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Coastal and Estuarine Data Archaeology and Rescue Program

BENTHIC SAMPLING PROGRAM IN BISCAYNE BAY 1981-1982

November 2003

US Department of Commerce
National Oceanic and Atmospheric Administration
Silver Spring, MD

Miami-Dade County
Department of Environmental Resources Management
Miami, FL

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ACKNOWLEDGMENTS

This study constitutes an integral part of the Biscayne Bay Restoration and Enhancement Program. It is the primary goal of the Program to maintain, restore or enhance those qualities of Biscayne Bay that provide the basic character and value of the resource. One of the objectives set forth to effect the realization of this goal includes the completion of specific baseline studies.

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BENTHIC SAMPLING PROGRAM IN BISCAYNE BAY 1981-1982

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ABSTRACT

Report on the Biscayne Bay Benthic Sampling Program

The Biscayne Bay Benthic Sampling Program was divided into two phases. In Phase I, sixty sampling stations were established in Biscayne Bay (including Dumfoundling Bay and Card Sound) representing diverse habitats. The stations were visited in the wet season (late fall of 1981) and in the dry season (midwinter of 1982). At each station certain abiotic conditions were measured or estimated. These included depth, sources of freshwater inflow and pollution, bottom characteristics, current direction and speed, surface and bottom temperature, salinity and dissolved oxygen, and water clarity was estimated with a secchi disk. Seagrass blades and macroalgae were counted in a 0.1-m^2 grid placed so as to best represent the bottom community within a 50-foot radius. Underwater 35-mm photographs were made of the bottom using flash apparatus.

Benthic samples were collected using a petite Ponar dredge. These samples were washed through a 5-mm mesh screen, fixed in formalin in the field, and later sorted and identified by experts to a pre-agreed taxonomic level.

During the wet season sampling period, a nonquantitative one-meter wide trawl was made of the epibenthic community. These samples were also washed, fixed, sorted and identified.

During the dry season sampling period, sediment cores were collected at each station not located on bare rock. These cores were analyzed for sediment size and organic composition by personnel of the University of Miami.

Data resulting from the sampling were entered into a computer. These data were subjected to cluster analyses, Shannon-Weaver diversity analysis, multiple regression analysis of variance and covariance, and factor analysis.

In Phase II of the program, fifteen stations were selected from among the sixty of Phase I. These stations were sampled quarterly. At each quarter, five Petite Ponar dredge samples were collected from each station. As in Phase I, observations and measurements, including seagrass blade counts, were made at each station. In Phase II, polychaete specimens collected were given to a separate contractor for analysis to the species level. These analyses included mean, standard deviation, coefficient of dispersion, percent of total, and numeric rank for each organism in each station as well as number of species, Shannon-Weaver taxa diversity, and dominance (the compliment of Simpson's Index) for each station. Multiple regression analysis of variance and covariance, and factor analysis were applied to the data to determine effect of abiotic factors measured at each station.

1. INTRODUCTION

The Biscayne Bay Benthic Sampling Study is one of a number of coordinated projects associated with the "Biscayne Bay, Restoration and Enhancement Program" administered by the Dade County Department of Environmental Resources Management. The overall objectives of the plan are to increase public awareness of the Bay ecosystem and its management, improve public access to the Bay, develop comprehensive baseline data on the biotic and abiotic components of the Bay ecosystem, and to restore or enhance many of the natural Bay habitats that have been destroyed, altered or stressed. The goal of the benthic sampling project was to establish a data base of benthic communities in Biscayne Bay. The primary objective of Phase I (the first year) of the study was to provide information for correlation of benthic species abundance and distribution with seasonality as well as biotic (eg. macroflora, etc.) and abiotic (eg. sediments, circulation, urbanization, etc.) parameters throughout the Bay. Phase I of the study was also used to help select sites for study in Phase II (the second year) of the study. Phase II of the study provided more intensive information at selected stations allowing analyses based on variance within stations and between seasons.

2. METHODS

2.1. Phase I

2.1.1. Sampling Sites

During Phase I (the first year) of the Benthic Sampling Program sixty stations were established in Biscayne Bay (including Dumfoundling Bay and Card Sound) (Figures 1 and 2, and list of site locations in appendices). These sites were located to include as many of the bottom habitats as possible and to provide good geographical coverage of the Bay. The sites were situated near fixed markers such as Intracoastal Waterway markers or were located by vectors on shore features so the site could be reoccupied.

2.1.2. Sampling Periods

The sixty sampling sites of Phase I of the study were visited twice during the first year of the study. One period was at the end of the wet season in late fall of 1981 and the other period was during the dry season in mid-winter of 1982. Each sampling period spanned approximately two weeks.

2.1.3. Field Measurements, Estimates and Observations

At each station in both sampling periods depth of water surface and bottom water temperature, salinity and dissolved oxygen were measured: bottom habitat, water color, sources of freshwater and pollution were noted, and secchi disk readings were made. Wind and current direction and strength were also estimated.

2.1.4. Seagrass Blade and Stalked Macroalgae Counts

When each station was visited, a diver using SCUBA gear counted the number of seagrass blades and stalked macroalgae found within a 0.1-meter square grid placed in a location the diver considered representative of the surrounding area (within a 50-ft radius of the sampling site).

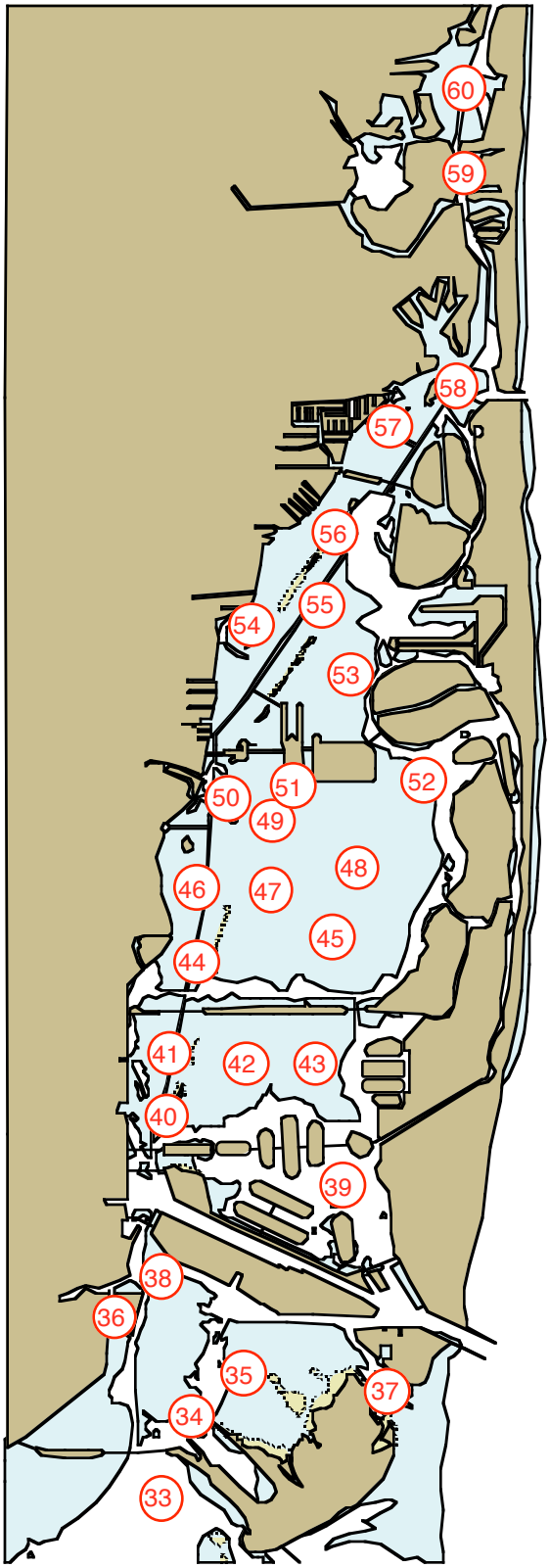

Figure 1. Phase I sampling sites in north Biscayne Bay. [NOTE: Current charts were used in all figures. Dodge Island (Port of Miami) and other areas in the Bay have changed since 1983.]

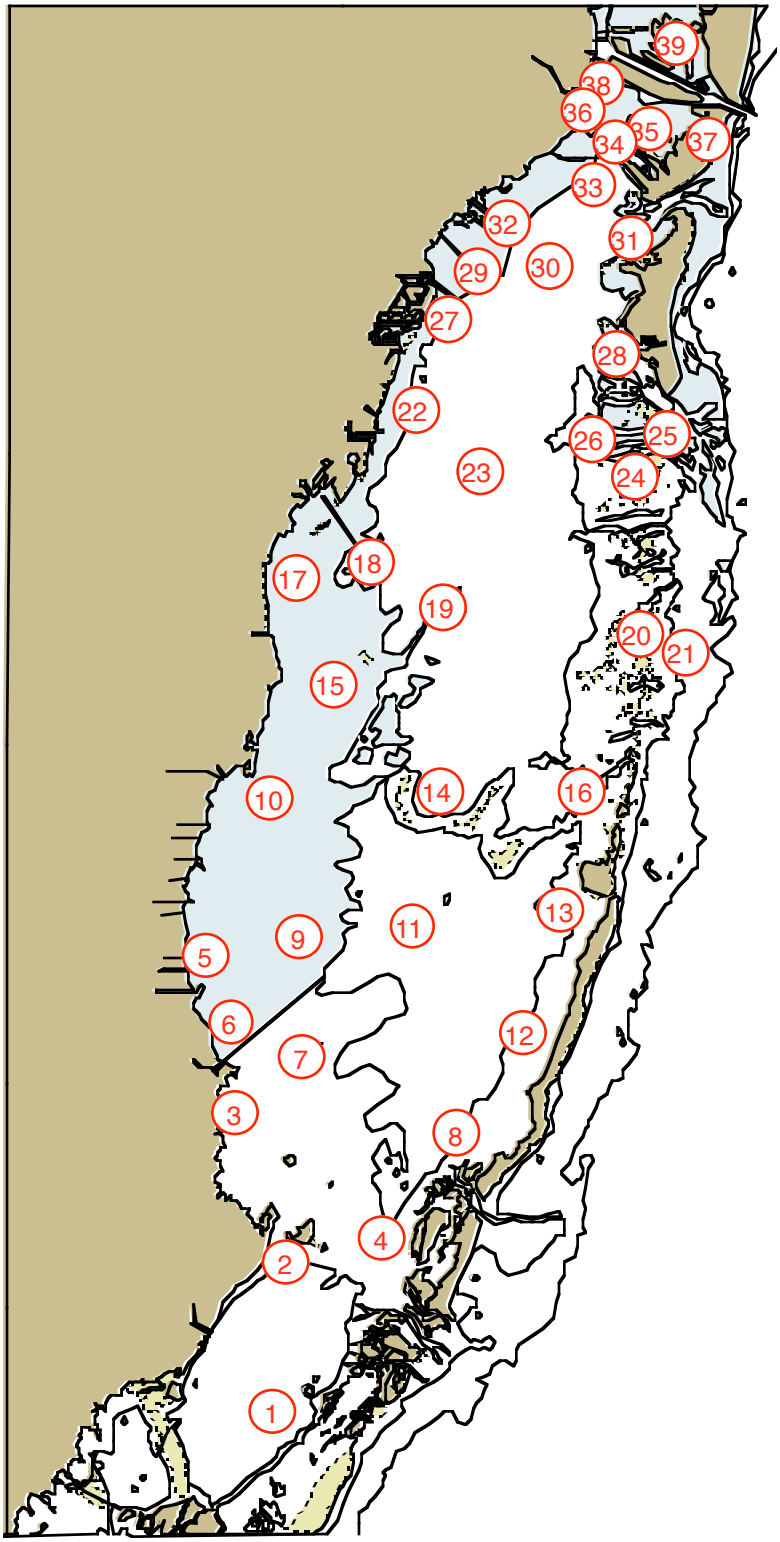

Figure 2. Phase I sampling sites in south Biscayne Bay. [NOTE: Current charts were used in all figures. Dodge Island (Port of Miami) and other areas in the Bay have changed since 1983.]

2.1.5. Ponar Dredge Samples

At each station during both sampling periods, a Petite Ponar dredge sample was collected (with SCUBA diver assistance). This 6-inch square infaunal grab sample was washed through a 0.5-mm mesh screen in the field and fixed in formalin for later sorting and identification. Due to their rarity, soft corals, large sponges, and hard corals were avoided when possible.

2.1.6. Trawl Samples

During the first sampling period (wet season), a nonquantitative epibenthic trawl sample was collected at each station. This sample was also washed through a 0.5-mm mesh screen, fixed in formalin in the field, and returned to the laboratory for sorting and identification.

2.1.7. Underwater Photographs

During the first sampling period (wet season), 35-mm underwater photographs of the bottom habitat were taken using a Nikkor 55 mm macro-lens and underwater flash apparatus. Three photographs were taken at each station.

2.1.8. Sediment Core Samples

During the second sampling period (dry season) 7.5 cm (o. d.) aluminum cores were collected at all stations where possible (not bare rock). These cores were turned over to personnel of the University of Miami for sediment size and organic content analyses.

2.1.9. Sorting of Samples

In the laboratory, the trawl and dredge samples were transferred to isopropanol preservative and sorted to major taxa. The sorted samples were then turned over to experts in the various taxa for identification.

2.1.10. Identification

Mollusks, decapod crustaceans, amphipods, isopods, echinoderms, fishes, algae and seagrasses were identified to species; sponges, other crustaceans and polychaetes were identified to family level. All other organisms were identified to the highest taxonomic level possible without outside consultation.

2.1.11. Polychaetes

Polychaetes were identified to the family level and then delivered to a separate consultant for identification to the species level. This consultant returned the polychaete information to Biosystems Research for inclusion into the benthic sampling study database.

2.1.12. Reference Collections

When available, ten individuals of each taxon identified to the species level were permanently preserved, catalogued and stored by the subconsultants for future reference. These collections will be gathered to form a permanent reference collection at the end of the program.

2.1.13. Data Base

All data received from the subconsultants have been incorporated into a microcomputer data base for numerical analyses. These data included animal and plant data from the trawl and

dredge samples, sediment data from the core samples, and field measurements and observations. A taxonomic listing of all animals found in the dredge and trawl samples has been prepared arranged according to taxonomic hierarchy.

2.1.14. Numerical analyses

Shannon-Weaver diversity indices were calculated for each station during both sampling periods. Multiple regression analyses were conducted for seagrass blade count and animal species both separately and lumped into higher taxonomic groups. Factor analysis was run on the resulting matrices of correlation coefficients. Eigenroots and denormal vectors were extracted from the matrix with a program adapted from D. J. Valdeman, 1967. Cluster analysis was attempted in order to help select sampling sites for the second year of the benthic sampling study. A computer program was employed based on hyperspace density techniques described by R. R. Sokal and P. Sneath, 1963.

2.2. Phase II

2.2.1. Second Year Sampling Sites Selection

After examination of data collected during Phase I of the benthic sampling program, consultation with Dr. Wanless of the University of Miami, and consultation with representatives of the Dade County Department of Environmental Resources Management, fifteen sampling sites were selected for Phase II of the benthic sampling program (Figures 3 and 4). These were stations #3, #16, #22, #23, #29, #35, #39, #41, #42, #44, #47, #48, #54, #58, and #60. These stations are referred to as Phase II stations 1-15, or by their Phase I number preceded by a "#" sign.

2.2.2. Sample Collection, Sorting and Identification

Five samples were collected from each of the fifteen sampling sites quarterly during Phase II of the benthic sampling program. Each Phase II sampling site has been visited four times (quarterly), abiotic and biotic observations, estimates and measurements were made similar to those made during Phase I of the program. Five dredge samples were collected at each station, washed in the field, fixed in formalin, and returned to the laboratory for sorting and identification according to the procedures followed during Phase I of the study. All identifications were made by subcontrator to Biosystems Research Inc., except for polychaetes, which were identified to species level by a separate contractor.

3. DISCUSSION

Three summary observations are apparent from examination of the data resulting from the first year benthic sampling. The first is the extraordinarily large number of species of organisms in the samples. Most comparative estuarine benthic studies have been conducted in temperate regions. It is therefore remarkable but not surprising that a tropical or near-tropical estuarine such as Biscayne Bay should be relatively rich in benthic animal life.

The second observation is that north Biscayne Bay (north of Rickenbacker Causeway), which is largely surrounded by urban and industrial areas, is far from dead. Not only did north Biscayne Bay yield the sample with the most organisms, but most of the north Biscayne Say stations were quite diverse as indicated by the Shannon-Weaver diversity indices based on the taxa identified. Average Shannon-Weaver indices for north Bay stations were 2.72 in the fall wet season and 2.59 in the winter dry season an compared to 2.86 and 2.71 respectively in south Biscayne Bay. In neither season is the difference between north and south Bay stations

significant nor is the difference between the seasons significant based on analysis of variance. However, it should be noted that north Biscayne Say stations were slightly less diverse than south Bay stations in both seasons and that diversity was lower in the winter dry season than in the fall wet season.

The third observation is that most organisms were found in relatively few stations. None were ubiquitous. Viewed from another perspective, no station had many of the total number of organisms. For this reason, numerical techniques based on the relative numbers, such as correlation analyses used to determine association of organisms, yielded very little information. The distribution of benthic animals in Biscayne Bay, north and south, is patchy. One Petit Ponar dredge (6" x 6") sample was inadequate to sample a community.

Polychaetes were found to comprise a large portion of the benthic organisms found in both north Biscayne Bay and south Biscayne Bay. Therefore, it was decided to identify polychaetes to the species level in Phase II of the study. One apparent observation can be made from Phase II of the study. The number and diversity of organisms collected during the winter quarter (second) and fall (final) quarter collecting period are much less than during the other quarters. Diversity and numbers of polychaetes parallel the diversity and numbers of other groups of organisms at most stations and reflect the apparent loss of animal diversity and population during the fall season.

The primary purpose of this study was to create an inventory of benthic faunal communities in Biscayne Bay (including Dumbfoundling Bay and Card Sound) to serve as a baseline for future studies. In order to perform this primary objective, sampling stations were selected to represent the greatest of diversity of benthic communities and to cover the widest possible geographical extent In the Bay area. No cline of biotic or abiotic conditions was considered in making the selection of sampling stations. At each sampling, certain abiotic factors were measured or noted. Measurements included depth, water, temperature, dissolved oxygen, salinity at surface and bottom, and secchi disk readings. At most stations, the secchi disk was visible at the bottom. Observations included sources of pollution and fresh water, wind direction and current, when present. Bottom sediment cores were collected at each station (except on hard rock) and analyzed for particle size by the University of Miami. Mean and mode particle size were calculated. Representative large stalk algae and seagrasses found at stations were quantified by counting blade number within a square of fixed dimensions. Plant material found in the dredge samples were identified and quantified. The benthic sampling program was not designed to answer the question of what factor controlled the abundance of benthic organisms. It was designed to provide the broadest possible survey of benthic communities in Biscayne Bay including Card Sound and Dumfoundling Bay. Nevertheless, data from both phases of the study was subjected to numerical analyses.

In Phase I of the study, sixty stations were sampled twice during the first year. No species of organism was found to be ubiquitous. In Phase II of the study, five dredge samples were collected from fifteen stations quarterly. Although no species or taxon was identified in all samples from all stations, certain groups of organisms were found in one or more samples at all stations in every quarter except the fourth quarter. The polychaete, *Lumbrineris verrilli*, found at every station in quarter 3, was the only species at every station in any quarter. Such other taxa as polychaetes, mollusks, nematodes and nemertines, were usually represented at all stations. In the first quarter of Phase II, oligochaetes as well as Capitellidae and Spionidae were also found in every station. In quarters 1, 2 and 4 of Phase II, no single species was found at all stations.

The following tables (Table 1 and Table 2) summarize the mean data on the benthic organisms collected during the four quarters of Phase II of the study.

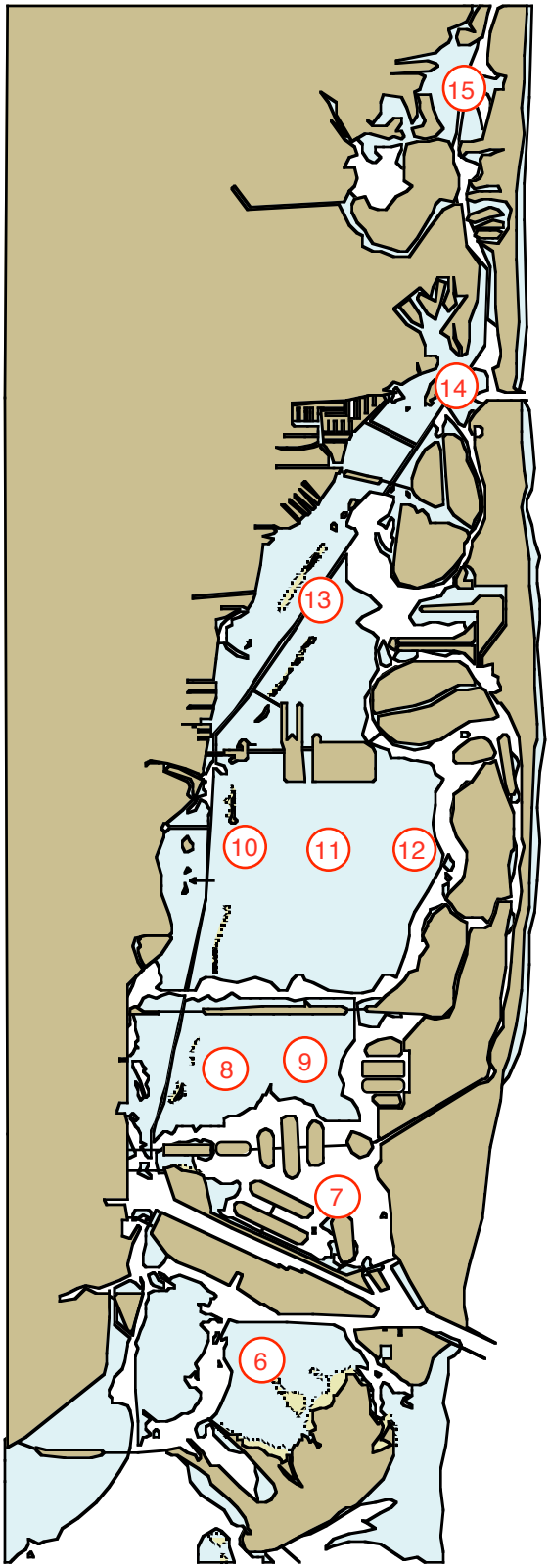

Figure 3. Phase II sampling sites in north Biscayne Bay. [NOTE: Current charts were used in all figures. Dodge Island (Port of Miami) and other areas in the Bay have changed since 1983.]

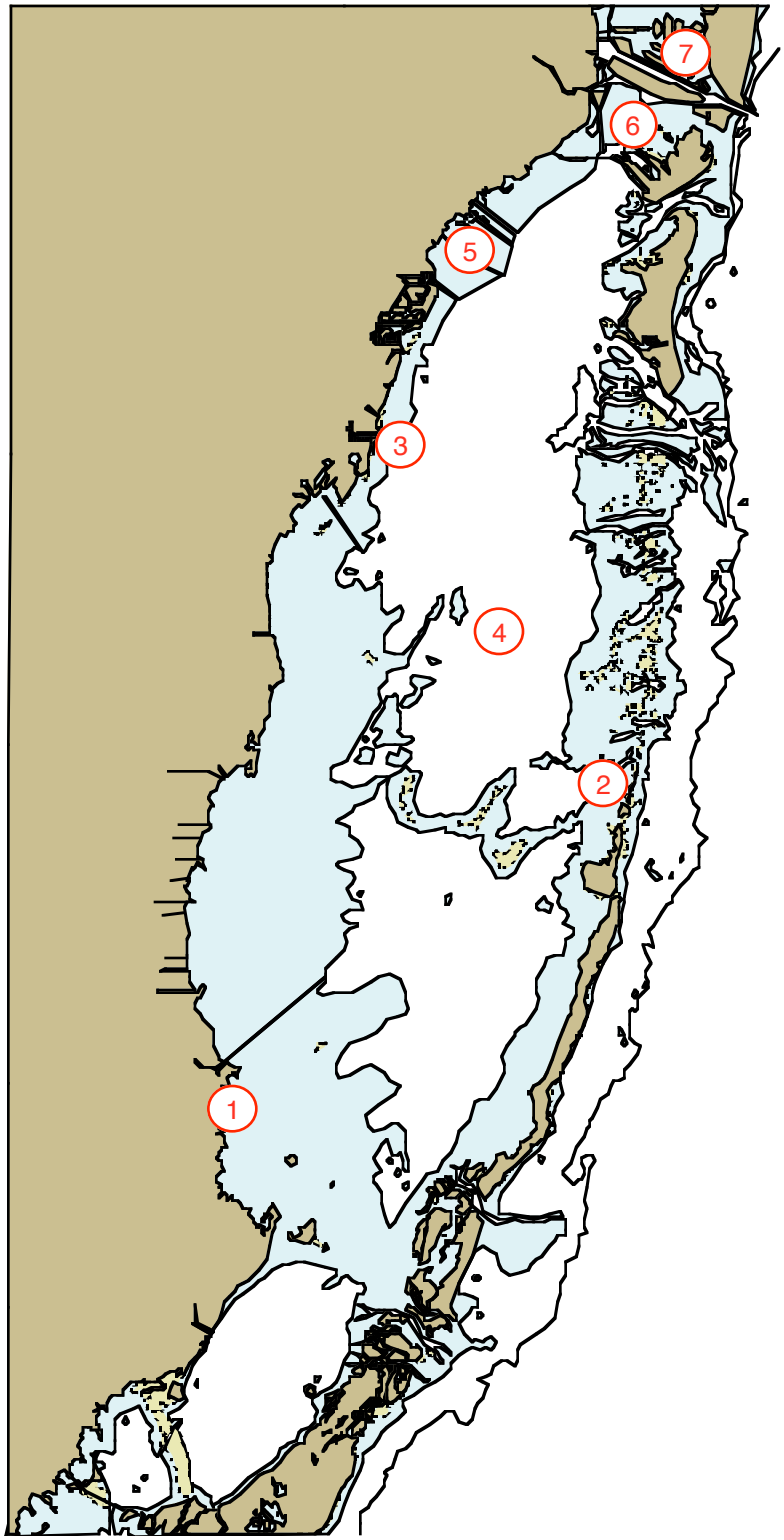

Figure 4. Phase II sampling sites in south Biscayne Bay. [NOTE: Current charts were used in all figures. Dodge Island (Port of Miami) and other areas in the Bay have changed since 1983.]

Table 1. Sum, mean and standard deviation of quarterly mean number of organisms, mean number of taxa, mean diversity, and mean dominance at each station for Phase II.

	Number of Organisms			Number of Taxa		Diversity		Dominance	
Station	Total	Mean	S.D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
1	262.2	65.6	44.60	19.1	9.18	1.0	0.27	0.9	0.02
2	1527.6	381.9	140.86	78 3	19.47	1.5	0.10	0.9	0.02
3	402.6	100.7	64.72	18:4	6.63	0.9	0.11	0.9	0.04
4	198.0	49.5	40.20	25.8	14.47	1.2	0.24	1.0	0.02
5	301.4	75.4	6.47	32.4	3.61	1.4	0.07	1.0	0.01
6	1110.2	277.6	121.20	50.8	11.73	1.4	0.05	0.9	0.01
7	281.0	70.3	19.43	21.8	6.29	1.1	0.13	0.9	0.03
8	674.0,	168.5	66.84	49.1	11.95	1.4	0.13	1.0	0.02
9	425.2	106.3	51.47	29.3	9.68	1.1	0.18	0.9	0.06
10	1085.6	271.4	121.53	44.6	15.06	1.1	0.19	0.8	0.08
11	4128.0	1032.0	311.25	56.0	12.91	1.1	0.10	0.8	0.05
12	587.6	146.9	51.86	32.0	8.11	1.1	0.09	0.7	0.24
13	1955.6	488.9	237.83	41.0	9.55	0.9	0.05	0.8	0.02
14	157.8	39.5	17.03	16.7	8.20	1.0	0.27	0.9	0.07
15	259.2	64.8	19.90	23.3	5.44	1.1	0.11	0.9	0.08

Table 2. Total, mean and standard deviation of station mean number of organisms, mean number of taxa, mean diversity, and mean dominance each quarter for Phase II.

	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
	Number	Taxa	Number	Taxa	Number	Taxa	Number	Taxa
Totals	4874.0	726.0	2424.0	372.0	3721.0	569.0	2337.0	486.0
Means	325.0	48.4	161.6	24.8	248.1	38.0	155.8	32.4
S.D.	358.6	23.2	264.3	16.7	280.9	16.8	127.3	14.3

Large differences were found in number of organisms, number of taxa, diversity and dominance indices between quarters in Phase II of the study. Most noticeable of these changes are the large drop in number of organisms and taxa in quarter 2, a partial recovery in quarter 3, and a second decrease in quarter 4. Although the decrease in number of organisms and taxa has been throughout the Bay, the south Bay stations (those south of Rickenbacker Causeway) showed the largest change between quarter 1 and 2 while the north Bay stations showed the greatest change between quarter 3 and 4. The initial decrease was seen in south Bay in both deep and shallow water stations, and both man-impacted stations (#3) and relatively pristine station (#16). The first quarter sampling was done in late November of 1982 prior to the cold and while the Bay was still affected by the residual effects of the long wet season. The second quarter collections were made in very late February and early March, at the height of the cold and winter dry season. The extraordinary decrease in taxa and number of organisms was probably the result of the change in weather, a winter storm, or a combination of cyclical natural conditions. The third quarter collections were carried out during late May of 1993 at the very beginning of the wet season and during warm weather. This period shows an increase in number of organisms and taxa. The fourth quarter sampling, carried out during late August and early September of 1983, found a second decrease in both number of organisms and taxa. Shallow water north Bay stations appeared to be most affected. This decrease can also be ascribed to weather conditions. It was preceded by a period of high temperature and heavy rains. This second decrease in number of organisms and taxa can also be attributed to weather conditions and is also part of the natural cycle of the Bay system. The number of organisms and taxa in the Bay probably fluctuates cyclically and periodically with the seasons. Care should be taken in interpreting future comparative studies if not conducted for an entire weather cycle.

Five stations of the fifteen sampled during Phase II of the study had considerably more organisms than the rest. One of these, station 1 (#16) also had the largest number of taxa and the largest diversity index. Of the five stations with the largest number of organisms, number 2 (#16) was the only one located south of Rickenbacker Causeway. This was an unusual station in that it was located in the Ragged Keys area, on the edge of the channel passing between two keys. The channel bottom is scoured bare rock. Turtlegrass (*Thalassia testudinum*) borders the channel. Station 6 (#35) is located in a shallow turtlegrass bed about 500 ft from the Intracoastal Waterway north of Rickenbacker Causeway and evidently represents a highly productive area both in terms of number of organisms and diversity of taxa. Station 10 (#44) is located near the western shore north of the Julia Tuttle Causeway. The bottom at this station appears to have been scoured but is covered by a thin layer of ooze. Water at the station usually appeared murky. Conditions at this station appear to be quite productive of number of organisms. Number of taxa and diversity are also high. This station is near a seagrass replanting area and some seagrass seedlings were observed at the station when last visited. Water clarity also seems to have improved there. Station 11 (#47) is located mid Bay between the Julia Tuttle Causeway and the 79th Street Causeway. It is an area of high water clarity, large diversity and great productivity of organisms. Large areas at this station are covered with the macroalgae, *Halimeda*, and there are thick areas of the seagrass, *Syringodium filiforme*. Numerous snapper and grunts were observed at this station. It is by far the most productive station of number of organisms and second only to the pristine station 2 (#16) in number of taxa. It is relatively far from the Intracoastal Waterway and protected from it by spoil lands. Station 13 (#54) is located between the 79th Street Causeway and Broad Causeway near the western shore south of the mouth of the Biscayne Canal. This area has thick mixed seagrass beds comprising *Syringodium filiforme*, *Halodule wrightii* and *Thalassia testudinum*. Although high in average number of organisms collected, the diversity index of this station was relatively low.

Although not so apparent, five of the Phase II stations had fewer average taxa and fewer organisms per sample than the other stations. These were stations 1 (#3), 3 (#22), 4 (#23), 14 (#58), and 15 (#60). Station 1 (#3) was located in an area of replanted seagrass near the

mouth of the former effluent canal from Turkey Point Power Station. This is a shallow mixed seagrass station probably subjected to extremes of temperature and large fluctuations in salinity. It is near the shore and canal mouth, and must receive pulses of runoff. It may also be affected by mosquito control efforts as well as other man-induced influences associated with the power plant. Probably its greatest influences are natural: extremes of temperature and fluctuations in salinity. Station 3 (#22) is located near the mouth of Snapper Creek Canal. It is therefore subjected to extreme changes in salinity and strong currents resulting from opening the water control structure in the canal. It is also on an exposed shore in relatively shallow water and may have been affected by storms. When first visited in Phase I, this station had a relatively thick cover of the seagrass *Halodule wrightii*, but subsequent visits found this station bare. This station had one of the lowest average mean-diversity indices. Station 4 (#23) was a relatively deep mid-bay station with sparse seagrasses, *Thalassia testudinum* and *Halodule wrightii,* growing in calcareous sand. Although this station had relatively few taxa, it had a fairly high average mean-diversity index. Water here was usually clouded with fine calcareous particles. Light probably limited the productivity of this station which may be representative of much of the deeper parts of the lower Bay. Station 14 (#58) is located on the sandy shore of a spoil island near the Intracoastal Waterway almost opposite to Bakers Haulover Inlet. This station had the lowest average mean number of organisms and mean number of taxa of the fifteen stations sampled in Phase II of this study. It is in a shallow area of sparse patches of seagrass (*Halodule wrightii*), moving sand, and subjected to alternate currents of seawater from the inlet and Bay water from the out-going tide. It is also exposed to considerable wake disturbance from the traffic on the Intracoastal Waterway, boats entering and leaving the Inlet, and wind action. Considerable movement of the sandy substrate is evident in this area. Station 15 (#60) is located in Dumfoundling Bay. This area is characterized by low water clarity, changing salinities, and wakes from traffic on the Intracoastal Waterway. It is not typical of areas in Biscayne Bay proper.

In quarter 1 of Phase II, 537 taxa were identified. Of these, 77 were found in more than three samples from a station and in more than three stations. In quarter 2, only 462 taxa were identified of which only 31 were found in more than three samples from a station and at more than three stations. In quarter 3, 477 taxa were identified of which 65 were found in more than three samples from one station and in more than three stations. In quarter 4, only 422 taxa were identified of which 65 were found in more than three samples from one station and in more than three stations. The coldest-season quarter and the hottest-season quarter had the fewest number of organisms and taxa. The benthic organisms of the Bay are most stressed during the extremes of temperatures and salinity. Those taxa which were found in more than three stations and in more than three samples in one station were subjected to regression analysis with the measured depth, temperature, salinity, and dissolved oxygen at bottom in order to gain an insight into which factor might be determining their presence or abundance. These same taxa were regressed with seagrass biomass in samples to determine if they associated with particular seagrass environments.

The mean correlation coefficients for all taxa tested, the mean standard error of the estimate, and the percent positively and the percent negatively correlated in each quarter are shown in the following table (Table 3).

Table 3. Results of Correlation Analyses of Abiotic Factors with the More Common Benthic Organisms.

Quarter	Independent Variable	Mean Correlation Coefficient	Mean Standard Error of Estimate	Percent Positive	Percent Negative
1	Oxygen	0.29	32	29	71
	Depth	0.22	35	71	28
	Temperature	0.19	35	48	51
	Salinity	0.19	35	12	87
2	Oxygen	0.15	32	32	67
	Depth	0.27	32	87	12
	Temperature	0.31	30	12	87
	Salinity	0.11	32	29	70
3	Oxygen	0.21	31	52	44
	Depth	0.26	30	80	20
	Temperature	0.26	30	13	86
	Salinity	0.09	32	69	30
4	Oxygen	0.30	22	52	47
	Depth	0.20	22	66	33
	Temperature	0.24	21	27	72
	Salinity	0.11	22	35	64

3.1. Salinity

Salinity was measured at surface and bottom at each station during each sampling period. During Phase I, in which sixty stations were sampled twice, salinity measurements ranged from 7.8 to 29.0 ppt (parts per thousand). During Phase II, in which fifteen stations were sampled quarterly, measured salinity values ranged from non detectable salinity to 28 ppt. Of the abiotic factors examined, salinity consistently shows the lowest average correlations with abundance of specific organisms. Only one organism, the amphipod, *Ampelisca vadorum*, showed a correlation coefficient greater than 0.5 with salinity, and that only during the first quarter. This does not mean that the presence, absence, or abundance of particular organisms is not dependent on the parameters measured. The presence or abundance of most organisms was probably dependent on certain maximum or minimum abiotic conditions that occurred at some period prior to sampling and perhaps present at sampling time. The effect of these abiotic conditions on the benthic organisms is probably not linear. Organisms tend to be unaffected by changes within defined limits of certain abiotic factors. Once that limit is crossed, their response is dramatic because fundamental physiological processes, such an osmoregulation, suddenly collapse. The degree of correlation of these measured abiotic factors probably results from the fact that the conditions as measured only reflect generally some previous condition that affected the organisms. The correlation of salinity with organisms found at more than three stations and in more than three samples at any one stations follow in Tables 4 through 7.

Table 4. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	-39647.70	29725.50	415.95	0.10
Paracerceis caudata	-5199.48	3900.31	60.97	0.09
Erichsonella filiformis isabelensis	374.80	281.23	3.28	0.12
Anthozoa	-503.03	377.39	3.83	0.14
Turbellaria	-3199.24	2397.54	18.28	0.18
Nemertina	-8317.70	6264.77	61.49	0.14
Nematoda	-29856.40	22360.60	87.75	0.34
Harpachoida spp.	-4577.74	3429.54	22.82	0.21
Myodocopa spp.	-7939.44	5950.77	53.85	0.16
Podocopa spp.	-16564.40	12425.80	194.95	0.09
Dikonophora spp.	-8737.51	6545.23	35.92	0.25
Ampelisca abdita	-491.53	368.54	2.66	0.19
Ampelisca vadorum	2295.30	-1714.77	3.16	0.61
Batea catharinensis	-4295.11	3216.52	16.65	0.27
Dulichiella appendiculata	-3433.54	2589.54	101.91	0.04
Lembos unicornis	-2217.48	1662.77	16.00	0.15
Neopanope packardii	-332.91	249.62	2.08	0.17
Capitellidae	-4616.71	3469.54	46.19	0.11
Cirratulidae	-5475.90	4109.54	24.13	0.24
Dorvilleidae	-515.53	388.92	4.12	0.13
Eunicidae	-1673.70	1254.77	8.35	0.21
Glyceridae	-161.69	121.77	2.66	0.07
Goniadidae	227.89	-166.77	5.72	0.04
Lumbrineridae	-1806.28	1358.77	12.24	0.16
Maldanidae	520.77	-386.46	10.02	0.05
Nereidae	-2209.57	1656.31	4.42	0.47
Orbiniidae	-4387.07	3289.85	18.75	0.24
Paraonidae	-7184.90	5388.31	20.48	0.35
Sabellidae	-18748.70	14043.10	75.77	0.26
Spionidae	-3781.42	2848.00	26.06	0.15
Syllidae	-37961.00	28435.70	137.27	0.28
Terebellidae	-2870.27	2152.62	14.10	0.21
Trichobranchidae	-1023.59	767.39	5.47	0.20
Oligochaeta	-12075.50	9053.54	53.62	0.23
Caecum pulchellum	-102489.00	76878.80	620.27	0.17
Chione cancellata	346.06	-256.31	3.64	0.10
Marginella apicina	327.76	-243.92	2.80	0.12
Meioceras nitida	-13544.50	10145.20	59.12	0.24
Nucula proxima	-609.01	456.52	3.67	0.17
Parvilucina multilineata	-1304.01	978.46	7.75	0.18
Tellina versicolor	-476.92	358.62	3.81	0.13
Amphiodia pulchella	-1053.33	790.46	7.12	0.16
Ophiactis savignyi	-2399.22	1797.54	10.21	0.24
Naineris setosa	-1219.12	914.15	10.54	0.12
Scoloplos (Leodamus) rubra	784.50	-582.77	13.09	0.06

Table 4. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	-967.99	726.77	9.59	0.11
Aricidea sp. C	-1180.94	888.00	16.42	0.08
Paraonides n. sp.	-3479.65	2604.92	10.93	0.32
Minuspio cirrifera	-1691.52	1267.69	11.21	0.16
Prionospio cristata	-1977.39	1483.69	10.92	0.19
Prionospio heterobranchia	-2940.55	2204.31	11.22	0.27
Caulleriella alata	-291.82	221.54	5.55	0.06
cf. *Caulleriella killariensis*	-982.47	739.39	10.23	0.10
Tharyx annulosus	-3833.60	2870.46	18.46	0.22
Capitella jonesi	-207.03	155.62	1.94	0.11
Mediomastus sp.	-683.33	512.77	4.74	0.15
Notomastus hemipodus	-848.37	635.85	5.48	0.16
Scyphoproctus platyprotus	-1164.35	872.46	4.83	0.25
Podarke obscura	2283.76	-1704.00	5.28	0.42
Ehlersia sp. A	557.30	-412.92	7.35	0.08
Exogone arenosa	-9802.12	7337.85	41.22	0.25
Exogone dispar	-6117.02	4579.69	25.08	0.25
Exogone verugera	-470.04	352.23	2.91	0.17
Odontosyllis sp.	-839.73	628.69	2.99	0.29
Sphaerosyllis sp.	-2769.18	2072.46	10.20	0.28
Typosyllis annularis	-2014.38	1509.85	14.76	0.14
Typosyllis sp. A	4248.95	-3173.54	10.10	0.41
Typosyllis sp. F	-2796.65	2097.23	33.81	0.09
Platynereis dumerilii	-1526.03	1143.38	4.43	0.35
Glycinde solitaria	274.54	-201.85	5.52	0.05
Lumbrineris latreilli	-389.30	291.92	2.08	0.20
Lumbrineris verrilli	-629.91	476.92	11.38	0.06
Streblosoma hartmanae	-349.45	262.23	2.44	0.15
Terebellides stroemi	-1131.30	848.15	6.50	0.18
Branchiomma nigromaculata	-1876.79	1405.85	4.54	0.40
Fabricia sabella	-1453.24	1090.46	10.26	0.15
Sabella variegata	-16196.30	12125.50	75.70	0.22

Table 5. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	231.89	-10.25	286.76	0.07
Paracerceis caudata	39.80	-1.65	51.26	0.07
Paratanaidae sp. A	-32.22	2.72	19.36	0.27
Turbellaria	0.45	0.24	12.61	0.04
Nemertina	-19.72	3.00	29.18	0.20
Nematoda	-30.92	4.05	39.06	0.21
Harpachoida spp.	6.02	-0.01	19.12	0.00
Myodocopa spp.	-20.05	1.71	12.06	0.28
Cymadusa compta	-11.75	1.47	26.48	0.11
Erichthonius brasiliensis	27.04	-0.63	28.60	0.04
Lembos unicornis	-1.15	0.27	5.06	0.11
Lysianassa alba	2.77	0.16	13.22	0.02
Brachidontes exustus	6.99	-0.27	7.59	0.07
Caecum pulchellum	58.18	4.42	215.27	0.04
Chione cancellata	3.24	-0.11	2.73	0.08
Meioceras nitida	36.91	-1.49	44.37	0.07
Tellina versicolor	-1.17	0.26	4.09	0.13
Scoloplos (Leodamus) rubra	-6.49	0.61	8.38	0.15
Aricidea philbinae	-20.32	1.62	13.59	0.24
Paraonides n. sp.	-2.70	0.41	6.18	0.13
Minuspio cirrifera	3.14	0.01	5.46	0.00
Prionospio heterobranchia	3.77	0.49	24.59	0.04
Caulleriella alata	2.13	0.04	4.38	0.02
Mediomastus hemipodus	0.08	0.09	1.60	0.12
Notomastus hemipodus	-1.49	0.16	1.38	0.23
Podarke obscura	5.38	-0.21	3.57	0.12
Ehlersia sp. A	-6.99	0.67	4.91	0.27
Platynereis dumerilii	-9.86	0.87	11.51	0.15
Lumbrineris verrilli	1.21	0.29	7.07	0.08
Schistomeringos rudolphi	6.56	-0.28	6.49	0.09
Sabella variegata	-45.62	5.30	95.03	0.11

Table 6. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	1935.56	-1441.33	7.71	0.13
Nemertina spp.	5835.63	-4346.67	12.75	0.23
Nematoda spp.	10038.30	-7456.00	131.83	0.04
Sipuncula spp.	1319.07	-983.33	3.44	0.19
Copepoda spp.	5970.59	-4450.67	22.73	0.13
Myodocopa spp.	4206.19	-3130.67	20.86	0.10
Paratanaidae ssp.	52372.40	-39061.30	141.08	0.19
Tanaidae spp.	-1827.87	1376.00	30.04	0.03
Carpias sp. A	55775.50	-41514.70	517.88	0.05
Paracerceis caudata	3438.41	-2557.33	34.26	0.05
Amphilochus neopolitanus	-610.34	458.67	6.48	0.05
Cerapus n. sp.	5366.17	-4000.00	22.00	0.12
Cymadusa compta	-5301.08	3965.33	14.62	0.18
Dulichiella appendiculata	6338.39	-4714.67	58.23	0.06
Elasmopus laevis	16507.00	-12304.00	42.12	0.20
Erichthonius brasiliensis	9165.13	-6826.67	31.72	0.15
Lembos unicornis	1315.04	-970.67	28.47	0.02
Listriella barnardi	410.54	-304.67	5.79	0.04
Lysianassa alba	4983.42	-3706.67	42.60	0.06
Photis pugnator	12858.10	-9578.67	75.79	0.09
Corophium tuberculatum	82.70	-60.00	3.90	0.01
Rhepoxynius sp. indet.	-1091.96	821.33	15.51	0.04
Tethygenia longleyi	344.48	-250.67	17.96	0.01
Amphiodia pulchella	1386.97	-1033.33	6.38	0.11
Caecum plicatum	3541.69	-2637.33	24.51	0.07
Caecum pulchellum	50985.70	-37973.30	210.01	0.12
Cumingia tellinoides	1050.57	-782.67	4.91	0.11
Ischnochiton papillosus	895.26	-666.67	6.38	0.07
Lima pellucida	592.36	-440.67	3.47	0.09
Meioceras nitida	3766.01	-2794.67	46.96	0.04
Parvilucina multilineata	3458.64	-2573.33	25.52	0.07
Tellina versicolor	736.15	-545.33	5.41	0.07
Haploscoloplos foliosus	1290.94	-961.33	6.10	0.11
Naineris setosa	1196.55	-890.67	7.27	0.08
Scoloplos (Leodamus) rubra	573.41	-426.67	3.44	0.08
Aricidea philbinae	9.16	-4.00	7.20	0.00
Aricidea n. sp. A	-580.59	434.67	5.01	0.06
Paraonides n. sp.	1518.62	-1129.33	8.06	0.10
Prionospio cristata	-137.68	105.33	5.19	0.01
Prionospio heterobranchia	-442.72	334.67	7.53	0.03
Spiochaetopterus costarum	1642.58	-1224.67	6.53	0.13
Caulleriella alata	1126.82	-840.00	2.89	0.20
Tharyx annulosus	118.81	-86.67	5.34	0.01
Mediomastus sp.	242.44	-178.67	4.60	0.03
Notomastus hemipodus	-470.00	352.00	1.98	0.12

Table 6. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scyphoproctus platyprotus	-3218.26	2408.00	14.33	0.11
Ehlersia sp. A	2027.07	-1511.33	6.80	0.15
Exogone arenosa	7546.36	-5629.33	18.75	0.20
Odontosyllis sp. A	1243.64	-926.67	3.58	0.17
Sphaerosyllis spp.	7069.08	-5272.00	17.95	0.20
Typosyllis sp. A	-6569.08	4908.00	16.15	0.20
Typosyllis sp. F	2679.63	-1996.00	21.06	0.06
Platynereis dumerilii	-135.24	102.67	3.60	0.02
Glycera abranchiata	-235.72	177.33	2.63	0.05
Glycinde solitaria	909.06	-676.67	3.49	0.13
Lumbrineris latreilli	323.68	-240.67	1.69	0.10
Lumbrineris verrilli	-403.15	306.67	9.39	0.02
Schistomeringos cf. *pectinata*	155.65	-114.67	4.25	0.02
Schistomeringos rudolphi	-478.46	358.67	3.24	0.08
Piromis eruca	207.21	-152.67	4.75	0.02
Polycirrus eximius	252.90	-185.33	15.42	0.01
Terebellides stroemi	-83.51	65.33	7.44	0.01
Chone americana	999.83	-745.33	3.14	0.16
Fabricia sabella	2379.64	-1774.67	5.52	0.22
Sabella variegata	19850.30	-14762.70	212.36	0.05

Table 7. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with Water Salinities Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	3810.03	-2832.00	24.82	0.13
Nematoda spp.	202.29	-132.00	30.69	0.00
Copepoda spp.	3147.89	-2344.00	35.76	0.07
Myodocopa spp.	-5140.68	3852.00	29.99	0.14
Paratanaidae spp.	-11923.30	8926.00	42.21	0.23
Carpias sp. A	-833.08	630.00	20.66	0.03
Paracerceis caudata	1558.58	-1159.00	19.29	0.07
Cerapus n. sp.	-1045.10	786.00	13.39	0.07
Cymadusa compta	1069.27	-794.00	16.11	0.06
Elasmopus laevis	950.54	-704.00	21.35	0.04
Lysianassa alba	3957.50	-2947.00	40.20	0.08
Amphiodia pulchella	-1555.88	1165.50	6.42	0.20
Caecum pulchellum	52453.50	-39056.00	309.81	0.14
Chione cancellata	-169.87	129.25	4.69	0.03
Ischnochiton papillosus	-561.94	422.50	5.18	0.09
Marginella apicina	112.83	-82.75	3.75	0.02
Meioceras nitida	-2910.06	2186.00	28.95	0.08
Nucula proxima	-805.41	603.50	3.78	0.18
Olivella perplexa	-185.06	139.25	2.34	0.07
Parvilucina multilineata	-2818.07	2111.00	12.53	0.19
Tellina versicolor	-602.43	453.50	6.53	0.08
Naineris setosa	590.49	-438.75	5.84	0.08
Scoloplos (*Leodamus*) *rubra*	-825.36	618.25	3.78	0.18
Aricidea fragilis	-1129.54	845.50	5.68	0.16
Aricidea philbinae	-471.05	354.50	6.04	0.07
Paranoides n. sp.	-1560.74	1178.00	33.73	0.04
Minuspio cirrifera	-335.52	252.25	2.73	0.10
Prionospio heterobranchia	1387.71	-1031.00	10.05	0.11
Caulleriella alata	-683.42	515.50	14.76	0.04
Tharyx annulosus	-62.93	50.50	5.68	0.01
Mediomastus sp.	-740.43	555.25	4.31	0.14
Podarke obscura	1180.05	-878.50	5.93	0.16
Brania sp. A	-565.01	423.50	3.52	0.13
Ehlersia sp. A	-1678.06	1255.75	6.52	0.21
Exogone arenosa	-9671.44	7233.00	34.44	0.23
Exogone dispar	-903.94	679.00	9.17	0.08
Exogone verugera	296.14	-219.25	4.68	0.05
Sphaerosyllis spp.	-4256.86	3183.50	14.42	0.24
Typosyllis annularis	1880.90	-1400.50	21.19	0.07
Typosyllis sp. F	3017.64	-2245.00	41.03	0.06
Ceratonereis irritabilis	374.66	-279.00	5.58	0.06
Platynereis dumerilii	-291.61	218.75	1.66	0.15
Lumbrineris latreilli	-460.00	344.50	1.61	0.23
Lumbrineris verrilli	-1117.74	845.00	23.75	0.04
Piromis eruca	-305.27	230.25	6.71	0.04
Branchiomma nigromaculata	-1688.40	1265.00	10.43	0.13
Fabricia sabella	2359.39	-1706.25	4.72	0.38
Sabella variegata	9713.02	-7728.00	106.41	0.09

3.2. Oxygen

Dissolved oxygen values as measured at each station ranged from 3.4 to 16.1 ppm (parts per million) in Phase I and from 3.0 to 10.6 ppm in Phase II. Oxygen allowed the highest mean correlations during quarters 1 and 4, the wet season quarters. Correlation values of organisms with bottom dissolved oxygen are presented in Tables 8 through 11.

3.3. Depth and Temperature

The sixty stations sampled during Phase I of the study ranged in depth from 1.75 to 20.25 feet. Measured temperatures at these stations ranged in value from 21.2 to 29.8 °C (Celsius). The fifteen stations sampled quarterly during Phase II ranged in depth from 2.5 to 15 feet. The temperature measured at these stations ranged from 20.4 to 29.9 °C. Depth and temperature had highest mean correlations during quarters 2 and 3, the dry colder seasons, indicating that perhaps more organisms are limited by the cold weather than hot in Biscayne Bay. Most of the correlations with temperature were negative where as most of the correlations with depth during these quarters were positive. Certain organisms showed fairly high correlation with depth during several quarters. Among those were the polychaete worm, *Notomastus hemipodus*, with correlation coefficients above 0.6 in quarters 1, 2, and 3, and the Atlantic nut clam, *Nucula proxima*, with a correlation coefficient above 0.8 in quarter 1. The later species showed a relatively high correlation with oxygen in quarter 4. A number of species and taxa were found to have correlation coefficients above 0.5 with temperature. The high correlation coefficient with temperature was 0.74 and negative found in the first quarter for the polychaete family Dorvilleidae. Correlation values of organisms with depth and temperature are presented in Tables 12 through 19.

3.4. Seagrasses

Taxa were also correlated with the seagrasses, *Thalassia testudinum*, *Halodule wrightii*, *Syringodium filiforme*, and *Halophila baillonis*.

3.4.1. *Thalassia testudinum*

Very few taxa were highly correlated with *Thalassia* (Tables 20 - 23). The highest correlation coefficient found with *Thalassia* was a positive 0.77 in quarter 1 with the syllid polychaete, *Typosyllis* sp. A. A number of taxa found correlated with this seagrass during one quarter were not highly correlated with the seagrass during the other quarters. This possibly could represent seasonal behavior on the part of the organisms.

3.4.2. *Syringodium filiforme*

More taxa were positively correlated with the seagrass, *Syringodium filiforme* than with the other seagrasses (Tables 24 - 27). Principal among these was the polychaete, *Platynereis dumerilii* which had positive correlations (coefficients from 0.89 to 0.92) during the first three quarters sampled. The correlation coefficient was 0.48 with this seagrass in the fourth quarter. The polychaete, *Sabella variegata*, was highly correlated with *Syringodium* during all four quarters. The polychaete, *Tharyx annulosus,* also seemed to consistently be found in this habitat. Although nematodes were usually found at all stations, they were usually found positively correlated with this seagrass except during the fourth quarter. The number of organisms that associate with this seagrass might indicate that it would be an excellent candidate for restoration projects in certain areas of Biscayne Bay. This seagrass deserves more scientific consideration.

Table 8. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	-874.22	138.82	373.32	0.45
Paracerceis caudata	-119.16	19.22	55.41	0.43
Erichsonella filiformis isabelensis	-7.69	1.27	2.81	0.52
Anthozoa	-5.77	1.06	3.59	0.37
Turbellaria	-46.47	7.63	15.47	0.56
Nemertina	-141.99	26.81	50.41	0.58
Nematoda	-220.44	38.65	77.31	0.56
Harpachoida spp.	-44.59	7.64	20.92	0.44
Myodocopa spp.	2.25	2.61	54.40	0.06
Podocopa sp.	-307.95	51.25	183.04	0.35
Dikonophora sp.	-14.72	4.59	36.59	0.17
Ampelisca abdita	3.78	-0.32	2.68	0.16
Ampelisca vadorum	10.24	-1.23	3.63	0.42
Batea catharinensis	- 29.90	5.28	15.73	0.41
Dulichiella appendiculata	-228.50	26.30	89.34	0.48
Lembos unicornis	-26.15	4.62	14.91	0.39
Neopanope packardii	-1.96	0.42	2.04	0.27
Capitellidae	126.09	-14.25	42.26	0.42
Cirratulidae	-52.76	10.40	20.45	0.57
Dorvilleidae	-1.89	0.93	3.97	0.30
Eunicidae	-9.91	2.06	8.07	0.33
Glyceridae	1.32	-0.02	2.67	0.01
Goniadidae	14.53	-1.36	5.42	0.32
Lumbrineridae	29.71	-2.58	11.89	0.28
Maldanidae	7.54	-0.52	10.01	0.07
Nereidae	-0.80	0.96	4.84	0.26
Orbiniidae	3.32	1.46	19.22	0.10
Paraonides	20.43	0.36	21.87	0.02
Sabellidae	-179.49	30.29	66.77	0.52
Spionidae	31.58	-0.46	26.37	0.02
Syllidae	-135.18	29.77	137.34	0.28
Terebellidae	-15.10	3.42	13.67	0.32
Trichobrandae	-7.66	1.49	5.21	0.36
Oligochaeta	-12.73	6.74	54.40	0.17
Caecum pulchellum	-1459.57	253.91	527.69	0.55
Chione cancellata	-5.35	1.20	3.28	0.44
Marginella apicina	-5.97	1.04	2.45	0.50
Meioceras nitida	-111.96	19.43	54.88	0.43
Nucula proxima	4.94	-0.44	3.68	0.16
Parvilucina multilineata	13.37	-1.19	7.71	0.21
Tellina versicolor	6.84	-0.57	3.77	0.20
Amphiodia pulchella	3.12	0.13	7.20	0.02
Ophiactis savignyi	-3.92	1.30	10.37	0.17
Naineris setosa	-21.67	3.56	9.46	0.45

Table 8. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scoloplos (Leodamus) rubra	14.79	-1.38	12.98	0.14
Aricidea philbinae	13.17	-1.26	9.50	O.18
Aricidea sp. C	-4.59	1.62	16.32	0.13
Paraonides n. sp.	9.59	-0.65	11.51	O.08
Minuspio cirrifera	-2.45	0.94	11.28	0.11
Prionospio cristata	10.85	-0.49	11.10	0.06
Prionospio heterobranchia	-21.12	4.10	10.24	0.48
Caulleriella alata	1.77	0.39	5.53	0.09
cf. *Caulleriella killariensis*	6.18	0.06	10.29	0.01
Tharyx annulosus	-37.31	6.10	17.01	0.44
Capitella jonesi	2.65	-0.21	1.93	0.15
Mediomastus sp.	-6.25	1.24	4.50	0.35
Notomastus hemipodus	1.09	0.16	5.55	0.04
Scyphoproctus platyprotus	-0.72	0.48	4.94	0.13
Podarke obscura	-13.77	2.54	4.69	0.59
Ehlersia sp. A	0.74	0.59	7.33	0.11
Exogone arenosa	23.75	-1.41	42.48	0.05
Exogone dispar	-53.27	8.76	23.04	0.46
Exogone verugera	-5.19	0.89	2.70	0.41
Odontosyllis sp.	2.38	-0.16	3.12	0.07
Sphaerosyllis spp.	4.80	-0.23	10.61	0.03
Typosyllis annularis	-27.30	4.58	13.57	0.42
Typosyllis sp. A	-25.31	4.07	9.60	0.50
Typosyllis sp. F	-65.60	10.43	30.86	0.42
Platynereis dumerilii	-7.32	1.51	4.25	0.43
Glycinde solitaria	13.94	-1.32	5.23	0.32
Lumbrineris latreilli	-1.55	0.39	2.05	0.25
Lumbrineris verrilli	28.89	-2.92	10.70	0.35
Streblosoma hartmanae	2.79	-0.20	2.45	0.11
Terebellides stroemi	-9.85	1.84	6.13	0.38
Branchiomma nigromaculata	-3.96	1.09	4.74	0.30
Fabricia sabella	-4.81	1.44	10.19	0.19
Sabella variegata	-169.69	27.15	68.39	0.47

Table 9. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	25.76	6.14	287.33	0.04
Paracerceis caudata	4.18	1.31	51.33	0.04
Paratanaidae sp. A	-21.26	4.12	18.91	0.34
Turbellaria	-3.70	1.03	12.50	0.14
Nemertina	-9.01	4.72	28.74	0.27
Nematoda	4.91	3.56	39.47	0.15
Harpachoida spp.	2.92	0.38	19.11	0.03
Myodocopa spp.	-24.13	4.04	10.58	0.54
Cymadusa compta	2.07	1.18	26.58	0.07
Erichthonius brasiliensis	28.21	-1.45	28.52	0.08
Lembos unicornis	1.44	0.21	5.08	0.07
Lysianassa alba	-3.22	1.12	13.09	0.14
Brachidontes exustus	1.74	0.15	7.60	0.03
Caecum pulchellum	213.52	-11.38	214.61	0.09
Chione cancellata	1.33	0.03	2.74	0.02
Meioceras nitida	5.76	1.05	44.44	0.04
Tellina versicolor	5.14	-0.29	4.09	0.12
Scoloplos (Leodamus) rubra	18.63	-2.05	7.74	0.41
Aricidea philbinae	21.50	-2.18	13.50	0.26
Paraonides n. sp.	3.03	0.09	6.23	0.02
Minuspio cirrifera	3.83	-0.06	5.46	0.02
Prionospio heterobranchia	17.79	-0.84	24.57	0.06
Caulleriella alata	10.68	-1.04	4.01	0.40
Mediomastus sp.	5.37	-0.50	1.37	0.52
Notomastus hemipodus	-0.98	0.26	1.35	0.31
Podarke obscura	0.35	0.23	3.57	0.11
Ehlersia sp. A	5.92	-0.33	5.07	0.11
Platynereis dumerilii	-0.70	0.57	11.61	0.08
Lumbrineris verrilli	0.35	0.71	7.00	0.17
Schistomeringos rudolphi	1.99	0.04	6.51	0.05
Sabella variegata	14.41	2.94	95.51	0.05

Table 10. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria	-1.45	0.88	7.69	0.14
Nemertina spp.	3.35	1.41	12.97	0.14
Nematoda spp.	-380.02	58.51	108.99	0.56
Sipuncula spp.	3.44	-0.20	3.50	0.07
Copepoda spp.	-31.37	5.52	21.84	0.31
Myodocopa spp.	68.85	-7.57	18.64	0.46
Paratanaidae spp.	-212.08	36.05	136.09	0.32
Tanaidae spp.	39.70	-3.33	29.76	0.14
Carpias sp. A	-313.61	65.67	511.91	0.16
Paracerceis caudata	-31.65	6.07	33.43	0.22
Amphilochus neopolitanus	-6.16	1.38	6.25	0.27
Cerapus n. sp.	44.66	-4.89	21.29	0.28
Cymadusa compta	12.84	-0.38	14.86	0.03
Dulichiella appendiculata	-20.42	5.97	57.83	0.13
Elasmopus laevis	-82.33	14.63	38.60	0.44
Erichthonius brasiliensis	-4.58	3.54	31.75	0.14
Lembos unicornis	-10.21	3.41	28.15	0.15
Listriella barnardi	7.59	-0.69	5.72	0.15
Lysianassa alba	-11.87	4.15	42.34	0.12
Photis pugnator	191.29	-22.05	70.72	0.37
Corophium tuberculatum	6.55	-0.57	3.83	0.19
Rhepoxynius sp. indet.	30.42	-3.02	15.04	0.25
Tethygenia longleyi	14.35	-0.76	17.94	0.05
Amphiodia pulchella	14.30	-1.54	6.11	0.31
Caecum plicatum	-2.33	1.57	24.49	0.08
Caecum pulchellum	10.68	15.42	210.71	0.09
Cumingia tellinoides	10.61	-1.13	4.72	0.29
Ischnochiton papillosus	1.24	0.15	6.39	0.03
Lima pellucida	1.03	0.15	3.48	0.05
Meioceras nitida	83.79	-8.26	45.81	0.22
Parvilucina multilineata	56.50	-6.04	24.40	0.30
Tellina versicolor	21.62	-2.15	4.69	0.50
Haploscoloplos foliosus	-9.75	1.77	5.71	0.37
Naineris setosa	-6.73	1.40	7.07	0.24
Scoloplos (Leodamus) rubra	10.56	-1.17	3.12	0.43
Aricidea philbinae	16.27	-1.69	6.88	0.30
Aricidea n. sp. A	-8.13	1.32	4.73	0.33
Parsanides n. sp.	26.61	-2.79	7.28	0.44
Prionospio cristata	3.96	-0.08	5.18	0.02
Prionospio heterobranchia	25.35	-2.68	6.72	0.45
Spiochaetopterus costarum	3.33	-0.14	6.58	0.03
Caulleriella alata	3.73	- 0.27	2.93	0.12
Tharyx annulosus	-4.03	0.92	5.21	0.22
Mediomastus sp.	11.56	-1.14	4.37	0.31

Table 10. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Notomastus hemipodus	-0.62	0.28	1.96	0.18
Scyphoproctus platyprotus	22.30	-2.07	14.18	0.18
Ehlersia sp. A	-2.91	0.77	6.80	0.14
Exogone arenosa	-22.49	3.92	18.48	0.26
Odontosyllis sp. A	-0.43	0.39	3.60	0.14
Sphaerosyllis spp.	-24.66	4.47	17.41	0.31
Typosyllis sp. A	24.71	-2.72	16.14	0.21
Typosyllis sp. F	-13.34	2.65	20.83	0.16
Platynereis dumerilii	-4.13	0.87	3.43	0.31
Glycera abranchiata	3.51	-0.23	2.62	0.11
Glycinde solitaria	2.94	-0.03	3.52	0.01
Lumbrineris latreilli	0.07	0.17	1.68	0.13
Lumbrineris verrilli	17.70	-1.37	9.22	0.19
Schistomeringos cf. *pectinata*	2.27	-0.03	4.25	0.01
Schistomeringos rudolphi	2.05	-0.02	3.25	0.01
Piromis eruca	2.55	0.02	4.75	0.01
Polycirrus eximius	28.37	-3.21	14.87	0.26
Terebellides stroemi	17.05	-1.77	7.10	0.30
Chone americana	4.85	-0.45	3.13	0.18
Fabricia sabella	7.48	-0.65	5.59	0.15
Sabella variegata	-445.17	70.79	192.64	0.42

Table 11. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with Dissolved Oxygen Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	28.74	-1.59	24.78	0.14
Nematoda spp.	48.99	-3.93	29.46	0.28
Copepoda spp.	23.88	-2.28	35.50	0.14
Myodocopa spp.	-20.67	6.06	27.23	0.44
Paratanaidae spp.	-1.60	4.39	42.29	0.22
Carpias sp. A	10.11	0.02	20.67	0.00
Paracerceis caudata	9.15	-0.33	19.32	0.04
Cerapus n. sp.	0.44	1.10	13.20	0.18
Cymadusa compta	15.93	-1.59	15.76	0.22
Elasmopus laevis	23.05	-2.49	20.66	0.26
Lysianassa alba	32.41	-3.29	39.69	0.18
Amphiodia pulchella	-7.59	1.98	4.91	0.66
Caecum pulchellum	238.48	-10.63	312.00	0.07
Chione cancellata	4.30	-0.20	4.67	0.09
Ischnochiton papillosus	5.48	-0.32	5.15	0.13
Marginella apicina	5.45	-0.57	3.54	0.33
Meioceras nitida	-24.94	6.88	24.83	0.52
Nucula proxima	-5.85	1.39	2.35	0.79
Olivella perplexa	-3.23	0.77	1.63	0.72
Parvilucina multilineata	-14.79	3.76	9.72	0.65
Tellina versicolor	-5.18	1.64	5.47	0.55
Naineris setosa	7.26	-0.68	5.67	0.26
Scoloplos (Leodamus) rubra	-4.08	1.06	3.07	0.60
Aricidea fragilis	-2.99	0.87	5.43	0.33
Aricidea philbinae	-3.43	1.16	5.49	0.42
Paraonides n. sp.	16.16	-0.02	33.75	0.00
Minuspio cirrifera	-1.94	0.68	2.29	0.55
Prionospio heterobranchia	16.09	-1.42	9.62	0.31
Caulleriella alata	-10.78	2.92	23.31	0.43
Tharyx annulosus	0.93	0.63	5.51	0.24
Mediomastus sp.	-4.26	1.19	3.49	0.60
Podarke obscura	8.58	-0.75	5.78	0.27
Brania sp. A	5.52	-0.61	3.28	0.38
Ehlersia sp. A	5.61	-0.47	6.59	0.16
Exogone arenosa	33.72	-3.94	34.30	0.24
Exogone dispar	8.14	-0.54	9.13	0.13
Exogone verugera	6.56	-0.65	4.46	0.31
Sphaerosyllis spp.	14.12	-1.63	14.41	0.24
Typosyllis annularis	14.27	-1.34	21.04	0.14
Typosyllis sp. F	32.54	-3.35	40.44	0.18
Ceratonereis irritabilis	2.05	0.02	5.59	0.01
Platynereis dumerilii	0.40	0.13	1.65	0.18
Lumbrineris latreilli	0.09	0.18	1.61	0.23
Lumbrineris verrilli	-24.34	6.33	19.30	0.58
Piromis eruca	6.56	-0.61	6.58	0.20
Branchiomma nigromaculata	-10.40	2.56	8.89	0.53
Fabricia sabella	1.07	0.36	5.06	0.15
Sabella variegata	132.35	-15.85	100.89	0.33

Table 12. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	245.91	-18.56	413.50	0.15
Paracerceis caudata	34.53	-2.37	60.72	0.13
Erichsonella filiformis isabelensis	2.46	-0.15	3.26	0.15
Anthozoa	2.72	-0.13	3.84	0.11
Turbellaria	15.33	-1.06	18.27	0.19
Nemertina	86.05	-5.25	59.67	0.28
Nematoda	81.71	-3.78	92.53	0.13
Harpachoida spp.	17.58	-1.09	23.06	0.15
Myodocopa spp.	31.13	-1.47	54.30	0.09
Podocopa sp.	129.80	-10.31	192.78	0.17
Dikonophora sp.	40.73	-3.25	35.53	0.29
Ampelisca abdita	-2.96	0.63	1.73	0.77
Ampelisca vadorum	1.54	-0.01	4.00	0.01
Batea catharinensis	14.49	-0.96	16.98	0.18
Dulichiella appendiculata	68.98	-5.50	100.35	0.18
Lembos unicornis	16.72	-1.42	15.48	0.29
Neopanope packardii	2.06	-0.15	2.05	0.24
Capitellidae	44.08	-2.80	45.53	0.20
Cirratulidae	39.06	-2.52	23.39	0.34
Dorvilleidae	1.20	0.51	3.81	0.40
Eunicidae	6.16	-0.19	8.52	0.08
Glyceridae	-1.13	0.33	2.43	0.41
Goniadidae	6.36	-0.22	5.68	0.13
Lumbrineridae	-7.07	2.63	8.86	0.70
Maldanidae	3.78	0.00	10.04	0.00
Nereidae	8.00	-0.28	4.93	0.18
Orbiniidae	18.41	-0.67	19.20	0.11
Paraonidae	22.48	0.07	21.87	0.01
Sabellidae	70.17	-4.80	76.76	0.20
Spionidae	48.02	-2.81	24.69	0.35
Syllidae	100.77	-3.37	142.71	0.08
Terebellidae	8.20	0.15	14.42	0.03
Trichobranchidae	2.54	0.06	5.58	0.03
Oligochaeta	74.76	-5.63	51.93	0.34
Caecum pulchellum	693.58	-48.84	608.92	0.26
Chione cancellata	4.54	-0.19	3.61	0.17
Marginella apicina	3.27	-0.26	2.69	0.30
Meioceras nitida	49.82	-3.31	59.88	0.18
Nucula proxima	-4.71	0.93	2.12	0.82
Parvilucina multilineata	-7.75	1.80	5.16	0.76
Tellina versicolor	1.69	0.16	3.81	0.14
Amphiodia pulchella	1.69	0.34	7.12	0.16
Ophiactis savignyi	6.08	-0.11	10.52	0.03
Naineris setosa	8.88	-0.73	10.34	0.23
Scoloplos (*Leodamus*) *rubra*	7.41	-0.35	13.07	0.09

Table 12. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	5.56	-0.19	9.63	0.07
Aricidea sp. C	19.77	-1.83	15.31	0.37
Paraonides n. sp.	1.94	0.43	11.46	0.12
Minuspio cirrifera	9.44	-0.74	11.09	0.21
Prionospio cristata	1.47	0.84	10.77	0.25
Prionospio heterobranchia	17.76	-1.37	10.73	0.39
Caulleriella alata	8.07	-0.51	5.30	0.30
cf. *Caulleriella killariensis*	10.61	-0.57	10.11	0.18
Tharyx annulosus	12.36	-0.88	18.69	0.15
Capitella jonesi	0.64	0.07	1.94	0.12
Mediomastus sp.	5.62	-0.43	4.59	0.30
Notomastus hemipodus	-5.37	1.08	4.25	0.64
Scyphoproctus platyprotus	3.90	-0.17	4.95	0.11
Podarke obscura	9.06	-0.67	5.37	0.38
Ehlersia sp. A	8.89	-0.57	7.13	0.25
Exogone arenosa	9.51	0.59	42.48	0.05
Exogone dispar	16.84	-1.09	25.66	0.14
Exogone verugera	1.70	-0.08	2.95	0.09
Odontosyllis sp.	0.92	0.05	3.12	0.05
Sphaerosyllis spp.	0.51	0.37	10.55	0.12
Typosyllis annularis	10.28	-0.71	14.74	0.16
Typosyllis sp. A	9.97	-0.89	10.67	0.27
Typosyllis sp. F	17.88	-1.30	33.67	0.13
Platynereis dumerilii	4.98	-0.22	4.67	0.15
Glycinde solitaria	6.71	-0.31	5.44	0.19
Lumbrineris latreilli	-0.90	0.30	1.87	0.47
Lumbrineris verrilli	-4.00	1.72	9.88	0.50
Streblosoma hartmanae	1.04	0.04	2.47	0.06
Terebellides stroemi	3.34	-0.01	6.62	0.01
Branchiomma nigromaculata	6.37	-0.37	4.81	0.24
Fabricia sabella	8.71	-0.46	10.26	0.15
Sabella variegata	49.16	-3.59	76.74	0.15

Table 13. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	172.75	-16.08	282.36	0.19
Paracerceis caudata	31.83	-2.84	50.47	0.19
Paratanaidae sp. A	14.85	-0.76	19.97	0.13
Turbellaria	7.73	-0.58	12.47	0.15
Nemertina	29.51	-0.41	29.78	0.05
Nematoda	52.86	-3.35	38.29	0.28
Harpachoida spp.	12.55	-1.08	18.77	0.19
Myodocopa spp.	-7.07	2.19	10.15	0.59
Cymadusa compta	23.59	-2.01	25.77	0.25
Erichthonius brasiliensis	44.11	-4.32	24.64	0.51
Lembos unicornis	6.89	-0.61	4.65	0.41
Lysianassa alba	10.68	-0.87	12.89	0.22
Brachidontes exustus	6.74	-0.62	7.31	0.28
Caecum pulchellum	244.05	-18.80	205.91	0.29
Chione cancellata	3.74	-0.35	2.47	0.44
Meioceras nitida	32.97	-3.09	43.24	0.23
Tellina versicolor	3.26	-0.05	4.12	0.04
Scoloplos (*Leodamus*) *rubra*	4.96	-0.31	8.40	0.13
Aricidea philbinae	6.50	-0.25	13.95	0.06
Paraonides n. sp.	-0.56	0.69	5.78	0.37
Minuspio cirrifera	5.74	-0.39	5.30	0.24
Prionospio heterobranchia	29.01	-2.82	22.69	0.39
Caulleriella alata	6.72	-0.64	3.81	0.49
Mediomastus sp.	2.33	-0.13	1.55	0.27
Notomastus hemipodus	-0.79	0.29	1.03	0.69
Podarke obscura	3.63	-0.24	3.50	0.23
Ehlersia sp. A	5.17	-0.28	5.01	0.19
Platynereis dumerilii	6.52	-0.46	11.54	0.13
Lumbrineris verrilli	0.66	0.81	6.55	0.39
Schistomeringos rudolphi	5.49	-0.52	6.27	0.27
Sabella variegata	77.20	-6.48	93.11	0.23

Table 14. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	9.76	-0.74	7.22	0.37
Nemertina spp.	18.70	-0.78	12.73	0.23
Nematoda spp.	76.31	-3.86	131.07	0.11
Sipuncula spp.	2.52	-0.08	3.49	0.09
Copepoda spp.	11.04	-0.26	22.92	0.04
Myodocopa spp.	10.97	0.32	20.94	0.06
Paratanaidae spp.	9.29	7.03	140.95	0.19
Tanaidae spp.	35.74	-3.25	27.26	0.42
Carpias sp. A	399.30	-35.94	499.38	0.27
Paracerceis caudata	30.46	-2.73	32.62	0.31
Amphilochus neopolitanus	8.10	-0.65	5.99	0.39
Cerapus n. sp.	21.55	-2.04	20.70	0.36
Cymadusa compta	21.56	-1.81	13.09	0.47
Dulichiella appendiculata	58.34	-5.47	54.28	0.37
Elasmopus laevis	37.39	-1.62	42.49	0.15
Erichthonius brasiliensis	49.84	-4.46	26.95	0.54
Lembos unicornis	32.95	-2.84	26.25	0.39
Listriella barnardi	4.93	-0.39	5.59	0.26
Lysianassa alba	45.42	-4.20	39.40	0.38
Photis pugnator	67.68	-6.17	72.17	0.32
Corophium tuberculatum	5.27	-0.46	3.45	0.46
Rhepoxynius sp. indet.	18.48	-1.63	14.16	0.41
Tethygenia longleyi	18.44	-1.53	16.95	0.33
Amphiodia pulchella	6.12	-0.50	6.11	0.31
Caecum plicatum	-6.21	2.44	22.66	0.39
Caecum pulchellum	291.30	-26.27	185.20	0.48
Cumingia tellinoides	5.08	-0.44	4.63	0.35
Ischnochiton papillosus	5.17	-0.45	6.15	0.27
Lima pellucida	5.13	-0.47	2.96	0.53
Meioceras nitida	53.33	-4.80	43.12	0.40
Parvilucina multilineata	17.56	-0.89	25.34	0.13
Tellina versicolor	6.88	-0.18	5.38	0.13
Haploscoloplos foliosus	4.35	-0.16	6.10	0.10
Naineris setosa	8.36	-0.75	6.68	0.40
Scoloplos (*Leodamus*) *rubra*	1.39	0.09	3.44	0.10
Aricidea philbinae	5.60	-0.28	7.12	0.15
Aricidea n. sp. A	-0.56	0.34	4.84	0.26
Paraonides n. sp.	5.23	0.12	8.08	0.06
Prionospio cristata	4.32	-0.14	5.15	0.11
Prionospio heterobranchia	11.28	-0.91	6.66	0.47
Spiochaetopterus costarum	2.35	-0.01	6.58	0.01
Caulleriella alata	3.66	-0.30	2.70	0.40
Tharyx annulosus	3.19	-0.07	5.33	0.05
Mediomastus sp.	5.37	-0.35	4.40	0.30
Notomastus hemipodus	-0.74	0.35	1.47	0.68

Table 14. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scyphoproctus platyprotus	14.41	-1.17	13.69	0.32
Ehlersia sp. A	4.10	-0.20	6.83	0.12
Exogone arenosa	1.22	0.83	18.87	0.17
Odontosyllis sp. A	3.65	-0.19	3.56	0.20
Sphaerosyllis spp.	5.39	0.46	18.22	0.10
Typosyllis sp. A	9.86	-0.82	16.19	0.19
Typosyllis sp. F	13.70	-1.18	20.59	0.22
Platynereis dumerilii	4.48	-0.35	3.34	0.38
Glycera abranchiata	2.02	-0.03	2.63	0.05
Glycinde solitaria	2.95	-0.03	3.52	0.04
Lumbrineris latreilli	1.03	0.05	1.68	0.11
Lumbrineris verrilli	-0.51	1.28	7.96	0.53
Schistomeringos cf. *pectinata*	1.68	0.06	4.24	0.06
Schistomeringos rudolphi	4.04	-0.33	2.98	0.40
Piromis eruca	5.20	-0.39	4.50	0.32
Polycirrus eximius	9.12	-0.70	15.18	0.18
Terebellides stroemi	0.74	0.51	7.17	0.27
Chone americana	2.59	-0.17	3.12	0.20
Fabricia sabella	4.00	-0.21	5.59	0.14
Sabella variegata	151.58	-11.70	207.65	0.21

Table 15. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with Water Depth. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	28.77	-1.50	24.36	0.23
Nematoda spp.	31.82	-0.98	30.46	0.12
Copepoda spp.	20.60	-1.62	35.31	0.17
Myodocopa spp.	-5.49	3.30	27.56	0.42
Paratanaidae spp.	33.93	-1.48	43.00	0.13
Carpias sp. A	19.98	-1.54	19.81	0.29
Paracerceis caudata	14.51	-1.15	18.82	0.23
Cerapus n. sp.	15.11	-1.28	12.49	0.36
Cymadusa compta	11.45	-0.79	15.86	0.19
Elasmopus laevis	16.64	-1.33	20.75	0.24
Lysianassa alba	27.48	-2.32	39.35	0.22
Amphiodia pulchella	2.88	0.21	6.51	0.12
Caecum pulchellum	310.94	-21.43	301.96	0.26
Chione cancellata	6.19	-0.48	4.31	0.39
Ischnochiton papillosus	5.13	-0.24	5.12	0.18
Marginella apicina	3.33	-0.20	3.67	0.20
Meioceras nitida	23.87	-1.24	28.67	0.16
Nucula proxima	-0.37	0.44	3.46	0.44
Olivella perplexa	0.82	0.08	2.32	0.13
Parvilucina multilineata	0.06	1.19	11.91	0.36
Tellina versicolor	6.27	-0.26	6.47	0.15
Naineris setosa	5.59	-0.38	5.68	0.25
Scoloplos (*Leodamus*) *rubra*	0.58	0.26	3.72	0.25
Aricidea fragilis	-1.79	0.63	5.23	0.42
Aricidea philbinae	5.43	-0.31	5.93	0.20
Paraonides n. sp.	10.07	0.95	33.56	0.11
Minuspio cirrifera	1.76	0.06	2.73	0.08
Prionospio heterobranchia	15.00	-1.16	9.09	0.44
Caulleriella alata	8.57	-0.31	14.72	0.08
Tharyx annulosus	3.88	0.12	5.66	0.08
Mediomastus sp.	1.53	0.20	4.29	0.18
Podarke obscura	7.02	-0.46	5.75	0.29
Brania sp. A	2.41	-0.09	3.53	0.09
Ehlersia sp. A	1.37	0.23	6.61	0.13
Exogone arenosa	7.41	0.45	35.33	0.05
Exogone dispar	7.32	-0.38	9.09	0.16
Exogone verugera	4.08	-0.22	4.61	0.18
Sphaerosyllis spp.	2.16	0.35	14.79	0.09
Typosyllis annularis	12.82	-1.03	20.88	0.19
Typosyllis sp. F	24.54	-1.89	40.47	0.18
Ceratonereis irritabilis	3.35	-0.18	5.55	0.12
Platynereis dumerilii	1.62	-0.07	1.65	0.15
Lumbrineris latreilli	0.35	0.12	1.59	0.28
Lumbrineris verrilli	0.14	2.08	22.40	0.33
Piromis eruca	3.72	-0.12	6.70	0.07
Branchiomma nigromaculata	7.45	-0.41	10.41	0.15
Fabricia sabella	3.93	-0.12	5.10	0.09
Sabella variegata	62.94	-3.94	105.65	0.14

Table 16. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	-5856.96	212.76	405.06	0.25
Paracerceis caudata	-854.78	31.09	59.34	0.25
Erichsonella filiformis isabelensis	-47.80	1.75	3.19	0.26
Anthozoa	-10.32	0.43	3.86	0.05
Turbellaria	-147.87	5.55	18.40	0.14
Nemertina	126.30	-2.74	62.12	0.02
Nematoda	345.24	-10.33	93.23	0.05
Harpachoida spp.	-173.41	6.53	23.12	0.14
Myodocopa spp.	-96.14	4.17	54.48	0.04
Podocopa spp.	-2689.23	97.84	189.92	0.24
Dikonophora sp.	273.18	-9.09	36.85	0.12
Ampelisca abdita	-4.84	0.22	2.71	0.04
Ampelisca vadorum	26.37	-0.89	3.97	0.11
Batea catharinensis	-59.22	2.38	17.23	0.07
Dulichiella appendiculata	-1244.42	45.41	99.57	0.22
Lembos unicornis	-174.22	6.45	15.87	0.19
Neopanope packardii	1.92	-0.03	2.11	0.01
Capitellidae	414.71	-13.90	45.97	0.15
Cirratulidae	-418.84	15.68	23.63	0.31
Dorvilleidae	184.71	-6.41	2.76	0.75
Eunicidae	61.53	-2.02	8.48	0.11
Glyceridae	39.02	-1.35	2.58	0.25
Goniadidae	-39.45	1.58	5.68	0.13
Lumbrineridae	0.01	0.40	12.39	0.02
Maldanidae	-168.04	6.12	9.59	0.30
Nereidae	71.91	-2.35	4.88	0.23
Orbiniidae	-158.78	6.15	19.09	0.15
Paraonidae	350.68	-11.67	21.13	0.26
Sabellidae	177.59	-5.02	78.33	0.03
Spionidae	487.89	-16.37	25.15	0.30
Syllidae	1866.44	-63.73	139.76	0.22
Terebellidae	114.76	-3.76	14.31	0.13
Trichobranchidae	-74.85	2.77	5.42	0.24
Oligochaeta	-178.86	7.63	55.03	0.07
Caecum pulchellum	-8110.57	301.43	612.68	0.23
Chione cancellata	-21.40	0.88	3.64	0.12
Marginella apicina	41.98	-1.44	2.74	0.25
Meioceras nitida	177.50	-5.37	60.81	0.04
Nucula proxima	-17.66	0.69	3.71	0.09
Parvilucina multilineata	-35.95	1.45	7.84	0.09
Tellina versicolor	-78.16	2.88	3.58	0.36
Amphiodia pulchella	98.37	-3.36	7.02	0.23
Ophiactis savignyi	25.22	-0.71	10.52	0.03
Naineris setosa	-151.34	5.52	10.28	0.25
Scoloplos (*Leodamus*) *rubra*	-330.79	11.96	11.77	0.44

Table 16. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	47.52	-1.54	9.62	0.08
Aricidea sp. C	-147.04	5.48	16.25	0.16
Paraonides n. sp.	223.64	-7.79	10.91	0.33
Minuspio cirrifera	98.75	-3.37	11.23	0.14
Prionospio cristata	226.41	-7.80	10.46	0.34
Prionospio heterobranchia	122.38	-4.07	11.48	0.17
Caulleriella alata	-117.67	4.35	5.14	0.38
cf. *Caulleriella killariensis*	-84.64	3.25	10.17	0.15
Tharyx annulosus	7.30	-0.04	18.91	0.00
Capitella jonesi	-43.42	1.59	1.80	0.39
Mediomastus sp.	-68.45	2.53	4.64	0.26
Notomastus hemipodus	147.42	-5.17	4.95	0.45
Scyphoproctus platyprotus	88.16	-3.04	4.76	0.30
Podarke obscura	36.15	-1.13	5.79	0.09
Ehlersia sp. A	-34.30	1.40	7.34	0.09
Exogone arenosa	663.86	-23.16	41.02	0.26
Exogone dispar	149.83	-5.01	25.80	0.09
Exogone verugera	-19.55	0.74	2.94	0.12
Odontosyllis sp.	55.36	-1.93	2.98	0.30
Sphaerosyllis spp.	221.11	-7.76	9.93	0.35
Typosyllis annularis	-207.01	7.56	14.46	0.25
Typosyllis sp. A	237.87	-8.34	10.30	0.37
Typosyllis sp. F	-476.05	17.27	32.89	0.25
Platynereis dumerilii	-1.00	0.16	4.72	0.02
Glycinde solitaria	-51.58	2.00	5.45	0.18
Lumbrineris latreilli	34.43	-1.18	2.04	0.27
Lumbrineris verrilli	-123.45	4.68	11.18	0.20
Streblosoma hartmanae	8.37	-0.25	2.47	0.05
Terebellides stroemi	-89.51	3.30	6.42	0.24
Branchiomma nigromaculata	55.94	-1.86	4.88	0.18
Fabricia sabella	94.63	-3.18	10.26	0.15
Sabella variegata	-50.36	2.65	77.64	0.02

Table 17. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	-1639.53	79.14	277.58	0.26
Paracerceis caudata	-302.57	14.64	49.47	0.27
Paratanaidae sp. A	24.73	-0.67	20.12	0.03
Turbellaria	-62.19	3.07	12.28	0.23
Nemertina	-42.54	3.21	29.66	0.10
Nematoda	-366.86	18.44	35.90	0.44
Harpachoida spp.	-107.23	5.22	18.47	0.26
Myodocopa spp.	95.69	-4.12	11.94	0.31
Cymadusa compta	-314.42	15.05	22.52	0.53
Erichthonius brasiliensis	-371.45	17.97	23.02	0.59
Lembos unicornis	-29.17	1.49	4.89	0.28
Lysianassa alba	-62.23	3.12	12.89	0.22
Brachidontes exustus	-54.24	2.64	7.18	0.33
Caecum pulchellum	-2846.24	137.43	171.72	0.60
Chione cancellata	-23.96	1.18	2.50	0.41
Meioceras nitida	-316.70	15.27	42.06	0.33
Tellina versicolor	-21.81	1.14	3.98	0.26
Scoloplos (*Leodamus*) *rubra*	-49.34	2.42	8.15	0.27
Aricidea philbinae	-36.89	1.93	13.86	0.13
Paraonides n. sp.	14.99	-0.52	6.21	0.08
Minuspio cirrifera	-23.46	1.24	5.33	0.21
Prionospio heterobranchia	-179.59	8.83	23.14	0.34
Caulleriella alata	-40.02	1.98	3.96	0.43
Mediomastus sp.	-12.63	0.65	1.49	0.38
Notomastus hemipodus	10.09	-0.42	1.36	0.28
Podarke obscura	-32.27	1.59	3.26	0.42
Ehlersia sp. A	-18.13	1.00	5.01	0.18
Platynereis dumerilii	-113.20	5.40	10.46	0.44
Lumbrineris verrilli	-4.91	0.49	7.08	0.07
Schistomeringos rudolphi	-50.57	2.44	6.09	0.36
Sabella variegata	-1155.51	55.11	80.15	0.55

Table 18. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	-148.32	5.39	6.73	0.50
Nemertina spp.	-198.91	7.47	11.94	0.41
Nematoda spp.	-787.87	29.50	130.21	0.16
Sipuncula spp.	-29.32	1.10	3.42	0.23
Copepoda spp.	-143.57	5.37	22.61	0.17
Myodocopa spp.	-11.13	0.85	20.96	0.03
Paratanaidae spp.	838.40	-27.56	142.22	0.14
Tanaidae spp.	-266.26	9.89	29.20	0.24
Carpias sp. A	-7682.36	275.95	479.19	0.38
Paracerceis caudata	-588.24	21.13	30.76	0.44
Amphilochus neopolitanus	-34.94	1.37	6.42	0.15
Cerapus n. sp.	-349.31	12.58	20.25	0.41
Cymadusa compta	-179.30	6.65	14.08	0.32
Dulichiella appendiculata	-1050.90	37.75	51.61	0.47
Elasmopus laevis	-322.40	12.28	42.04	0.21
Erichthonius brasiliensis	-707.83	25.63	26.24	0.57
Lembos unicornis	-261.29	9.71	27.61	0.25
Listriella barnardi	-0.41	0.10	5.79	0.01
Lysianassa alba	-827.97	29.75	36.92	0.50
Photis pugnator	-1278.16	45.91	68.53	0.43
Corophium tuberculatum	-35.34	1.32	3.78	0.24
Rhepoxynius sp. indet.	9.49	-0.05	15.52	0.00
Tethygenia longleyi	-214.50	7.84	17.05	0.31
Amphiodia pulchella	-99.75	3.61	5.87	0.40
Caecum plicatum	337.89	-11.55	23.13	0.34
Caecum pulchellum	-4972.78	179.10	167.90	0.61
Cumingia tellinoides	-81.79	2.95	4.46	0.43
Ischnochiton papillosus	-60.31	2.20	6.19	0.25
Lima pellucida	-66.77	2.42	3.02	0.50
Meioceras nitida	-494.87	18.19	45.14	0.28
Parvilucina multilineata	-276.56	10.14	24.52	0.29
Tellina versicolor	-31.26	1.30	5.35	0.17
Haploscoloplos foliosus	18.99	-0.55	6.12	0.06
Naineris setosa	-145.22	5.23	6.25	0.52
Scoloplos (*Leodamus*) *rubra*	-12.29	0.50	3.43	0.10
Aricidea philbinae	-35.90	1.40	7.13	0.14
Aricidea n. sp. A	-2.46	0.14	5.02	0.02
Paraonides n. sp.	-64.68	2.48	7.90	0.22
Prionospio cristata	-38.67	1.48	5.08	0.21
Prionospio heterobranchia	-99.10	3.68	7.05	0.35
Spiochaetopterus costarum	78.20	-2.67	6.29	0.29
Caulleriella alata	-46.27	1.69	2.69	0.41
Tharyx annulosus	-19.02	0.76	5.31	0.10
Mediomastus sp.	-15.41	0.65	4.58	0.10
Notomastus hemipodus	28.64	-0.95	1.87	0.34

Table 18. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scyphoproctus platyprotus	-151.30	5.56	13.86	0.28
Ehlersia sp. A	-53.41	1.98	6.73	0.21
Exogone arenosa	77.24	-2.49	19.06	0.09
Odontosyllis sp. A	-49.93	1.84	3.38	0.36
Sphaerosyllis spp.	-11.98	0.71	18.30	0.03
Typosyllis sp. A	-100.73	3.70	16.28	0.16
Typosyllis sp. F	-291.02	10.44	19.72	0.36
Platynereis dumerilii	-48.78	1.79	3.37	0.36
Glycera abranchiata	-13.78	0.55	2.61	0.15
Glycinde solitaria	0.02	0.10	3.52	0.02
Lumbrineris latreilli	-9.67	0.39	1.67	0.16
Lumbrineris verrilli	115.28	-3.78	8.98	0.29
Schistomeringos cf. *pectinata*	-26.88	1.02	4.19	0.17
Schistomeringos rudolphi	-56.31	2.05	2.89	0.45
Piromis eruca	-32.14	1.23	4.66	0.19
Polycirrus eximius	-121.04	4.42	15.09	0.21
Terebellides stroemi	48.44	-1.56	7.36	0.15
Chone americana	-28.60	1.06	3.09	0.24
Fabricia sabella	-34.58	1.31	5.57	0.17
Sabella variegata	-22228.08	81.00	204.46	0.27

Table 19. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with Water Temperature Measured at the Bottom. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	-159.03	6.19	24.46	0.21
Nematoda spp.	202.85	-6.15	30.24	0.17
Copepoda spp.	-377.01	13.44	33.98	0.32
Myodocopa spp.	120.93	-3.66	30.14	0.10
Paratanaidae spp.	-124.47	5.17	43.15	0.10
Carpias sp. A	-235.11	8.51	19.36	0.35
Paracerceis caudata	-248.50	8.87	17.79	0.39
Cerapus n. sp.	18.92	-0.41	13.41	0.03
Cymadusa compta	-212.61	7.60	14.78	0.40
Elasmopus laevis	-177.19	6.43	20.66	0.26
Lysianassa alba	-443.20	15.82	38.02	0.33
Amphiodia pulchella	-43.31	1.65	6.40	0.21
Caecum pulchellum	-5542.74	198.40	263.33	0.54
Chone cancellata	-71.34	2.58	4.14	0.47
Ischnochiton papillosus	-67.69	2.47	4.75	0.41
Marginella apicina	-44.95	1.63	3.48	0.37
Meioceras nitida	-261.90	9.64	27.87	0.28
Nucula proxima	2.77	-0.01	3.84	0.00
Olivella perplexa	5.92	-0.16	2.34	0.06
Parvilucina multilineata	-36.79	1.54	12.68	0.10
Tellina versicolor	-39.79	1.54	6.42	0.20
Naineris setosa	-85.27	3.07	5.24	0.45
Scoloplos (*Leodamus*) *rubra*	-23.60	0.90	3.77	0.20
Aricidea fragilis	-21.77	0.83	5.71	0.12
Aricidea philbinae	-35.54	1.35	5.94	0.19
Paraonides n. sp.	411.11	-13.71	31.67	0.35
Minuspio cirrifera	-23.73	0.90	2.63	0.28
Prionospio heterobranchia	51.08	-1.51	10.03	0.13
Caulleriella alata	-106.27	3.92	14.39	0.23
Tharyx annulosus	-50.67	1.92	5.44	0.29
Mediomastus sp.	15.76	0.45	4.34	0.09
Podarke obscura	-17.14	0.74	5.98	0.10
Brania sp. A	-14.46	0.57	3.52	0.14
Ehlersia sp. A	87.60	-2.94	6.18	0.38
Exogone arenosa	340.99	-11.48	34.00	0.28
Exogone dispar	-92.35	3.38	8.74	0.31
Exogone verugera	-23.32	0.90	4.62	0.16
Sphaerosyllis spp.	150.59	-5.07	14.21	0.29
Typosyllis amularis	-227.97	8.13	20.09	0.33
Typosyllis sp. F	-394.06	14.11	39.31	0.29
Ceratonereis irritabilis	-58.15	2.09	5.30	0.32
Platynereis dumerilii	-16.65	0.62	1.59	0.32
Lumbrineris latreilli	8.29	-0.25	1.64	0.13
Lumbrineris verrilli	169.55	-5.42	23.32	0.19
Piromis eruca	-62.86	2.28	6.43	0.29
Branchiomma nigromaculata	-73.83	2.73	10.26	0.22
Fabricia sabella	-0.59	0.13	5.12	0.02
Sabella variegata	-1073.89	38.58	101.53	0.31

Table 20. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	135.61	-0.24	415.36	0.11
Paracerceis caudata	20.75	-0.03	60.85	0.11
Erichsonella filiformis isabelensis	1.68	-0.00	3.23	0.20
Anthozoa	1.85	-0.00	3.87	0.03
Turbellaria	8.27	-0.00	18.58	0.04
Nemertina	44.79	0.06	61.20	0.17
Nematoda	57.32	-0.03	93.24	0.05
Harpachoida spp.	9.90	0.00	23.34	0.00
Myodocopa spp.	8.81	0.15	46.25	0.53
Podocopa spp.	68.07	-0.13	194.15	0.13
Dikonophora sp.	9.59	0.10	31.17	0.54
Ampelisca abdita	1.76	-0.00	2.62	0.26
Ampelisca vadorum	1.53	-0.00	3.99	0.04
Batea catharinensis	8.98	-0.02	17.02	0.17
Dulichiella appendiculata	30.85	-0.00	101.98	0.01
Lembos unicornis	5.10	0.02	15.65	0.25
Neopanope packardii	0.65	0.00	1.94	0.40
Capitellidae	26.47	-0.02	46.21	0.10
Cirratulidae	21.93	-0.01	24.80	0.05
Dorvilleidae	4.36	0.00	4.06	0.21
Eunicidae	4.20	0.01	8.42	0.17
Glyceridae	1.28	-0.00	2.66	0.08
Goniadidae	5.45	-0.01	5.51	0.27
Lumbrineridae	13.19	-0.02	11.57	0.36
Maldanidae	4.24	-0.01	9.98	0.10
Nereidae	6.33	-0.00	4.97	0.13
Orbiniidae	13.49	0.00	19.32	0.03
Paraonidae	20.06	0.04	20.71	0.32
Sabellidae	38.77	-0.03	78.20	0.07
Spionidae	24.29	0.05	24.54	0.37
Syllidae	67.63	0.12	141.30	0.16
Terebellidae	9.34	-0.00	14.43	0.01
Trichobranchidae	3.05	-0.00	5.57	0.05
Oligochaeta	25.76	0.12	50.17	0.42
Caecum pulchellum	393.03	-0.51	622.06	0.16
Chione cancellata	2.33	0.01	3.02	0.57
Marginella apicina	1.01	0.01	2.61	0.39
Meioceras nitida	28.58	-0.02	60.70	0.08
Nucula proxima	2.16	-0.00	3.62	0.23
Parvilucina multilineata	5.51	-0.01	7.72	0.19
Tellina versicolor	3.13	-0.00	3.77	0.20
Amphiodia pulchella	3.39	0.01	7.02	0.22
Ophiactis savignyi	5.77	-0.01	10.47	0.10
Naineris setosa	3.54	0.00	10.61	0.04
Scoloplos (*Leodamus*) *rubra*	5.82	-0.01	12.94	0.16

Table 20. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	3.87	0.00	9.62	0.08
Aricidea sp. C	4.00	0.04	14.89	0.43
Paraonides n. sp.	4.67	0.00	11.53	0.05
Minuspio cirrifera	1.58	0.03	9.35	0.57
Prionospio cristata	6.72	0.01	11.02	0.13
Prionospio heterobranchia	6.83	0.02	11.22	0.27
Caulleriella alata	4.82	-0.00	5.52	0.12
cf. *Caulleriella killariensis*	5.49	0.01	9.94	0.26
Tharyx annulosus	7.37	-0.01	18.70	0.15
Capitella jonesi	1.36	-0.00	1.88	0.28
Mediomastus sp.	2.15	0.01	4.68	0.22
Notomastus hemipodus	2.59	-0.00	5.47	0.17
Scyphoproctus platyprotus	2.07	0.01	4.72	0.32
Podarke obscura	3.64	0.01	5.57	0.26
Ehlersia sp. A	4.25	0.01	7.19	0.22
Exogone arenosa	11.63	0.03	42.25	0.11
Exogone dispar	9.96	-0.01	25.85	0.07
Exogone verugera	1.20	-0.00	2.95	0.06
Odontosyllis sp.	1.25	0.00	3.12	0.01
Sphaerosyllis spp.	2.54	0.01	10.52	0.13
Typosyllis annularis	5.88	-0.01	14.86	0.09
Typosyllis sp. A	0.19	0.04	7.11	0.77
Typosyllis sp. F	10.52	-0.02	33.69	0.12
Platynereis dumerilii	3.82	-0.00	4.64	0.18
Glycinde solitaria	5.13	-0.01	5.34	0.26
Lumbrineris latreilli	1.36	-0.00	2.08	0.18
Lumbrineris verrilli	9.53	-0.02	10.85	0.31
Streblosoma hartmanae	1.50	-0.00	2.44	0.16
Terebellides stroemi	3.37	-0.00	6.61	0.04
Branchiomma nigromaculata	3.22	0.01	4.77	0.28
Fabricia sabella	4.43	0.01	10.07	0.24
Sabella variegata	28.81	-0.06	76.80	0.15

Table 21. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	96.13	-0.20	284.13	0.15
Paracerceis caudata	18.41	-0.04	50.75	0.16
Paratanaidae sp. A	8.82	0.01	19.98	0.12
Turberllaria	5.08	-0.01	12.49	0.14
Nemertina	28.99	-0.02	29.57	0.13
Nematoda	32.40	-0.00	39.91	0.02
Harpachoida spp.	7.45	-0.01	18.87	0.16
Myodocopa spp.	7.50	-0.01	12.44	0.13
Cymadusa compta	13.16	-0.02	26.36	0.15
Erichthonius brasiliensis	18.06	-0.01	28.58	0.06
Lembos unicornis	2.75	0.00	5.06	0.12
Lysianassa alba	5.84	-0.00	13.18	0.08
Brachidontes exustus	3.06	-0.00	7.60	0.05
Caecum pulchellum	164.22	-0.31	203.87	0.32
Chione cancellata	1.41	0.00	2.73	0.08
Meioceras nitida	17.4i	-0.03	43.94	0.15
Tellina versicolor	3.48	-0.00	4.00	0.25
Scoloplos (*Leodamus*) *rubra*	3.99	-0.01	8.26	0.22
Aricidea philbinae	6.07	-0.01	13.82	0.15
Paraonides n. sp.	4.44	-0.01	6.09	0.21
Minuspio cirrifera	3.01	0.00	5.43	0.11
Prionospio heterobranchia	10.13	0.01	24.49	0.10
Caulleriella alata	2.71	0.00	4.38	0.01
Mediomastus sp.	1.85	-0.00	1.50	0.37
Notomastus hemipodus	0.96	0.00	1.41	0.05
Podarke obscura	2.50	-0.00	3.53	0.19
Ehlersia sp. A	3.36	0.00	5.10	0.01
Platynereis dumerilii	4.64	-0.01	11.51	0.16
Lumbrineris verrilli	7.12	-0.01	6.61	0.36
Schistomeringos rudolphi	2.73	-0.00	6.45	0.13
Sabella variegata	45.78	-0.08	94.16	0.18

Table 22. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	4.53	0.00	7.71	0.13
Nemertina spp.	13.96	-0.00	13.09	0.03
Nematoda spp.	60.96	-0.08	130.80	0.13
Sipuncula spp.	2.32	-0.00	3.46	0.17
Copepoda spp.	11.90	-0.02	22.45	0.20
Myodocopa spp.	14.20	-0.01	20.85	0.11
Paratanaidae spp.	59.99	-0.05	143.14	0.08
Tanaidae spp.	18.71	-0.03	29.30	0.22
Carpias sp. A	198.31	-0.23	516.13	0.10
Paracerceis caudata	15.49	-0.02	34.02	0.13
Amphilochus neopolitanus	2.83	0.01	6.11	0.34
Cerapus n. sp.	8.87	-0.00	22.17	0.02
Cymadusa compta	7.25	0.02	13.90	0.36
Dulichiella appendiculata	23.27	0.00	58.32	0.01
Elasmopus laevis	27.51	-0.00	42.95	0.02
Erichthonius brasiliensis	21.61	-0.00	32.07	0.00
Lembos unicornis	5.80	0.08	22.73	0.60
Listriella barnardi	0.40	0.02	4.30	0.67
Lysianassa alba	17.87	0.01	42.60	0.04
Photis pugnator	37.61	-0.08	74.13	0.22
Corophium tuberculatum	1.99	0.00	3.84	0.17
Rhepoxynius sp. indet.	4.19	0.03	13.63	0.48
Tethygenia longleyi	7.74	0.01	17.87	0.10
Amphiodia pulchella	3.15	-0.00	6.40	0.06
Caecum plicatum	11.89	-0.02	24.08	0.20
Caecum pulchellum	135.08	-0.09	210.68	0.09
Cumingia tellinoides	2.19	0.00	4.94	0.03
Ischnochiton papillosus	0.05	0.02	4.73	0.67
Lima pellucida	1.27	0.01	3.09	0.46
Meioceras nitida	11.82	0.09	42.17	0.44
Parvilucina multilineata	14.02	-0.02	25.28	0.15
Tellina versicolor	5.24	0.00	5.35	0.17
Haploscoloplos foliosus	3.75	-0.00	6.08	0.13
Naineris setosa	3.10	0.00	7.23	0.13
Scoloplos (*Leodamus*) *rubra*	2.50	-0.00	3.29	0.31
Aricidea philbinae	3.69	0.00	7.20	0.03
Aricidea n. sp. A	2.06	-0.00	4.95	0.17
Paraonides n. sp.	7.81	-0.02	7.35	0.42
Prionospio cristata	2.72	0.01	5.03	0.25
Prionospio heterobranchia	4.29	0.01	7.16	0.31
Spiochaetopterus costarum	3.01	-0.01	6.43	0.21
Caulleriella alata	1.57	0.00	2.93	0.11
Tharyx annulosus	3.46	-0.01	5.16	0.26
Mediomastus sp.	2.56	0.00	4.48	0.23
Notomastus hemipodus	1.55	-0.00	1.99	0.08

Table 22. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scyphoproctus platyprotus	2.47	0.04	11.64	0.59
Ehlersia sp. A	1.64	0.01	6.52	0.32
Exogone arenosa	8.01	-0.01	18.92	0.15
Odontosyllis sp. A	3.02	-0.00	3.48	0.29
Sphaerosyllis spp.	10.07	-0.01	18.02	0.18
Typosyllis sp. A	2.71	0.02	16.08	0.22
Typosyllis sp. F	8.11	-0.02	20.79	0.17
Platynereis dumerilii	1.78	0.00	3.49	0.25
Glycera abranchiata	1.60	0.00	2.61	0.15
Glycinde solitaria	2.81	-0.00	3.52	0.04
Lumbrineris latreilli	1.45	-0.00	1.68	0.13
Lumbrineris verrilli	9.42	-0.02	8.74	0.36
Schistomeringos cf. *pectinata*	2.54	-0.00	4.16	0.21
Schistomeringos rudolphi	1.76	0.00	3.23	0.10
Piromis eruca	1.14	0.01	3.69	0.63
Polycirrus eximius	5.44	-0.01	15.35	0.09
Terebellides stroemi	4.29	-0.00	7.42	0.07
Chone americana	2.02	-0.00	3.05	0.29
Fabricia sabella	3.39	-0.01	5.49	0.24
Sabella variegata	62.80	0.12	210.86	0.13

Table 23. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with the seagrass *Thalassia testudinum* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	20.89	-0.03	24.90	0.10
Nematoda spp.	30.97	-0.10	29.56	0.27
Copepoda spp.	14.79	-0.08	35.19	0.19
Myodocopa spp.	19.54	-0.08	29.63	0.21
Paratanaidae spp.	13.43	0.20	39.87	0.39
Carpias sp. A	9.47	0.01	20.64	0.05
Paracerceis caudata	9.26	-0.04	19.07	0.16
Cerapus n. sp.	4.66	0.04	12.92	0.27
Cymadusa compta	3.65	0.05	15.55	0.27
Elasmopus laevis	9.45	-0.02	21.28	0.09
Lysianassa alba	16.19	-0.06	40.00	0.13
Amphiodia pulchella	3.53	0.01	6.47	0.16
Caecum pulchellum	175.02	0.00	312.87	0.00
Chione cancellata	1.74	0.03	4.17	0.46
Ischnochiton papillosus	1.76	0.03	4.37	0.54
Marginella apicina	1.43	0.01	3.62	0.26
Meioceras nitida	13.74	0.04	28.85	0.12
Nucula proxima	2.88	-0.01	3.77	0.19
Olivella perplexa	1.56	-0.00	2.32	0.15
Parvilucina multilineata	9.63	-0.04	12.36	0.24
Tellina versicolor	4.24	0.01	6.53	0.09
Naineris setosa	3.42	-0.00	5.85	0.06
Scoloplos (*Leodamus*) *rubra*	2.91	-0.01	3.69	0.28
Aricidea fragilis	2.87	-0.01	5.66	0.18
Aricidea philbinae	2.53	0.02	5.87	0.24
Paraonides n. sp.	22.90	-0.13	32.08	0.31
Minuspio cirrifera	2.32	-0.00	2.73	0.10
Prionospio heterobranchia	7.95	-0.01	10.10	0.04
Caulleriella alata	7.15	-0.01	14.74	0.06
Tharyx annulosus	4.71	-0.00	5.68	0.01
Mediomastus sp.	3.34	-0.01	4.27	0.19
Podarke obscura	4.25	-0.00	6.01	0.03
Brania sp. A	1.74	0.00	3.54	0.05
Ehlersia sp. A	3.20	-0.01	6.64	0.09
Exogone arenosa	10.99	-0.01	35.36	0.03
Exogone dispar	2.71	0.04	8.55	0.37
Exogone verugera	3.53	-0.02	4.49	0.28
Sphaerosyllis spp.	4.61	-0.00	14.85	0.02
Typosyllis annularis	8.98	-0.05	20.83	0.20
Typosyllis sp. F	18.29	-0.10	40.16	0.21
Ceratonereis irritabilis	2.59	-0.01	5.56	0.11
Platynereis dumerilii	0.97	0.00	1.64	0.21
Lumbrineris latreilli	1.26	-0.00	1.65	0.11
Lumbrineris verrilli	15.71	-0.04	23.49	0.15
Piromis eruca	1.34	0.03	6.26	0.36
Branchiomma nigromaculata	3.10	0.03	10.17	0.26
Fabricia sabella	3.38	-0.00	5.11	0.05
Sabella variegata	31.76	0.12	106.28	0.09

Table 24. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	138.49	-0.45	415.60	0.11
Paracerceis caudata	22.13	-0.08	60.65	0.14
Erichsonella filiformis isabelensis	1.15	0.01	3.26	0.15
Anthozoa	2.13	-0.01	3.81	0.17
Turbellaria	7.96	-0.00	18.60	0.00
Nemertina	50.20	-0.02	62.11	0.03
Nematoda	30.12	0.50	78.78	0.54
Harpachoida spp.	12.13	-0.04	22.92	0.19
Mydocopa spp.	26.38	-0.11	53.40	0.20
Podocopa spp.	74.34	-0.34	192.89	0.17
Dikonophora sp.	16.96	0.02	37.05	0.06
Ampelisca abdita	1.47	-0.00	2.71	0.00
Ampelisca vadorum	1.89	-0.01	3.91	0.21
Batea catharinensis	1.31	0.13	11.60	0.74
Dulichiella appendiculata	38.96	-0.17	100.57	0.17
Lembos unicornis	8.10	-0.03	15.96	0.16
Neopanope packardii	1.07	-0.00	2.11	0.07
Capitellidae	28.86	-0.09	45.63	0.19
Cirratulidae	16.72	0.09	23.01	0.38
Dorvilleidae	4.36	0.01	4.09	0.18
Eunicidae	6.02	-0.02	8.19	0.29
Glyceridae	1.54	-0.01	2.58	0.26
Goniadidae	3 . 86	0.02	5.41	0.33
Lumbrineridae	11 . 61	-0.01	12.38	0.04
Maldanidae	4.71	-0.02	9.88	0.18
Nereidae	4.50	0.03	3.92	0.62
Orbiniidae	16.06	-0.05	18.76	0.24
Paraonidae	22.80	0.00	21.87	0.02
Sabellidae	9.35	0.55	56.51	0.69
Spionidae	26.97	0.03	26.24	0.10
Syllidae	83.80	-0.13	142.53	0.09
Terebellidae	10.10	-0.02	14.33	0.12
Trichobranchidae	3.48	-0.01	5.47	0.20
Oligochaeta	29.53	0.12	53.93	0.21
Caecum pulchellum	226.10	2.51	578.08	0.40
Chione cancellata	2.79	0.01	3.57	0.22
Marginella apicina	0.61	0.02	2.25	0.60
Meioceras nitida	5.54	0.42	43.96	0.69
Nucula proxima	1.95	-0.00	3.71	0.08
Parvilucina multilineata	5.22	-0.01	7.84	0.09
Tellina versicolor	2.15	0.01	3.62	0.34
Amphiodia pulchella	4.28	-0.00	7.19	0.06
Ophiactis savignyi	4.83	0.01	10.47	0.10
Naineris setosa	4.49	-0.02	10.51	0.14
Scoloplos (*Leodamus*) *rubra*	5.57	-0.01	13.06	0.10

Table 24. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	2.25	0.04	8.83	0.40
Aricidea sp. C	7.66	-0.01	16.40	0.09
Paraonides n. sp.	5.53	-0.01	11.49	0.10
Minuspio cirrifera	5.17	-0.02	11.21	0.16
Prionospio cristata	6.51	0.02	11.00	0.15
Prionospio heterobranchia	5.75	0.05	10.64	0.41
Caulleriella alata	3.90	0.01	5.41	0.23
cf. *Caulleriella killariensis*	6.97	-0.01	10.26	0.07
Tharyx annulosus	-1.21	0.15	11.81	0.78
Capitella jonesi	1.14	-0.00	1.96	0.00
Mediomastus sp.	3.19	-0.01	4.66	0.24
Notomastus hemipodus	2.64	-0.01	5.48	0.16
Scyphoproctus platyprotus	2.85	-0.00	4.98	0.05
Podarke obscura	3.65	0.01	5.65	0.23
Ehlersia sp. A	5.03	-0.00	7.37	0.03
Exogone arenosa	17.64	-0.08	41.78	0.19
Exogone dispar	0.90	0.17	19.95	0.64
Exogone verugera	1.44	-0.01	2.89	0.21
Odontosyllis sp.	0.93	0.01	3.05	0.21
Sphaerosyllis spp.	4.04	-0.02	10.46	0.17
Typosyllis amularis	6.00	-1.01	14.86	0.09
Typosyllis sp. A	4.60	-0.02	10.94	0.16
Typosyllis sp. F	11.20	-0.05	33.60	0.14
Platynereis dumerilii	1.33	0.04	2.04	0.90
Glycinde solitaria	3.54	0.02	5.16	0.36
Lumbrineris latreilli	1.23	-0.00	2.12	0.03
Lumbrineris verrilli	7.98	0.00	11.40	0.02
Streblosoma hartmanae	0.91	0.01	2.32	0.34
Terebellides stroemi	3.91	-O.0l	6.49	0.20
Branchiomma nigromaculata	3.10	0.01	4.77	0.28
Fabricia sabella	7.06	-0.03	9.88	0.30
Sabella variegata	-5.11	0.58	51.63	0.75

Table 25. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	85.70	-0.29	285.62	0.11
Paracerceis caudata	16.02	-0.04	51.16	0.09
Paratanaidae sp. A	11.69	-0.03	19.75	0.19
Turbellaria	4.43	-0.01	12.60	0.06
Nemertina	29.12	-0.05	29.31	0.18
Nematoda	23.25	0.19	33.35	0.55
Harpachoida spp.	6.81	-0.02	18.95	0.13
Myodocopa spp.	7.74	-0.02	12.23	0.23
Cymadusa campta	2.30	0.19	15.08	0.82
Erichthonius brasiliensis	14.21	0.07	27.63	0.26
Lembos unicornis	3.29	-0.00	5.06	0.11
Lysianassa alba	5.98	-0.02	13.10	0.14
Brachidontes exustus	2.52	0.01	7.56	0.11
Caecum pulchellum	94.87	0.70	199.96	0.37
Chione cancellata	1.20	0.01	2.61	0.31
Meioceras nitida	14.15	-0.01	44.46	0.02
Tellina versicolor	2.67	0.01	4.07	0.16
Scoloplos (*Leodamus*) *rubra*	3.29	-0.01	8.44	0.09
Aricidea philbinae	3.29	0.04	13.36	0.29
Paraonides n. sp.	3.73	-0.00	6.23	0.00
Minuspio cirrifera	3.26	0.00	5.46	0.03
Prionospio heterobranchia	8.81	0.06	23.73	0.26
Caulleriella alata	2.87	-0.00	4.36	0.08
Mediomastus sp.	1.55	-0.00	1.61	0.02
Notomastus hemipodus	1.18	-0.00	1.34	0.31
Podarke obscura	2.22	-0.00	3.59	0.06
Ehlersia sp. A	3.49	-0.00	5.09	0.04
Platynereis dumerilii	-0.49	0.09	5.22	0.89
Lumbrineris verrilli	5.85	-0.00	7.09	0.04
Schistomeringos rudolphi	2.41	-0.00	6.50	0.05'
Sabella variegata	4.04	0.71	49.01	0.86

Table 26. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	5.59	-0.01	7.70	0.13
Nemertina spp.	15.66	-0.03	12.55	0.28
Nematoda spp.	-2.70	0.82	79.13	0.80
Sipuncula spp.	2.31	-0.00	3.46	0.17
Copepoda spp.	12.06	-0.04	22.35	0.22
Myodocopa spp.	16.23	-0.05	20.02	0.30
Paratanaidae spp.	63.10	-0.14	142.49	0.12
Tanaidae spp.	12.88	0.03	29.74	0.14
Carpias sp. A	202.53	-0.47	515.08	0.12
Paracerceis caudata	11.97	0.02	34.23	0.07
Amphilochus neopolitanus	1.84	0.03	4.96	0.64
Cerapus n. sp.	9.72	-0.02	22.07	0.10
Cymadusa compta	7.63	0.04	14.11	0.32
Dulichiella appendiculata	24.32	-0.01	58.30	0.02
Elasmopus laevis	21.79	0.08	41.70	0.24
Erichthonius brasiliensis	19.51	0.03	31.83	0.12
Lembos unicornis	9.94	0.08	26.79	0.34
Listriella barnardi	2.85	-0.01	5.74	0.13
Lysianassa alba	18.48	0.00	42.67	0.01
Photis pugnator	24.33	0.06	75.63	0.11
Corophium tuberculatum	1.63	0.01	3.65	0.35
Rhepoxynius sp. indet.	8.02	0.00	15.52	0.01
Tethygenia longleyi	3.34	0.08	14.63	0.58
Amphiodia pulchella	3.23	-0.00	6.39	0.09
Caecum plicatum	12.12	-0.04	23.95	0.22
Caecum pulchellum	111.12	0.20	210.04	0.12
Cumingia tellinoides	2.52	-0.00	4.91	0.10
Ischnochiton papillosus	1.32	0.02	6.09	0.31
Lima pellucida	1.99	0.00	3.47	0.08
Meioceras nitida	22.32	0.01	46.99	0.02
Parvilucina multilineata	13.46	-0.02	25.41	0.12
Tellina versicolor	5.28	0.01	5.36	0.16
Haploscoloplos foliosus	2.18	0.02	5.72	0.36
Naineris setosa	2.68	0.01	7.07	0.24
Scoloplos (*Leodamus*) *rubra*	2.30	-0.01	3.38	0.21
Aricidea philbinae	3.24	0.01	7.12	0.15
Aricidea n. sp. A	1.47	0.00	5.01	0.05
Paraonides n. sp.	6.11	-0.00	8.09	0.03
Prinospio cristata	2.94	0.01	5.11	0.17
Prinospio heterobranchia	6.44	-0.01	7.33	0.23
Spiochaetopterus costarum	2.81	-0.01	6.50	0.16
Caulleriella alata	1.46	0.00	2.90	0.18
Tharyx annulosus	0.72	0.03	3.66	0.73
Mediomastus sp.	2.86	0.00	4.58	0.11
Notomastus hemipodus	1.59	-0.00	1.98	0.12

Table 26. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scyphoproctus platyprotus	6.29	0.01	14.36	0.10
Ehlersia sp. A	1.71	0.02	6.54	0.31
Exogone arenosa	8.33	-0.03	18.80	0.19
Odontosyllis sp. A	2.48	-0.00	3.63	0.01
Sphaerosyllis spp.	10.41	-0.03	17.87	0.22
Typosyllis sp. A	5.96	-0.02	16.31	0.15
Typosyllis sp. F	7.94	-0.03	20.83	0.16
Platynereis dumerilii	0.55	0.03	1.40	0.92
Glycera abranchiata	1.41	0.01	2.53	0.29
Glycinde solitaria	2.05	0.01	3.26	0.38
Lumbrineris latreilli	1.39	-0.00	1.69	0.07
Lumbrineris verrilli	8.09	-0.01	9.14	0.10
Schistomeringos cf. *pectinata*	1.66	0.01	4.18	0.19
Schistomeringos rudolphi	1.85	0.00	3.24	0.05
Piromis eruca	2.06	0.01	4.57	0.27
Polycirrus eximius	2.56	0.03	14.87	0.26
Terebellides stroemi	5.03	-0.02	7.17	0.27
Chone americana	1.71	-0.00	3.16	0.11
Fabricia sabella	3.37	-0.01	5.49	0.24
Sabella variegata	-20.04	1.47	98.84	0.89

Table 27. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with the seagrass *Syringodium filiforme* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	22.19	-0.08	24.41	0.22
Nematoda spp.	29.83	-0.12	29.63	0.26
Copepoda spp.	13.44	-0.09	35.37	0.16
Myodocopa spp.	18.80	-0.10	29.62	0.21
Paratanaidae spp.	25.12	-0-02	43.36	0.03
Carpias sp. A	12.90	-0.08	20.04	0.25
Paracerceis caudata	7.47	-0.01	19.33	0.03
Cerapus n. sp.	8.05	-0.03	13.27	0.15
Cymadusa compta	2.79	0.10	14.57	0.43
Elasmopus laevis	10.35	-0.06	20.98	0.19
Lysianassa alba	15.83	-0.09	39.93	0.14
Amphiodia pulchella	3.82	0.01	6.52	0.11
Caecum pulchellum	172.67	0.07	312.83	0.02
Chione cancellata	2.79	0.01	4.64	0.14
Ischnochiton papillosus	3.70	-0.00	5.20	0.04
Marginella apicina	1.64	0.01	3.66	0.22
Meioceras nitida	11.23	0.13	27.63	0.31
Nucula proxima	2.02	0.01	3.77	0.19
Olivella perplexa	1.15	0.01	2.32	0.15
Parvilucina multilineata	6.47	0.03	12.57	0.17
Tellina versicolor	4.02	0.02	6.46	0.17
Naineris setosa	2.38	0.02	5.65	0.26
Scoloplos (*Leodamus*) *rubra*	1.61	0.02	3.68	0.29
Aricidea fragilis	2.09	0.00	5.75	0.04
Aricidea philbinae	3.01	0.01	5.99	0.14
Paraonides n. sp.	20.09	-0.11	32.89	0.22
Minuspio cirrifera	1.79	0.01	2.66	0.24
Prionospio heterobranchia	7.84	-0.00	10.11	0.03
Caulleriella alata	3.85	0.08	13.83	0.35
Tharyx annulosus	3.21	0.04	4.98	0.48
Mediomastus sp.	2.29	0.01	4.25	0.22
Podarke obscura	4.73	-0.02	5.90	0.19
Brania sp. A	1.91	-0.00	3.55	0.02
Ehlersia sp. A	3.18	-0.01	6.63	0.11
Exogone arenosa	13.34	-0.09	34.89	0.16
Exogone dispar	4.35	0.02	9.14	0.12
Exogone verugera	0.80	0.05	3.09	0.75
Sphaerosyllis spp.	5.71	-0.04	14.64	0.17
Typosyllis annularis	7.46	-0.03	21.13	0.11
Typosyllis sp. F	14.98	-0.07	40.86	0.11
Ceratonereis irritabilis	2.75	-0.02	5.49	0.19
Platynereis dumerilii	0.78	0.01	1.47	0.48
Lumbrineris latreilli	1.24	-0.00	1.65	0.12
Lumbrineris verrilli	13.61	-0.01	23.76	0.02
Piromis eruca	2.36	0.02	6.63	0.16
Branchiomma nigromaculata	3.90	0.03	10.36	0.17
Fabricia sabella	3.77	-0.02	5.00	0.21
Sabella variegata	1.72	1.02	81.91	0.64

3.4.3. *Halodule wrightii*

Many organisms show low negative correlation with the seagrass *Halodule wrightii* (Tables 28 - 31). An exception to this was the polychaete, *Lumbrineris latreilli*, which was found highly positively correlated with this seagrass, particularly during the fourth quarter. The polychaete, *Typosyllis* sp. A, with a correlation coefficient of 0.77 with *Thalassia* during the first quarter had a correlation coefficient of 0.79 with *Halodule wrightii* during the second quarter. This seagrass should not be rejected as a candidate for restoration projects because of the number of taxa found negatively correlated with the habitat in which it is found. This seagrass is often seen as a pioneer in areas disturbed by wave action and may serve the purpose of stabilizing areas that would otherwise be bare and ever more inhospitable to benthic organisms. This seagrass might be a succession plant leading to colonization by *Thalassia* and *Syringodium*.

3.4.4. *Halophila baillonis*

Most of the organisms tested showed a negative correlation with the seagrass, *Halophila baillonis* (Tables 32 - 35). This is an angiosperm usually found at considerable depth or in areas of low water clarity. It often forms a thin, ephemeral cover over muddy bottoms and probably can be used as an indicator of non-ideal conditions. The low negative correlation of many taxa with this seagrass probably reflects the usually low productivity of this habitat. During the third quarter, a new species of amphipod of the genus *Cerapus*, the Venus clam, *Chione americana*, and the polychaetes, *Fabricia sabella*, and *Scoloplos* (*Leodamus*) *rubra*, and the brittle star, *Amphiodia pulchella*, were found highly correlated with *Halophila*. Species of the phylum Sipuncula and the arthropod subclass Myodocopa were also positively correlated with this seagrass.

3.5. Sediment

Sediment samples were collected during Phase I of this study. Percent of sediment in certain size ranges was determined as was mean sediment size, median sediment size, and mode of sediment size. These statistics were given in the appendix of this report. Mean, mode and median sediment size were correlated with the number of those benthic organisms used in the above analyses. Certain organisms were found to have a slightly higher correlation with mode and median of sediment size than with mean sediment size, but the latter statistic was found to be representative. Therefore, the correlation of the benthic organisms with mean sediment size is given in Tables 36 through 39 for Phase II, quarters 1 through 4.

3.6. Taxonomic Richness

The taxonomically richest and most productive stations of the Bay were:

Station 2 (#16), at the edge of a channel leading to the ocean between two keys in a relatively pristine area. This was a bare bottom station closely bordered by *Thalassia* beds and probably had representative benthic organisms of both Biscayne Bay and the ocean shore.

Station 11 (#47), near the center of a large basin surrounded by urbanization. The bottom was large patches of mixed alga, primarily *Halimeda* and beds of the seagrass, *Syringodium*. Water was usually clear and the underwater appearance of the site was aesthetically pleasing. The area probably profited from, but was not overwhelmed by, the nutrients supplied by the surrounding city and represents an ideal for possible management practices.

Table 28. Correlation of Number of Significant organisms Collected Phase II Quarter 1 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	153.84	-2.68	411.95	0.17
Paracerceis caudata	22.66	-0.33	60.58	0.14
Erichsonella filiformis isabelensis	1.74	-0.02	3.Z4	0.19
Anthozoa	2.27	-0.03	3.76	0.23
Turbellaria	10.40	-0.17	18.01	0.25
Nemertina	61.41	-0.86	57.82	0.37
Nematoda	69.54	-1.01	89.46	0.29
Harpachoida spp.	12.48	-0.18	22.85	0.20
Myodocopa spp.	25.89	-0.36	53.70	0.17
Podocopa spp.	76.47	-1.34	192.54	0.18
Dikonophora sp.	22.41	-0.31	36.18	0.22
Ampelisca abdita	1.12	0.02	2.64	0.24
Ampelisca vadorum	1.71	-0.02	3.97	0.12
Batea catharinensis	8.63	-0.06	17.19	0.10
Dulichiella appendiculata	39.86	-0.67	100.45	0.17
Lembos unicornis	8.82	-0.14	15.72	0.23
Neopanope packardi	1.16	-0.01	2.09	0.14
Capitellidae	27.47	-0.21	46.12	0.12
Cirratulidae	24.88	-0.25	23.96	0.26
Dorvilleidae	3.88	0.06	3.84	0.39
Eunicidae	5.88	-0.08	8.30	0.24
Glyceridae	0.18	0.07	1.85	0.72
Goniadidae	4.76	0.00	5.73	0.01
Lumbrineridae	8.18	0.22	10.90	0.48
Maldanidae	4.33	-0.04	9.99	0.10
Nereidae	6.34	-0.02	4.99	0.10
Orbiniidae	17.87	-0.29	17.70	0.40
Paraonidae	22.50	0.04	21.85	0.04
Sabellidae	47.65	-0.78	75.59	0.26
Spionidae	30.51	-0.15	26.06	0.15
Syllidae	99.46	-1.58	136.93	0.29
Terebellidae	9.89	-0.04	14.38	0.08
Trichobranchidae	3.36	-0.03	5.52	0.14
Oligochaeta	43.22	-0.56	53.14	0.27
Caecum pulchellum	425.23	-5.21	614.63	0.22
Chione cancellata	3.96	-0.05	3.38	0.39
Marginella apicina	1.90	-0.03	2.70	0.29
Meioceras nitida	30.51	-0.27	60.44	0.12
Nucula proxima	1.30	0.04	3.60	0.25
Parvilucina multilineata	3.97	0.06	7.69	0.21
Tellina versicolor	3.29	-0.03	3.74	0.24
Amphiodia pulchella	2.62	0.10	6.68	0.38
Ophiactis savignyi	6.68	-0.10	10.21	0.24
Naineris setosa	4.88	-0.08	10.40	0.20
Scoloplos (*Leodamus*) *rubra*	6.26	-0.09	12.88	0.19

Table 28. Correlation of Number of Significant organisms Collected Phase II Quarter 1 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	4.83	-0.04	9.58	0.12
Aricidea sp. C	8.93	-0.14	16.04	0.23
Paraonides n. sp.	6.05	-0.08	11.35	0.18
Minuspio cirrifera	4.76	-0.03	11.31	0.08
Prionospio cristata	5.09	0.16	10.30	0.38
Prionospio heterobranchia	-0.15	10.93	0.34	10.28
Caulleriella alata	5.27	-0.05	5.39	0.25
cf. *Caulleriella killariensis*	6.20	0.03	10.26	0.07
Tharyx annulosus	8.11	-0.14	18.57	0.19
Capitella jonesi	0.95	0.01	1.92	0.18
Medicimastus sp.	3.09	-0.03	4.71	0.19
Notanastus hemipodus	-0.26	0.17	3.08	0.83
Scyphoproctus platyprotus	3.60	-0.06	4.71	0.33
Podarke obscura	5.27	-0.07	5.54	0.30
Ehlersia sp. A	5.92	-0.07	7.14	0.25
Exogone arenosa	17.76	-0.29	41.83	0.18
Exogone dispar	12.13	-0.21	25.33	0.21
Exogone verugera	1.34	-0.01	2.93	0.13
0dontosyllis sp.	1.67	-0.03	3.03	0.24
Sphaerosyllis spp.	3.77	-0.04	10.55	0.11
Typosyllis annularis	7.08	-0.12	14.55	0.22
Typosyllis sp. A	4.51	-0.05	10.97	0.13
Typosyllis sp. F	11.58	-0.20	33.54	0.15
Platynereis dumerilii	3.89	-0.03	4.65	0.17
Glycinde solitaria	4.78	=0.02	5.51	0.08
Lumbrinereis latreilli	0.40	0.06	1.51	0.70
Lumbrinereis verrilli	6.85	0.09	11.18	0.20
Streblosoma hartmanae	1.19	0.01	2.46	0.11
Terebellides stroemi	3.81	-0.04	6.54	0.15
Branchiana nigromaculata	4.47	-0.05	4.81	0.25
Fabricia sabella	7.15	-0.12	9.89	0.30
Sabella variegata	31.90	-0.56	76.23	0.19

Table 29. Correlation of Number of Significant organisms Collected Phase II Quarter 2 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	84.32	-0.80	285.81	0.11
Paracerceis caudata	16.32	-0.15	51.04	0.11
Paratanaidae A	11.63	-0.10	19.74	0.20
Turbellaria	4.79	-0.04	12.50	0.14
Nemertina	29.56	-0.18	28.99	0.23
Nematoda	34.48	-0.17	39.37	0.17
Harpachoida spp.	6.73	-0.06	18.97	0.13
Myodocopa spp.	7.32	-0.05	12.41	0.15
Cymadusa compta	12.58	-0.10	26.34	0.15
Erichthonius brasiliensis	19.39	-0.15	28.03	0.20
Lembos unicornis	3.47	-0.03	4.98	0.21
Lysianassa alba	6.08	-0.05	13.05	0.16
Brachidontes exustus	2.79	0.01	7.60	0.03
Caecum pulchellum	143.38	-1.12	210.95	0.20
Chione cancellata	1.75	-0.01	2.68	0.21
Meioceras nitida	15.92	-0.15	44.09	0.13
Tellina versicolor	3.35	-0.03	3.97	0.27
Scoloplos (Leodamus) rubra	3.22	-0.01	8.45	0.07
Aricidea philbinae	5.52	-0.04	13.89	0.11
Paraonides n. sp.	3.99	-0.02	6.19	0.11
Minuspio cirrifera	3.63	-0.02	5.40	0.15
Prionospio heterobranchia	13.08	-0.11	24.20	0.18
Caulleriella alata	2.98	-0.02	4.33	0.15
Mediomastus sp.	1.64	-0.01	1.59	0.17
Notomastus henipodus	1.07	--0.00	1.40	0.13
Podarke obscura	2.37	-0.02	3.54	0.18
Ehlersia sp. A	3.60	-0.01	5.07	0.10
Platynereis dumerilii	4.13	-0.03	11.58	0.11
Lumbrinereis verrilli	5.80	-0.00	7.10	0.02
Schistomeringos rudolphi	2.58	-0.02	6.46	0.13
Sabella variegata	41.39	-0.31	94.86	0.13

Table 30. Correlation of Number of Significant organisms Collected Phase II Quarter 3 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	5.66	-0.04	7.61	0.20
Nemertina spp.	14.69	-0.07	12.86	0.19
Nematoda spp.	59.25	-0.52	130.49	0.15
Sipuncula spp.	2.34	-0.02	3.40	0.25
Copepoda spp.	10.82	-0.10	22.64	0.16
Myodocopa spp.	14.67	-0.12	20.51	0.21
Paratanaidae spp.	62.02	-0.56	142.03	0.15
Tanaidae spp.	17.13	-0.14	29.60	0.17
Carpias sp. A	200.09	-2.02	513.11	0.15
Paracerceis caudata	15.23	-0.15	33.87	0.16
Amphilochus neopolitanus	4.16	-0.01	6.48	0.07
Cerapus n. sp.	9.97	-0.10	21.88	0.16
Cymadusa compta	7.11	0.21	12.72	0.52
Dulichiella appendiculata	27.51	-0.27	57.42	0.17
Elasmopus levis	31.63	-0.31	41.33	0.27
Erichthonius brasiliensis	25.13	-0.25	30.67	0.29
Lembos unicornis	17.40	-0.17	27.74	0.23
Listriella barnardi	2.88	-0.03	5.69	0.19
Lysianassa alba	21.40	-0.19	42.10	0.16
Photis pugnator	32.81	-0.30	75.25	0.15
Corophium tuburcluatum	2.69	-0.02	3.78	0.24
Rhepoxynius sp. indet.	9.26	-0.08	15.24	0.19
Tethygenia longleyi	10.22	-0.10	17.54	0.22
Amphiodia pulchella	3.23	-0.02	6.37	0.12
Caecum plicatum	10.84	-0.11	24.23	0.17
Caecum pulchellum	143.31	-1.31	205.84	0.23
Cumingia tellinoides	2.65	-0.03	4.83	0.20
Ischnochiton papillosus	2.73	-0.03	6.31	0.16
Lima pellucida	2.49	-0.03	3.35	0.27
Meioceras nitida	26.74	-0.27	45.90	0.21
Parvilucina multilineata	13.16	-0.09	25.38	0.13
Tellina versicolor	6.70	-0.07	4.81	0.46
Haploscoloplos foliosus	3.41	-0.01	6.13	0.03
Naineris setosa	4.21	-0.04	7.12	0.22
Scoloplos (*Leodamus*) *rubra*	2.13	-0.01	3.42	0.15
Aricidea philbinae	4.04	-0.02	7.18	0.09
Aricidea n. sp. A	0.60	0.07	4.29	0.52
Paraonides n. sp.	6.15	-0.01	6.09	0.05
Prionospio cristata	3.18	0.02	5.15	0.11
Prionospio heterobranchia	4.77	0.05	7.26	0.27
Spiochaetopterus costarum	2.64	-0.03	6.51	0.15
Caulleriella alata	1.95	-0.02	2.89	0.19
Tharyx annulosus	3.20	-0.03	5.20	0.23
Mediomastus sp.	3.50	-0.03	4.50	0.21

Table 30. Correlation of Number of Significant organisms Collected Phase II Quarter 3 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef). (cont.)

Organisms	A	B	StndErr	CorrCoef
Notomastus hemipodus	1.51	-0.00	1.99	0.05
Scyphoproctus platyprotus	3.98	0.21	12.08	0.55
Ehlersia sp. A	3.21	-0.03	6.79	0.16
Exogone arenosa	7.56	-0.08	18.93	0.15
Odontosyllis sp. A	2.71	-0.02	3.58	0.18
Sphaerosyllis spp.	9.68	-0.09	17.97	0.19
Typosyllis sp. A	-0.34	0.35	10.09	0.79
Typosyllis sp. F	7.25	-0.07	20.92	0.13
Platynereis dumerilii	2.29	-0.00	3.60	0.02
Glycera abranchiata	1.96	-0.01	2.60	0.16
Glycinde solitaria	3.12	-0.03	3.37	0.29
Lumbrineris latreilli	1.23	0.01	1.67	0.16
Lumbrineris verrilli	7.33	0.02	9.36	0.08
Schistomeringos cf. *pectinata*	1.82	0.02	4.20	0.15
Schistomeringos rudolphi	1.42	0.04	2.96	0.41
Piromis eruca	3.13	-0.03	4.63	0.22
Polycirrus eximius	5.39	-0.05	15.30	0.12
Terebellides stroemi	4.68	-0.05	7.23	0.24
Chone americana	1.77	-0.02	3.12	0.20
Fabricia sabella	3.12	-0.03	5.53	0.21
Sabella variegata	90.28	-0.91	209.87	0.16

Table 31. Correlation of Number of Significant Organisms Collected Phase II Quarter 4 with the Seagrass *Halodule wrightii* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimte (StndErr) and Correlaticn Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	22.89	-0.96	23.94	0.29
Nematoda spp.	30.12	-1.19	29.32	0.30
Copepoda spp.	12.96	-0.69	35.46	0.15
Myodocopa spp.	19.17	-0.99	29.35	0.25
Paratanaidae spp.	26.24	-0.45	43.24	0.08
Carpias sp. A	13.12	-0.77	19.83	0.28
Paracerceis caudata	8.23	-0.27	19.22	0.11
Cerapus n. sp.	8.77	-0.47	12.94	0.26
Cymadusa compta	6.16	0.08	16.13	0.04
Elasmopus laevis	9.02	-0.22	21.31	0.08
Lysianassa alba	14.63	-0.48	40.17	0.09
Amphiodia pulchella	4.16	0.01	6.55	0.01
Caecum pulchellum	216.80	-10.97	301.56	0.27
Chione cancellata	3.33	-0.05	4.67	0.09
Ischnochiton papillosus	3.85	-0.07	5.18	0.10
Marginella apicina	1.71	0.09	3.68	0.19
Meioceras nitida	20.19	-1.11	27.81	0.29
Nucula proxima	2.74	-0.09	3.78	0.18
Olivella perplexa	1.68	-0.09	2.24	0.30
Parvilucina multilineata	7.03	0.15	12.70	0.09
Tellina versicolor	5.86	-0.33	6.05	0.38
Naineris setosa	3.10	0.03	5.96	0.03
Scoloplos (*Leodamus*) *rubra*	2.05	0.04	3.84	0.08
Aricidea fragilis	1.12	0.28	5.34	0.37
Aricidea philbinae	3.60	-0.04	6.04	0.05
Paraonides n. sp.	19.79	-0.98	32.92	0.22
Minuspio cirrifera	2.60	-0.12	2.58	0.34
Prionospio heterobranchia	9.14	-0.39	9.67.	0.29
Caulleriella alata	7.88	-0.34	14.54	0.17
Tharyx annulosus	4.64	0.01	5.68	0.01
Mediomastus sp.	3.23	-0.11	4.27	0.20
Podarke obscura	4.31	-0.05	6.00	0.66
Brania sp. A	2.25	-0.10	3.47	0.22
Ehlersia sp. A	3.32	-0.14	6.59	0.16
Exogone arenosa	13.21	-0.77	34.88	0.17
Exogone dispar	5.97	-0.27	8.97	0.23
Exogone verugera	1.69	0.26	4.26	0.42
Sphaerosyllis spp.	5.58	-0.31	14.66	0.16
Typosyllis annularis	7.54	-0.33	21.09	0.12
Typosyllis sp. F	14.94	-0.62	40.83	0.11
Ceratonereis irritabilis	2.65	-0.12	5.52	0.16
Platynereis dumerilii	1.22	-0.01	1.67	0.03
Lumbrineris latreilli	1.12	0.00	1.66	0.01
Lumbrineris verrilli	15.83	-0.66	23.24	0.21
Piromis eruca	3.62	-0.18	6.57	0.21
Branchiomma nigromaculata	5.93	-0.28	10.31	0.2o
Fabricia sabella	4.02	-0.21	4.85	0.32
Sabella variegata	24.09	3.67	103.01	0.26

Table 32. Correlation of Number of Significant organisms Collected Phase II Quarter 1 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	140.02	-11.65	414.21	0.13
Paracerceis caudata	21.44	-1.70	60.67	0.13
Erichsonella filiformis isabelensis	1.66	-0.12	3.25	0.18
Anthozoa	2.10	-0.15	3.80	0.18
Turbellaria	9.46	-0.74	18.25	0.19
Nemertina	55.77	-3.15	60.24	0.24
Nematoda	65.21	-4.82	90.42	0.25
Harpachoida spp.	11.61	-0.81	23.01	0.17
Myodocopa spp.	25.13	-2.07	53.59	0.18
Podocopa spp.	69.54	-5.79	193.75	0.14
Dikonophora sp.	21.28	-1.59	36.31	0.21
Ampelisca abdita	1.78	-0.15	2.62	0.27
Ampelisca vadorum	1.13	0.16	3.92	0.19
Batea catharinensis	7.17	0.27	17.22	0.08
Dulichiella appendiculata	36.41	-2.88	101.03	0.14
Lembos unicornis	8.13	-0.64	15.87	0.19
Neopanope packardi	1.21	-0.10	2.05	0.23
Capitellidae	28.28	-1.85	45.59	0.19
Cirratulidae	22.79	-0.68	24.61	0.13
Dorvilleidae	5.55	-0.40	3.70	0.46
Eunicidae	5.27	-0.23	8.47	0.13
Glyceridae	1.14	0.03	2.66	0.05
Goniadidae	4.80	-0.00	5.73	0.00
Lumbrineridae	11.94	-0.29	12.32	0.11
Maldanidae	2.01	0.87	9.13	0.42
Nereidae	7.17	-0.54	4.30	0.52
Orbiniidae	13.25	0.24	19.29	0.06
Paraonidae	23.34	-0.17	21.86	0.04
Sabellidae	43.27	-3.23	76.80	0.20
Spionidae	30.39	-0.99	25.94	0.18
Syllidae	87.38	-4.94	141.14	0.17
Terebellidae	11.14	-0.91	13.75	0.30
Trichobranchidae	3.55	-0.30	5.39	0.26
Oligochaeta	39.48	-2.01	54.30	0.18
Caecum pulchellum	348.64	1.47	629.85	0.01
Chione cancellata	3.49	-0.14	3.60	0.19
Marginella apicina	1.71	-0.12	2.77	0.20
Meioceras nitida	31.81	-2.49	59.67	0.20
Nucula proxima	2.18	-0.18	3.62	0.24
Parvilucina multilineata	5.50	-0.31	7.73	0.19
Tellina versicolor	2.78	0.01	3.85	0.01
Amphiodia pulchella	4.52	-0.22	7.13	0.15
Ophiactis savignyi	6.39	-0.51	10.23	0.23
Naineris setosa	4.52	-0.38	10.46	0.17
Scoloplos (*Leodamus*) *rubra*	2.46	1.20	11.77	0.44

Table 32. Correlation of Number of Significant organisms Collected Phase II Quarter 1 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Aricidea philbinae	4.94	-0.36	9.49	0.18
Aricidea sp. C	6.04	0.43	16.33	0.13
Paraonides n. sp.	5.84	-0.44	11.35	0.18
Minuspio cirrifera	5.03	-0.37	11.21	0.16
Prionospio cristata	8.19	-0.41	10.94	0.18
Prionospio heterobranchia	9.16	-0.50	11.40	0.21
Caulleriella alata	4.04	0.24	5.44	0.21
cf. *Caulleriella killariensis*	6.56	0.02	10.29	0.01
Tharyx annulosus	7.37	-0.56	18.71	0.14
Capitella jonesi	0.60	0.26	1.51	0.63
Mediomastus sp.	2.84	-0.12	4.77	0.12
Notomastus hemipodus	2.46	-0.12	5.52	0.11
Scyphoproctus platyprotus	3.24	-0.25	4.84	0.24
Podarke obscura	4.49	-0.08	5.80	0.06
Ehlersia sp. A	4.03	0.44	7.06	0.29
Exogone arenosa	14.19	-0.25	42.51	0.03
Exogone dispar	10.53	-0.64	25.73	0.12
Exogone verugera	1.37	-0.12	2.90	0.19
Odontosyllis sp.	1.53	-0.13	3.06	0.20
Sphaerosyllis spp.	3.79	-0.32	10.51	0.15
Typosyllis annularis	6.46	-0.55	14.68	0.18
Typosyllis sp. A	4.32	-0.28	10.99	0.12
Typosyllis sp. F	10.66	-0.90	33.66	0.13
Platynereis dumerilii	4.09	-0.30	4.49	0.31
Glycinde solitaria	4.48	0.03	5.53	0.02
Lumbrineris latreilli	1.38	-0.09	2.07	0.20
Lumbrineris verrilli	8.32	-0.12	11.39	0.05
Streblosoma hartmanae	1.61	-0.14	2.38	0.27
Terebellides stroemi	3.96	-0.33	6.42	0.24
Branchiomma nigromaculata	4.60	-0.39	4.60	0.38
Fabricia sabella	6.21	-0.36	10.23	0.17
Sabella variegata	29.06	-2.45	76.74	0.15

Table 33. Correlation of Number of Significant organisms Collected Phase II Quarter 2 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	83.45	-6.66	285.92	0.11
Paracerceis caudata	16.20	-1.26	51.05	0.11
Paratanaidae sp. A	11.66	-0.93	19.68	0.21
Turbellaria	4.76	-0.38	12.50	0.14
Nemertina	29.20	-1.38	29.14	0.21
Nematoda	35.03	-1.85	39.03	0.21
Harpachoida spp.	6.67	-0.53	18.97	0.13
Myodocopa spp.	6.94	-0.21	12.52	0.08
Cymadusa compta	12.67	-0.98	26.28	0.17
Erichthonius brasiliensis	19.62	-1.47	27.83	0.23
Lembos unicornis	3.53	-0.28	4.93	0.25
Lysianassa alba	6.06	-0.48	13.04	0.17
Brachidontes exustus	3.30	-0.26	7.51	0.16
Caecum pulchellum	129.65	-1.70	215.32	0.04
Chione cancellata	1.76	-0.14	2.67	0.23
Meioceras nitida	15.67	-1.18	44.15	0.12
Tellina versicolor	2.84	0.06	4.11	0.07
Scoloplos (Leodamus) rubra	3.19	-0.12	8.45	0.06
Aricidea philbinae	5.68	-0.45	13.83	0.15
Paraonides n. sp.	4.30	-0.34	6.03	0.25
Minuspio cirrifera	3.64	-0.19	5.39	0.16
Prionospio heterobranchia	12.79	-0.85	24.30	0.16
Caulleriella alata	3.06	-0.20	4.28	0.21
Mediomastus sp.	1.46	0.04	1.60	0.12
Notomastus hemipodus	1.02	-0.01	1.41	0.04
Podarke obscura	1.76	0.23	3.44	0.28
Ehlersia sp. A	3.85	-0.27	4.94	0.24
Platynereis dumerilii	4.15	-0.30	11.57	0.12
Lumbrineris verrilli	5.06	0.41	6.85	0.26
Schistomeringos rudolphi	2.61	-0.21	6.44	0.15
Sabella variegata	42.34	-3.38	94.40	0.16

Table 34. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	4.72	0.06	7.67	0.16
Nemertina spp.	13.00	0.13	12.82	0.20
Nematoda spp.	54.14	-0.41	131.66	0.06
Sipuncula spp.	1.30	0.12	2.43	0.72
Copepoda spp.	10.04	-0.11	22.82	0.10
Myodocopa sp.	8.50	0.78	13.21	0.78
Paratantidae spp.	53.44	0.09	143.58	0.01
Tanaidae spp.	16.47	-0.23	29.67	0.16
Carpias sp. A	183.19	-2.12	516.80	0.08
Paracerceis caudata	13.97	-0.15	34.17	0.09
Amphilochus neopolitanus	4.18	-0.03	6.46	0.10
Cerapus n. sp.	2.81	1.01	7.29	0.94
Cymadusa compta	10.94	-0.15	14.53	0.21
Dulichiella appendiculata	24.57	-0.17	58.22	0.06
Elasmopus laevis	22.85	0.75	40.06	0.36
Erichthonius brasiliensis	17.55	0.69	28.64	0.45
Lembos unicornis	16.25	-0.23	28.08	0.17
Listriella barnardi	2.42	0.01	5.79	0.03
Lysianassa alba	19.43	-0.12	42.60	0.06
Photis pugnator	14.59	2.43	56.93	0.66
Corophium tuberculatum	2.06	0.05	3.77	0.25
Rhepoxynius sp. indet.	7.90	0.04	15.50	0.06
Tethygenia longleyi	9.50	-0.13	17.75	0.15
Amphiodia pulchella	1.36	0.27	2.98	0.89
Caecum plicatum	10.07	-0.14	24.40	0.12
Caecum pulchellum	87.29	6.48	163.34	0.64
Cumingia tellinoides	2.15	0.02	4.92	0.09
Ischnochiton papillosus	2.54	-0.04	6.35	0.12
Lima pellucida	2.00'	0.02	3.45	0.14
Meioceras nitida	20.35	0.44	46.11	0.19
Parvilucina multilineata	12.90	-0.17	25.34	0.14
Tellina versicolor	5.59	0.02	5.40	0.09
Haploscoloplos foliosus	3.38	-0.01	6.13	0.03
Naineris setosa	3.84	-0.04	7.24	0.12
Scoloplos (Leodamus) rubra	1.15	0.14	1.97	0.82
Aricidea philbinae	4.12	-0.06	7.11	0.16
Aricidea n. sp. A	1.74	-0.02	4.99	0.10
Paraonides n. sp.	5.26	0.13	7.64	0.33
Prionospio cristata	3.46	-0.01	5.18	0.04
Prionospio heterobranchia	4.33	0.21	6.14	0.58
Spiochaetopterus costarum	2.17	0.02	6.57	0.05
Caulleriella alata	1.30	0.08	2.49	0.54
Tharyx annulosus	2.96	-0.04	5.28	0.16
Mediomastus sp	3.14	-0.00	4.61	0.01

Table 34. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Notomastus hemipodus	1.52	-0.01	1.99	0.09
Scyphoproctus platyprotus	7.54	-0.09	14.29	0.13
Ehlersia sp. A	2.97	-0.03	6.85	0.09
Exogone arenosa	5.29	0.21	18.66	0.22
Odontosyllis sp. A	2.29	0.03	3.58	0.18
Sphaerosyllis spp.	8.03	0.05	18.28	0.06
Typosyllis sp. A	5.07	-0.07	16.44	0.09
Typosyllis sp. F	6.67	-0.08	21.03	0.08
Platynereis dumerilii	2.47	-0.03	3.53	0.20
Glycera abranchiata	1.87	-0.01	2.62	0.10
Glycinde solitaria	2.61	0.02	3.49	0.12
Lumbrineris latreilli	1.28	0.01	1.68	0.11
Lumbrineris verrilli	7.53	0.01	9.38	0.03
Schistomeringos cf. *pectinata*	2.09	-0.00	4.25	0.02
Schistomeringos rudolphi	2.01	-0.01	3.23	0.06
Piromis eruca	2.74	-0.00	4.75	0.00
Polycirrus eximius	5.08	-0.07	15.35	0.10
Terebellides stroemi	4.11	-0.02	7.43	0.06
Chone americana	0.79	0.13	1.72	0.84
Fabricia sabella	1.25	0.25	2.40	0.91
Sabella variegata	83.99	-1.17	211.20	0.11

Table 35. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with the Seagrass *Halophila baillonis* Found in Dredge Samples. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	19.48	-0.11	25.01	0.02
Nematoda spp.	26.35	-0.40	30.62	0.07
Copepoda spp.	11.60	-0.68	35.67	0.10
Myodocopa spp.	13.41	1.07	29.77	0.19
Paratanaidae spp.	27.11	-1.38	42.75	0.17
Carpias sp. A	9.85	0.19	20.65	0.05
Paracerceis caudata	7.73	-0.29	19.27	0.08
Cerapus n. sp.	6.13	0.47	13.18	0.19
Cymadusa compta	7.37	-0.49	15.93	0.16
Elasmopus laevis	9.36	-0.63	21.11	0.16
Lysianassa alba	14.62	-0.98	40.01	0.13
Amphiodia pulchella	3.95	0.14	6.51	0.11
Caecum pulchellum	159.37	8.51	309.60	0.14
Chione cancellata	3.15	-0.01	4.69	0.01
Ischnochiton papillosus	4.11	-0.27	4.99	0.28
Marginella apicina	2.26	-0.10	3.71	0.15
Meioceras nitida	13.86	1.15	28.41	0.21
Nucula proxima	2.29	0.06	3.83	0.08
Olivella perplexa	0.91	0.23	2.00	0.52
Parvilucina multilineata	8.03	-0.23	12.69	0.10
Tellina versicolor	4.26	0.18	6.48	0.15
Naineris setosa	3.43	-0.12	5.82	0.11
Scoloplos (Leodamus) rubra	2.42	-0.12	3.80	0.16
Aricidea fragilis	2.51	-0.17	5.68	0.15
Aricidea philbinae	3.74	-0.15	6.00	0.13
Paraonides n. sp.	17.67	-0.86	33.44	0.14
Minuspio cirrifera	2.31	-0.09	2.70	0.18
Prionospio heterobranchia	8.00	-0.18	10.07	0.09
Caulleriella alata	6.78	-0.10	14.76	0.04
Tharyx annulosus	4.68	-0.01	5.68	0.01
Mediomastus sp.	2.22	0.31	4.03	0.38
Podarke obscura	4.10	0.02	6.01	0.01
Brania sp. A	2.13	-0.14	3.47	0.21
Ehlersia sp. A	2.99	-0.10	6.65	0.08
Exogone arenosa	10.58	-0.17	35.36	0.03
Exogone dispar	4.55	0.20	9.14	0.12
Exogone verugera	2.95	-0.15	4.62	0.17
Sphaerosyllis spp.	4.99	-0.32	14.76	0.11
Typosyllis annularis	7.16	-0.48	21.10	0.12
Typosyllis sp. F	14.36	-0.94	40.80	0.12
Ceratonereis irritabilis	2.29	-0.05	5.59	0.04
Platynereis dumerilii	1.34	-0.07	1.63	0.24
Lumbrineris latreilli	0.84	0.16	1.43	0.51
Lumbrineris verrilli	8.27	2.72	18.87	0.61
Piromis eruca	3.35	-0.22	6.61	0.18
Branchiomma nigromaculata	5.17	-0.16	10.49	0.08
Fabricia sabella	1.73	0.79	2.93	0.82
Sabella variegata	43.30	-2.85	105.64	0.14

Table 36. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	419.15	-150.61	402.06	0.27
Paracerceis caudata	59.43	-20.62	59.19	0.26
Erichsonella filiformis isabelensis	3.55	-1.07	3.20	0.25
Anthozoa	7.38	-2.77	3.24	0.54
Turbellaria	29.03	-10.48	16.81	0.43
Nemertina	141.49	-45.82	51.49	0.56
Nematoda	158.89	-51.48	84.79	0.42
Harpachoida spp.	40.57	-15.22	20.28	0.50
Myodocopa spp.	-2.06	11.39	53.B2	0.16
Podocopa spp.	196.00	-68.76	188.67	0.27
Dikonophora sp.	30.67	-6.29	36.80	0.13
Ampelisca abdita	-1.24	1.35	2.51	0.38
Ampelisca vadorum	1.25	0.11	4.00	0.02
Batea catharinensis	8.56	-0.41	17.27	0.02
Dulichiella appendiculata	86.62	-27.90	99.76	0.21
Lembos unicornis	12.76	-2.96	16.02	0.14
Neopanope packardi	1.21	-0.11	2.11	0.04
Capitellidae	39.95	-7.69	46.09	0.13
Cirratulidae	37.03	-7.76	24.12	0.24
Dorvilleidae	6.87	-1.06	4.08	0.19
Eunicidae	21.45	-8.27	5.79	0.74
Glyceridae	0.05	0.57	2.63	0.16
Goniadidae	4.26	0.27	5.72	0.04
Lumbrineridae	5.39	2.95	12.19	0.18
Maldanidae	8.60	-2.38	9.88	0.18
Nereidae	11.29	-2.60	4.61	0.39
Orbiniidae	52.94	-19.48	12.44	0.77
Paraonidae	39.23	-8.06	21.00	0.28
Sabellidae	85.93	-24.51	76.13	0.24
Spionidae	36.78	-4.19	26.19	0.12
Syllidae	391.40	-156.10	80.29	0.83
Terebellidae	29.61	-10.11	12.22	0.53
Trichobranchidae	6.19	-1.62	5.44	0.22
Oligochaeta	46.33	-5.46	55.00	0.08
Caecum pulchellum	800.99	-223.24	606.66	0.27
Chione cancellata	-2.26	2.71	3.03	0.56
Marginella apicina	-0.91	1.18	2.68	0.32
Meioceras nitida	36.59	-4.93	60.75	0.06
Nucula proxima	-2.53	2.15	3.35	0.44
Parvilucina multilineata	-3.78	4.29	7.17	0.41
Tellina versicolor	0.38	1.20	3.74	0.24
Amphiodia pulchella	0.42	1.81	7.07	0.19
Ophiactis savignyi	18.81	-6.70	9.21	0.48
Naineris setosa	10.30	-3.26	10.33	0.23

Table 36. Correlation of Number of Significant Organism Collected Phase II Quarter 1 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Scoloplos (Leodamus) rubra	8.93	-1.98	13.03	0.11
Aricidea philbinae	-1.71	2.94	9.39	0.23
Aricidea sp. C	9.14	-1.10	16.45	0.05
Paraonides n. sp.	27.56	-11.24	7.78	0.74
Minuspio cirrifera	5.78	-0.75	11.34	0.05
Prionospio cristata	1.88	2.71	10.93	0.19
Prionospio heterobranchia	18.76	-5.28	10.94	0.34
Caulleriella alata	6.66	-1.06	5.50	0.14
cf. *Caulleriella killariensis*	5.70	0.45	10.28	0.03
Tharyx annulosus	8.69	-1.24	18.89	0.05
Capitella jonesi	-0.16	0.64	1.89	0.25
Mediomastus sp.	5.26	-1.32	4.69	0.21
Notomastus hemipodus	1.05	0.57	5.53	0.08
Scyphoproctus platyprotus	10.94	-4.08	3.91	0.62
Podarke obscura	3.46	0.44	5.80	0.06
Ehlersia sp. A	9.05	-2.05	7.21	0.21
Exogone arenosa	103.27	-44.52	25.82	0.79
Exogone dispar	26.77	-8.73	25.05	0.26
Exogone verugera	4.78	-1.81	2.62	0.47
Odontosyllis sp.	5.97	-2.34	2.57	0.57
Sphaerosyllis spp.	24.22	-10.48	7.04	0.75
Typosyllis annularis	18.90	-6.74	14.01	0.34
Typosyllis sp. A	-6.04	4.85	10.44	0.33
Typosyllis sp. F	32.96	-12.01	32.69	0.27
Platynereis dumerilii	4.29	-0.41	4.71	0.07
Glycinde solitaria	4.05	0.24	5.53	0.03
Lumbrineris latreilli	0.81	0.19	2.11	0.07
Lumbrineris verrilli	0.08	3.97	11.00	0.26
Streblosoma hartmanae	1.06	0.14	2.47	0.04
Terebellides stroemi	7.22	-1.96	6.45	0.23
Branchiomma nigromaculata	10.36	-3.26	4.30	0.50
Fabricia sabella	25.57	-9.99	7.08	0.73
Sabella variegata	39.73	-7.81	77.43	0.08

Table 37. Correlation of Number of Significant Organism Collected Phase II Quarter 2 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Carpias stylodactylus	275.83	-101.00	277.11	0.27
Paracerceis caudata	50.93	-18.28	49.46	0.27
Paratanaidae sp. A	45.49	-17.57	15.08	0.66
Turbellaria	18.37	-7.07	11.42	0.43
Nemertina	72.30	-22.54	24.41	0.57
Nematoda	64.71	-16.25	37.97	0.31
Harpachoida spp.	23.10	-8.59	17.98	0.34
Myodocopa spp.	12.45	-2.91	12.36	0.18
Cymadusa compta	22.80	-5.83	26.28	0.17
Erichthonius brasiliensis	27.17	-4.95	28.38	0.13
Lembos unicornis	8.25	-2.58	4.70	0.38
Lysianassa alba	20.61	-7.62	11.89	0.44
Brachidontes exustus	7.10	-2.11	7.43	0.21
Caecum pulchellum	321.82	-96.86	202.52	0.34
Chione cancellata	1.86	-0.16	2.74	0.04
Meioceras nitida	44.78	-15.43	42.91	0.26
Tellina versicolor	-0.47	1.69	3.92	0.31
Scoloplos (Leodamus) rubra	6.37	-1.67	8.37	0.15
Aricidea philbinae	-2.82	3.85	13.67	0.21
Paraonides n. sp.	-2.87	3.28	5.71	0.40
Minuspio cirrifera	0.51	1.40	5.35	0.20
Prionospio heterobranchia	16.36	-2.46	24.54	0.08
Caulleriella alata	3.81	-0.53	4.36	0.09
Mediomastus sp.	1.47	0.03	1.61	0.01
Notomastus hemipodus	1.16	-0.08	1.41	0.04
Podarke obscura	3.80	-0.83	3.54	0.18
Ehlersia sp. A	8.18	-2.37	4.77	0.35
Platynereis dumerilii	7.04	-1.67	11.58	0.11
Lumbrineris verrilli	4.90	0.42	7.09	0.04
Schistomeringos rudolphi	5.99	-1.85	6.36	0.22
Sabella variegata	74.01	-18.49	94.60	0.15

Table 38. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Turbellaria spp.	13.55	-4.22	7.08	0.41
Nemertina spp.	38.90	-12.51	9.02	0.73
Nematoda spp.	128.29	-38.00	128.74	0.22
Sipuncula spp.	6.98	-2.48	2.96	0.54
Copepoda spp.	50.73	-20.53	16.83	0.68
Myodocopa spp.	14.51	-0.75	20.96	0.03
Paratanaidae spp.	350.96	-147.57	89.83	0.78
Tanaidae spp.	17.25	-1.05	30.05	0.03
Carpias sp. A	609.71	-217.94	491.57	0.32
Paracerceis caudata	39.25	-12.97	32.86	0.29
Amphilochus neopolitanus	2.51	0.74	6.47	0.09
Cerapus n. sp.	15.07	-3.21	22.04	0.11
Cymadusa campta	-4.00	6.99	13.89	0.36
Dulichiella appendiculata	60.74	-18.45	56.61	0.24
Elasmopus laevis	109.00	-40.68	29.87	0.72
Erichthonius brasiliensis	47.32	-12.81	30.56	0.30
Lembos unicornis	13.52	0.70	28.48	0.02
Listriella barnardi	1.06	0.70	5.77	0.09
Lysianassa alba	43.84	-12.47	41.61	0.22
Photis pugnator	24.83	1.84	76.06	0.02
Corophium tuberculatum	1.34	0.49	3.88	0.10
Rhepoxynius sp. indet.	2.34	2.88	15.37	0.14
Tethygenia longleyi	1.66	3.51	17.76	0.15
Amphiodia pulchella	4.33	-0.69	6.39	0.08
Caecum plicatum	33.60	-12.09	22.80	0.37
Caecum pulchellum	294.20	-84.33	201.71	0.30
Cumingia tellinoides	1.72	0.27	4.93	0.04
Ischnochiton papillosus	0.61	0.86	6.36	0.10
Lima pellucida	3.49	-0.68	3.45	0.15
Meioceras nitida	14.80	4.01	46.90	0.06
Parvilucina multilineata	5.00	3.44	25.44	0.10
Tellina versicolor	1.09	2.31	5.14	0.32
Haploscoloplos foliosus	4.15	-0.40	6.13	0.05
Naineris setosa	8.15	-2.26	7.09	0.24
Scoloplos (Leodamus) rubra	1.90	0.02	3.45	0.00
Aricidea philbinae	-0.24	2.01	7.04	0.21
Aricidea n. sp. A	1.97	-0.18	5.02	0.03
Paraonides n. sp.	5.42	0.29	8.09	0.03
Prionospio cristata	1.35	1.02	5.13	0.15
Prionospio heterobranchia	0.88	2.31	7.33	0.23
Spiochaetopterus costarum	2.38	-0.06	6.58	0.01
Caulleriella alata	2.08	-0.17	2.94	0.04
Tharyx annulosus	2.60	0.07	5.34	0.01
Mediomastus sp.	1.12	1.00	4.54	0.17

Table 38. Correlation of Number of Significant Organism Collected Phase II Quarter 3 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef) (cont.).

Organisms	A	B	StndErr	CorrCoef
Notomastus hemipodus	1.26	0.10	1.99	0.04
Scyphoproctus platyprotus	-7.32	7.11	13.37	0.37
Ehlersia sp. A	6.87	-2.02	6.70	0.22
Exogone arenosa	46.65	-19.96	11.69	0.79
Odontosyllis sp. A	8.81	-3.15	2.74	0.66
Sphaerosyllis sp.	49.08	-20.25	9.96	0.84
Typosyllis sp. A	-12.28	8.42	15.21	0.39
Typosyllis sp. F	26.63	-10.15	19.64	0.37
Platynereis dumerilii	-0.97	0.65	3.57	0.14
Glycera abranchiata	-0.06	0.92	2.54	0.27
Glycinde solitaria	2.35	0.19	3.52	0 04
Lumbrineris latreilli	2.55	-0.61	1.63	0.27
Lumbrineris verrilli	3.93	1.82	9.28	0.15
Schistomeringos cf. *pectinata*	2.61	-0.27	4.25	0.05
Schistomeringos rudolphi	0.77	0.58	3.22	0.13
Piromis eruca	1.46	0.63	4.72	0.10
Polycirrus eximius	-1.05	2.84	15.27	0.14
Terebellides stroemi	2.00	0.99	7.40	0.10
Chone americana	4.96	-1.70	2.91	0.41
Fabricia sabella	8.67	-2.98	5.18	0.40
Sabella variegata	85.71	-4.20	212.58	0.01

Table 39. Correlation of Number of Significant Organism Collected Phase II Quarter 4 with Mean Sediment Size Determined at Each Station. Origin of Regression Line (A), Slope (B), Standard Error of the Estimate (StndErr) and Correlation Coefficient (CorrCoef).

Organisms	A	B	StndErr	CorrCoef
Nemertina spp.	49.22	-14.88	22.33	0.45
Nematoda spp.	78.28	-26.18	23.39	0.65
Copepoda spp.	38.67	-14.08	34.22	0.30
Myodocopa spp.	-4.12	9.70	29.40	0.24
Paratanaidae spp.	49.89	-12.60	42.30	0.22
Carpias sp. A	34.91	-12.28	18.45	0.45
Paracerceis caudata	18.92	-5.82	18.82	0.23
Cerapus n. sp.	5.64	0.68	13.41	0.04
Cymadusa compta	7.82	-0.67	16.13	0.03
Elasmopus laevis	25.64	-8.66	20.33	0.31
Lysianassa alba	35.69	-11.37	39.41	0.21
Amphiodia pulchella	2.23	0.98	6.51	0.11
Caecum pulchellum	422.17	-122.71	298.69	0.30
Chione cancellata	2.70	0.21	4.69	0.03
Ischnochiton papillosus	6.41	-1.40	5.09	0.20
Marginella apicina	2.24	-0.09	3.75	0.02
Meioceras nitida	8.16	3.89	28.91	0.10
Nucula proxima	-1.08	1.73	3.61	0.34
Olivella perplexa	0.65	0.34	2.33	0.11
Parvilucina multilineata	-0.52	4.03	12.38	0.24
Tellina versicolor	0.78	1.90	6.39	0.22
Naineris setosa	7.98	-2.38	5.58	0.31
Scoloplos (Leodamus) rubra	-0.51	1.35	3.71	0.27
Aricidea fragilis	0.67	0.76	5.73	0.10
Aricidea philbinae	0.98	1.24	5.98	0.16
Paraonides n. sp.	-5.97	10.95	32.71	0.25
Minuspio cirrifera	1.21	0.46	2.72	0.13
Prionospio heterobranchia	8.58	-0.45	10.11	0.03
Caulleriella alata	0.28	3.14	14.58	0.16
Tharyx annulosus	2.70	0.98	5.63	0.13
Mediomastus sp.	4.07	-0.63	4.33	0.11
Podarke obscura	7.09	-1.47	5.91	0.19
Brania sp. A	8.78	-3.44	2.41	0.74
Ehlersia sp. A	14.98	-6.05	4.84	0.69
Exogone arenosa	82.98	-36.13	22.34	0.78
Exogone dispar	13.92	-4.46	6.56	0.37
Exogone verugera	5.53	-1.42	4.56	0.23
Sphaerosyllis spp.	33.84	-14.63	9.86	0.75
Typosyllis annularis	23.04	-8.33	20.28	0.30
Typosyllis sp. F	52.13	-19.64	38.31	0.36
Ceratonereis irritabilis	6.02	-1.90	5.40	0.26
Platynereis dumerilii	1.72	-0.26	1.66	0.12
Lumbrineris latreilli	3.83	-1.34	1.31	0.61
Lumbrineris verrilli	9.60	1.86	23.73	0.06
Piromis eruca	6.79	-1.92	6.56	0.22
Branchiomma nigromaculata	0.02	2.41	10.36	0.17
Fabricia sabella	8.73	-2.75	4.67	0.41
Sabella variegata	44.44	-3.20	106.69	0.02

The stations showing the greatest disturbance by man were:

Station 1 (#3), near the mouth of the former effluent canal from Turkey Point Power Station. This was an area of restored seagrass which seems to be doing well, but it is probably much affected by runoff. It may be more typical of the near-shore seagrass areas of southwest Biscayne Bay than its history suggests.

Station 3 (#22), near the mouth of the Snapper Creek canal. This area is much affected by the controlled releases of water from the canal and is an indication of the type of water-control construction and policies that should be avoided if possible. "V" weirs in the canal, which should allow water control without huge pulses of water being released into the Bay, would probably improve areas represented by this station.

Station 14 (#58), near Bakers Haulover Inlet, is located in an area of shifting sand partially colonized by the seagrass, *Halodule*. It receives seawater from the Inlet, usually carrying calcareous particles, and Bay water on the outgoing tide. Much of the disturbance of the bottom in this area results from its nearness to the Intracoastal Waterway. Enforcement of the speed limit wake control ordinances on the Waterway would probably improve such areas.

3.7. Cluster Analysis

A simple percent of similarity index can document spatial-temporal faunal homogeneity between stations as described by Swartz in "Techniques for sampling and analyzing the marine macrobenthos" (Swartz, R. C., 1978). A percent dissimilarity index is calculated for all pairs of stations as the complement of the sum of the minimum value of n_i/N for all species common to the two stations where n_i is the number of a particular species in common and N is the total number of species at the station. Index values range from 1.0 when the stations have no species in common to 0.0 when all species are common and the distribution of individuals is the same. Matrices of dissimilarity indices follow for Phase II, quarters 1 through 4.

Quarter 1

Station	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0.73	0.89	0.83	0.87	0.76	0.88	0.80	0.84	0.85	0.77	0.77	0.83	0.78	0.75
2		0.86	0.81	0.84	0.74	0.81	0.78	0.82	0.82	0.77	0.77	0.81	0.79	0.81
3			0.84	0.80	0.82	0.87	0.84	0.86	0.90	0.80	0.87	0.90	0.83	0.79
4				0.60	0.57	0.76	0.60	0.63	0.68	0.73	0.80	0.73	0.75	0.69
5					0.74	0.70	0.60	0.78	0.85	0.91	0.82	0.87	0.71	0.77
6						0.77	0.58	0.59	0.64	0.66	0.62	0.64	0.70	0.65
7							0.77	0.79	0.84	0.92	0.84	0.86	0.85	0.84
8								0.60	0.71	0.83	0.72	0.76	0.72	0.73
9									0.30	0.72	0.77	0.30	0.83	0.67
10										0.74	0.81	0.38	0.82	0.72
11											0.85	0.72	0.86	0.76
12												0.68	0.80	0.78
13													0.85	0.70
14														0.78

Quarter 2

Station	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0.91	0.83	0.81	0.84	0.83	0.86	0.86	0.89	0.93	0.93	0.74	0.89	0.83	0.86
2		0.88	0.87	0.80	0.79	0.87	0.86	0.86	0.90	0.87	0.83	0.91	0.89	0.89
3			0.65	0.80	0.81	0.60	0.81	0.82	0.96	0.96	0.79	0.92	0.74	0.85
4				0.70	0.81	0.65	0.81	0.80	0.92	0.94	0.72	0.92	0.69	0.89
5					0.70	0.73	0.68	0.69	0.81	0.87	0.77	0.84	0.80	0.78
6						0.82	0.60	0.75	0.76	0.77	0.61	0.67	0.78	0.73
7							0.75	0.75	0.92	0.94	0.77	0.90	0.76	0.85
8								0.68	0.74	0.79	0.78	0.77	0.78	0.73
9									0.40	0.82	0.82	0.59	0.90	0.61
10										0.82	0.89	0.60	0.93	0.65
11											0.86	0.78	0.93	0.83
12												0.64	0.73	0.82
13													0.89	0.65
14														0.83

Quarter 3

Station	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0.93	0.93	0.93	0.93	0.89	0.96	0.92	0.93	0.92	0.95	0.87	0.92	0.91	0.93
2		0.89	0.79	0.86	0.80	0.92	0.85	0.89	0.80	0.83	0.80	0.83	0.88	0.94
3			0.78	0.76	0.89	0.83	0.86	0.71	0.87	0.97	0.89	0.94	0.91	0.77
4				0.70	0.83	0.80	0.81	0.77	0.84	0.92	0.84	0.94	0.82	0.92
5					0.76	0.77	0.67	0.74	0.71	0.88	0.83	0.84	0.84	0.86
6						0.92	0.53	0.88	0.57	0.61	0.71	0.59	0.81	0.85
7							0.89	0.68	0.88	0.97	0.93	0.98	0.93	0.92
8								0.84	0.61	0.79	0.77	0.75	0.78	0.88
9									0.86	0.98	0.87	0.94	0.91	0.87
10										0.79	0.79	0.69	0.84	0.83
11											0.81	0.75	0.93	0.91
12												0.42	0.83	0.87
13													0.90	0.87
14														0.85

Quarter 4

Station	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0.91	0.91	0.90	0.89	0.92	0.94	0.94	0.89	0.93	0.80	0.93	0.87	0.93	0.90
2		0.86	0.76	0.84	0.83	0.90	0.87	0.84	0.84	0.81	0.85	0.92	0.99	0.92
3			0.86	0.84	0.85	0.76	0.89	0.80	0.83	0.88	0.92	0.95	0.83	0.84
4				0.64	0.73	0.78	0.77	0.72	0.75	0.85	0.86	0.88	0.96	0.84
5					0.65	0.79	0.59	0.61	0.67	0.79	0.82	0.81	0.91	0.80
6						0.88	0.55	0.69	0.62	0.74	0.77	0.71	0.96	0.78
7							0.83	0.66	0.79	0.92	0.92	0.93	0.84	0.90
8								0.57	0.56	0.72	0.85	0.67	0.93	0.71
9									0.54	0.74	0.88	0.73	0.92	0.72
10										0.52	0.89	0.48	0.97	0.57
11											0.83	0.53	0.97	0.61
12												0.65	0.96	0.90
13													0.97	0.63
14														0.98

Dendograms of similarity were calculated using the dissimilarity indices. The stations with the lowest dissimilarity index were combined and a second matrix was generated treating the combined stations as one and calculating their mean dissimilarity index with other stations. This process was repeated until all stations were combined into a single group. From these matrices the following dendograms of similarity were constructed for Phase II quarters 1 through 4 (Figures 5).

It is apparent from an examination of the dendograms that the relative similarity in benthic faunal composition of the stations changes with the seasons of the year. Initially, (quarter 1 and 2), the three north Bay stations, 9 (#42), 10 (#44) and 13 (#54), had the most similar benthic composition, but this changed in the following quarters. Stations 1 (#3) and 2 (#16), the two most southern stations, one in a replanted seagrass area and the other located near the channel between two keys, were quite dissimilar to the other stations. Station 3 (#22), located at the mouth of Snapper Creek Canal, was also dissimilar to the other stations although it did cluster with station 4 (#23), its nearest station and the fairly deep station 7 (#39) located mid channel in north Bay in several quarters. Station 11 (#47), an unusually diverse and rich north Bay station appeared relatively dissimilar to other stations in most quarters although it did cluster with stations 9 (#42), 10 (#44), and 13 (#54), all north Bay stations, during most quarters.

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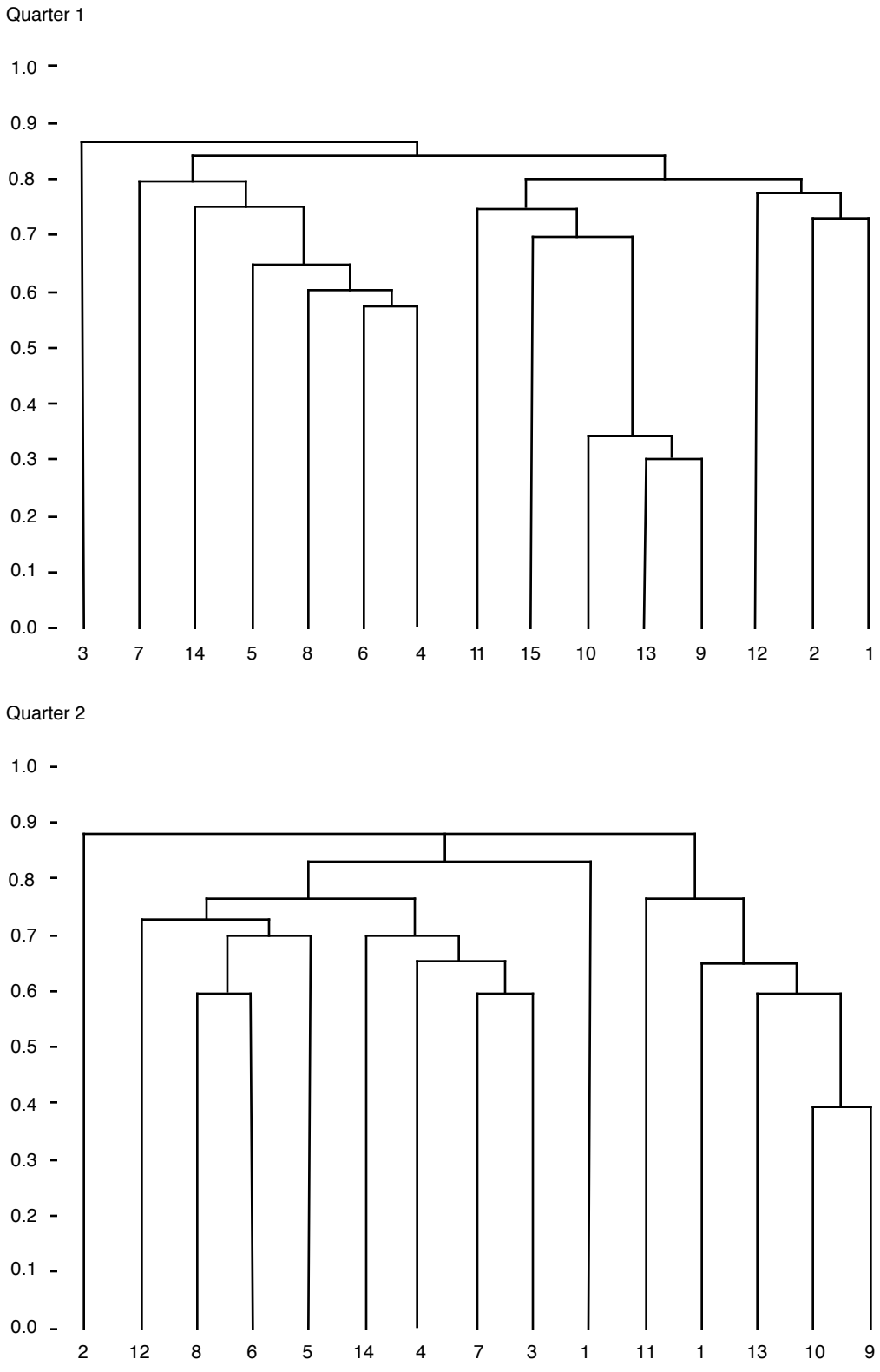

Figure 5. Dendograms of similarity for Phase II quarters 1 through 4.

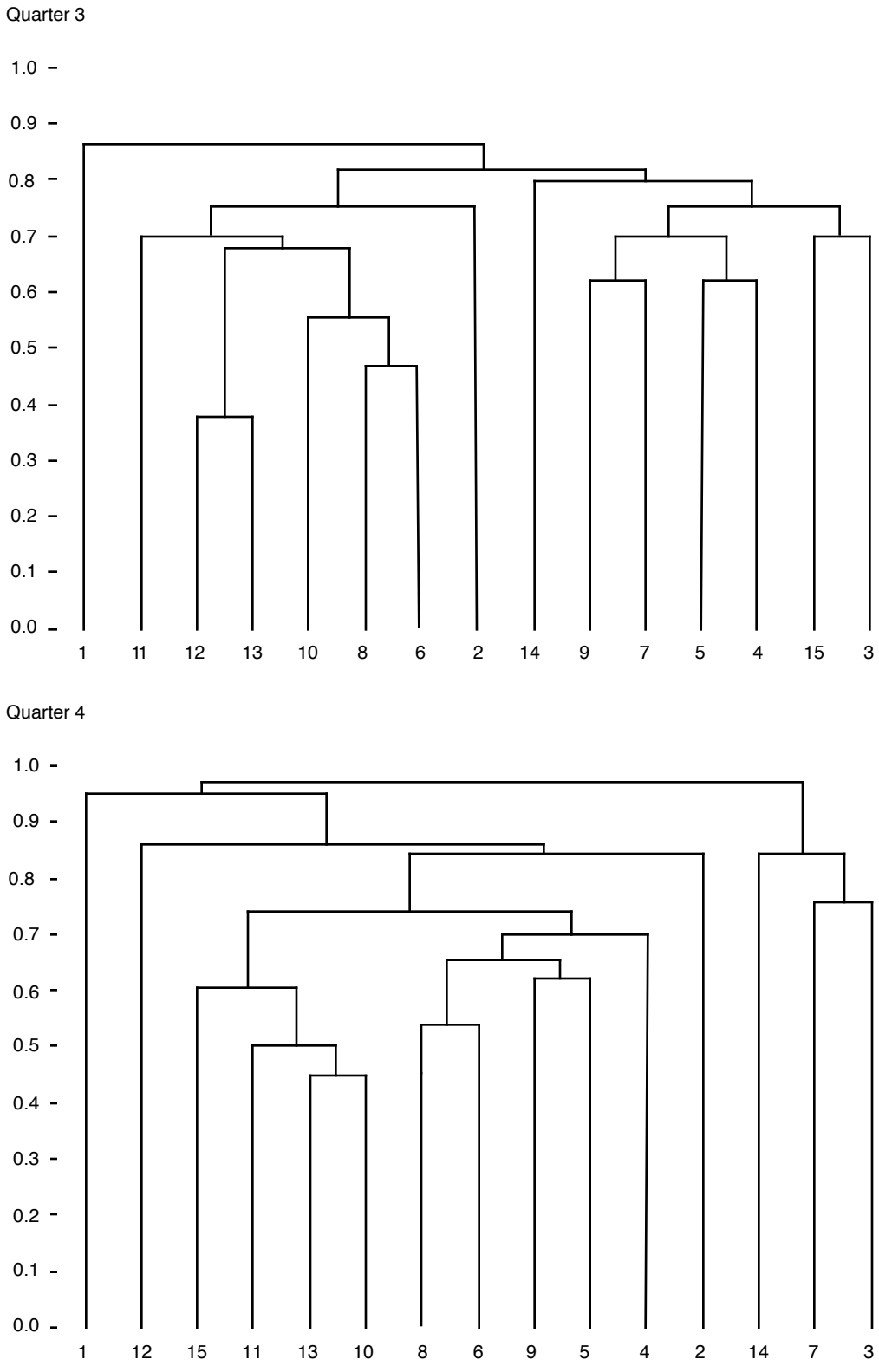

Figure 5. Dendograms of similarity for Phase II quarters 1 through 4 (cont.).

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