	16	6	54	10	101	88
Oligochaeta	Enchytraeidae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lumbriculidae	-	-	-	0	0	0	2	0	2	0	2	1	0	5	8	5	2	3	1	0	1	2	1
	Naididae	Naidinae	-	-	0	0	0	1	0	18	24	0	16	15	16	59	31	8	0	0	0	0	8	0
	Naididae	Tubificinae	-	-	0	0	0	1	0	0	1	0	2	1	0	19	9	0	16	0	0	0	5	0
Gastropoda	Valvatidae	-	-	*Valvata sincera*	0	1	0	0	1	9	8	1	3	1	14	28	13	21	16	0	1	2	2	1
Bivalvia	Pisidiidae	-	-	(i/d)	0	1	0	5	0	16	47	5	14	5	21	29	11	10	13	6	10	1	16	18
		-	-	*Sphaerium*	0	0	0	0	0	2	1	2	0	0	0	1	1	4	0	0	0	0	0	0
		-	-	*Pisidium*	3	4	0	5	3	23	18	4	14	9	15	7	1	2	3	9	7	1	19	12
Hydracarina	-	-	-	-	0	0	0	0	0	12	27	0	2	0	0	18	8	24	8	4	12	0	18	3
Copepoda - Calanoida	-	-	-	-	0	0	0	0	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	0
Copepoda - Cyclopoida	Cyclopidae	Cyclopinae	-	*Acanthocyclops*	0	1	0	0	0	28	34	0	0	0	0	16	4	0	8	2	1	0	20	41
	Ergasilidae	-	-	*Ergasilus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Copepoda - Harpacticoida	-	-	-	-	0	2	0	0	0	12	48	0	0	20	24	44	20	81	80	17	16	10	72	0
Ostracoda	-	-	-	-	0	0	0	0	0	0	0	0	0	0	8	1	0	8	0	1	0	0	0	1

Table II-4: Raw Benthic Invertebrate Abundance Data (no./sample) Collected Using a Standard Ekman Grab Sampler, Fall 2011 (continued)

Major Taxon	Family	Subfamily	Tribe	Genus/Species	Lake N11-D4					Lake N11-D5					Lake M1					Lake M2				
					N11-D4-A	N11-D4-B	N11-D4-C	N11-D4-D	N11-D4-E	N11-D5-A	N11-D5-B	N11-D5-C	N11-D5-D	N11-D5-E	M1-A	M1-B	M1-C	M1-D	M1-E	M2-A	M2-B	M2-C	M2-D	M2-E
Cladocera	Bosminidae	-	-	*Bosmina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
	Chydoridae	-	-	*Eurycercus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	Chydoridae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
	Daphnidae	-	-	-	0	0	0	0	0	2	0	0	2	4	0	0	0	0	0	0	0	0	0	0
	Macrothricidae	-	-	-	0	0	0	0	0	0	0	0	0	0	8	6	0	0	0	0	2	0	5	19
	Sididae	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Trichoptera	Hydroptilidae	-	-	*Agraylea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leptoceridae	-	-	*Oecetis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limnephilidae	-	-	*Grensia praeterica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Phryganeidae	-	-	*Phryganea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Diptera	Chironomidae	-	-	(pupa)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Tanypodinae	Pentaneurini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Ablabesmyia	0	0	0	0	0	5	8	0	2	0	17	16	5	21	1	1	4	0	9	3
				Thienemannimyia group	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
			Procladiini	*Procladius*	0	3	1	1	3	39	50	10	27	19	26	13	1	9	11	13	21	1	31	39
		Diamesinae	Protanypini	*Protanypus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Prodiamesinae	-	*Monodiamesa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Orthocladiinae	-	(i/d)	0	0	0	0	0	0	8	0	0	0	0	4	4	0	0	0	0	0	8	4
			Orthocladiini	*Abyskomyia*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Cricotopus / Orthocladius	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
				Heterotanytarsus	0	1	0	0	0	1	24	8	0	12	0	0	0	1	0	0	0	0	4	0
				Heterotrissocladius	0	0	0	0	0	0	10	0	0	1	0	0	0	0	0	0	2	0	0	0
				Parakiefferiella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Psectrocladius	0	1	0	0	0	28	27	1	17	1	59	60	4	59	16	0	24	0	45	46
				Zalutschia	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0
		Chironominae	Chironomini	(i/d)	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
				Chironomus	0	0	0	0	1	4	5	0	2	1	1	26	16	2	0	0	0	0	0	0
				Cladopelma	0	0	0	0	0	4	12	0	8	1	3	6	2	19	0	1	8	0	8	3
				Cryptochironomus	1	1	1	1	0	2	6	1	1	1	0	2	0	0	0	0	3	1	4	3
				Dicrotendipes	0	0	0	0	0	5	0	0	0	0	3	1	2	2	0	0	3	1	1	3
				Microtendipes	1	0	0	0	0	9	13	0	3	0	0	4	0	0	8	21	86	8	137	150
				Pagastiella	1	2	0	2	0	7	9	0	13	8	42	28	33	16	0	6	25	1	35	4
				Parachironomus	0	0	0	0	0	2	0	0	1	1	0	0	0	1	0	0	0	0	0	0
				Polypedilum	0	2	0	0	0	52	90	8	31	22	11	24	10	16	0	14	6	2	22	17
				Sergenta	0	0	0	1	0	2	0	1	0	1	1	0	0	1	0	0	0	0	0	3
				Stictochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Pseudochironomini	*Pseudochironomus*	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
			Tanytarsini	(i/d)	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	0	4
				Cladotanytarsus	0	0	0	0	0	19	89	0	26	8	1	0	0	1	0	2	11	0	13	7
				Corynocera	3	11	0	14	1	1,097	1,385	250	1,199	230	0	0	0	0	0	3	13	0	15	25
				Micropsectra	0	0	0	2	0	13	64	0	16	4	0	0	0	0	0	0	0	0	0	0
				Micropsectra / Tanytarsus	0	0	0	0	0	0	8	0	16	4	0	0	0	0	0	0	0	0	0	0
				Paratanytarsus	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
				Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Tanytarsus	0	0	0	0	0	9	10	0	0	0	50	73	21	32	0	1	3	0	45	59
	Ceratopogonidae	Ceratopogoninae	-	*Bezzia*	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	1
		Dasyheleinae		*Dasyhelea*	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
	Empididae	-	-	*Chelifera / Metachela*	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Terrestrial	-	-	-	-	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total					**9**	**36**	**3**	**38**	**9**	**1,545**	**2,551**	**318**	**1,477**	**443**	**334**	**540**	**221**	**383**	**199**	**109**	**321**	**39**	**655**	**567**

Notes: (i/d) = immature or damaged specimens not identified below the taxonomic level indicated; - not identified to this taxonomic level.
Samples were collected using a standard Ekman grab with a bottom sampling area of 0.0232 m².
Samples were sieved through a screen with a 250 µm mesh opening size.

Table II-5: Sorting Efficiency for Benthic Invertebrate Samples for Lakes in the Gahcho Kue Project Area, Fall 2011

Site	Total Organisms in Initial Sort	Total Organisms in QA/QC Re-Sort	Sorting Efficiency [%]
Ref D1-A	57	0	100
Ref D3-C	69	0	100
Ref D5-E	240	4	98
N11-D3-B	473	10	98
N11-D4-D	38	0	100
M1-C	221	5	98
M3-B	226	7	97

Notes: % sorting efficiency = [1-(# in QC re-sort / (# sorted originally + # QC resort))]* 100.

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