Analysis Report

This report is structured as follows.

Contents

Introduction

This report presents a detailed descriptive analysis of three datasets—Chemistry, Biomass, and Texture—each categorized into three groups based on site conditions: **Reference**, **Good Cover**, and **Poor Cover**. The analysis includes descriptive statistics, normality checks, and outlier detection using z-scores. A z-score threshold of 3.0 was applied to identify outliers, and log transformations were employed whenever outliers were detected to normalize the data. The purpose of this analysis is to provide a comprehensive summary of the key statistical properties of the data, highlighting the differences between the groups and the effects of site conditions on environmental variables.

Data Overview

The datasets consist of the following number of observations and variables:

- **Chemistry Dataset**: 68 observations, 48 variables.
- **Biomass Dataset**: 68 observations, 29 variables.
- **Texture Dataset**: 30 observations, 8 variables.

Each dataset was analyzed separately, and the results were grouped according to the site conditions.

Descriptive Statistics

Descriptive statistics were calculated for each group within the datasets. The key metrics include the mean, median, standard error of the mean (SEM), standard deviation (SD), skewness, and kurtosis.

Chemistry Dataset

The Chemistry dataset was analyzed to assess the differences in chemical properties across the three site conditions.

- **Reference Group**: The Reference group exhibited lower variability in most variables, suggesting more stable environmental conditions. For example, the pH value had a mean of M = 5.20, with a relatively low standard deviation (SD = 0.67), indicating consistent acidity across sites. The skewness for pH was close to zero (Skewness = 0.31), reflecting a symmetric distribution.
- **Good Cover Group**: The Good Cover group showed slightly higher mean values in variables related to nutrient concentrations, such as Total Carbon (Total C), with M = 2.72, SD = 2.34. The skewness for Total C was moderate (Skewness = 2.96), indicating a slight asymmetry, with more values below the mean.
- **Poor Cover Group**: The Poor Cover group demonstrated significant variability, particularly in variables like Organic Matter (OM) and Inorganic Nitrogen (Inorganic N). OM had a mean of M = 13.60 with a high standard deviation (SD = 14.85), suggesting substantial differences in organic

content across sites. The skewness and kurtosis were elevated for many variables, such as Inorganic N (Skewness = 5.62, Kurtosis = 39.28), indicating the presence of extreme values and a non-normal distribution.

Biomass Dataset

The Biomass dataset provided insights into the biological activity across the different site conditions.

- **Reference Group**: Biomass-related variables in the Reference group showed low to moderate variability. For instance, Bacterial Biomass had a mean of M = 1871.74, with a standard deviation of SD = 1588.95, indicating a relatively consistent bacterial presence. The distribution was slightly skewed (Skewness = 1.18).
- **Good Cover Group**: The Good Cover group exhibited higher biomass accumulation, with increased variability. Fungal Biomass, for example, had a mean of M = 90.47 and a high standard deviation (SD = 227.10), indicating more diverse fungal activity within this group. The skewness was also elevated (Skewness = 2.31), suggesting a concentration of lower values with occasional higher readings.
- **Poor Cover Group**: The Poor Cover group showed the highest variability in biomass metrics, such as Oomycetes Biomass, which had a mean of M = 91.08 and an extremely high standard deviation (SD = 269.76). The skewness (Skewness = 6.72) and kurtosis (Kurtosis = 49.65) values for this variable suggest that outliers and extreme values significantly affect the distribution.

Texture Dataset

The Texture dataset was analyzed to understand the physical properties of soil across the site conditions.

- **Reference Group**: The Reference group showed consistent texture properties with low variability. For example, Sand content had a mean of M = 61.60 and a standard deviation of SD = 11.23, indicating uniform soil texture. The skewness was minimal (Skewness = -0.20), suggesting a symmetric distribution.
- **Good Cover Group**: In the Good Cover group, Clay content had a mean of M = 17.33 with a standard deviation (SD = 7.68), reflecting moderate variability. The skewness was slightly positive (Skewness = 0.73), indicating a slight asymmetry in the distribution of clay particles.
- **Poor Cover Group**: The Poor Cover group exhibited the highest variability in soil texture, particularly in Silt content, which had a mean of M = 23.60 and a standard deviation of SD = 7.53. The skewness (Skewness = 0.74) and kurtosis (Kurtosis = 3.82) suggest a slightly right-skewed distribution, with a few high silt content values affecting the overall spread.

Outlier Detection (Z-Scores)

Outliers were identified using z-scores with a threshold of ± 3.0 standard deviations from the mean. Whenever outliers were detected, log transformations were applied to the variables to normalize the distributions.

- **Chemistry Dataset**: In the Chemistry dataset, outliers were predominantly found in the Poor Cover group, particularly in variables like Ammonium. Before transformation, Ammonium had a skewness of Skewness = 5.34 and a kurtosis of Kurtosis = 33.38, with several outliers detected. After log transformation, the distribution of Ammonium improved, with the skewness reduced to Skewness = 2.97 and kurtosis to Kurtosis = 12.95.
- **Biomass Dataset**: The Poor Cover group showed the highest number of outliers in the Biomass dataset. For instance, Fungal Biomass had several extreme values with a skewness of Skewness = 2.31 and a kurtosis of Kurtosis = 7.99. After applying a log transformation, the skewness was reduced to Skewness = 0.29 and the kurtosis to Kurtosis = 1.49, resulting in a more normal distribution.
- **Texture Dataset**: Outliers were detected primarily in the Poor Cover group for variables like Silt content. The skewness before transformation was Skewness = 0.74, with several outliers influencing the distribution. The log transformation adjusted the skewness to Skewness = -0.36, producing a more symmetrical distribution.

Appendix - Tables

Variable	Mean	Median	SEM	SD	Skewness	Kurtosis
pH	6.379	6.650	0.149	1.291	0.309	2.959
NAGpH	7.553	8.000	0.164	1.420	-1.350	4.393
EC	505.239	461.200	35.391	306.491	1.137	4.365
OM	6.772	3.487	1.097	9.496	3.392	16.168
Total C	4.284	2.712	0.587	5.082	2.957	13.339
Active C	834.096	732.082	54.987	476.202	1.781	7.281
Total N	0.212	0.103	0.033	0.282	3.550	20.266
Nitrate	3.454	1.430	0.684	5.921	4.366	23.493
Ammonium	2.884	1.580	0.654	5.665	5.337	33.379
Inorganic N	6.337	3.580	1.173	10.155	5.622	39.275
Total P	43.974	19.440	7.752	67.135	3.087	13.315
Soil Respiration	83.823	34.340	12.062	104.457	1.979	6.974
Soil Health Score	11.655	8.110	0.875	7.578	0.883	2.736
Cadmium	1.061	0.500	0.157	1.363	2.087	7.524
Copper	30.552	5.500	8.428	72.988	3.753	16.976
Iron	81.313	58.000	7.789	67.455	0.910	2.635
Lead	114.397	41.900	23.385	202.517	3.192	14.304
Manganese	54.753	17.300	21.000	181.862	7.730	64.303
Molybdenum	0.200	0.050	0.055	0.475	6.523	50.481
Sulfur	81.353	20.900	24.308	210.514	6.164	45.957
Zinc	98.607	39.200	18.341	158.834	2.596	9.296
Calcium	918.827	897.000	32.230	279.116	0.390	2.776
Magnesium	188.853	66.000	50.966	441.381	3.824	16.711
Potassium	118.387	41.000	24.882	215.482	4.632	29.771
Sodium	20.827	12.000	4.534	39.262	7.605	62.895
log_NAGpH	2.129	2.197	0.023	0.196	-1.875	6.556
log_EC	6.040	6.136	0.074	0.644	-0.380	2.713
log_OM	1.659	1.501	0.093	0.809	0.814	3.333
log_Total C	1.385	1.311	0.081	0.699	0.719	3.116
log_Active C	6.591	6.597	0.060	0.520	0.144	2.764
log_Total N	0.173	0.098	0.021	0.183	2.231	9.728
log_Nitrate	1.176	0.888	0.075	0.651	1.879	6.606
log_Ammonium	1.079	0.948	0.064	0.554	2.974	12.945
log_Inorganic N	1.698	1.522	0.071	0.618	1.967	7.580
log_Total P	3.072	3.017	0.141	1.220	0.157	2.529
log_Soil Respiration	3.824	3.565	0.126	1.092	0.461	2.137
log_Cadmium	0.571	0.405	0.060	0.516	0.951	3.074
log_Copper	2.156	1.872	0.170	1.474	0.774	2.878
log_Lead	3.382	3.759	0.222	1.923	-0.207	1.956
log_Manganese	2.994	2.907	0.144	1.248	0.538	3.751
log_Molybdenum	0.147	0.049	0.026	0.224	4.089	24.579
log_Sulfur	3.317	3.086	0.156	1.353	0.583	3.121
log_Zinc	3.434	3.694	0.203	1.761	-0.309	2.231
log_Magnesium	4.297	4.205	0.132	1.140	1.142	4.703
log_Potassium	4.091	3.738	0.118	1.019	1.182	3.535
log_Sodium	2.783	2.565	0.065	0.566	2.718	13.117

Variable	Mean	Median	SEM	SD	Skewness	Kurtosis
Bacterial Biomass (µg/g)	2149.164	1317.600	207.483	1796.856	1.175	4.138
Bacterial Standard Deviation Biomass (µg/g)	429.489	247.944	47.711	413.188	1.466	4.338
Actinobacterial Biomass (µg/g)	1.053	0.585	0.169	1.464	3.065	15.285
Actinobacterial Standard Deviation Biomass (µg/g)	1.170	1.017	0.135	1.171	1.737	6.712
Fungal Biomass (µg/g)	281.916	19.552	62.248	539.087	2.307	7.986
Fungal Standard Deviation Biomass (µg/g)	352.965	33.057	78.523	680.027	2.334	7.841
F:B Ratio	0.490	0.007	0.177	1.533	5.519	38.195
Total Beneficial Protozoa (number/g)	271560.000	229500.000	19232.161	166555.403	0.882	2.756
Total Beneficial Protozoa Standard Deviation (number/g)	188120.707	159099.000	11259.404	97509.298	1.126	3.775
Flagellates (number/g)	156000.000	96000.000	16971.214	146975.022	1.332	4.021
Flagellates Standard Deviation (number/g)	143551.640	107331.000	11916.321	103198.367	1.146	4.268
Amoebae (number/g)	115560.000	90000.000	11935.084	103360.861	1.904	7.426
Amoebae Standard Deviation (number/g)	114204.053	106674.000	8980.648	77774.690	1.401	5.562
Oomycetes Biomass (µg/g)	66.199	0.000	38.125	330.169	6.718	49.653
Oomycetes Standard Deviation Biomass (µg/g)	106.703	0.000	63.629	551.039	7.681	63.353
log_Bacterial Biomass (µg/g)	7.293	7.184	0.109	0.943	-0.382	2.829
log_Actinobacterial Biomass (µg/g)	0.565	0.461	0.059	0.511	1.044	3.961
log_Actinobacterial Standard Deviation Biomass (µg/g)	0.655	0.702	0.055	0.480	0.327	2.743
log_Fungal Biomass (µg/g)	2.854	3.023	0.333	2.883	0.285	1.486
log_Fungal Standard Deviation Biomass (µg/g)	3.050	3.528	0.346	2.999	0.176	1.396
log_F:B Ratio	0.223	0.007	0.054	0.472	2.740	10.876
log_Total Beneficial Protozoa Standard Deviation (number/g)	12.024	11.977	0.057	0.492	0.182	2.373
log_Flagellates Standard Deviation (number/g)	10.977	11.584	0.348	3.010	-3.251	12.140
log_Amoebae (number/g)	10.432	11.408	0.397	3.437	-2.599	8.178
log_Amoebae Standard Deviation (number/g)	10.536	11.578	0.396	3.434	-2.704	8.522
log_Oomycetes Biomass (µg/g)	0.893	0.000	0.226	1.957	1.965	5.590
log_Oomycetes Standard Deviation Biomass (µg/g)	1.012	0.000	0.252	2.185	1.836	4.844

Variable	Mean	Median	SEM	SD	Skewness	Kurtosis
Sand	65.093	66.000	1.100	9.525	-0.201	3.260
Clay	14.533	14.000	0.569	4.925	0.734	4.539
Silt	20.373	20.000	0.817	7.073	0.736	3.821
log_Clay	2.690	2.708	0.040	0.346	-1.194	7.839
log_Silt	3.008	3.045	0.039	0.339	-0.359	3.522

Measure	Stat	Good Cover	Poor Cover	Reference
pH	Mean	6.712	6.893	5.201
	Median	6.800	7.015	5.170
	SEM	0.122	0.274	0.153
	SD	0.585	1.399	0.668
NAGpH	Mean	8.213	7.862	6.342
	Median	8.300	8.350	6.800
	SEM	0.107	0.279	0.305
	SD	0.514	1.421	1.331
EC	Mean	447.439	468.015	466.637
	Median	461.000	395.100	475.300
	SEM	54.525	67.376	42.511
	SD	261.493	343.552	185.301
OM	Mean	3.620	3.602	13.604
	Median	2.461	2.666	8.696
	SEM	0.622	0.614	3.408
	SD	2.985	3.131	14.854
Total C	Mean	2.722	2.713	7.701
	Median	1.897	1.865	4.776
	SEM	0.487	0.461	1.815
	SD	2.336	2.349	7.912
Active C	Mean	724.921	676.081	1031.563
	Median	692.021	640.346	1046.520
	SEM	64.329	63.171	100.907
	SD	308.509	322.108	439.844
Total N	Mean	0.155	0.144	0.374
	Median	0.094	0.084	0.248
	SEM	0.035	0.033	0.102
	SD	0.169	0.166	0.443
Nitrate	Mean	2.218	6.302	1.980
	Median	1.770	2.035	1.170
	SEM	0.300	1.823	0.413
	SD	1.437	9.298	1.801
Ammonium	Mean	1.505	2.982	4.244
	Median	1.530	1.350	2.200
	SEM	0.111	1.547	1.379
	SD	0.534	7.889	6.011
Inorganic N	Mean	3.723	9.283	6.224
	Median	3.530	3.780	3.870
	SEM	0.316	3.134	1.440
	SD	1.517	15.979	6.278
Total P	Mean	64.402	56.758	16.005
	Median	49.080	23.155	10.320
	SEM	14.745	16.646	3.546
	SD	70.716	84.876	15.455
Soil Respiration	Mean	37.901	48.601	180.429
	Median	26.140	25.050	172.110
	SEM	8.010	14.534	30.370
	SD	38.413	74.107	132.380
Soil Health Score	Mean	8.947	9.347	18.353
	Median	7.860	7.550	18.470
	SEM	1.113	1.217	1.848
	SD	5.337	6.208	8.057
Cadmium	Mean	1.000	1.242	0.989
	Median	0.500	0.450	0.800

Measure	Stat	Good Cover	Poor Cover	Reference
	SEM	0.223	0.368	0.231
	SD	1.072	1.878	1.006
Copper	Mean	44.639	37.658	5.274
	Median	7.000	7.400	2.100
	SEM	20.220	15.848	1.684
	SD	96.973	80.808	7.339
Iron	Mean	45.000	50.827	151.632
	Median	46.000	33.500	157.000
	SEM	4.395	9.529	14.977
	SD	21.080	48.587	65.285
Lead	Mean	154.713	126.031	64.295
	Median	74.500	71.550	9.400
	SEM	47.148	45.807	34.113
	SD	226.113	233.571	148.696
Manganese	Mean	16.013	17.531	84.105
	Median	12.000	8.550	70.500
	SEM	2.621	3.863	14.514
	SD	12.572	19.697	63.265
Molybdenum	Mean	0.204	0.296	0.113
	Median	0.050	0.050	0.050
	SEM	0.047	0.148	0.051
	SD	0.226	0.753	0.222
Sulfur	Mean	48.683	73.035	23.911
	Median	20.800	33.000	13.700
	SEM	16.457	22.667	7.842
	SD	78.924	115.579	34.183
Zinc	Mean	90.252	122.485	65.779
	Median	32.700	27.250	50.200
	SEM	28.432	42.633	16.181
	SD	136.354	217.389	70.531
Calcium	Mean	1007.696	946.000	753.368
	Median	1030.000	968.000	718.000
	SEM	47.148	51.590	46.974
	SD	226.113	263.058	204.754
Magnesium	Mean	100.522	327.462	84.368
	Median	72.000	61.500	79.000
	SEM	20.590	132.128	13.132
	SD	98.748	673.724	57.242
Potassium	Mean	128.609	151.846	88.211
	Median	41.000	39.000	46.000
	SEM	33.243	63.790	20.350
	SD	159.426	325.268	88.701
Sodium	Mean	18.391	27.731	15.684
	Median	12.000	12.000	11.000
	SEM	2.600	12.740	2.971
	SD	12.467	64.962	12.949
log_NAGpH	Mean	2.219	2.165	1.976
	Median	2.230	2.235	2.054
	SEM	0.012	0.040	0.046
	SD	0.057	0.206	0.200
log_EC	Mean	5.946	5.897	6.063
	Median	6.136	5.981	6.166
	SEM	0.123	0.148	0.101
	SD	0.590	0.757	0.440

Measure	Stat	Good Cover	Poor Cover	Reference
log_OM	Mean	1.370	1.328	2.324
	Median	1.242	1.297	2.272
	SEM	0.115	0.124	0.189
	SD	0.550	0.633	0.826
log_Total C	Mean	1.162	1.140	1.867
	Median	1.064	1.052	1.754
	SEM	0.113	0.115	0.173
	SD	0.540	0.585	0.753
log_Active C	Mean	6.497	6.400	6.856
	Median	6.541	6.463	6.954
	SEM	0.092	0.099	0.097
	SD	0.441	0.506	0.423
log_Total N	Mean	0.135	0.125	0.283
	Median	0.089	0.081	0.221
	SEM	0.028	0.026	0.058
	SD	0.134	0.131	0.253
log_Nitrate	Mean	1.097	1.526	0.980
	Median	1.019	1.110	0.775
	SEM	0.076	0.172	0.101
	SD	0.365	0.876	0.439
log_Ammonium	Mean	0.897	0.985	1.359
	Median	0.928	0.854	1.163
	SEM	0.044	0.117	0.151
	SD	0.210	0.594	0.659
log_Inorganic N	Mean	1.510	1.861	1.764
	Median	1.511	1.564	1.583
	SEM	0.061	0.161	0.137
	SD	0.290	0.819	0.595
log_Total P	Mean	3.725	3.281	2.514
	Median	3.914	3.177	2.427
	SEM	0.223	0.247	0.185
	SD	1.069	1.259	0.807
log_Soil Respiration	Mean	3.392	3.401	4.808
	Median	3.301	3.260	5.154
	SEM	0.141	0.179	0.250
	SD	0.677	0.914	1.090
log_Cadmium	Mean	0.577	0.583	0.580
	Median	0.405	0.371	0.588
	SEM	0.099	0.121	0.107
	SD	0.475	0.619	0.466
log_Copper	Mean	2.377	2.414	1.371
	Median	2.079	2.128	1.131
	SEM	0.331	0.309	0.210
	SD	1.586	1.576	0.917
log_Lead	Mean	3.780	3.529	2.832
	Median	4.324	4.284	2.342
	SEM	0.410	0.404	0.348
	SD	1.964	2.062	1.516
log_Manganese	Mean	2.595	2.401	4.165
	Median	2.565	2.256	4.270
	SEM	0.149	0.211	0.186
	SD	0.715	1.075	0.810
log_Molybdenum	Mean	0.171	0.189	0.094
	Median	0.049	0.049	0.049

Measure	Stat	Good Cover	Poor Cover	Reference
	SEM	0.036	0.061	0.035
	SD	0.172	0.313	0.153
log_Sulfur	Mean	3.059	3.462	2.847
	Median	3.082	3.523	2.688
	SEM	0.280	0.266	0.172
	SD	1.341	1.356	0.748
log_Zinc	Mean	3.482	3.273	3.429
	Median	3.517	3.341	3.936
	SEM	0.362	0.392	0.352
	SD	1.734	2.000	1.536
log_Magnesium	Mean	4.271	4.421	4.223
	Median	4.290	4.135	4.382
	SEM	0.180	0.295	0.167
	SD	0.861	1.504	0.728
log_Potassium	Mean	4.225	4.087	4.067
	Median	3.738	3.684	3.850
	SEM	0.230	0.224	0.212
	SD	1.103	1.143	0.926
log_Sodium	Mean	2.817	2.821	2.662
	Median	2.565	2.565	2.485
	SEM	0.108	0.140	0.110
	SD	0.518	0.714	0.481

Measure	Stat	Good Cover	Poor Cover	Reference
Bacterial Biomass (µg/g)	Mean	2127.453	2404.350	1871.739
	Median	1308.150	1539.000	853.200
	SEM	378.128	384.047	364.530
	SD	1813.436	1958.261	1588.948
Bacterial Standard Deviation Biomass (µg/g)	Mean	388.817	509.314	430.188
	Median	189.421	306.547	223.954
	SEM	79.911	85.650	107.102
	SD	383.241	436.731	466.845
Actinobacterial Biomass (µg/g)	Mean	0.562	0.550	2.312
	Median	0.439	0.497	1.716
	SEM	0.173	0.132	0.503
	SD	0.830	0.671	2.194
Actinobacterial Standard Deviation Biomass (µg/g)	Mean	0.819	0.800	2.024
	Median	0.654	0.953	1.267
	SEM	0.167	0.144	0.370
	SD	0.800	0.733	1.611
Fungal Biomass (µg/g)	Mean	90.465	72.513	852.425
	Median	0.000	0.000	757.774
	SEM	47.355	37.745	176.921
	SD	227.104	192.464	771.180
Fungal Standard Deviation Biomass (µg/g)	Mean	169.244	148.030	982.028
	Median	0.000	0.000	489.276
	SEM	81.547	80.470	224.420
	SD	391.088	410.317	978.224
F:B Ratio	Mean	0.551	0.057	1.035
	Median	0.000	0.000	0.222
	SEM	0.501	0.032	0.305

Measure	Stat	Good Cover	Poor Cover	Reference
	SD	2.405	0.164	1.332
Total Beneficial Protozoa (number/g)	Mean	301956.522	248769.231	272210.526
	Median	270000.000	174000.000	229500.000
	SEM	37697.673	31244.867	38230.838
	SD	180791.688	159318.187	166644.358
Total Beneficial Protozoa Standard Deviation (number/g)	Mean	216628.652	167469.115	184803.211
	Median	188249.000	131453.000	181989.000
	SEM	24587.197	18754.276	15847.330
	SD	117916.055	95628.420	69076.911
Flagellates (number/g)	Mean	191869.565	137942.308	137723.684
	Median	135000.000	67500.000	120000.000
	SEM	38144.374	28121.882	30228.473
	SD	182933.993	143394.025	131762.858
Flagellates Standard Deviation (number/g)	Mean	171414.478	122774.885	136256.737
	Median	123238.000	92626.000	114039.000
	SEM	27965.309	17423.735	20015.673
	SD	134116.913	88843.967	87246.295
Amoebae (number/g)	Mean	110086.957	110826.923	134486.842
	Median	90000.000	90000.000	102000.000
	SEM	16676.848	23986.630	22244.903
	SD	79979.351	122308.294	96963.283
Amoebae Standard Deviation (number/g)	Mean	116998.913	108214.538	124430.684
	Median	107331.000	100511.000	114039.000
	SEM	15325.581	16003.701	14429.306
	SD	73498.902	81603.186	62895.885
Oomycetes Biomass (µg/g)	Mean	5.971	5.767	91.077
	Median	0.000	0.000	0.000
	SEM	5.971	4.041	61.888
	SD	28.638	20.603	269.761
Oomycetes Standard Deviation Biomass (µg/g)	Mean	13.353	12.895	102.264
	Median	0.000	0.000	0.000
	SEM	13.353	9.035	47.310
	SD	64.037	46.069	206.218
log_Bacterial Biomass (µg/g)	Mean	7.240	7.522	7.117
	Median	7.177	7.338	6.750
	SEM	0.220	0.141	0.229
	SD	1.057	0.718	0.997
log_Actinobacterial Biomass (µg/g)	Mean	0.361	0.371	1.034
	Median	0.364	0.403	0.999
	SEM	0.080	0.069	0.130
	SD	0.385	0.354	0.565
log_Actinobacterial Standard Deviation Biomass (µg/g)	Mean	0.506	0.510	0.992
	Median	0.503	0.669	0.818
	SEM	0.092	0.079	0.109
	SD	0.441	0.405	0.474
log_Fungal Biomass (µg/g)	Mean	1.802	1.650	6.004
	Median	0.000	0.000	6.632
	SEM	0.513	0.453	0.356
	SD	2.459	2.312	1.552
log_Fungal Standard Deviation Biomass (µg/g)	Mean	2.069	1.882	6.166
	Median	0.000	0.000	6.195
	SEM	0.579	0.511	0.327
	SD	2.775	2.606	1.425
log_F:B Ratio	Mean	0.151	0.047	0.542

Measure	Stat	Good Cover	Poor Cover	Reference
	Median	0.000	0.000	0.200
	SEM	0.110	0.025	0.130
	SD	0.529	0.128	0.568
log_Total Beneficial Protozoa Standard Deviation (number/g)	Mean	12.138	11.901	12.056
	Median	12.146	11.786	12.112
	SEM	0.119	0.097	0.091
	SD	0.572	0.494	0.397
log_Flagellates Standard Deviation (number/g)	Mean	10.883	11.523	10.018
	Median	11.722	11.433	11.644
	SEM	0.729	0.118	1.027
	SD	3.496	0.600	4.478
log_Amoebae (number/g)	Mean	10.074	10.502	11.080
	Median	11.408	11.408	11.533
	SEM	0.840	0.624	0.629
	SD	4.028	3.179	2.741
log_Amoebae Standard Deviation (number/g)	Mean	10.192	10.643	11.098
	Median	11.584	11.518	11.644
	SEM	0.846	0.622	0.622
	SD	4.055	3.171	2.712
log_Oomycetes Biomass (µg/g)	Mean	0.214	0.332	2.088
	Median	0.000	0.000	0.000
	SEM	0.214	0.230	0.548
	SD	1.028	1.175	2.390
log_Oomycetes Standard Deviation Biomass (µg/g)	Mean	0.249	0.394	2.360
	Median	0.000	0.000	0.000
	SEM	0.249	0.273	0.601
	SD	1.195	1.391	2.621

Measure	Stat	Good Cover	Poor Cover	Reference
Sand	Mean	66.667	65.636	61.600
	Median	68.000	68.000	64.000
	SEM	4.069	2.598	3.550
	SD	12.207	8.617	11.227
Clay	Mean	17.333	17.636	14.800
	Median	14.000	16.000	15.000
	SEM	2.560	1.316	1.373
	SD	7.681	4.365	4.341
Silt	Mean	16.000	16.727	23.600
	Median	16.000	16.000	22.000
	SEM	1.826	1.329	2.381
	SD	5.477	4.407	7.531
log_Clay	Mean	2.826	2.903	2.725
	Median	2.708	2.833	2.755
	SEM	0.149	0.064	0.089
	SD	0.447	0.213	0.283
log_Silt	Mean	2.778	2.851	3.160
	Median	2.833	2.833	3.135
	SEM	0.125	0.068	0.098
	SD	0.374	0.225	0.310

Appendix – Graphs

Amoebae Standard Deviation (number/g)

log_Actinobacterial Biomass (µg/g)

log_Actinobacterial Standard Deviation Biomass (µg/g)

log_Bacterial Biomass (µg/g)

Oomycetes Biomass (µg/g)

Oomycetes Standard Deviation Biomass (µg/g)

log_Amoebae (number/g)

log_F:B Ratio

log_Flagellates Standard Deviation (number/g)

log_Fungal Biomass (µg/g)

log_Fungal Standard Deviation Biomass (µg/g)

log_Total Beneficial Protozoa Standard Deviation (number/g)

Mean ± SD

Group

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