

**PHYTOPLANKTON COMMUNITY ANALYSIS
BOISE RIVER AT PARMA, MARCH 2007**

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Algal taxa present in a sample collected from **Boise River, Parma** on **3/16/2007**. The percent relative density based on cell volume, species rank in the sample, number of organisms counted, and cell volume per milliliter are also provided. Descriptive statistics are given at the end of the list of taxa.

Taxon	Rank	Relative Density	Number Per Milliliter	Cell Volume (μ^3/ml)
Bacillariophyta				
Centric diatoms	2	6.8	108.0	75600.0
Fragilaria virescens	8	0.5	1.2	5880.0
Melosira granulata	6	1.1	1.2	11760.0
Melosira varians	9	0.4	1.2	4200.0
Pennate diatoms	1	80.2	1118.4	894720.1
Stephanodiscus niagarae	4	3.4	1.2	38400.0
Total Bacillariophyta		92.4	1231.2	1030560.0
Chlorophyta				
Scenedesmus quadricauda	5	1.9	2.4	21600.0
Sphaerocystis schroeteri	3	4.8	1.2	53356.8
Total Chlorophyta		6.7	3.6	74956.8
Euglenophyta				
Trachellomonas species	7	0.9	1.2	9600.0
Total Euglenophyta		0.9	1.2	9600.0
TOTAL FOR ALL GROUPS		100.0	1236.0	1115117.0
Shannon-Wiener Index	=0.36			
Species Evenness	=0.16			
Species Richness	=1.15			
Number of Species	=9			

Shannon-Wiener = $-\sum(P_i \log P_i)$

Where: P_i is the proportion of the total number of individuals in the i^{th} species

Species Evenness = Shannon-Wiener / $\log S$

Where: S is the number of species

Species Richness = $S-1 / \log N$

Where: S is the number of species and N is the number of individuals

