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Benthic Macroinvertebrate Data from 148 Surface Water Sites Within the St. Johns River Water Management District

Prepared for

St. Johns River Water Management District
Highway 100 West
Palatka, Florida 32177

Prepared by

Water & Air Research, Inc.
6821 S.W. Archer Road
Gainesville, Florida 32608

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Executive Summary

Among the long-term goals of the St. Johns River Water Management District (SJRWMD) is determining the degree to which biological communities in the District's water bodies have been impaired by organic and toxic metal contamination of sediments. To further this goal, a survey of the benthic macroinvertebrate communities of the District's lakes, streams, and estuaries was performed. Between February and June 1999, District staff collected four replicate petite Ponar grab sediment samples at each of 148 surface water sites. Water & Air Research, Inc. (Water & Air) was retained to conduct laboratory analysis of samples and preliminary, exploratory statistical analysis of benthic invertebrate community composition and structure.

Benthic macroinvertebrate data were summarized to obtain three variables: average organism density, total number of taxa observed, and pooled Shannon-Weiner species diversity index for each sampling site. Average organism density ranged from 11 to 38,990 m^{-2}, total number of taxa from 1 to 25; and Shannon-Weiner species diversity index from 0.00 to 3.89.

To elucidate patterns and groupings among the 148 sites, an agglomerative hierarchical cluster analysis with average linkage was performed. Seven clusters were identified, which were sorted into four groups: 1) Clusters ***b, d,*** and ***e*** – very low diversity, 2) Clusters ***a*** and ***c*** – moderate diversity, 3) Cluster ***f*** – high diversity, and 4) Cluster ***g*** – high organism density (Tables 1.1-1.4). The very low diversity of organisms in the first of these groups suggested the presence of environmental stress. The others were tentatively considered to show low to moderate environmental stress.

TABLE 1.1
Clusters *b, d* and *e* - Very Low Diversity Values

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	12	37	49
Density	677	625	651
No. Taxa	4	4	4
Diversity	0.74	0.86	0.80

TABLE 1.2
Clusters *a* and *c* - Moderate Diversity Values

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	41	49	90
Density	1438	904	1171
No. Taxa	11	8	10
Diversity	2.32	2.11	2.21

TABLE 1.3
Cluster *f* - High Diversity Values

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	7	1	8
Density	1394	1593	1494
No. Taxa	21	25	23
Diversity	3.33	3.06	3.20

TABLE 1.4
Cluster *g* - Single Site with Very High Organism Densities

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	1		1
Density	38990		38990
No. Taxa	25		25
Diversity	0.81		0.81

When the degree of dominance by tolerant and sensitive taxa was considered, in addition to diversity, seven classes were recognized. These classes were placed in three groups according to the relative degree of impairment: 1) Classes ***A*** and ***B*** – severely impaired sites (low diversity index, low densities, dominated by tolerant taxa), 2) Classes ***D*** and ***E*** – moderately impaired (moderate diversity index, low to moderate densities, and moderate to high dominance of tolerant taxa), and 3) Classes ***C***, ***F*** and ***G*** – unimpaired (moderate to high diversity, low to moderate densities, relatively few tolerant taxa present, and sensitive taxa present) (Tables 2.1 through 2.3).

TABLE 2.1
Classes *A* and *B* – Severely Impaired Sites

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	25	47	72
Density	2429	788	1358
No. Taxa	6	5	5
Diversity	1.23	1.04	1.11

TABLE 2.2
Classes *D* and *E* – Moderately Impaired Sites

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	26	32	58
Density	1681	842	1244
No. Taxa	12	8	10
Diversity	2.56	2.11	2.30

TABLE 2.3
Classes *C, F* and *G* – Unimpaired Sites

Variable	Stream Sites	Lake Sites	All Sites
No. Sites	10	8	18
Density	990	678	891
No. Taxa	18	12	15
Diversity	3.13	2.92	3.04

Benthic macroinvertebrate data are valuable for assessing ecosystem response to toxic substances and other sources of environmental stress. Although study results indicate the degree to which sampled sites were biologically impaired, they do not in themselves identify sources of stress, which may include toxic substances, low dissolved oxygen, poor substrate quality, or a combination of factors. Future analysis of sediment chemistry and water quality data collected during this study and the use of bioassay techniques should help greatly in establishing causality.

The data collected for this study should be further evaluated to identify ecologically meaningful relationships between water quality, sediment quality and biological communities and to guide water resource managers in decision-making. To further investigate these relationships, additional biological, water, and sediment samples should be collected along environmental gradients (e.g. metal content) at impaired sites. Additional data, in combination with sediment toxicity testing results, would strengthen statements that can be made regarding the influence of sediment quality on benthic invertebrate communities and guide water resource managers in decisionmaking.

1 Introduction

The St. Johns River Water Management District retained Water & Air Research, Inc. (Water & Air) to conduct laboratory analysis of benthic macroinvertebrate samples and to complete a statistical analysis of the data. In a district-wide biological survey conducted February through June 1999, District staff collected four replicate petite Ponar grab samples at each of 148 surface water sites. The overall objective of the investigation is to document possible effects of organic and metallic sediment contaminants on benthic invertebrate community composition and structure. This report presents a preliminary exploratory analysis of the data.

2 Methods

2.1 Description of Sampling Locations

The 148 sampling sites included freshwater lakes and streams and estuarine rivers and streams located within the St. Johns River Water Management District in north central Florida. Site locations are depicted in Figure A-1 of Appendix A. Site names and sampling dates are presented in Table 1.

2.2 Laboratory Analysis, Data Tabulation, and Benthic Community Metrics

Samples were analyzed in Water & Air's biological laboratory in accordance with Water & Air's state-approved Comprehensive Quality Assurance Plan (CQAP, #900322). This plan addresses sample logging/tracking/custody, verification of sorting completeness, accuracy of taxonomic identification, verification of data entry, and other processes. After all samples were processed and organisms were identified and enumerated, data were tabulated and benthic community metrics were calculated, including total organism density, number of taxa, and Shannon-Weiner species diversity.

2.3 Statistical Analysis

The data were analyzed using exploratory data analysis techniques to elucidate patterns and groupings among the sites. Some water bodies were represented by multiple sites. For the purposes of these analyses, each site was considered to be independent. Four replicate petite Ponar grabs were collected from each site and processed separately in the laboratory. These data were summarized with three variables: average organism density, total number of taxa observed, and pooled Shannon-Weiner species diversity index. Mean organism density was transformed using the $\log_{10}$ transformation.

An agglomerative hierarchical cluster analysis with average linkage was performed on the 148 sites (Johnson and Wichern 1992). In this class of cluster analysis, each site starts in its own cluster. The two clusters that are the most similar (determined by using average linkage) are joined into one cluster. This hierarchical process continues until only one cluster remains.

3 Results and Discussion

Species abundance tables are presented for each sampling site in Appendix B. The 148 sites exhibited wide ranges in organism density (11 to 38,990 m^{-2}), number of taxa (1 to 25), and Shannon-Weiner species diversity (0.00 to 3.89).

3.1 Exploratory Data Analysis

Initial exploratory analysis consisted of a series of matrix scatterplots presenting density ($\log_{10}$), number of taxa, and Shannon-Weiner species diversity (Figures 1 through 9). The scatterplots present scales for each variable both horizontally and vertically. For example, the density $\log_{10}$ horizontal scale is presented in lower left corner and the vertical scale is found in the upper right corner. The number of taxa scales are shown horizontally at the top of the middle column of plots and vertically on the left side of the middle row of plots. Finally, diversity scales are displayed horizontally at the bottom of the right column and vertically at the right side of the lower row of plots.

The matrix scatterplot allows the reader to view relationships in two ways. For example, to view the relationship between number of taxa and diversity, the reader can look at the lower middle plot or the plot on the right side of the middle row.

All sites are displayed in Figure 1. There do not appear to be any obvious groups in the samples; however, the data are highly scattered and several outliers are present. A strong positive association between total taxa and diversity is also visible. Figure 2 depicts the same matrix scatterplots as in Figure 1, with the lake and stream sites represented with different color symbols. Most lakes tend to fall at the lower end of the range in number of taxa. All sites are plotted in Figures 3 through 9, using colored symbols to identify those water bodies with at least six sampling sites. These plots show a high degree of variability in the measured responses within each of the water bodies.

The results of the agglomerative hierarchical clustering analysis are depicted in Figure 10. All sites were given a unique identification number (Table 2). The identification numbers are presented at the bottom of the dendrogram (Figure 10). The dendrogram can most easily be interpreted by reading it from the bottom up. The two most similar clusters were joined together first, then the next two most similar clusters, and so forth. The height of the lines represents the distance of the two clusters to be joined.

Determining the number of clusters in a particular data set is arbitrary. The data set was divided into 7 clusters, Clusters a through g (Figures 11 and 12). A listing of sites within each cluster indicating the dendogram identification number assigned to each site is provided in Table 3. Average organism density, number of taxa, and Shannon-Weiner species diversity values are presented for each cluster in Table 4. The data could have been divided into more clusters or fewer clusters. For example, in subsequent analyses it may be meaningful to break cluster 'a' into smaller clusters.

3.2 Cluster Attributes

Figures 13, 14, and 15 depict cluster ranges and means for organism density, number of taxa, and Shannon-Weiner species diversity, respectively.

Clusters b, d, and e – Clusters b, d, and e tended to be low in number of taxa, averaging 4.35, 2.38, and 1.00, respectively. Shannon-Weiner species diversity, which is influenced by number of taxa, was correspondingly low, averaging 0.92, 0.67, and 0.00, respectively. Of the 49 sites in these clusters, 37 (76 percent) were lake sites. Forty-three percent of the total number of lake sites (37 out of 86 lakes) were grouped with these "low diversity" clusters. Nineteen percent of the total number of stream sites sampled were grouped in these clusters. It is possible that dominance of lakes in these clusters is related to relatively low dissolved oxygen in lentic waters, but a review of limited dissolved oxygen data did not reveal any obvious trends.

Lakes in this group of clusters tended to be strongly dominated by tolerant fauna, including *Limnodrilus hoffmeisteri*, *Chaoborus*, *Chironomus*, and *Coelotanypus* spp. Freshwater streams were dominated by *L. hoffmeisteri*, *Chaoborus*, *Chironomus*, and occasionally *Procladius*, *Elliptio*, and

Corbicula were present in moderate numbers. Estuarine streams and rivers were dominated by *Polydora*, spionid polychaetes, nemerteans, *Paraprionospio pinnata*, and *Limnodrilus*.

The low diversity values observed in clusters b, d, and e indicate that biota at these sites may be subject to stress caused by lack of dissolved oxygen (as a result of inorganic nutrient or organic input) and/or by the presence of toxic substances. Although most of the dominant taxa at these sites tolerate low levels of dissolved oxygen, a cursory review of field measurements recorded by District staff at select sites revealed no obvious relationships between dissolved oxygen levels and number of taxa or Shannon-Weiner species diversity. This is probably because dissolved oxygen can undergo wide daily fluctuations, particularly in eutrophic waters. Furthermore, dissolved oxygen measured in the water column may not be representative of conditions in the sediments, particularly in highly productive water bodies with flocculent sediments. Low diversity values may also be caused by the presence of toxic substances.

Clusters a and c – Clusters a and c tended to exhibit moderate Shannon-Weiner diversity values (Figure 15) and were represented by a more even mix of lentic and lotic sites (Table 3). Sites in cluster c are relatively productive, with organism density ranging from 2,077 to 8,276 individuals m^{-2}.

Some lakes in these clusters were moderately dominated by tolerant forms; but admixtures of a variety of chironomids, mayflies, crustaceans, and mollusks were also usually present. Freshwater streams in these clusters generally supported a moderately diverse assemblage of chironomids. A variety of odonates, beetles, mayflies, caddisflies, crustaceans, and mollusks were occasionally present. Estuarine systems in Cluster a harbored a moderately diverse community of polychaetes, crustacea, and mollusks.

Cluster f – High diversity values were recorded for sites in Cluster f (Figure 15), which was strongly dominated by stream sites (88 percent). These sites had the highest numbers of taxa (Figure 14) and most major taxonomic groups were well represented. Diverse benthic macroinvertebrate are generally subject to relatively low levels of environmental stress. Such relationships can be confirmed by evaluating water and sediment quality at these sites.

Cluster g – The single site represented in Cluster g separates out primarily due to very high organism densities (38,990 m^{-2}). Extremely high invertebrate densities can occur where algae or organic particulate material provides ample food resources. Diversity can be low under these conditions because one or two tolerant species can become extremely abundant, skewing species evenness and reducing Shannon-Weiner diversity values, even when the number of taxa present is relatively high. This phenomenon occurred at the Tomoka River sampling site. Similar results can be seen in many streams during natural seasonal pulses in density of some species (*Rheotanytarsus* and *Simulium*). These natural pulses can be prolonged during the rainy season when organic particulate matter input is high.

3.3 Biological Impacts: Site Evaluation and Classification

For decision-making purposes related to water resource management, it is useful to evaluate the data to determine which of the 148 sites can be considered impaired and which sites are relatively unimpaired. Where are biological impacts most apparent?

All sites were classified and evaluated, based on organism density, number of taxa, Shannon-Weiner species diversity, and the degree of dominance by tolerant and sensitive taxa. Based on best professional judgement, a combination of all these factors was used to classify the sites. This approach allowed for some subjectivity. For example, a site strongly dominated by tolerant species

might be considered impaired in spite of moderate species diversity or a relatively high number of taxa. Organisms considered to be pollution tolerant are able to withstand relatively long periods of low dissolved oxygen concentrations (hypoxia), typical of conditions occurring in eutrophic waters. Pollution-sensitive organisms cannot tolerate extended periods of hypoxia. Flowing waters are typically higher in dissolved oxygen and can support higher benthic invertebrate diversity and abundance than lentic waters. For example, average organism density in lakes (793 m^{-2}) was less than 50 percent of average density occurring in streams (1,899 m^{-2}). Because of these differences in environmental conditions and benthic invertebrate communities, lake and stream sites were evaluated independently.

Lake and stream sites were placed into the following seven classes:

- Class A - low diversity; low densities (<450 m^{-2}); dominated by tolerant taxa (> 60 percent); 20 lake sites and eight stream sites
- Class B - low diversity; moderate to high densities; dominated by tolerant taxa; 27 lake sites and 17 stream sites
- Class C - moderately high diversity; relatively few tolerant taxa; low densities; three lake sites and one stream site
- Class D - moderate diversity; low densities; tolerant taxa dominant to moderately dominant (> 30 percent); 14 lake sites and six stream sites
- Class E - moderate diversity; tolerant taxa moderately dominant (> 30 percent); 18 lake sites and 20 stream sites
- Class F - high diversity; relatively few tolerant taxa; sensitive taxa present; five lake sites and seven stream sites
- Class G - estuarine stream sites with moderate diversity; relatively few tolerant taxa; sensitive taxa present; no lake sites and two stream sites

Although the stream site classification was similar to the lake classification, the ranges of organism density, number of taxa, and diversity values within each class differed from ranges used for the lake sites. For example, diversity values at Class A stream sites ranged from 0 to 2.33, while diversity at Class A lake sites ranged from 0 to 2.01. Class ranges and means for organism density, number of taxa, and Shannon-Weiner species diversity at the lake sites are depicted in Figures 16, 17, and 18, respectively. Sites within each class are listed in Table 4. Similar data collected from the stream sites are presented in Figures 19 through 21 and Table 5.

Some general hypotheses can be drawn from a review of the data site classification. Low diversity and a strong dominance of tolerant taxa at the sites in Classes A and B suggest that these sites are severely impaired. Class A sites, where low diversity and low organism densities occur, may be highly eutrophic and/or contaminated with toxicants. The moderate to high organism densities, in combination with low species diversity, occurring at Class B sites may be primarily a result of eutrophication. Classes D and E appear to be moderately impaired. There is little or no evidence of stress to the invertebrate community at the lake and stream sites in Classes C and F. Moderate diversity values of the stream sites in Class G may be a result of natural fluctuations in environmental conditions (eg. salinity).

4 Summary of Findings

Among the long-term goals of the St. Johns River Water Management District is determining the degree to which biological communities in the District's water bodies have been impaired by organic and toxic metal contamination of sediments. To further this goal, a survey of the benthic macroinvertebrate communities of the District's lakes, streams, and estuaries was performed. Between February and June 1999, District staff collected four replicate petite Ponar grab sediment samples at each of 148 surface water sites. Water & Air was retained to conduct laboratory analysis of samples and preliminary, exploratory statistical analysis of benthic invertebrate community composition and structure.

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When the degree of dominance by tolerant and sensitive taxa was considered, in addition to diversity, seven classes were recognized. These classes were placed in three groups according to the relative degree of impairment: 1) Classes ***A*** and ***B*** – severely impaired sites (low diversity index, low densities, dominated by tolerant taxa), 2) Classes ***D*** and ***E*** – moderately impaired (moderate diversity index, low to moderate densities, and moderate to high dominance of tolerant taxa), and 3) Classes ***C, F*** and ***G*** – unimpaired (moderate to high diversity, low to moderate densities, relatively few tolerant taxa present, and sensitive taxa present) (Tables 2.1 through 2.3).

5 Conclusions and Recommendations

Benthic macroinvertebrate data are valuable for assessing ecosystem response to toxic substances and other sources of environmental stress. Although study results indicate the degree to which sampled sites were biologically impaired, they do not in themselves identify sources of stress, which may include toxic substances, low dissolved oxygen, poor substrate quality, or a combination of factors. Future analysis of sediment chemistry and water quality data collected during this study and the use of bioassay techniques should help greatly in establishing causality.

The data collected for this study should be further evaluated to identify ecologically meaningful relationships between water quality, sediment quality and biological communities and to guide water resource managers in decision-making. To further investigate these relationships, additional biological, water, and sediment samples should be collected along environmental gradients (e.g. metal content) at impaired sites. Additional data, in combination with sediment toxicity testing results, would strengthen statements that can be made regarding the influence of sediment quality on benthic invertebrate communities and guide water resource managers in decision-making. Since benthic invertebrates are a major food resource for fisheries and sediment quality may have both direct and indirect influence on fish, it may be desirable to conduct fish community assessments (inventories, tissue analysis) at the impaired sites.

6 Reference

Johnson, R.A. and D.W. Wichern, 1992. Applied Multivariate Statistical Analysis. Third-Edition. Prentice-Hall, Inc. Englewood Cliffs, New Jersey

7 Glossary

Agglomerative Hierarchical Cluster Analysis – Grouping of items based on similarities. Similarity is evaluated using the distance between two *p*-dimensional items. Clustering is accomplished by a series of successive mergers of the items. Most similar items are grouped first, and subgroups continue to be merged until there is only one cluster.

Average Linkage – Method of evaluating the distance (or dissimilarity) between two clusters. Distance between two clusters is the average distance between all pairs of items, where one member of a pair belongs to each cluster. Distance between two *p*-dimensional items is calculated using the Euclidean (i.e., straight-line) distance.

Average Organism Density – The average number of invertebrate organisms collected per unit area. Usually presented as the number of individuals per square meter.

Benthic – Associated with sediments or other substrates on the bottom of water bodies.

CQAP – Comprehensive Quality Assurance Plan, a document submitted to and approved by the Florida Department of Environmental Protection.

Dendogram – Two-dimensional diagram used for displaying the results of a cluster analysis. Mergers of items and/or clusters made at successive levels are illustrated.

Estuarine – Pertaining to waterbodies where ocean water and fresh water mix.

Eutrophic – Nutrient-enriched. In this context, waters that have relatively high concentrations of inorganic plant nutrients and abundant algal populations.

Flocculent – Sediments formed by converting dissolved material into very fine particulate material. Such sediments tend to have a low settling rate and can remain suspended in the water for long periods.

Hypoxia – Containing a low concentration of dissolved oxygen.

Lentic – Standing waters.

Lotic – Flowing waters.

Macroinvertebrate – An invertebrate organism that is retained by U.S. Standard No. 30 mesh sieve.

Metrics – Measured variables.

Petite Ponar Grab – A sediment sample taken with a petite Ponar dredge (dimensions: 6" by 6").

Replicate Samples – Multiple samples collected at the same sampling location.

Shannon-Weiner Species Diversity Index – A calculated index value expressing the degree of species diversity in a given sample or group of samples. The calculation is influenced by both the number of species present as well as the evenness of abundance among the species. Values generally

range from 0 to 5, with values at the high end of the range indicating high species diversity. This index also is known as the Shannon-Weaver Species Diversity Index (tables in Appendix B).

Taxa – The plural form of taxon (taxonomic unit). A taxon is a morphologically unique set of organisms. A taxon may consist of one or more species.

Figures

Figure 1. Matrix Scatterplot – All Sites

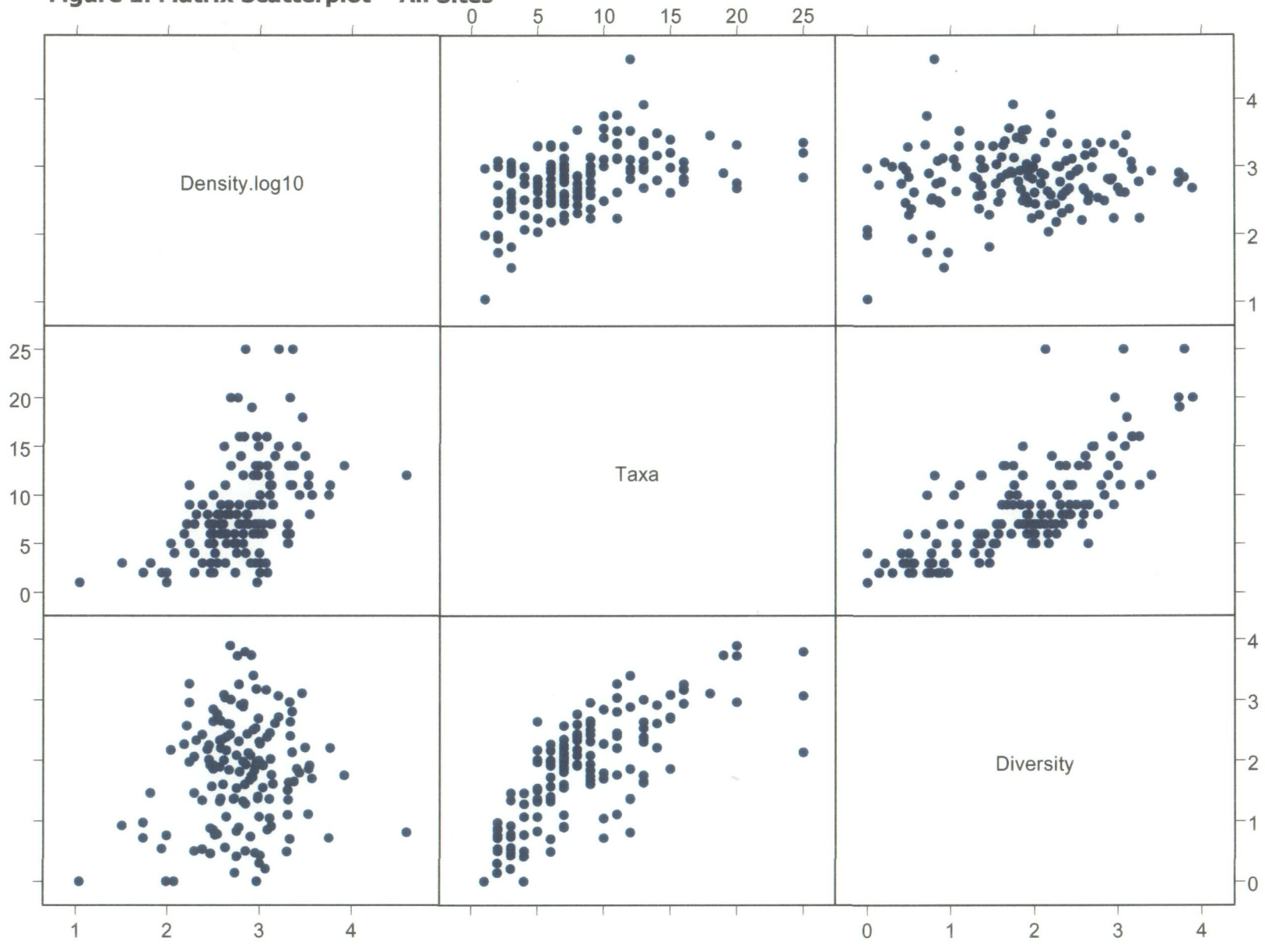

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Figure 2. Matrix Scatterplot – Lake vs. Stream Sites

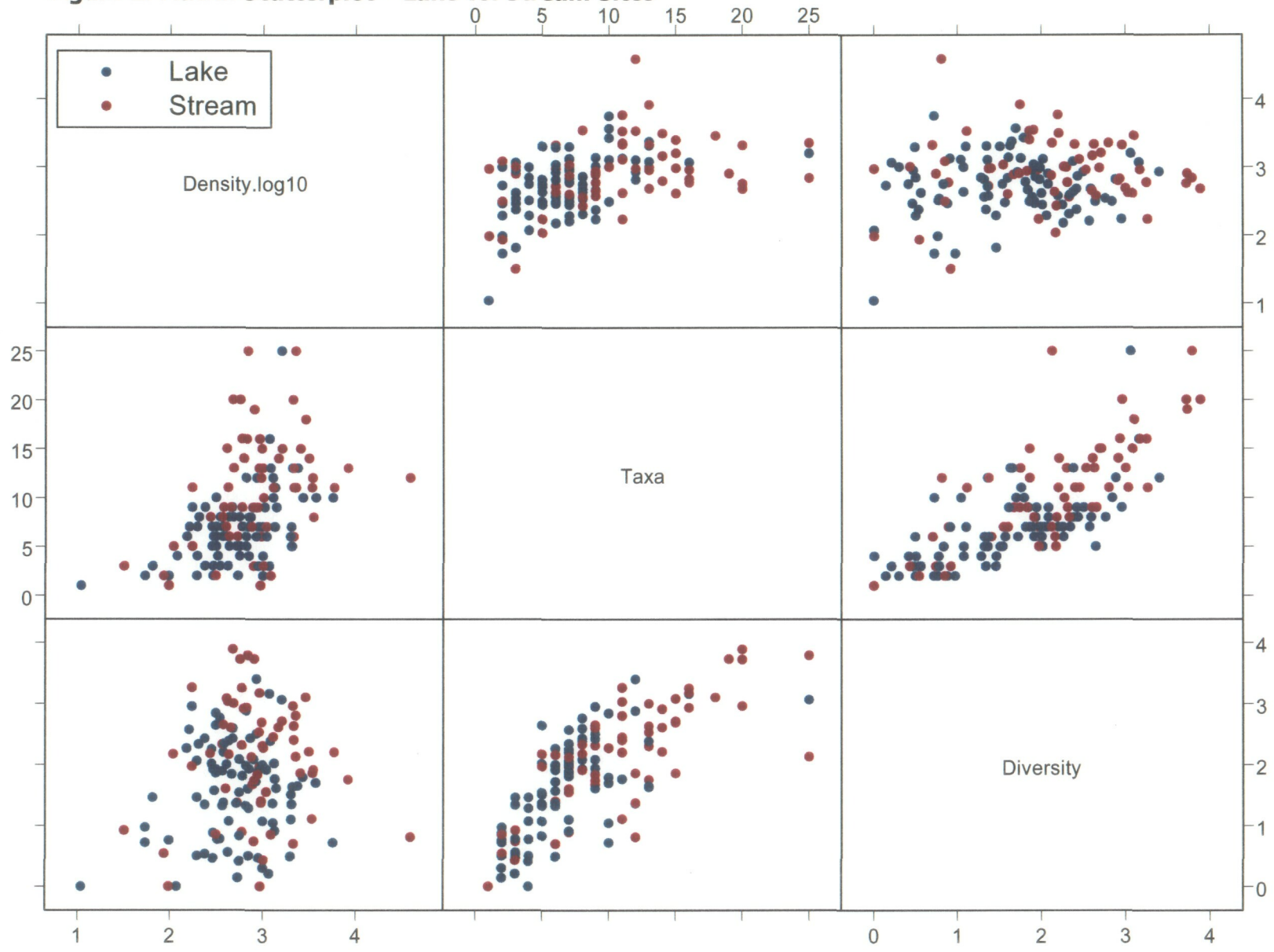

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Figure 3. Matrix Scatterplot – Bivens Arm Sites

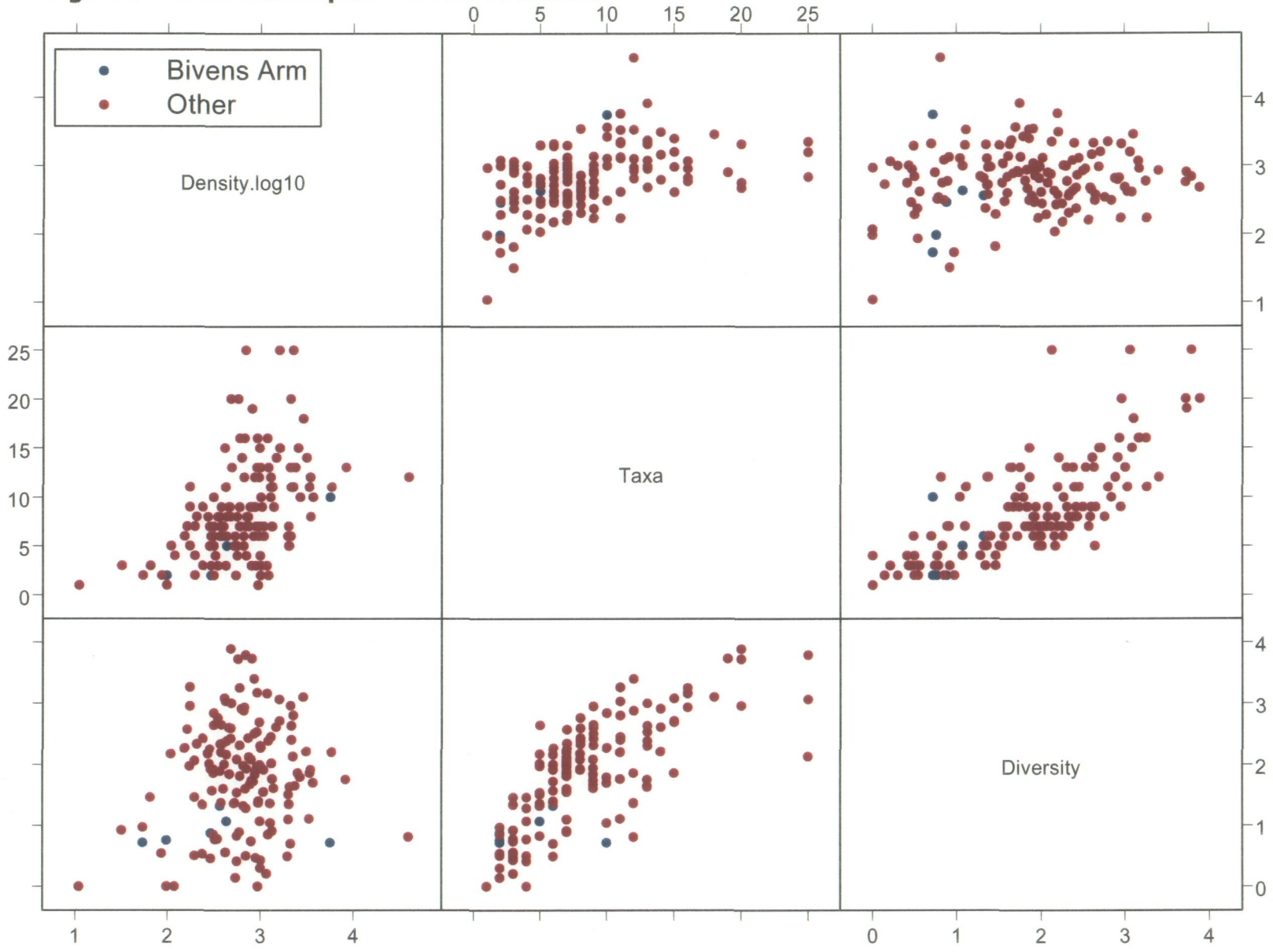

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Figure 4. Matrix Scatterplot – Lake Dora Sites

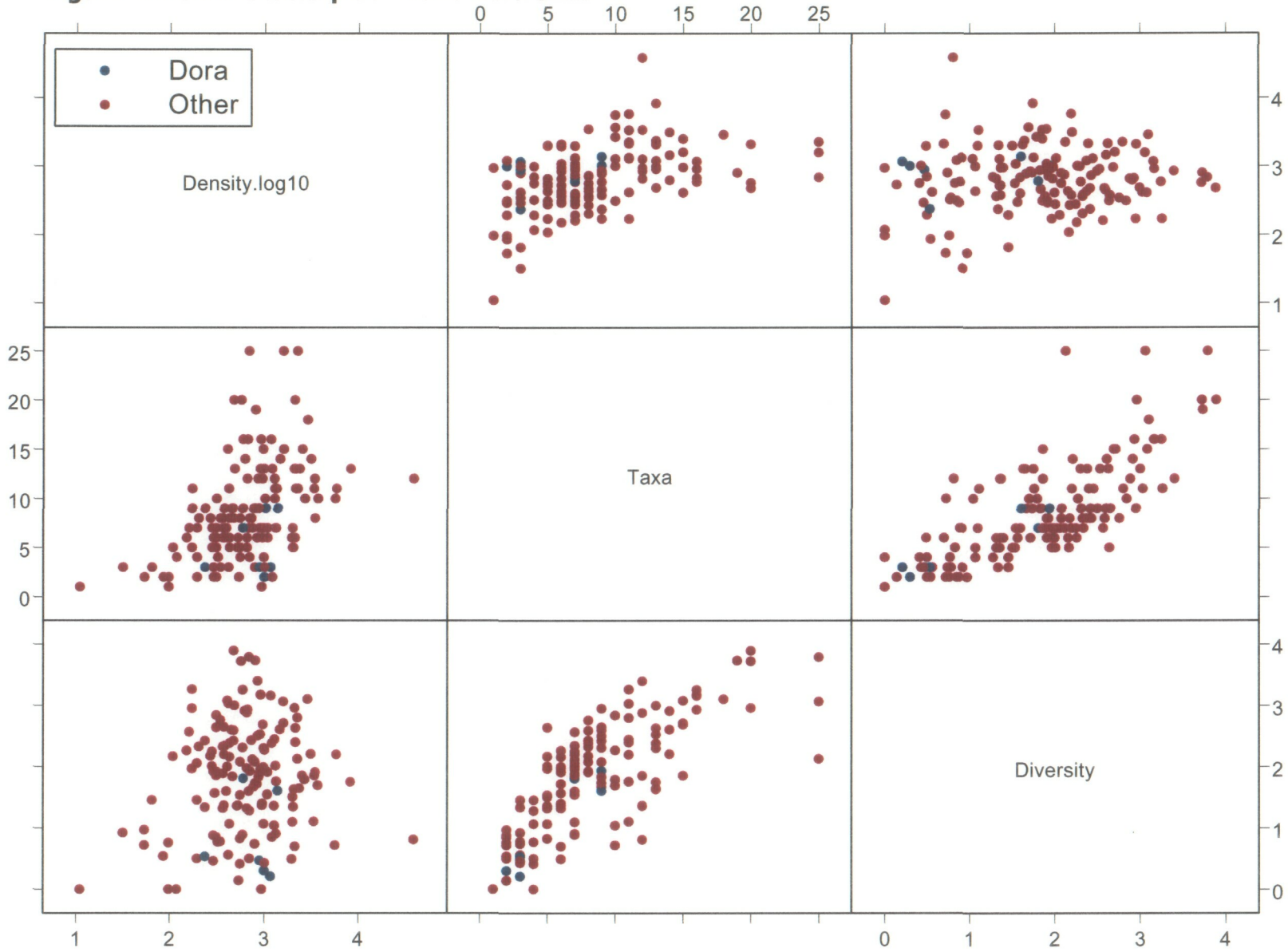

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Figure 5. Matrix Scatterplot – Lake Eustis Sites

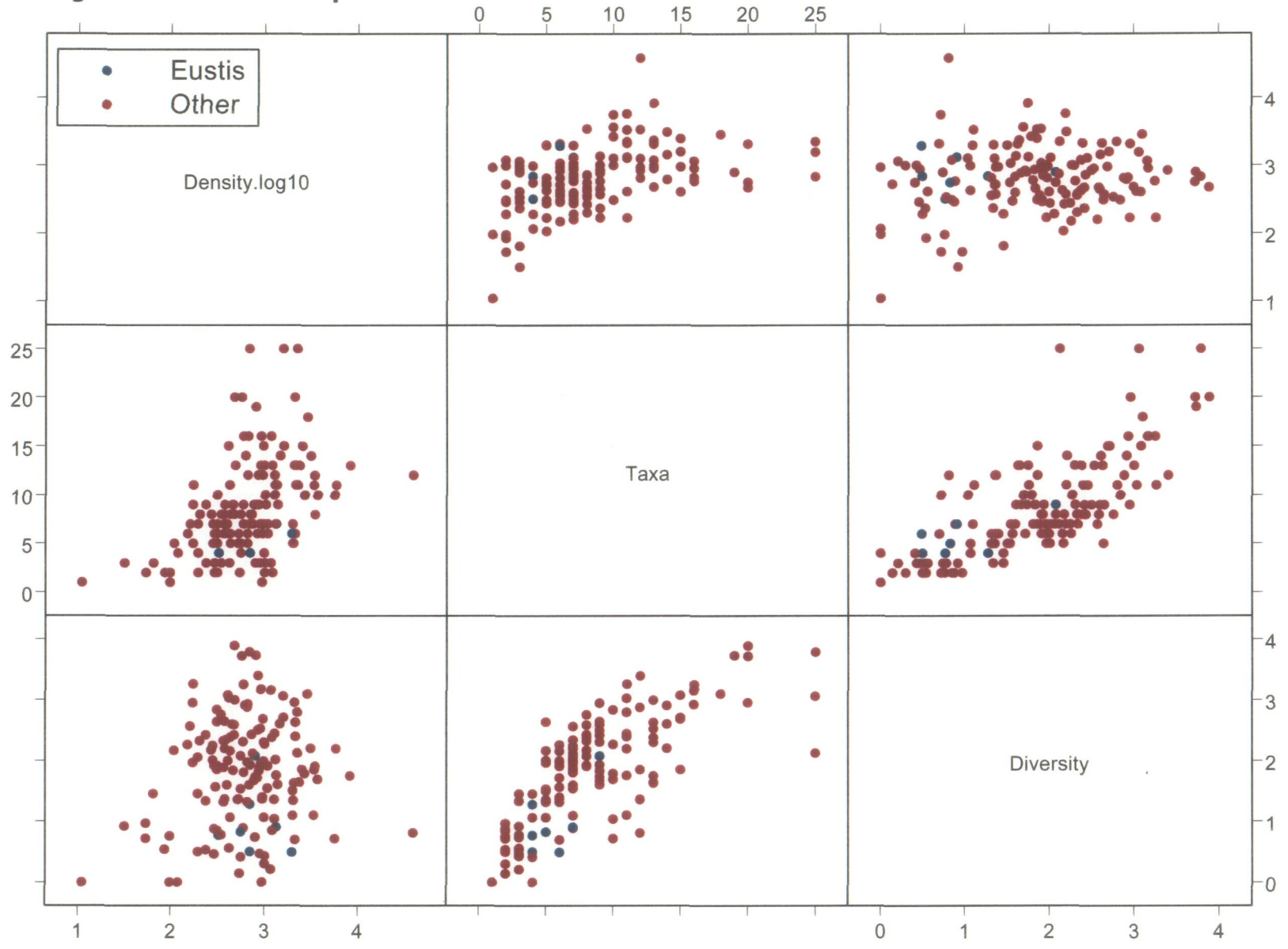

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Figure 6. Matrix Scatterplot – Lake George Sites

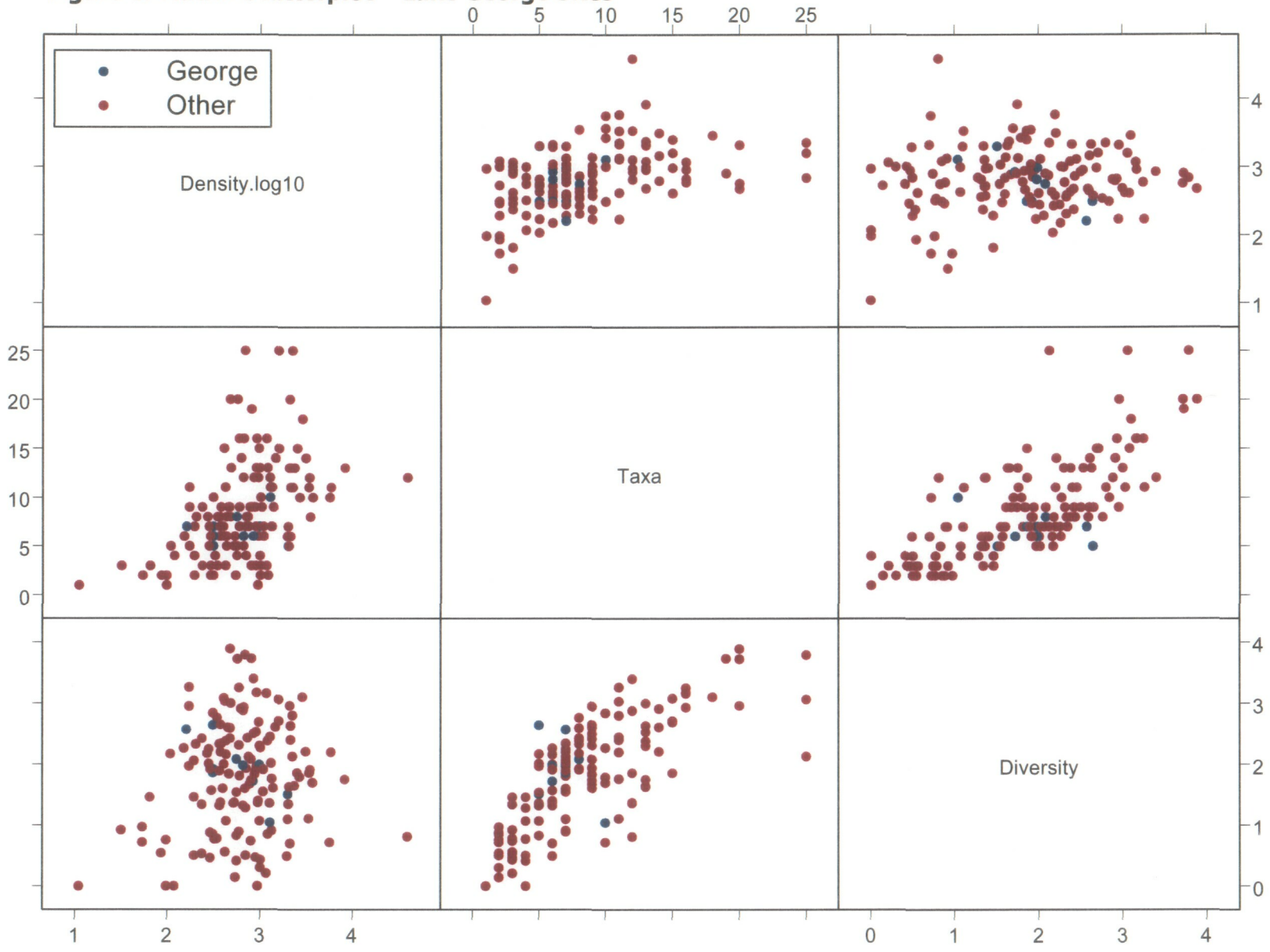

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Figure 7. Matrix Scatterplot – Lake Harris Sites

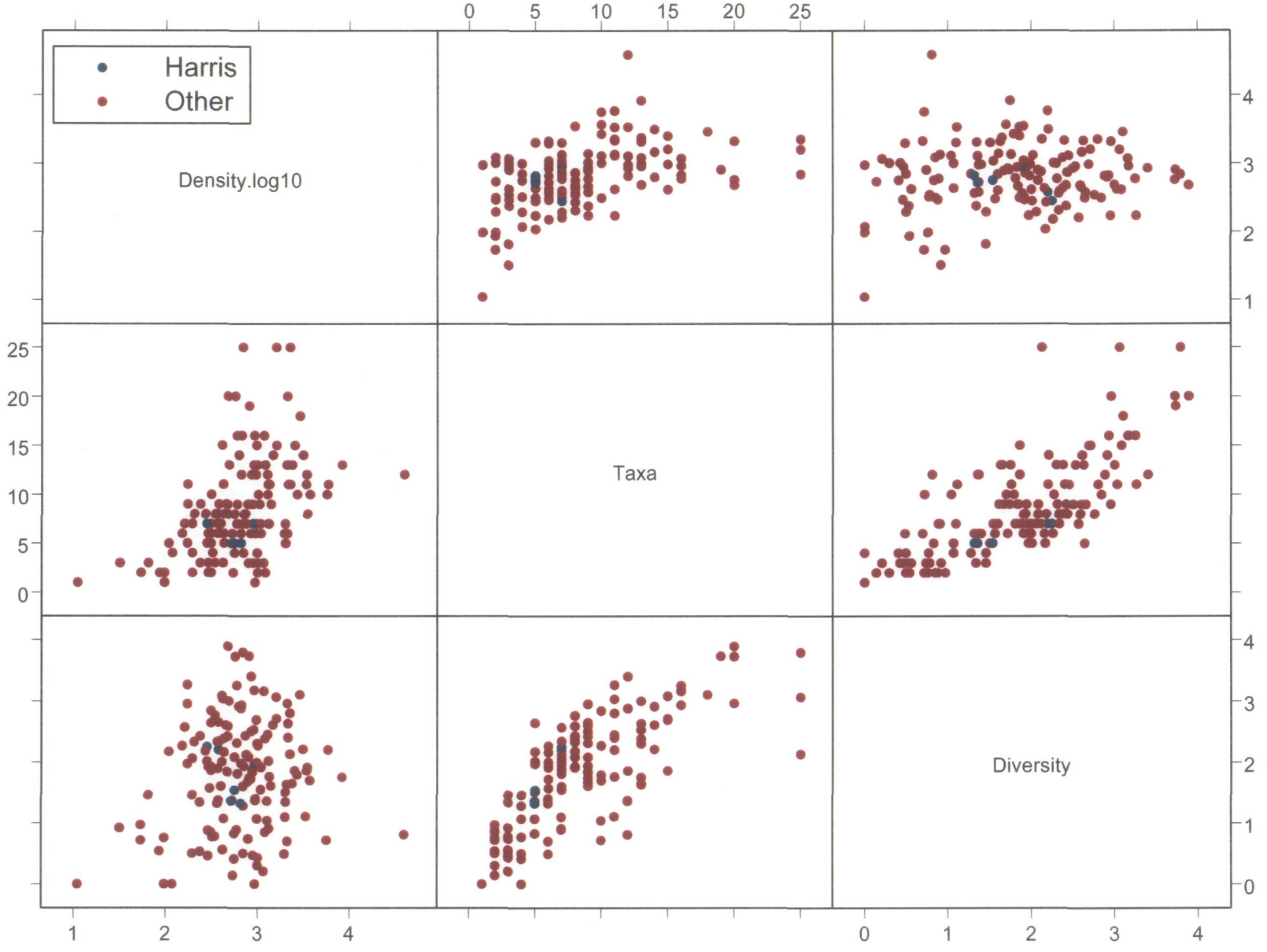

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Figure 8. Matrix Scatterplot – Lake Monroe Sites

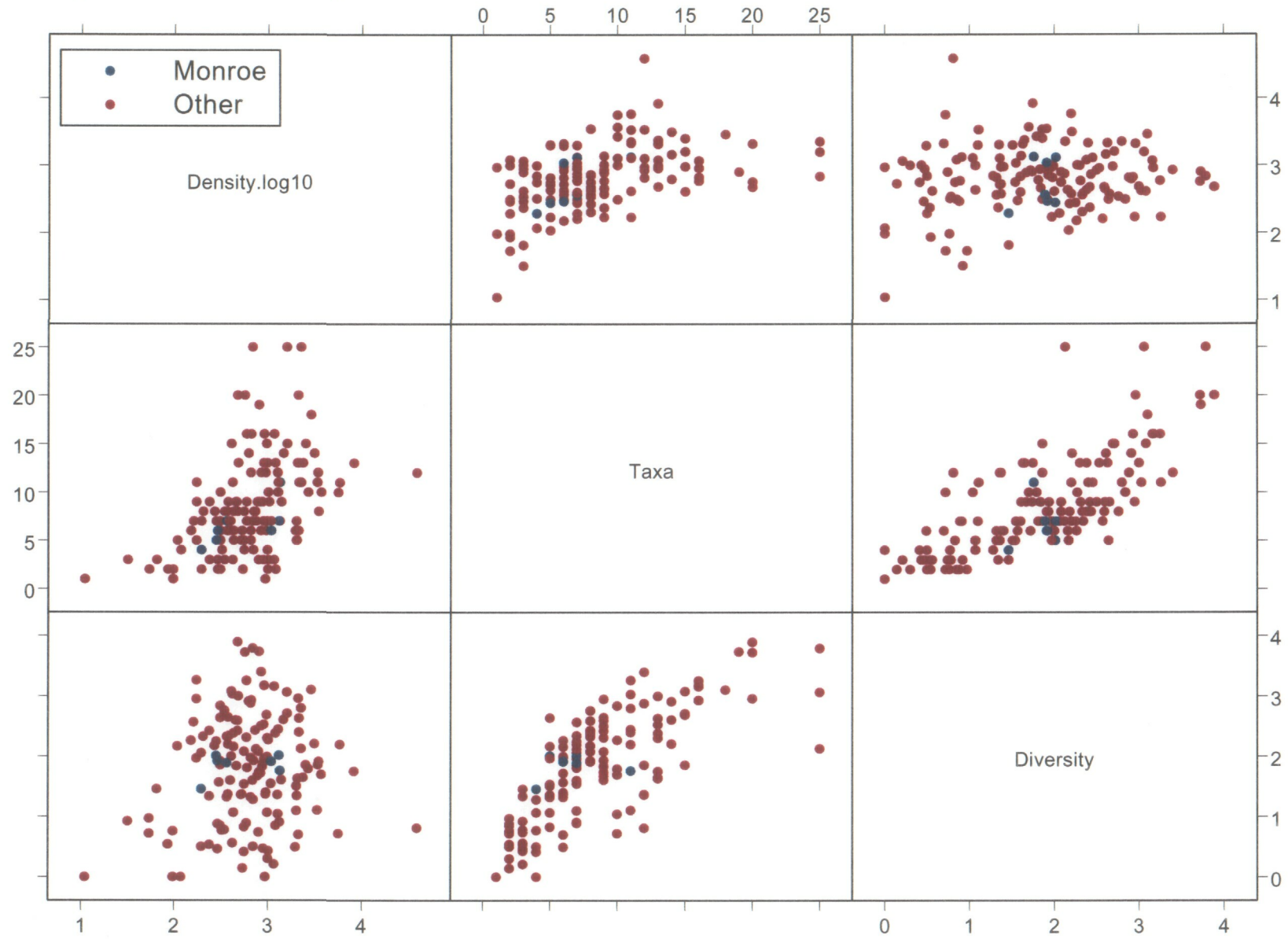

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Figure 9. Matrix Scatterplot – St. Johns River Sites

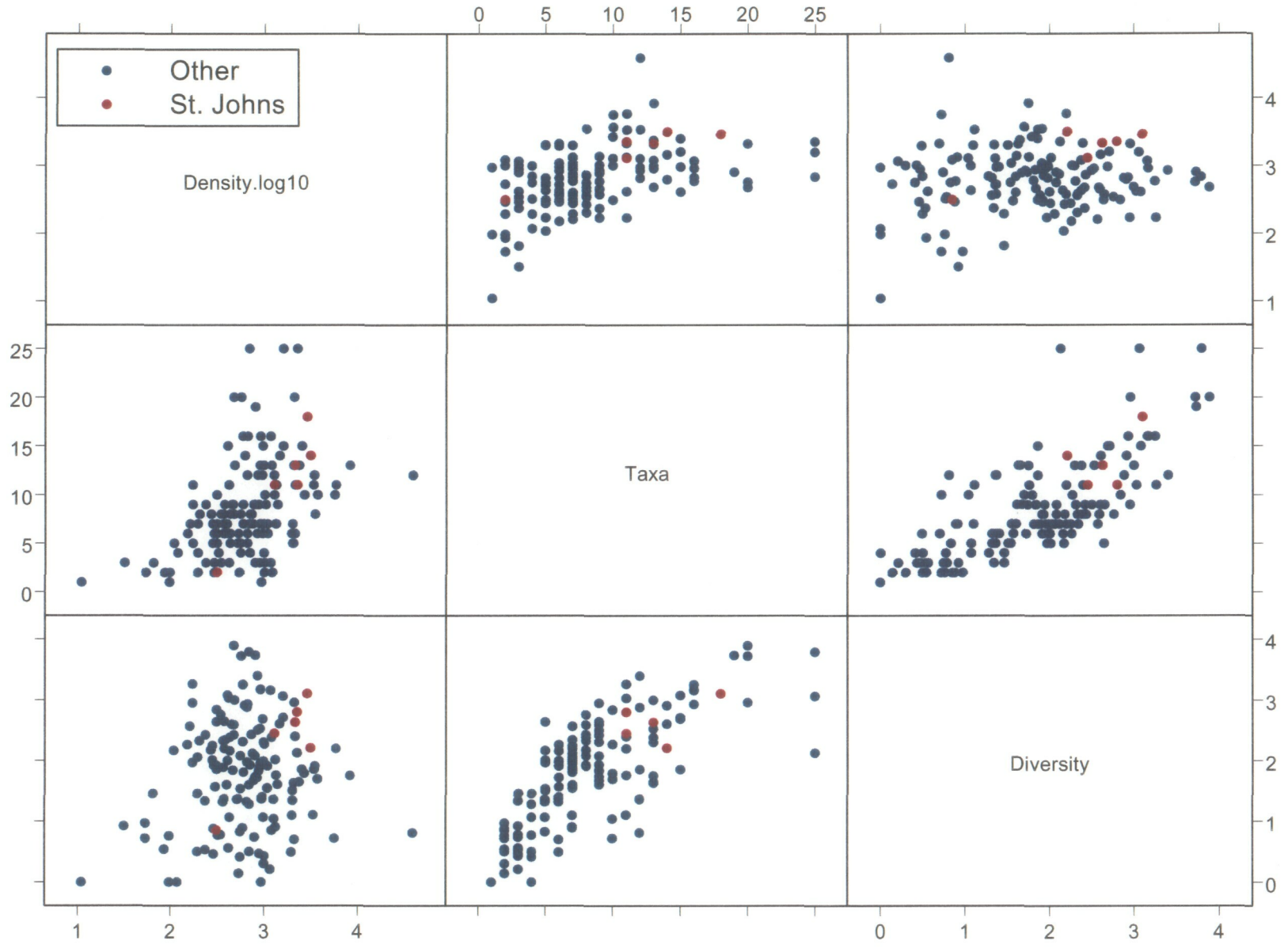

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Figure 10

Agglomerative hierarchical cluster analysis

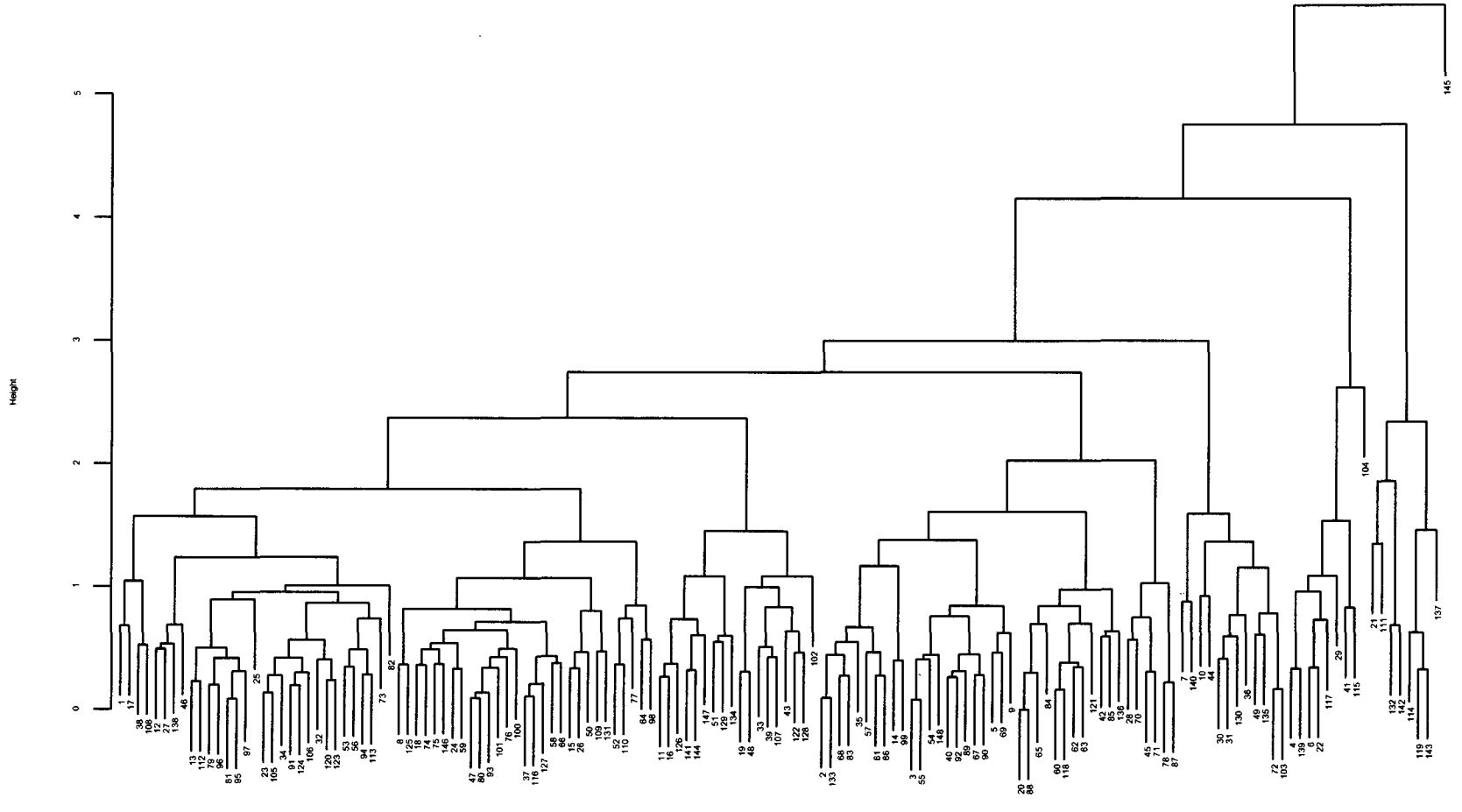

Figure 11

Agglomerative hierarchical cluster analysis

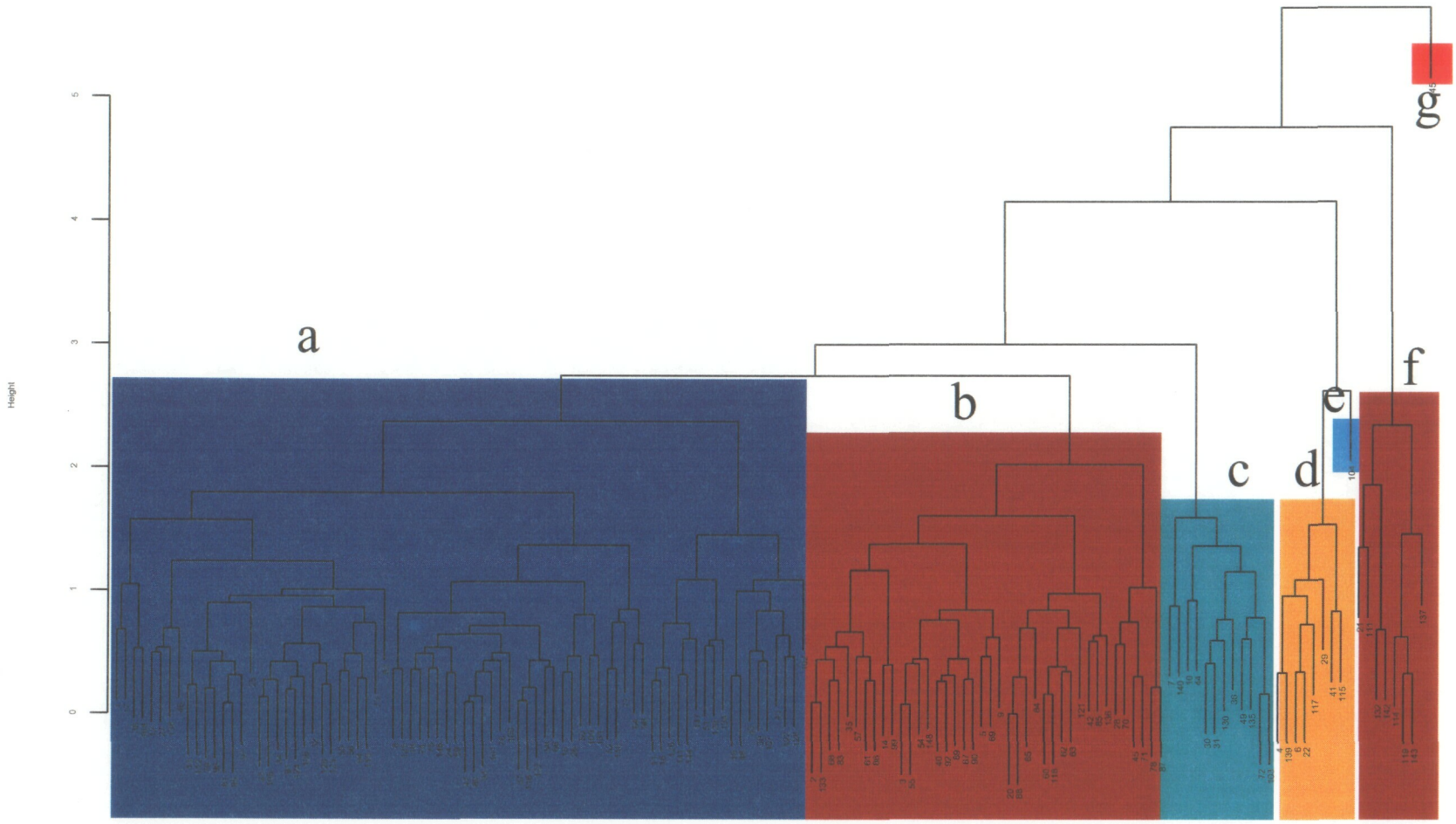

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Figure 12. Matrix Scatterplot – Clusters a through g

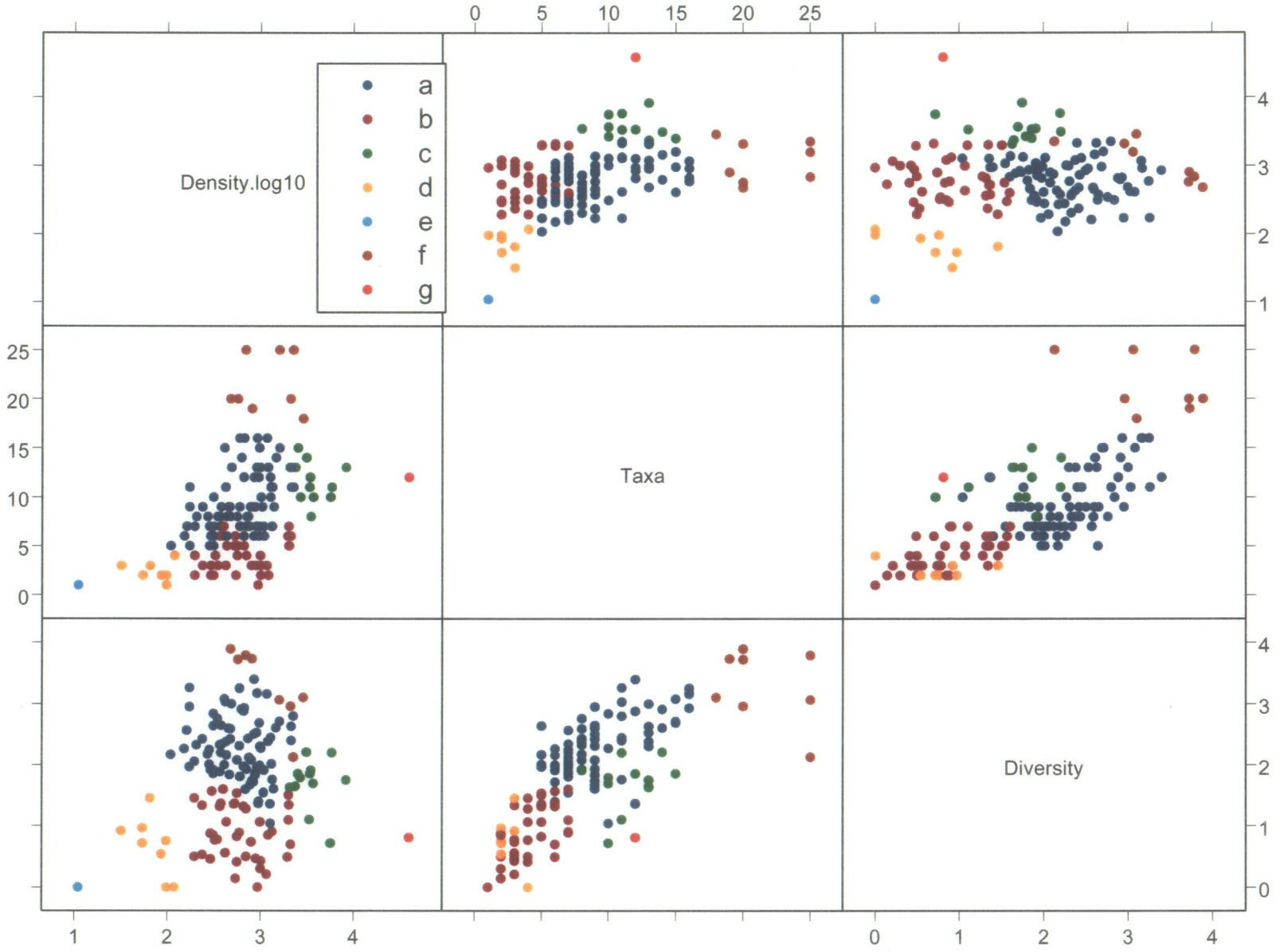

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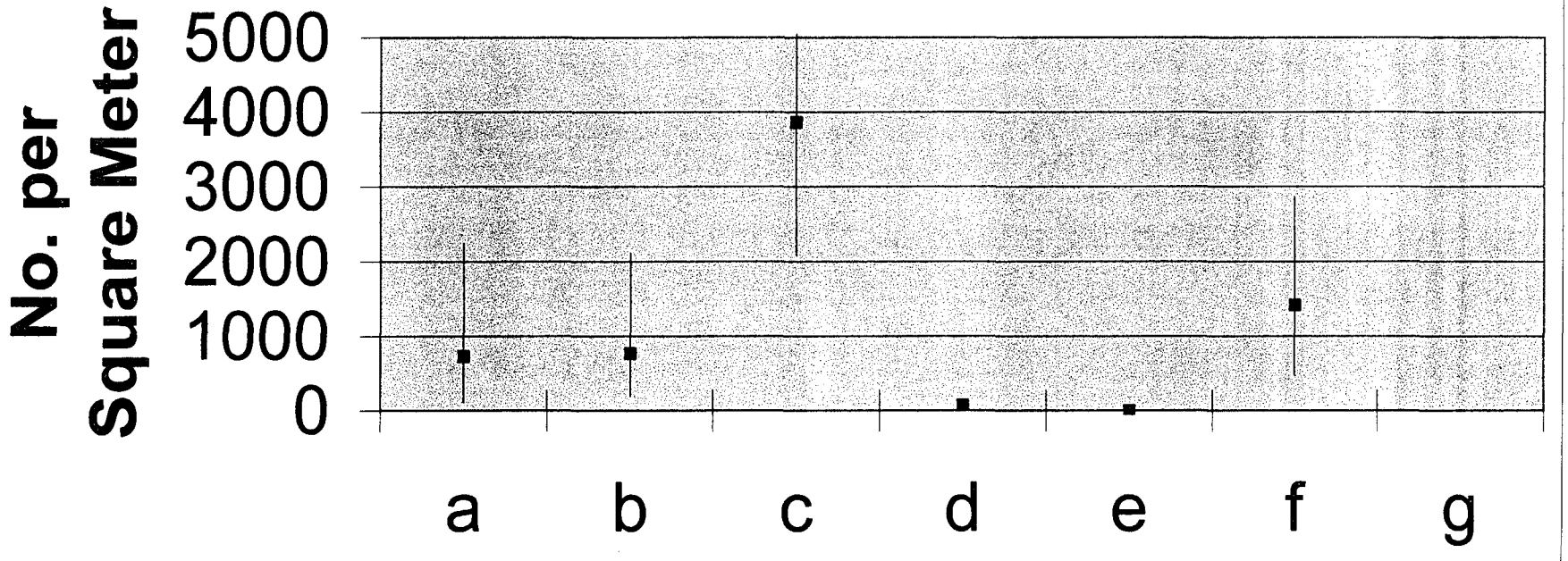
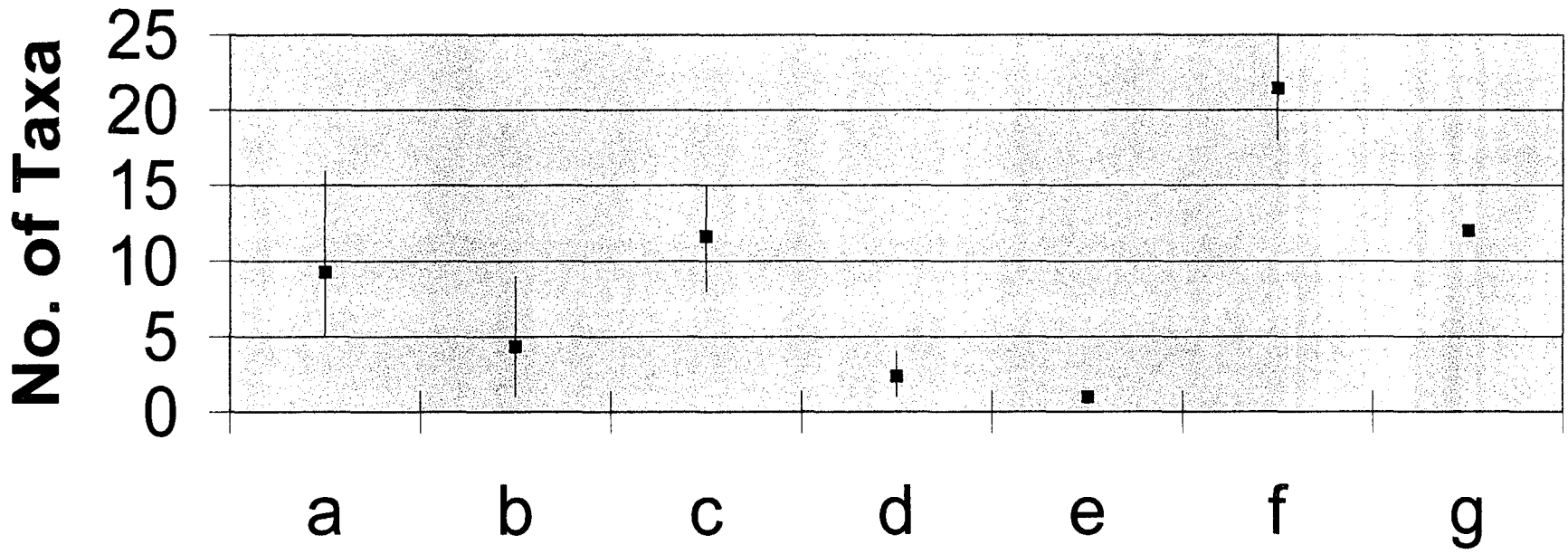
Figure 13. Organism Density



	a	b	c	d	e	f	g
Max	2249	2120	8276	118	11	2873	38990
Min	108	194	2077	32	11	474	38990
■ Mean	730	773	3872	75	11	1419	38990

Cluster

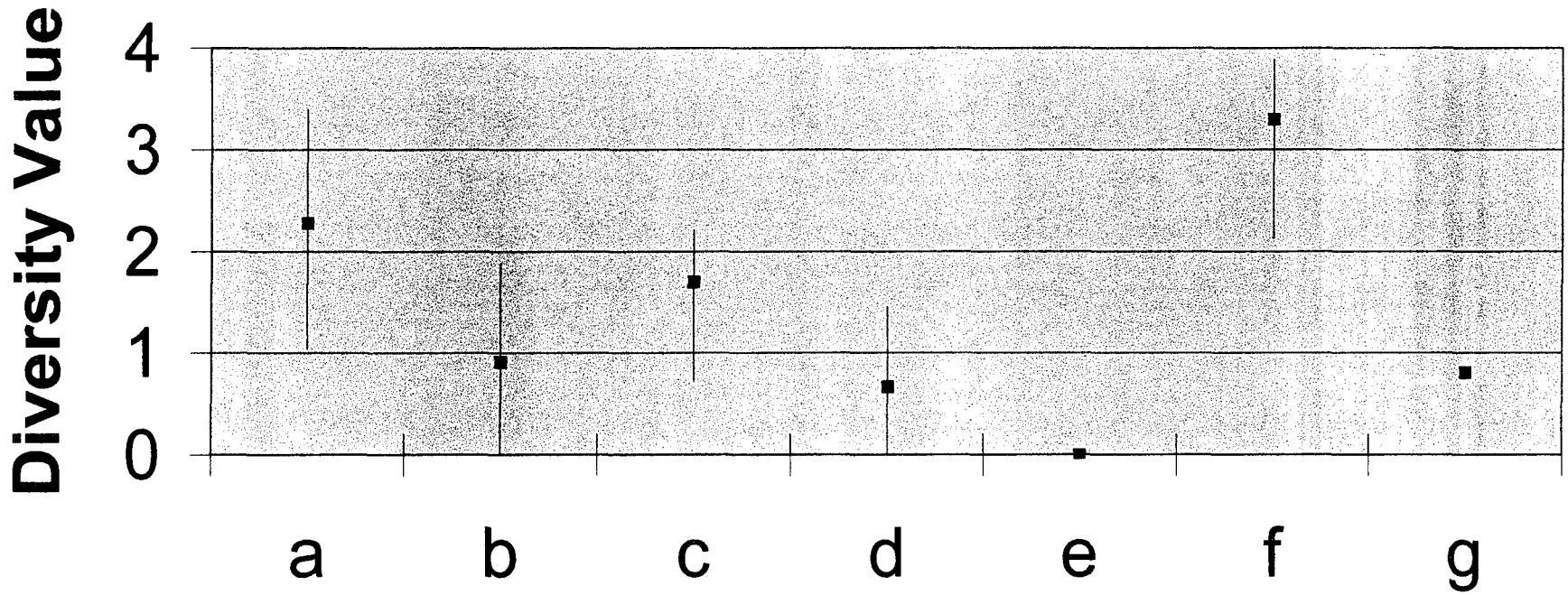
Figure 14. Number of Taxa



	a	b	c	d	e	f	g
Max	16	9	15	4	1	25	12
Min	5	1	8	1	1	18	12
■ Mean	9.28	4.35	11.67	2.38	1.00	21.50	12.00

Cluster

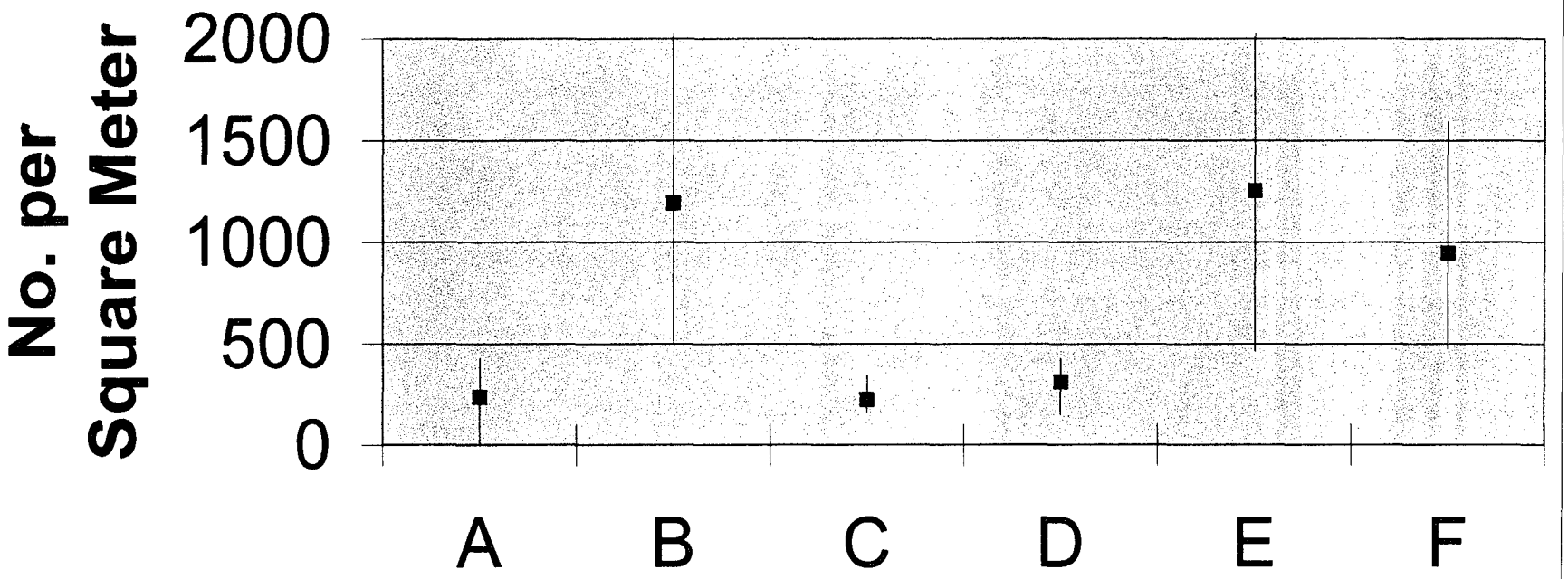
Figure 15. Shannon-Weiner Diversity



	a	b	c	d	e	f	g
Max	3.40	1.89	2.21	1.46	0.00	3.89	0.81
Min	1.04	0.00	0.72	0.00	0.00	2.13	0.81
■ Mean	2.28	0.92	1.70	0.67	0.00	3.30	0.81

Cluster

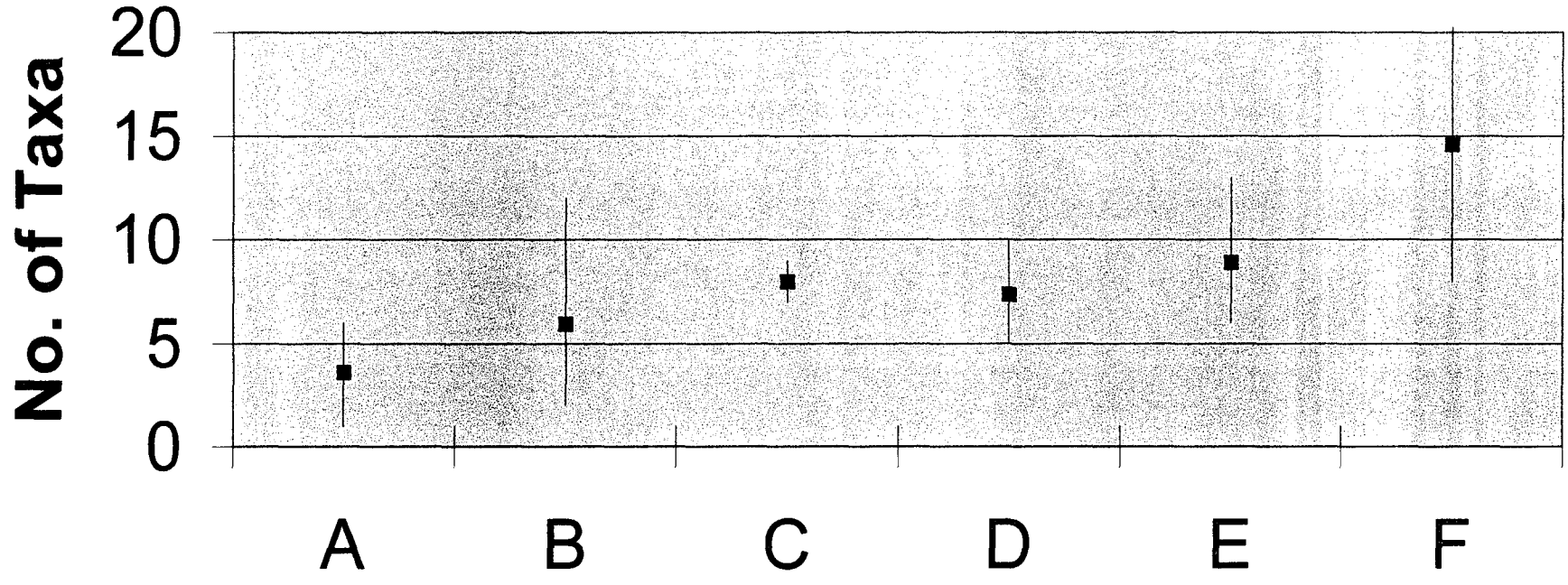
Figure 16. Organism Density at Lake Sites



	A	B	C	D	E	F
Max	430	5628	344	430	3691	1593
Min	11	506	161	151	463	474
■ Mean	237.45	1195.44	225.67	312.86	1254.28	949.20

Site Class

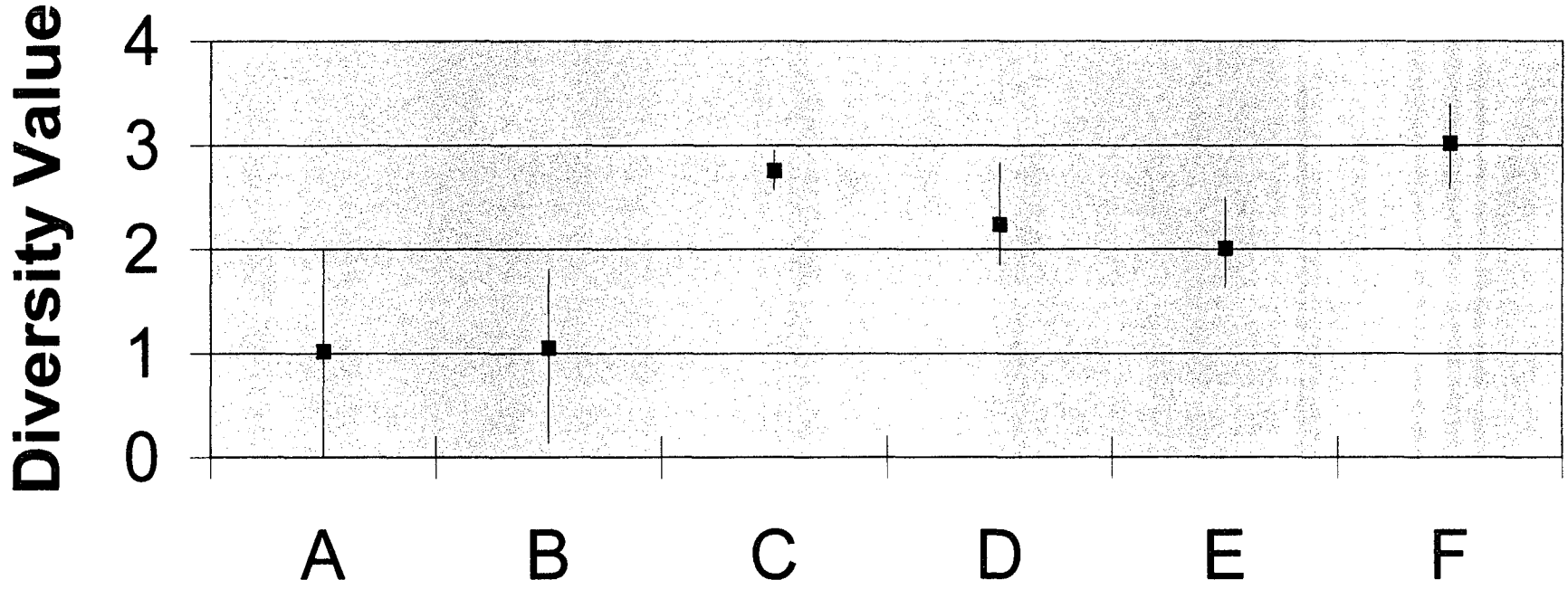
Figure 17. Number of Taxa at Lake Sites



	A	B	C	D	E	F
Max	6	12	9	10	13	25
Min	1	2	7	5	6	8
■ Mean	3.60	5.96	8.00	7.36	8.89	14.60

Site Class

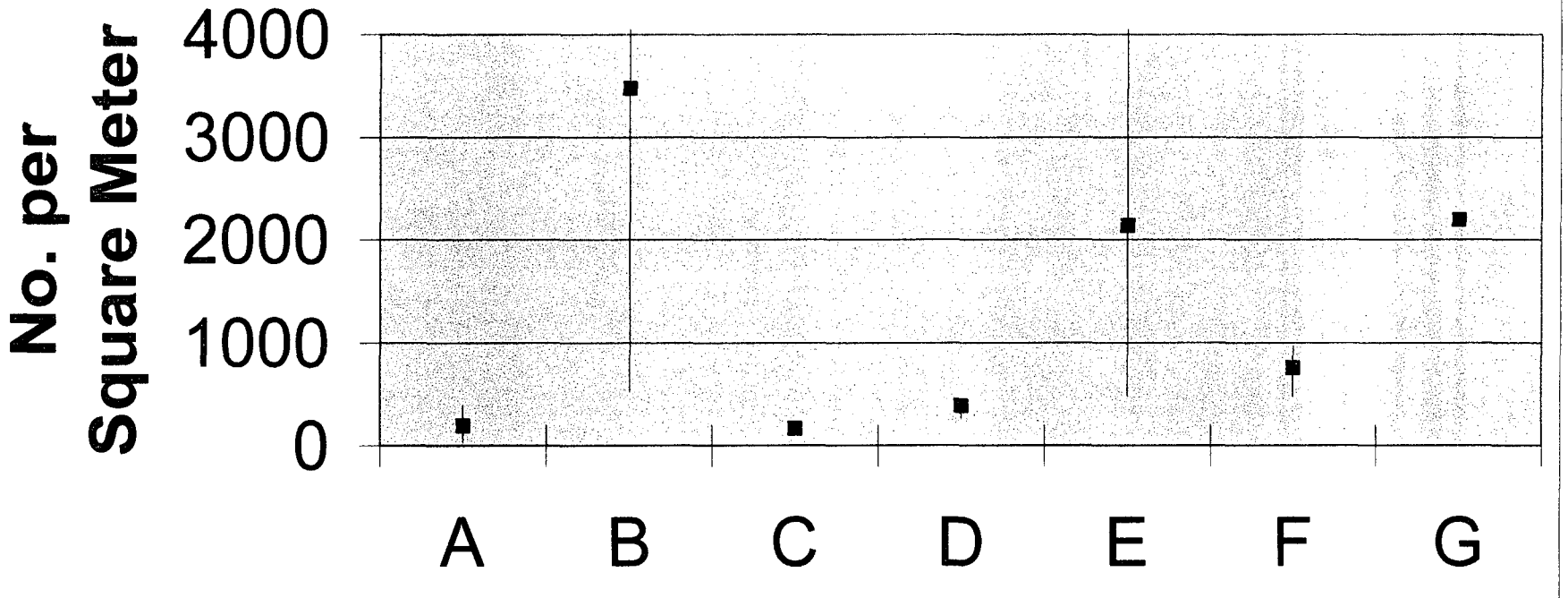
Figure 18. Species Diversity at Lake Sites



	A	B	C	D	E	F
Max	2.01	1.81	2.95	2.84	2.50	3.40
Min	0.00	0.14	2.57	1.85	1.63	2.59
■ Mean	1.02	1.05	2.76	2.24	2.01	3.02

Site Class

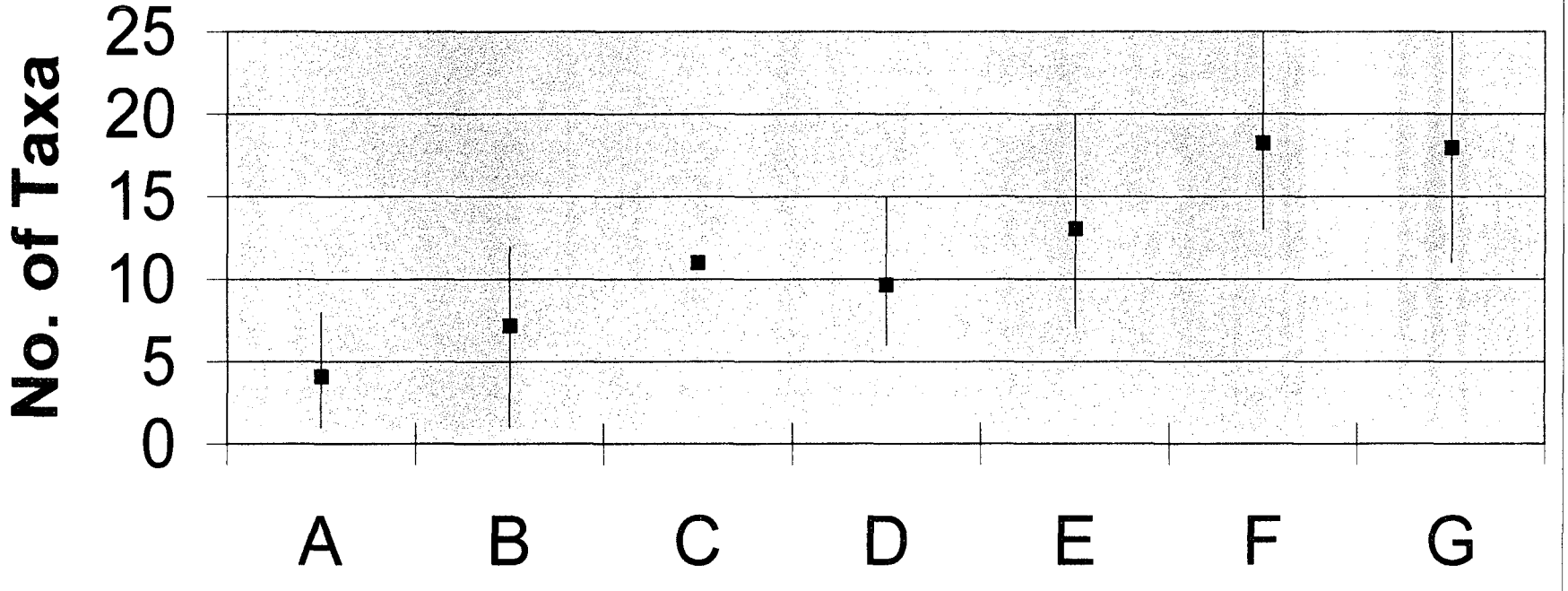
Figure 19. Organism Density - Stream Sites



	A	B	C	D	E	F	G
Max	398	38990	172	452	8276	969	2249
Min	32	527	172	269	484	474	2152
■ Mean	196.38	3479.18	172.00	392.83	2142.65	761.14	2200.50

Site Class

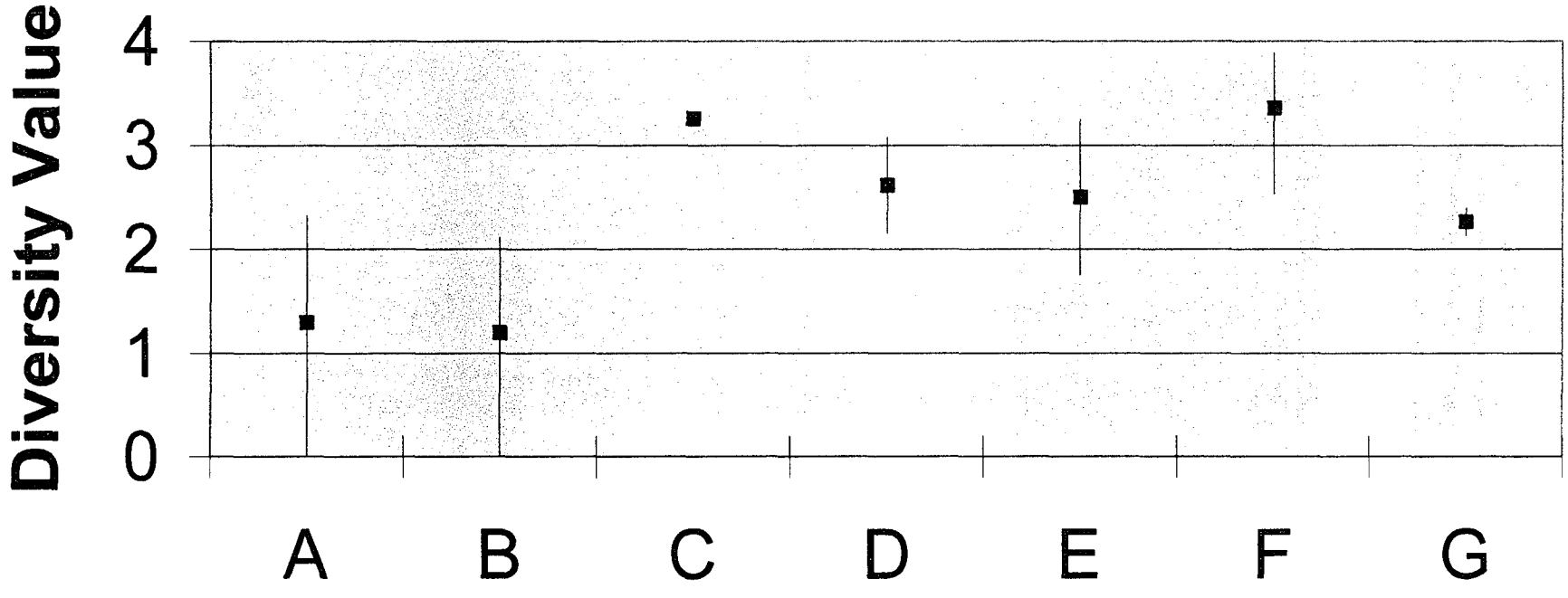
Figure 20. Number of Taxa at Stream Sites



	A	B	C	D	E	F	G
Max	8	12	11	15	20	25	25
Min	1	1	11	6	7	13	11
■ Mean	4.13	7.18	11.00	9.67	13.05	18.29	18.00

Site Class

Figure 21. Species Diversity at Stream Sites



	A	B	C	D	E	F	G
Max	2.33	2.12	3.26	3.08	3.25	3.89	2.40
Min	0.00	0.00	3.26	2.16	1.75	2.53	2.13
■ Mean	1.30	1.20	3.26	2.62	2.51	3.36	2.27

Site Class

Tables

TABLE 1
Benthic Sampling Locations and Collection Dates
St. Johns River Water Management District, Florida

Sample Code	Date	Time	Site Names	Latitude	Longitude
LSJ099	990521	1045	BIG DAVIS CREEK AT US 1	300906.0	813135.0
BIVENA	981124	1015	BIVENS ARM	293718.1	822026.2
BIVENB	981124	1045	BIVENS ARM	293726.2	822044.0
BIVENC	981124	1115	BIVENS ARM	293730.4	822054.6
BIVEND	981124	1200	BIVENS ARM	293737.8	822042.7
BIVENE	981124	1415	BIVENS ARM	293714.4	822017.7
BIVENF	981124	1530	BIVENS ARM	293659.8	822009.2
BWCCPB	990520	1030	BLACKWATER CREEK @ CARTER PROPERTY BRIDGE	285127.0	812610.0
BWC44	990520	0930	BLACKWATER CREEK AT HWY 44	285228.0	812912.0
BLSPR	990520	1300	BLUE SPRING NEAR ORANGE CITY	285638.0	812024.0
BUL	990623	1415	BULOW CREEK AT LOW BRIDGE	292426.0	0810719.0
ASH	990505	1130	CENTER LAKE ASHBY	285547.0	0810537.0
LOL	990610	0945	CENTER LAKE LOCHLOOSA	293112.0	0820729.0
LKWOOD	990504	1000	CENTER LAKE WOODRUFF	290551.0	0812500.0
LYC	990505	1215	CENTER LAKE YALE	285452.0	0814401.0
BEAR	990301	1000	CENTER_OF_BEAR_LAKE	283928.1	812713.4
CHERRY	990227	1300	CENTER_OF_CHERRY_LAKE	283604.2	814903.5
HALFMOON	990224	1300	CENTER_OF_HALFMOON_LAKE	290926.0	815003.0
BROWARD	990224	1600	CENTER_OF_LAKE_BROWARD	293045.2	813520.6
CHARLES	990224	1100	CENTER_OF_LAKE_CHARLES	291345.0	815434.3
DALHOUS	990227	0945	CENTER_OF_LAKE_DALHOUSIE	285412.3	813708.7
DIAS	990223	1100	CENTER_OF_LAKE_DIAS	290953.4	811848.5
DORR	990225	0900	CENTER_OF_LAKE_DORR	290054.3	813741.0
HOWELL	990301	1130	CENTER_OF_LAKE_HOWELL	283821.1	811847.6
JOHNSON	990302	1100	CENTER_OF_LAKE_JOHNSON	294926.2	815617.0
KERR	990224	0930	CENTER_OF_LAKE_KERR	292125.8	814655.3
LOUISA	990227	1400	CENTER_OF_LAKE_LOUISA	283001.8	814439.6
MAITL	990304	1030	CENTER_OF_LAKE_MAITLAND	283658.2	812104.7
NORRIS	990225	1100	CENTER_OF_LAKE_NORRIS	285654.6	813237.6
OLA	990227	1100	CENTER_OF_LAKE_OLA	284504.5	813751.5
SELLERS	990223	0945	CENTER_OF_LAKE_SELLERS	290715.8	813727.8
WASH	990303	0930	CENTER_OF_LAKE_WASHINGTON	280854.0	804420.0
WINN	990225	1330	CENTER_OF_LAKE_WINNEMISETT	290132.1	811504.9
MILLD	990304	1030	CENTER_OF_MILL_DAM_LAKE	291056.1	814959.8
SOUTH	990303	1030	CENTER_OF_SOUTH_LAKE	283655.2	805204.2
USJ055	990525	1200	CRABGRASS CREEK AT SR 192	280748.0	0810006.0
CC03	990519	0945	CRANE CREEK AT BABCOCK STREET	280407.0	803721.0
20030411	990503	1210	CRESCENT LAKE AT MARKER 9	292332.0	0812620.0
DMR	990505	1010	DEEP CREEK AT MAYTOWN ROAD BRIDGE	285046.0	0810446.0
LSJ087	990521	0930	DURBIN CREEK AT RACETRACK ROAD	300733.0	813513.0
20030400	990610	1300	GEORGES LAKE 200 YDS FROM WEST BANK	294734.3	0815050.0
2238000	990609	1100	HAINES CREEK AT LISBON	285214.0	0814702.0
27010037	990623	1110	HALIFAX RIVER 100 FT N SI BEACH MEMORIAL BRIDGE	291242.0	0810042.0
02240800	990524	1130	HATCHET CREEK NEAR GAINESVILLE	294115.0	0821224.0
HAW	990608	1000	HAW CREEK MOUTH AT DEAD LAKE	292354.0	0812554.0
HELENA	990327	0930	Helena Run at the confluence of Bugg Spring Run	284547.4	815346.4
HOGA	981123	1000	HOGTOWN CREEK	294000.5	822055.9
HOGB	981123	1115	HOGTOWN CREEK	294001.1	822151.1
HOGC	981123	1330	HOGTOWN CREEK	293902.0	822231.1
HOGD	981123	1445	HOGTOWN CREEK	293809.5	822333.7
27010875	990507	1030	INDIAN RIVER AT ICWW CM 12 NEAR HALOV	284112.0	804847.0
20030412	990503	0915	KINGSLEY LAKE AT CENTER	295751.2	0815957.2
DISSA	981125	1015	LAKE DISSTON	291751.2	812231.1
DISSB	981125	1045	LAKE DISSTON	291745.0	812328.2

TABLE 1
Benthic Sampling Locations and Collection Dates
St. Johns River Water Management District, Florida

Sample Code	Date	Time	Site Names	Latitude	Longitude
DISSC	981125	1115	LAKE DISSTON	291642.1	812402.2
DISSD	981125	1200	LAKE DISSTON	291642.4	812302.3
DISSE	981125	1245	LAKE DISSTON	291715.2	812226.4
DORAA	981214	0945	LAKE DORA	284746.7	814403.0
DORAB	981214	1015	LAKE DORA	284725.4	814231.9
DORAC	981214	1045	LAKE DORA	284700.7	814053.2
DORAD	981214	1115	LAKE DORA	284759.1	814016.4
DORAE	981214	1230	LAKE DORA	284724.3	813853.3
DORAF	981214	1300	LAKE DORA	284626.6	813903.6
DORAG	981214	1330	LAKE DORA	284616.8	813951.2
EUSTA	981216	0945	LAKE EUSTIS	285112.4	814121.7
EUSTB	981216	1030	LAKE EUSTIS	284925.6	814336.3
EUSTC	981216	1100	LAKE EUSTIS	284851.7	814428.3
EUSTD	981216	1130	LAKE EUSTIS	284919.9	814521.0
EUSTE	981216	1245	LAKE EUSTIS	285103.3	814512.3
EUSTF	981216	1330	LAKE EUSTIS	285210.4	814317.9
EUSTG	981216	1400	LAKE EUSTIS	285202.0	814139.2
GEN	990524	1010	LAKE GENEVA AT CENTER	294606.0	0820131.0
GEORGEA	981211	0815	LAKE GEORGE	292043.2	813504.4
GEORGEB	981211	0930	LAKE GEORGE	291731.9	813250.4
GEORGEC	981211	1015	LAKE GEORGE	291526.8	813223.2
GEORGED	981211	1045	LAKE GEORGE	292203.3	813716.5
GEORGEE	981211	1130	LAKE GEORGE	292517.7	813912.8
GEORGEF	981211	0845	LAKE GEORGE	291829.4	813622.2
GEORGEG	981211	0915	LAKE GEORGE	291320.6	813458.3
GEORGEH	981211	1000	LAKE GEORGE	291206.6	813353.4
GEORGEI	981211	1045	LAKE GEORGE	291518.3	813708.1
GEORGEJ	981211	1130	LAKE GEORGE	291638.9	813756.7
GRIFFA	981201	1100	LAKE GRIFFIN	284915.8	815206.7
GRIFFB	981201	1200	LAKE GRIFFIN	285021.7	815233.3
GRIFFC	981201	1245	LAKE GRIFFIN	285032.9	815103.2
GRIFFD	981201	1330	LAKE GRIFFIN	285337.9	814959.8
GRIFFE	981201	1400	LAKE GRIFFIN	285432.8	814947.6
GRIFFF	981201	1430	LAKE GRIFFIN	285614.5	814950.6
HARA	981203	1030	LAKE HARRIS	284154.3	814508.4
HARB	981203	1115	LAKE HARRIS	284630.5	814820.7
HARC	981203	1215	LAKE HARRIS	284612.2	815220.4
HARD	981203	1330	LAKE HARRIS	284748.2	815215.4
HARE	981203	1400	LAKE HARRIS	284831.6	814627.2
HARF	981203	1430	LAKE HARRIS	284546.9	814558.3
MONA	981210	1015	LAKE MONROE	284902.4	811545.7
MONB	981210	1100	LAKE MONROE	284912.3	811635.9
MONC	981210	1130	LAKE MONROE	285009.9	811630.9
MOND	981210	1300	LAKE MONROE	285003.4	811853.7
MONE	981210	1345	LAKE MONROE	285135.0	811524.7
MONF	981210	1415	LAKE MONROE	284950.7	811410.6
MONG	981210	1445	LAKE MONROE	284851.0	811438.4
SHEEL	990524	0900	LAKE SHEELAR @ CENTER (GOLD HEAD BRDG - CLAY CO)	295022.0	0815730.0
CLW	990505	0930	LAKE WEIR AT CENTER	290113.0	0815612.0
WIO	990520	1145	LAKE WINONA	291048.0	812000.0
20020371	990505	1115	LAKE YALE SOUTH LOBE AT CENTER	285410.0	0814320.0
02233200	990519	0830	LITTLE ECONLOCKHATCHEE R NR UNION PARK, FLA.	283129.0	811439.0
LSJ070	990518	1000	LITTLE HAW CREEK AT SR 305	291913.0	812308.0
LORANCRK	990329	1000	Little Orange Creek	293228.7	815712.8

TABLE 1
Benthic Sampling Locations and Collection Dates
St. Johns River Water Management District, Florida

Sample Code	Date	Time	Site Names	Latitude	Longitude
20010137	990520	1300	LITTLE WEKIVA RIVER AT HWY 434	284115.5	812350.0
LOCCR	990329	1130	Lochloosa Creek at SR 20	293602.3	820839.8
MR312	990524	1030	MATANZAS RIVER AT HWY 312	295219.0	0811824.0
MAT	990524	1300	MATANZAS RIVER S OF WASHINGTON OAKS @ CM #109	293708.0	0811227.0
SJRJESUP	990327	1300	Mid SJR at East of Barge Canal near JJ Fish Camp	284727.2	810939.3
MPS	990624	0930	MIDDLE PRONG ST MARY'S RIVER AT HWY 127	302556.0	0821352.0
MBU	990622	0930	MOSS BLUFF STRUCTURE ABOVE DAM	290444.0	0815254.0
MTC	990625	0900	MOULTRIE CREEK AT SR 207	295050.0	0812141.0
19020002	990521	1245	NASSAU RIVER AT US 17	303427.8	813632.2
NRI	990624	1130	NASSAU RIVER NEAR ITALIA	303453.0	0814109.0
NBLACK	990325	1000	North Fork of Black Creek at SR 21	300432.0	815147.7
ORD	990622	1200	OCKLAWAHA R DNSTR SR 40 BEFORE 4TH RIVER BEND	291303.0	0815909.0
20020001	990622	1030	OCKLAWAHA RIVER AT SR 464	290453.0	0815305.8
20020012	990517	1215	OKLAWAHA RIVER AT SR 316	292222.5	815406.2
20020404	990628	1030	ORANGE CREEK 50 YARDS UPSTREAM OF HWY 21	293109.0	0815648.0
OLK	990610	1030	ORANGE LAKE B/T COW HAMMOCK & SAMSONS POINT	292749.0	0821038.0
PEL	990625	1000	PELLICER CREEK AT US 1	293905.0	0811714.0
LSJ918	990526	0900	RICE CREEK AT SR 100	294116.0	0814432.0
SILRV	990331	1030	Silver_River_at_boat_ramp_canal*	291236.2	815931.5
SIM	990524	1230	SIMMS CREEK 2 MILES N-NE OF BARDIN	294427.0	0814249.0
SJRPLTKA	990325	0830	SJR at Palatka (US Hwy. 17)	293837.8	813714.5
02248000	990623	1300	SPRUCE CREEK NEAR SAMSULA	290301.0	0810249.0
20030373	990622	1030	ST. JOHNS RIVER AT CM 72	292240.0	0813742.0
20010002	990504	0815	ST. JOHNS RIVER AT HWY 40 NEAR ASTOR	291005.0	0813125.0
SRS	990519	1000	ST. JOHNS RIVER at SR 50 NR CHRISTMAS, FLA.	283234.0	805638.0
20010003	990604	0945	ST. JOHNS RIVER AT US HWY 17-92	285013.5	0811922.0
02236000	990504	1130	ST. JOHNS RIVER NEAR DeLAND	290029.0	0812258.0
19010001	990506	1015	ST. MARYS RIVER @ US 17 GEORGIA LINE	304416.0	0814114.0
19010006	990624	1010	ST. MARYS RIVER AT SR 2	303115.0	0821348.0
SWEETA	981130	1100	SWEETWATER BRANCH	293654.5	821930.6
SWEETB	981130	1215	SWEETWATER BRANCH	293618.1	821804.8
SWEETC	981130	1430	SWEETWATER BRANCH	293857.5	821913.2
SWEETD	981130	1530	SWEETWATER BRANCH	293749.3	821921.0
SWEETE	981130	1630	SWEETWATER BRANCH	293808.3	821924.7
TOL	990621	0945	TOLOMATO RIVER AT SPANISH LANDING	300359.0	0812212.0
27010579	990506	1000	TOMOKA RIVER AT 11TH STREET BRIDGE	291301.0	0810632.5
27010024	990623	1000	TOMOKA RIVER AT OLD DIXIE HWY BRIDGE	292030.3	0810511.9
TUBPP1	990628	0915	TUMBLIN CREEK	293658.2	822006.5
02235000	990520	1110	WEKIVA RIVER NEAR SANFORD	284854.0	812510.0
USJ918	990525	1100	WOLF CREEK #1 AT US 419	281247.0	0805441.0

TABLE 2
Sampling Sites Listed by Dendogram Identification Number

Cluster	Dendogram Id. No.	Site Location
a	1	BIG DAVIS CREEK AT US 1
b	2	BIVENS ARM
b	3	BIVENS ARM
d	4	BIVENS ARM
b	5	BIVENS ARM
d	6	BIVENS ARM
c	7	BIVENS ARM
a	8	BLACKWATER CREEK @ CARTER PROPERTY BRIDGE
b	9	BLACKWATER CREEK AT HWY 44
c	10	BLUE SPRING NEAR ORANGE CITY
a	11	BULOW CREEK AT LOW BRIDGE
a	12	CENTER LAKE ASHBY
a	13	CENTER LAKE LOCHLOOSA
b	14	CENTER LAKE WOODRUFF
a	15	CENTER LAKE YALE
a	16	CENTER_OF_BEAR_LAKE
a	17	CENTER_OF_CHERRY_LAKE
a	18	CENTER_OF_HALFMOON_LAKE
a	19	CENTER_OF_LAKE_BROWARD
b	20	CENTER_OF_LAKE_CHARLES
f	21	CENTER_OF_LAKE_DALHOUSIE
d	22	CENTER_OF_LAKE_DIAS
a	23	CENTER_OF_LAKE_DORR
a	24	CENTER_OF_LAKE_HOWELL
a	25	CENTER_OF_LAKE_JOHNSON
a	26	CENTER_OF_LAKE_KERR
a	27	CENTER_OF_LAKE_LOUISA
b	28	CENTER_OF_LAKE_MAITLAND
d	29	CENTER_OF_LAKE_NORRIS
c	30	CENTER_OF_LAKE_OLA
c	31	CENTER_OF_LAKE_SELLERS
a	32	CENTER_OF_LAKE_WASHINGTON
a	33	CENTER_OF_LAKE_WINNEMISETT
a	34	CENTER_OF_MILL_DAM_LAKE
b	35	CENTER_OF_SOUTH_LAKE
c	36	CRABGRASS CREEK AT SR 192
a	37	CRANE CREEK AT BABCOCK STREET
a	38	CRESCENT LAKE AT MARKER 9
a	39	DEEP CREEK AT MAYTOWN ROAD BRIDGE
b	40	DURBIN CREEK AT RACETRACK ROAD
d	41	GEORGES LAKE 200 YDS FROM WEST BANK
b	42	HAINES CREEK AT LISBON
a	43	HALIFAX RIVER 100 FT N SI BEACH MEMORIAL BRIDGE
c	44	HATCHET CREEK NEAR GAINESVILLE
b	45	HAW CREEK MOUTH AT DEAD LAKE
a	46	Helena Run at the confluence of Bugg Spring Run
a	47	HOGTOWN CREEK
a	48	HOGTOWN CREEK
c	49	HOGTOWN CREEK
a	50	HOGTOWN CREEK
a	51	INDIAN RIVER AT ICWW CM 12 NEAR HALOV
a	52	KINGSLEY LAKE AT CENTER
a	53	LAKE DISSTON
b	54	LAKE DISSTON
b	55	LAKE DISSTON

TABLE 2
Sampling Sites Listed by Dendogram Identification Number

Cluster	Dendogram Id. No.	Site Location
a	56	LAKE DISSTON
b	57	LAKE DISSTON
a	58	LAKE DORA
a	59	LAKE DORA
b	60	LAKE DORA
b	61	LAKE DORA
b	62	LAKE DORA
b	63	LAKE DORA
a	64	LAKE DORA
b	65	LAKE EUSTIS
a	66	LAKE EUSTIS
b	67	LAKE EUSTIS
b	68	LAKE EUSTIS
b	69	LAKE EUSTIS
b	70	LAKE EUSTIS
b	71	LAKE EUSTIS
c	72	LAKE GENEVA AT CENTER
a	73	LAKE GEORGE
a	74	LAKE GEORGE
a	75	LAKE GEORGE
a	76	LAKE GEORGE
a	77	LAKE GEORGE
b	78	LAKE GEORGE
a	79	LAKE GEORGE
a	80	LAKE GEORGE
a	81	LAKE GEORGE
a	82	LAKE GEORGE
b	83	LAKE GRIFFIN
b	84	LAKE GRIFFIN
b	85	LAKE GRIFFIN
b	86	LAKE GRIFFIN
b	87	LAKE GRIFFIN
b	88	LAKE GRIFFIN
b	89	LAKE HARRIS
b	90	LAKE HARRIS
a	91	LAKE HARRIS
b	92	LAKE HARRIS
a	93	LAKE HARRIS
a	94	LAKE HARRIS
a	95	LAKE MONROE
a	96	LAKE MONROE
a	97	LAKE MONROE
a	98	LAKE MONROE
b	99	LAKE MONROE
a	100	LAKE MONROE
a	101	LAKE MONROE
a	102	LAKE SHEELAR @ CENTER (GOLD HEAD BRDG - CLAY CO)
c	103	LAKE WEIR AT CENTER
e	104	LAKE WINONA
a	105	LAKE YALE SOUTH LOBE AT CENTER
a	106	LITTLE ECONLOCKHATCHEE R NR UNION PARK, FLA.
a	107	LITTLE HAW CREEK AT SR 305
a	108	Little Orange Creek
a	109	LITTLE WEKIVA RIVER AT HWY 434
a	110	Lochloosa Creek at SR 20
f	111	MATANZAS RIVER AT HWY 312

TABLE 2
Sampling Sites Listed by Dendogram Identification Number

Cluster	Dendogram Id. No.	Site Location
a	112	MATANZAS RIVER S OF WASHINGTON OAKS @ CM #109
a	113	Mid SJR at East of Barge Canal near JJ Fish Camp
f	114	MIDDLE PRONG ST MARY'S RIVER AT HWY 127
d	115	MOSS BLUFF STRUCTURE ABOVE DAM
a	116	MOULTRIE CREEK AT SR 207
d	117	NASSAU RIVER AT US 17
b	118	NASSAU RIVER NEAR ITALIA
f	119	North Fork of Black Creek at SR 21
a	120	OCKLAWAHA R DNSTR SR 40 BEFORE 4TH RIVER BEND
b	121	OCKLAWAHA RIVER AT SR 464
a	122	OKLAWAHA RIVER AT SR 316
a	123	ORANGE CREEK 50 YARDS UPSTREAM OF HWY 21
a	124	ORANGE LAKE B/T COW HAMMOCK & SAMSONS POINT
a	125	PELLICER CREEK AT US 1
a	126	RICE CREEK AT SR 100
a	127	Silver_River_at_boat_ramp_canal*
a	128	SIMMS CREEK 2 MILES N-NE OF BARDIN
a	129	SJR at Palatka (US Hwy. 17)
c	130	SPRUCE CREEK NEAR SAMSULA
a	131	ST. JOHNS RIVER AT CM 72
f	132	ST. JOHNS RIVER AT HWY 40 NEAR ASTOR
b	133	ST. JOHNS RIVER at SR 50 NR CHRISTMAS, FLA.
a	134	ST. JOHNS RIVER AT US HWY 17-92
c	135	ST. JOHNS RIVER NEAR DeLAND
b	136	ST. MARYS RIVER @ US 17 GEORGIA LINE
f	137	ST. MARYS RIVER AT SR 2
a	138	SWEETWATER BRANCH
d	139	SWEETWATER BRANCH
c	140	SWEETWATER BRANCH
a	141	SWEETWATER BRANCH
f	142	SWEETWATER BRANCH
f	143	TOLOMATO RIVER AT SPANISH LANDING
a	144	TOMOKA RIVER AT 11TH STREET BRIDGE
g	145	TOMOKA RIVER AT OLD DIXIE HWY BRIDGE
a	146	TUMBLIN CREEK
a	147	WEKIVA RIVER NEAR SANFORD
b	148	WOLF CREEK #1 AT US 419

TABLE 3
List of Sampling Sites and Benthic Community Metrics Arranged by Cluster

Cluster	Water Body Type	Dendogram Id. No.	Site Location	Density (No./m^{-2})	log10 Density	No. of Taxa	Shannon Diversity
a	Lake	12	CENTER LAKE ASHBY	151	2.18	6	2.26
a	Lake	13	CENTER LAKE LOCHLOOSA	409	2.61	6	2.00
a	Lake	15	CENTER LAKE YALE	850	2.93	9	2.50
a	Lake	16	CENTER_OF_BEAR_LAKE	1205	3.08	13	2.38
a	Lake	17	CENTER_OF_CHERRY_LAKE	172	2.24	9	2.95
a	Lake	18	CENTER_OF_HALFMOON_LAKE	710	2.85	8	1.93
a	Lake	19	CENTER_OF_LAKE_BROWARD	1173	3.07	16	3.16
a	Lake	23	CENTER_OF_LAKE_DORR	474	2.68	8	2.42
a	Lake	24	CENTER_OF_LAKE_HOWELL	689	2.84	7	1.60
a	Lake	25	CENTER_OF_LAKE_JOHNSON	463	2.67	9	1.84
a	Lake	26	CENTER_OF_LAKE_KERR	732	2.86	8	2.43
a	Lake	27	CENTER_OF_LAKE_LOUISA	194	2.29	7	2.06
a	Lake	32	CENTER_OF_LAKE_WASHINGTON	344	2.54	8	2.76
a	Lake	33	CENTER_OF_LAKE_WINNEMISETT	656	2.82	12	2.88
a	Lake	34	CENTER_OF_MILL_DAM_LAKE	474	2.68	8	2.59
a	Lake	38	CRESCENT LAKE AT MARKER 9	312	2.49	10	2.84
a	Lake	52	KINGSLEY LAKE AT CENTER	1270	3.10	12	1.36
a	Lake	53	LAKE DISSTON	204	2.31	8	2.33
a	Lake	56	LAKE DISSTON	237	2.37	9	2.42
a	Lake	58	LAKE DORA	1033	3.01	9	1.94
a	Lake	59	LAKE DORA	603	2.78	7	1.81
a	Lake	64	LAKE DORA	1388	3.14	9	1.61
a	Lake	66	LAKE EUSTIS	796	2.90	9	2.08
a	Lake	73	LAKE GEORGE	161	2.21	7	2.57
a	Lake	74	LAKE GEORGE	560	2.75	8	2.08
a	Lake	75	LAKE GEORGE	656	2.82	6	1.98
a	Lake	76	LAKE GEORGE	839	2.92	6	1.72
a	Lake	77	LAKE GEORGE	1281	3.11	10	1.04
a	Lake	79	LAKE GEORGE	312	2.49	7	1.86
a	Lake	80	LAKE GEORGE	979	2.99	7	1.99
a	Lake	81	LAKE GEORGE	312	2.49	6	1.92
a	Lake	82	LAKE GEORGE	312	2.49	5	2.64
a	Lake	91	LAKE HARRIS	377	2.58	7	2.20
a	Lake	93	LAKE HARRIS	893	2.95	7	1.89
a	Lake	94	LAKE HARRIS	280	2.45	7	2.25
a	Lake	95	LAKE MONROE	291	2.46	6	1.92
a	Lake	96	LAKE MONROE	366	2.56	7	1.89
a	Lake	97	LAKE MONROE	280	2.45	5	2.01
a	Lake	98	LAKE MONROE	1345	3.13	11	1.76
a	Lake	100	LAKE MONROE	1313	3.12	7	2.02
a	Lake	101	LAKE MONROE	1087	3.04	6	1.91
a	Lake	102	LAKE SHEELAR @ CENTER (GOLD HEAD BRDG - CLAY CO)	850	2.93	12	3.40
a	Lake	105	LAKE YALE SOUTH LOBE AT CENTER	430	2.63	8	2.38
a	Lake	124	ORANGE LAKE B/T COW HAMMOCK & SAMSONS POINT	387	2.59	7	2.34
a	Stream	1	BIG DAVIS CREEK AT US 1	172	2.24	11	3.26
a	Stream	8	BLACKWATER CREEK @ CARTER PROPERTY BRIDGE	958	2.98	6	1.40
a	Stream	11	BULOW CREEK AT LOW BRIDGE	990	3.00	13	2.30
a	Stream	37	CRANE CREEK AT BABCOCK STREET	775	2.89	9	1.67
a	Stream	39	DEEP CREEK AT MAYTOWN ROAD BRIDGE	484	2.68	13	3.00
a	Stream	43	HALIFAX RIVER 100 FT N SI BEACH MEMORIAL BRIDGE	409	2.61	15	3.08
a	Stream	46	Helena Run at the confluence of Bugg Spring Run	108	2.03	5	2.17
a	Stream	47	HOGTOWN CREEK	915	2.96	7	1.96
a	Stream	48	HOGTOWN CREEK	915	2.96	16	3.17
a	Stream	50	HOGTOWN CREEK	592	2.77	9	2.31
a	Stream	51	INDIAN RIVER AT ICWW CM 12 NEAR HALOV	2152	3.33	11	2.40
a	Stream	106	LITTLE ECONLOCKHATCHEE R NR UNION PARK, FLA.	366	2.56	8	2.33
a	Stream	107	LITTLE HAW CREEK AT SR 305	624	2.80	14	2.91
a	Stream	108	Little Orange Creek	420	2.62	11	3.03
a	Stream	109	LITTLE WEKIVA RIVER AT HWY 434	1011	3.00	10	2.27
a	Stream	110	Lochloosa Creek at SR 20	947	2.98	12	1.37
a	Stream	112	MATANZAS RIVER S OF WASHINGTON OAKS @ CM #109	430	2.63	6	2.16
a	Stream	113	Mid SJR at East of Barge Canal near JJ Fish Camp	269	2.43	8	2.18
a	Stream	116	MOULTRIE CREEK AT SR 207	807	2.91	9	1.74
a	Stream	120	OCKLAWAHA R DNSTR SR 40 BEFORE 4TH RIVER BEND	377	2.58	9	2.65
a	Stream	122	OKLAWAHA RIVER AT SR 316	592	2.77	16	3.25
a	Stream	123	ORANGE CREEK 50 YARDS UPSTREAM OF HWY 21	452	2.66	9	2.60
a	Stream	125	PELLICER CREEK AT US 1	1076	3.03	7	1.55
a	Stream	126	RICE CREEK AT SR 100	904	2.96	13	2.53

TABLE 3
List of Sampling Sites and Benthic Community Metrics Arranged by Cluster

Cluster	Water Body Type	Dendogram Id. No.	Site Location	Density (No./m^{-2})	log10 Density	No. of Taxa	Shannon Diversity
a	Stream	127	Silver_River_at_boat_ramp_canal*	872	2.94	9	1.83
a	Stream	128	SIMMS CREEK 2 MILES N-NE OF BARDIN	667	2.82	16	2.93
a	Stream	129	SJR at Palatka (US Hwy. 17)	2249	3.35	11	2.80
a	Stream	131	ST. JOHNS RIVER AT CM 72	1291	3.11	11	2.45
a	Stream	134	ST. JOHNS RIVER AT US HWY 17-92	2152	3.33	13	2.63
a	Stream	138	SWEETWATER BRANCH	172	2.24	5	1.97
a	Stream	141	SWEETWATER BRANCH	1464	3.17	14	2.61
a	Stream	144	TOMOKA RIVER AT 11TH STREET BRIDGE	1604	3.21	15	2.71
a	Stream	146	TUMBLIN CREEK	753	2.88	7	2.12
a	Stream	147	WEKIVA RIVER NEAR SANFORD	969	2.99	15	2.69
b	Lake	2	BIVENS ARM	291	2.46	2	0.88
b	Lake	3	BIVENS ARM	366	2.56	6	1.32
b	Lake	5	BIVENS ARM	430	2.63	5	1.07
b	Lake	14	CENTER LAKE WOODRUFF	237	2.37	3	1.34
b	Lake	20	CENTER_OF_LAKE_CHARLES	560	2.75	4	0.41
b	Lake	28	CENTER_OF_LAKE_MAITLAND	2002	3.30	7	1.10
b	Lake	35	CENTER_OF_SOUTH_LAKE	420	2.62	3	0.56
b	Lake	54	LAKE DISSTON	301	2.48	6	1.57
b	Lake	55	LAKE DISSTON	377	2.58	6	1.37
b	Lake	57	LAKE DISSTON	194	2.29	2	0.50
b	Lake	60	LAKE DORA	893	2.95	3	0.47
b	Lake	61	LAKE DORA	237	2.37	3	0.53
b	Lake	62	LAKE DORA	1162	3.07	3	0.21
b	Lake	63	LAKE DORA	1001	3.00	2	0.30
b	Lake	65	LAKE EUSTIS	700	2.85	4	0.50
b	Lake	67	LAKE EUSTIS	700	2.85	4	1.28
b	Lake	68	LAKE EUSTIS	323	2.51	4	0.77
b	Lake	69	LAKE EUSTIS	560	2.75	5	0.83
b	Lake	70	LAKE EUSTIS	1334	3.13	7	0.91
b	Lake	71	LAKE EUSTIS	1959	3.29	6	0.49
b	Lake	78	LAKE GEORGE	2002	3.30	5	1.51
b	Lake	83	LAKE GRIFFIN	344	2.54	3	0.78
b	Lake	84	LAKE GRIFFIN	538	2.73	2	0.14
b	Lake	85	LAKE GRIFFIN	990	3.00	4	1.07
b	Lake	86	LAKE GRIFFIN	291	2.46	3	0.46
b	Lake	87	LAKE GRIFFIN	2034	3.31	5	1.35
b	Lake	88	LAKE GRIFFIN	560	2.75	4	0.41
b	Lake	89	LAKE HARRIS	560	2.75	5	1.54
b	Lake	90	LAKE HARRIS	656	2.82	5	1.32
b	Lake	92	LAKE HARRIS	517	2.71	5	1.36
b	Lake	99	LAKE MONROE	194	2.29	4	1.46
b	Stream	9	BLACKWATER CREEK AT HWY 44	592	2.77	7	0.89
b	Stream	40	DURBIN CREEK AT RACETRACK ROAD	527	2.72	6	1.37
b	Stream	42	HAINES CREEK AT LISBON	796	2.90	3	0.74
b	Stream	45	HAW CREEK MOUTH AT DEAD LAKE	2120	3.33	6	0.70
b	Stream	118	NASSAU RIVER NEAR ITALIA	1012	3.01	3	0.43
b	Stream	121	OCKLAWAHA RIVER AT SR 464	936	2.97	1	0.00
b	Stream	133	ST. JOHNS RIVER at SR 50 NR CHRISTMAS, FLA.	312	2.49	2	0.85
b	Stream	136	ST. MARYS RIVER @ US 17 GEORGIA LINE	1216	3.08	2	0.85
b	Stream	148	WOLF CREEK #1 AT US 419	398	2.60	7	1.60
c	Lake	7	BIVENS ARM	5628	3.75	10	0.72
c	Lake	30	CENTER_OF_LAKE_OLA	2690	3.43	10	1.79
c	Lake	31	CENTER_OF_LAKE_SELLERS	3691	3.57	10	1.70
c	Lake	72	LAKE GENEVA AT CENTER	2368	3.37	13	1.65
c	Lake	103	LAKE WEIR AT CENTER	2077	3.32	13	1.63
c	Stream	10	BLUE SPRING NEAR ORANGE CITY	8276	3.92	13	1.75
c	Stream	36	CRABGRASS CREEK AT SR 192	3487	3.54	8	1.91
c	Stream	44	HATCHET CREEK NEAR GAINESVILLE	5844	3.77	11	2.20
c	Stream	49	HOGTOWN CREEK	2518	3.40	15	1.86
c	Stream	130	SPRUCE CREEK NEAR SAMSULA	3411	3.53	12	1.86
c	Stream	135	ST. JOHNS RIVER NEAR DeLAND	3121	3.49	14	2.21
c	Stream	140	SWEETWATER BRANCH	3358	3.53	11	1.11
d	Lake	4	BIVENS ARM	97	1.99	2	0.76
d	Lake	6	BIVENS ARM	54	1.73	2	0.72
d	Lake	22	CENTER_OF_LAKE_DIAS	54	1.73	2	0.97
d	Lake	29	CENTER_OF_LAKE_NORRIS	65	1.81	3	1.46
d	Lake	41	GEORGES LAKE 200 YDS FROM WEST BANK	118	2.07	4	0.00
d	Stream	115	MOSS BLUFF STRUCTURE ABOVE DAM	97	1.99	1	0.00

TABLE 3
List of Sampling Sites and Benthic Community Metrics Arranged by Cluster

Cluster	Water Body Type	Dendogram Id. No.	Site Location	Density (No./m^{-2})	log10 Density	No. of Taxa	Shannon Diversity
d	Stream	117	NASSAU RIVER AT US 17	32	1.51	3	0.92
d	Stream	139	SWEETWATER BRANCH	86	1.93	2	0.54
e	Lake	104	LAKE WINONA	11	1.04	1	0.00
f	Lake	21	CENTER_OF_LAKE_DALHOUSIE	1593	3.20	25	3.06
f	Stream	111	MATANZAS RIVER AT HWY 312	2249	3.35	25	2.13
f	Stream	114	MIDDLE PRONG ST MARY'S RIVER AT HWY 127	807	2.91	19	3.73
f	Stream	119	North Fork of Black Creek at SR 21	570	2.76	20	3.72
f	Stream	132	ST. JOHNS RIVER AT HWY 40 NEAR ASTOR	2873	3.46	18	3.10
f	Stream	137	ST. MARYS RIVER AT SR 2	689	2.84	25	3.79
f	Stream	142	SWEETWATER BRANCH	2099	3.32	20	2.96
f	Stream	143	TOLOMATO RIVER AT SPANISH LANDING	474	2.68	20	3.89
g	Stream	145	TOMOKA RIVER AT OLD DIXIE HWY BRIDGE	38990	4.59	12	0.81

TABLE 4
Evaluation and Classification of Lake Sites

Cluster	Dendogram Id. No.	Sample Id. No.	Site Location	Density	Number of Taxa	Diversity	Dominance by Tolerant Taxa	Site Class
b	2	BIVENA	BIVENS ARM	291	2	0.88	High	A
b	3	BIVENB	BIVENS ARM	366	6	1.32	High	A
d	4	BIVENC	BIVENS ARM	97	2	0.76	High	A
b	5	BIVEND	BIVENS ARM	430	5	1.07	High	A
d	6	BIVENE	BIVENS ARM	54	2	0.72	High	A
a	13	LOL	CENTER LAKE LOCHLOOSA	409	6	2.00	High	A
b	14	LKWOOD	CENTER LAKE WOODRUFF	237	3	1.34	High	A
d	22	DIAS	CENTER_OF_LAKE_DIAS	54	2	0.97	High	A
d	29	NORRIS	CENTER_OF_LAKE_NORRIS	65	3	1.46	High	A
b	35	SOUTH	CENTER_OF_SOUTH_LAKE	420	3	0.56	High	A
d	41	20030400	GEORGES LAKE 200 YDS FROM WEST BANK	118	4	0.00	High	A
b	57	DISSE	LAKE DISSTON	237	5	1.37	High	A
b	61	DORAD	LAKE DORA	237	3	0.53	High	A
b	68	EUSTD	LAKE EUSTIS	323	4	0.77	High	A
b	83	GRIFFA	LAKE GRIFFIN	344	3	0.78	High	A
b	86	GRIFFD	LAKE GRIFFIN	291	3	0.46	High	A
a	95	MONA	LAKE MONROE	291	6	1.92	High	A
a	97	MONC	LAKE MONROE	280	5	2.01	High	A
b	99	MONE	LAKE MONROE	194	4	1.46	High	A
e	104	WIO	LAKE WINONA	11	1	0.00	High	A
c	7	BIVENF	BIVENS ARM	5628	10	0.72	High	B
b	20	CHARLES	CENTER_OF_LAKE_CHARLES	560	4	0.41	High	B
a	24	HOWELL	CENTER_OF_LAKE_HOWELL	689	7	1.60	High	B
b	28	MAITL	CENTER_OF_LAKE_MAITLAND	2002	7	1.10	High	B
a	52	20030412	KINGSLEY LAKE AT CENTER	1270	12	1.36	High	B
b	55	DISSC	LAKE DISSTON	506	9	1.63	High	B
a	59	DORAB	LAKE DORA	603	7	1.81	High	B
b	60	DORAC	LAKE DORA	893	3	0.47	High	B
b	62	DORAE	LAKE DORA	1162	3	0.21	High	B
b	63	DORAF	LAKE DORA	1001	2	0.30	High	B
a	64	DORAG	LAKE DORA	1388	9	1.61	High	B
b	65	EUSTA	LAKE EUSTIS	700	4	0.50	High	B
b	67	EUSTC	LAKE EUSTIS	700	4	1.28	High	B
b	69	EUSTE	LAKE EUSTIS	560	5	0.83	High	B
b	70	EUSTF	LAKE EUSTIS	1334	7	0.91	High	B
b	71	EUSTG	LAKE EUSTIS	1959	6	0.49	High	B
a	76	GEORGED	LAKE GEORGE	839	6	1.72	High	B

TABLE 4
Evaluation and Classification of Lake Sites

Cluster	Dendogram Id. No.	Sample Id. No.	Site Location	Density	Number of Taxa	Diversity	Dominance by Tolerant Taxa	Site Class
a	77	GEORGEE	LAKE GEORGE	1281	10	1.04	High	B
b	78	GEORGEF	LAKE GEORGE	2002	5	1.51	High	B
b	84	GRIFFB	LAKE GRIFFIN	538	2	0.14	High	B
b	85	GRIFFC	LAKE GRIFFIN	990	4	1.07	High	B
b	87	GRIFFE	LAKE GRIFFIN	2034	5	1.35	High	B
b	88	GRIFFF	LAKE GRIFFIN	560	4	0.41	High	B
b	89	HARA	LAKE HARRIS	560	5	1.54	High	B
b	90	HARB	LAKE HARRIS	656	5	1.32	High	B
b	92	HARD	LAKE HARRIS	517	5	1.36	High	B
a	98	MOND	LAKE MONROE	1345	11	1.76	High	B
a	17	CHERRY	CENTER_OF_CHERRY_LAKE	172	9	2.95	Mod	C
a	32	WASH	CENTER_OF_LAKE_WASHINGTON	344	8	2.76	Low	C
a	73	GEORGEA	LAKE GEORGE	161	7	2.57	Low	C
a	12	ASH	CENTER LAKE ASHBY	151	6	2.26	Mod	D
a	27	LOUISA	CENTER_OF_LAKE_LOUISA	194	6	1.85	High?	D
a	38	20030411	CRESCENT LAKE AT MARKER 9	312	10	2.84	Mod	D
a	53	DISSA	LAKE DISSTON	248	10	2.76	Mod	D
b	54	DISSB	LAKE DISSTON	387	7	1.89	High	D
a	56	DISSD	LAKE DISSTON	312	10	2.25	High	D
a	79	GEORGEG	LAKE GEORGE	312	7	1.86	Mod	D
a	81	GEORGEI	LAKE GEORGE	312	6	1.92	Mod	D
a	82	GEORGEJ	LAKE GEORGE	312	5	2.64	Mod	D
a	91	HARC	LAKE HARRIS	377	7	2.20	High	D
a	94	HARF	LAKE HARRIS	280	7	2.25	High	D
a	96	MONB	LAKE MONROE	366	7	1.89	High	D
a	105	20020371	LAKE YALE SOUTH LOBE AT CENTER	430	8	2.38	High	D
a	124	OLK	ORANGE LAKE B/T COW HAMMOCK & SAMSONS POINT	387	7	2.34	Mod	D
a	15	LYC	CENTER LAKE YALE	850	9	2.50	Mod	E
a	16	BEAR	CENTER_OF_BEAR_LAKE	1205	13	2.38	Mod	E
a	18	HALFMOON	CENTER_OF_HALFMOON_LAKE	710	8	1.93	Mod	E
a	23	DORR	CENTER_OF_LAKE_DORR	474	8	2.42	Mod	E
a	25	JOHNSON	CENTER_OF_LAKE_JOHNSON	463	9	1.84	Mod	E
a	26	KERR	CENTER_OF_LAKE_KERR	732	8	2.43	High?	E
c	30	OLA	CENTER_OF_LAKE_OLA	2690	10	1.79	Mod	E
c	31	SELLERS	CENTER_OF_LAKE_SELLERS	3691	10	1.70	Mod	E
a	58	DORAA	LAKE DORA	1033	9	1.94	Mod	E
a	66	EUSTB	LAKE EUSTIS	796	9	2.08	Mod	E

TABLE 4
Evaluation and Classification of Lake Sites

Cluster	Dendogram Id. No.	Sample Id. No.	Site Location	Density	Number of Taxa	Diversity	Dominance by Tolerant Taxa	Site Class
c	72	GEN	LAKE GENEVA AT CENTER	2368	13	1.65	Mod	E
a	74	GEORGEB	LAKE GEORGE	560	8	2.08	Mod	E
a	75	GEORGEC	LAKE GEORGE	656	6	1.98	Mod	E
a	80	GEORGEH	LAKE GEORGE	979	7	1.99	Mod	E
a	93	HARE	LAKE HARRIS	893	7	1.89	High	E
a	100	MONF	LAKE MONROE	1313	7	2.02	High	E
a	101	MONG	LAKE MONROE	1087	6	1.91	High	E
c	103	CLW	LAKE WEIR AT CENTER	2077	13	1.63	Mod	E
a	19	BROWARD	CENTER_OF_LAKE_BROWARD	1173	16	3.16	Low	F
f	21	DALHOUS	CENTER_OF_LAKE_DALHOUSIE	1593	25	3.06	Low	F
a	33	WINN	CENTER_OF_LAKE_WINNEMISETT	656	12	2.88	Low	F
a	34	MILLD	CENTER_OF_MILL_DAM_LAKE	474	8	2.59	Low	F
a	102	SHEEL	LAKE SHEELAR @ CENTER (GOLD HEAD BRDG - CLAY CO)	850	12	3.40	Low	F

Class A - Sites with low diversity;low densities; dominated by tolerant taxa
Class B - Sites with low diversity; dominated by tolerant taxa
Class C - Sites with high diversity; relatively few tolerant taxa; low densities
Class D - Sites with moderate diversity;low densities; tolerant taxa dominant to moderately dominant
Class E - Sites with moderate diversity; tolerant taxa moderately dominant
Class F - Sites with high diversity; relatively few tolerant taxa; sensitive taxa present

TABLE 5
Evaluation and Classification of Stream Sites

Cluster	Dendogram Id. No.	Sample Id. No.	Site Locations	Density	Number of Taxa	Diversity	Dominance by Tolerant Taxa	Site Class
a	46	HELENA	Helena Run at the confluence of Bugg Spring Run	108	5	2.17	Moderate	A
a	106	02233200	LITTLE ECONLOCKHATCHEE R NR UNION PARK, FLA.	366	8	2.33	High	A
d	115	MBU	MOSS BLUFF STRUCTURE ABOVE DAM	97	1	0.00	High	A
d	117	19020002	NASSAU RIVER AT US 17	32	3	0.92	High	A
b	133	SRS	ST. JOHNS RIVER at SR 50 NR CHRISTMAS, FLA.	312	2	0.85	High	A
d	139	SWEETB	SWEETWATER BRANCH	86	2	0.54	High	A
a	138	SWEETA	SWEETWATER BRANCH	172	5	1.97	High	A
b	148	USJ918	WOLF CREEK #1 AT US 419	398	7	1.60	High	A
a	8	BWCCPB	BLACKWATER CREEK @ CARTER PROPERTY BRIDGE	958	6	1.40	High	B
b	9	BWC44	BLACKWATER CREEK AT HWY 44	592	7	0.89	High	B
a	37	CC03	CRANE CREEK AT BABCOCK STREET	775	9	1.67	High	B
b	40	LSJ087	DURBIN CREEK AT RACETRACK ROAD	527	6	1.37	High	B
b	42	2238000	HAINES CREEK AT LISBON	796	3	0.74	High	B
b	45	HAW	HAW CREEK MOUTH AT DEAD LAKE	2120	6	0.70	High	B
a	110	LOCCR	Lochloosa Creek at SR 20	947	12	1.37	High	B
a	116	MTC	MOULTRIE CREEK AT SR 207	807	9	1.74	High	B
b	118	NRI	NASSAU RIVER NEAR ITALIA	1012	3	0.43	High	B
b	121	20020001	OCKLAWAHA RIVER AT SR 464	936	1	0.00	High	B
a	125	PEL	PELLICER CREEK AT US 1	1076	7	1.55	High	B
a	127	SILRV	Silver_River_at_boat_ramp_canal*	872	9	1.83	Moderate	B
c	130	02248000	SPRUCE CREEK NEAR SAMSULA	3411	12	1.86	High	B
b	136	19010001	ST. MARYS RIVER @ US 17 GEORGIA LINE	1216	2	0.85	High	B
c	140	SWEETC	SWEETWATER BRANCH	3358	11	1.11	Moderate	B
g	145	27010024	TOMOKA RIVER AT OLD DIXIE HWY BRIDGE	38990	12	0.81	High?	B
a	146	TUBPP1	TUMBLIN CREEK	753	7	2.12	High	B
a	1	LSJ099	BIG DAVIS CREEK AT US 1	172	11	3.26	Low	C
a	43	27010037	HALIFAX RIVER 100 FT N SI BEACH MEMORIAL BRIDGE	409	15	3.08	Moderate	D
a	108	LORANCRK	Little Orange Creek	420	11	3.03	Moderate	D
a	112	MAT	MATANZAS RIVER S OF WASHINGTON OAKS @ CM #109	430	6	2.16	High	D
a	113	SJRJESUP	Mid SJR at East of Barge Canal near JJ Fish Camp	269	8	2.18	High	D
a	120	ORD	OCKLAWAHA R DNSTR SR 40 BEFORE 4TH RIVER BEND	377	9	2.65	Moderate	D
a	123	20020404	ORANGE CREEK 50 YARDS UPSTREAM OF HWY 21	452	9	2.60	Moderate	D
c	10	BLSPR	BLUE SPRING NEAR ORANGE CITY	8276	13	1.75	Moderate	E
a	11	BUL	BULOW CREEK AT LOW BRIDGE	990	13	2.30	Moderate	E
c	36	USJ055	CRABGRASS CREEK AT SR 192	3487	8	1.91	Moderate	E
a	39	DMR	DEEP CREEK AT MAYTOWN ROAD BRIDGE	484	13	3.00	Moderate	E
c	44	02240800	HATCHET CREEK NEAR GAINESVILLE	5844	11	2.20	High	E

TABLE 5
Evaluation and Classification of Stream Sites

Cluster	Dendogram Id. No.	Sample Id. No.	Site Locations	Density	Number of Taxa	Diversity	Dominance by Tolerant Taxa	Site Class
c	49	HOGC	HOGTOWN CREEK	2518	15	1.86	Moderate	E
a	47	HOGA	HOGTOWN CREEK	915	7	1.96	Moderate	E
a	50	HOGD	HOGTOWN CREEK	592	9	2.31	Moderate	E
a	107	LSJ070	LITTLE HAW CREEK AT SR 305	624	14	2.91	Moderate	E
a	109	20010137	LITTLE WEKIVA RIVER AT HWY 434	1011	10	2.27	Moderate	E
a	122	20020012	OKLAWAHA RIVER AT SR 316	592	16	3.25	Moderate	E
a	128	SIM	SIMMS CREEK 2 MILES N-NE OF BARDIN	667	16	2.93	Moderate	E
a	129	SJRPLTKA	SJR at Palatka (US Hwy. 17)	2249	11	2.80	Moderate	E
a	131	20030373	ST. JOHNS RIVER AT CM 72	1291	11	2.45	Moderate	E
f	132	20010002	ST. JOHNS RIVER AT HWY 40 NEAR ASTOR	2873	18	3.10	Moderate	E
a	134	20010003	ST. JOHNS RIVER AT US HWY 17-92	2152	13	2.63	Moderate	E
c	135	02236000	ST. JOHNS RIVER NEAR DeLAND	3121	14	2.21	Moderate	E
a	141	SWEETD	SWEETWATER BRANCH	1464	14	2.61	Moderate	E
f	142	SWEETE	SWEETWATER BRANCH	2099	20	2.96	Moderate	E
a	144	27010579	TOMOKA RIVER AT 11TH STREET BRIDGE	1604	15	2.71	Moderate	E
a	48	HOGB	HOGTOWN CREEK	915	16	3.17	Low	F
f	114	MPS	MIDDLE PRONG ST MARY'S RIVER AT HWY 127	807	19	3.73	Low	F
f	119	NBLACK	North Fork of Black Creek at SR 21	570	20	3.72	Low	F
a	126	LSJ918	RICE CREEK AT SR 100	904	13	2.53	Low	F
f	137	19010006	ST. MARYS RIVER AT SR 2	689	25	3.79	Low	F
f	143	TOL	TOLOMATO RIVER AT SPANISH LANDING	474	20	3.89	Low	F
a	147	02235000	WEKIVA RIVER NEAR SANFORD	969	15	2.69	Low	F
a	51	27010875	INDIAN RIVER AT ICWW CM 12 NEAR HALOV	2152	11	2.40	Low	G
f	111	MR312	MATANZAS RIVER AT HWY 312	2249	25	2.13	Low	G

Class A - Sites with low diversity;low densities; dominated by tolerant taxa
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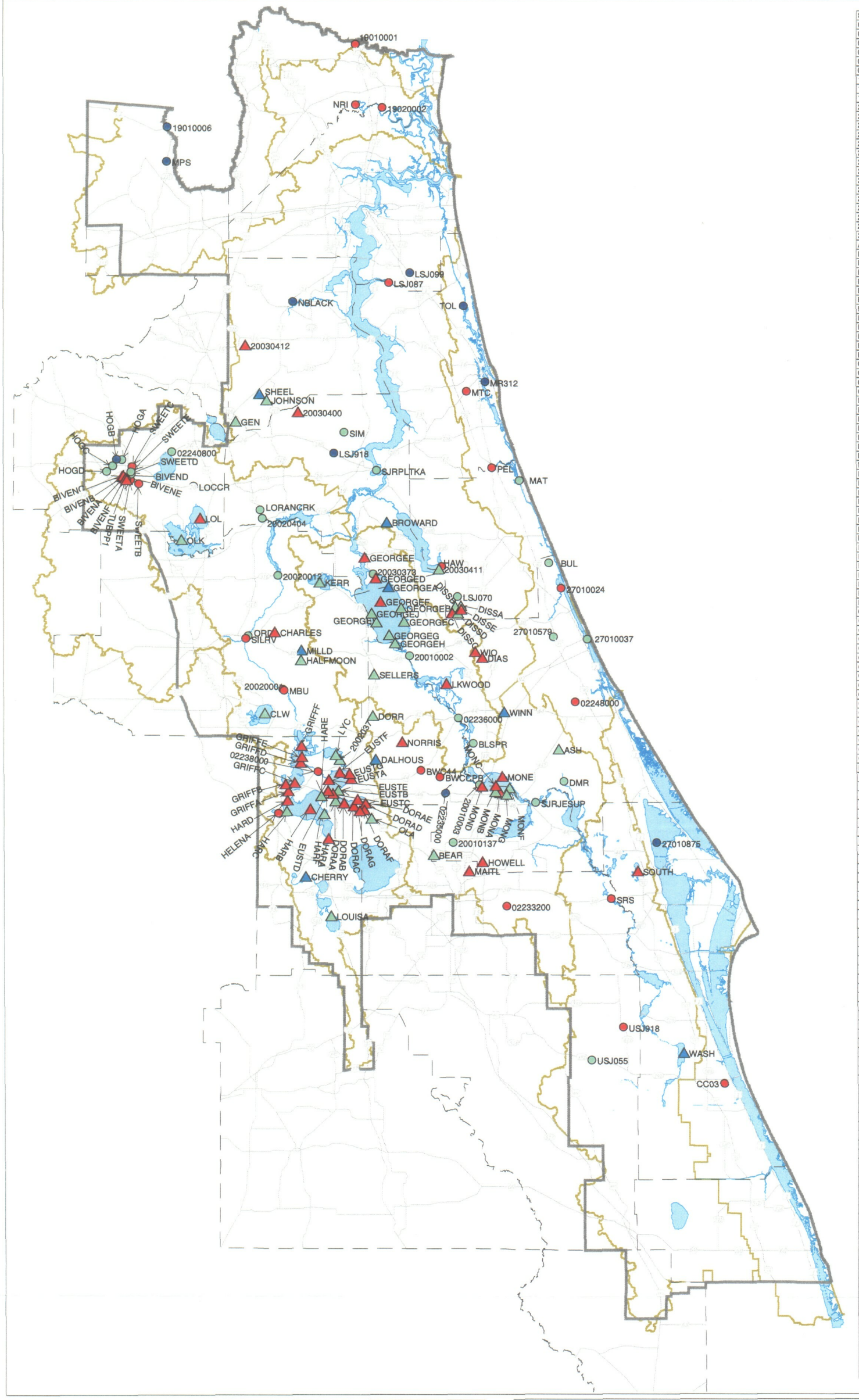
Class C - Sites with high diversity; relatively few tolerant taxa; low densities
Class D - Sites with moderate diversity;low densities; tolerant taxa dominant to moderately dominant
Class E - Sites with moderate diversity; tolerant taxa moderately dominant
Class F - Sites with high diversity; relatively few tolerant taxa; sensitive taxa present
Class G - Estuarine sites with moderate diversity; relatively few tolerant taxa; sensitive taxa present

Appendix A

Site Location Map Benthic Sites 2000



Site	Site Description
02233200	Little Econlockhatchee R near Union Park.
02235000	Wekiva River near Sanford
02236000	St. Johns River near Deland
02238000	Haines Creek at Lisbon
02240800	Hatchet Creek near Gainesville
02248000	Spruce Creek near Samsula
19010001	St. Marys River at US 17 Georgia Line
19010006	St. Marys River at SR 2
19020002	Nassau River at US 17
20010002	St. Johns River at Hwy 40 near Astor
20010003	St. Johns River at US Hwy 17-92
20010137	Little Wekiva River at Hwy 434
20020001	Ocklawaha River at SR 464
20020012	Ocklawaha River at SR 316
20020371	Lake Yale south lobe at center
20020404	Orange Creek 50 yards upstream of Hwy 21
20030373	St. Johns River at CM 72
20030400	Georges Lake 200 yards from West Bank
20030411	Crescent Lake at CM 9
20030412	Kingsley Lake at center
27010024	Tomoka River at Old Dixie Hwy bridge
27010037	Halifax River 100 ft of NS Beach Memorial Bridge
27010579	Tomoka River at 11th Street Bridge
27010875	Indian River at ICWW CM 12 near Haiov
ASH	Center of Lake Ashby
BEAR	Bear Lake
BIVENA	Bivens Arm
BIVENB	Bivens Arm
BIVENC	Bivens Arm
BIVEND	Bivens Arm
BIVENE	Bivens Arm
BIVENF	Bivens Arm
BLSPR	Blue Springs upstream pool discharge weir
BROWARD	Lake Broward
BUL	Bulow Creek at Low Bridge
BWC44	Blackwater Creek at SR 44
BWCCPB	Blackwater Creek at Carter property bridge
CC03	Indian River Lagoon Crane Creek
CHARLES	Lake Charles
CHERRY	Cherry Lake
CLW	Lake Weir at center
DALHOUS	Lake Dalhousie
DIAS	Lake Dias
DISSA	Lake Disston
DISSB	Lake Disston
DISSC	Lake Disston
DISSD	Lake Disston
DISSE	Lake Disston
DMR	Deep Creek at Maytown Road bridge
DORAA	Lake Dora
DORAB	Lake Dora
DORAC	Lake Dora
DORAD	Lake Dora
DORAE	Lake Dora
DORAF	Lake Dora
DORAG	Lake Dora
DORR	Lake Dorr
EUSTA	Lake Eustis
EUSTB	Lake Eustis
EUSTC	Lake Eustis
EUSTD	Lake Eustis
EUSTE	Lake Eustis
EUSTF	Lake Eustis
EUSTG	Lake Eustis
GEN	Lake Geneva at center
GEORGEA	Lake George
GEORGEB	Lake George
GEORGEC	Lake George
GEORGED	Lake George
GEORGEE	Lake George
GEORGEF	Lake George
GEORGEG	Lake George
GEORGEH	Lake George
GEORGEI	Lake George
GEORGEJ	Lake George
GRIFFA	Lake Griffin
GRIFFB	Lake Griffin
GRIFFC	Lake Griffin
GRIFFD	Lake Griffin
GRIFFE	Lake Griffin
GRIFFF	Lake Griffin
HALFMOON	Halfmoon Lake
HARA	Lake Harris
HARB	Lake Harris
HARC	Lake Harris
HARD	Lake Harris
HARE	Lake Harris
HARF	Lake Harris
HAW	Haw Creek mouth at Dead Lake
HELENA	Helena Run at the confluence of Bugg Spring Run
HOGA	Hogtown Creek
HOGB	Hogtown Creek
HOGC	Hogtown Creek
HOGD	Hogtown Creek
HOWELL	Lake Howell
JOHNSON	Lake Johnson
KERR	Lake Kerr
LKWOOD	Center of Lake Woodruff
LOCCR	Lochloosa Creek at SR 20
LOL	Center of Lake Lochloosa
LORANCRK	Little Orange Creek
LOUISA	Lake Louisa
LSJ070	Little Haw Creek at US 305
LSJ087	Durbin Creek at Racetrack Road
LSJ099	Big Davis Creek at US 1
LSJ918	Rice Creek at SR 100
LYC	Center of Lake Yale
MAITL	Lake Maitland
MAT	Matanzas River south of Washington Oaks at CM #109
MBU	Moss Bluff structure above dam
MILLD	Mill Dam Lake
MONA	Lake Monroe
MONB	Lake Monroe
MONC	Lake Monroe
MOND	Lake Monroe
MONE	Lake Monroe
MONF	Lake Monroe
MONG	Lake Monroe
MPS	Middle Prong St Marys River at Hwy 127
MR312	Matanzas River at Hwy 312
MTC	Moultrie Creek at SR 207
NBLACK	North Fork of Black Creek at SR 21
NORRIS	Lake Norris
NRI	Nassau River near Italia
OLA	Lake Ola
OLK	Orange Lake between Cow Hammock and Samsons Point
ORD	Ocklawaha R. downstream of SR 40 before 4th River bend
PEL	Pellicer Creek at US 1
SELLERS	Lake Sellers
SHEEL	Lake Sheelar at center (Clay Co.)
SILRV	Silver River at boat ramp canal
SIM	Simms Creek 2 mi near of NE of Bardin
SJRJESUP	Mid St. Johns River east of Barge Canal Near JJ Fish Camp
SJRPLTKA	St. Johns River at Palatka (US Hwy. 17)
SOUTH	South Lake
SRS	St. Johns River at SR 50, Seminole Ranch south bound
SWEETA	Sweetwater Branch
SWEETB	Sweetwater Branch
SWEETC	Sweetwater Branch
SWEETD	Sweetwater Branch
SWEETE	Sweetwater Branch
TOL	Tolomato River at Spanish Landing
TUBPP1	Tumblin Creek
USJ055	Crabgrass Creek at SR 192
USJ918	Wolf Creek #1 at US 419
WASH	Lake Washington
WINN	Lake Winnemisett
WIO	Lake Winona at center

Figure A-1. Site Location Map

Benthic Sites

2000

10 0 10 20 Miles

Stream Benthic Site
- Unimpaired
- Moderately Impaired
- Severely Impaired

Lake Benthic Site
- Unimpaired
- Moderately Impaired
- Severely Impaired

Hydrography

Surface Water Basins

SJRWMD Boundary

County Boundary

Major Road

Source: /sjr/es3/projects/wq/WQGstns.apr 04/11/2000

Appendix B
Species Abundance Tables

Big Davis Creek at US 1	**LSJ099**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	2				2	0.5
Eclipidrilus palustris	1		1		2	0.5
Stenochironomus sp.	1				1	0.25
Phylocentropus sp.	1				1	0.25
Argia sp.	1	1			2	0.5
Peltodytes oppositus	1				1	0.25
Caecidotea sp.		1			1	0.25
Tribelos jucundum			1	3	4	1
Procambarus sp.				1	1	0.25
Chironomus sp.				1	1	0.25
Callibaetis floridanus				1	1	0.25
Total Abundance	7	2	2	6	17	4
Organism Density (No./M^2)	301	86	86	258	732	183
Total No. Taxa	6	2	2	4	11	3.5
Shannon-Weaver Diversity	2.52	1	1	1.79	3.26	1.58

Bivens Arm

Taxa	Bivens A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Bivens B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Bivens C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Bivens D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Bivens E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Bivens F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Chaoborus punctipennis	2	3	2	1	8	2	10	8	2	6	26	6.5	2	1	3	1	7	1.75	9	8	3	12	32	8	2		1	1	4	1					0	0	77
Chironomus sp					0	0			2		2	0.5					0	0					0	0					0	0	78	96	130	167	471	117.75	473
Dero digitata					0	0			1		1	0.25					0	0					0	0			1		1	0.25	1				1	0.25	3
Limnodrilus hoffmeisteri	6	6	4	1	19	4.75				1	1	0.25	1		1		2	0.5					0	0					0	0	14	3	1		18	4.5	40
Tanytarsus limneticus					0	0		2			2	0.5					0	0	1				1	0.25					0	0					0	0	3
Endochironomus nigricans					0	0			2		2	0.5					0	0		1	3		4	1					0	0					0	0	8
Enfelda natchitochaee					0	0					0	0					0	0				1	1	0.25					0	0					0	0	1
Paratanytarsus sp A					0	0					0	0					0	0		1	1		2	0.5					0	0					0	0	2
Eclipidrilus palustris					0	0					0	0					0	0					0	0					0	0	3	5		1	9	2.25	9
Helobdella elongata					0	0					0	0					0	0					0	0					0	0	2				2	0.5	2
Dugesia sp					0	0					0	0					0	0					0	0					0	0	2				2	0.5	2
Nematoda sp A					0	0					0	0					0	0					0	0					0	0	2				2	0.5	2
Goeldichironomus cf. natans					0	0					0	0					0	0					0	0					0	0	3			1	4	1	4
Goeldichironomus holoprasinus					0	0					0	0					0	0					0	0					0	0	3		2	8	13	3.25	13
Pristina leidyi					0	0					0	0					0	0					0	0					0	0				1	1	0.25	1
Total Abundance	10	9	6	2	27	7	10	10	7	7	34	9	3	1	4	1	9	2	10	10	7	13	40	10	2	0	2	1	5	1	108	104	133	178	523	131	836
Organism Density (No /M^2)	430	387	258	86	1162	291	430	430	301	301	1464	366	129	43	172	43	387	97	430	430	301	560	1722	430	86	0	86	43	215	54	4649	4477	5725	7663	22514	5628	27464
Total No Taxa	2	2	2	2	2	2.00	1	2	4	2	6	2.25	2	1	2	1	2	1.50	2	3	3	2	5	2.50	1	0	2	1	2	1.00	9	3	3	5	10	5.00	15
Shannon-Weaver Diversity	0.72	0.92	0.81	1	0.86	0.86	0	0.72	1.95	0.59	1.32	0.82	0.92	0	0.81	0	0.76	0.43	0.47	0.92	1.45	0.39	1.07	0.81	0	0	1	0	0.72	0.25	1.53	0.46	0.18	0.41	0.72	0.65	1.46

Blackwater Creek @ Carter Property Bridge			BWCCPB			
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	14	20	8	16	58	14.5
Limnodrilus hoffmeisteri	8	13		1	22	5.5
Ablabesmyia annulata		1			1	0.25
Procladius bellus var. 3		1			1	0.25
Hexagenia limbata		5			5	1.25
Tanypus punctipennis			2		2	0.5
Total Abundance	22	40	10	17	89	22
Organism Density (No./M^2)	947	1722	430	732	3831	958
Total No. Taxa	2	5	2	2	6	2.75
Shannon-Weaver Diversity	0.95	1.67	0.72	0.32	1.4	0.915

Blackwater Creek at HWY 44	**BWC44**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chrysomelidae	1				1	0.25
Limnodrilus hoffmeisteri	9	26	3	9	47	11.75
Aulodrilus pigueti		1			1	0.25
Elliptio buckleyi		1	2	1	4	1
Helobdella sp. (immature)			1		1	0.25
Corbicula fluminea				1	1	0.25
						0
Total Abundance	10	28	6	11	55	14
Organism Density (No./M^2)	430	1205	258	474	2368	592
Total No. Taxa	2	3	3	3	6	2.75
Shannon-Weaver Diversity	0.47	0.44	1.46	0.87	0.89	0.81

Blue Spring Near Orange City	BLSPR					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	79	117	71	199	466	116.5
Limnodrilus hoffmeisteri	74	70	61	157	362	90.5
Ilyodrilus templetoni	5	3	3	1	12	3
Hyalella azteca	62	23	93	51	229	57.25
Dicrotendipes neomodestus		4			4	1
Goeldichironomus holoprasinus		1			1	0.25
Caecidotea racovitzai australis		1			1	0.25
Dicrotendipes modestus			1	3	4	1
Chironominae			1	5	6	1.5
Amnicola dalli			1		1	0.25
Helobdella sp.				1	1	0.25
Nematoda sp. C				1	1	0.25
Procladius (Holotanypus) sp.				1	1	0.25
Total Abundance	220	219	231	419	1089	272
Organism Density (No./M^2)	9471	9427	9944	18037	46879	11720
Total No. Taxa	4	7	7	9	13	6.75
Shannon-Weaver Diversity	1.7	1.61	1.74	1.62	1.75	1.67

Bulow Creek at Low Bridge	**BUL**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Hobsonia florida	6	5	5	1	17	4.25
Corophium near lacustre	1	1			2	0.5
Bowmanniella brasiliensis/florida	1				1	0.25
Cerapus sp.	1	1			2	0.5
Hargeria rapax		1			1	0.25
Halmyrapseudes bahamensis		1			1	0.25
Grandidierella bonnerieroides			2		2	0.5
Laeoneris culveri	13	8	22	6	49	12.25
Nemertea	2	3			5	1.25
Eteone heteropoda	1		1		2	0.5
Onuphidae sp. A			1		1	0.25
Capitella capitata	2			6	8	2
Tubificidae				1	1	0.25
Total Abundance	27	20	31	14	92	23
Organism Density (No./M^2)	1162	861	1334	603	3960	990
Total No. Taxa	8	7	5	4	13	6
Shannon-Weaver Diversity	2.25	2.3	1.35	1.59	2.3	1.87

Center Lake Ashby	Ash					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	2		2	2	4	1
Eclipidrilus palustris	1	1		1	1	0.25
Chaoborus punctipennis		1	1		1	0.25
Hexagenia limbata		1	2		2	0.5
Corbicula fluminea		5		5	5	1.25
Hyalella azteca	3		1		1	0.25
Total Abundance	6	8	6	8	14	4
Organism Density (No./M^2)	258	344	258	344	603	151
Total No. Taxa	3	4	4	3	6	3.5
Shannon-Weaver Diversity	1.46	1.55	1.92	1.3	2.26	1.56

Center Lake Lochloosa	**LOL**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	5				5	1.25
Chaoborus punctipennis	1		1		2	0.5
Chironomus crassicaudatus		12	8		20	5
Coelotanypus tricolor		3	2		5	1.25
Glyptotendipes paripes		3	2		5	1.25
Tanypodinae (pupa)			1		1	0.25
Total Abundance	6	18	14	0	38	9.5
Organism Density (No./M^2)	258	775	603	0	1636	409
Total No. Taxa	2	3	5	0	6	2.5
Shannon-Weaver Diversity	0.65	1.25	1.81	0	2	0.93

Center of Lake Woodruff

Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	2				2	0.5
Coelotanypus tricolor	6	1	2	2	11	2.75
Limnodrilus hoffmeisteri	1	2	4	2	9	2.25
Total Abundance	9	3	6	4	22	6
Organism Density (No./M^2)	387	129	258	172	947	237
Total No. Taxa	3	2	2	2	3	2.25
Shannon-Weaver Diversity	1.22	0.92	0.92	1	1.34	1.02

Center Lake Yale	LYC					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	9	3	6	13	31	7.75
Limnodrilus hoffmeisteri	16			1	17	4.25
Cryptochironomus fulvus gr.	1	1			2	0.5
Chaoborus albatus		4	1	2	7	1.75
Limnodrilus hoffmeisteri		4			4	1
Cryptochironomus blarina		2	2		4	1
Ceratopogonidae		1	1		2	0.5
Cladotanytarsus sp.			11		11	2.75
Tanytarsus sp. O			1		1	0.25
Total Abundance	26	15	22	16	79	20
Organism Density (No./M^2)	1119	646	947	689	3401	850
Total No. Taxa	3	6	6	3	9	4.5
Shannon-Weaver Diversity	1.14	2.39	1.93	0.87	2.5	1.5825

Center of Lake Bear

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia mallochi		1	1		2	0.5
Ablabesmyia rhamphe gr.				2	2	0.5
Aulodrilus pigueti				1	1	0.25
Ceratopogonidae			1		1	0.25
Coelotanypus sp. im.	14	2	5	3	24	6
Corbicula fluminea	6		35	16	57	14.25
Cricotopus/Orthocladius				1	1	0.25
Djalmabatista pulchra variant	2		2		4	1
Elliptio buckleyi	3		2		5	1.25
Limnodrilus hoffmeisteri	1		1	3	5	1.25
Polypedilum halterale gr.	1		1	3	5	1.25
Pseudochironomus sp.			1	1	2	0.5
Tanytarsus sp. O				3	3	0.75
Total Abundance	27	3	49	33	112	28
Organism Density (No./M^2)	1162	129	2109	1421	4821	1205
Total No. Taxa	6	2	9	9	13	6.5
Shannon-Weaver Diversity	1.96	0.92	1.63	2.47	2.38	1.75

Center of Cherry Lake

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia peleensis gr.				1	1	0.25
Chaoborus punctipennis	1		3		4	1
Chironomus sp.		1			1	0.25
Coelotanypus sp. (damaged)		1			1	0.25
Coelotanypus tricolor				1	1	0.25
Cryptochironomus fulvus gr.	1	1			2	0.5
Hexagenia limbata	2		1		3	0.75
Limnodrilus hoffmeisteri			1	1	2	0.5
Tanytarsus limneticus	1				1	0.25
Total Abundance	5	3	5	3	16	4
Organism Density (No./M^2)	215	129	215	129	689	172
Total No. Taxa	4	3	3	3	9	3.25
Shannon-Weaver Diversity	1.92	1.58	1.37	1.58	2.95	1.61

Center of Halfmoon Lake

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia annulata		1			1	0.25
Ceratopogonidae	1		1		2	0.5
Chaoborus albatus		4			4	1
Chaoborus punctipennis	10	2	7	3	22	5.5
Coelotanypus tricolor	6	5	2	4	17	4.25
Hexagenia limbata	4	2	5	5	16	4
Hyalella azteca	1				1	0.25
Limnodrilus hoffmeisteri	2	1			3	0.75
Total Abundance	24	15	15	12	66	17
Organism Density (No./M^2)	1033	646	646	517	2841	710
Total No. Taxa	6	6	4	3	8	4.75
Shannon-Weaver Diversity	2.14	2.33	1.69	1.55	1.93	1.93

Center of Lake Broward

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia mallochi	1				1	0.25
Ceratopogonidae				1	1	0.25
Chaoborus punctipennis		1			1	0.25
Cladotanytarsus sp.	2	1			3	0.75
Clinotanypus sp.				1	1	0.25
Cryptochironomous fulvus gr.	1	1			2	0.5
Cryptochironomus blarina				1	1	0.25
Djalmabatista pulchra				1	1	0.25
Eclipidrilus palustris	1	1	1		3	0.75
Hexagenia limbata		1		3	4	1
Hyalella azteca			4	4	8	2
Limnodrilus hoffmeisteri	7	10	8	3	28	7
Polypedilum halterale gr.	8	2	2	2	14	3.5
Pseudochironomus sp.	1	1	1	13	16	4
Stictochironomus sp.	14	2	3	1	20	5
Tanytarsus sp. G	1		1	3	5	1.25
Total Abundance	36	20	20	33	109	27
Organism Density (No./M^2)	1550	861	861	1421	4692	1173
Total No. Taxa	9	9	7	11	16	9
Shannon-Weaver Diversity	2.42	2.46	2.38	2.85	3.16	2.53

Center of Lake Charles

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	12	12	13	12	49	12.25
Chaoborus (pupa)		1			1	0.25
Coelotanypus tricolor		1			1	0.25
Limnodrilus hoffmeisteri		1			1	0.25
Total Abundance	12	15	13	12	52	13
Organism Density (No./M^2)	517	646	560	517	2238	560
Total No. Taxa	1	4	1	1	4	1.75
Shannon-Weaver Diversity	0	1.04	0	0	0.41	0.26

Center of Lake Dalhousie	DALHOUS					
Taxa	**Rep 1**	**Rep2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Ablabesmyia mallochi		1		1	2	0.5
Ablabesmyia sp. (damaged)	1				1	0.25
Ceratopogonidae			1		1	0.25
Chaoborus punctipennis	2				2	0.5
Chironominae (damaged)	1				1	0.25
Chironominae (pupae)		1			1	0.25
Cladopelma sp.	1				1	0.25
Coelotanypus tricolor		1			1	0.25
Corbicula fluminea		1	4	1	6	1.5
Cryptochironomus blarina		2			2	0.5
Cryptochironomus sp. (damaged)				4	4	1
Cryptotendipes sp.	2	3		1	6	1.5
Dero digitata			1		1	0.25
Dicrotendipes modestus	1			1	2	0.5
Djalmabatista pulchra variant		2		2	4	1
Einfeldia natchitochaea	3				3	0.75
Hexagenia limbata		3	1		4	1
Hyalella azteca	19	17	4	21	61	15.25
Limnodrilus hoffmeisteri	1	1			2	0.5
Nilothauma sp.	1	1			2	0.5
Paralauterborniella nigrohalteralis	2			2	4	1
Polypedilum halterale gr.	2	11	5	3	21	5.25
Slavina appendiculata	1				1	0.25
Tanytarsus sp. G	6	6		2	14	3.5
Tanytarsus sp. O			1		1	0.25
Total Abundance	43	50	17	38	148	37
Organism Density (No./M^2)	1851	2152	732	1636	6371	1593
Total No. Taxa	14	13	7	10	25	11
Shannon-Weaver Diversity	2.45	2.91	2.46	2.33	3.06	2.54

Center of Lake Dias

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Helobdella sp. (immature)	2				2	0.5
Erpobdellidae				3	3	0.75
Total Abundance	2	0	0	3	5	1
Organism Density (No./M^2)	86	0	0	129	215	54
Total No. Taxa	1	0	0	1	2	0.5
Shannon-Weaver Diversity	0.00	0.00	0.00	0.00	0.97	0

Center of Lake Dorr

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis			1		1	0.25
Djalmabatista pulchra	1	2	1	1	5	1.25
Eclipidrilus palustris		1		1	2	0.5
Glyptotendipes paripes	4	1	1	5	11	2.75
Hexagenia limbata		3			3	0.75
Limnodrilus hoffmeisteri	6	4	1	6	17	4.25
Polypedilum halterale gr.		4			4	1
Stictochironomus sp.	1				1	0.25
Total Abundance	12	15	4	13	44	11
Organism Density (No./M^2)	517	646	172	560	1894	474
Total No. Taxa	4	6	4	4	8	4.5
Shannon-Weaver Diversity	1.63	2.39	2	1.61	2.42	1.91

Center of Lake Howell

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	10	15	8	9	42	10.5
Chironominae (damaged)			1		1	0.25
Chironomus sp.			2		2	0.5
Coelotanypus sp. im.	8			2	10	2.5
Coelotanypus tricolor		3	4		7	1.75
Glyptotendipes paripes			1		1	0.25
Limnodrilus hoffmeisteri			1		1	0.25
Total Abundance	18	18	17	11	64	16
Organism Density (No./M^2)	775	775	732	474	2755	689
Total No. Taxa	2	2	6	2	7	3
Shannon-Weaver Diversity	0.99	0.65	2.09	0.68	1.6	1.10

Center of Lake Johnson

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia annulata	1				1	0.25
Chaoborus punctipennis	1	1			2	0.5
Chironominae (pupae)	1				1	0.25
Coelotanypus sp. im.		2			2	0.5
Coelotanypus tricolor	3	1	1	1	6	1.5
Cryptochironomus fulvus gr.			1		1	0.25
Hexagenia limbata	9	4	5	10	28	7
Nais sp.		1			1	0.25
Tanytarsus sp. G			1		1	0.25
Total Abundance	15	9	8	11	43	11
Organism Density (No./M^2)	646	387	344	474	1851	463
Total No. Taxa	5	5	4	2	9	4
Shannon-Weaver Diversity	1.69	2.06	1.55	0.44	1.84	1.44

Center of Lake Kerr

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Cernotina sp.				1	1	0.25
Chaoborus punctipennis	15		2	4	21	5.25
Coelotanypus tricolor	7				7	1.75
Corbicula fluminea	10	3	4	4	21	5.25
Eclipidrilus palustris	2	2	2	2	8	2
Helobdella elongata	1				1	0.25
Limnodrilus hoffmeisteri	3				3	0.75
Varichaetidrilus angustipennis		4	2		6	1.5
Total Abundance	38	9	10	11	68	17
Organism Density (No./M^2)	1636	387	430	474	2927	732
Total No. Taxa	6	3	4	4	8	4.25
Shannon-Weaver Diversity	2.14	1.53	1.92	1.82	2.43	1.85

Center of Lake Louisa

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia annulata				1	1	0.25
Chaoborus punctipennis				1	1	0.25
Coelotanypus sp. im.				1	1	0.25
Eclipidrilus palustris	1	1	1	1	4	1
Limnodrilus hoffmeisteri	1	1	1	7	10	2.5
Microtendipes pedellus gr.	1				1	0.25
Total Abundance	3	2	2	11	18	5
Organism Density (No./M^2)	129	86	86	474	775	194
Total No. Taxa	3	2	2	5	6	3
Shannon-Weaver Diversity	1.58	1	1	1.67	1.85	1.31

Center of Lake Maitland	MAITL					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	46	67	19	18	150	38
Chironomus sp.	1	10	4	2	17	4
Coelotanypus concinnus	1	1		2	4	1
Ilyodrilus templetoni			2		2	1
Limnodrilus hoffmeisteri		7		2	9	2
Nematoda sp. C			1		1	0
Procladius (Holotanypus) sp.	1			2	3	1
Total Abundance	49	85	26	26	186	47
Organism Density (No./M^2)	2109	3659	1119	1119	8007	2002
Total No. Taxa	4	4	4	5	7	4.25
Shannon-Weaver Diversity	0.43	1.01	1.21	1.51	1.1	1.04

Center of Lake Norris

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	2				2	0.5
Coelotanypus sp.	1				1	0.25
Hexagenia limbata	3				3	0.75
Total Abundance	6	0	0	0	6	2
Organism Density (No./M^2)	258	0	0	0	258	65
Total No. Taxa	3	0	0	0	3	0.75
Shannon-Weaver Diversity	1.46	0	0	0	1.46	0.37

Center of Lake Ola	OLA					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironominae (Pupae)	1				1	0.25
Chironomus sp.	27	40	31	28	126	31.5
Cladotanytarsus sp.	3	3			6	1.5
Dicrotendipes modestus	1				1	0.25
Hyalella azteca			1		1	0.25
Palaemonetes paludosus		1	3		4	1
Polypedilum halterale gr.	14	10	8		32	8
Procambarus sp.				1	1	0.25
Procladius (Holotanypus) sp.		1			1	0.25
Tanytarsus limneticus	42	11	22	2	77	19.25
Total Abundance	88	66	65	31	250	63
Organism Density (No./M^2)	3788	2841	2798	1334	10762	2690
Total No. Taxa	6	6	5	3	10	5
Shannon-Weaver Diversity	1.77	1.67	1.71	0.55	1.79	1.43

Center of Lake Sellers

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	1				1	0.25
Cladotanytarsus sp.				2	2	0.5
Cryptochironomus blarina			4	5	9	2.25
Dero digitata			2		2	0.5
Dicrotendipes sp. im.				1	1	0.25
Dicrotendipes tritomus	1				1	0.25
Hyalella azteca	45	15	25	39	124	31
Limnodrilus hoffmeisteri	16	5	5	10	36	9
Procladius sp. im.				1	1	0.25
Stictochironomus sp.	44	68	21	33	166	41.5
Total Abundance	107	88	57	91	343	86
Organism Density (No./M^2)	4606	3788	2454	3917	14765	3691
Total No. Taxa	5	3	5	7	10	5
Shannon-Weaver Diversity	1.59	1.48	1.8	1.9	1.7	1.69

Center of Lake Washington

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	2		1	1	4	1
Chironominae	1				1	0.25
Coelotanypus sp. im.		1			1	0.25
Coelotanypus tricolor	1	3			4	1
Corbicula fluminea	5	2			7	1.75
Elliptio buckleyi	3	3		1	7	1.75
Hexagenia limbata	1		2	2	5	1.25
Limnodrilus hoffmeisteri				3	3	0.75
Total Abundance	13	9	3	7	32	8
Organism Density (No./M^2)	560	387	129	301	1378	344
Total No. Taxa	6	4	2	4	8	4
Shannon-Weaver Diversity	2.29	1.89	0.92	1.84	2.76	1.74

Center of Lake Winnemisett	WINN					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Ablabesmyia rhamphe gr.			1		1	0.25
Ablabesmyia sp. B - Epler Lake Winn				2	2	0.5
Chironominae (damaged)			1		1	0.25
Chironomus ochreatus? - 4232 Winn				9	9	2.25
Chironomus sp.	6	4	2		12	3
Dicrotendipes tritomus	1				1	0.25
Limnodrilus hoffmeisteri			1		1	0.25
Polypedilum halterale gr.		1	4	13	18	4.5
Procladius (Holotanypus) sp.			1		1	0.25
Tanytarsus sp.		1	1	1	3	0.75
Tanytarsus sp. C		2			2	0.5
Tanytarsus sp. G	3		7		10	2.5
Total Abundance	10	8	18	25	61	15
Organism Density (No./M^2)	430	344	775	1076	2626	656
Total No. Taxa	3	4	8	4	12	4.75
Shannon-Weaver Diversity	1.3	1.75	2.52	1.5	2.88	1.77

Center of Mill Dam Lake

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Elliptio buckleyi		1	1		2	0.5
Eclipidrilus palustris			5		5	1.25
Limnodrilus hoffmeisteri			7	3	10	2.5
Stictochironomus sp.			2	8	10	2.5
Hexagenia limbata			7	4	11	2.75
Viviparus georgianus			1		1	0.25
Polypedilum halterale gr.				4	4	1
Djalmabatista pulchra				1	1	0.25
Total Abundance	0	1	23	20	44	11
Organism Density (No./M^2)	0	43	990	861	1894	474
Total No. Taxa	0	1	6	5	8	3
Shannon-Weaver Diversity	0	0	2.22	2.08	2.59	1.08

Center of South Lake

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis				1	1	0.25
Einfeldia natchitocheae		11	12	12	35	8.75
Limnodrilus hoffmeisteri			1	2	3	0.75
Total Abundance	0	11	13	15	39	10
Organism Density (No./M^2)	0	474	560	646	1679	420
Total No. Taxa	0	1	2	3	3	1.5
Shannon-Weaver Diversity	0	0	0.39	0.91	0.56	0.33

Crabgrass Creek at SR 192	USJ055					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	14	5	11	16	46	11.5
Chironomus sp.	11	1	4	1	17	4.25
Dicrotendipes sp im.	3				3	0.75
Procladius (Holotanypus) sp.	1			1	2	0.5
Elliptio buckleyi	1			2	3	0.75
Entomobyridae		1			1	0.25
Clinotanypus sp.		1	5	2	8	2
Paralauterborniella nigrohalteralis				1	1	0.25
Total Abundance	30	8	20	23	81	20.25
Organism Density (No./M^2)	1291	344	861	990	3487	871.72
Total No. Taxa	5	4	3	6	8	4.5
Shannon-Weaver Diversity	1.7	1.55	1.44	1.57	1.91	1.57

Crane Creek @ Babcock St.	**CCO3**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	15	5	23	5	48	12
Ilyodrilus templetoni	1			1	2	0.5
Chironomus sp.	1				1	0.25
Nematoda sp. A	1				1	0.25
Cryptochironomus blarina		11			11	2.75
Dubiraphia vittata		1			1	0.25
Polypedilum halterale gr.		1			1	0.25
Aulodrilus pigueti			2	4	6	1.5
Helobdella sp. (immature)				1	1	0.25
Total Abundance	18	18	25	11	72	18
Organism Density (No./M^2)	775	775	1076	474	3099	775
Total No. Taxa	4	4	2	4	9	3.5
Shannon-Weaver Diversity	0.91	1.41	0.4	1.68	1.67	1.1

Crescent Lake at Marker 9

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	1				1	0.25
Coelotanypus scapularis			1		1	0.25
Coelotanypus sp. im.	3	1			4	1
Coelotanypus tricolor			3		3	0.75
Limnodrilus hoffmeisteri	1	1	3	3	8	2
Procladius bellus var. 2			2		2	0.5
Procladius sp. im.			1		1	0.25
Tanytarsus sp. G	2	2	2	1	7	1.75
Tanytarsus sp. O		1			1	0.25
Tanytarsus sp. S		1			1	0.25
Total Abundance	7	6	12	4	29	7
Organism Density (No./M^2)	301	258	517	172	1248	312
Total No. Taxa	4	5	6	2	10	4.25
Shannon-Weaver Diversity	1.84	2.25	2.46	0.81	2.84	1.84

Deep Creek at Maytown Road Bridge		DMR				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	2	2	4	3	11	2.75
Tanytarsus sp. Dam.	1				1	0.25
Chironomus sp.	3		3	1	7	1.75
Tribelos jucundum	1				1	0.25
Polypedilum sp.	1				1	0.25
Goeldichironomus holoprasinus	1				1	0.25
Dero nivea	1		1		2	0.5
Branchiura sowerbyi	1				1	0.25
Dicrotendipes neomodestus	2	1			3	0.75
Ablabesmyia mallochi	3				3	0.75
Procladius sp. (immature)		1			1	0.25
Ceratopogonidae			1	11	12	3
Erioptera sp.				1	1	0.25
Total Abundance	16	4	9	16	45	11.25
Organism Density (No./M^2)	689	172	387	689	1937	484
Total No. Taxa	10	3	4	4	13	5.25
Shannon-Weaver Diversity	3.16	1.50	1.75	1.32	3.00	1.93

Durbin Creek at Racetrack Roa	LSJ087					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	4	20	1	7	32	8
Eclipidrilus palustris	5	3	3	2	13	3.25
Goeldichironomus holoprasinus	1				1	0.25
Tribelos jucundum		1			1	0.25
Dubiraphia vittata		1			1	0.25
Tanytarsus sp. G		1			1	0.25
Total Abundance	10	26	4	9	49	12
Organism Density (No./M^2)	430	1119	172	387	2109	527
Total No. Taxa	3	5	2	2	6	3
Shannon-Weaver Diversity	1.36	1.19	0.81	0.76	1.37	1.03

Georges Lake 200 Yds from West Bank **20030400**

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	2	6	2	1	11	2.75
Total Abundance	2	6	2	1	11	2.75
Organism Density (No./M^2)	86	258	86	43	474	118.3814
Total No. Taxa	1	1	1	1	1	0.25
Shannon-Weaver Diversity	0	0.00	0.00	0.00	0.00	0.00

Haines Creek at Lisbon	**2238000**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	20	17	10	14	61	15.25
Chaoborus punctipennis		1	2	9	12	3
Cryptochironomus blarina			1		1	0.25
Total Abundance	20	18	13	23	74	18.5
Organism Density (No./M^2)	861	775	560	990	3186	796
Total No. Taxa	1	2	3	2	3	2
Shannon-Weaver Diversity	0	0.31	0.99	0.97	0.74	0.57

Halifax River 100 ft. N Sl Beach Memorial Bridge				27010037		
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Mulinia lateralis	3				3	0.75
Melongena corona		1			1	0.25
Marphsa near sanguinea			3		3	0.75
Glycinde solitaria	6	3	3	4	16	4
Polychaeta sp G			1		1	0.25
Diopatra cuprea				1	1	0.25
Spionidae sp. A		1		1	2	0.5
Onuphidae sp. A		1		1	2	0.5
Amaeana trilobata			1		1	0.25
Spiochaetopterus costarum			1		1	0.25
Enteropneusta			1		1	0.25
Eupolymnia sp. A			1		1	0.25
Demonax sp. A			1		1	0.25
Nereidae sp. A	2			1	3	0.75
Nassarius vibex				1	1	0.25
Total Abundance	11	6	12	9	38	10
Organism Density (No./M	474	258	517	387	1636	409
Total No. Taxa	3	4	8	6	15	5.25
Shannon-Weaver Diversit	1.44	1.79	2.79	2.28	3.08	2.08

Hatchet Creek Near Gainesville		2240800				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	158				158	39.5
Kiefferulus dux/pungens	114				114	28.5
Tanytarsus sp. G	112				112	28
Dicrotendipes modestus	1				1	0.25
Procladius bellus var. 1	4				4	1
Chironominae	6	2	1		9	2.25
Clinotanypus sp.	1				1	0.25
Dicrotendipes sp im.	1				1	0.25
Lumbriculidae sp. B	1				1	0.25
Libellulidae (imm.)			1		1	0.25
Chaoborus punctipennis				141	141	35.25
Total Abundance	398	2	2	141	543	135.75
Organism Density (No./M^2)	17133	86	86	6070	23375	5844
Total No. Taxa	9	1	2	1	11	3.25
Shannon-Weaver Diversity	1.81	0	1	0	2.2	0.70

Haw Creek Mouth at Dead Lake		HAW				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	48	48	38	42	176	44
Limnodrilus hoffmeisteri	1	2	3	1	7	1.75
Spirosperma ferox			1		1	0.25
Cladopelma sp.			1	1	2	0.5
Tanypus carinatus					1	0.25
Procladius bellus var. 2		1	5	5	11	2.75
Total Abundance	49	51	48	49	198	49.5
Organism Density (No./M^2)	2109	2195	2066	2109	8523	2131
Total No. Taxa	2	3	5	4	6	3.5
Shannon-Weaver Diversity	0.14	0.38	1.09	0.76	0.7	0.59

Helena Run at the confluence of Bugg Spring Run

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Hyalella azteca	1			1	2	0.5
Procladius (Holotanypus) sp.			1		1	0.25
Procladius sp. im.	1	2			3	0.75
Tanypus carinatus	1				1	0.25
Tanypus punctipennis		1		2	3	0.75
Total Abundance	3	3	1	3	10	3
Organism Density (No./M^2)	129	129	43	129	430	108
Total No. Taxa	3	2	1	2	5	2
Shannon-Weaver Diversity	1.58	0.92	1	0.92	2.17	1.11

Hogtown Creek

Taxa	HOG A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	HOG B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	HOG C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	HOG D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Ablabesmyia mallochi	8		2	6	16	4	1	5	6	5	17	4.25	1	1	4	5	11	2.75					0	0	44
Autodrilus pigueti					0	0				1	1	0.25					0	0					0	0	1
Branchiura sowerbyi					0	0					0	0					0	0	8	4	7	5	24	6	24
Chironominae (pupae)	1			2	3	0.75	1	1	2	3	7	1.75		2	3		5	1.25					0	0	15
Chironomus sp. Im.	1		3		4	1	1			1	2	0.5	25	23	22	77	147	36.75		1			1	0.25	154
Cladotanytarsus sp.					0	0					0	0	1				1	0.25		1			1	0.25	2
Clinotanypus sp.					0	0					0	0					0	0				2	2	0.5	2
Corbicula fluminea					0	0	1				1	0.25					0	0					0	0	1
Cricotopus sp.					0	0					0	0				1	1	0.25					0	0	1
Cryptochironomus fulvus gr.					0	0		2	1	1	4	1		2	1	1	4	1					0	0	8
Dicrotendipes neomodestus					0	0					0	0	1			2	3	0.75					0	0	3
Dicrotendipes sp.					0	0	1				1	0.25					0	0					0	0	1
Eclipidrilus palustris			2		2	0.5					0	0					0	0					0	0	2
Hyalella azteca					0	0					0	0					0	0	1				1	0.25	1
Limnodrilus hoffmeisteri	1		5		6	1.5	3	2		1	6	1.5					0	0		1		3	4	1	16
Macromia taeniolata					0	0					0	0				1	1	0.25					0	0	1
Paracladopelma cf. Nereis					0	0	1	1			2	0.5					0	0					0	0	2
Polypedilum halterale gr.					0	0	1			2	3	0.75	1	2		2	5	1.25					0	0	8
Polypedilum illinoense gr.					0	0					0	0				3	3	0.75					0	0	3
Polypedilum scalaenum gr.					0	0					0	0					0	0	2				2	0.5	2
Progomphus alachuensis					0	0		1			1	0.25					0	0					0	0	1
Rheocricopotus robacki					0	0					0	0				1	1	0.25					0	0	1
Simullum sp.					0	0			1		1	0.25					0	0					0	0	1
Tanypodinae					0	0					0	0			2		2	0.5					0	0	2
Tanytarsus limneticus					0	0					0	0				1	1	0.25					0	0	1
Tanytarsus sp. A	5	1			6	1.5	5	4	8	6	23	5.75	19	13	7	9	48	12					0	0	77
Tanytarsus sp. C					0	0	1	5	5	2	13	3.25	1				1	0.25					0	0	14
Tanytarsus sp. G					0	0		1		1	2	0.5					0	0					0	0	2
Tribelos fuscicorne					0	0				1	1	0.25					0	0					0	0	1
Tribelos jucundum	25	4	10	9	48	12					0	0					0	0		6	7	1	14	3.5	62
Tubificidae Imm. Sp. C					0	0					0	0					0	0	6				6	1.5	6
Total Abundance	41	5	22	17	85	21	16	22	23	24	85	21	49	43	39	103	234	59	17	13	14	11	55	14	459
Organism Density (No./M^2)	1765	215	947	732	3659	915	689	947	990	1033	3659	915	2109	1851	1679	4434	10073	2518	732	560	603	474	2368	592	19759
Total No. Taxa	6	2	5	3	7	4.00	10	9	6	11	16	9.00	7	6	6	11	15	7.50	4	5	2	4	9	3.75	31
Shannon-Weaver Diversity	1.66	0.72	2.02	1.38	1.96	1.45	2.98	2.86	2.21	3.09	3.17	2.79	1.6	1.75	1.89	1.53	1.86	1.69	1.65	1.89	1	1.79	2.31	1.58	3.21

Indian River @ ICWW CM 12 near Halov		27010875				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Paraprionospio pinnata	6	1	2		9	2.25
Ampelisca abdita	19	19	40	16	94	23.5
Oxyurostylis smithi	8	8	16	1	33	8.25
Erichthouius brasiliensis	11	3	1		15	3.75
Nemertea		1		2	3	0.75
Polynoidae sp. A		2		2	4	1
Mediomastus sp.		2			2	0.5
Tubificidae imm. Sp. B			1		1	0.25
Pectinaria regalis			1		1	0.25
Tellina lineata			26		26	6.5
Glycera americana	6	3	1	2	12	3
Total Abundance	50	39	88	23	200	50
Organism Density (No./M^2)	2152	1679	3788	990	8610	2152
Total No. Taxa	5	8	8	5	11	6.5
Shannon-Weaver Diversity	2.17	2.25	1.9	1.48	2.4	1.95

Kingsley Lake at Center

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia mallochi			1		1	0.25
Ablabesmyia peleensis gr.	1			1	2	0.5
Chaoborus punctipennis	1				1	0.25
Chironomus sp.	16	6	17	54	93	23.25
Erpobdellidae			1	1	2	0.5
Limnodrilus hoffmeisteri	4	1	2	3	10	2.5
Nematoda sp. C	1				1	0.25
Palaemonetes paludosus		1		1	2	0.5
Polypedilum halterale gr.			2		2	0.5
Procambarus sp.	1				1	0.25
Procladius (Holotanypus) sp.	1	1			2	0.5
Procladius bellus var. 1				1	1	0.25
Total Abundance	25	9	23	61	118	30
Organism Density (No./M^2)	1076	387	990	2626	5080	1270
Total No. Taxa	7	4	5	6	12	5.5
Shannon-Weaver Diversity	1.76	1.45	1.33	0.76	1.36	1.33

Lake Disston

Taxa	Diss A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Diss B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Diss C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Diss D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Diss E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Ablabesmyia rhamphe gr.		1			1	0.25					0	0					0	0					0	0					0	0	1
Chaoborus punctipennis	1				1	0.25	3	1			4	1	8	5	16	6	34	8.5					0	0		1		1	2	0.5	41
Chironominae (pupae)					0	0					0	0					0	0			1		1	0.25					0	0	1
Cilnotanypus sp.	1				1	0.25	2				2	0.5					0	0					0	0					0	0	3
Coelotanypus sp.					0	0					0	0	1	1			2	0.5					0	0					0	0	2
Coelotanypus tricolor					0	0		1			1	0.25			1	2	3	0.75					0	0					0	0	4
Cryptochironomus blarina					0	0					0	0					0	0				1	1	0.25					0	0	1
Cryptochironomus fulvus gr.					0	0					0	0					0	0					0	0	1				1	0.25	1
Dero digitata					0	0					0	0					0	0			1		1	0.25					0	0	1
Djalmabatista pulchra					0	0					0	0					0	0		1			1	0.25					0	0	1
Ecilpidrilus pelastris					0	0					0	0					0	0		3	1	1	5	1.25	1				1	0.25	6
Ellipdo buckleyi		1			1	0.25					0	0					0	0					0	0					0	0	1
Enallagma sp. (immature)					0	0					0	0	1				1	0.25					0	0					0	0	1
Gammarus near tigrinus				1	1	0.25					0	0			1		1	0.25					0	0					0	0	2
Haber speciosus					0	0					0	0					0	0		1			1	0.25					0	0	1
Hexagenia limbata			4		4	1		2	2		4	1		1			1	0.25	1				1	0.25					0	0	10
Hyalella azteca					0	0					0	0	1				1	0.25					0	0					0	0	1
Limnodrilus claparedianus		4	5		9	2.25	3	6	9	4	22	5.5		1		2	3	0.75	6	2	3	5	16	4		7	6	3	16	4	66
Limnodrilus hoffmeisteri					0	0					0	0					0	0					0	0	2				2	0.5	2
Polypedilum halterale gr.	1	1			2	0.5					0	0					0	0				1	1	0.25					0	0	3
Tanytarsus sp. O			1		1	0.25		1	1		2	0.5					0	0					0	0					0	0	3
Tanytarsus sp. P	1	1			2	0.5					0	0					0	0					0	0					0	0	2
Tribelos fuscicorne					0	0					0	0	1				1	0.25					0	0					0	0	1
Tubificidae Imm. Sp. B					0	0			1		1	0.25					0	0		1			1	0.25					0	0	2
Total Abundance	4	8	10	1	23	6	8	11	13	4	36	9	12	8	17	10	47	12	7	8	6	6	29	7	4	8	6	4	22	6	157
Organism Density (No./M^2)	172	344	430	43	990	248	344	474	560	172	1550	387	517	344	732	430	2023	506	301	344	258	344	1248	312	172	344	258	172	947	237	6759
Total No. Taxa	4	5	3	1	10	3	3	5	4	1	7	2	5	4	3	3	9	2	2	5	4	4	10	3	3	2	1	2	5	1	24
Shannon-Weaver Diversity	2	2	1.36	0	2.76	0.69	1.56	1.87	1.35	0	1.89	0.4725	1.56	1.55	0.84	1.37	1.83	0.4075	0.59	2.16	1.79	1.55	2.25	0.56	1.5	0.54	0	0.81	1.37	0.34	2.84

Lake Dora

Taxa	Dora A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Dora B Rep 1	Rep 2	Rep 3	Rep4	Totals	Means	Dora C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Dora D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Dora E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Dora F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Dora G Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Ceratopogonidae (damaged)				1	1	0.25					0	0					0	0					0	0					0	0					0	0					0	0	1
Chaoborus punctipennis	2				2	0.5			21	6	5	32	8	9	23	17	27	76	19	4		13	3	20	5	31	21	24	29	105	26.25	16	14	29	29	88	22	39	16	21	14	90	22.5	413
Chironomus sp					0	0	3	3	1	2	9	2.25						0	0					0	0					0	0					0	0	1		1	2	0.5	11
Cladotanytarsus sp	58	1			59	14.75					0	0						0	0					0	0					0	0					0	0				6	6	1.5	65
Coelotanypus concinnus	1	1			2	0.5			1		1	0.25						0	0			1		1	0.25					0	0					0	0		1			1	0.25	5
Coelotanypus sp. imm	1			1	2	0.5					0	0						0	0					0	0			1		1	0.25					0	0					0	0	3
Cryptochironomus blarina	2	7			9	2.25					0	0						0	0					0	0					0	0					0	0				4	4	1	13
Cryptochironomus fulvus gr					0	0		1			1	0.25						0	0					0	0					0	0					0	0					0	0	1
Dero digitata	2				2	0.5	1	1			2	0.5						0	0					0	0					0	0				5	5	1.25		1			1	0.25	10
Hydrius templetoni	7				7	1.75		1			1	0.25						0	0					0	0					0	0					0	0				10	10	2.5	18
Lemnaonius hoffmeisteri	10			2	12	3	2	2		6	10	2.5		3	2	1	6	1.5						0	0			2		2	0.5					0	0	1		5	8	14	3.5	44
Hyaella azteca					0	0					0	0	1				1	0	0.25					0	0					0	0					0	0					0	0	1
Autodrilus piguets					0	0					0	0					0	0	0	1				1	0.25					0	0					0	0					0	0	1
Thoracts jucundum					0	0					0	0					0	0	0					0	0					0	0					0	0				1	1	0.25	1
Total Abundance	83	9	0	4	96	24	6	29	8	13	56	14	10	26	19	26	83	21	5	0	14	3	22	6	31	21	27	29	108	27	16	14	29	34	93	23	41	18	27	43	129	32	587
Organism Density (No /M^2)	3573	387	0	172	4133	1033	258	1246	344	560	2411	603	430	1119	818	1205	3573	860	215	0	603	129	947	237	1334	904	1162	1246	4649	1162	689	603	1246	1464	4003	1001	1765	775	1162	1851	5553	1368	25269
Total No Taxa	8	3	0	3	9	4	3	6	3	3	7	4	2	2	2	2	3	2	2	0	2	1	3	1	1	1	3	1	3	2	1	1	1	2	2	1	3	3	3	6	9	4	14
Shannon-Weaver Diversity	1.57	0.99	0	1.5	1.94	1.02	1.46	1.44	1.06	1.46	1.81	1.36	0.47	0.52	0.49	0.22	0.47	0.43	0.72	0	0.37	0	0.53	0.37	0	0	0.81	0	0.31	0.15	0	0	0	0.6	0.30	0.15	0.33	0.61	0.91	2.31	1.61	1.04	1.85

Lake Eustis

Taxa	Eustis A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Eustis B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	23	14	11	12	60	15				1	1	0.25
Hyalella azteca	1				1	0.25		1			1	0.25
Coelotanypus concinnus	2	1			3	0.75		4	1	4	9	2.25
Limnodrilus hoffmeisteri		1			1	0.25	9		1	3	13	3.25
Cladotanytarsus - Eustis					0	0	37			3	40	10
Ilyodrilus templetoni					0	0	4			1	5	1.25
Cryptochironomus blarina					0	0	2		1		3	0.75
Procladius (Holotanypus) sp					0	0				1	1	0.25
Chironominae					0	0				1	1	0.25
Chaoborus albatus					0	0					0	0
Coelotanypus tricolor					0	0					0	0
Helobdella sp (immature)					0	0					0	0
Hydrobiidae					0	0					0	0
Tanytarsus sp. O					0	0					0	0
Coelotanypus sp					0	0					0	0
Procladius bellus var. 2					0	0					0	0
Einfeldia natchitocheae					0	0					0	0
Total Abundance	26	16	11	12	65	16	52	5	3	14	74	19
Organism Density (No./M²)	1119	689	474	517	2798	700	2238	215	129	603	3186	796
Total No. Taxa	3	3	1	1	4	2.00	4	2	3	7	9	4.00
Shannon-Weaver Diversity	0.82	0.67	0	0	0.50	0.32	1.25	0.72	1.56	2.56	2.08	1.53

Taxa	Eustis C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Eustis D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	7	12	16	10	45	11.25	7	7	4	8	26	6.5
Hyalella azteca					0	0			1	1	2	0.5
Coelotanypus concinnus					0	0					0	0
Limnodrilus hoffmeisteri	2		2		4	1					0	0
Cladotanytarsus - Eustis					0	0					0	0
Ilyodrilus templetoni					0	0					0	0
Cryptochironomus blarina					0	0					0	0
Procladius (Holotanypus) sp					0	0					0	0
Chironominae					0	0					0	0
Chaoborus albatus	3				3	0.75					0	0
Coelotanypus tricolor		7	5	1	13	3.25					0	0
Helobdella sp (immature)					0	0	1				1	0.25
Hydrobiidae					0	0		1			1	0.25
Tanytarsus sp. O					0	0					0	0
Coelotanypus sp					0	0					0	0
Procladius bellus var. 2					0	0					0	0
Einfeldia natchitocheae					0	0					0	0
Total Abundance	12	19	23	11	65	16	8	8	5	9	30	8
Organism Density (No./M²)	517	818	990	474	2798	700	344	344	215	387	1291	323
Total No. Taxa	3	2	3	2	4	2.50	2	2	2	2	4	2.00
Shannon-Weaver Diversity	1.36	0.85	1.15	0.44	1.28	0.96	0.54	0.54	0.72	0.47	0.77	0.57

Taxa	Eustis E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Eustis F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chaoborus punctipennis	12	2	17	14	45	11.25	20	27	34	25	106	26.5
Hyalella azteca					0	0		4		3	7	1.75
Coelotanypus concinnus	2				2	0.5	1		1	1	3	0.75
Limnodrilus hoffmeisteri					0	0			1		1	0.25
Cladotanytarsus - Eustis					0	0					0	0
Ilyodrilus templetoni					0	0					0	0
Cryptochironomus blarina					0	0					0	0
Procladius (Holotanypus) sp					0	0					0	0
Chironominae					0	0					0	0
Chaoborus albatus					0	0					0	0
Coelotanypus tricolor		2			2	0.5					0	0
Helobdella sp (immature)					0	0					0	0
Hydrobiidae					0	0					0	0
Tanytarsus sp. O				1	1	0.25			1		1	0.25
Coelotanypus sp				2	2	0.5			2	3	5	1.25
Procladius bellus var. 2					0	0					0	0
Einfeldia natchitocheae					0	0				1	1	0.25
Total Abundance	14	4	17	17	52	13	21	31	39	33	124	31
Organism Density (No./M²)	603	172	732	732	2236	560	904	1334	1678	1421	5336	1334
Total No. Taxa	2	2	1	3	5	2.00	2	2	5	5	7	3.50
Shannon-Weaver Diversity	0.59	1	0	0.83	0.83	0.61	0.28	0.65	0.8	1.24	0.81	0.72

Taxa	Eustis G Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Chaoborus punctipennis	33	29	73	35	170	42.5	453
Hyalella azteca					0	0	11
Coelotanypus concinnus			5		5	1.25	22
Limnodrilus hoffmeisteri				2	2	0.5	21
Cladotanytarsus - Eustis					0	0	40
Ilyodrilus templetoni					0	0	5
Cryptochironomus blarina					0	0	3
Procladius (Holotanypus) sp					0	0	1
Chironominae					0	0	1
Chaoborus albatus					0	0	3
Coelotanypus tricolor	2				2	0.5	17
Helobdella sp (immature)					0	0	1
Hydrobiidae					0	0	1
Tanytarsus sp. O					0	0	2
Coelotanypus sp		1		1	2	0.5	8
Procladius bellus var. 2			1		1	0.25	1
Einfeldia natchitocheae					0	0	1
Total Abundance	35	30	79	36	182	46	582
Organism Density (No./M²)	1507	1291	3401	1636	7835	1959	25484
Total No. Taxa	2	2	3	3	8	2.50	17
Shannon-Weaver Diversity	0.32	0.21	0.44	0.47	0.48	0.36	1.51

Lake Geneva at Center	Gen					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	1		1		2	0.5
Chironominae	1			1	2	0.5
Elliptio buckleyi	1				1	0.25
Stictochironomus sp.		4			4	1
Djalmabatista pulchra		2	1	1	4	1
Hexagenia limbata		1	1		2	0.5
Tanytarsus sp. G			14		14	3.5
Chironomus sp.			154		154	38.5
Kiefferulus dux/pungens			30		30	7.5
Dicrotendipes simpsoni			4		4	1
Ceratopogonidae			1		1	0.25
Procladius sp. im.			1		1	0.25
Cryptochironomus fulvus gr.			1		1	0.25
Total Abundance	3	7	208	2	220	55
Organism Density (No./M^2)	129	301	8954	86	9471	2368
Total No. Taxa	3	3	10	2	13	4.5
Shannon-Weaver Diversity	1.58	1.38	1.32	1	1.65	1.32

Lake George

Taxa	George A						George B						George C						George D						George E					
	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Haber speciosus	1				1	0.25					0	0					0	0					0	0					0	0
Cladotanytarsus sp.	2				2	0.5					0	0					0	0					0	0					0	0
Monoculodes nyei	1				1	0.25	2	2			4	1					0	0					0	0	2	2		1	5	1.25
Cyathura polita	1			1	2	0.5	1				1	0.25					0	0					0	0		2		1	3	0.75
Cryptochironomus blarina		4			4	1					0	0					0	0					0	0	1				1	0.25
Chironomus crassicaudatus		1			1	0.25					0	0					0	0	1	1		1	3	0.75			4		4	1
Cryptochironomus fulvus gr.			1	3	4	1				1	1	0.25					0	0					0	0					0	0
Coelotanypus tricolor					0	0	7	10	8	2	27	6.75	3	3	5	7	18	4.5	5		2	5	12	3					0	0
Chaoborus punctipennis					0	0	6	4	1		11	2.75	4	10		7	21	5.25			1		1	0.25					0	0
Procladius (Holotanypus) sp.					0	0	2				2	0.5	1				1	0.25					0	0					0	0
Limnodrilus hoffmeisteri					0	0		1		4	5	1.25	1		1		2	0.5	7	14	9	13	43	10.75	20	28	25	28	101	25.25
Polypedilum halterale gr.					0	0				1	1	0.25					0	0					0	0					0	0
Coelotanypus sp.					0	0					0	0	5	8	3	1	17	4.25					0	0	1				1	0.25
Coelotanypus concinnus					0	0					0	0			1	1	2	0.5					0	0					0	0
Dero digitata					0	0					0	0					0	0		1			1	0.25					0	0
Nematode sp. A					0	0					0	0					0	0		9	4	5	18	4.5					0	0
Chironomus sp. im.					0	0					0	0					0	0					0	0	1				1	0.25
Dero nivea					0	0					0	0					0	0					0	0		1			1	0.25
Pristina synites					0	0					0	0					0	0					0	0		1			1	0.25
Melita cf. intermedia					0	0					0	0					0	0					0	0			1		1	0.25
Helobdella sp. (immature)					0	0					0	0					0	0					0	0					0	0
Djalmabatista pulchra					0	0					0	0					0	0					0	0					0	0
Mysidopsis almyra					0	0					0	0					0	0					0	0					0	0
Total Abundance	5	5	1	4	15	4	18	17	9	8	52	13	14	21	10	16	61	15	13	25	16	24	78	20	25	34	30	30	119	30
Organism Density (No./M^2)	215	215	43	172	646	161	775	732	387	344	2238	560	603	904	430	689	2626	656	560	1076	689	1033	3358	839	1076	1464	1291	1291	5123	1281
Total No. Taxa	4	2	1	2	7	2.25	5	4	2	4	8	3.75	5	3	4	4	6	4.00	3	4	4	4	6	3.75	5	5	3	3	10	4.00
Shannon-Weaver Diversity	1.92	0.72	0	0.81	2.57	0.86	1.99	1.55	0.5	1.75	2.08	1.45	2.07	1.44	1.69	1.54	1.98	1.69	1.3	1.37	1.59	1.61	1.72	1.47	1.11	1.01	0.77	0.42	1.04	0.83

Lake George

Taxa	George F						George G						George H						George I						George J					
	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals	Means
Haber speciosus					0	0					0	0					0	0					0	0					0	0	1	0
Cladotanytarsus sp.					0	0					0	0					0	0					0	0					0	0	2	0
Monoculodes nyai					0	0			1		1	0.25		6			6	1.5					0	0					0	0	23	2
Cyathura polita					0	0					0	0	5	8	2	4	19	4.75					0	0					0	0	44	4
Cryptochironomus blarina					0	0					0	0					0	0					0	0					0	0	5	1
Chironomus crassicaudatus					0	0					0	0					0	0					0	0					0	0	8	1
Cryptochironomus fulvus gr.					0	0					0	0					0	0					0	0					0	0	5	1
Coelotanypus tricolor	9	13	22	6	52	13	2	1		3	6	1.5	9		2		11	2.75	2	7		1	10	2.5	1			1	2	0.5	149	15
Cheoborus punctipennis				1	1	0.25					0	0	2				2	0.5					0	0					0	0	36	4
Procladius (Holotanypus) sp.					0	0	2				2	0.5					0	0					0	0		1			1	0.25	8	1
Limnodrilus hoffmeisteri	2	9	8	4	23	5.75	7	7		3	17	4.25		9		39	48	12		5	4	4	13	3.25	4	9	8	5	24	6	324	32
Polypedilum halterale gr.					0	0					0	0					0	0					0	0					0	0	1	0
Coelotanypus sp.				4	4	1		1			1	0.25	2			1	3	0.75					0	0			1		1	0.25	30	3
Coelotanypus concinnus					0	0					0	0					0	0			2		2	0.5					0	0	4	0
Dero digitata					0	0					0	0					0	0					0	0					0	0	1	0
Nematoda sp. A	44	33	28	1	106	26.5		1			1	0.25					0	0			1		1	0.25					0	0	126	13
Chironomus sp. Im.					0	0					0	0					0	0					0	0					0	0	1	0
Dero nivea					0	0					0	0					0	0					0	0					0	0	1	0
Pristina synlites					0	0					0	0					0	0					0	0					0	0	1	0
Meilta cf. intermedia					0	0					0	0					0	0					0	0					0	0	1	0
Helobdella sp. (immature)					0	0		1			1	0.25					0	0	1	1			2	0.5					0	0	3	0
Djalmabatista pulchra					0	0					0	0		1	1		2	0.5					0	0					0	0	4	0
Mysidopsis almyra					0	0					0	0					0	0				1	1	0.25	1				1	0.25	2	0
Total Abundance	55	55	58	18	186	47	11	11	1	6	29	7	18	24	5	44	91	23	3	13	7	6	29	7	6	10	7	6	29	7	760	76
Organism Density (No./M^2)	2368	2368	2497	775	8007	2002	474	474	43	258	1246	312	775	1033	215	1884	3917	979	129	560	301	258	1248	312	258	430	301	258	1246	312	33577	3358
Total No. Taxa	3	3	3	5	5	3.50	3	5	1	2	7	2.75	4	4	3	3	7	3.50	2	3	3	3	6	2.75	3	2	2	2	5	2.25	23	4
Shannon-Weaver Diversity	0.86	1.36	1.43	1.95	1.51	1.40	1.31	1.67	0	1	1.86	1.00	1.72	1.75	1.52	0.59	1.99	1.40	0.92	1.3	1.36	1.25	1.92	1.21	1.25	0.47	0.59	0.65	2.64	0.74	2.64	1.31

Lake Griffin

Taxa	Griff A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Griff B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Griff C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Griff D Rep 1	Rep 2	Rep 3	Rep4	Totals	Means	Griff E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Griff F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Chaoborus punctipennis	6	5	7	9	27	6.75	15	11	6	17	49	12.25	21	18	10	19	68	17					0	0	25	23	19	12	79	19.75	3	24	9	13	49	12.25	272
Chironomus sp					0	0					0	0					0	0		1			1	0.25					0	0					0	0	1
Cladotanytarsus sp					0	0					0	0					0	0					0	0					0	0					0	0	0
Coelotanypus concinnus					0	0					0	0					0	0					0	0				3	3	0.75	1				1	0.25	4
Coelotanypus sp					0	0					0	0					0	0					0	0					0	0			1		1	0.25	1
Crystachironomus blanne					0	0					0	0					0	0					0	0					0	0					0	0	0
Crystachironomus fulvus gr					0	0					0	0					0	0					0	0					0	0					0	0	0
Dero digitata					0	0					0	0					0	0					0	0					0	0					0	0	0
Hyaltnus templetoni					0	0					0	0					0	0					0	0					0	0					0	0	0
Limnodrilus hoffmeisteri					0	0			1		1	0.25	1		2		3	0.75	6	8	10	3	25	6.25	4	2	1	1	8	2				1	1	0.25	36
Hyalella azteca					0	0					0	0					0	0					0	0				1	1	0.25					0	0	1
Auloctilus pigueti					0	0					0	0					0	0					0	0					0	0					0	0	0
Tribelos jucundum					0	0					0	0					0	0					0	0					0	0					0	0	0
Coelotanypus tricolor	2				2	0.5					0	0	2				2	0.5					0	0					0	0					0	0	4
Helobdella sp					0	0					0	0					0	0					0	0					0	0					0	0	0
Glossiphoniidae (imm.)					0	0					0	0					0	0					0	0					0	0					0	0	0
Procladius (Holotanypus) sp					0	0					0	0					0	0					0	0					0	0					0	0	0
Hydrobiidae	3				3	0.75					0	0	5	2	5	7	19	4.75					0	0	18	27	32	21	98	24.5					0	0	120
Helobdella stagnalis					0	0					0	0					0	0					0	0					0	0					0	0	0
Chironomus crassicaudatus					0	0					0	0					0	0				1	1	0.25					0	0					0	0	1
Total Abundance	11	5	7	9	32	8	15	11	7	17	50	12.5	29	20	17	26	92	23	6	7	10	4	27	6.75	47	52	52	38	189	47.25	4	24	10	14	52	13	442
Organism Density (No /M^2)	474	215	301	387	1378	344	646	474	301	732	2152	538	1248	861	732	1119	3960	990	258	301	430	172	1162	291	2023	2238	2238	1636	8136	2034	172	1033	430	603	2236	560	19027
Total No Taxa	3	1	1	1	3	1.50	1	1	2	1	2	1.25	4	2	3	2	4	2.75	1	2	1	2	3	1.50	3	3	3	5	5	3.50	2	1	2	2	4	1.75	20
Shannon-Weaver Diversity	1.44	0	0	0	0.78	0.36	0	0	0.59	0	0.14	0.15	1.21	0.47	1.33	0.84	1.07	0.96	0	0.58	0	0.81	0.46	0.35	1.32	1.19	1.07	1.56	1.35	1.29	0.81	0	0.47	0.37	0.41	0.41	1.45

Lake Harris

Taxa	Har A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Har B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Har C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Har D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Har E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Har F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Chaoborus punctipennis	5	11	5	7	28	7	10	14	4	13	41	10.25	2	3	2	4	11	2.75	4	11	6	3	26	6.5		9	13	17	39	9.75	5	5	2		12	3	157
Chironomus sp.					0	0					0	0					0	0					0	0					0	0					0	0	0
Cladotanytarsus sp.					0	0					0	0					0	0					0	0					0	0					0	0	0
Coelotanypus concinnus					0	0					0	0		4		1	5	1.25			1		1	0.25		3		1	4	1					0	0	10
Coelotanypus sp. imm					0	0					0	0					0	0					0	0					0	0				4	4	1	4
Chyptochironomus blenne					0	0					0	0					0	0					0	0					0	0					0	0	0
Cryptochironomus fulvus gr					0	0					0	0					0	0					0	0					0	0					0	0	0
Dero digitata					0	0					0	0					0	0					0	0					0	0					0	0	0
Ilyodrilus templetoni					0	0					0	0					0	0					0	0					0	0					0	0	0
Limnodrilus hoffmeisteri	1	1			2	0.5	1				1	0.25		1			1	0.25			1		1	0.25		1	2	1	4	1				4	4	1	13
Hyalella azteca	3	5	8	2	18	4.5	1	3			4	1			1		1	0.25					0	0					0	0		1			1	0.25	24
Aulodrilus pigueti					0	0					0	0					0	0					0	0					0	0					0	0	0
Tribelos jucundum					0	0					0	0					0	0					0	0					0	0					0	0	0
Coelotanypus tricolor		1		2	3	0.75	3	7		4	14	3.5	1		3	9	13	3.25	8		8	3	19	4.75		8	12	10	28	7		3			3	0.75	80
Helobdella sp				1	1	0.25					0	0	1		1	1	3	0.75					0	0	1	2	2	1	6	1.5		1			1	0.25	11
Glossiphoniidae (imm)					0	0				1	1	0.25					0	0					0	0					0	0					0	0	1
Procladius (Holotanypus) sp					0	0					0	0	1				1	0.25					0	0			1		1	0.25			1		1	0.25	3
Hydrobiidae					0	0					0	0					0	0				1	1	0.25					0	0					0	0	1
Helobdella stagnalis					0	0					0	0					0	0					0	0			1		1	0.25					0	0	1
Total Abundance	9	18	13	12	52	13	15	24	4	18	61	15	5	8	7	15	35	9	12	11	18	7	48	12	1	21	31	30	83	21	5	10	3	8	26	7	305
Organism Density (No /M^2)	387	775	560	517	2238	560	646	1033	172	775	2626	656	215	344	301	646	1507	377	517	474	775	301	2066	517	43	904	1334	1291	3573	893	215	430	129	344	1119	280	13130
Total No Taxa	3	4	2	4	5	3.25	4	3	1	3	5	2.75	4	3	4	4	7	3.75	2	1	4	3	5	2.50	1	5	6	5	7	4.25	1	4	2	2	7	2.25	19
Shannon-Weaver Diversity	1.35	1.41	0.96	1.61	1.54	1.33	1.36	1.35	0	1.05	1.32	0.95	1.92	1.41	1.84	1.47	2.20	1.66	0.92	0	1.5	1.45	1.36	0.97	0	1.97	1.89	1.46	1.89	1.34	0	1.69	0.92	1	2.25	0.90	2.05

Lake Monroe

Taxa	Mon A Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Mon B Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Coelotanypus tricolor		1	3		4	1		1			1	0.25
Limnodrilus hoffmeisteri		6	5	4	15	3.75				1	1	0.25
Procladius (Holotanypus) sp		1	1	2	4	1					0	0
Chaoborus punctipennis			1		1	0.25	1	7	4	3	15	3.75
Tanytarsus sp 1 - DLE			1		1	0.25					0	0
Cyathura polita				2	2	0.5					0	0
Cryptochironomus blarina					0	0	1				1	0.25
Coelotanypus sp					0	0	1			1	2	0.5
Helobdella sp (immature)					0	0	1	4	5	3	13	3.25
Nematoda sp. A					0	0			1		1	0.25
Helobdella elongata					0	0					0	0
Coelotanypus concinnus					0	0					0	0
Tanytarsus sp. C					0	0					0	0
Amphipoda sp. C - Lake Mona					0	0					0	0
Nanocladius - Mon					0	0					0	0
Polypedilum halterale gr.					0	0					0	0
Glyptotendipes paripes					0	0					0	0
Glossiphoniidae					0	0					0	0
Total Abundance	0	8	11	8	27	7	4	12	10	8	34	9
Organism Density (No./M²)	0	344	474	344	1162	291	172	517	430	344	1464	366
Total No. Taxa	0	3	5	3	6	2.75	4	3	3	4	7	3.50
Shannon-Weaver Diversity	0	1.08	1.97	1.5	1.92	1.13	2	1.28	1.36	1.81	1.89	1.61

Taxa	Mon C Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Mon D Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Coelotanypus tricolor	3	5	2	1	11	2.75	5		8	3	16	4
Limnodrilus hoffmeisteri	3		3		6	1.5	20	18	35	12	85	21.25
Procladius (Holotanypus) sp					0	0		1	1		2	0.5
Chaoborus punctipennis	1		1	1	3	0.75			1		1	0.25
Tanytarsus sp 1 - DLE					0	0				4	4	1
Cyathura polita					0	0	2		1	3	6	1.5
Cryptochironomus blarina					0	0					0	0
Coelotanypus sp					0	0					0	0
Helobdella sp (immature)					0	0					0	0
Nematoda sp. A					0	0	2	3			5	1.25
Helobdella elongata	2	1	2		5	1.25					0	0
Coelotanypus concinnus					0	0	2	1			3	0.75
Tanytarsus sp. C					0	0		1			1	0.25
Amphipoda sp. C - Lake Mona			1		1	0.25					0	0
Nanocladius - Mon					0	0			1		1	0.25
Polypedilum halterale gr.					0	0			1		1	0.25
Glyptotendipes paripes					0	0					0	0
Glossiphoniidae					0	0					0	0
Total Abundance	9	6	9	2	28	7	31	24	48	22	125	31
Organism Density (No./M²)	387	258	387	86	1119	280	1334	1033	2066	947	5381	1346
Total No. Taxa	4	2	5	2	5	3.25	6	5	7	4	11	5.25
Shannon-Weaver Diversity	1.89	0.86	2.2	1	2.01	1.44	1.6	1.29	1.34	1.71	1.78	1.46

Taxa	Mon E Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Mon F Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Coelotanypus tricolor	2	2		2	6	1.5	2	24		15	41	10.25
Limnodrilus hoffmeisteri	6		2	2	10	2.5	21	9	7	11	48	12
Procladius (Holotanypus) sp					0	0					0	0
Chaoborus punctipennis					0	0		1	2		3	0.75
Tanytarsus sp 1 - DLE					0	0					0	0
Cyathura polita					0	0		1			1	0.25
Cryptochironomus blarina					0	0					0	0
Coelotanypus sp			1		1	0.25			16		16	4
Helobdella sp (immature)					0	0					0	0
Nematoda sp. A					0	0					0	0
Helobdella elongata					0	0					0	0
Coelotanypus concinnus					0	0	8	3		1	12	3
Tanytarsus sp. C					0	0					0	0
Amphipoda sp. C - Lake Mona					0	0					0	0
Nanocladius - Mon					0	0					0	0
Polypedilum halterale gr.			1		1	0.25					0	0
Glyptotendipes paripes					0	0	1				1	0.25
Glossiphoniidae					0	0					0	0
Total Abundance	8	2	4	4	18	[illegible]	32	38	25	27	122	31
Organism Density (No./M²)	344	86	172	172	775	194	1378	1636	1076	1162	5252	1313
Total No. Taxa	2	1	3	2	4	2.00	4	5	3	3	7	3.75
Shannon-Weaver Diversity	0.61	0	1.5	1	1.46	0.83	1.31	1.46	1.22	1.17	2.02	1.30

Taxa	Mon G Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Coelotanypus tricolor		13	5	2	20	5	99
Limnodrilus hoffmeisteri	8	14	13	16	51	12.75	216
Procladius (Holotanypus) sp					0	0	6
Chaoborus punctipennis	7	1		3	11	2.75	34
Tanytarsus sp 1 - DLE					0	0	5
Cyathura polita					0	0	9
Cryptochironomus blarina					0	0	1
Coelotanypus sp					0	0	19
Helobdella sp (immature)				1	1	0.25	14
Nematoda sp. A					0	0	6
Helobdella elongata					0	0	5
Coelotanypus concinnus	7		9		16	4	31
Tanytarsus sp. C					0	0	1
Amphipoda sp. C - Lake Mona					0	0	1
Nanocladius - Mon					0	0	1
Polypedilum halterale gr.					0	0	2
Glyptotendipes paripes					0	0	1
Glossiphoniidae	2				2	0.5	2
							0
Total Abundance	22	28	27	24	101	25	453
Organism Density (No./M²)	947	1206	1162	1033	4346	1087	19500.64572
Total No. Taxa	4	3	3	4	8	3.50	18
Shannon-Weaver Diversity	1.84	1.19	1.49	1.16	1.91	1.44	2.47

Lake Sheelar @ Center (Gold Head Bridge-Clay Cty.) **SHEE1**

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ceratopogonidae	1				1	0.25
Eclipidrilus palustris	1	3	4		8	2
Cryptochironomus blarina	1				1	0.25
Helobdella elongata	1	1		2	4	1
Djalmabatista pulchra		3	3	2	8	2
Stenelmis sp. (larvae)		7			7	1.75
Hyalella azteca		42			42	10.5
Progomphus obscurus		1			1	0.25
Cryptochironomus fulvus gr.			2		2	0.5
Pseudochironomus sp.			1	1	2	0.5
Tanytarsus sp. O				1	1	0.25
Tanypodinae				2	2	0.5
Total Abundance	4	57	10	8	79	20
Organism Density (No./M^2)	172	2454	430	344	3401	850
Total No. Taxa	4	6	4	5	12	4.75
Shannon-Weaver Diversity	2	1.35	1.85	2.25	2.4	1.86

Lake Weir at Center

Taxa	Rep 1	Rep 2	Re 3	Rep 4	Totals	Means
Helobdella stagnalis	5	7	6	2	20	5
Eclipidrilus palustris	1	3	1	1	6	1.5
Erpobdellidae	1	2		1	4	1
Polypedilum halterale gr.	2		1	2	5	1.25
Nematoda sp. A	1			3	4	1
Limnodrilus hoffmeisteri	1	2			3	0.75
Hyalella azteca	84	12	26	20	142	35.5
Unid gastropod	1				1	0.25
Oxyethira sp.		1			1	0.25
Aulodrilus pigueti		1			1	0.25
Nematoda sp. C		1			1	0.25
Elliptio buckleyi			2	2	4	1
Cryptochironomus fulvus gr.				1	1	0.25
Total Abundance	96	29	36	32	193	48
Organism Density (No./M^2)	4133	1248	1550	1378	8308	2077
Total No. Taxa	8	8	5	8	13	7.25
Shannon-Weaver Diversity	0.85	2.4	1.29	1.96	1.625	1.63

Lake Winona	**WIO**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Hexagenia limbata		1			1	0.25
	no orgs.		no orgs.	no orgs.		
Total Abundance	0	1	0	0	1	0
Organism Density (No./M^2)	0	43	0	0	43	11
Total No. Taxa	0	1	0	0	1	0.25
Shannon-Weaver Diversity	0	0	0	0	0	0

Lake Yale South Lobe at Center	**20020371**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Procladius bellus var. 2	2	1			3	0.75
Limnodrilus hoffmeisteri	1	1	1	1	4	1
Chaoborus albatus	3	3	4	7	17	4.25
Cladotanytarsus sp.	1				1	0.25
Chaoborus sp.		2			2	0.5
Chaoborus punctipennis		1	3	5	9	2.25
Coelotanypus tricolor		3			3	0.75
Cryptotendipes sp.			1		1	0.25
Total Abundance	7	11	9	13	40	10
Organism Density (No./M^2)	301	474	387	560	1722	430
Total No. Taxa	4	6	4	3	8	4.25
Shannon-Weaver Diversity	1.84	2.41	1.75	1.3	2.38	1.83

Little Econlokhatchee R NR Union Park		2233200				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Eclipidrilus palustris	2	2	2	5	11	2.75
Cryptochironomus fulvus gr.	1		2	1	4	1
Nemertea	1	1	1		3	0.75
Limnodrilus hoffmeisteri	5	1	3	3	12	3
Dubiraphia vittata		1			1	0.25
Pentaneura inconspicua		1			1	0.25
Hyalella azteca		1			1	0.25
Dromogomphus spinosus			1		1	0.25
Total Abundance	9	7	9	9	34	9
Organism Density (No./M^2)	387	301	387	387	1464	366
Total No. Taxa	4	6	5	3	8	4.5
Shannon-Weaver Diversity	1.66	2.52	2.2	1.35	2.33	1.9325

Little Haw Creek at SR 305	**LSJ070**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	13	4		2	19	4.75
Cryptochironomus sp.	1			1	2	0.5
Tanytarsus sp. O	2			3	5	1.25
Hydroptila sp.	1				1	0.25
Oecetis inconspicua Complex sp. A	1			1	2	0.5
Leptophlebia intermedia	1				1	0.25
Elliptio buckleyi	1	1			2	0.5
Ablabesmyia mallochi		2		1	3	0.75
Eclipidrilus palustris		3		13	16	4
Procladius bellus var. 2		1		1	2	0.5
Dubiraphia vittata			2		2	0.5
Ceratopogonidae			1		1	0.25
Stenelmis sp. (larvae)				1	1	0.25
Paralauterborniella nigrohalteralis				1	1	0.25
Total Abundance	20	11	3	24	58	15
Organism Density (No./M^2)	861	474	129	1033	2497	624
Total No. Taxa	7	5	2	9	14	5.75
Shannon-Weaver Diversity	1.82	2.12	0.92	2.3	2.91	1.79

Little Orange Creek	LORANCRK					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Ancyronyx variegata (larvae)			1		1	0.25
Ceratopogonidae	1		1		2	0.5
Cryptochironomus fulvus gr.	2		1		3	0.75
Djalmabatista pulchra	2			1	3	0.75
Eclipidrilus palustris			4		4	1
Limnodrilus hoffmeisteri			2		2	0.5
Lumbriculidae sp. B			9		9	2.25
Phylocentropus sp.			1		1	0.25
Stenelmis sp. (larvae)	4		3	3	10	2.5
Tanytarsus sp. D		1			1	0.25
Tanytarsus sp. S	1	1	1		3	0.75
Total Abundance	10	2	23	4	39	10
Organism Density (No./M^2)	430	86	990	172	1679	420
Total No. Taxa	5	2	9	2	11	4.5
Shannon-Weaver Diversity	2.12	1.5	2.64	0.81	3.03	1.77

Little Wekiva River a HWY 434	**20010137**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Dicrotendipes neomodestus	3	6	28	1	38	9.5
Polypedilum scalaenum gr.	8	13	16		37	9.25
Cryptochironomus fulvus gr.	1		2		3	0.75
Tanytarsus sp. A		1	2		3	0.75
Ablabesmyia mallochi		1			1	0.25
Limnodrilus hoffmeisteri			4	9	13	3.25
Polypedilum illinoense gr.			1		1	0.25
Pseudochironomus sp.			1		1	0.25
Paratanytarsus sp. (damaged)			1		1	0.25
Chironomus sp.				9	9	2.25
Total Abundance	12	21	55	19	107	27
Organism Density (No./M^2)	517	904	2368	818	4606	1152
Total No. Taxa	3	4	8	3	10	4.5
Shannon-Weaver Diversity	1.19	1.36	1.95	1.24	2.27	1.435

Lochloosa Creek at SR 20

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chironomus sp.	1				1	0.25
Chrysops sp.			1		1	0.25
Eclipidrilus palustris			1		1	0.25
Haber speciosus		1			1	0.25
Hydroporus sp.			1		1	0.25
Ilyodrilus templetoni		1	5	2	8	2
Limnodrilus hoffmeisteri	5	26	7	31	69	17.25
Macromia taeniolata			1		1	0.25
Polypedilum tritum (damaged)	1				1	0.25
Procladius sp. im.				2	2	0.5
Tanytarsus sp. G		1			1	0.25
Tanytarsus sp. S		1			1	0.25
Total Abundance	7	30	16	35	88	22
Organism Density (No./M^2)	301	1291	689	1507	3788	947
Total No. Taxa	3	5	6	3	12	4.25
Shannon-Weaver Diversity	1.15	0.83	2.05	0.63	1.37	1.17

Matanzas River at HWY 312		MR312				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Nemertea	2	4	9	2	17	4.25
Mysidopsis bigelowi		1			1	0.25
Ophiuroidea (LPIL)	2	1	2	3	8	2
Leitoscoloplos fragilis	1				1	0.25
Diopatra cuprea	1				1	0.25
Lucinidae sp. A	2				2	0.5
Cerithium eburneum	1				1	0.25
Batea catherinensis	1				1	0.25
Corophium sp.	1				1	0.25
Amphipoda sp. C	1				1	0.25
Caecidotea sp.	1				1	0.25
Sthenelais sp.	1		1		2	0.5
Phyllodoce sp.		1			1	0.25
Prionospio sp.		1			1	0.25
Schistomeringos cf. Rudolphi		1			1	0.25
Aglaophamus verrilli		1	1	1	3	0.75
Thenacia sp.		8			8	2
Spionidae sp. A			1		1	0.25
Mediomastus sp.		1	1	3	5	1.25
Ampelisca cf. Holmesii		3	139		142	35.5
Grandidierella bonnieroides		2			2	0.5
Cyathura polita			3		3	0.75
Corbula contracta		1			1	0.25
Tellina lineata			1		1	0.25
Paraprionospio pinnata			1	2	3	0.75
Total Abundance	14	25	159	11	209	52
Organism Density (No./M^2)	603	1076	6845	474	8997	2249
Total No. Taxa	11	12	10	5	25	9.5
Shannon-Weaver Diversity	3.38	3.09	0.87	2.23	2.13	2.39

Mid St. John's River at East of Barge Canal near JJ Fish Camp

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Aulodrilus pigueti		2			2	0.5
Chaoborus punctipennis				1	1	0.25
Cladotanytarsus sp.			1		1	0.25
Cyathura polita		4	1		5	1.25
Elliptio buckleyi				1	1	0.25
Limnodrilus hoffmeisteri		6	1	6	13	3.25
Paralauterborniella nigrohalteralis				1	1	0.25
Procladius (Holotanypus) sp.				1	1	0.25
Total Abundance	0	12	3	10	25	6
Organism Density (No./M^2)	0	517	129	430	1076	269
Total No. Taxa	0	3	3	5	8	2.75
Shannon-Weaver Diversity	0	1.46	1.58	1.77	2.18	1.20

Middle Prong St Mary's River at HWY 127			MPS			
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Procladius sp. im.	1		1		2	0.5
Paracladopelma loganae	1	2	2		5	1.25
Polypedilum halterale gr.	1	1			2	0.5
Robackia sp.	9	4			13	3.25
Cricotopus bicinctus gr	1		1	5	7	1.75
Ceratopogonidae		5	1		6	1.5
Stenelmis sp. (larvae)		1			1	0.25
Tanytarsus sp. E			1		1	0.25
Polypedilum scalaenum gr.			2	1	3	0.75
Chaoborus punctipennis			1		1	0.25
Polypedilum sp.			1		1	0.25
Baetis sp.			8		8	2
Chironominae			2		2	0.5
Dicrotendipes sp im.			1	2	3	0.75
Psectrocladius (Monopsectrocladius) sp.			1		1	0.25
Djalmabatista pulchra				2	2	0.5
Dicrotendipes neomodestus				12	12	3
Stenelmis sp. (larvae)				4	4	1
Orthocladinae sp. A				1	1	0.25
Total Abundance	13	13	22	27	75	19
Organism Density (No./M^2)	560	560	947	1162	3229	807
Total No. Taxa	5	5	12	7	19	7.25
Shannon-Weaver Diversity	1.51	2.04	3.1	2.29	3.73	2.24

Moss Bluff Structure above Dam	MBU					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	1	2	3	3	9	2.25
Total Abundance	1	2	3	3	9	2.25
Organism Density (No./M^2)	43	86	129	129	387	97
Total No. Taxa	1	1	1	1	1	0.25
Shannon-Weaver Diversity	0.00	0.00	0.00	0.00	0.00	0.00

Moultrie Creek at SR 207	**MTC**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	2	1	16	32	51	12.75
Aulodrilus pigueti	2		1	3	6	1.5
Procladius sp. im.	2				2	0.5
Sphaerium simile	1				1	0.25
Pisidium sp.	4				4	1
Eclipidrilus palustris		2			2	0.5
Varichaetidrilus psummophilus		4	3		7	1.75
Clinotanypus sp.			1		1	0.25
Cryptochironomus blarina				1	1	0.25
Total Abundance	11	7	21	36	75	19
Organism Density (No./M^2)	474	301	904	1550	3229	807
Total No. Taxa	5	3	4	3	9	3.75
Shannon-Weaver Diversity	2.19	1.38	1.12	0.59	1.74	1.32

Nassau River at US 17	**19020002**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Nemertea		1		1	2	0.5
Paraprionospio pinnata				1	1	0.25
	no orgs.		no orgs.			
Total Abundance	0	1	0	2	3	1
Organism Density (No./M^2)	0	43	0	86	129	32
Total No. Taxa	0	1	0	2	2	0.75
Shannon-Weaver Diversity	0	0	0	1	0.92	0.25

Nassau River near Italia	**NRI**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Polydora sp.	66	21			87	21.75
Nemertea			2	4	6	1.5
Paraprionospio pinnata				1	1	0.25
Total Abundance	66	21	2	5	94	24
Organism Density (No./M^2)	2841	904	86	215	4046	1012
Total No. Taxa	1	1	1	2	3	1.25
Shannon-Weaver Diversity	0	0	0	0.72	0.43	0.18

North Fork of Black Creek

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Chironomus sp.	1				1	0.25
Cladotanytarsus sp.			1		1	0.25
Coelotanypus concinnus			2		2	0.5
Coelotanypus sp. (damaged)	1				1	0.25
Dromogomphus spinosus			1		1	0.25
Dubiraphia vittata	1			1	2	0.5
Eclipidrilus palustris				1	1	0.25
Ferrissia hendersoni				1	1	0.25
Glyptotendipes paripes				1	1	0.25
Hexagenia limbata	1				1	0.25
Ilyodrilus templetoni	4	1		4	9	2.25
Limnodrilus hoffmeisteri		1			1	0.25
Lype diversa				1	1	0.25
Paralauterborniella nigrohalteralis	2				2	0.5
Polypedilum halterale gr.	3		6		9	2.25
Tanytarsus sp. G	1		2		3	0.75
Tanytarsus sp. O	6		3		9	2.25
Tanytarsus sp. P	1				1	0.25
Tribelos jucundum	2				2	0.5
Tubificidae imm. Sp. C				4	4	1
Total Abundance	23	2	15	13	53	13
Organism Density (No./M^2)	990	86	646	560	2282	570
Total No. Taxa	11	2	6	7	20	6.5
Shannon-Weaver Diversity	3.12	1	2.29	2.47	3.72	2.22

Oklawaha R DNSTR SR 40 before 4th River Bend				ORD		
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	2	1		4	7	1.75
Varichaetidrilus angustipennis	3	1	1	1	6	1.5
Eclipidrilus palustris	2				2	0.5
Gammarus near tigrinus	2	1	3	6	12	3
Stenelmis sp. (larvae)		2			2	0.5
Elliptio buckleyi		1			1	0.25
Ilyodrilus templetoni			1		1	0.25
Chaoborus punctipennis				3	3	0.75
Oecetis sp.				1	1	0.25
Total Abundance	9	6	5	15	35	8.75
Organism Density (No./M^2)	387	258	215	646	1507	377
Total No. Taxa	4	5	3	5	9	4.25
Shannon-Weaver Diversity	1.97	2.25	1.37	2.02	2.65	1.90

Oklawaha River at SR 464	**20020001**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	29	23	21	14	87	21.75
Total Abundance	29	23	21	14	87	21.75
Organism Density (No./M^2)	1248	990	904	603	3745	936
Total No. Taxa	1	1	1	1	1	0.25
Shannon-Weaver Diversity	0.00	0.00	0.00	0.00	0.00	0.00

Oklawaha River @ SR 316	**20020012**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Eclipidrilus palustris	1		1		2	0.5
Dugesia sp.	1				1	0.25
Limnodrilus hoffmeisteri	1	4	8	6	19	4.75
Elliptio buckleyi	1				1	0.25
Procladius bellus var. 2		1		2	3	0.75
Tanytarsus sp. G		1	1	2	4	1
Chironomus sp.		1		4	5	1.25
Cryptotendipes sp.		1	1		2	0.5
Ilyodrilus templetoni			2		2	0.5
Procladius (Holotanypus) sp.			1		1	0.25
Cyathura polita			1		1	0.25
Chironominae			1		1	0.25
Gomphidae (immature)			1		1	0.25
Tanytarsus sp. P				8	8	2
Clinotanypus sp.				2	2	0.5
Dubiraphia vittata				2	2	0.5
Total Abundance	4	8	17	26	55	14
Organism Density (No./M^2)	172	344	732	1119	2368	592
Total No. Taxa	4	5	9	7	16	6.25
Shannon-Weaver Diversity	2	2	2.56	2.57	3.25	2.28

Orange Creek 50 Yds. Upstream of HWY 21			20020404			
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	4	4		2	10	2.5
Helobdella sp. (immature)	2				2	0.5
Polypedilum halterale gr.	2				2	0.5
Djalmabatista pulchra		12	4		16	4
Stenelmis sp. (larvae)		2			2	0.5
Phylocentropus sp.			4		4	1
Erpobdellidae				2	2	0.5
Eclipidrilus palustris				2	2	0.5
Tribelos jucundum				2	2	0.5
Total Abundance	8	18	8	8	42	11
Organism Density (No./M^2)	344	775	344	344	1808	452
Total No. Taxa	3	3	2	4	9	3
Shannon-Weaver Diversity	1.5	1.22	1	2	2.6	1.43

Orange Lake B/T Cow Hammock & Samsons Point				OLK		
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Glyptotendipes paripes	5		1	4	10	2.5
Chaoborus punctipennis	1	2		5	8	2
Coelotanypus tricolor		1	3	6	10	2.5
Tanytarsus sp. G			1		1	0.25
Chironomus sp. (immature)				5	5	1.25
Chironomus crassicaudatus				1	1	0.25
Decapoda (LPIL)				1	1	0.25
Total Abundance	6	3	5	22	36	9
Organism Density (No./M^2)	258	129	215	947	1550	387.43
Total No. Taxa	2	2	3	6	7	3.25
Shannon-Weaver Diversity	0.65	0.92	1.37	2.34	2.34	1.32

Pellicer Creek at US 1	**PEL**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Gammarus near tigrinus	3	1			4	1
Procladius sp. im.	6			1	7	1.75
Chironomus sp.	2	2	2	1	7	1.75
Chaoborus puntipennis	1	1			2	0.5
Hobsonia florida	1	1	2		4	1
Tubificidae (LPIL)	25	45	2		72	18
Limnodrilus hoffmeisteri				4	4	1
Total Abundance	38	50	6	6	100	25
Organism Density (No./M^2)	1636	2152	258	258	4305	1076
Total No. Taxa	6	5	3	3	7	4.25
Shannon-Weaver Diversity	1.61	0.66	1.58	1.25	1.55	1.28

Rice Creek at SR 100	**LSJ918**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	3	2	5	2	12	3
Chironomus sp.	1				1	0.25
Eclipidrilus palustris	1	3			4	1
Ablabesmyia rhamphe gr.	1				1	0.25
Corbicula fluminea	5	4	11	19	39	9.75
Dubiraphia sp.		1	3		4	1
Gammarus near tigrinus		1			1	0.25
Elliptio buckleyi		2	5	7	14	3.5
Orthocladinae sp. A			1		1	0.25
Dromogomphus spinosis			2		2	0.5
Phylocentropus sp.			1	1	2	0.5
Argia sp.			1	1	2	0.5
Macronychus glabratus				1	1	0.25
Total Abundance	11	13	29	31	84	21
Organism Density (No./M^2)	474	560	1248	1334	3616	904
Total No. Taxa	5	6	8	6	13	6.25
Shannon-Weaver Diversity	1.97	2.41	2.51	1.65	2.53	2.14

Silver River at Boat Ramp Canal

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Ablabesmyia mallochi		1			1	0.25
Gammarus near tigrinus	12	2			14	3.5
Helobdella elongata			1		1	0.25
Helobdella sp.		1			1	0.25
Hyalella azteca	24	1	11	13	49	12.25
Hydroptila sp.			1		1	0.25
Limnodrilus hoffmeisteri		1		3	4	1
Nematoda sp. A		1			1	0.25
Tanytarsus sp. G	3	1	2	3	9	2.25
Total Abundance	39	8	15	19	81	20
Organism Density (No./M^2)	1679	344	646	818	3487	872
Total No. Taxa	3	7	4	3	9	4.25
Shannon-Weaver Diversity	1.24	2.75	1.24	1.22	1.83	1.61

Simms Creek 2 miles NNE of Bardin		SIM				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	1			1	2	0.5
Kiefferulus dux/pungens	2			1	3	0.75
Tribelos jucundum	6	15	5	2	28	7
Stenochironomus sp.	1	1			2	0.5
Ablabesmyia mallochi		1	1		2	0.5
Actiniaria		1			1	0.25
Limnodrilus hoffmeisteri			2		2	0.5
Stephensonia trivandrana			1		1	0.25
Ablabesmyia rhamphe gr.			1		1	0.25
Caecidotea racovitzai australis			1	6	7	1.75
Eclipidrilus palustris				6	6	1.5
Chironomus sp. (immature)				1	1	0.25
Glossiphoniidae				1	1	0.25
Argia sp.				1	1	0.25
Sialis sp.				1	1	0.25
Melita cf. Intermedia				3	3	0.75
Total Abundance	10	18	11	23	62	16
Organism Density (No./M^2)	430	775	474	990	2669	667
Total No. Taxa	4	4	6	10	16	6
Shannon-Weaver Diversity	1.57	0.91	2.22	2.88	2.93	1.90

St. John's River at Palatka	SJRPALATKA					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Amphipoda sp. D	1				1	0.25
Cladotanytarsus sp.	1	2		2	5	1.25
Coelotanypus sp. im.		5			5	1.25
Coelotanypus tricolor	6	3	3	13	25	6.25
Cyathura polita		2	2	4	8	2
Gammarus near tigrinus	9	18		2	29	7.25
Limnodrilus hoffmeisteri	5	6	2	6	19	4.75
Monoculodes nyei	1	23	13	15	52	13
Polypedilum halterale gr.	1	2		2	5	1.25
Procladius (Holotanypus) sp.	1	2		1	4	1
Tanytarsus sp. G	11	34	3	8	56	14
Total Abundance	36	97	23	53	209	52
Organism Density (No./M^2)	1550	4176	990	2282	8997	2249
Total No. Taxa	9	10	5	9	11	8.25
Shannon-Weaver Diversity	2.57	2.56	1.84	2.7	2.8	2.42

Spruce Creek Near Samsula		**2248000**				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Pisidium sp.	2		1		3	0.75
Corbicula fluminea	5		8		13	3.25
Chironomus sp.		184			184	46
Kiefferulus dux/pungens		76			76	19
Tanytarsus sp. G		16			16	4
Procladius sp. im.		12			12	3
Dicrotendipes modestus		8			8	2
Stenelmis sp. (larvae)			1		1	0.25
Lumbriculidae sp. A			1		1	0.25
Limnodrilus hoffmeisteri			1		1	0.25
Cryptochironomus sp.			1		1	0.25
Laevapex fuscus			1		1	0.25
Total Abundance	7	296	14	0	317	79
Organism Density (No./M^2	301	12742	603	0	13646	3412
Total No. Taxa	2	5	7	0	12	3.5
Shannon-Weaver Diversit	0.86	1.49	2.09	0	1.86	1.11

St. John's River at CM 72	20030373					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus crassicaudatus	12	22	18	6	58	14.5
Procladius sp. im.	1			2	3	0.75
Coelotanypus concinnus	5	5		2	12	3
Limnodrilus hoffmeisteri	3	2	8	1	14	3.5
Gammarus near tigrinus	1			3	4	1
Cyathura polita	1	7	2	4	14	3.5
Coelotanypus sp. im.			9		9	2.25
Chaoborus sp.			1		1	0.25
Procladius (Holotanypus) sp.			2		2	0.5
Tanytarsus sp. G			1		1	0.25
Hydrobiidae			2		2	0.5
Total Abundance	23	36	43	18	120	30
Organism Density (No./M^2)	990	1550	1851	775	5166	1291
Total No. Taxa	6	4	8	6	11	6
Shannon-Weaver Diversity	1.94	1.52	2.32	2.38	2.45	2.04

St. John's River at Hwy 40 near Astor

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Aulodrilus pigueti		2			2	0.5
Chironomus crassicaudatus	2	2	46	10	60	15
Chironomus sp.	4	4		2	10	2.5
Cladotanytarsus sp.		2			2	0.5
Clinotanypus sp.			2	2	4	1
Coelotanypus sp. im.	2				2	0.5
Cryptochironomus fulvus gr.		2			2	0.5
Cyathura polita		2			2	0.5
Gammarus near tigrinus	3			8	11	2.75
Helobdella stagnalis			2		2	0.5
Limnodrilus hoffmeisteri	10	58	2	4	74	18.5
Nematoda sp. C		4			4	1
Paralauterborniella nigrohalteralis		2			2	0.5
Polypedilum halterale gr.		28			28	7
Procladius (Holotanypus) sp.	2	8	12	8	30	7.5
Sphaeriidae	6				6	1.5
Tanytarsus limneticus				2	2	0.5
Tanytarsus sp. G		22		2	24	6
Total Abundance	29	136	64	38	267	67
Organism Density (No./M^2)	1248	5854	2755	1636	11494	2873
Total No. Taxa	7	12	5	8	18	8
Shannon-Weaver Diversity	2.53	2.5	1.26	2.69	3.1	2.25

St. John's River @ SR50 near Christmas			SRS			
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	3	2	13	3	21	5.25
Elliptio buckleyi		5	2	1	8	2
Total Abundance	3	7	15	4	29	7
Organism Density (No./M^2)	129	301	646	172	1248	312
Total No. Taxa	1	2	2	2	2	1.75
Shannon-Weaver Diversity	0	0.86	0.57	0.81	0.85	0.56

St. Johns River at US HWY 17-92		20010003				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus crassicaudatus	41	36	67	2	146	36.5
Einfeldia natchitochaea	1	1			2	0.5
Helobdella stagnalis	1				1	0.25
Helobdella triserialis			4			
Procladius (Holotanypus) sp.	14	2	8		24	6
Coelotanypus sp. im.	3	1			4	1
Djalmabatista pulchra	1				1	0.25
Limnephilidae (pupa)	2				2	0.5
Elliptio buckleyi	1	1			2	0.5
Viviparus georgianus		1			1	0.25
Glyptotendipes paripes			3		3	0.75
Rhithropanopeus harrisii			2		2	0.5
Libellulidae (damaged)			1		1	0.25
Gammarus near tigrinus			7		7	1.75
Total Abundance	64	42	92	2	196	49
Organism Density (No./M^2)	2755	1808	3960	86	8437	2109
Total No. Taxa	8	6	7	1	13	5.5
Shannon-Weaver Diversity	1.63	0.91	1.47	0	2.63	1.00

St. John's River near DeLand

Taxa	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means
Arcteonais lomondi	2				2	0.5
Chironomus crassicaudatus	6	84	3	25	118	29.5
Chironomus sp.	4				4	1
Cladotanytarsus sp.	12		2	1	15	3.75
Clinotanypus sp.				2	2	0.5
Coelotanypus sp. im.	4				4	1
Cryptochironomus fulvus gr.	2		1		3	0.75
Glyptotendipes sp. im.				1	1	0.25
Goeldichironomus amazonicus			1		1	0.25
Limnodrilus hoffmeisteri	4	4	5	1	14	3.5
Paralauterborniella nigrohalteralis	2				2	0.5
Polypedilum halterale gr.	4				4	1
Procladius (Holotanypus) sp.	2	4	2	4	12	3
Tanytarsus sp. G	82	10	6	10	108	27
Total Abundance	124	102	20	44	290	73
Organism Density (No./M^2)	5338	4391	861	1894	12484	3121
Total No. Taxa	11	4	7	7	14	7.25
Shannon-Weaver Diversity	1.96	0.93	2.53	1.84	2.21	1.82

St. Mary's River @US17 Georgia Line		19010001				
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Limnodrilus hoffmeisteri	38	5	18	21	82	20.5
Spionidae sp. A	8	18	2	3	31	7.75
Total Abundance	46	23	20	24	113	28
Organism Density (No./M^2)	1980	990	861	1033	4864	1216
Total No. Taxa	2	2	2	2	2	2
Shannon-Weaver Diversity	0.67	0.76	0.47	0.54	0.85	0.61

St. Mary's River at SR 2	19010006					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Tribelos jucundum	2				2	0.5
Chironomus sp.	4				4	1
Tanytarsus sp. G	2				2	0.5
Procladius (Holotanypus) sp.	3			2	5	1.25
Ablabesmyia mallochi	1		1		2	0.5
Aulodrilus pigueti	1				1	0.25
Limnodrilus hoffmeisteri	1				1	0.25
Progomphus obscurus	1				1	0.25
Polypedilum halterale gr.		2			2	0.5
Polypedilum scalaenum group				1	1	0.25
Nematoda sp. C		1			1	0.25
Cryptochironomus sp.		1			1	0.25
Oecetis persimilis		1			1	0.25
Phylocentropus sp.		1			1	0.25
Dicrotendipes sp.		1			1	0.25
Stenelmis sp. (larvae)			19		19	4.75
Melita cf. Intermedia			9		9	2.25
Sialis sp.				3	3	0.75
Baetidae (LPIL)				1	1	0.25
Procambarus sp. (juv.)				1	1	0.25
Cricotopus bicinctus group				1	1	0.25
Dicrotendipes neomodestus				1	1	0.25
Caenis diminuta				1	1	0.25
Hydropsyche sparna				1	1	0.25
Leptophlebiidae				1	1	0.25
Total Abundance	15	7	29	13	64	16
Organism Density (No./M^2)	646	301	1248	560	2755	689
Total No. Taxa	8	6	3	10	25	6.75
Shannon-Weaver Diversity	2.79	2.59	1.09	3.18	3.79	2.41

Sweetwater Branch

Taxa	Sweet A						Sweet B						Sweet C						Sweet D						Sweet E						
	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Rep 1	Rep 2	Rep 3	Rep 4	Totals	Means	Totals
Ablabesmyia mallochi					0	0					0	0				2	2	0.5					0	0	1		2		3	0.75	5
Baetis sp.					0	0					0	0					0	0			1		1	0.25					0	0	1
Chaoborus punctipennis					0	0	1	3	1	2	7	1.75					0	0					0	0					0	0	7
Chironominae (pupae)					0	0					0	0	1				1	0.25	7		2	1	10	2.5	6	21	5	15	47	11.75	62
Chironomus sp. Im.					0	0					0	0					0	0	1				1	0.25		3		1	4	1	5
Cryptochironomus blarina					0	0					0	0					0	0					0	0				1	1	0.25	1
Cryptochironomus fulvus gr.					0	0					0	0		5	1		6	1.5	5				5	1.25					0	0	11
Cryptotendipes sp.					0	0					0	0					0	0					0	0				1	1	0.25	1
Dicrotendipes sp.					0	0					0	0					0	0					0	0		1			1	0.25	1
Ectipidrilus pelustris	3	4			7	1.75					0	0					0	0					0	0					0	0	7
Elimia sp.					0	0					0	0					0	0	11		8	11	30	7.5					0	0	30
Enallagma sp. (immature)					0	0					0	0					0	0			1		1	0.25					0	0	1
Entomobryidae					0	0					0	0		1			1	0.25					0	0					0	0	1
Hyalella azteca					0	0	1				1	0.25					0	0					0	0					0	0	1
Hyalella azteca					0	0					0	0			1		1	0.25					0	0					0	0	1
Limnodrilus hoffmeisteri		1	1	2	4	1					0	0	8	9	11		28	7	12				12	3					0	0	44
Lumbriculidae sp. B			1	2	3	0.75					0	0					0	0			1		1	0.25					0	0	4
Nematoda sp. B					0	0					0	0					0	0				1	1	0.25					0	0	1
Paracladopelma cf. Nereis					0	0					0	0					0	0	1		1		2	0.5		1			1	0.25	3
Paratanytarsus sp. A					0	0					0	0					0	0					0	0		1			1	0.25	1
Pentaneura inconspicua	1				1	0.25					0	0					0	0					0	0		4	1	1	6	1.5	7
Polypedilum illinoense gr.					0	0					0	0					0	0	1	1	1		3	0.75		3	1	1	5	1.25	8
Polypedilum scalaenum gr.					0	0					0	0	160	34	60	2	256	64	34	5	17	2	58	14.5		13		4	17	4.25	331
Progomphus alachuensis					0	0					0	0					0	0		4		1	5	1.25					0	0	5
Progomphus obscurus					0	0					0	0					0	0					0	0		1			1	0.25	1
Rheocricopotus robicki					0	0					0	0					0	0					0	0		2			2	0.5	2
Stictochironomus sp.			1		1	0.25					0	0					0	0					0	0					0	0	1
Tanypodinae					0	0					0	0					0	0					0	0	2	1	1	2	6	1.5	6
Tanytarsus sp. C					0	0					0	0				1	1	0.25					0	0		5	1	4	10	2.5	11
Tanytarsus sp. Dam.					0	0					0	0		1		3	4	1					0	0		1			1	0.25	5
Tanytarsus sp. G					0	0					0	0					0	0					0	0		3		4	7	1.75	7
Tanytarsus sp. O					0	0					0	0					0	0					0	0				1	1	0.25	1
Tanytarsus sp. P					0	0					0	0				1	1	0.25					0	0	5			4	9	2.25	10
Tanytarsus sp. U					0	0					0	0			1	6	7	1.75	3		3		6	1.5	2	42	7	20	71	17.75	84
Total Abundance	4	5	3	4	16	4	2	3	1	2	8	2	169	50	74	19	312	78	75	10	35	16	136	34	16	102	18	59	195	48.75	667
Organism Density (No./M^2)	172	215	129	172	689	172	86	129	43	86	344	86	7275	2152	3186	818	13431	3358	3229	430	1507	689	5854	1464	689	4391	775	2540	8394	2098	28713
Total No. Taxa	2	2	3	2	5	2.25	2	1	1	1	2	1.25	3	5	5	7	11	5.00	9	3	9	5	14	6.50	5	15	7	13	20	10.00	34
Shannon-Weaver Diversity	0.81	0.72	1.58	1	1.97	1.03	1	0	0	0	0.54	0.25	0.33	1.38	0.91	2.55	1.11	1.29	2.36	1.36	2.27	1.5	2.61	1.87	2.06	2.72	2.32	2.85	2.96	2.49	2.86

Tolomato River at Spanish Landing	ToL					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	3				3	0.75
Amphipoda sp. D	1				1	0.25
Ampelisca abdita	5				5	1.25
Edotea cf. montosa	1				1	0.25
Cyathura polita	1				1	0.25
Capitella capitata	1		1		2	0.5
Neanthes acuminata	1				1	0.25
Magelona sp.	1	1			2	0.5
Tharyx cf. Annulosus	1	1	3		5	1.25
Cirrophorus sp.	2	2	3	2	9	2.25
Polydora sp.	1		1		2	0.5
Maldanidae (LPIL)	1				1	0.25
Cirratulidae (LPIL)		1			1	0.25
Paraprionospio pinnata		1			1	0.25
Mediomastus sp.			3		3	0.75
Glycinde solitaria			1		1	0.25
Scoloplos rubra			2		2	0.5
Monoculodes nyei			1		1	0.25
Tanytarsus sp.				1	1	0.25
Acteocina canaliculata				1	1	0.25
Total Abundance	19	6	15	4	44	11
Organism Density (No./M^2)	818	258	646	172	1894	474
Total No. Taxa	12	5	8	3	20	7
Shannon-Weaver Diversity	3.28	2.25	2.82	1.50	3.89	2.46

Tomoka River at 11 St. Bridge	**27010579**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Cryptotendipes sp.	1	9	2	1	13	3.25
Dicrotendipes modestus	2	15	14	5	36	9
Nais pardalis	1				1	0.25
Limnodrilus hoffmeisteri	9	3	7	11	30	7.5
Chironomus sp.	2	19	5	19	45	11.25
Tanytarsus sp. G	1	2	7		10	2.5
Tanytarsus sp. P	1		1	1	3	0.75
Clinotanypus sp.		1			1	0.25
Tanytarsus sp. O		1	1		2	0.5
Paralauterborniella nigrohalteralis	1	1			2	0.5
Eclipidrilus palustris				1	1	0.25
Cryptochironomus fulvus gr.				2	2	0.5
Ceratopogonidae				1	1	0.25
Dicrotendipes fumidus				1	1	0.25
Argia sp. (damaged)				1	1	0.25
Total Abundance	18	51	37	43	149	37
Organism Density (No./M^2)	775	2195	1593	1851	6414	1604
Total No. Taxa	8	8	7	10	15	8.25
Shannon-Weaver Diversity	2.36	2.25	2.34	2.35	2.71	2.325

Tomoka River at Old Dixie HWY Bridge			**27010024**			
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Halmyrapseudes bahamensis	980	1056	728	456	3220	805
Corophium lacustre	15	8	8	8	39	9.75
Grandidierella bonnieroides	20	8	8	40	76	19
Bowmanniella sp.	5				5	1.25
Erichthonius cf brasiliensis	5	8	16	48	77	19.25
Rhithropanopeus harrisii	10				10	2.5
Ascideacea	50			64	114	28.5
Onuphidae sp. A	5				5	1.25
Nemertea	5				5	1.25
Mulinia lateralis		8	16	32	56	14
Tellina versicolor		8			8	2
Xanthidae		8			8	2
Total Abundance	1095	1104	776	648	3623	906
Organism Density (No./M^2)	47137	47525	33405	27895	155962	38991
Total No. Taxa	9	7	5	6	12	6.75
Shannon-Weaver Diversity	0.74	0.37	0.45	1.51	0.81	0.77

Tumblin Creek	**TUBPP1**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chironomus sp.	3	19	2	4	28	7
Helobdella stagnalis	2	1			3	0.75
Limnodrilus hoffmeisteri	4	10	5	6	25	6.25
Erpobdellidae	3				3	0.75
Elliptio buckleyi	1	1	1	1	4	1
Ilyodrilus templetoni		1	1	1	3	0.75
Nematoda sp. C		1	1	2	4	1
Total Abundance	13	33	10	14	70	18
Organism Density (No./M^2)	560	1421	430	603	3013	753
Total No. Taxa	5	6	5	5	7	5.25
Shannon-Weaver Diversity	2.2	1.59	1.96	1.99	2.12	1.94

Wekiva River near Sanford	**2235000**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Gammarus near tigrinus	18	7	1	43	69	17.25
Hyalella azteca	2			7	9	2.25
Eclipidrilus palustris	4	4	4	3	15	3.75
Limnodrilus hoffmeisteri	6	2	2	3	13	3.25
Pseudochironomus sp.	4	1		2	7	1.75
Hexagenia limbata		2	2		4	1
Cryptochironomus fulvus gr.		1			1	0.25
Nematoda sp. C		1			1	0.25
Dicrotendipes neomodestus		1	2		3	0.75
Tanytarsus sp. G			1		1	0.25
Corbicula fluminea			5	5	10	2.5
Pentaneura inconspicua			1		1	0.25
Ceratopogonidae				1	1	0.25
Lumbriculidae sp. B				1	1	0.25
Ablabesmyia mallochi				1	1	0.25
Elliptio buckleyi				3	3	0.75
Aphylla williamsoni				1	1	0.25
Total Abundance	34	19	18	70	141	35
Organism Density (No./M^2)	1464	818	775	3013	6070	1517
Total No. Taxa	5	8	8	11	17	8
Shannon-Weaver Diversity	1.89	2.58	2.75	2.12	2.69	2.34

Wolf Creek #1 at US 419	**USJ918**					
Taxa	**Rep 1**	**Rep 2**	**Rep 3**	**Rep 4**	**Totals**	**Means**
Chaoborus punctipennis	10	4	3	9	26	6.5
Eclipidrilus palustris	1				1	0.25
Procladius (Holotanypus) sp.		2	1		3	0.75
Einfeldia natchitochaea		1		2	3	0.75
Chironomus sp.		1	1		2	0.5
Clinotanypus sp.			1		1	0.25
Cladopelma sp.			1		1	0.25
Total Abundance	11	8	7	11	37	9.25
Organism Density (No./M^2)	474	344	301	474	1593	398
Total No. Taxa	2	4	5	2	7	3.25
Shannon-Weaver Diversity	0.44	1.75	2.13	0.68	1.6	1.25