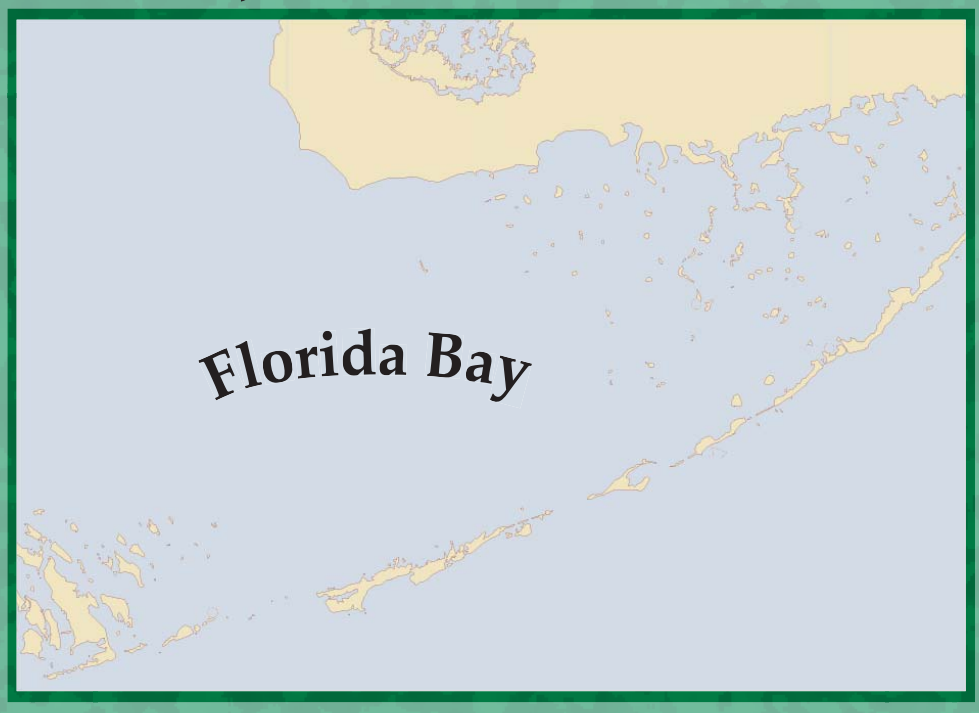
FLORIDA BAY MACROINVERTEBRATE COMMUNITY ASSESSMENT, AUGUST 2000



SUBMITTED TO:
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
NATION CENTERS FOR COASTAL OCEAN SCIENCE
CENTER FOR COASTAL MONITORING AND ASSESSMENT
219 FORT JOHNSON ROAD
CHARLESTON, SOUTH CAROLINA 29412

PREPARED BY:
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SEPTEMBER 2001

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INTRODUCTION

Florida Bay was sampled during August 2000 (Figure 1). One aspect of this study was benthic community characterization, which was accomplished via sample collection by National Oceanic and Atmospheric Administration (NOAA) personnel and laboratory and data analysis by Barry A. Vittor & Associates, Inc. (BVA).

METHODS

Sample Collection and Handling

A Young dredge (area = 0.04 m^2) was used to collect bottom samples at each of 28 station locations (three replicate samples were taken at each station) throughout Florida Bay. Samples were prescreened through 0.5 mm mesh seives, by NOAA in the field and fixed in 10% formalin. The preserved sample fractions were transported to BVA'S laboratory in Mobile, Alabama.

Macroinfaunal Sample Analysis

In the laboratory of BVA, benthic samples were inventoried, rinsed gently through a 0.5 mm mesh sieve to remove preservatives and sediment, stained with Rose Bengal, and stored in 70% isopropanol solution until processing. Sample material (sediment, detritus, organisms) was placed in white enamel trays for sorting under Wild M-5A dissecting microscopes. All macroinvertebrates were carefully removed with forceps and placed in labelled glass vials containing 70% isopropanol. Each vial represented a major taxonomic group (*e.g*. Polychaeta, Mollusca, Arthropoda). All sorted macroinvertebrates were identified to the lowest practical identification level (LPIL), which in most cases was to species level unless the specimen was a juvenile, damaged, or otherwise unidentifiable. The number of individuals of each taxon, excluding fragments, was recorded. A voucher collection was prepared, composed of representative individuals of each species not previously encountered in samples from the region.

DATA ANALYSIS

All data generated as a result of laboratory analysis of macroinfauna samples were first coded on data sheets. Enumeration data were entered for each species according to station and replicate. These data were reduced to a data summary report for each station, which included a taxonomic species list and benthic community parameters information. Archive data files of species identification and enumeration were prepared.

The Quality Assurance/Quality Control (QA/QC) reports for the Florida Bay samples are given in Appendices A1 and A2. Quality control comments on dominant LPIL taxa are given in Appendix A3.

Assemblage Structure

Several numerical indices were chosen for analysis and interpretation of the macroinfaunal data. Selection was based primarily on the ability of the index to provide a meaningful summary of data, as well as the applicability of the index to the characterization of the benthic community. Infaunal abundance is reported as the total number of individuals per station and the total number of individuals per square meter (= density). Taxa richness is reported as the total number of taxa represented in a given station collection.

Taxa diversity, which is often related to the ecological stability and environmental "quality" of the benthos, was estimated by the Shannon-Weaver Index (Pielou, 1966), according to the following formula:

$$H' = -\sum_{i=1}^{s} p_i (\ln p_i)$$

where, S = the number of taxa in the sample,

i = the i'th taxon in the sample, and

p_i = the number of individuals of the i'th taxon divided by the total number of individuals in the sample.

Taxa diversity was calculated using ln, however taxa diversity may also be

calculated using log. Both methods for calculating taxa diversity are common in scientific literature. The taxa diversity calculated in this report using ln, can be converted to log by multiplying the taxa diversity by 1.44270.

Taxa diversity within a given community is dependent upon the number of taxa present (taxa richness) and the distribution of all individuals among those taxa (equitability or evenness). In order to quantify and compare faunal equitability to taxa diversity for a given area, Pielou's Index J' (Pielou, 1966) was calculated as J' = H'/ln S, where ln S = H'_{max}, or the maximum possible diversity, when all taxa are represented by the same number of individuals; thus, J' = H' /H'_{max}.

Macroinfaunal data were graphically and statistically analyzed to identify any differences in density and number of taxa per replicate between stations. Data for density was analyzed using a one-way ANOVA and Tukey-Kramer post-hoc tests (SAS Institute, 2000). Data for taxa richness (mean number of taxa per replicate) could not be normalized using standard transformations (Shapiro-Wilk W; SAS Institute, 2000), and were analyzed using a non-parameteric Wilcoxon test (Zar, 1999; SAS Institute, 1995).

HABITAT CHARACTERISTICS

Water quality data for the 28 stations are presented in Table 1 and Figures 2 and 3. Depth ranged from 0.9 m at Station LR25 to 9.0 m at Station MR12 (Figure 2). Salinity ranged from 35.3 at Station LR25 to 43.4 at Station LR31 (Figure 3). Dissolved oxygen ranged from 3.3 mg/l at Stations LR48 to 5.3 mg/l at Station LR38 (Figure 3).

Sediment data for the 28 stations are given in Table 1 and Figures 4 through 9. Sediment composition at the 28 stations varied throughout Florida Bay (Figure 4). Sand was the dominant sediment type at each station except Stations LR25, LR30, LR38, LR47 and LR48 (Figure 5). Mean particle size ranged from 0.51 at Station LR50 to 6.9 at Station LR25 (Figure 6). Sorting coefficient ranged from 1.1 at Station LR33 to 5.8 at Station LR45 (Figure 7). Percent water content ranged from 39.3 at Station LR50 to 339.7 at Station LR30 (Table 1; Figure 8). The percent total organic carbon (TOC)

fraction of the sediment was generally low with all values less than 4% (Table 1, Figure 9).

BENTHIC COMMUNITY CHARACTERIZATION

Faunal Composition, Abundance, and Community Structure

Table 2 provides a complete phylogenetic listing for all strata as well as data on taxa abundance and strata occurrence. Microsoft ™ Excel spreadsheets are being provided separately to NOAA which include: raw data on taxa abundance and density by station, a complete taxonomic listing with strata abundance and occurrence and QA/QC comments, a major taxa table with overall taxa abundance, and an assemblage parameter table including data on mean number of taxa, mean density, taxa diversity and taxa evenness by station and stratum.

A total of 26,359 organisms, representing 687 taxa, were identified from the 28 stations (Table 3). Polychaetes were the most numerous organisms present representing 56% of the total assemblage, followed in abundance by malacostracans (14%) and gastropods (10%). Polychaetes represented 37% of the total number of taxa followed by malacostracans (28%), and gastropods (17%)(Table 3). The percentage abundance of the major taxa at the 28 stations is given in Table 4 and Figures 10 and 11.

The dominant taxa collected from the 28 stations were the polychaetes, Mediomastus LPIL, *Fabricinuda trilobata, and Exogone rolani* representing 7.6%, 7.5%, and 7.0% of the total number of individuals, respectively (Table 2). Rhynchocoela LPIL was the most widely distributed taxa being found at 100% of the stations. The distribution of taxa representing > 10% of the total assemblage at each station is given in Table 5.

Station abundance and taxa data are summarized for the 28 stations in Table 6. Mean density per station ranged from 2100.0 organisms·m^2 (SD = 950.0) at Station LR31 to 24,466.7 organisms·m^2 (SD = 2028.0) at Station LR27 (Table 6; Figures 12 and 13). There were significant differences in density between stations (Tables 7 and 8). The mean

number of taxa per station ranged from 21.7 taxa per replicate (SD = 4.0) at Station LR23 to 89.3 taxa per replicate (SD = 10.8) at Station LR52 (Table 6; Figures 14 and 15). There were significant differences in the number of taxa between stations (Table 7).

Taxa diversity and evenness for the Florida Bay stations are given in Table 6 and Figures 16, 17, 18 and 19. Taxa diversity (H´) varied and ranged from 1.05 at Station LR23 to 4.27 at Station LR39 (Table 6; Figures 16 and 17). Taxa evenness (J´) ranged from 0.29 at Station LR23 to 0.87 at Station LR49 (Table 6; Figures 18 and 19).

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Table 1. Summary of station location, water quality and sediment data for the Florida Bay stations, August 2000.

Station	Latitude	Longitude	Depth (m)	Temp. (C)	Salinity (ppt)	D.O. (mg/l)	% T.O.C.	% Gravel	% Sand	% Silt	% Clay	% Silt + Clay	USACE Description	Median Particle Size (phi)	Sorting Coefficient
LR-19	25.17581	80.50572	1.4	**	**	**	0.63	0.82	57.78	15.53	25.87	–	Clayey Sand	3.127	4.873
LR-21	25.12193	80.58278	1.4	**	**	**	1.00	4.63	48.60	15.81	30.96	–	Sandy Clay	3.428	5.404
LR-23	25.10724	80.73539	1.2	30.2	43.8	3.6	1.55	3.39	47.70	24.82	24.09	–	Clayey Sand	3.540	4.821
LR-25	25.08042	80.63933	0.9	30.3	35.3	3.8	1.42	0.42	23.63	35.84	40.11	–	Silty Clay	6.867	3.753
LR-27	25.06530	81.06700	3.2	31.4	39.4	4.4	0.51	2.91	92.18	–	–	4.90	Sand	1.336	1.487
LR-29	25.04600	81.13400	4.9	31.0	38.6	4.4	0.23	12.45	50.84	13.79	22.92	–	N/A	1.998	5.462
LR-30	25.02178	80.89438	1.2	30.4	41.3	3.6	3.36	0.00	18.67	41.34	39.98	–	Silty Clay	6.714	3.464
LR-31	24.99983	80.73990	1.5	30.2	43.4	3.5	1.18	2.64	42.37	24.23	30.76	–	Sandy Clay	5.178	4.735
LR-32	24.98321	81.06225	3.0	30.5	38.6	4.4	0.51	5.17	63.62	11.88	19.33	–	N/A	2.497	4.561
LR-33	24.97013	80.79373	2.1	30.7	41.5	3.7	0.22	3.95	92.68	–	–	3.37	Sand	0.655	1.139
LR-34	24.95503	80.60538	1.8	31.0	38.3	4.1	1.29	5.41	44.54	24.61	25.44	–	N/A	4.017	4.808
LR-35	24.95432	80.95668	2.7	31.3	39.9	4.4	0.92	1.00	49.50	20.44	29.07	–	Clayey Sand	3.959	4.715
LR-36	24.91478	81.11582	3.0	30.7	38.8	4.5	0.45	1.72	62.67	11.05	24.55	–	Clayey Sand	2.658	5.152
LR-37	24.89826	80.98428	2.7	30.9	38.9	3.8	2.19	0.70	42.81	27.28	29.20	–	Clayey Sand	5.580	4.324
LR-38	24.88561	80.92638	2.3	31.8	39.3	5.3	2.04	0.43	34.29	28.35	36.93	–	Sandy Clay	6.638	4.027
LR-39	24.88066	81.02858	2.1	31.2	38.9	3.9	1.79	9.46	45.70	11.82	33.02	–	N/A	2.521	7.571
LR-40	24.87379	80.79683	2.6	31.6	39.1	4.3	0.42	1.59	64.96	10.25	23.20	–	Clayey Sand	2.205	5.233
LR-41	24.68726	81.23000	2.3	31.1	38.2	3.6	0.80	0.69	62.20	12.38	24.73	–	Clayey Sand	3.285	4.761
LR-42	24.85962	81.36140	4.4	31.6	38.0	5.1	0.27	2.79	95.49	–	–	1.72	Sand	1.436	1.456
LR-45	24.84458	81.08147	2.7	31.1	39.0	3.5	1.87	3.46	46.22	21.57	28.76	–	Clayey Sand	4.030	5.770
LR-46	24.84140	81.21603	4.0	31.5	39.2	4.8	0.67	2.33	51.52	16.39	29.76	–	Clayey Sand	3.137	5.603
LR-47	24.81791	81.39074	1.8	31.7	38.1	4.1	1.80	0.00	24.03	38.92	37.05	–	Silty Clay	6.311	3.786
LR-48	24.77560	81.31274	2.1	31.8	39.0	3.3	1.65	0.22	34.34	28.79	36.64	–	Sandy Clay	6.265	4.456
LR-49	24.77282	80.97932	3.0	31.7	39.1	4.3	0.55	1.74	68.36	12.84	17.06	–	Silty Sand	1.741	4.538
LR-50	24.77093	81.03256	2.3	31.8	39.7	4.8	0.33	1.82	94.41	–	–	3.77	Sand	0.513	1.217
LR-51	24.76206	81.11771	2.7	32.4	40.2	3.5	0.55	6.90	60.75	10.01	22.34	–	N/A	1.726	5.647
LR-52	24.75227	81.20681	2.0	32.4	39.1	4.6	0.86	2.49	68.91	9.78	18.82	–	Silty Sand	1.782	4.635
MR-12	25.05350	81.27830	9.0	30.5	38.0	4.2	0.29	5.48	92.82	–	–	1.69	N/A	1.406	1.205

** indicates measurement not recorded

Table 2. Distribution and abundance of taxa for the Florida Bay stations, August 2000.

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Mediomastus (LPIL)	Ann	Poly	2015	7.64	7.64	26	93
Fabricinuda trilobata	Ann	Poly	1985	7.53	15.18	26	93
Exogone rolani	Ann	Poly	1858	7.05	22.22	27	96
Tubificidae (LPIL)	Ann	Olig	1195	4.53	26.76	27	96
Caecum pulchellum	Mol	Gast	954	3.62	30.38	25	89
Leptochelia (LPIL)	Art	Mala	864	3.28	33.65	16	57
Sipuncula (LPIL)	Sip	–	777	2.95	36.60	24	86
Monticellina dorsobranchialis	Ann	Poly	694	2.63	39.24	22	79
Scoletoma verrilli	Ann	Poly	550	2.09	41.32	17	61
Nucula aegeenis	Mol	Biva	437	1.66	42.98	17	61
Rhynchocoela (LPIL)	Rhy	–	421	1.60	44.58	28	100
Cirrophorus lyra	Ann	Poly	387	1.47	46.04	26	93
Cirratulidae (LPIL)	Ann	Poly	363	1.38	47.42	23	82
Syllis broomensis	Ann	Poly	322	1.22	48.64	26	93
Exogone lourei	Ann	Poly	311	1.18	49.82	18	64
Ampelisca vadorum	Art	Mala	303	1.15	50.97	17	61
Chione cancellata	Mol	Biva	269	1.02	51.99	17	61
Capitellidae (LPIL)	Ann	Poly	267	1.01	53.01	21	75
Schistomeringos pectinata	Ann	Poly	262	0.99	54.00	24	86
Maldanidae (LPIL)	Ann	Poly	208	0.79	54.79	20	71
Nereididae (LPIL)	Ann	Poly	201	0.76	55.55	23	82
Phascolion strombi	Sip	–	198	0.75	56.30	20	71
Tubulanus (LPIL)	Rhy	Anop	198	0.75	57.05	24	86
Schwartziella catesbyana	Mol	Gast	179	0.68	57.73	16	57
Ophiuroidea (LPIL)	Ech	Ophi	173	0.66	58.39	25	89
Prionospio (LPIL)	Ann	Poly	170	0.64	59.03	25	89
Actiniaria (LPIL)	Cni	Anth	167	0.63	59.67	27	96
Syllis cornuta	Ann	Poly	166	0.63	60.30	26	93
Lembos (LPIL)	Art	Mala	157	0.60	60.89	22	79
Branchiomma nigromaculata	Ann	Poly	155	0.59	61.48	15	54
Caecum floridanum	Mol	Gast	151	0.57	62.05	3	11
Caecum nitidium	Mol	Gast	148	0.56	62.62	11	39
Lumbrineridae (LPIL)	Ann	Poly	147	0.56	63.17	16	57
Aricidea taylori	Ann	Poly	145	0.55	63.72	23	82
Solemya occidentalis	Mol	Biva	137	0.52	64.24	13	46
Taylorpholoe hirsuta	Ann	Poly	132	0.50	64.74	12	43
Aricidea philbinae	Ann	Poly	130	0.49	65.24	13	46
Armandia maculata	Ann	Poly	129	0.49	65.73	17	61
Prionospio cristata	Ann	Poly	129	0.49	66.22	13	46
Decamastus sp. A	Ann	Poly	128	0.49	66.70	8	29
Mediomastus californiensis	Ann	Poly	128	0.49	67.19	20	71
Elasmopus levis	Art	Mala	126	0.48	67.67	13	46
Haplosyllis spongicola	Ann	Poly	122	0.46	68.13	9	32
Sabellidae (LPIL)	Ann	Poly	114	0.43	68.56	21	75
Pettibonella multiuncinata	Ann	Poly	112	0.42	68.99	12	43
Sphaerosyllis piriferopsis	Ann	Poly	110	0.42	69.40	17	61
Caecum imbricatum	Mol	Gast	99	0.38	69.78	7	25
Finella dubia	Mol	Gast	93	0.35	70.13	2	7
Tellina (LPIL)	Mol	Biva	90	0.34	70.47	18	64
Terebellides parvus	Ann	Poly	89	0.34	70.81	13	46
Lucina nassula	Mol	Biva	88	0.33	71.14	7	25
Aricidea catherinae	Ann	Poly	86	0.33	71.47	17	61
Grandidierella bonnieroides	Art	Mala	85	0.32	71.79	11	39
Podarkeopsis levifuscina	Ann	Poly	85	0.32	72.12	20	71
Goniadides carolinae	Ann	Poly	84	0.32	72.43	9	32
Lembos unifasciatus	Art	Mala	83	0.31	72.75	9	32

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Notomastus tenuis	Ann	Poly	82	0.31	73.06	9	32
Polyplacophora (LPIL)	Mol	Polyp	78	0.30	73.36	13	46
Ceratocephale oculata	Ann	Poly	76	0.29	73.64	9	32
Protodorvillea kefersteini	Ann	Poly	76	0.29	73.93	8	29
Nereis panamensis	Ann	Poly	74	0.28	74.21	11	39
Cumella garrityi	Art	Mala	73	0.28	74.49	18	64
Lucinidae (LPIL)	Mol	Biva	73	0.28	74.77	10	36
Axiothella mucosa	Ann	Poly	72	0.27	75.04	11	39
Crepidula maculosa	Mol	Gast	71	0.27	75.31	10	36
Acteocina canaliculata	Mol	Gast	69	0.26	75.57	11	39
Acuminodeutopus naglei	Art	Mala	69	0.26	75.83	10	36
Serpulidae (LPIL)	Ann	Poly	67	0.25	76.09	17	61
Amakusanthura magnifica	Art	Mala	66	0.25	76.34	18	64
Eupolymnia nebulosa	Ann	Poly	65	0.25	76.58	18	64
Aricidea (LPIL)	Ann	Poly	64	0.24	76.83	19	68
Nereis falsa	Ann	Poly	62	0.24	77.06	14	50
Cymadusa compta	Art	Mala	61	0.23	77.29	12	43
Schistomeringos rudolphi	Ann	Poly	61	0.23	77.53	12	43
Diplodonta (LPIL)	Mol	Biva	60	0.23	77.75	14	50
Pagurolangis largoensis	Art	Mala	56	0.21	77.97	3	11
Ampelisca (LPIL)	Art	Mala	55	0.21	78.17	14	50
Cerithium (LPIL)	Mol	Gast	54	0.20	78.38	3	11
Scoletoma ernesti	Ann	Poly	54	0.20	78.58	8	29
Syllidae (LPIL)	Ann	Poly	53	0.20	78.79	15	54
Bulla striata	Mol	Gast	52	0.20	78.98	14	50
Chone (LPIL)	Ann	Poly	52	0.20	79.18	13	46
Erichthonius brasiliensis	Art	Mala	52	0.20	79.38	5	18
Caulleriella cf. alata	Ann	Poly	51	0.19	79.57	14	50
Hargeria rapax	Art	Mala	50	0.19	79.76	9	32
Carpias algicola	Art	Mala	49	0.19	79.95	9	32
Kalliapseudes sp. C	Art	Mala	49	0.19	80.13	3	11
Paracerceis caudata	Art	Mala	49	0.19	80.32	15	54
Scyphoproctus (LPIL)	Ann	Poly	49	0.19	80.50	15	54
Nematonereis hebes	Ann	Poly	48	0.18	80.69	17	61
Neomegamphopus (LPIL)	Art	Mala	48	0.18	80.87	5	18
Tellina similis	Mol	Biva	46	0.17	81.04	10	36
Polycirrus (LPIL)	Ann	Poly	45	0.17	81.21	12	43
Cylindrobulla beauii	Mol	Gast	44	0.17	81.38	7	25
Branchiosyllis exilis	Ann	Poly	43	0.16	81.54	8	29
Cerapus cudjoe	Art	Mala	43	0.16	81.71	6	21
Fimbriosthenelais minor	Ann	Poly	41	0.16	81.86	14	50
Aoridae (LPIL)	Art	Mala	40	0.15	82.01	14	50
Cyclostremiscus pentagonus	Mol	Gast	40	0.15	82.17	3	11
Deutella incerta	Art	Mala	40	0.15	82.32	10	36
Codakia orbicularis	Mol	Biva	39	0.15	82.47	8	29
Neomegamphopidae (LPIL)	Art	Mala	39	0.15	82.61	4	14
Nereis pelagica	Ann	Poly	39	0.15	82.76	12	43
Amphiuridae (LPIL)	Ech	Ophi	38	0.14	82.91	9	32
Branchiosyllis oculata	Ann	Poly	38	0.14	83.05	5	18
Cerithiidae (LPIL)	Mol	Gast	38	0.14	83.19	17	61
Marginella lavalleeana	Mol	Gast	38	0.14	83.34	13	46
Maera caroliniana	Art	Mala	37	0.14	83.48	3	11
Shoemakerella cubensis	Art	Mala	37	0.14	83.62	6	21
Syllis prolifera	Ann	Poly	37	0.14	83.76	9	32
Brachidontes exustus	Mol	Biva	36	0.14	83.90	4	14
Lucina (LPIL)	Mol	Biva	34	0.13	84.02	12	43
Podarke obscura	Ann	Poly	34	0.13	84.15	15	54

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Prionospio steenstrupi	Ann	Poly	34	0.13	84.28	11	39
Olivella dealbata	Mol	Gast	33	0.13	84.41	8	29
Syllis danieli	Ann	Poly	33	0.13	84.53	7	25
Veneridae (LPIL)	Mol	Biva	33	0.13	84.66	12	43
Nereis acuminata	Ann	Poly	32	0.12	84.78	6	21
Nereis grayi	Ann	Poly	32	0.12	84.90	1	4
Praxillella gracilis	Ann	Poly	32	0.12	85.02	3	11
Terebellidae (LPIL)	Ann	Poly	32	0.12	85.14	16	57
Batea carinata	Art	Mala	31	0.12	85.26	11	39
Pettiboneia duofurca	Ann	Poly	31	0.12	85.38	11	39
Pitar fulminatus	Mol	Biva	31	0.12	85.50	9	32
Isolda pulchella	Ann	Poly	30	0.11	85.61	16	57
Acteocina candei	Mol	Gast	29	0.11	85.72	6	21
Ehlersia ferrugina	Ann	Poly	29	0.11	85.83	5	18
Nereis (LPIL)	Ann	Poly	29	0.11	85.94	10	36
Aricidea suecica	Ann	Poly	28	0.11	86.05	15	54
Glycinde solitaria	Ann	Poly	28	0.11	86.15	13	46
Prionospio heterobranchia	Ann	Poly	28	0.11	86.26	10	36
Tagelus divisus	Mol	Biva	28	0.11	86.37	4	14
Turbinidae genus A	Mol	Gast	28	0.11	86.47	6	21
Vaunthompsonia sp. B	Art	Mala	28	0.11	86.58	8	29
Leptochelia forresti	Art	Mala	27	0.10	86.68	3	11
Montacutidae (LPIL)	Mol	Biva	27	0.10	86.78	11	39
Patelloida pustulata	Mol	Gast	27	0.10	86.88	6	21
Accalathura crenulata	Art	Mala	26	0.10	86.98	4	14
Chevalia carpenteri	Art	Mala	26	0.10	87.08	5	18
Erichthonius rubricornis	Art	Mala	26	0.10	87.18	3	11
Hesionidae (LPIL)	Ann	Poly	26	0.10	87.28	10	36
Lucina multilineata	Mol	Biva	26	0.10	87.38	9	32
Paracaprella tenuis	Art	Mala	26	0.10	87.48	4	14
Psammokalliapseudes granulosus	Art	Mala	26	0.10	87.58	4	14
Dorvillea largidentis	Ann	Poly	25	0.09	87.67	9	32
Erichsonella floridana	Art	Mala	25	0.09	87.77	6	21
Linga amiantus	Mol	Biva	25	0.09	87.86	7	25
Odontosyllis enopla	Ann	Poly	25	0.09	87.95	11	39
Pagurus (LPIL)	Art	Mala	25	0.09	88.05	11	39
Paranebalia belizensis	Art	Mala	25	0.09	88.14	8	29
Xenanthura brevitelson	Art	Mala	25	0.09	88.24	7	25
Apseudes propinquus	Art	Mala	24	0.09	88.33	6	21
Ceratonereis (LPIL)	Ann	Poly	24	0.09	88.42	9	32
Eunice (LPIL)	Ann	Poly	23	0.09	88.51	10	36
Gastropoda (LPIL)	Mol	Gast	23	0.09	88.60	14	50
Laonice cirrata	Ann	Poly	23	0.09	88.68	11	39
Lyonsia hyalina	Mol	Biva	23	0.09	88.77	6	21
Lysidice notata	Ann	Poly	23	0.09	88.86	10	36
Prionospio multibranchiata	Ann	Poly	23	0.09	88.94	7	25
Schwartziella bryerea	Mol	Gast	23	0.09	89.03	3	11
Anamixis cavitura	Art	Mala	22	0.08	89.12	4	14
Ascidiacea (LPIL)	Cho	Asci	22	0.08	89.20	8	29
Atys sandersoni	Mol	Gast	22	0.08	89.28	6	21
Bittium (LPIL)	Mol	Gast	22	0.08	89.37	1	4
Calyptraea centralis	Mol	Gast	22	0.08	89.45	7	25
Cyclaspis pustulata	Art	Mala	22	0.08	89.53	7	25
Leitoscoloplos robustus	Ann	Poly	22	0.08	89.62	6	21
Leptosynapta multigranula	Ech	Holo	22	0.08	89.70	2	7
Nereis goagirana	Ann	Poly	22	0.08	89.78	7	25
Rissoina cancellata	Mol	Gast	22	0.08	89.87	4	14

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Scolelepis texana	Ann	Poly	22	0.08	89.95	6	21
Turridae (LPIL)	Mol	Gast	22	0.08	90.03	13	46
Nassarius albus	Mol	Gast	21	0.08	90.11	11	39
Olivella (LPIL)	Mol	Gast	21	0.08	90.19	7	25
Ophiactis savignyi	Ech	Ophi	21	0.08	90.27	6	21
Owenia fusiformis	Ann	Poly	21	0.08	90.35	6	21
Scoloplos rubra	Ann	Poly	21	0.08	90.43	9	32
Xanthidae (LPIL)	Art	Mala	21	0.08	90.51	10	36
Antalis antillarum	Mol	Scap	20	0.08	90.59	7	25
Dulichiella appendiculata	Art	Mala	20	0.08	90.66	7	25
Melinna maculata	Ann	Poly	20	0.08	90.74	6	21
Paranebalia (LPIL)	Art	Mala	20	0.08	90.82	6	21
Cumella (LPIL)	Art	Mala	19	0.07	90.89	9	32
Edotia lyonsi	Art	Mala	19	0.07	90.96	6	21
Leucon americanus	Art	Mala	19	0.07	91.03	1	4
Lineidae (LPIL)	Rhy	Anop	19	0.07	91.10	11	39
Lysianopsis alba	Art	Mala	19	0.07	91.18	5	18
Phyllodocidae (LPIL)	Ann	Poly	19	0.07	91.25	10	36
Scoletoma impatiens	Ann	Poly	19	0.07	91.32	7	25
Turbonilla (LPIL)	Mol	Gast	19	0.07	91.39	10	36
Typosyllis armillaris	Ann	Poly	19	0.07	91.46	7	25
Capitella jonesi	Ann	Poly	18	0.07	91.53	5	18
Dipolydora socialis	Ann	Poly	18	0.07	91.60	5	18
Leucothoe spinicarpa	Art	Mala	18	0.07	91.67	3	11
Nuculana concentrica	Mol	Biva	18	0.07	91.74	2	7
Paramicrodeutopus myersi	Art	Mala	18	0.07	91.81	4	14
Diplodonta semiaspera	Mol	Biva	17	0.06	91.87	5	18
Gibberosus myersi	Art	Mala	17	0.06	91.93	4	14
Leiocapitella sp. A	Ann	Poly	17	0.06	92.00	2	7
Pinnixa (LPIL)	Art	Mala	17	0.06	92.06	10	36
Porifera (LPIL)	Por	–	17	0.06	92.13	5	18
Scoletoma (LPIL)	Ann	Poly	17	0.06	92.19	6	21
Sinelobus stanfordi	Art	Mala	17	0.06	92.26	1	4
Sphaerosyllis aciculata	Ann	Poly	17	0.06	92.32	5	18
Streblosoma hartmanae	Ann	Poly	17	0.06	92.39	8	29
Strombiformis (LPIL)	Mol	Gast	17	0.06	92.45	9	32
Aglaophamus verrilli	Ann	Poly	16	0.06	92.51	5	18
Anamaera hixoni	Art	Mala	16	0.06	92.57	1	4
Caecum cooperi	Mol	Gast	16	0.06	92.63	2	7
Leptosynapta (LPIL)	Ech	Holo	16	0.06	92.69	4	14
Oxyurostylis (LPIL)	Art	Mala	16	0.06	92.75	8	29
Pleuromeris tridentata	Mol	Biva	16	0.06	92.81	4	14
Pseudoleptochelia sp. A	Art	Mala	16	0.06	92.88	4	14
Scyphoproctus platyproctus	Ann	Poly	16	0.06	92.94	8	29
Bivalvia (LPIL)	Mol	Biva	15	0.06	92.99	6	21
Circulus suppressus	Mol	Gast	15	0.06	93.05	1	4
Lucina radians	Mol	Biva	15	0.06	93.11	5	18
Photis (LPIL)	Art	Mala	15	0.06	93.16	8	29
Ampelisca schellenbergi	Art	Mala	14	0.05	93.22	6	21
Cerithium muscarum	Mol	Gast	14	0.05	93.27	4	14
Corbula contracta	Mol	Biva	14	0.05	93.32	4	14
Decamastus gracilis	Ann	Poly	14	0.05	93.38	2	7
Kinbergonuphis simoni	Ann	Poly	14	0.05	93.43	2	7
Limnoria (LPIL)	Art	Mala	14	0.05	93.48	5	18
Malmgreniella maccraryae	Ann	Poly	14	0.05	93.54	9	32
Nereiphylla fragilis	Ann	Poly	14	0.05	93.59	9	32
Notomastus latericeus	Ann	Poly	14	0.05	93.64	6	21

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Polycirrus plumosus	Ann	Poly	14	0.05	93.69	9	32
Tharyx acutus	Ann	Poly	14	0.05	93.75	5	18
Anachis floridana	Mol	Gast	13	0.05	93.80	3	11
Glycera sp. E	Ann	Poly	13	0.05	93.85	5	18
Glyceridae (LPIL)	Ann	Poly	13	0.05	93.90	5	18
Melitidae (LPIL)	Art	Mala	13	0.05	93.95	5	18
Philine sagra	Mol	Gast	13	0.05	93.99	6	21
Corophium (LPIL)	Art	Mala	12	0.05	94.04	5	18
Dorvilleidae (LPIL)	Ann	Poly	12	0.05	94.09	10	36
Galathowenia oculata	Ann	Poly	12	0.05	94.13	6	21
Notomastus hemipodus	Ann	Poly	12	0.05	94.18	7	25
Phyllodoce arenae	Ann	Poly	12	0.05	94.22	3	11
Pycnogonida (LPIL)	Art	Pycn	12	0.05	94.27	8	29
Sabaco americanus	Ann	Poly	12	0.05	94.31	5	18
Spio pettiboneae	Ann	Poly	12	0.05	94.36	6	21
Syllis beneliahui	Ann	Poly	12	0.05	94.40	4	14
Zebina browniana	Mol	Gast	12	0.05	94.45	6	21
Ampelisca sp. C	Art	Mala	11	0.04	94.49	2	7
Campylaspis sp. U	Art	Mala	11	0.04	94.53	6	21
Capitella capitata	Ann	Poly	11	0.04	94.57	7	25
Ceratonereis mirabilis	Ann	Poly	11	0.04	94.62	4	14
Chaetozone sp. O	Ann	Poly	11	0.04	94.66	5	18
Notomastus (LPIL)	Ann	Poly	11	0.04	94.70	8	29
Saltipedis sp. B	Art	Mala	11	0.04	94.74	4	14
Trichobranchus glacialis	Ann	Poly	11	0.04	94.78	5	18
Glycymeris americana	Mol	Biva	10	0.04	94.82	2	7
Grubeosyllis rugulosa	Ann	Poly	10	0.04	94.86	6	21
Lumbrineris latreilli	Ann	Poly	10	0.04	94.90	4	14
Mytilidae (LPIL)	Mol	Biva	10	0.04	94.94	5	18
Neomegamphopus hiatus	Art	Mala	10	0.04	94.97	2	7
Odostomia (LPIL)	Mol	Gast	10	0.04	95.01	6	21
Panopeus occidentalis	Art	Mala	10	0.04	95.05	4	14
Piromis roberti	Ann	Poly	10	0.04	95.09	6	21
Rissoidae (LPIL)	Mol	Gast	10	0.04	95.13	5	18
Sphaeromatidae (LPIL)	Art	Mala	10	0.04	95.16	6	21
Aclididae (LPIL)	Mol	Gast	9	0.03	95.20	6	21
Ampeliscidae (LPIL)	Art	Mala	9	0.03	95.23	2	7
Carditamera floridana	Mol	Biva	9	0.03	95.27	3	11
Columbella rusticoides	Mol	Gast	9	0.03	95.30	5	18
Eunice unifrons	Ann	Poly	9	0.03	95.33	4	14
Hydrozoa (LPIL)	Cni	Hydr	9	0.03	95.37	5	18
Lysianassidae (LPIL)	Art	Mala	9	0.03	95.40	6	21
Sphaerosyllis perkinsi	Ann	Poly	9	0.03	95.44	2	7
Spionidae (LPIL)	Ann	Poly	9	0.03	95.47	6	21
Stylocheilus citrinus	Mol	Gast	9	0.03	95.50	3	11
Tellina sybaritica	Mol	Biva	9	0.03	95.54	4	14
Anachis lafresnayi	Mol	Gast	8	0.03	95.57	3	11
Ceratonereis longicirrata	Ann	Poly	8	0.03	95.60	3	11
Cerithium eburneum	Mol	Gast	8	0.03	95.63	2	7
Erichsonella attenuata	Art	Mala	8	0.03	95.66	5	18
Euceramus praelongus	Art	Mala	8	0.03	95.69	2	7
Eulimidae (LPIL)	Mol	Gast	8	0.03	95.72	5	18
Holothuroidea (LPIL)	Ech	Holo	8	0.03	95.75	7	25
Listriella barnardi	Art	Mala	8	0.03	95.78	6	21
Paguristes (LPIL)	Art	Mala	8	0.03	95.81	5	18
Plesiolembos rectangulatus	Art	Mala	8	0.03	95.84	2	7
Tegula lividomaculata	Mol	Gast	8	0.03	95.87	7	25

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Ampelisca venetiensis	Art	Mala	7	0.03	95.90	1	4
Ampithoe (LPIL)	Art	Mala	7	0.03	95.93	1	4
Anodontia alba	Mol	Biva	7	0.03	95.95	2	7
Anomia simplex	Mol	Biva	7	0.03	95.98	3	11
Barantolla sp. A	Ann	Poly	7	0.03	96.01	1	4
Brachiopoda (LPIL)	Bra	–	7	0.03	96.03	3	11
Calyptraeidae (LPIL)	Mol	Gast	7	0.03	96.06	5	18
Cerapus sp. H	Art	Mala	7	0.03	96.08	1	4
Chione (LPIL)	Mol	Biva	7	0.03	96.11	4	14
Corophiidae (LPIL)	Art	Mala	7	0.03	96.14	1	4
Cumingia tellinoides	Mol	Biva	7	0.03	96.16	4	14
Decamastus (LPIL)	Ann	Poly	7	0.03	96.19	2	7
Elasmopus (LPIL)	Art	Mala	7	0.03	96.22	3	11
Eobrolgus spinosus	Art	Mala	7	0.03	96.24	5	18
Eunicidae (LPIL)	Ann	Poly	7	0.03	96.27	5	18
Globosolembos smithi	Art	Mala	7	0.03	96.30	2	7
Glycera americana	Ann	Poly	7	0.03	96.32	2	7
Laevicardium laevigatum	Mol	Biva	7	0.03	96.35	3	11
Lepidonotus variabilis	Ann	Poly	7	0.03	96.38	3	11
Megalomma (LPIL)	Ann	Poly	7	0.03	96.40	2	7
Nephtys incisa	Ann	Poly	7	0.03	96.43	2	7
Odostomia laevigata	Mol	Gast	7	0.03	96.46	4	14
Opisthodonta sp. B	Ann	Poly	7	0.03	96.48	2	7
Paramphinome sp. B	Ann	Poly	7	0.03	96.51	4	14
Polynoidae (LPIL)	Ann	Poly	7	0.03	96.54	3	11
Protohadzia schoenerae	Art	Mala	7	0.03	96.56	4	14
Spirorbidae (LPIL)	Ann	Poly	7	0.03	96.59	1	4
Tricolia bella	Mol	Gast	7	0.03	96.62	3	11
Tricolia thalassicola	Mol	Gast	7	0.03	96.64	4	14
Arcopsis adamsi	Mol	Biva	6	0.02	96.67	2	7
Bittiolum varium	Mol	Gast	6	0.02	96.69	1	4
Colomastix halichondriae	Art	Mala	6	0.02	96.71	1	4
Dexaminidae Genus A	Art	Mala	6	0.02	96.73	3	11
Diplodonta punctata	Mol	Biva	6	0.02	96.76	1	4
Leptochelia sp. D	Art	Mala	6	0.02	96.78	1	4
Mesanthura floridensis	Art	Mala	6	0.02	96.80	4	14
Nuculana (LPIL)	Mol	Biva	6	0.02	96.82	2	7
Olividae (LPIL)	Mol	Gast	6	0.02	96.85	5	18
Paguridae (LPIL)	Art	Mala	6	0.02	96.87	3	11
Pariphinotus seclusus	Art	Mala	6	0.02	96.89	3	11
Plakosyllis quadrioculata	Ann	Poly	6	0.02	96.92	4	14
Psammobiidae (LPIL)	Mol	Biva	6	0.02	96.94	1	4
Pteromeris perplana	Mol	Biva	6	0.02	96.96	1	4
Pyramidellidae (LPIL)	Mol	Gast	6	0.02	96.98	3	11
Sthenelais sp. A	Ann	Poly	6	0.02	97.01	1	4
Strombiformis hemphilli	Mol	Gast	6	0.02	97.03	1	4
Tellinidae (LPIL)	Mol	Biva	6	0.02	97.05	4	14
Triptychus niveus	Mol	Gast	6	0.02	97.08	2	7
Vitrinellidae (LPIL)	Mol	Gast	6	0.02	97.10	1	4
Apseudes sp. A	Art	Mala	5	0.02	97.12	3	11
Arene tricarinata	Mol	Gast	5	0.02	97.14	4	14
Aspidosiphon albus	Sip	–	5	0.02	97.15	1	4
Cyclaspis sp. N	Art	Mala	5	0.02	97.17	5	18
Dasybranchus (LPIL)	Ann	Poly	5	0.02	97.19	2	7
Dentimargo aureocincta	Mol	Gast	5	0.02	97.21	5	18
Drilonereis sp. E	Ann	Poly	5	0.02	97.23	2	7
Echinoidea (LPIL)	Ech	Echi	5	0.02	97.25	1	4

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Eumida sanguinea	Ann	Poly	5	0.02	97.27	4	14
Heteromastus filiformis	Ann	Poly	5	0.02	97.29	1	4
Kalliapseudes bahamaensis	Art	Mala	5	0.02	97.31	1	4
Leiocapitella sp. B	Ann	Poly	5	0.02	97.33	3	11
Leitoscoloplos (LPIL)	Ann	Poly	5	0.02	97.34	4	14
Lucinoma filosum	Mol	Biva	5	0.02	97.36	4	14
Magelona pettiboneae	Ann	Poly	5	0.02	97.38	4	14
Megalomma bioculatum	Ann	Poly	5	0.02	97.40	1	4
Melphidippidae (LPIL)	Art	Mala	5	0.02	97.42	3	11
Photis pugnator	Art	Mala	5	0.02	97.44	2	7
Pista palmata	Ann	Poly	5	0.02	97.46	1	4
Thor manningi	Art	Mala	5	0.02	97.48	2	7
Trachypenaeus (LPIL)	Art	Mala	5	0.02	97.50	4	14
Trichobranchidae (LPIL)	Ann	Poly	5	0.02	97.52	3	11
Triphora nigrocincta	Mol	Gast	5	0.02	97.53	2	7
Turbonilla conradi	Mol	Gast	5	0.02	97.55	2	7
Acmaeidae (LPIL)	Mol	Gast	4	0.02	97.57	2	7
Asthenothaerus hemphilli	Mol	Biva	4	0.02	97.58	2	7
Bhawania heteroseta	Ann	Poly	4	0.02	97.60	2	7
Bowmaniella (LPIL)	Art	Mala	4	0.02	97.61	3	11
Caulleriella (LPIL)	Ann	Poly	4	0.02	97.63	2	7
Cirrophorus branchiatus	Ann	Poly	4	0.02	97.64	3	11
Corbula (LPIL)	Mol	Biva	4	0.02	97.66	3	11
Crassinella martinicensis	Mol	Biva	4	0.02	97.67	1	4
Dorvillea clavata	Ann	Poly	4	0.02	97.69	1	4
Exogone atlantica	Ann	Poly	4	0.02	97.70	3	11
Exogone dispar	Ann	Poly	4	0.02	97.72	1	4
Gammaropsis (LPIL)	Art	Mala	4	0.02	97.74	2	7
Glans dominguensis	Mol	Biva	4	0.02	97.75	3	11
Haminoea succinea	Mol	Gast	4	0.02	97.77	3	11
Heteromysis nouveli	Art	Mala	4	0.02	97.78	3	11
Hippolyte zostericola	Art	Mala	4	0.02	97.80	2	7
Lioberus castaneus	Mol	Biva	4	0.02	97.81	3	11
Loimia medusa	Ann	Poly	4	0.02	97.83	4	14
Lucina pectinata	Mol	Biva	4	0.02	97.84	2	7
Marginellidae (LPIL)	Mol	Gast	4	0.02	97.86	3	11
Metaphoxus sp. A	Art	Mala	4	0.02	97.87	3	11
Mitrella lunata	Mol	Gast	4	0.02	97.89	3	11
Nereis micromma	Ann	Poly	4	0.02	97.90	2	7
Nudibranchia (LPIL)	Mol	Gast	4	0.02	97.92	3	11
Onuphidae (LPIL)	Ann	Poly	4	0.02	97.93	2	7
Ophelina cylindricaudata	Ann	Poly	4	0.02	97.95	3	11
Parapionosyllis uebelackerae	Ann	Poly	4	0.02	97.96	3	11
Parthenope granulata	Art	Mala	4	0.02	97.98	2	7
Pectinaria regalis	Ann	Poly	4	0.02	97.99	3	11
Pilargis berkeleyae	Ann	Poly	4	0.02	98.01	3	11
Pinnidae (LPIL)	Mol	Biva	4	0.02	98.02	3	11
Pleurobranchiidae Genus A	Mol	Gast	4	0.02	98.04	2	7
Pseudovermilia occidentalis	Ann	Poly	4	0.02	98.05	4	14
Pusia gemmata	Mol	Gast	4	0.02	98.07	4	14
Rictaxis punctostriatus	Mol	Gast	4	0.02	98.08	2	7
Rildardanus laminosa	Art	Mala	4	0.02	98.10	1	4
Sabellaria sp. A	Ann	Poly	4	0.02	98.11	3	11
Scolelepis squamata	Ann	Poly	4	0.02	98.13	3	11
Semelidae (LPIL)	Mol	Biva	4	0.02	98.14	4	14
Sphaerosyllis (LPIL)	Ann	Poly	4	0.02	98.16	2	7
Sphaerosyllis taylori	Ann	Poly	4	0.02	98.18	2	7

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Syllides bansei	Ann	Poly	4	0.02	98.19	2	7
Tagelus (LPIL)	Mol	Biva	4	0.02	98.21	1	4
Tellidora cristata	Mol	Biva	4	0.02	98.22	2	7
Transennella stimpsoni	Mol	Biva	4	0.02	98.24	2	7
Upogebia (LPIL)	Art	Mala	4	0.02	98.25	2	7
Acteocina (LPIL)	Mol	Gast	3	0.01	98.26	3	11
Ampelisca abdita	Art	Mala	3	0.01	98.27	2	7
Amphilochus neopolitanus	Art	Mala	3	0.01	98.29	2	7
Aphelochaeta (LPIL)	Ann	Poly	3	0.01	98.30	3	11
Arabella multidentata	Ann	Poly	3	0.01	98.31	2	7
Arabella mutans	Ann	Poly	3	0.01	98.32	2	7
Aspidosiphon (LPIL)	Sip	–	3	0.01	98.33	2	7
Batea (LPIL)	Art	Mala	3	0.01	98.34	2	7
Bowmaniella brasiliensis	Art	Mala	3	0.01	98.35	1	4
Bowmaniella portoricensis	Art	Mala	3	0.01	98.36	2	7
Branchiostoma (LPIL)	Cho	Lept	3	0.01	98.38	1	4
Campylaspis sp. Y	Art	Mala	3	0.01	98.39	3	11
Carditidae (LPIL)	Mol	Biva	3	0.01	98.40	3	11
Ceratonereis japonica	Ann	Poly	3	0.01	98.41	1	4
Conus (LPIL)	Mol	Gast	3	0.01	98.42	2	7
Conus jaspideus	Mol	Gast	3	0.01	98.43	3	11
Crassispira leucocyma	Mol	Gast	3	0.01	98.44	2	7
Cubanocuma sp. A	Art	Mala	3	0.01	98.46	2	7
Diopatra cuprea	Ann	Poly	3	0.01	98.47	3	11
Eunice multicylindri	Ann	Poly	3	0.01	98.48	1	4
Golfingia (LPIL)	Sip	–	3	0.01	98.49	1	4
Golfingiidae (LPIL)	Sip	–	3	0.01	98.50	1	4
Goneplacidae (LPIL)	Art	Mala	3	0.01	98.51	2	7
Goniada maculata	Ann	Poly	3	0.01	98.52	2	7
Granulina ovuliformis	Mol	Gast	3	0.01	98.54	3	11
Hydroides sp. E	Ann	Poly	3	0.01	98.55	2	7
Inermonephtys inermis	Ann	Poly	3	0.01	98.56	2	7
Laevicardium sybariticum	Mol	Biva	3	0.01	98.57	2	7
Litocorsa antennata	Ann	Poly	3	0.01	98.58	2	7
Lumbrineris sp. D	Ann	Poly	3	0.01	98.59	2	7
Macoma (LPIL)	Mol	Biva	3	0.01	98.60	2	7
Melita (LPIL)	Art	Mala	3	0.01	98.62	2	7
Modiolus americanus	Mol	Biva	3	0.01	98.63	2	7
Monoculodes sp. D	Art	Mala	3	0.01	98.64	3	11
Nassariidae (LPIL)	Mol	Gast	3	0.01	98.65	1	4
Neomegamphopus kalanii	Art	Mala	3	0.01	98.66	3	11
Notomastus americanus	Ann	Poly	3	0.01	98.67	1	4
Oxyurostylis lecroyae	Art	Mala	3	0.01	98.68	2	7
Oxyurostylis smithi	Art	Mala	3	0.01	98.69	1	4
Palaemonidae (LPIL)	Art	Mala	3	0.01	98.71	3	11
Pitar (LPIL)	Mol	Biva	3	0.01	98.72	3	11
Pseudopolydora diopatra	Ann	Poly	3	0.01	98.73	1	4
Rhodine (LPIL)	Ann	Poly	3	0.01	98.74	1	4
Scaphopoda (LPIL)	Mol	Scap	3	0.01	98.75	1	4
Semele nuculoides	Mol	Biva	3	0.01	98.76	1	4
Tectonatica pusilla	Mol	Gast	3	0.01	98.77	3	11
Tellina iris	Mol	Biva	3	0.01	98.79	1	4
Thor floridanus	Art	Mala	3	0.01	98.80	1	4
Trachypenaeus constrictus	Art	Mala	3	0.01	98.81	2	7
Varohios sp. A	Art	Mala	3	0.01	98.82	2	7
Aeginellidae (LPIL)	Art	Mala	2	0.01	98.83	2	7
Alpheus (LPIL)	Art	Mala	2	0.01	98.84	2	7

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Alpheus floridanus	Art	Mala	2	0.01	98.84	2	7
Amphiduros sp. A	Ann	Poly	2	0.01	98.85	1	4
Amphipoda (LPIL)	Art	Mala	2	0.01	98.86	2	7
Ancistrosyllis carolinensis	Ann	Poly	2	0.01	98.87	1	4
Anomalocardia auberiana	Mol	Biva	2	0.01	98.87	1	4
Arca zebra	Mol	Biva	2	0.01	98.88	1	4
Architectonica nobilis	Mol	Gast	2	0.01	98.89	1	4
Autolytus (LPIL)	Ann	Poly	2	0.01	98.90	2	7
Automate (LPIL)	Art	Mala	2	0.01	98.90	2	7
Batea catharinensis	Art	Mala	2	0.01	98.91	2	7
Buccinidae (LPIL)	Mol	Gast	2	0.01	98.92	2	7
Caecum cycloferum	Mol	Gast	2	0.01	98.93	1	4
Campylaspis heardi	Art	Mala	2	0.01	98.93	1	4
Capitella (LPIL)	Ann	Poly	2	0.01	98.94	2	7
Cardiidae (LPIL)	Mol	Biva	2	0.01	98.95	2	7
Cerapus (LPIL)	Art	Mala	2	0.01	98.96	2	7
Chaetozone (LPIL)	Ann	Poly	2	0.01	98.96	2	7
Codakia costata	Mol	Biva	2	0.01	98.97	2	7
Craspedochiton hemphilli	Mol	Polyp	2	0.01	98.98	2	7
Crassinella lunulata	Mol	Biva	2	0.01	98.99	2	7
Crenella divaricata	Mol	Biva	2	0.01	98.99	2	7
Crepidula (LPIL)	Mol	Gast	2	0.01	99.00	2	7
Cyclaspis unicornis	Art	Mala	2	0.01	99.01	2	7
Cyclaspis varians	Art	Mala	2	0.01	99.02	1	4
Cyclinella tenuis	Mol	Biva	2	0.01	99.03	1	4
Demonax microphthalmus	Ann	Poly	2	0.01	99.03	2	7
Dispio uncinata	Ann	Poly	2	0.01	99.04	2	7
Dorvillea (LPIL)	Ann	Poly	2	0.01	99.05	2	7
Ebalia cariosa	Art	Mala	2	0.01	99.06	2	7
Eudevenopus honduranus	Art	Mala	2	0.01	99.06	1	4
Exogone caribensis	Ann	Poly	2	0.01	99.07	1	4
Glycera abranchiata	Ann	Poly	2	0.01	99.08	2	7
Goniada littorea	Ann	Poly	2	0.01	99.09	1	4
Goniadidae (LPIL)	Ann	Poly	2	0.01	99.09	2	7
Gouldia cerina	Mol	Biva	2	0.01	99.10	2	7
Grubeulepis mexicana	Ann	Poly	2	0.01	99.11	2	7
Harmothoe (LPIL)	Ann	Poly	2	0.01	99.12	2	7
Harmothoe imbricata	Ann	Poly	2	0.01	99.12	2	7
Hornellia tequestae	Art	Mala	2	0.01	99.13	1	4
Ischyroceridae (LPIL)	Art	Mala	2	0.01	99.14	2	7
Kinbergonuphis sp. C	Ann	Poly	2	0.01	99.15	1	4
Kurtziella atrostyla	Mol	Gast	2	0.01	99.15	1	4
Lanice conchilega	Ann	Poly	2	0.01	99.16	2	7
Listriella sp. G	Art	Mala	2	0.01	99.17	1	4
Magelona (LPIL)	Ann	Poly	2	0.01	99.18	1	4
Majidae (LPIL)	Art	Mala	2	0.01	99.18	2	7
Megalomma lobiferum	Ann	Poly	2	0.01	99.19	2	7
Melita elongata	Art	Mala	2	0.01	99.20	1	4
Metaprotella hummelincki	Art	Mala	2	0.01	99.21	1	4
Mysella (LPIL)	Mol	Biva	2	0.01	99.21	1	4
Nebalia bipes	Art	Mala	2	0.01	99.22	2	7
Nephtys picta	Ann	Poly	2	0.01	99.23	2	7
Nephtys squamosa	Ann	Poly	2	0.01	99.24	2	7
Ophioderma (LPIL)	Ech	Ophi	2	0.01	99.25	1	4
Ophiophragmus (LPIL)	Ech	Ophi	2	0.01	99.25	1	4
Paguristes tortugae	Art	Mala	2	0.01	99.26	2	7
Panopeus (LPIL)	Art	Mala	2	0.01	99.27	1	4

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Pectinidae (LPIL)	Mol	Biva	2	0.01	99.28	1	4
Penaeus duorarum	Art	Mala	2	0.01	99.28	2	7
Periclimenes iridescens	Art	Mala	2	0.01	99.29	2	7
Persicula catenata	Mol	Gast	2	0.01	99.30	1	4
Platynereis dumerilli	Ann	Poly	2	0.01	99.31	2	7
Podocerus kleidus	Art	Mala	2	0.01	99.31	1	4
Polycirrus sp. G	Ann	Poly	2	0.01	99.32	1	4
Prionospio cirrifera	Ann	Poly	2	0.01	99.33	1	4
Pyramidella (LPIL)	Mol	Gast	2	0.01	99.34	2	7
Semele (LPIL)	Mol	Biva	2	0.01	99.34	1	4
Semele proficua	Mol	Biva	2	0.01	99.35	2	7
Serolis mgrayi	Art	Mala	2	0.01	99.36	2	7
Syllis (LPIL)	Ann	Poly	2	0.01	99.37	2	7
Syllis gracilis	Ann	Poly	2	0.01	99.37	2	7
Synchelidium americanum	Art	Mala	2	0.01	99.38	1	4
Tellina nitens	Mol	Biva	2	0.01	99.39	1	4
Tornidae (LPIL)	Mol	Gast	2	0.01	99.40	1	4
Trachycardium muricatum	Mol	Biva	2	0.01	99.40	2	7
Trochidae (LPIL)	Mol	Gast	2	0.01	99.41	2	7
Alpheus estuariensis	Art	Mala	1	0.00	99.42	1	4
Amakusanthura signata	Art	Mala	1	0.00	99.42	1	4
Ampharetidae (LPIL)	Ann	Poly	1	0.00	99.42	1	4
Amphilochidae (LPIL)	Art	Mala	1	0.00	99.43	1	4
Ampithoidae (LPIL)	Art	Mala	1	0.00	99.43	1	4
Anachis (LPIL)	Mol	Gast	1	0.00	99.43	1	4
Ancistrosyllis jonesi	Ann	Poly	1	0.00	99.44	1	4
Antalis (LPIL)	Mol	Scap	1	0.00	99.44	1	4
Anthuridae (LPIL)	Art	Mala	1	0.00	99.45	1	4
Aonides paucibranchiata	Ann	Poly	1	0.00	99.45	1	4
Aphelochaeta marioni	Ann	Poly	1	0.00	99.45	1	4
Arene (LPIL)	Mol	Gast	1	0.00	99.46	1	4
Aricidea cerrutii	Ann	Poly	1	0.00	99.46	1	4
Astralium phoebium	Mol	Gast	1	0.00	99.47	1	4
Axiothella sp. A	Ann	Poly	1	0.00	99.47	1	4
Bateidae (LPIL)	Art	Mala	1	0.00	99.47	1	4
Bellaspira pentagonalis	Mol	Gast	1	0.00	99.48	1	4
Bodotriidae (LPIL)	Art	Mala	1	0.00	99.48	1	4
Brania wellfleetensis	Ann	Poly	1	0.00	99.48	1	4
Bullidae (LPIL)	Mol	Gast	1	0.00	99.49	1	4
Caecum (LPIL)	Mol	Gast	1	0.00	99.49	1	4
Caecum heladum	Mol	Gast	1	0.00	99.50	1	4
Caecum johnsoni	Mol	Gast	1	0.00	99.50	1	4
Campylaspis (LPIL)	Art	Mala	1	0.00	99.50	1	4
Cephalocarida (LPIL)	Art	Ceph	1	0.00	99.51	1	4
Ceradocus sheardi	Art	Mala	1	0.00	99.51	1	4
Ceratonereis irritabilis	Ann	Poly	1	0.00	99.51	1	4
Chaetozone sp. A	Ann	Poly	1	0.00	99.52	1	4
Chaetozone sp. D	Ann	Poly	1	0.00	99.52	1	4
Chione grus	Mol	Biva	1	0.00	99.53	1	4
Chione paphia	Mol	Biva	1	0.00	99.53	1	4
Chrysopetalum hernancortezae	Ann	Poly	1	0.00	99.53	1	4
Cirrophorus (LPIL)	Ann	Poly	1	0.00	99.54	1	4
Cleantis planicauda	Art	Mala	1	0.00	99.54	1	4
Colomastix (LPIL)	Art	Mala	1	0.00	99.54	1	4
Corbula caribaea	Mol	Biva	1	0.00	99.55	1	4
Corbula sp. C	Mol	Biva	1	0.00	99.55	1	4
Crassinella (LPIL)	Mol	Biva	1	0.00	99.56	1	4

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Cryoturris cerinella	Mol	Gast	1	0.00	99.56	1	4
Cyclaspis (LPIL)	Art	Mala	1	0.00	99.56	1	4
Cylichnella tenuis	Mol	Gast	1	0.00	99.57	1	4
Decapoda (LPIL)	Art	Mala	1	0.00	99.57	1	4
Dexaminidae (LPIL)	Art	Mala	1	0.00	99.58	1	4
Dosinia discus	Mol	Biva	1	0.00	99.58	1	4
Duasmodactyla seguroensis	Ech	Holo	1	0.00	99.58	1	4
Ebalia stimpsonii	Art	Mala	1	0.00	99.59	1	4
Echinodermata (LPIL)	Ech	–	1	0.00	99.59	1	4
Elysia evelinae	Mol	Gast	1	0.00	99.59	1	4
Epialtus dilatus	Art	Mala	1	0.00	99.60	1	4
Epitoniidae (LPIL)	Mol	Gast	1	0.00	99.60	1	4
Eunice sp. L	Ann	Poly	1	0.00	99.61	1	4
Eurydice convexa	Art	Mala	1	0.00	99.61	1	4
Euryplax nitida	Art	Mala	1	0.00	99.61	1	4
Excorallana delaneyi	Art	Mala	1	0.00	99.62	1	4
Exogone (LPIL)	Ann	Poly	1	0.00	99.62	1	4
Fallotritella biscaynensis	Art	Mala	1	0.00	99.62	1	4
Fasciolariidae (LPIL)	Mol	Gast	1	0.00	99.63	1	4
Favorinidae (LPIL)	Mol	Gast	1	0.00	99.63	1	4
Gammaropsis sp. I	Art	Mala	1	0.00	99.64	1	4
Glycera sp. D	Ann	Poly	1	0.00	99.64	1	4
Glycymeridae (LPIL)	Mol	Biva	1	0.00	99.64	1	4
Glycymeris (LPIL)	Mol	Biva	1	0.00	99.65	1	4
Goniada teres	Ann	Poly	1	0.00	99.65	1	4
Grubeosyllis clavata	Ann	Poly	1	0.00	99.65	1	4
Grubeulepis augeneri	Ann	Poly	1	0.00	99.66	1	4
Gyptis (LPIL)	Ann	Poly	1	0.00	99.66	1	4
Haminoea (LPIL)	Mol	Gast	1	0.00	99.67	1	4
Heteromysis (LPIL)	Art	Mala	1	0.00	99.67	1	4
Heteromysis formosa	Art	Mala	1	0.00	99.67	1	4
Heteropodarke lyonsi	Ann	Poly	1	0.00	99.68	1	4
Hoplophenoides obesa	Art	Mala	1	0.00	99.68	1	4
Hydroides (LPIL)	Ann	Poly	1	0.00	99.69	1	4
Hydroides bispinosa	Ann	Poly	1	0.00	99.69	1	4
Hydroides dianthus	Ann	Poly	1	0.00	99.69	1	4
Hypsicomus phaeotaenia	Ann	Poly	1	0.00	99.70	1	4
Kalliapseudes (LPIL)	Art	Mala	1	0.00	99.70	1	4
Laevicardium (LPIL)	Mol	Biva	1	0.00	99.70	1	4
Laevicardium pictum	Mol	Biva	1	0.00	99.71	1	4
Leuconidae (LPIL)	Art	Mala	1	0.00	99.71	1	4
Lima pellucida	Mol	Biva	1	0.00	99.72	1	4
Limidae (LPIL)	Mol	Biva	1	0.00	99.72	1	4
Limnoria simulata	Art	Mala	1	0.00	99.72	1	4
Lithopoma tectum	Mol	Gast	1	0.00	99.73	1	4
Lucapinella limatula	Mol	Gast	1	0.00	99.73	1	4
Lumbrineris (LPIL)	Ann	Poly	1	0.00	99.73	1	4
Lumbrineris sp. C	Ann	Poly	1	0.00	99.74	1	4
Macoma tenta	Mol	Biva	1	0.00	99.74	1	4
Mangelia bandella	Mol	Gast	1	0.00	99.75	1	4
Marginella (LPIL)	Mol	Gast	1	0.00	99.75	1	4
Marginella apicina	Mol	Gast	1	0.00	99.75	1	4
Marphysa (LPIL)	Ann	Poly	1	0.00	99.76	1	4
Melanella arcuata	Mol	Gast	1	0.00	99.76	1	4
Mesorhoea sexspinosa	Art	Mala	1	0.00	99.76	1	4
Metatiron triocellatus	Art	Mala	1	0.00	99.77	1	4
Mexieulepis weberi	Ann	Poly	1	0.00	99.77	1	4

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Mitridae (LPIL)	Mol	Gast	1	0.00	99.78	1	4
Monoculodes (LPIL)	Art	Mala	1	0.00	99.78	1	4
Mooreonuphis pallidula	Ann	Poly	1	0.00	99.78	1	4
Murex recurvirostris	Mol	Gast	1	0.00	99.79	1	4
Myriowenia sp. A	Ann	Poly	1	0.00	99.79	1	4
Mysidacea (LPIL)	Art	Mala	1	0.00	99.80	1	4
Mysidae (LPIL)	Art	Mala	1	0.00	99.80	1	4
Natica canrena	Mol	Gast	1	0.00	99.80	1	4
Nereimyra sp. B	Ann	Poly	1	0.00	99.81	1	4
Nereis succinea	Ann	Poly	1	0.00	99.81	1	4
Notomastus daueri	Ann	Poly	1	0.00	99.81	1	4
Nototanais (LPIL)	Art	Mala	1	0.00	99.82	1	4
Nuculana acuta	Mol	Biva	1	0.00	99.82	1	4
Oedicerotidae (LPIL)	Art	Mala	1	0.00	99.83	1	4
Ophiocomella ophiactoides	Ech	Ophi	1	0.00	99.83	1	4
Ophiolepis (LPIL)	Ech	Ophi	1	0.00	99.83	1	4
Ophiopsila vittata	Ech	Ophi	1	0.00	99.84	1	4
Ophiostigma isocanthum	Ech	Ophi	1	0.00	99.84	1	4
Opisthosyllis longidentata	Ann	Poly	1	0.00	99.84	1	4
Oxyurostylis sp. B	Art	Mala	1	0.00	99.85	1	4
Paraonidae (LPIL)	Ann	Poly	1	0.00	99.85	1	4
Parthenope (LPIL)	Art	Mala	1	0.00	99.86	1	4
Patelloida (LPIL)	Mol	Gast	1	0.00	99.86	1	4
Pectinaria gouldii	Ann	Poly	1	0.00	99.86	1	4
Periclimenes (LPIL)	Art	Mala	1	0.00	99.87	1	4
Pherusa inflata	Ann	Poly	1	0.00	99.87	1	4
Pholadidae (LPIL)	Mol	Biva	1	0.00	99.87	1	4
Pista (LPIL)	Ann	Poly	1	0.00	99.88	1	4
Pitho (LPIL)	Art	Mala	1	0.00	99.88	1	4
Pleurobranchiidae (LPIL)	Mol	Gast	1	0.00	99.89	1	4
Polydora cornuta	Ann	Poly	1	0.00	99.89	1	4
Polygordius (LPIL)	Ann	Poly	1	0.00	99.89	1	4
Processa (LPIL)	Art	Mala	1	0.00	99.90	1	4
Processidae (LPIL)	Art	Mala	1	0.00	99.90	1	4
Pseudopolydora sp. A	Ann	Poly	1	0.00	99.91	1	4
Pyrgocythara coxi	Mol	Gast	1	0.00	99.91	1	4
Questa caudicirra	Ann	Poly	1	0.00	99.91	1	4
Rhodine sp. A	Ann	Poly	1	0.00	99.92	1	4
Rocinela signata	Art	Mala	1	0.00	99.92	1	4
Saltipedis (LPIL)	Art	Mala	1	0.00	99.92	1	4
Saltipedis sp. A	Art	Mala	1	0.00	99.93	1	4
Scalibregmatidae (LPIL)	Ann	Poly	1	0.00	99.93	1	4
Scaphandridae (LPIL)	Mol	Gast	1	0.00	99.94	1	4
Schwengelia hendersoni	Mol	Gast	1	0.00	99.94	1	4
Scoloplos (LPIL)	Ann	Poly	1	0.00	99.94	1	4
Solenocera (LPIL)	Art	Mala	1	0.00	99.95	1	4
Sphaerosyllis glandulata	Ann	Poly	1	0.00	99.95	1	4
Spiophanes bombyx	Ann	Poly	1	0.00	99.95	1	4
Stenothoe (LPIL)	Art	Mala	1	0.00	99.96	1	4
Sthenolepis sp. A	Ann	Poly	1	0.00	99.96	1	4
Syllides (LPIL)	Ann	Poly	1	0.00	99.97	1	4
Syllides fulvus	Ann	Poly	1	0.00	99.97	1	4
Synopiidae (LPIL)	Art	Mala	1	0.00	99.97	1	4
Tellina alternata	Mol	Biva	1	0.00	99.98	1	4
Terebellides (LPIL)	Ann	Poly	1	0.00	99.98	1	4
Thor amboinensis	Art	Mala	1	0.00	99.98	1	4
Turbonilla interrupta	Mol	Gast	1	0.00	99.99	1	4

Table 2. Continued:

Taxon Name	Phylum	Class	No. of Individuals	% Total	Cumulative %	Station Occurrence	Station % Occurrence
Vaunthompsonia (LPIL)	Art	Mala	1	0.00	99.99	1	4
Volvarina avena	Mol	Gast	1	0.00	100.00	1	4
Volvarina avenacea	Mol	Gast	1	0.00	100.00	1	4

Taxa Key:

Phylum

Class

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Ceph = Cephalocarida
- Mala = Malacostraca
- Pycn = Pycnogonida

Bra = Brachiopoda

Cho = Chordata
- Asci = Ascidiacea
- Lept = Leptocardia

Cni = Cnidaria
- Anth = Anthozoa
- Hydr = Hydrozoa

Ech = Echinodermata
- Echi = Echinoidea
- Holo = Holothuroidea
- Ophi = Ophiuroidea

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda
- Polyp = Polyplacophora
- Scap = Scaphopoda

Por = Porifera

Rhy = Rhynchocoela
- Anop = Anopla

Sip = Sipuncula

Table 3. Summary of overall abundance of major benthic macroinfaunal taxonomic groups for the Florida Bay stations, August 2000.

Taxa	Total No. Taxa	% Total	Total No. Individuals	% Total
Annelida				
Oligochaeta	1	0.15	1,195	4.53
Polychaeta	254	36.97	14,666	55.64
Mollusca				
Bivalvia	88	12.81	1,820	6.90
Gastropoda	114	16.59	2,730	10.36
Polyplacophora	2	0.29	80	0.30
Scaphopoda	3	0.44	24	0.09
Arthropoda				
Cephalocarida	1	0.15	1	0.00
Malacostraca	192	27.95	3,686	13.98
Pycnogonida	1	0.15	12	0.05
Echinodermata				
Echinoidea	1	0.15	5	0.02
Holothuroidea	4	0.58	47	0.18
Ophiuroidea	9	1.31	240	0.91
Other Taxa	17	2.47	1,853	7.03
	687		**26,359**	

Table 4. Summary of abundance of majorbenthic macroinfaunal taxonomic groups for the Florida Bay stations, August 2000.

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
LR-19	Annelida	41	46.59	807	78.35
	Mollusca	17	19.32	74	7.18
	Arthropoda	22	25.00	89	8.64
	Echinoderma	1	1.14	1	0.10
	Rhynchocoel	3	3.41	19	1.84
	Sipuncula	2	2.27	34	3.30
	Other Taxa	2	2.27	6	0.58
	TOTAL	**88**		**1030**	
LR-21	Annelida	32	54.24	373	60.75
	Mollusca	15	25.42	125	20.36
	Arthropoda	8	13.56	79	12.87
	Echinoderma	0	0.00	0	0.00
	Rhynchocoel	1	1.69	5	0.81
	Sipuncula	1	1.69	25	4.07
	Other Taxa	2	3.39	7	1.14
	TOTAL	**59**		**614**	
LR-23	Annelida	18	46.15	1069	87.55
	Mollusca	6	15.38	13	1.06
	Arthropoda	10	25.64	51	4.18
	Echinoderma	1	2.56	8	0.66
	Rhynchocoel	1	2.56	62	5.08
	Sipuncula	1	2.56	14	1.15
	Other Taxa	2	5.13	4	0.33
	TOTAL	**39**		**1221**	
LR-25	Annelida	40	41.24	371	49.01
	Mollusca	26	26.80	221	29.19
	Arthropoda	22	22.68	112	14.80
	Echinoderma	2	2.06	5	0.66
	Rhynchocoel	2	2.06	18	2.38
	Sipuncula	3	3.09	19	2.51
	Other Taxa	2	2.06	11	1.45
	TOTAL	**97**		**757**	
LR-27	Annelida	73	48.34	2545	86.68
	Mollusca	38	25.17	209	7.12
	Arthropoda	32	21.19	121	4.12
	Echinoderma	2	1.32	15	0.51
	Rhynchocoel	2	1.32	37	1.26
	Sipuncula	2	1.32	5	0.17
	Other Taxa	2	1.32	4	0.14
	TOTAL	**151**		**2936**	

Table 4. Continued:

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
WI 00LR-29	Annelida	78	52.70	1214	74.30
	Mollusca	34	22.97	278	17.01
	Arthropoda	29	19.59	50	3.06
	Echinodermata	1	0.68	1	0.06
	Rhynchocoela	3	2.03	64	3.92
	Sipuncula	2	1.35	24	1.47
	Other Taxa	1	0.68	3	0.18
	TOTAL	**148**		**1634**	
WI 00LR-30	Annelida	35	45.45	384	72.87
	Mollusca	16	20.78	52	9.87
	Arthropoda	22	28.57	80	15.18
	Echinodermata	1	1.30	2	0.38
	Rhynchocoela	1	1.30	1	0.19
	Sipuncula	1	1.30	1	0.19
	Other Taxa	1	1.30	7	1.33
	TOTAL	**77**		**527**	
WI 00LR-31	Annelida	31	49.21	97	38.49
	Mollusca	9	14.29	20	7.94
	Arthropoda	15	23.81	112	44.44
	Echinodermata	3	4.76	4	1.59
	Rhynchocoela	2	3.17	5	1.98
	Sipuncula	2	3.17	8	3.17
	Other Taxa	1	1.59	6	2.38
	TOTAL	**63**		**252**	
WI 00LR-32	Annelida	50	40.98	337	35.81
	Mollusca	43	35.25	464	49.31
	Arthropoda	22	18.03	48	5.10
	Echinodermata	2	1.64	2	0.21
	Rhynchocoela	2	1.64	46	4.89
	Sipuncula	2	1.64	41	4.36
	Other Taxa	1	0.82	3	0.32
	TOTAL	**122**		**941**	
WI 00LR-33	Annelida	43	47.25	400	48.13
	Mollusca	18	19.78	179	21.54
	Arthropoda	23	25.27	132	15.88
	Echinodermata	2	2.20	10	1.20
	Rhynchocoela	2	2.20	19	2.29
	Sipuncula	2	2.20	90	10.83
	Other Taxa	1	1.10	1	0.12
	TOTAL	**91**		**831**	

Table 4. Continued:

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
WI 00LR-34	Annelida	48	55.17	469	64.96
	Mollusca	13	14.94	100	13.85
	Arthropoda	19	21.84	112	15.51
	Echinodermata	1	1.15	3	0.42
	Rhynchocoela	2	2.30	10	1.39
	Sipuncula	2	2.30	21	2.91
	Other Taxa	2	2.30	7	0.97
	TOTAL	**87**		**722**	
WI 00LR-35	Annelida	63	48.46	646	66.80
	Mollusca	38	29.23	200	20.68
	Arthropoda	22	16.92	67	6.93
	Echinodermata	3	2.31	9	0.93
	Rhynchocoela	2	1.54	38	3.93
	Sipuncula	1	0.77	5	0.52
	Other Taxa	1	0.77	2	0.21
	TOTAL	**130**		**967**	
WI 00LR-36	Annelida	64	43.54	234	24.00
	Mollusca	50	34.01	495	50.77
	Arthropoda	27	18.37	101	10.36
	Echinodermata	1	0.68	2	0.21
	Rhynchocoela	2	1.36	42	4.31
	Sipuncula	1	0.68	99	10.15
	Other Taxa	2	1.36	2	0.21
	TOTAL	**147**		**975**	
WI 00LR-37	Annelida	63	44.68	397	42.92
	Mollusca	45	31.91	400	43.24
	Arthropoda	25	17.73	76	8.22
	Echinodermata	2	1.42	9	0.97
	Rhynchocoela	2	1.42	15	1.62
	Sipuncula	2	1.42	26	2.81
	Other Taxa	2	1.42	2	0.22
	TOTAL	**141**		**925**	
WI 00LR-38	Annelida	74	50.68	466	59.06
	Mollusca	41	28.08	183	23.19
	Arthropoda	23	15.75	51	6.46
	Echinodermata	2	1.37	18	2.28
	Rhynchocoela	3	2.05	34	4.31
	Sipuncula	1	0.68	35	4.44
	Other Taxa	2	1.37	2	0.25
	TOTAL	**146**		**789**	

Table 4. Continued:

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
WI 00LR-39	Annelida	65	41.40	417	53.19
	Mollusca	48	30.57	228	29.08
	Arthropoda	35	22.29	61	7.78
	Echinodermata	2	1.27	24	3.06
	Rhynchocoela	2	1.27	13	1.66
	Sipuncula	2	1.27	33	4.21
	Other Taxa	3	1.91	8	1.02
	TOTAL	**157**		**784**	
WI 00LR-40	Annelida	72	45.57	770	63.43
	Mollusca	38	24.05	127	10.46
	Arthropoda	38	24.05	204	16.80
	Echinodermata	4	2.53	20	1.65
	Rhynchocoela	3	1.90	19	1.57
	Sipuncula	2	1.27	62	5.11
	Other Taxa	1	0.63	12	0.99
	TOTAL	**158**		**1214**	
WI 00LR-41	Annelida	51	57.95	212	60.92
	Mollusca	17	19.32	35	10.06
	Arthropoda	13	14.77	54	15.52
	Echinodermata	2	2.27	9	2.59
	Rhynchocoela	2	2.27	10	2.87
	Sipuncula	2	2.27	26	7.47
	Other Taxa	1	1.14	2	0.57
	TOTAL	**88**		**348**	
WI 00LR-42	Annelida	71	48.97	751	66.99
	Mollusca	31	21.38	155	13.83
	Arthropoda	36	24.83	151	13.47
	Echinodermata	1	0.69	2	0.18
	Rhynchocoela	2	1.38	13	1.16
	Sipuncula	2	1.38	12	1.07
	Other Taxa	2	1.38	37	3.30
	TOTAL	**145**		**1121**	
WI 00LR-45	Annelida	69	53.49	300	52.63
	Mollusca	31	24.03	164	28.77
	Arthropoda	20	15.50	40	7.02
	Echinodermata	3	2.33	18	3.16
	Rhynchocoela	3	2.33	18	3.16
	Sipuncula	1	0.78	18	3.16
	Other Taxa	2	1.55	12	2.11
	TOTAL	**129**		**570**	

Table 4. Continued:

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
WI 00LR-46	Annelida	64	55.65	363	47.64
	Mollusca	30	26.09	191	25.07
	Arthropoda	14	12.17	28	3.67
	Echinodermata	3	2.61	15	1.97
	Rhynchocoela	2	1.74	11	1.44
	Sipuncula	1	0.87	148	19.42
	Other Taxa	1	0.87	6	0.79
	TOTAL	**115**		**762**	
WI 00LR-47	Annelida	47	47.00	318	65.57
	Mollusca	19	19.00	47	9.69
	Arthropoda	22	22.00	70	14.43
	Echinodermata	3	3.00	5	1.03
	Rhynchocoela	3	3.00	16	3.30
	Sipuncula	2	2.00	9	1.86
	Other Taxa	4	4.00	20	4.12
	TOTAL	**100**		**485**	
WI 00LR-48	Annelida	72	54.96	437	67.23
	Mollusca	24	18.32	73	11.23
	Arthropoda	26	19.85	57	8.77
	Echinodermata	3	2.29	13	2.00
	Rhynchocoela	3	2.29	26	4.00
	Sipuncula	2	1.53	39	6.00
	Other Taxa	1	0.76	5	0.77
	TOTAL	**131**		**650**	
WI 00LR-49	Annelida	60	60.61	186	52.39
	Mollusca	20	20.20	43	12.11
	Arthropoda	13	13.13	72	20.28
	Echinodermata	1	1.01	4	1.13
	Rhynchocoela	3	3.03	15	4.23
	Sipuncula	1	1.01	30	8.45
	Other Taxa	1	1.01	5	1.41
	TOTAL	**99**		**355**	
WI 00LR-50	Annelida	68	44.44	503	51.54
	Mollusca	37	24.18	202	20.70
	Echinodermata	1	0.65	10	1.02
	Arthropoda	41	26.80	169	17.32
	Rhynchocoela	3	1.96	15	1.54
	Sipuncula	2	1.31	76	7.79
	Other Taxa	1	0.65	1	0.10
	TOTAL	**153**		**976**	

Table 4. Continued:

Station	Phylum	No. of Taxa	% of Total	No. of Individuals	% of Total
WI 00LR-51	Annelida	84	52.83	1063	71.82
	Mollusca	30	18.87	64	4.32
	Arthropoda	34	21.38	240	16.22
	Echinodermata	4	2.52	30	2.03
	Rhynchocoela	2	1.26	21	1.42
	Sipuncula	3	1.89	36	2.43
	Other Taxa	2	1.26	26	1.76
	TOTAL	**159**		**1480**	
WI 00LR-52	Annelida	72	42.86	460	43.40
	Mollusca	40	23.81	193	18.21
	Arthropoda	44	26.19	298	28.11
	Echinodermata	7	4.17	39	3.68
	Rhynchocoela	2	1.19	17	1.60
	Sipuncula	1	0.60	41	3.87
	Other Taxa	2	1.19	12	1.13
	TOTAL	**168**		**1060**	
WI 00MR-12	Annelida	56	37.33	272	18.98
	Mollusca	29	19.33	119	8.30
	Arthropoda	51	34.00	974	67.97
	Echinodermata	4	2.67	15	1.05
	Rhynchocoela	3	2.00	29	2.02
	Sipuncula	3	2.00	12	0.84
	Other Taxa	4	2.67	12	0.84
	TOTAL	**150**		**1433**	

Table 5. Percentage abundance of dominant benthic macroinfaunal taxa (>10% of the total) for the Florida Bay stations, August 2000.

Taxa	LR-19	LR-21	LR-23	LR-25	LR-27	LR-29	LR-30	LR-31	LR-32	LR-33	LR-34	LR-35	LR-36	LR-37	LR-38
Annelida															
Oligochaeta															
Tubificidae (LPIL)		10.3					38.3			10.7					
Polychaeta															
Exogone rolani	33.4	10.1									29.4				
Fabricinuda trilobata					35.4	13.2									
Mediomastus (LPIL)			80.1		18.2										
Monticellina dorsobranchialis						20.0									
Nereididae (LPIL)		10.7													
Arthropoda															
Malacostraca															
Ampelisca vadorum															
Hargeria rapax								11.5							
Leptocheila (LPIL)															
Shoemakerella cubensis								10.7							
Mollusca															
Bivalvia															
Chione cancellata									12.9						
Nucula aegeenis															
Gastropoda															
Caecum floridanum										14.6					
Caecum pulchellum		14.0									10.7		12.9	13.4	
Schwartziella catesbyana															
Sipuncula															
Sipuncula (LPIL)													10.2		

Table 5. Continued:

Taxa	LR-39	LR-40	LR-41	LR-42	LR-45	LR-46	LR-47	LR-48	LR-49	LR-50	LR-51	LR-52	MR 12
Annelida													
Oligochaeta													
Tubificidae (LPIL)						10.9	16.1						
Polychaeta													
Exogone rolani		16.0	12.1	12.0				10.0		12.7	15.1		
Fabricinuda trilobata											12.2		
Mediomastus (LPIL)													
Monticellina dorsobranchialis													
Nereididae (LPIL)													
Arthropoda													
Malacostraca													
Ampelisca vadorum													14.6
Hargeria rapax													
Leptocheila (LPIL)									13.2				26.3
Shoemakerella cubensis													
Mollusca													
Bivalvia													
Chione cancellata													
Nucula aegeenis													
Gastropoda													
Caecum floridanum													
Caecum pulchellum													
Schwartziella catesbyana													
Sipuncula													
Sipuncula (LPIL)						19.4							

Table 6. Summary of the benthic macroinfaunal data for the Florida Bay stations, August 2000.

Station	Rep	No. of Taxa	No. of Indvs	Density (no/m²)	Mean No. Taxa	Taxa (SD)	Mean Density	Density (SD)	Total No. Taxa	Total No. Individuals	H' Diversity	J' Evenness
LR-19	1	48	188	4700	55.0	8.5	8583.3	3363.9	88	1030	3.14	0.70
	2	54	418	10450								
	3	64	424	10600								
LR-21	1	30	118	2950	34.7	6.4	5116.7	1900.2	59	614	3.13	0.77
	2	32	236	5900								
	3	42	260	6500								
LR-23	1	21	475	11875	21.7	4.0	10175.0	2944.5	39	1221	1.05	0.29
	2	26	271	6775								
	3	18	475	11875								
LR-25	1	54	177	4425	57.3	4.9	6308.3	2101.4	97	757	3.78	0.83
	2	55	237	5925								
	3	63	343	8575								
LR-27	1	82	915	22875	80.0	4.6	24466.7	2028.0	152	2936	2.74	0.55
	2	76	1070	26750								
	3	84	951	23775								
LR-29	1	84	591	14775	75.7	22.7	13616.7	6712.9	149	1634	3.50	0.70
	2	50	256	6400								
	3	93	787	19675								
LR-30	1	31	128	3200	36.3	14.7	4391.7	3469.5	77	527	2.92	0.67
	2	25	67	1675								
	3	53	332	8300								
LR-31	1	26	46	1150	31.3	8.4	2100.0	950.0	63	252	3.53	0.85
	2	41	122	3050								
	3	27	84	2100								
LR-32	1	86	483	12075	62.3	20.6	7841.7	3711.0	122	941	3.82	0.79
	2	52	252	6300								
	3	49	206	5150								
LR-33	1	53	264	6600	46.7	12.7	6925.0	2801.7	92	831	3.44	0.76
	2	32	172	4300								
	3	55	395	9875								
LR-34	1	52	216	5400	49.3	4.6	6016.7	1451.8	87	722	3.24	0.73
	2	44	199	4975								
	3	52	307	7675								
LR-35	1	86	389	9725	74.0	13.1	8058.3	1457.2	130	967	3.96	0.81
	2	60	297	7425								
	3	76	281	7025								
LR-36	1	75	445	11125	76.7	11.6	8075.0	2944.0	147	969	3.82	0.76
	2	89	314	7850								
	3	66	216	5400								
LR-37	1	97	406	10150	73.0	25.1	7708.3	4425.4	141	925	3.87	0.78
	2	47	104	2600								
	3	75	415	10375								
LR-38	1	87	313	7825	71.0	32.1	6575.0	3879.1	146	789	4.22	0.85
	2	34	89	2225								
	3	92	387	9675								
LR-39	1	91	409	10225	79.3	11.5	6533.3	3198.3	157	784	4.27	0.84
	2	68	191	4775								
	3	79	184	4600								
LR-40	1	86	223	5575	81.7	15.9	10116.7	7080.4	159	1214	3.82	0.76
	2	95	731	18275								
	3	64	260	6500								
LR-41	1	41	105	2625	43.3	12.7	2900.0	1481.8	88	348	3.79	0.85
	2	57	180	4500								
	3	32	63	1575								
LR-42	1	78	364	9100	78.0	14.0	9341.7	4242.7	145	1121	3.93	0.79
	2	64	209	5225								
	3	92	548	13700								

Table 6. Continued:

Station	Rep	No. of Taxa	No. of Indvs	Density (no/m²)	Mean No. Taxa	Taxa (SD)	Mean Density	Density (SD)	Total No. Taxa	Total No. Individuals	H' Diversity	J' Evenness
LR-45	1	97	399	9975	61.0	37.0	4750.0	4718.5	129	570	4.20	0.86
	2	23	32	800								
	3	63	139	3475								
LR-46	1	71	384	9600	59.3	11.5	6350.0	3154.8	115	762	3.52	0.74
	2	59	246	6150								
	3	48	132	3300								
LR-47	1	52	183	4575	50.7	4.2	4041.7	680.7	101	485	3.80	0.83
	2	46	131	3275								
	3	54	171	4275								
LR-48	1	65	160	4000	69.3	10.2	5416.7	1733.7	131	650	4.07	0.83
	2	81	294	7350								
	3	62	196	4900								
LR-49	1	33	78	1950	48.0	16.1	2958.3	1474.0	99	355	4.00	0.87
	2	46	91	2275								
	3	65	186	4650								
LR-50	1	75	366	9150	74.7	21.5	8133.3	2439.4	153	976	3.93	0.78
	2	53	214	5350								
	3	96	396	9900								
LR-51	1	81	399	9975	87.0	17.8	12333.3	6682.3	159	1480	3.78	0.75
	2	107	795	19875								
	3	73	286	7150								
LR-52	1	97	416	10400	89.3	10.8	8833.3	3707.2	168	1060	4.24	0.83
	2	77	184	4600								
	3	94	460	11500								
MR-12	1	96	596	14900	80.0	20.4	11941.7	5607.0	150	1433	3.44	0.69
	2	57	219	5475								
	3	87	618	15450								

Table 7. Statistical analysis for density and taxa differences among stations for the Florida Bay stations, August 2000.

DENSITY DATA

Shapiro-Wilk W Test for Normality

W= 0.97 Prob < W = 0.0946

ANOVA Table

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Model	27	39775.662	1473.17	**3.4519**	**<.0001**
Error	56	23899.145	426.77		
Total	83	63674.807			

TAXA DATA

Shapiro-Wilk W Test for Normality

W= 0.95 Prob < W = 0.01

Table 8. Density post-hoc results for the St. John's River stations, July 2000.

Density	LR-27	LR-29	LR-51	MR-12	LR-23	LR-40	LR-42	LR-52	LR-19	LR-35	LR-50	LR-36	LR-32	LR-37	LR-33	LR-39	LR-25	LR-38	LR-46	LR-34	LR-48	LR-21	LR-47	LR-30	LR-45	LR-49	LR-41	LR-31
LR-27																												
LR-29																												
LR-51																												
MR-12																												
LR-23																												
LR-40																												
LR-42																												
LR-52																												
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LR-35	*																											
LR-50	*																											
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LR-37	*																											
LR-33	*																											
LR-39	*																											
LR-25	*																											
LR-38	*																											
LR-46	*																											
LR-34	*																											
LR-48	*																											
LR-21	*																											
LR-47	*																											
LR-30	*																											
LR-45	*																											
LR-49	*																											
LR-41	*																											
LR-31	*	*																										

* indicates pairs of means that are significantly different.

Figure 1. Station locations for the Florida Bay stations, August 2000.

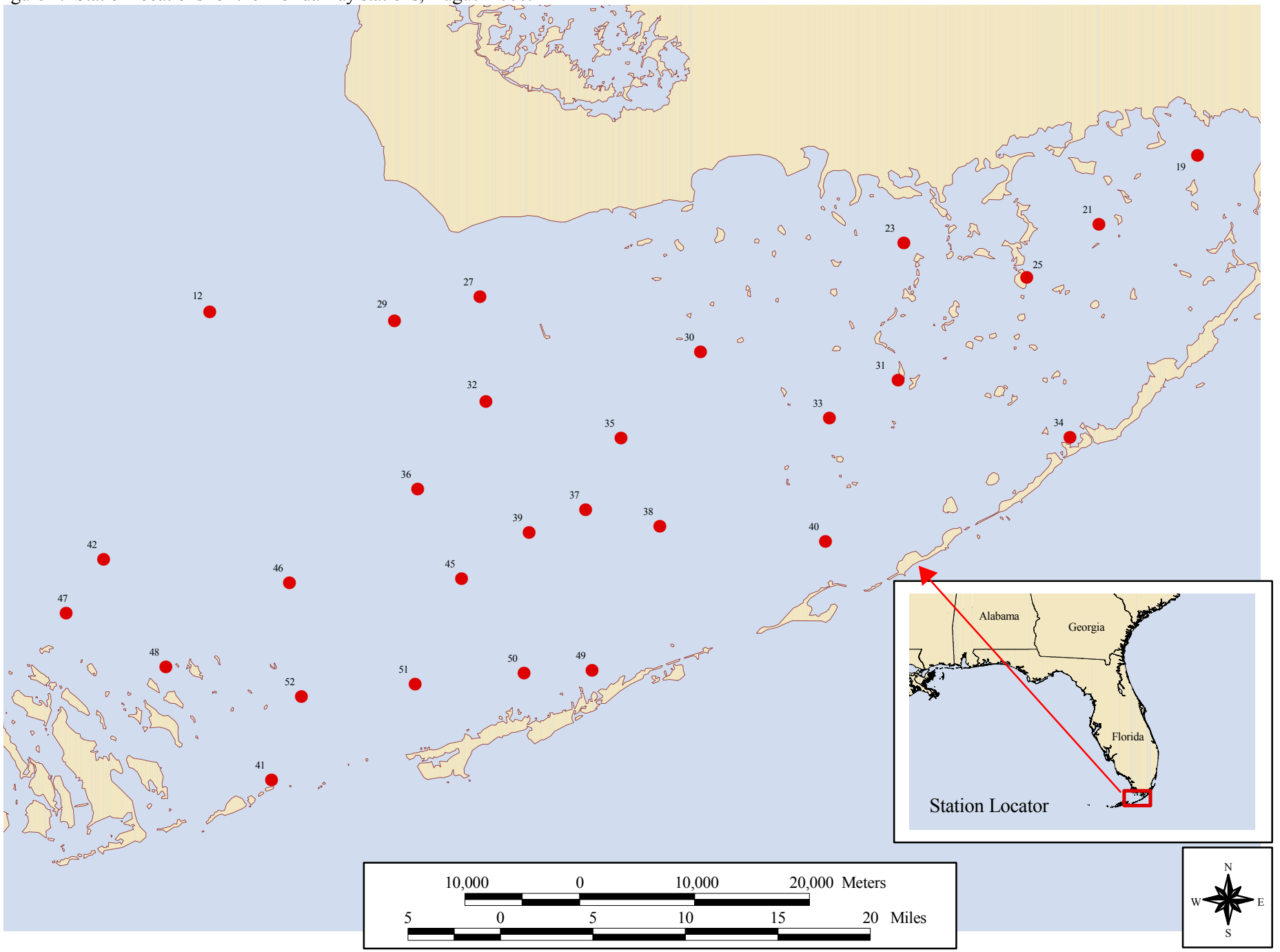


Figure 2. Depth and temperature data for the Florida Bay stations, August 2000.

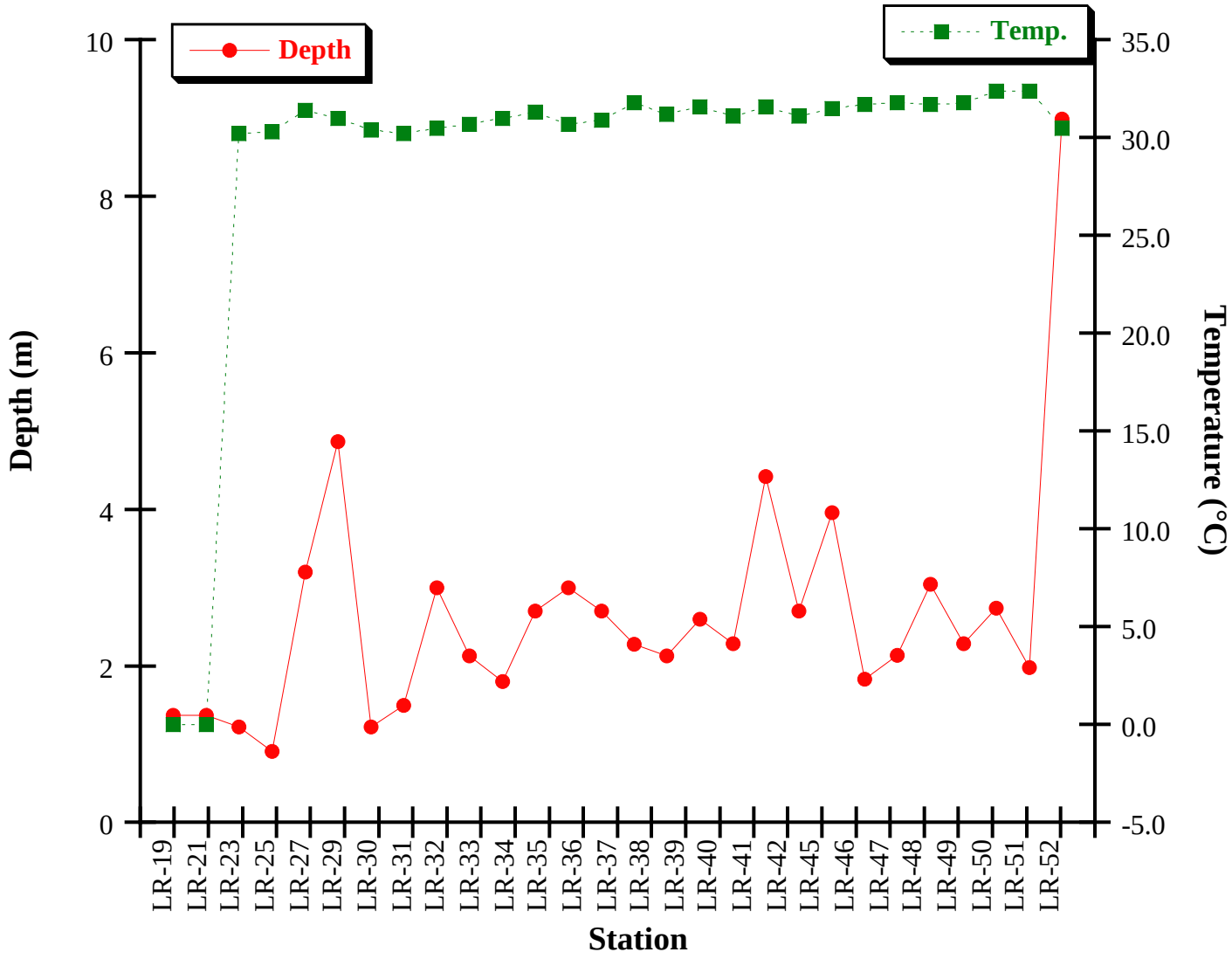


Figure 3. Salinity and dissolved oxygen data for the Florida Bay stations, August 2000.

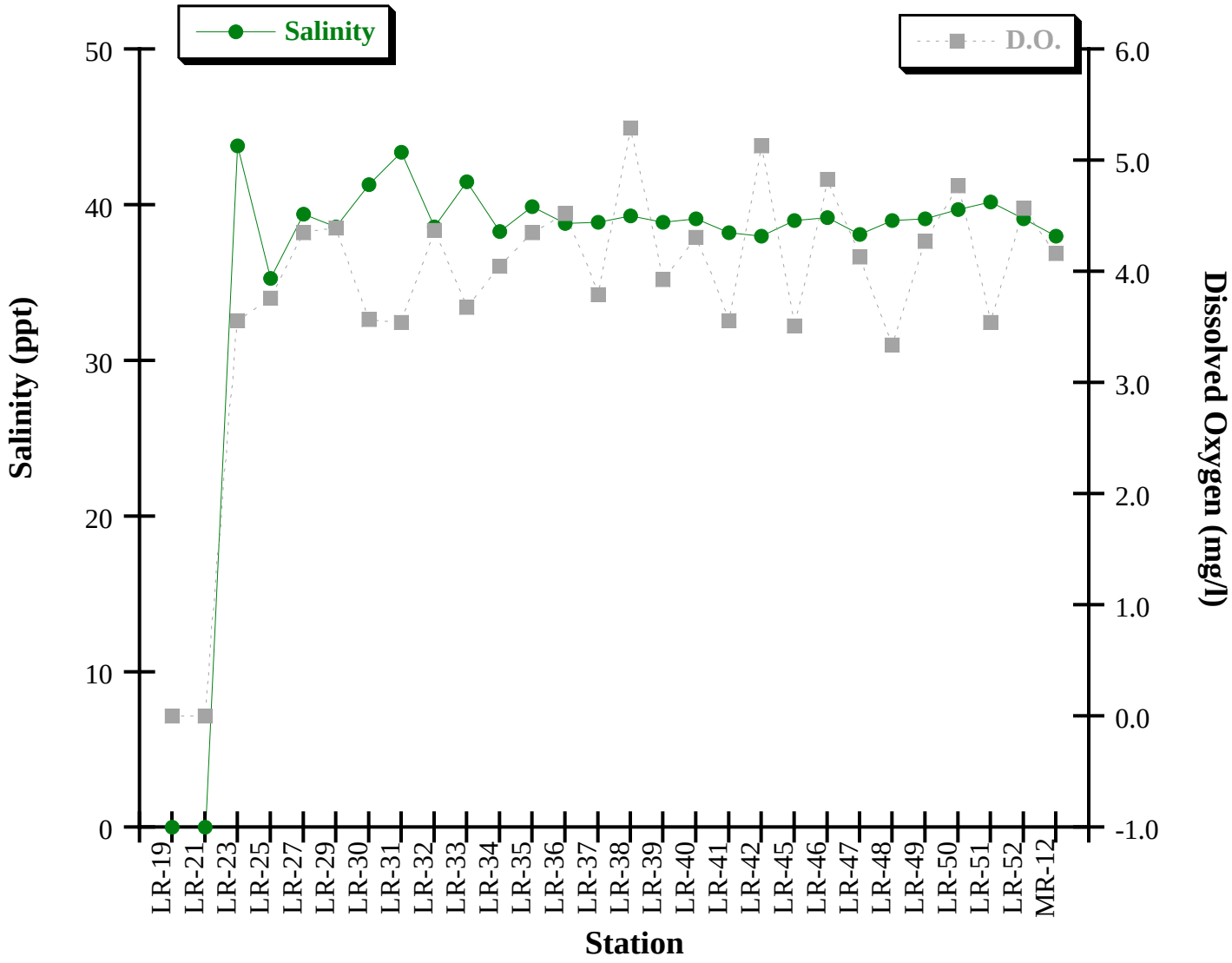


Figure 4. Sediment composition for the Florida Bay stations, August 2000.

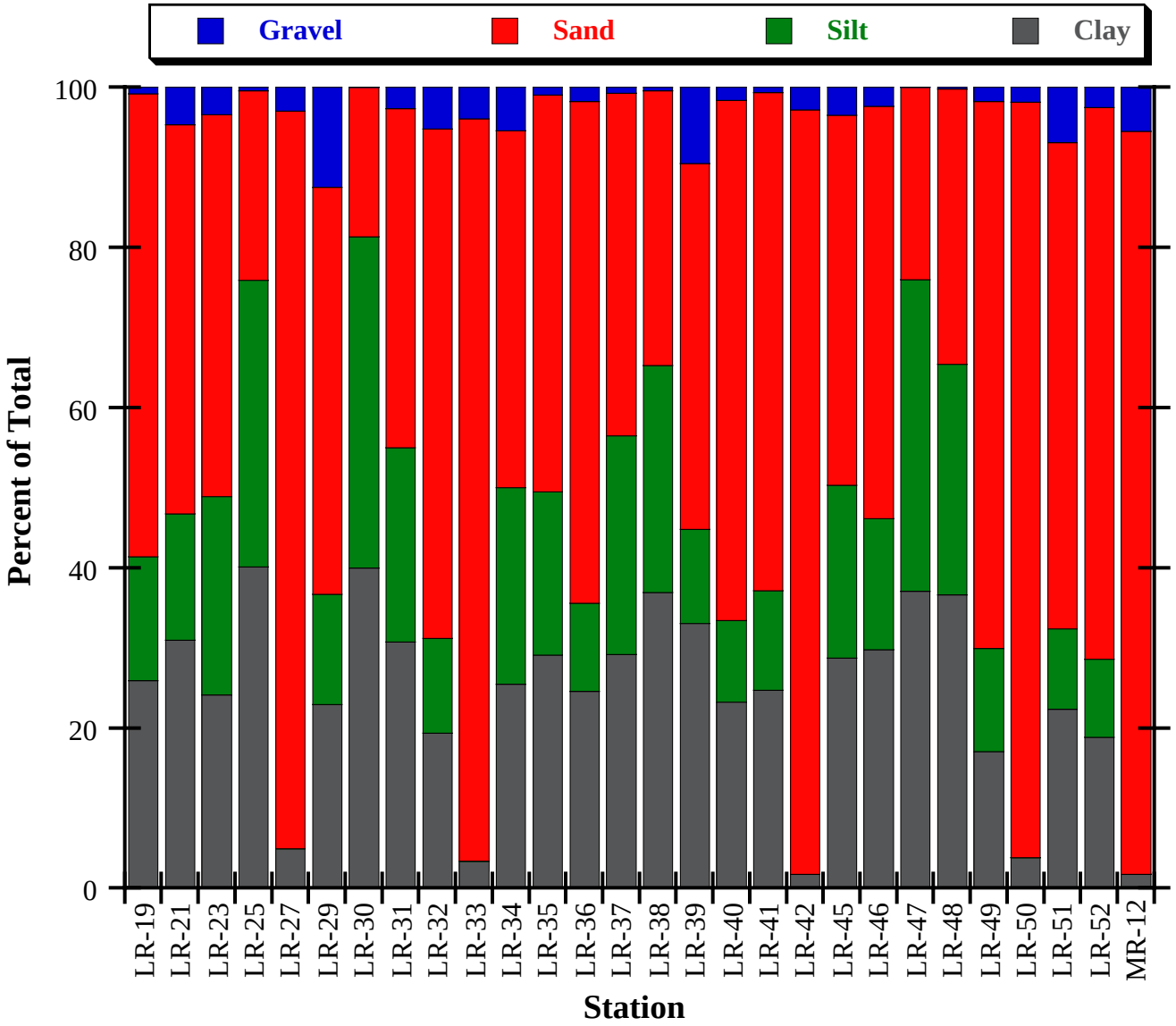


Figure 5. Spatial distribution of sediment composition for the Florida Bay stations, August 2000.

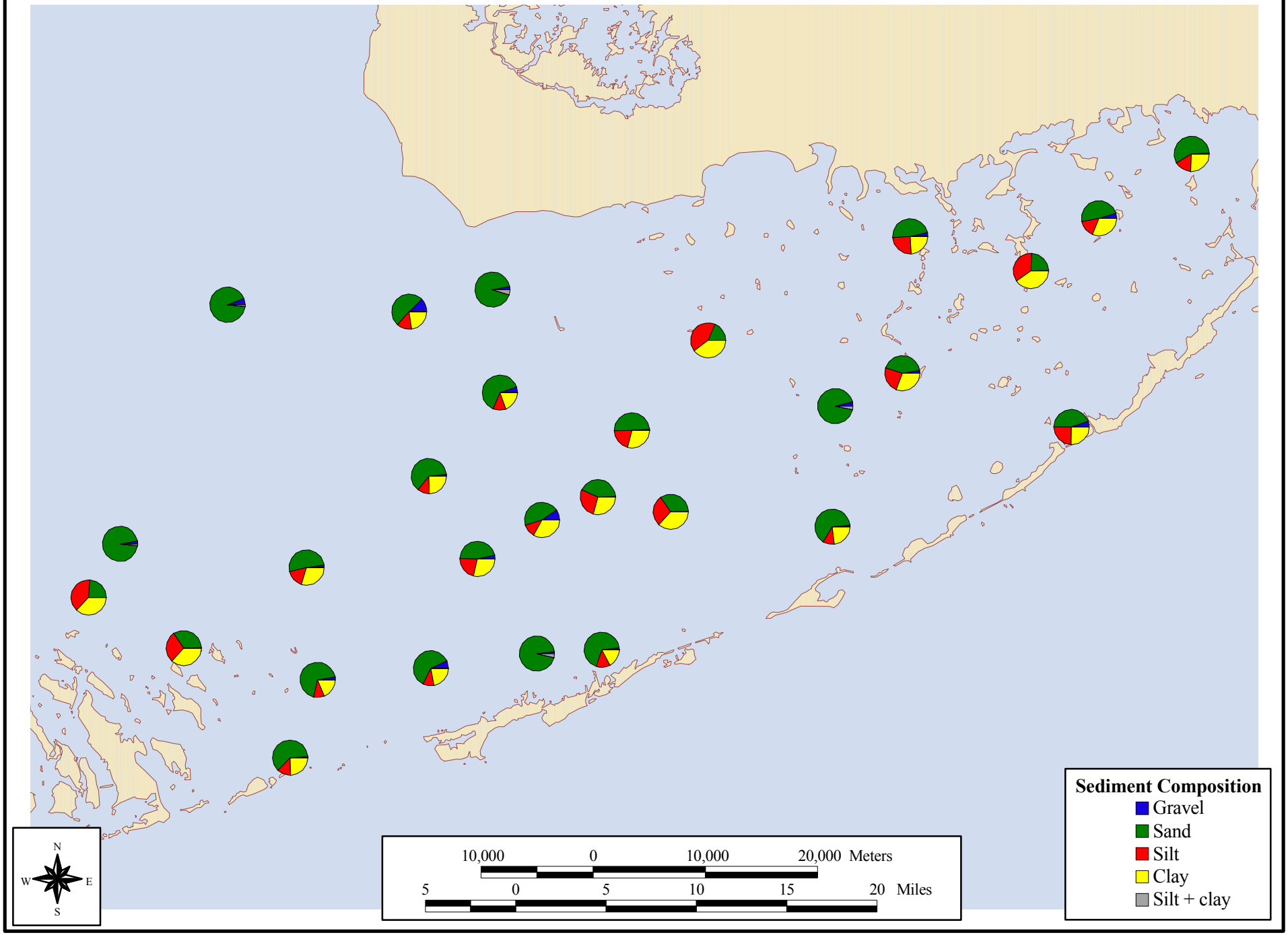


Figure 6. Mean particle size for the Florida Bay stations, August 2000.

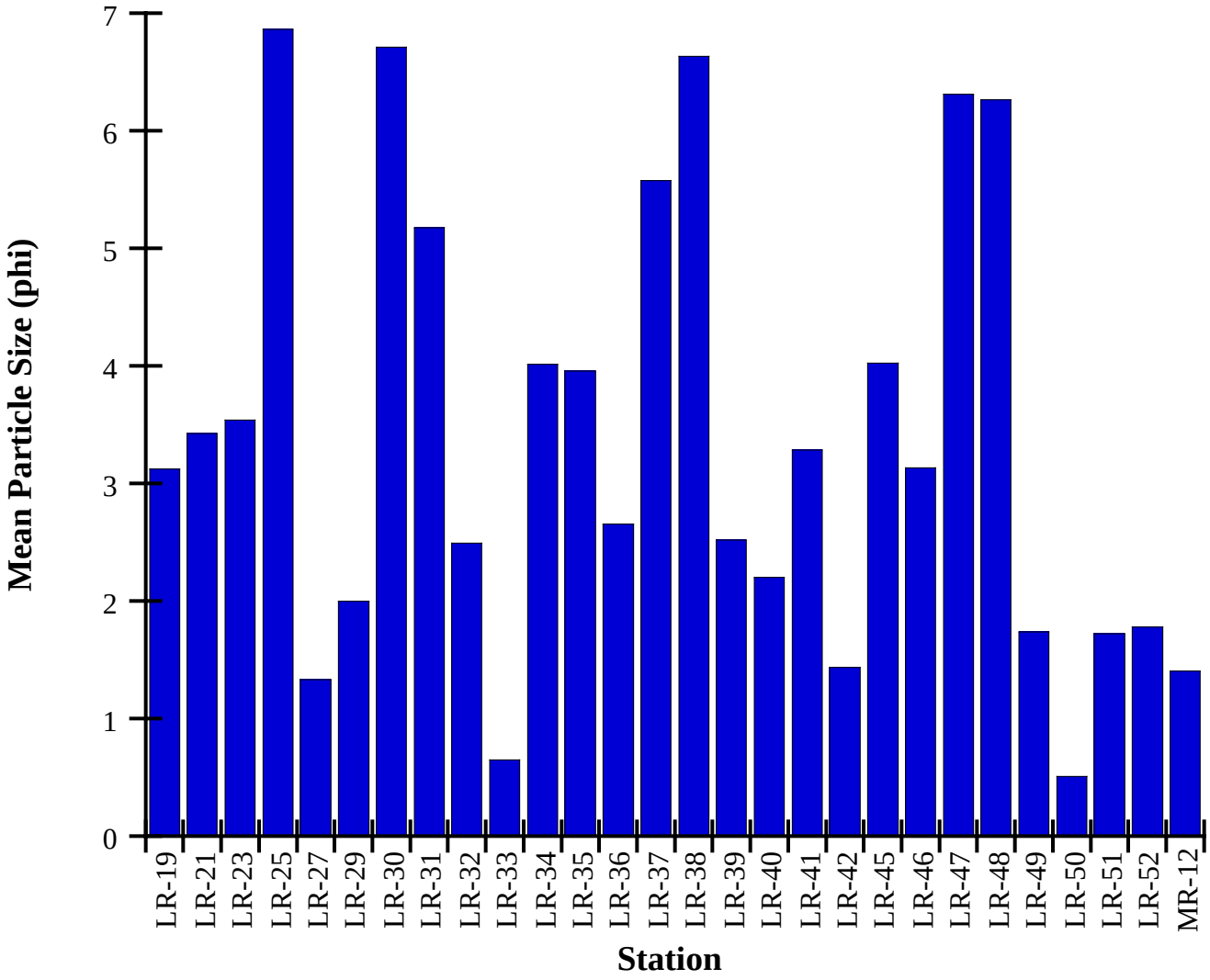


Figure 7. Sorting coefficient for the Florida Bay stations, August 2000.

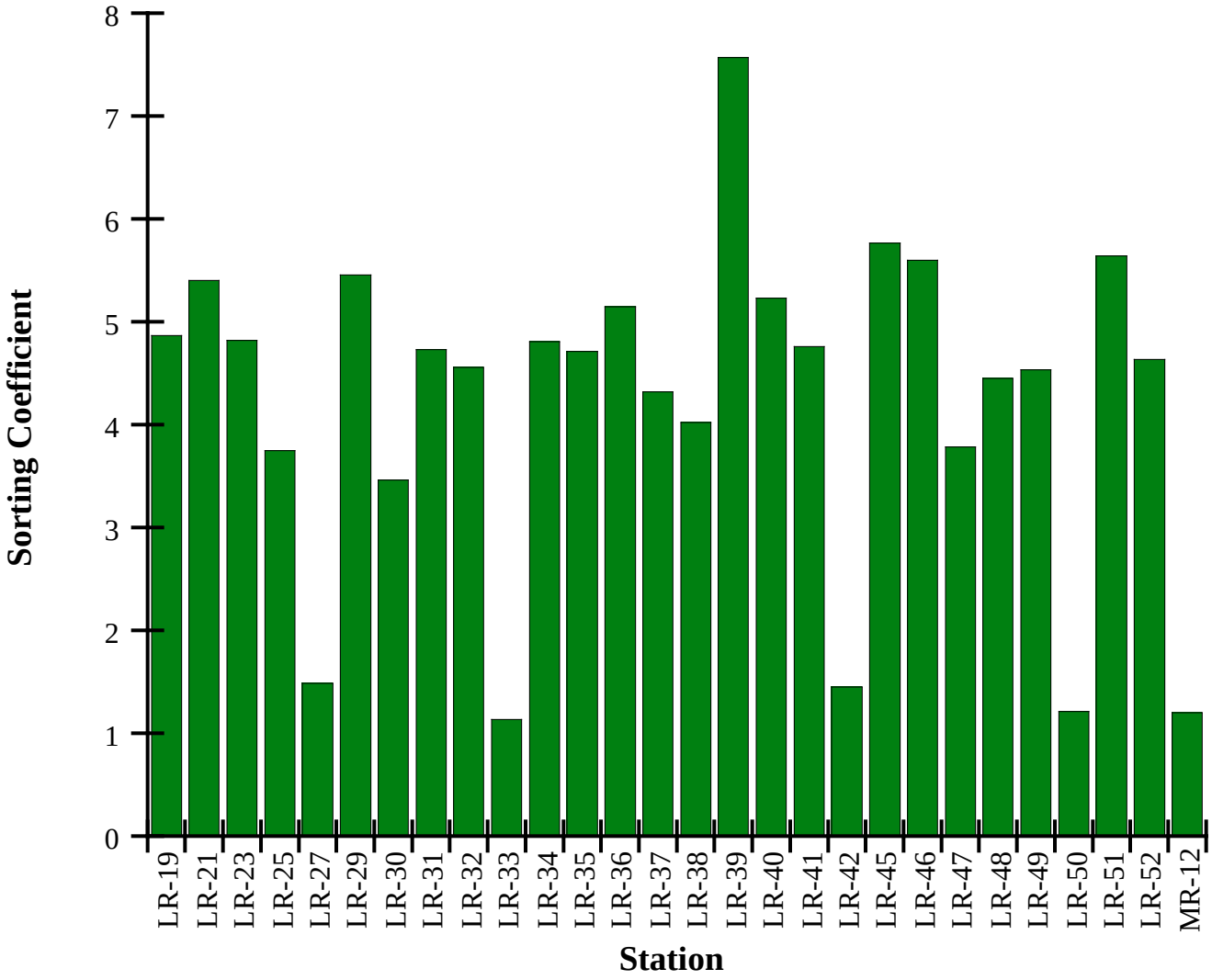


Figure 8. Percent total organic carbon (TOC) for the Florida Bay stations, August 2000.

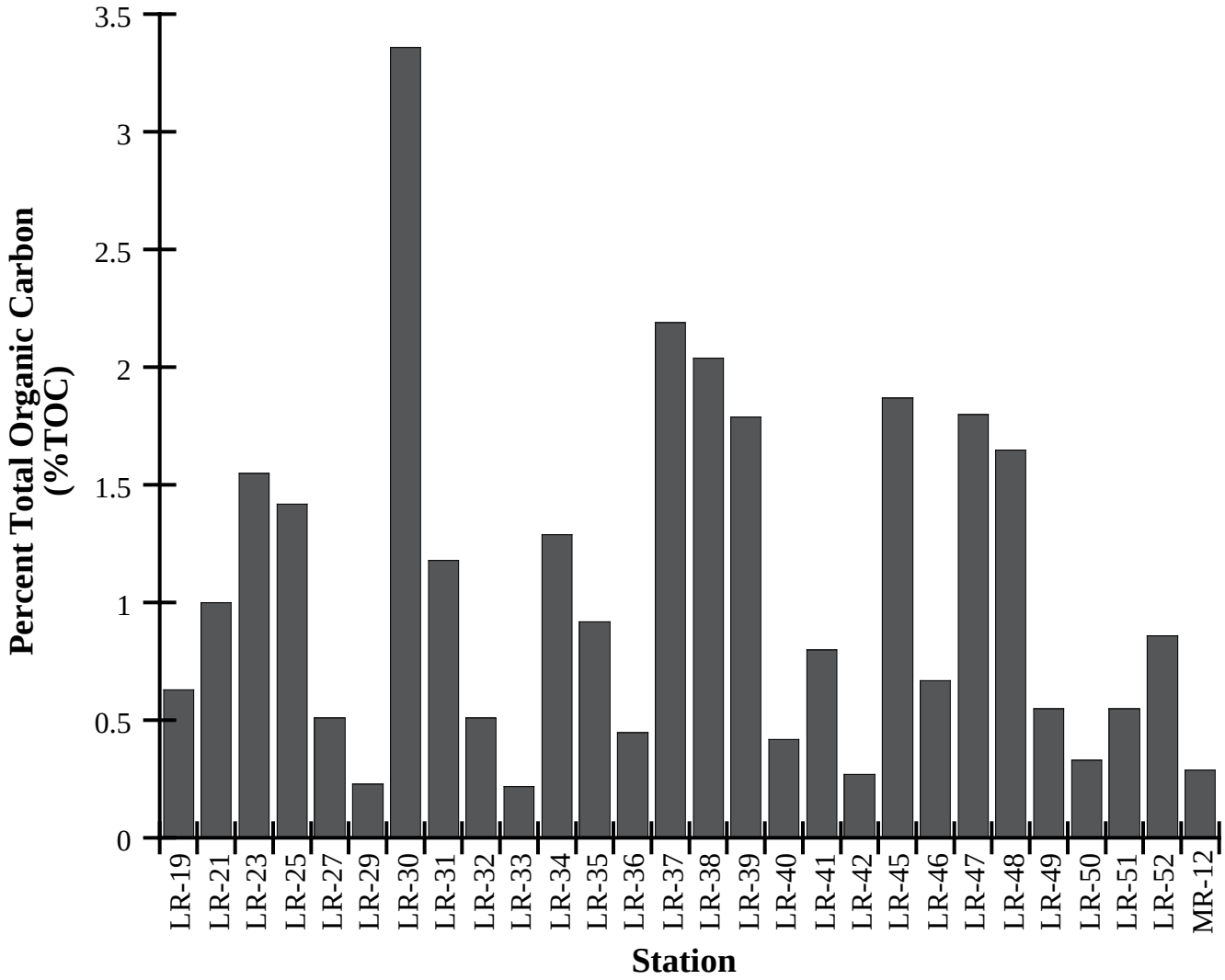


Figure 9. Percent abundance of major taxonomic groups for the Florida Bay stations, August 2000.

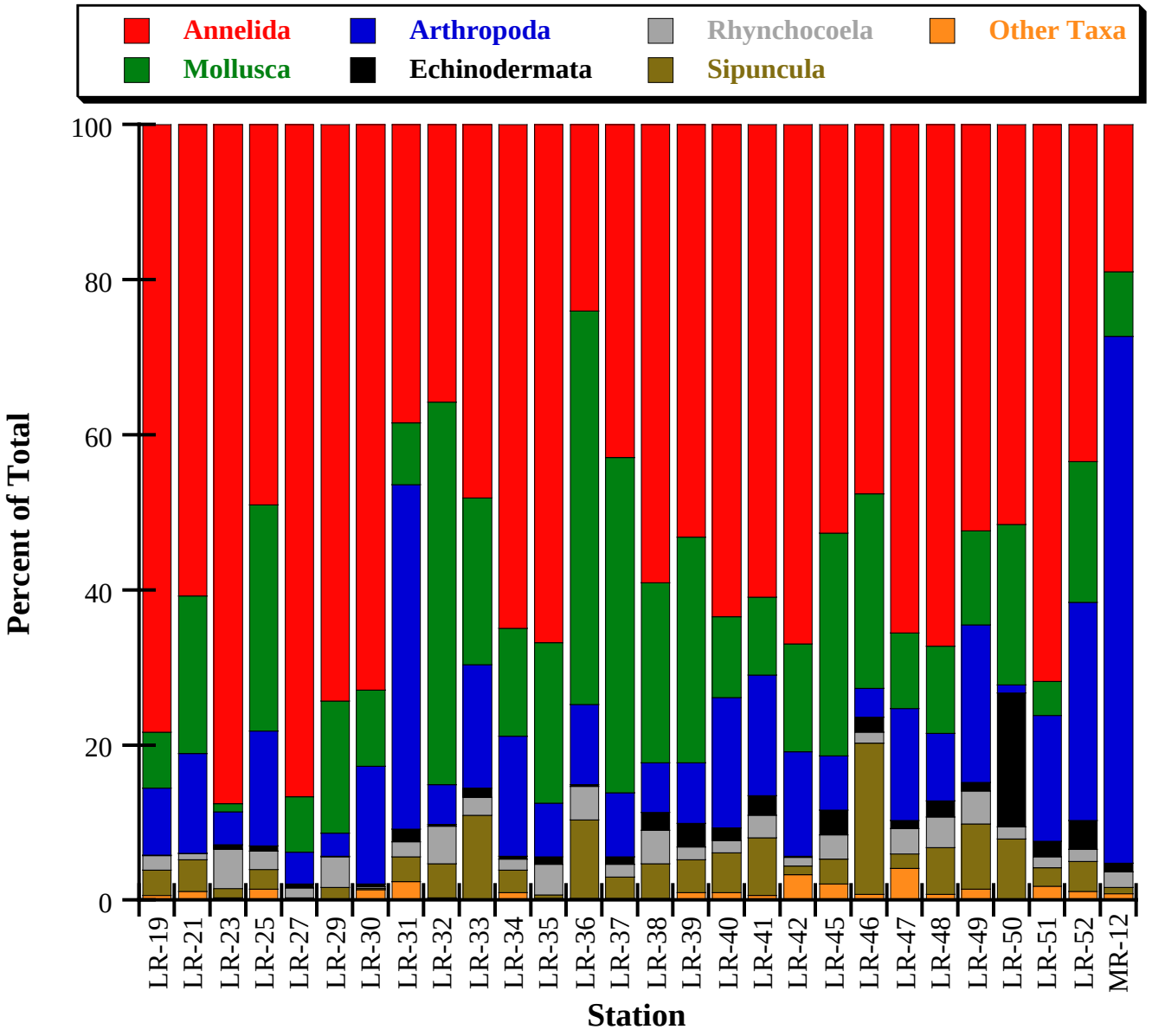


Figure 10. Spatial distribution of major taxonomic groups for the Florida Bay stations, August 2000.

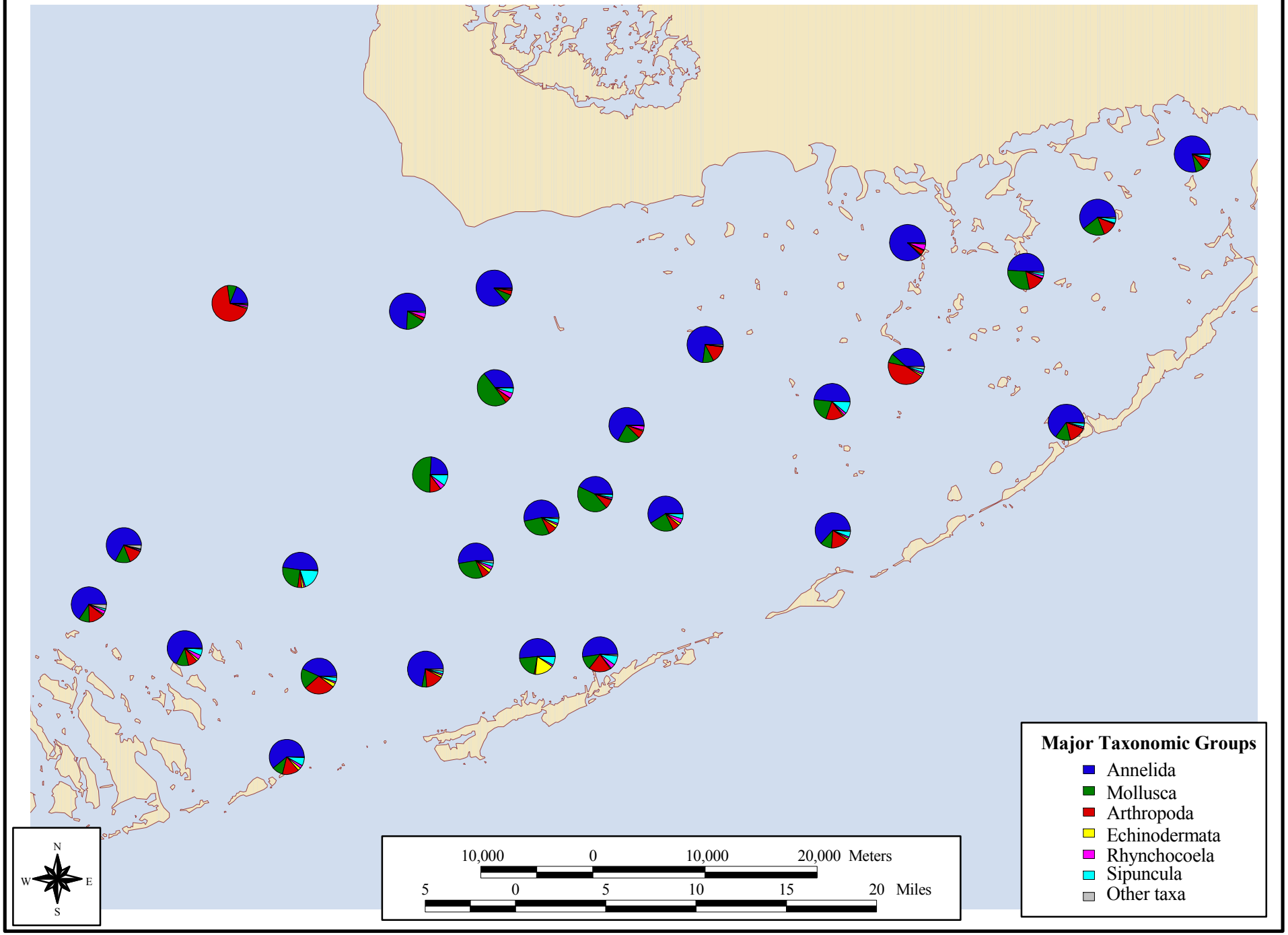


Figure 11. Mean macroinvertebrate density for the Florida Bay stations, August 2000.

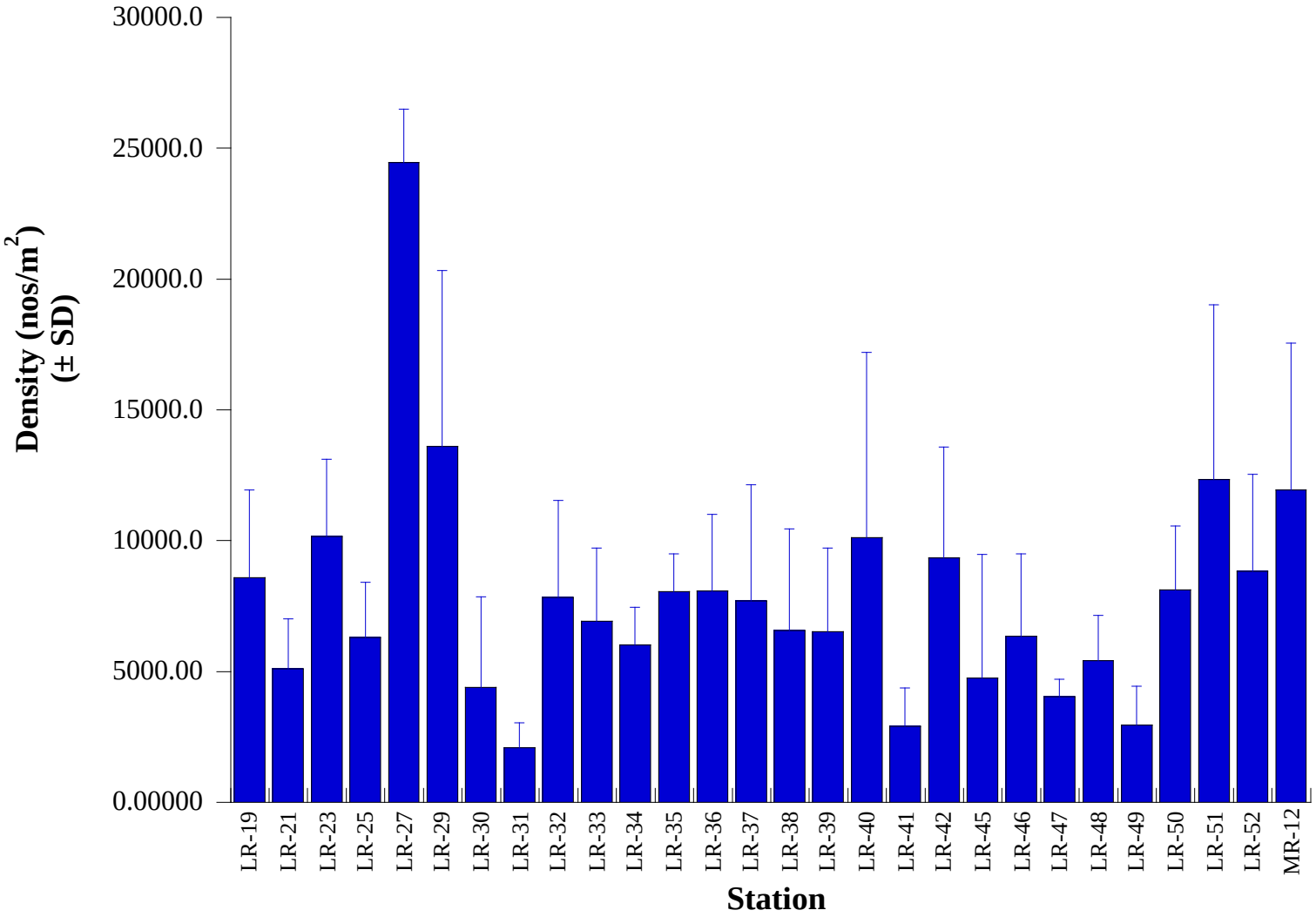


Figure 12. Spatial distribution of mean macroinvertebrate density for the Florida Bay stations, August 2000.

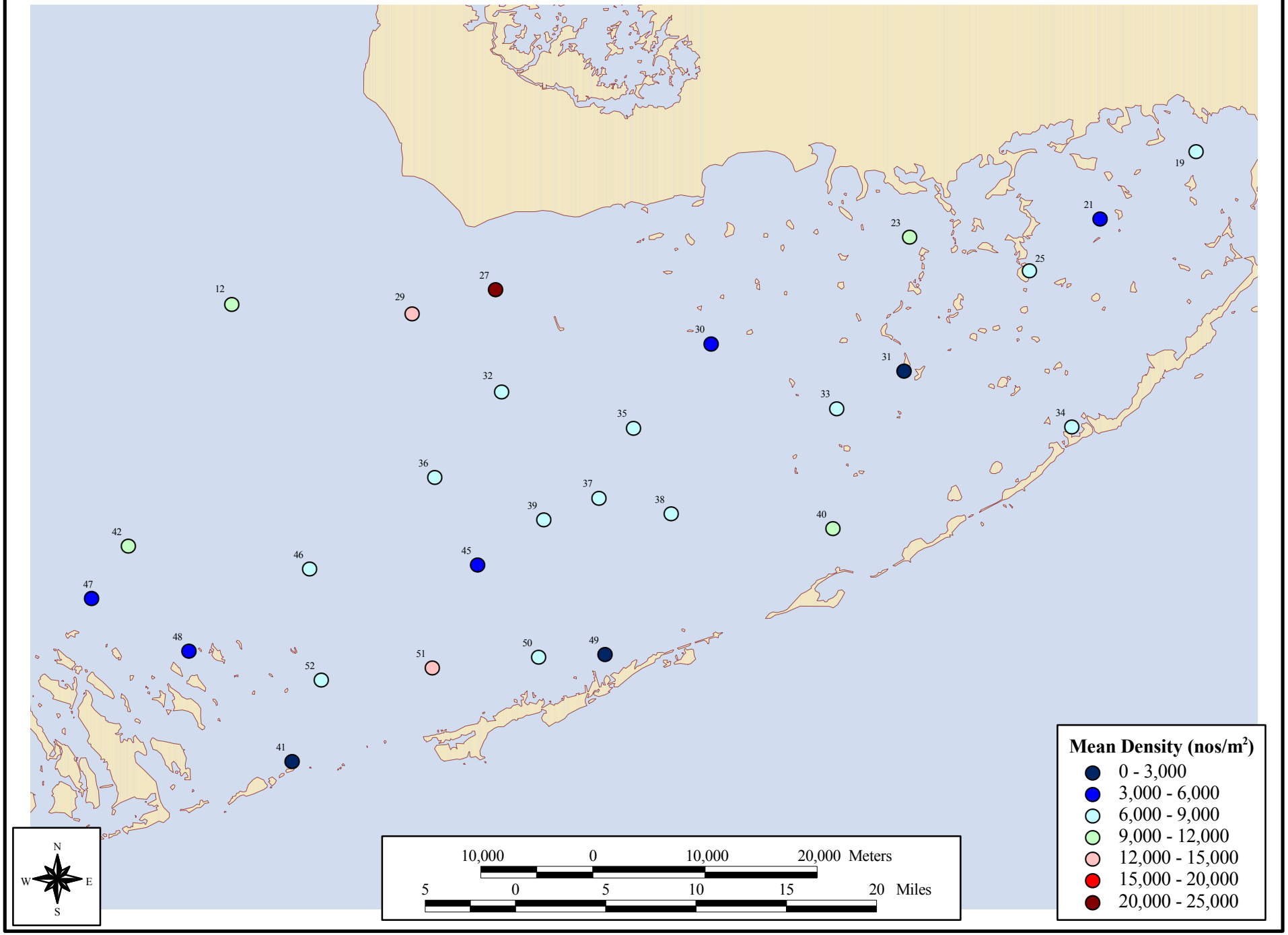


Figure 13. Mean number of taxa per replicate for the Florida Bay stations, August 2000.

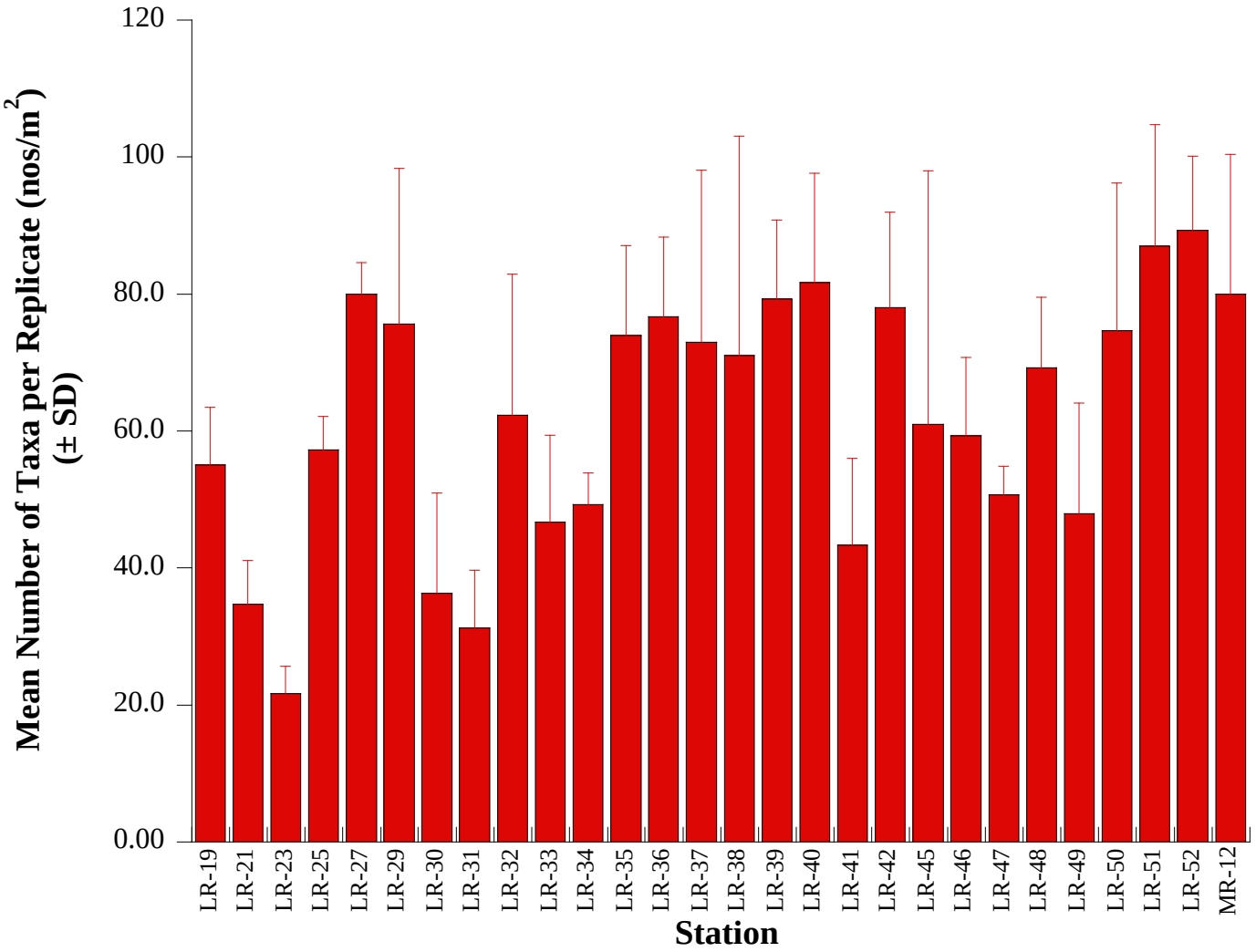


Figure 14. Spatial distribution of mean number of taxa per replicate for the Florida Bay stations, August 2000.

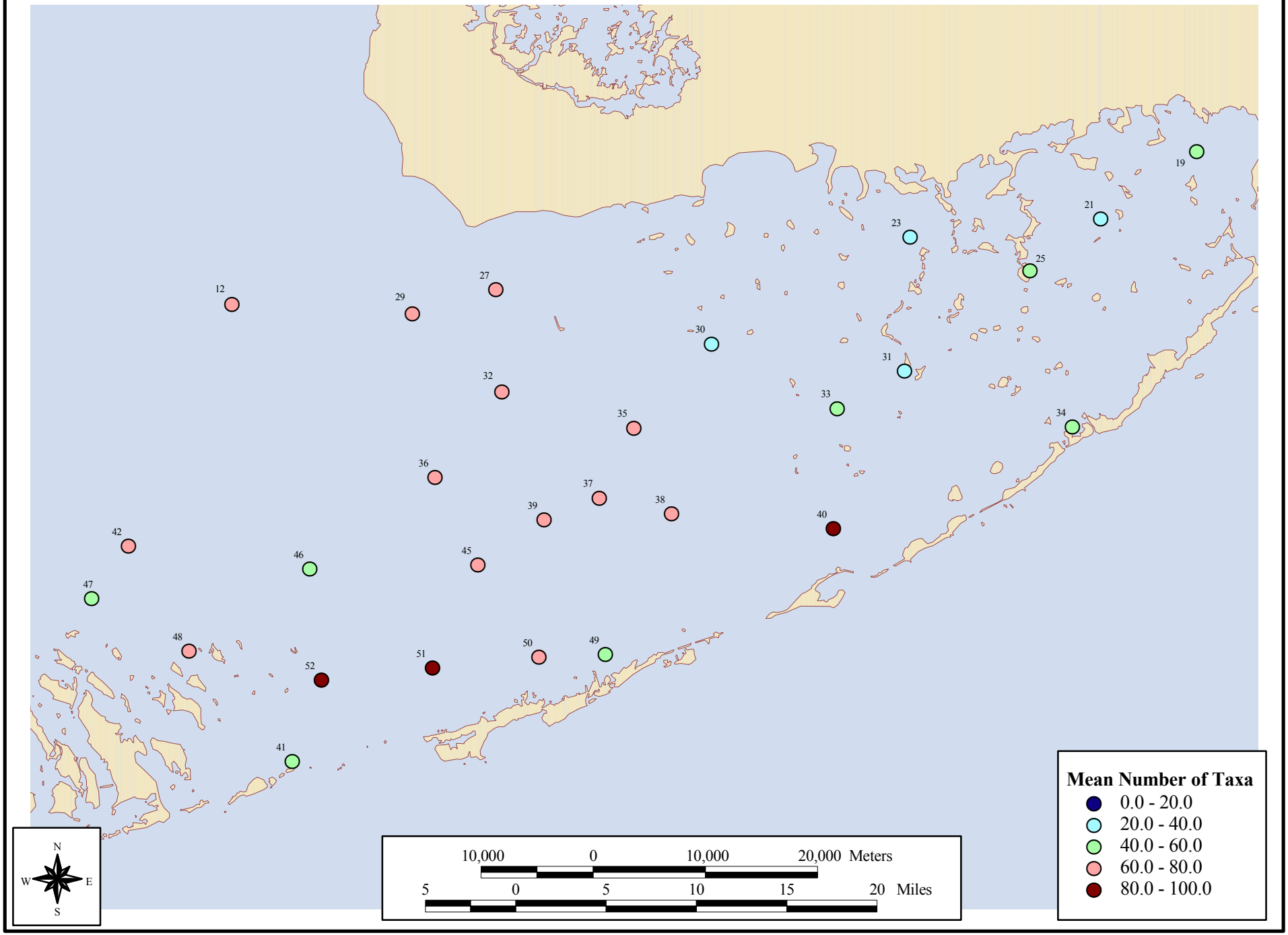


Figure 15. Taxa diversity (H') for the Florida Bay stations, August 2000.

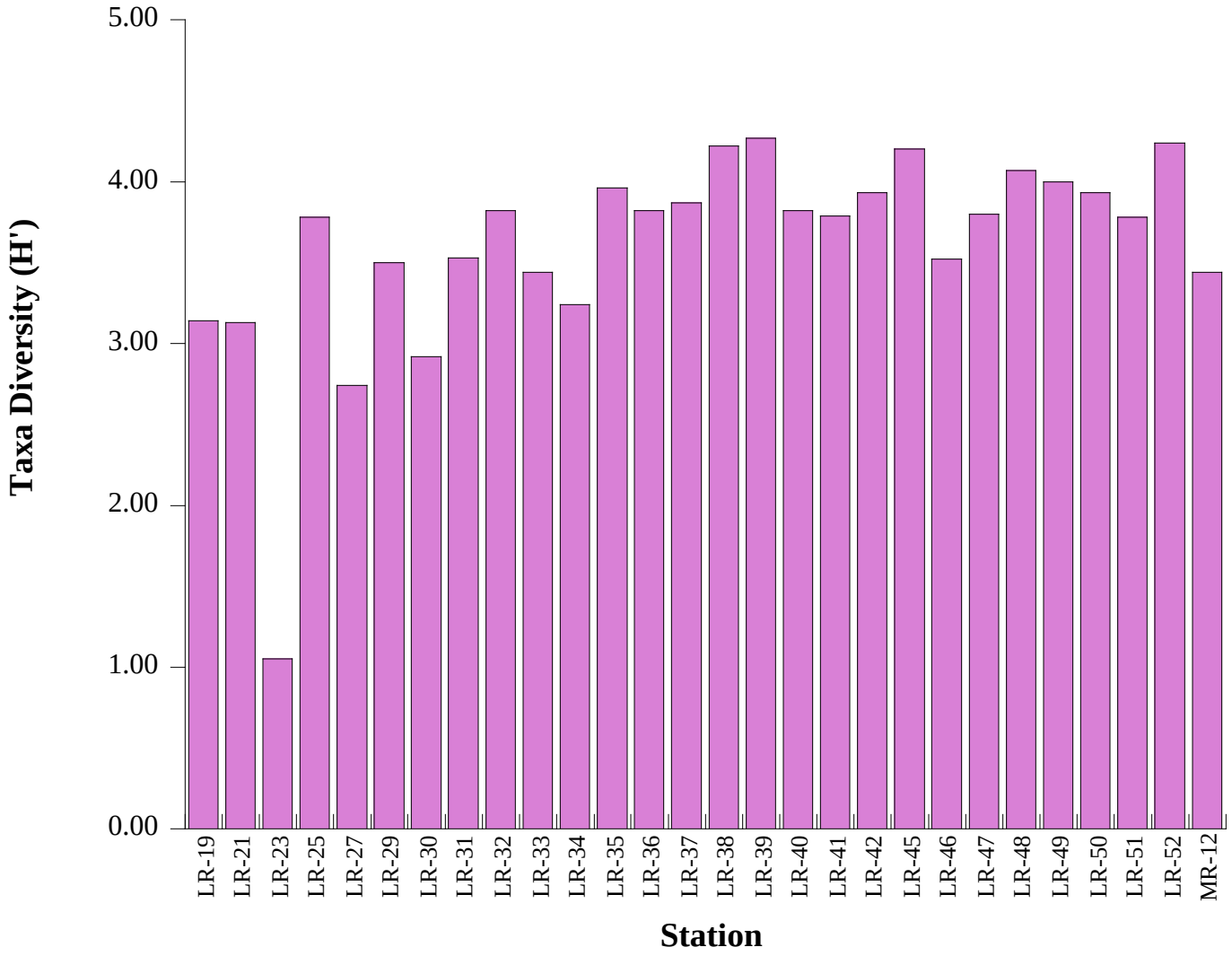


Figure 16. Spatial distribution of taxa diversity (H') for the Florida Bay stations, August 2000.

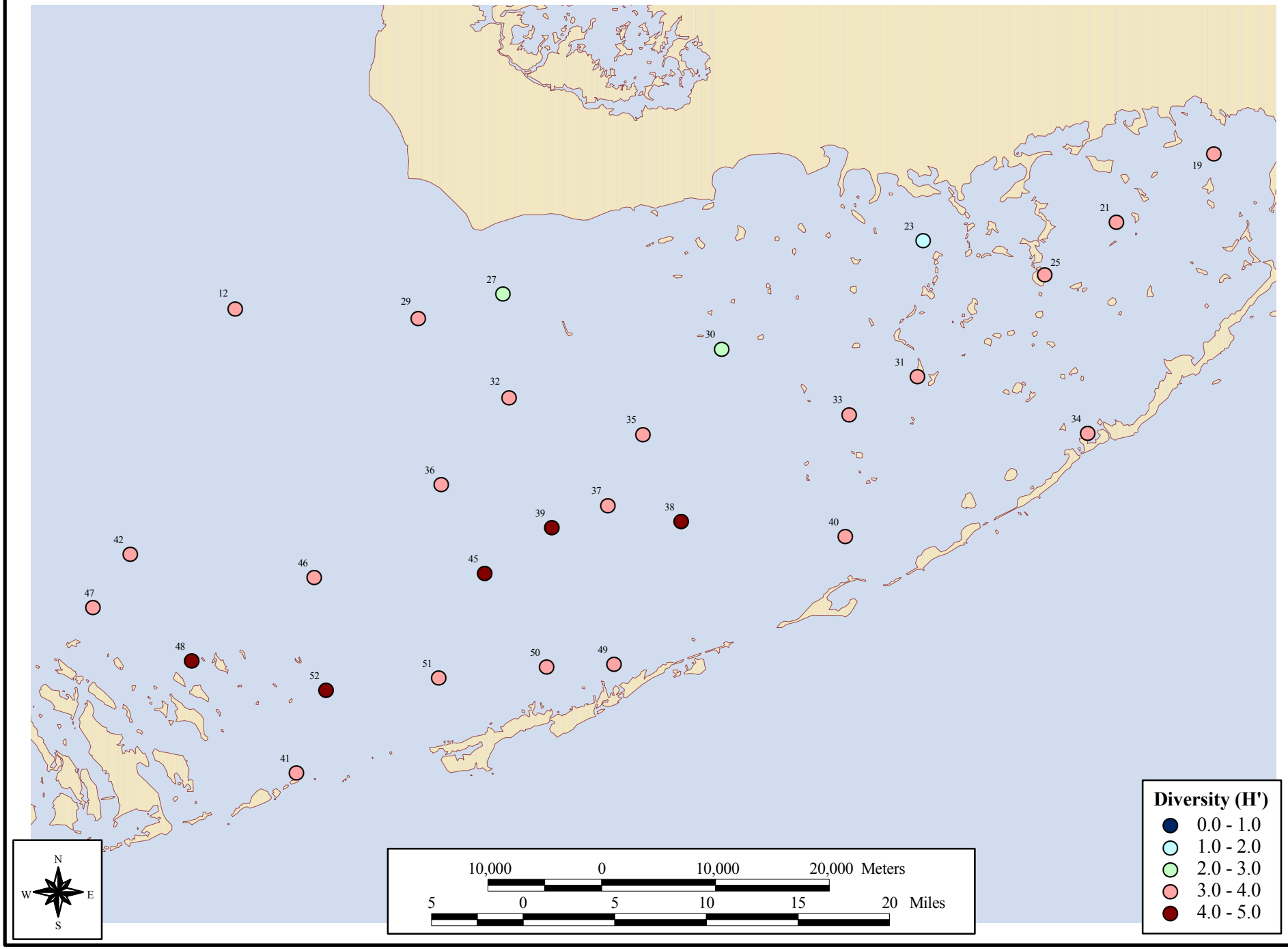


Figure 17. Taxa evenness(J') for the Florida Bay stations, August 2000.

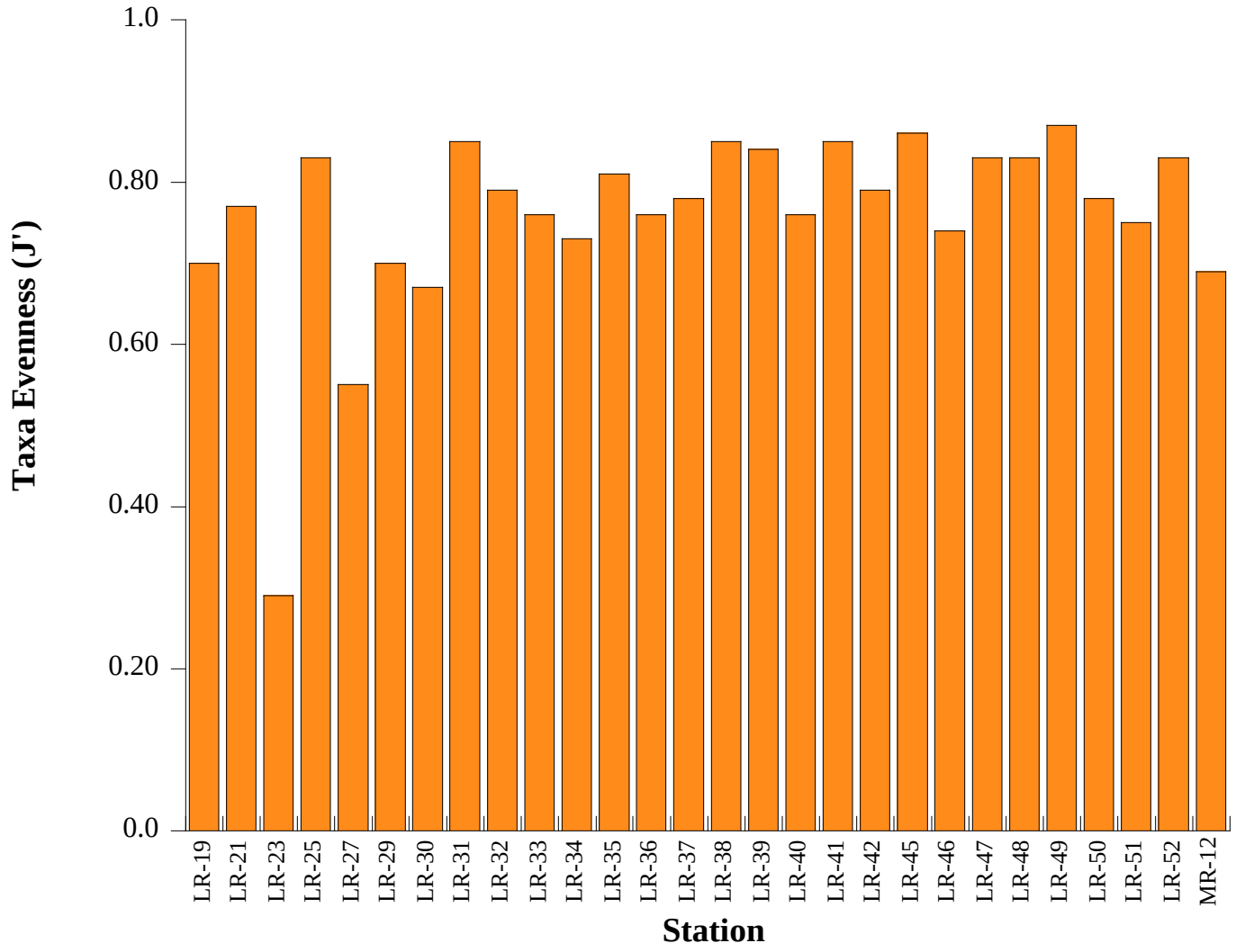
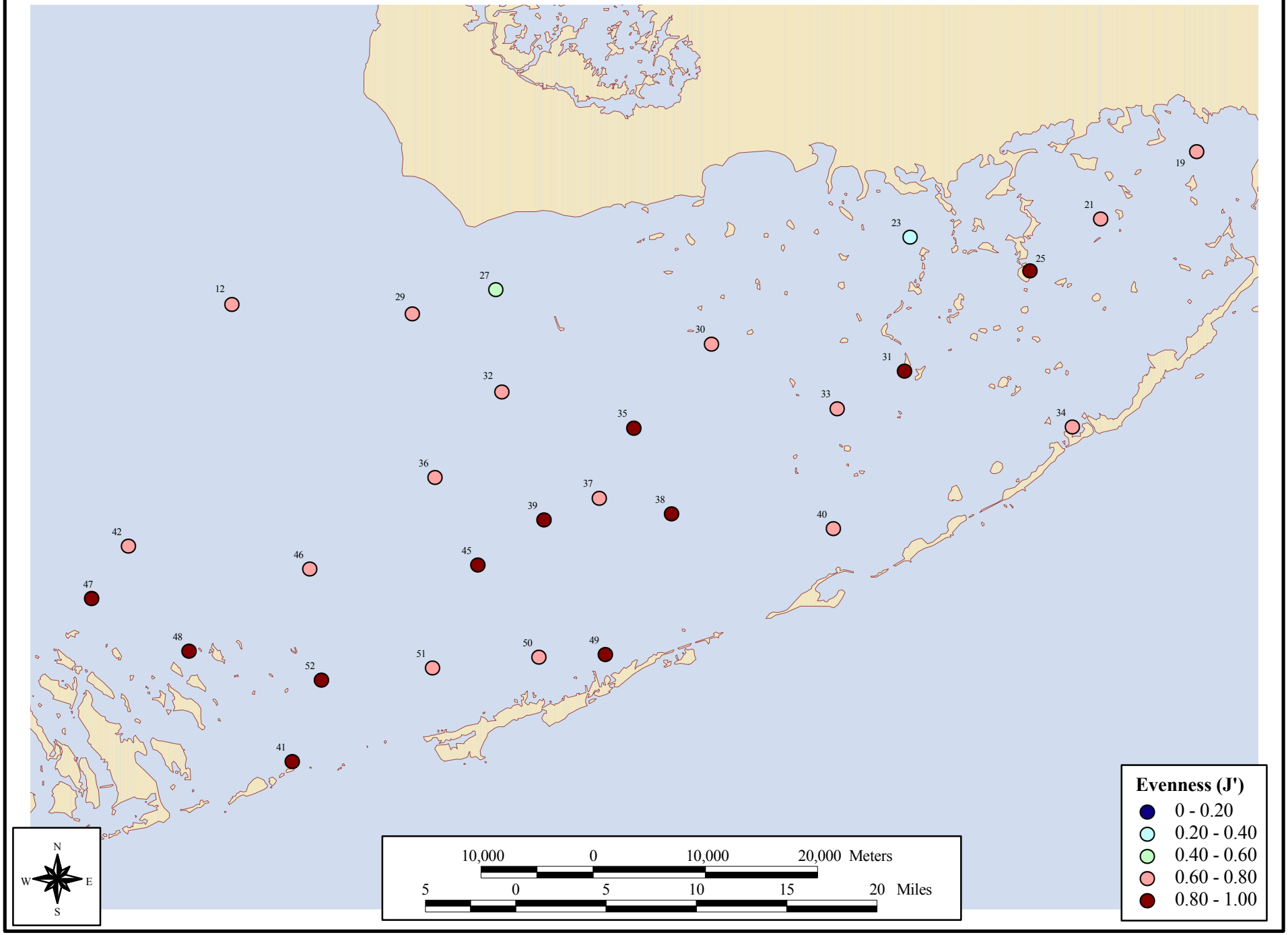


Figure 18. Spatial distribution of taxa evenness (J') for the Florida Bay stations, August 2000.



QUALITY ASSURANCE STATEMENT

Client/Project NOAA

Work Assignment Title Florida Bay 2000

Work Assignment Number Task Number DO 3

Description of Data Set or Deliverable: 84 Benthic macroinvertebrate samples collected August, 2000; Young Dredge grabs.

Description of audit and review activities: Judged accuracy rates were well above standard levels for sorting and taxonomy. Laboratory QC reports were completed. Copies of QC results follow (see attachment.) All taxonomic data were entered into computer and printed. This list was checked for accuracy against original taxonomic data sheets.

Description of outstanding issues or deficiencies which may affect data quality: None

_____

Signature of QA Officer or Reviewer Date

_____

Signature of Project Manager Date

QUALITY CONTROL REWORKS

Client/Project NOAA Florida Bay 2000

Task Number DO 3

Sorting Results:	**Sample #**	**% Accuracy**
	LR-41-3	95%
	LR-21-3	100%
	LR-36-3	100%
	LR-30-2	100%
	LR-34-2	100%
	LR-34-1	100%
	LR-37-2	100%
	LR-29-2	100%

Taxonomy Results:	**Sample #**	**Taxa**	**% Accuracy**
	LR-49-3	Crust./Moll.	97%
	LR-31-1	Crust./Moll.	96%
	LR-40-1	Crust./Moll.	97%
	LR-30-2	Crust./Moll.	100%
	LR-49-2	Crust./Moll.	100%
	LR-47-3	Crust./Moll.	96%
	LR-37-2	Crust./Moll.	97%
	LR-32-3	Crust./Moll.	96%
	LR-25-2	Crust./Moll.	97%
	LR-21-2	Poly./Misc.	99%
	LR-50-2	Poly./Misc.	97%
	LR-30-3	Poly./Misc.	99%
	LR-39-1	Poly./Misc.	98%
	LR-34-1	Poly./Misc.	97%
	LR-36-2	Poly./Misc.	97%
	LR-46-1	Poly./Misc.	98%
	LR48-3	Poly./Misc.	98%

Description of outstanding issues or deficiencies which may affect data quality: None

Signature of QA Officer or Reviewer Date

Appendix A3. Lowest practical identification levels (LPIL) for the Florida Bay stations, August 2000.

Taxon Name	Phylum	Class	Comment
Mediomastus (LPIL)	Ann	Poly	anterior portions only, pygidium needed for species ID.
Fabricinuda trilobata	Ann	Poly	
Exogone rolani	Ann	Poly	
Tubificidae (LPIL)	Ann	Olig	sexually immature
Caecum pulchellum	Mol	Gast	
Leptochelia (LPIL)	Art	Mala	mature male necessary for species identification.
Sipuncula (LPIL)	Sip	–	juvenile specimen or missing characters
Monticellina dorsobranchialis	Ann	Poly	
Scoletoma verrilli	Ann	Poly	
Nucula aegeenis	Mol	Biva	
Rhynchocoela (LPIL)	Rhy	–	no identifiable characters.
Cirrophorus lyra	Ann	Poly	
Cirratulidae (LPIL)	Ann	Poly	anterior fragment, posterior needed for specis ID.
Syllis broomensis	Ann	Poly	
Exogone lourei	Ann	Poly	
Ampelisca vadorum	Art	Mala	
Chione cancellata	Mol	Biva	
Capitellidae (LPIL)	Ann	Poly	immature and/or anterior portion only.
Schistomeringos pectinata	Ann	Poly	
Maldanidae (LPIL)	Ann	Poly	fragmented portion, pygidium necessary for positive identification.
Nereididae (LPIL)	Ann	Poly	missing identificaton characters and/or immature.
Phascolion strombi	Sip	–	
Tubulanus (LPIL)	Rhy	Anop	genus is lowest identification level.
Schwartziella catesbyana	Mol	Gast	
Ophiuroidea (LPIL)	Ech	Ophi	central disk missing characters.
Prionospio (LPIL)	Ann	Poly	missing identification characters
Actiniaria (LPIL)	Cni	Anth	order is lowest identification level.
Syllis cornuta	Ann	Poly	
Lembos (LPIL)	Art	Mala	need adult male with all appendages.
Branchiomma nigromaculata	Ann	Poly	
Caecum floridanum	Mol	Gast	
Caecum nitidium	Mol	Gast	
Lumbrineridae (LPIL)	Ann	Poly	damaged and/or immature specimen.
Aricidea taylori	Ann	Poly	
Solemya occidentalis	Mol	Biva	
Taylorpholoe hirsuta	Ann	Poly	
Aricidea philbinae	Ann	Poly	
Armandia maculata	Ann	Poly	
Prionospio cristata	Ann	Poly	
Decamastus sp. A	Ann	Poly	
Mediomastus californiensis	Ann	Poly	
Elasmopus levis	Art	Mala	
Haplosyllis spongicola	Ann	Poly	
Sabellidae (LPIL)	Ann	Poly	missing branchial crown.
Pettibonella multiuncinata	Ann	Poly	
Sphaerosyllis piriferopsis	Ann	Poly	
Caecum imbricatum	Mol	Gast	
Finella dubia	Mol	Gast	