Table 1. Summary of results of Wilcoxon Signed Rank Test comparison between zooplankton samples collected with 64 µm and 153 µm mesh nets.

Species	W	T+	T-	P(est.)	P(exact)	P<0.05
Bosmina longirostris	-28	25	-53	.29	.301	
Bythotrephes cederstroemi	-4	12	-16	.8	.813	
Cyclops copepodites	-6	36	-42	.845	.85	
Cyclops vernalis	4	16	-12	.8	.813	
Daphnia galeata mendotae	-25	15	-40	.221	.232	
Daphnia longirostris	1	8	-7	1	1	
Daphnia retrocurva	-8	10	-18	.554	.578	
Diacyclops thomasi	4	16	-12	.8	.813	
Diaphanosoma birgei	-13	4	-17	.208	.219	
Diaptomid copepodites	-14	32	-46	.61	.622	
Epischura copepodites	12	45	-33	.666	.677	
Epischura lacustris	7	26	-19	.722	.734	
Eubosmina coregonii	-8	29	-37	.756	.765	
Eurytemora affinis	-9	3	-12	.281	.313	
Leptodiaptomus ashlandi	6	17	-11	.673	.688	
Leptodiaptomus minutus	-8	29	-37	.756	.765	
Leptodiaptomus sicilis	-15	3	-18	.142	.156	
Leptodiaptomus siciloides	-9	3	-12	.281	.313	
Leptodora kindtii	-9	18	-27	.636	.652	
Mesocyclops copepodites	-56	11	-67	.031	.027	*
Mesocyclops edax	-28	25	-53	.29	.301	
Skistodiaptomus oregonensis	-17	19	-36	.415	.432	
Tropocyclops copepodites	14	21	-7	.272	.297	
Tropocyclops prasinus mexicanus	-10	34	-44	.724	.733	

Table 2. Summary of ANOVA results testing for depth preferences and indications of zooplankton migratory behavior in Lakes Huron (HU), Michigan (MI), and Superior (SU). All species with an adequate sample size were tested. Probabilities for factor effects are presented. **Bold** type indicates a significant factor effect at α=0.05.

	TIME			DEPTH			TIME x DEPTH		
Species	**HU**	**MI**	**SU**	**HU**	**MI**	**SU**	**HU**	**MI**	**SU**
Cladocerans									
Bosmina longirostris	**0.015**	0.823		**0.003**	**0.017**		**0.012**	**0.015**	
Bythotrephes cedarstroemi	0.261		0.140	0.102		**0.01**	0.932		0.598
Daphnia galeata mendotae	**0.005**	**0.050**	0.655	0.009	0.227	**0.014**	**0.001**	**<0.001**	0.556
Eubosmina coregoni	0.736			0.612			0.285		
Holopedium gibberum			0.803			**<0.001**			0.108
Calanoid copepods									
Diaptomid copepodites	0.161	0.121	0.834	0.839	0.435	0.097	0.566	**0.015**	0.855
Epischura lacustris	0.249	0.070	0.715	0.192	0.492	0.054	0.578	**0.006**	0.775
Epischura copepodites	0.692	0.115		**<0.001**	**0.015**		0.761	0.070	
Leptodiaptomus ashlandi	**0.034**	0.055		0.104	0.407		0.121	0.058	
Leptodiaptomus minutus	**0.021**	**0.019**		**0.031**	**0.012**		**0.011**	**<0.001**	
Leptodiaptomus sicilis	0.258	0.185	0.552	**<0.001**	**0.002**	**0.021**	0.305	0.366	0.609
Limnocalanus macrurus		0.239	**0.004**		**<0.001**	**<0.001**		0.743	**0.016**
Senecella calanoides		0.155	0.369		**0.036**	**<0.001**		0.155	0.369
Skistodiaptomus oregonensis		0.100			0.054			0.117	
Cyclopoid copepods									
Cyclops copepodites	0.136	**0.002**	0.312	0.605	0.142	**<0.001**	0.460	**<0.001**	0.555
Diacyclops thomasi	0.062	**<0.001**	0.226	0.164	**0.002**	**0.004**	0.170	**<0.001**	0.198
Tropocyclops prasinus		0.383			**0.007**			0.380	
Tropocyclops copepodites		0.637			**0.019**			0.568	

Table 3. Results of paired *t*-test comparison of zooplankton abundances estimated from shallow and deep tows at stations sampled during the day in Lakes Erie and Ontario. The following one-tailed hypothesis was tested: $H_0: \bar{d}_{20-100} \geq 0$

Lake Erie

Species	t	p
Bosmina longirostris	-3.812	**0.03**
Bythotrephes cedarstroemi	0.571	NS
Cyclops copepodite*s*	1.035	NS
Daphnia galeata mendotae	-0.082	NS
Diaptomid copepodites	1.794	NS
Epischura copepodites	2.481	NS
Epischura lacustrus	1.335	NS
Leptodiaptomus minutus	1.621	NS
Leptodiaptomus oregonensis	-0.244	NS
Leptodora kindti	2.969	NS
Mesocyclops copepodite*s*	1.147	NS
Mesocyclops edax	2.179	NS
Tropocyclops copepodites	2.029	NS
Tropocyclops prasinus mexicanus	2.945	NS

Lake Ontario

Species	t	p
Bosmina longirostris	1.486	NS
Daphnia retrocurva	1.909	NS
Diacyclops thomasi	1.266	NS
Diaptomid copepodites	-2.354	**0.05**

Table 4. Results of *t*-tests or Mann-Whitney rank sum tests comparing zooplankton length in deep and shallow day tows. Probabilities of $H_0: \overline{length}_{deep} - \overline{length}_{shallow} = 0$ are shown, with bold type denoting significance (=0.05). *indicates *t*-test used.

	Huron	Michigan	Superior	Ontario
Bosmina longirostris	**<0.001**	**<0.001**	0.380	0.724
Bythotrephes cedarstroemi	**0.006***		0.262	
Cercopagis pengoi				0.484
Cyclops copepodites	0.241	**<0.001**	0.510	0.620
Daphnia galeata mendotae	**<0.001**	**0.028**	**<0.001**	
Daphnia retrocurva				0.369
Diacyclops thomasi	0.309	0.331	**0.008**	0.914
Diaptomid copepodites	**<0.001**	**<0.001**	0.001	0.152
Epischura copepodites	**0.035**	0.379	0.080	
Epischura lacustris	0.641	0.308	0.407	
Eubosmina coregoni	**<0.001**			0.782
Holopedium gibberum	0.112		0.902	0.862*
Leptodiaptomus ashlandi	0.355	0.068		
Leptodiaptomus minutus	0.319	**0.016**		
Leptodiaptomus sicilis	0.380	**<0.001**	0.340	
Leptodora kindtii				0.203*
Limnocalanus macrurus			**0.025**	**0.020**
Polyphemus pediculus				0.300*
Tropocyclops copepodites		0.061		
Tropocyclops prasinus mexicanus	0.686	0.694		

	Huron	Michigan	Superior	Ontario
Bosmina longirostris	**29.9%**	**13.6%**		
Bythotrephes cedarstroemi	**-3.3%**			
Cyclops copepodites		**0.4%**		
Daphnia galeata mendotae	**23.3%**	**1.0%**	**0.7%**	
Diacyclops thomasi			**-0.1%**	
Diaptomus copepodites	**0.8%**	**49.2%**	**0.3%**	
Epischura copepodites	**0.4%**			
Eubosmina coregoni	**0.5%**			
Leptodiaptomus minutus		**4.5%**		
Leptodiaptomus sicilis		**0.8%**		
Limnocalanus macrurus			**3.3%**	**9.2%**