BLM MAFLA DEMERSAL FISH SURVEY 1975-1976

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ABSTRACT

Trawl and dredge collections of fishes were taken from 18 stations, each sampled during July, October, 1975, and February/March 1976. The stations were located at approximately 37 m, 93 m and 183 m depths along each of six transects located in the north central. to southeastern Gulf of Mexico.

A total of 8882 specimens representing 204 species were captured, identified, weighed, measured, and archived. These data were then analyzed for species diversity, seasonal variation of species composition and biomass, dominant species and possible migratory activity. In addition, tissue samples were removed from selected individuals for subsequent hydrocarbon/trace metal analysis.

Species diversity appeared most consistent at 183 m stations. However, differences in absolute diversity between depths were inconclusive. Numbers of species and biomass appeared only slightly higher at shallower depths. There appeared to be little geographical variation in any of these parameters.

Species dominance was the most consistent and valuable faunal characterization noted. Based on species dominance, faunal variation was more marked between depths than between geographically separate stations of the same depth.

INTRODUCTION

Demersal fishes are a major component, of the benthic fauna of continental shelves. Many species of demersal fishes are the principal components of the top trophic levels of continental shelf ecosystems, Therefore, knowledge of these species is imperative in the understanding and characterization of such ecosystem, and tissue analysis of these species can be most revealing toward an assessment of pathways taken by various compounds in continental shelf food webs.

Analysis of demersal fish communities in the MAFLA lease area was initiated during 1975, the second year of the project by the Bureau of Land Management (BLM). The following represents data gathered. during the 1975-1976 sampling period, and must be considered an interim report, awaiting the year to year comparisons of subsequent field work.

MATERIALS AND METHODS

Characterization of transects

Six transects were established within the MAFLA lease area (Figure 1), each consisting of stations at approximately 37 (A stations), 93 (B stations), and 183 (C stations) m depths. The northernmost two transects (VI), located south of Mobile Bay, and V located south of Pensacola Bay) lay partially over the steep slopes of the northern sector of the DeSoto Canyon, which resulted in close proximity of the stations within each transect, especially the 93 and 183 m stations. Transect III traversed the Florida Middle Ground area, which placed the A station amongst scattered coral reefs. Transect I, extending westward from the Fort Myers area, was bordering on 'tropical. substrate, and the A station was characterized by considerable biogenic relief, Transects IV and II were located

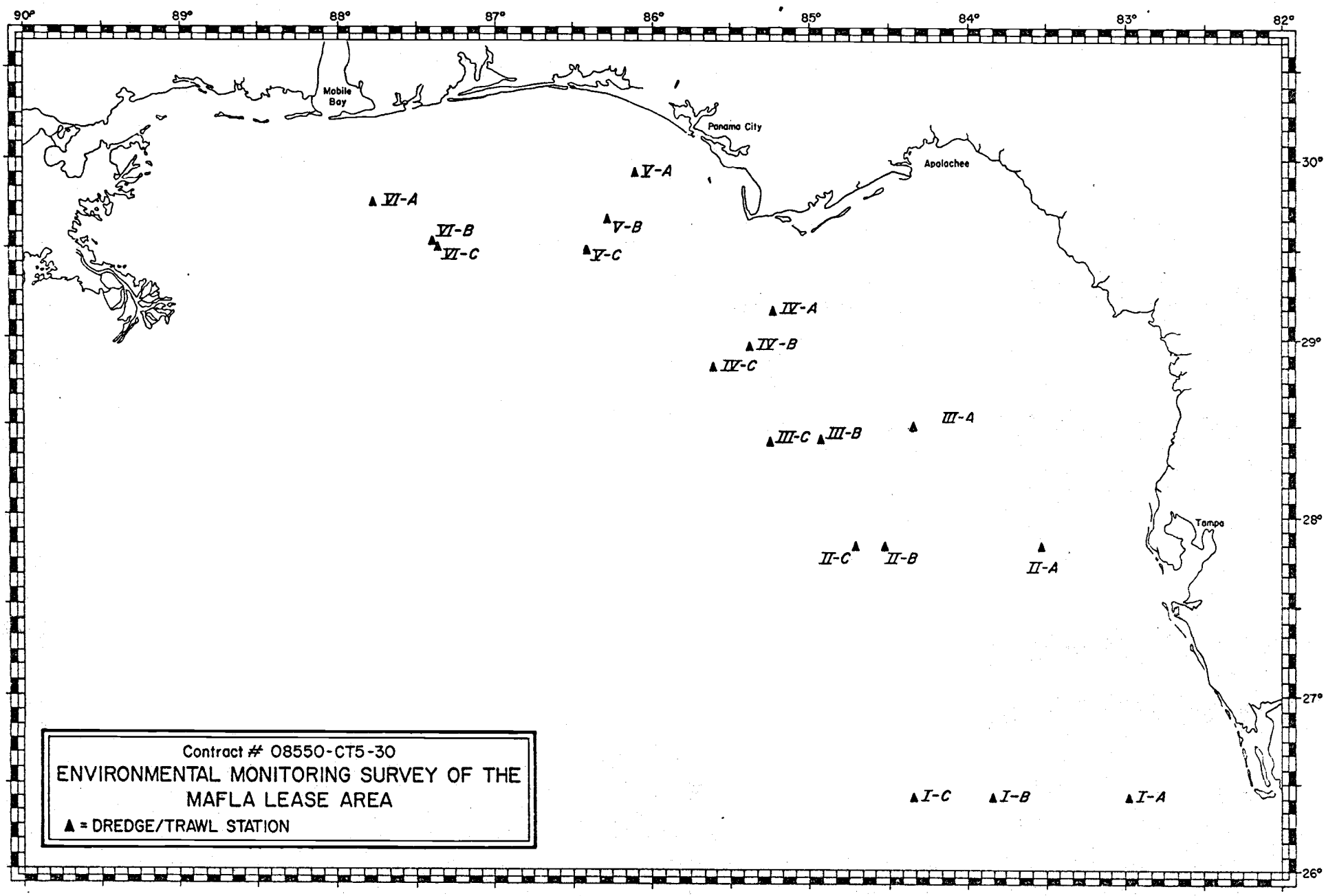

Figure 1. Location of sampling sites

on gently sloping shelf bottom, with no outstanding topographic features.

Sampling periods

The transects were sampled three times during the period from 1 June 197'5 to 30 March 1976. During the first sampling period (June/July), dredge/trawl operations were conducted from the R/V GYRE and R/V BELLOWS; cruises for both vessels were during July, 1975. Dredge/trawl collections during the next sampling period (September/October) were conducted aboard the R/V GYRE during October 1975. The final dredge/trawl samples (January-March sampling period) were conducted aboard the R/V GYRE and R/V BELLOWS during February 197'6, during which period all but dredge samples at 6B and 6A were taken. These latter were completed aboard the R/V TURSIOPS during March 1976. Specific information regarding each cruise activity is contained in cruise reports submitted to the Bureau of Land Management.

Sampling procedure and gear

Station locations (Table 1) were located by LORAN A navigational procedures.

One trawl sample was taken during each sampling period at each station. All trawling samples were taken with a 9.1 m semi-balloon trawl, with fine 9.5 m mesh cod-end liner. Bottom time for A and B stations was 15 rein, for C stations 30 min. The trawl was pulled at approximately 1-4 knots. Trawls were taken in a direction generally paralleling that of the transect, but occasionally, topographic features or vessel operational procedures required variance from this pattern.

Two dredge samples were taken at each station. A standard Capetown dredge with fine mesh 12.7 m or less, depending on bottom composition) metal screen liner was used for obtaining samples. Dredge durations (bottom time)

TABLE 1. Numbers of species of fishes collected during 1975-1976 MAFLA program.

	Transect	VI	V	IV	III	II	I
Station A	July, 1975	27	17	36	17	1.6	33
	October, 1975	21	28	25	33	32	36
	February/March, 1976	8	24	14	24	35	31
Station B	July, 1975	9	27	10	13	15	18
	October, 1975	18	18	23	35	15	19
	February/March, 1976	13	18	11	13	15	19
Station C	July, 1975	26	14	11	7	11	10
	October, 1975	21	25	19	23	18	11
	February/March, 1976	4	8	15	10	19	20

were 15 min each for the A and B stations, 30 min for C stations. Towing procedure for dredge samples paralleled those for the trawl.

Both trawl and dredge samples were deposited directly on sterilized sorting platforms. Specimens for hydrocarbon/trace metal analysis were removed first, and weighed, measured and prepared for subsequent analysis. Then, all remaining fish specimens were removed and placed in 10% formalin (4% formaldehyde) solution. Small, delicate specimens were placed in vials. In those rare cases where a species was represented by extremely numerous (>100) individuals, some were removed for pesticide analysis. These were first counted, weighed, and entered into field notes. Separation of dredge and trawl samples was maintained until after laboratory analysis was completed.

Specimens were transferred from the research vessels to the appropriate laboratories, where all were individually identified, weighed, measured, cataloged and archived into collections at the Universities of South Alabama, South Florida, and West Florida. The material deposited in University of South Florida will ultimately be transferred to the permanent collection of the other institutions. Copies of catalog entries have been deposited with the BLM-MAFLA program director. .

RESULTS

All data gathered from the demersal fish collections, including numbers, . lengths, and weights of all specimens of all species taken from dredge and trawl collections (exceptions noted in materials and methods) have been submitted to the data management section of the BLM-MAFLA program. Computer analyses are not yet available, however, results as can be reasonably derived without computer aid are included herein.

A total of 8882 specimens, representing 204 species, and a total weight of 302,547 g were taken. A station by station and season by season breakdown is included in Tables 2-5, also included in this table are H (species diversity) values for each collection. Graphical representation of these data has been presented in appropriate quarterly reports and is included herein.

Species dominance both by numbers and weight is awaiting computer analysis.

DISCUSSION

October collections at all stations and transects usually yielded higher species numbers, numbers of individuals, biomass and species diversity (see Figure 2-7). There is no apparent reason to suspect gear bias during this period, as all collecting specifications remained essentially unchanged. Therefore, some seasonal variation, with an increased fauna during fall, is evidenced by these data. One possible hypothesis to explain this observation would be that during early fall (e.g. October) stock from spring and summer spawnings would be entering a size class large enough to be sampled by the gear. However, winter depletion of stocks would not yet be incurred. Effects of Hurricane ELOISE, which crossed Transects V and VI, should not have affected the deeper stations nor the transects to the south, and thus would not enter into a hypothesis concerning the seasonal increase in October.

Collections, though variable from season to season, are amazingly similar between stations at similar depths as well as between transects, when considered on a year long basis. Repeated sampling tends to damp atypical collections, and thus revealed a more realistic conclusion regarding faunal composition.

TABLE 2. Number of specimens of fishes collected during 1975-1976 MAFLA program.

	Transect	VI	V	IV	III	II	I
Station A	July, 1975	264	64	218	129	116	102
	October, 1975	119	157	122	435	138	215
	February/March, 1976	15	185	52	203	269	153
Station B	July, 1975	68	307	16	24	100	192
	October, 1975	315	1.56	477	357	99	256
	February/March, I-976	192	68	57	26	160	139
Station C	July, 1975	369	92	53	29	27	59
	October, 1975	347	552	290	350	210	72
	February/March, 1976	8	27	78	22	123	209

TABLE 3. Total biomass (grams) of specimens of fishes collected during 1975-1976 MAFLA program.

	July, 1975	5699	1557	7163	2059	3744	3640
Station A	October, 1975	3809	7680	10646	14832	5497	22594
	February/March, 1976	543	8704	1372	6683	17579	7333
	July, 1975	1283	5234	410	879	3521	7618
Station B	October, 1975	3952	4611	13274	16137	5087	15165
	February/March, 1976	1408	2331	1694	658	4188	8094
	July, 1975	5686	2956	1496	279	560	767
Station C	October, 1975	7985	20407	5978	9827	7130	649
	February/March, 1976	64	1576	3820	1025	4128	1428

TABLE 4. Species diversity ($\overline{H}$) of demersal fishes collected during 1975-1976 MAFLA program.

	Transect	VI	v	IV	III	II	I
	July, 1975	1.83	2.36	2.91	1.21	2.14	2.74
Station A	October, 1975	2.26	2.58	2.62	2.29	3.01	2.79
	February/March, 1976	1.88	2.02	2.02	2.29	2.56	2.63
	July, 1975	1.53	1.67	2.36	2.38.	2.06	2.30
Station B	October, 1975	1.36	2.31	1.93	2.87	1.85	1.86
	February/March, 1976	0.93	1.99	1.49	2.24	2.07	2.54
	July, 1975	2.11	2.07	2.00	1.56	2.11	1.77
Station C	October, 1975	2.23	2.24	1.94	2.26	2.10	1.79
	February/March, 1976	1.21	1.52	1.93	2.14	2.37	1.80

TABLE 5. Total catches (specimens, biomass in grams) of demersal fishes collected during 1975-1976 MAFLA program.

	Transect	VI	V	IV	111	II	I	Total
Station A	Specimens (#)	398	406	392	767	523	470	2956
	Biomass (grams)	10051	17941	19180	23572	26831	33567	131142
Station B	Specimens	575	531	550	407	359	587	3009
	Biomass	6643	12176	15378	17674	12796	30877	95544
Station C	Specimens	724	671	421	401	360	340	2917
	Biomass	13735	24939	11294	11131	11818	2844	75761
Grand Totals ,	Specimens	1697	1608	1363	1575	1242	1397	8882
	Biomass	30429	55056	45852	52377	51445	67388	302547

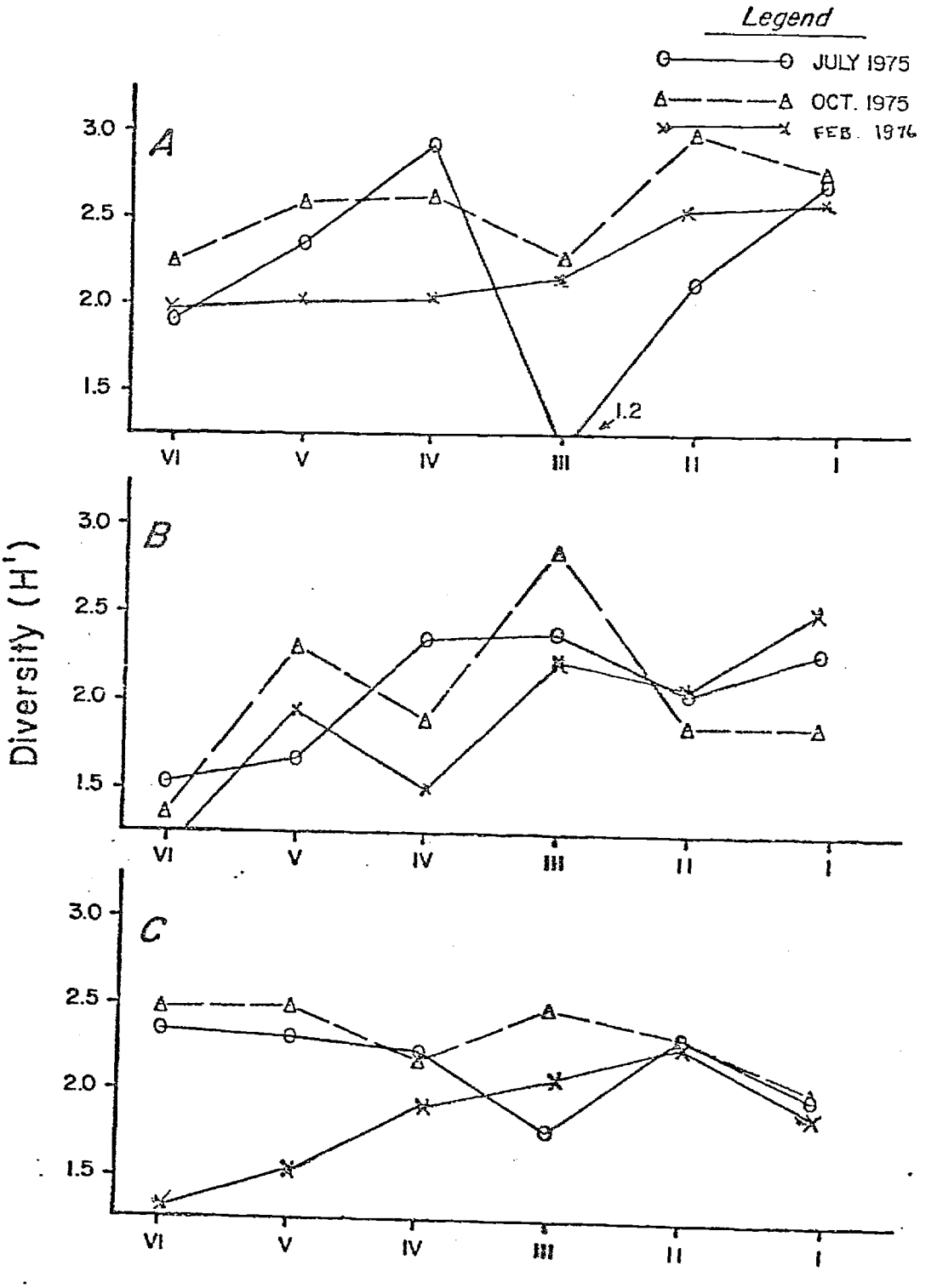
Legend
JULY 1975
OCT. 1975
FEB. 1976
Diversity (H')
A
B
C
3.0
2.5
2.0
1.5
1.2
VI
V
IV
III
II
I

Figure 2.

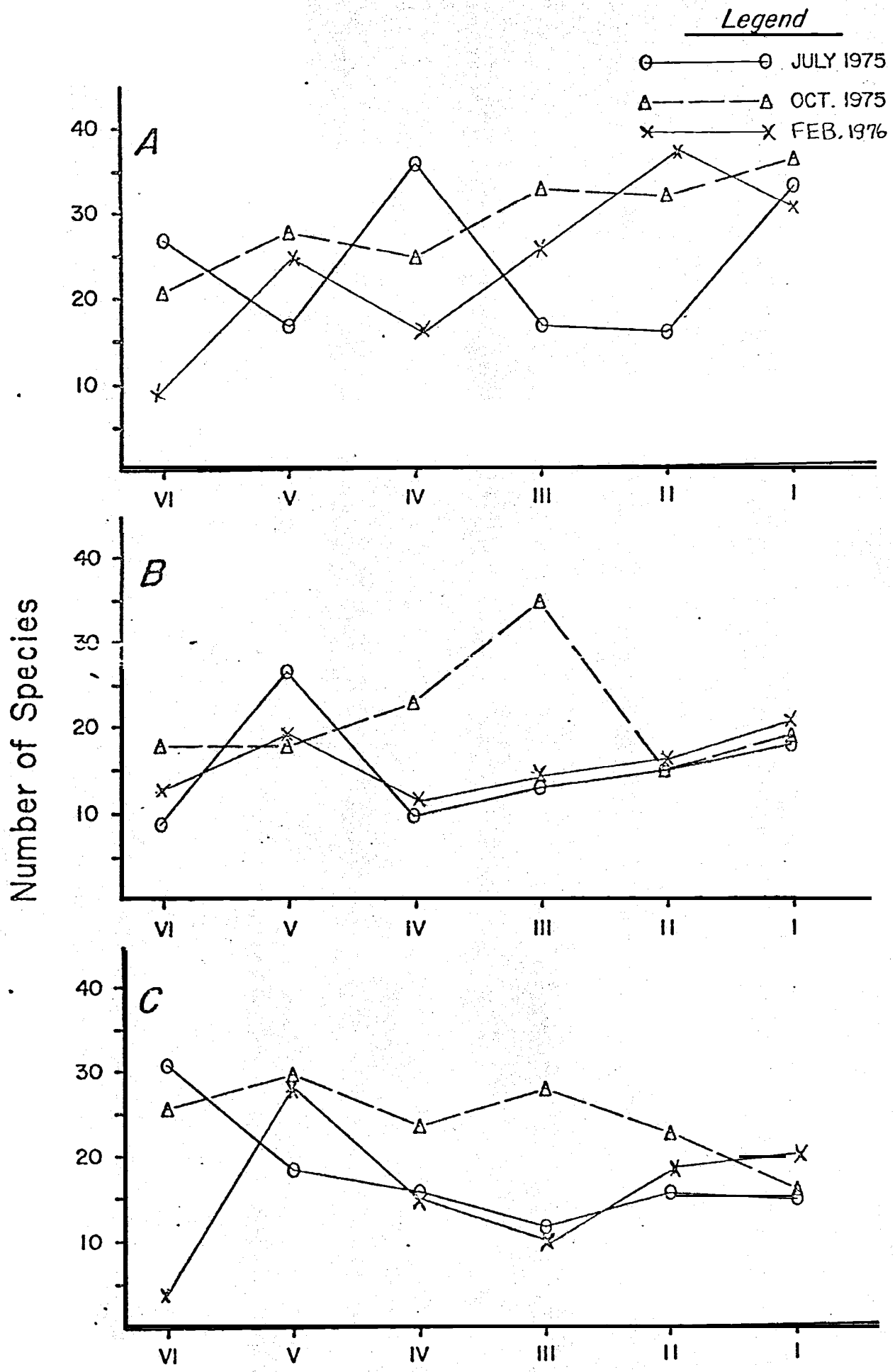
Legend
JULY 1975
OCT. 1975
FEB. 1976
A
B
C
Number of Species
40
30
20
10
VI
V
IV
III
II
I

Figure 3.

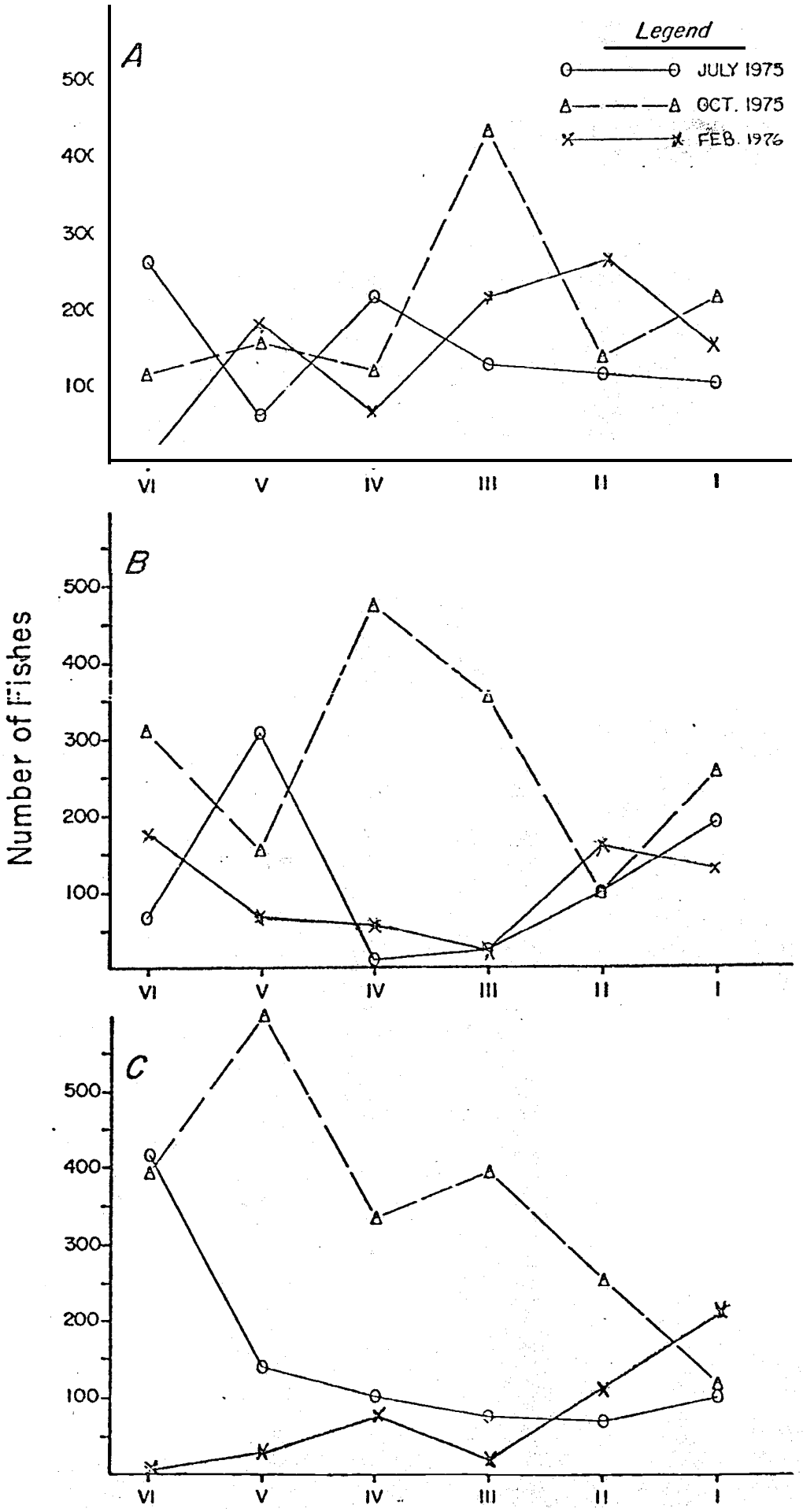
Legend
JULY 1975
OCT. 1975
FEB. 1976
A
B
C
Number of Fishes
500
400
300
200
100
VI
V
IV
III
II
I

Figure 4.

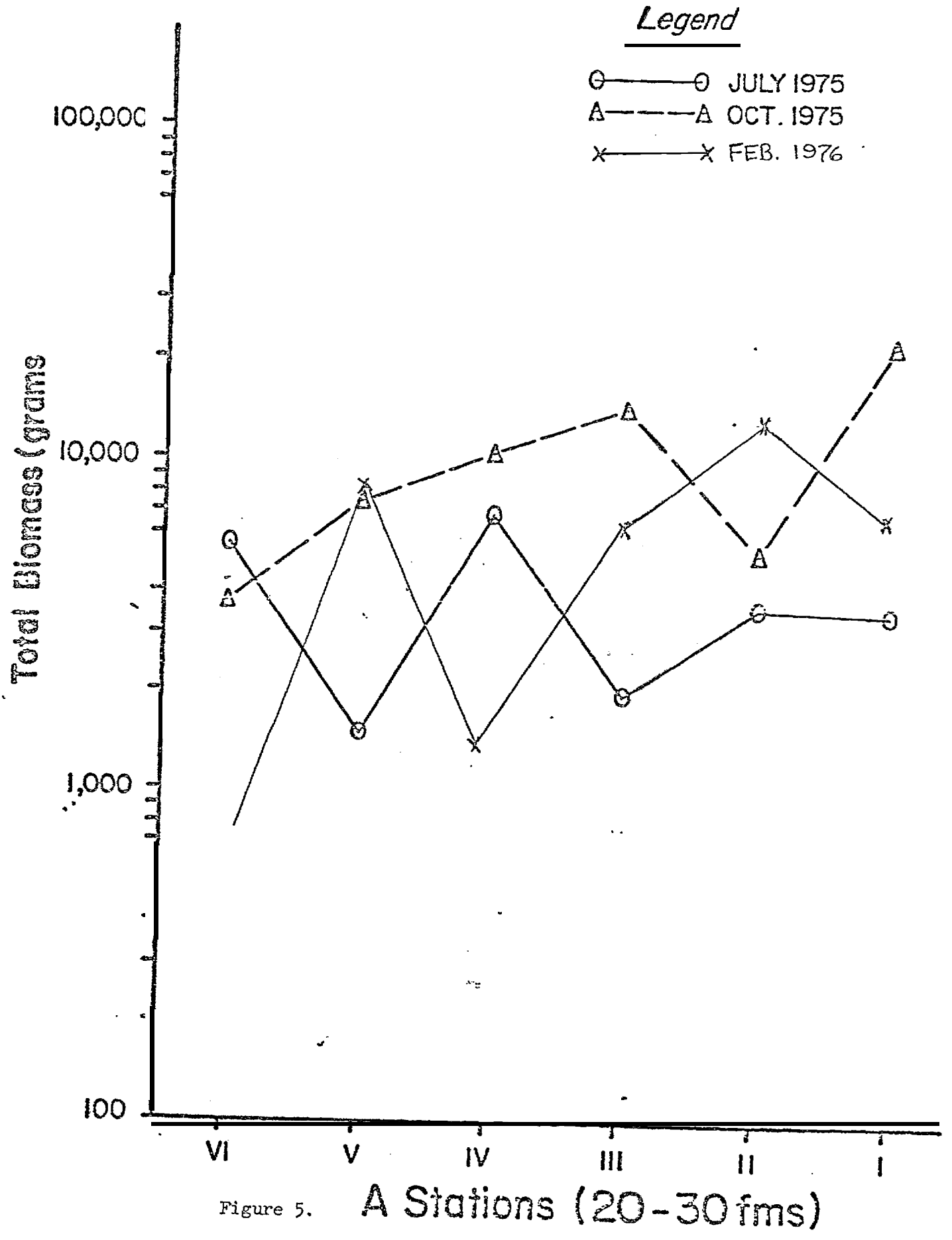
Legend
JULY 1975
OCT. 1975
FEB. 1976
100,000
10,000
1,000
100
Total Biomass (grams
VI
V
IV
III
II
I
A Stations (20-30 fms)

Figure 5.

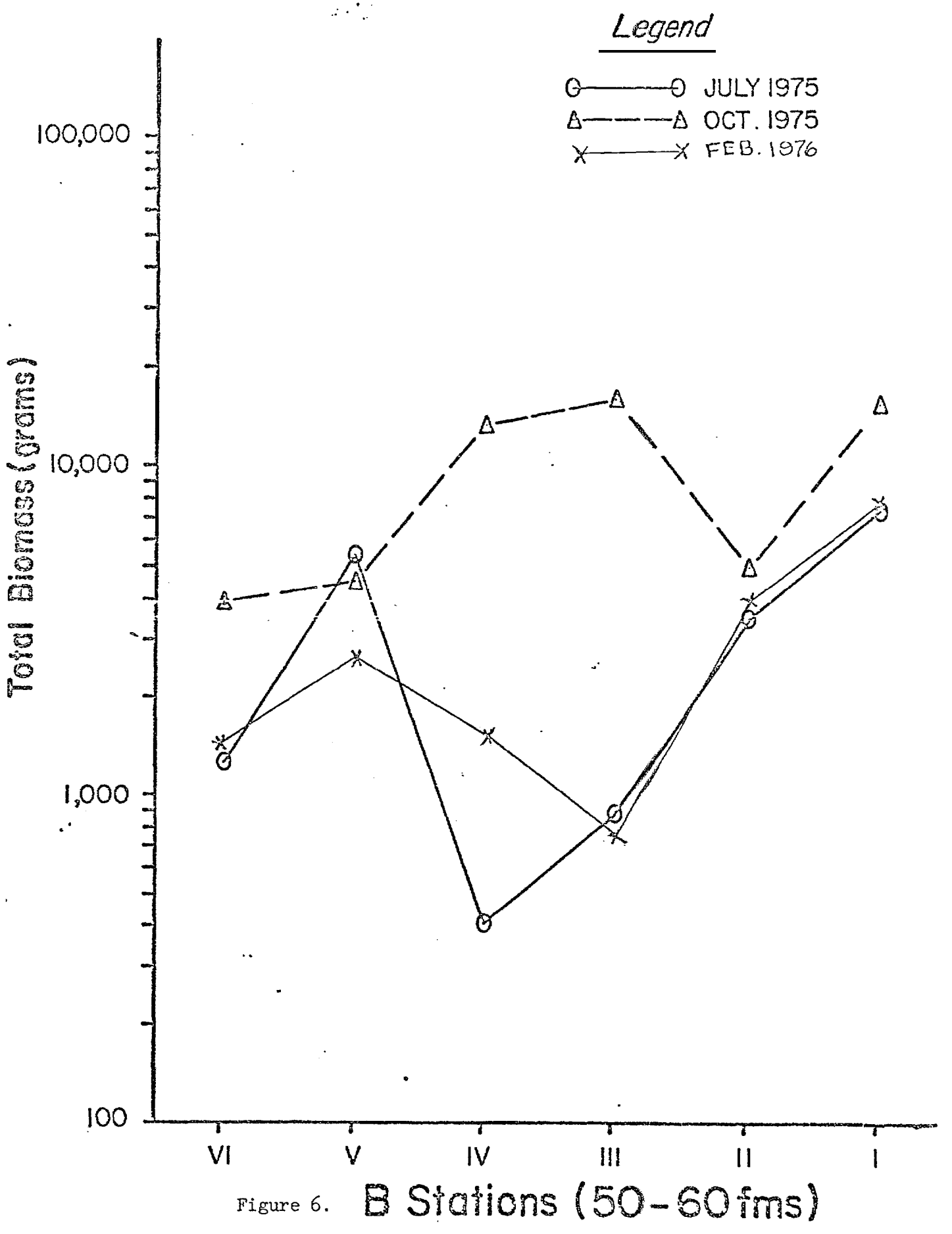
Legend
JULY 1975
OCT. 1975
FEB. 1976
100,000
10,000
1,000
100
Total Biomass (grams)
VI
V
IV
III
II
I
B Stations (50-60 fms)

Figure 6.

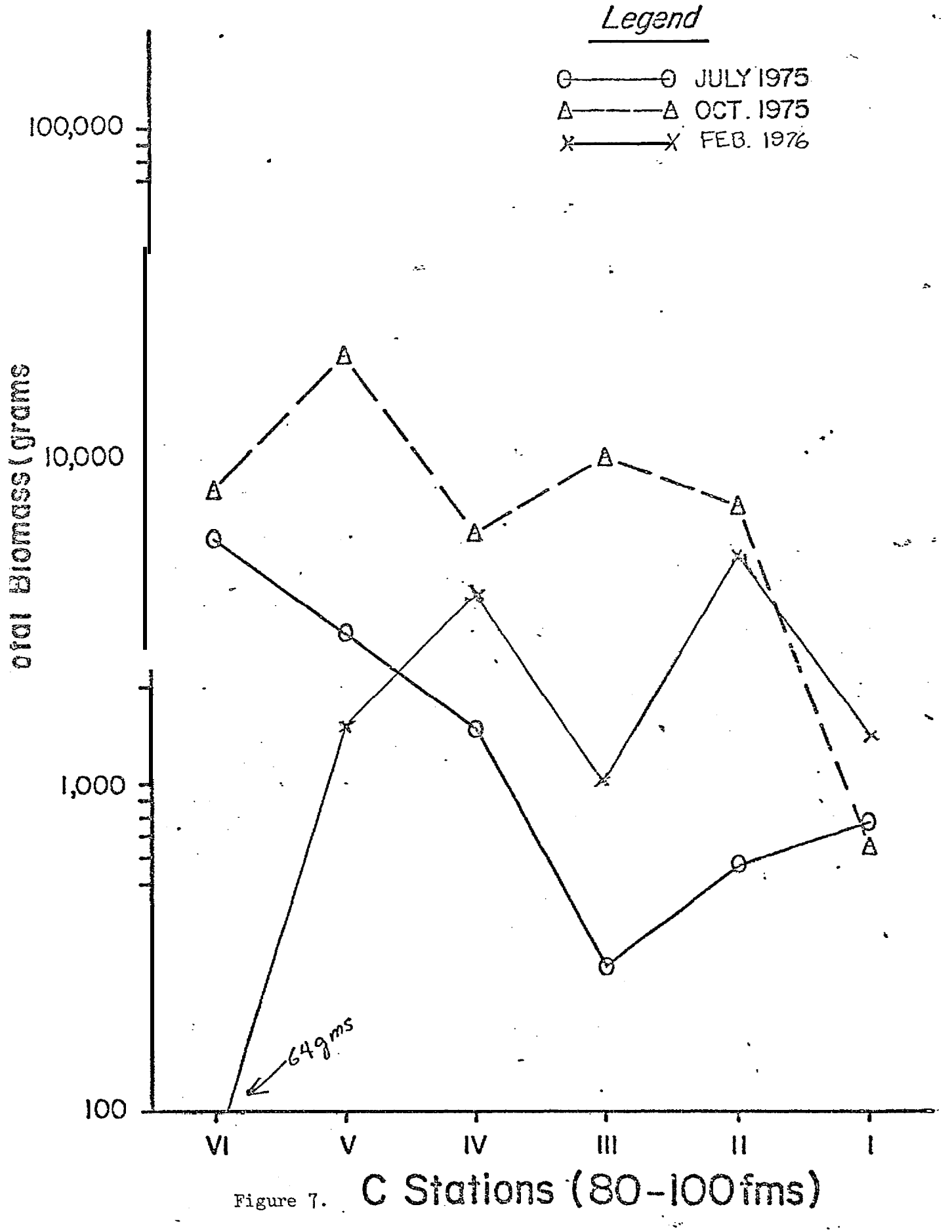
Legend
JULY 1975
OCT. 1975
FEB. 1976
100,000
10,000
1,000
100
Total Biomass (grams)
64gms
VI
V
IV
III
II
I
C Stations (80-100 fms)

Figure 7.

Species dominance data, though still preliminary and in need of computer analysis, indicated a relatively uniform species assemblage between stations at similar depths. Exceptions were stations (especially shallow water) where relief or biogenic substrate harbored fauna differing from adjoining bottoms.

Further discussion of findings is premature and must await computer analysis of data. Species lists for each station and sampling season are presented in Appendix I. Length frequency data are presented in Appendix II.

APPENDIX I

Species Lists

Station I-A, Sample Period 1

Species	Number of Specimens	Wet Weight (gin)
Blennius marmoreus	1	2
Apogon quadrisquamatus	1	2
Coryphopterus punctipectophorus	1	0.3
Haliohoeres caudalis	1	0.9
Raja eglanteria	1	91
Synodus foetens	3	317
Synodus intermedius	2	56
Trachinocephalus myops	1	89
Opsanus pardus	1	12
Antennarius ocellatus	1	68
Ogcocephalus radiosus	2	941
Hippocampus erectus	1	12
Centropristis ocyurur	1	0.3
Diplectrum formosum	2	238
Hypoplectrus puella	4	160
Monocanthus ciliatus	3	32
Chromis enchrysurus	2	29
Sphoeroides spengleri	1	14
Halichoeres caudalis	1	84
Eupomacentrus variabilis	1	8
Emblemaria atlantica	1	2
Monacanthus hispidus	9	261
Blennius marmoreus	1	0.5
Syacium papillosum	31	1,302
Evermannichthys spongicola	1	0.1
Gobicsoma xanthiprora	1	0.1
Lythrypnus sp.	1	0.1
Prionotus ophryas	1	11
Prionotus roseus	6	205
Scorpaena sp.	1	26
Bothus ocellatus	1	34
Bothus robinsi	11	438
Citharichthys macrops	1	63
Etropus rimosus	5	42

Replicate Totals

Species	34
Animals	102
Sample weight (gin)	4,541

Shannon-Weaver Statistics

H Prime	2.7712
H Max	3.5264
J Prime	0.7858

Station II-A, Sample Period 1

Species	Number of Specimens	Wet Weight (gin)
Branchiostoma floridae	1	0.1
Prionotus martis	1	45
Prionotus roseus	1	1.2
Scorpaena calcarata	2	70
Syacium papillosum	1	15
Sphoeroides dorsalis	3	19
Raja texana	1	425
Syr·odus foetens	7	824
Centropristis ocyurus	1	1
Diplectrum formosum	2	282
Bellator militaris	42	149
Prionotus martis	1	68
Monacanthus hispidus	10	195
Prionotus ophryas	5	136
Syacium papillosum	23	571
Prionotus roseus	5	138
Cyclopsetta fimbriata	1	82
Scorpaena calcarata	4	145
Bothus robinsi	14	453
Citharichthys macrops	2	136

Replicate Totals

Species	20
Animals	127
Sample weight (gin)	3,755

Shannon-Weaver Statistics

H Prime	2.2317
H Max	2.9957
J Prime	0.7450

Station III-A, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Emblemaria piratula	1	0.1
Opsanus parcus	1	2
Scorpaena calcarata	1	9
Lythrypnus nesiotes	2	0.1
Monacanthus sp.	1	15
Gymnothorax moringa	1	543
Lythrypnus sp.	1	0.1
Holocentrus bullisi	1	36
Hypoplectrus puella	1	19
Pristigenys alta	1	58
Chaetodon sedentarius	2	'77
Holacanthus bermudensis	1	100
Chromis enchrysurus	7	57
Chromis scotti	92	544
Emblemaria atlantica	1	0.5
Lythrypnus nesiotes	2	0.1
Emblemaria piratula	1	0.1
Evermannichthys spongicola	10	0.9

Replicate Totals

Species	18
Animals	127
Sample weight (gin)	1,462

Shannon-Weaver Statistics

H Prime	1.2473
H Max	2.89o4
J Prime	0.4315

Station IV-A, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Branch iostoma floridae	37	0.7
Carapus bermudensis	1	0.6
Gillelus sp. A	1	0.5
Symphurus minor	1	2
Ioglossus sp.	2	0.1
Gymnothorax nigromarginatus	1	0.5
Scorpaena calcarata	1	27
Bothus robinsi	1	42
Emblemaria piratula	13	1
Syacium papillosum	22	1,204
Raja eglanteria	3	476
Gymnothorax nigromarginatus	1	131
Synodus intermedius	1	81
Trachinocephalus myops	2	218
Monacanthus ciliatus	11	243
Antennarius ocellatus	1	68
Halieutichthys aculeatus	14	231
Ogcocephalus parvus	1	16
Ogcocephalus sp.	3	182
Symphurus diomedianus	3	105
Ophidion holbrooki	7	566
Hippocampus erectus	1	22
Centropristis ocyurus	3	106
Diplectrum formosum	6	579
Rypticus bistrispinus	1	21
Monacanthus hispidus	22	681
Emblemaria piratula	24	2
Sphoeroides corsalis	3	1.08
Chilomycterus schoepfi	3	457
Bellator militaris	1	4
Prionotus martis	1	39
Prionotus ophryas	2	160
Prionotus roseus	3	155
Scorpaena erasiliensis	5	392
Scorpaena calcarata	8	213
Balistes capriscus	2	87
Acanthostracion quadricornis	1	158
Cyclopsetta fimbriata	3	224
Gastropsetta frontalis	1	47
Gymnachirus melas	2	112

Replicate Totals

Species	40
Animals	219
Sample weight (gin)	7,162

Station IV-A, Sample Period 1 - continued

Shannon-Weaver Statistics

H Prime	2.9922
H Max	3.6889
J Prime	0.8111

Station V-A, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Branchiostoma floridae	17	1
Serranus notospilus	1	0.4
Emblemaria piratula	1	0.1
Emblemaria sp.	2	0.2
Palatagobius paradoxus	2	0.3
Symphurus minor	1	0.5
Risor ruber	1	0.1
Raja eglanteria	1	229
Gymnothorax nigromarginatus	2	125
Synodus intermedius	9	311
Trachinocephalus myops	1	143
Hemipteronotus novacula	5	178
Emblemaria piratula	9	0.3
Sphoeroides dorsalis	1	78
Syacium papillosum	5	351
Gymnachirus melas	1	68
Monacanthus ciliatus	1	19
Monacanthus hispidus	2	53
Chaenopsis sp.	1	0.1

Replicate 'Totals

Species	19
Animals	63
Sample weight (gin)	1,558

Shannon-Weaver Statistics

H Prime	2.4073
H Max	2.9444
J Prime	0.8176

Station VI-A, Sample Period 1

Species	Number of Specimens	Wet Weight (Gw)
Etropus rimosus	2	1.8
Ophichthus gomesi	1	121
Sardinella anchovia	5	122
Saurida brasiliensis	2	4
Synodus foetens	1	48
Trachinocephalus myops	11	631
Porichthys porosissimus	3	88
Bregmaceros atlanticus	1	0.7
Lepophidium jeannae	1	7
Ophidion sp.	2	77
Ophidion holbrooki	1	89
Otophidium omostigmum	2	15
Diplectrum bivittatum	3	8
Trachurus lathami	1	9
Vomer setapinnis	1	0.8
Stenotomus caprinus	2	115
Equetus sp.	1	2
Bellator militaris	11	14
Prionotus roseus	22	232
Prionotus rubio	2	
Prionotus salmonicolor	12	6;?
Peprilus burti	1	2
Citharichthys macrops	1	36
Cyclopsetta chittendeni	1	155
Cyclopsetta fimbriata	1	8
Etropus rimosus	126	439
Syacium papillosum	102	2,740
Gymnachirus melas	2	65

Replicate Totals

Species	28
Animals	321
Sample weight	5,704

Shannon-Weaver Statistics

H Prime	1.8585
H Max	3.3322
J Prime	0.5578

Station I-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Ogcocephalus sp. (corniger)	1	12
Scorpaena agassizi	1	26
Halieutichthys aculeatus	4	48
Bellator militaris	1	33
Serranus notospilus	1	0.2
Monacanthus ciliatus	1	28
Hippocampus erectus	2	12
Syacium papillosum	3	221
Syacium papillosum	29	1,271
Bellator militaris	33	855
Scorpaena sp.	1	0.1
Scorpaena agassizi	45	1,506
Serranus notospilus	1	1
Monacanthus ciliatus	3	69
Halieutichthys aculeatus	10	122
Hippocampus erectus	2	15
Synodus intermedius	14	472
Saurida normani	8	620
Trachinocephalus myops	8	542
Symphurus diomedianus	1	36
Ophidion holbrooki	1	21
Monacanthus hispidus	3	109
Ogcocephalus parvus	1	5
Sphoeroides dorsalis	10	667
Prionotus alatus	9	427

Replicate Totals

Species	25
Animals	193
Sample weight (gm)	7,618

Shannon-Weaver Statistics

H Prime	2.4721
H Max	3.2189
J Prime	0.7680

Station II-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Syacium papillosum	16	199
Prionotus alatus	5	203
Saurida normani	4	571
Pagrus pagrus	1	223
Pristipomoides aquilonaris	2	226
Synodus intermedius	1	49
Ogcocephalus parvus	3	38
Gymnothorax nigromarginatus	1	36
Lophiomus sp.	2	80
Serranus notospilus	1	0.6
Kathetostoma albigutta	7	342
Halieutichthys aculeatus	15	99
Citharichthys cornutus	2	6
Prionotus sp.	4	0.8
Scorpaena agassizi	36	949

Replicate Totals

Species	15
Animals	100
Sample weight (gin)	3.022

Shannon-Weaver Statistics

H Prime	2.0631
H Max	2.7080
J Prime	0.7619

Station III-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gin)
Chriolepis sp.	1	0.1
Lythrypnus nesiotes	1	0.1
Muraena retifera	1	96
Kathetostoma albigutta	1	23
Nemerinthe hemingwayi	1	38
Saurica normani	1	140
Synodus intermedius	3	141
Syacium papillosum	4	142
Chromis enchrysurus	1	5
Prionotus alatus	4	99
Bellator militaris	3	81
Centropristis ocyurus	2	66
Sphoeroides ocrsalis	1	36

Replicate Totals

Species	13
Animals	24
Sample weight (gin)	867

Shannon-Weaver Statistics

H Prime	2.3835
H Max	2.5649
J Prime	0.9293

Station IV-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Citharichthys cornutus	2	5
Peristedion gracile	3	82
Raja texana	1	12
Halieutichthys aculeatus	1	10
Prionotus stearnsi	1	14
Centropristis ocyurus	1	27
Lepophidium jeannae	1	44
Monacanthus hispidus	1	42
Symphurus diomedianus	3	87
Syacium papillosum	2	87

Replicate Totals

Species	10
Animals	16
Sample weight (gin)	410

Shannon-Weaver Statistics

H Prime	2.1873
H Max	2.3026
J Prime	0.9499

Station V-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Decodon puellaris	1	41
Mullus auratus	1	58
Centropristis ocyurus	1	44
Serranus notospilus	1	1
Hemanthias leptus	1	2
Monclene antillarum	1	5
Trachurus lathami	1	30
Pontinus longispinis	9	305
Pristipomoides aquilonaris	14	386
Citharichthys cornutus	5	14
Bembrops anatirostris	4	207
Synodus poeyi	4	31
Urophycis floridanus	3	148
Callionymus agassizi	" 3	39
Peristedion gracile	13	193
Stenotomus caprinus	4	179
Serranus atrobranchus	4	88
Halieutichthys aculeatus	6	60
Pikea mexicana	13	126
Trichopsetta ventralis	8	98
Ogcocephalus sp.	4	51
Saurida erasiliensis	2	4
Bregmaceros atlanticus	2	0.5
Physiculls sulvus	2	7
Syacium papillosum	1	55
Ariomma bondi	1	10
Prionctus stearnsi	198	3,051

Replicate Totals

Species	27
Animals	307
Sample weight (gm)	5,234

Shannon-Weaver Statistics

H Prime	1.6734
H Max	3.2958
J Prime	0.5077

Station VI-B, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Syacium papillosum	22	717
Citharichthys cornutus	20	66
Synodus poeyi	1	16
Ogcocephalus sp. (corniger)	1	27
Ogcocephalus sp. (declavirostris)	2	24
Cyclopsetts fimbriata	2	295
Bellator egretta	1	11
Serranus atrobranchus	1	4
Serranus notospilus	18	129

Replicate Totals

Species	9
Animals	68
Sample weight (gin)	1,289

Shannon-Weaver Statistics

H Prime	1.5325
H Max	2.1972
J Prime	0.6975

Station I-C, Sample Period 1

Species	Number of Specimens	Wet Weight (gin)
Antigonia capros	7	372
Synodus poeyi	1	5
Saurida normani	3	129
Callionymus agassizi	1	10
Serranus notospilus	13	124
Prionotus stearnsi	6	31
Parahollardia lineata	1	5
Lonchistium sp. A.	1	4
Zalieutes mcgintyi	3	6
Citharichthys cornutus	23	82

Replicate Totals

Species	10
Animals	59
Sample weight (gm)	768

Shannon-Weaver Statistics

H Prime	1.7653
H Max	2.3026
J Prime	0.7666

Station II-C, Sample Period 1

Species	Number of Specimens	Wet Weight, (gm)
Antennarius radiosus	2	9
Parahollardia lineata	1	27
Urophycis flori danus	3	232
Scorpaena agassizi	5	205
Zalieutes mcgintyi	2	13
Serranus notospilus	2	15
Bellator egretta	1	21
Citharichthys cornutus	8	35
Syacium sp.	1	0.4
Lonchistium sp. A.	1	1.8
Chriolepis sp. A.	1	0.3

Replicate Totals

Species	11
Animals	27
Sample weight (gin)	560

Shannon-Weaver Statistics

H Prime	2.1056
H Max	2.3979
J Prime	0.8781

Station III-C, Sample Period 1

Species	Number of Specimens	wet Weight (gin)
Saurida normani	1	73
Urophycis floridanus	1	65
Scorpaena agassizi	2	71
Citharichthys cornutus	11	45
Zalieutes mcgintyi	5	23
Bollmania sp. A.	1	0.5
Chriolepis sp. A.	8	2

Replicate Totals

Species	7
Animals	29
Sample weight (gin)	280

Shannon-Weaver Statistics

H Prime	1.5588
H Max	1.9459
J Prime	0.8011

Station IV-C, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Urophycis floridanus	5	639
Prionotus alatus	2	30
Scorpaena agassizi	2	62
Zalieutes mcgintyi	18	72
Bembrops anatirostris	4	139
Monolene sessilicauda	2	29
Saurida normani	6	348
Citharichthys cornutus	9	43
Pristipomoides aquilonaris	1	2
Chriolepis sp. A.	2	0.8
Mullus auratus	1	65

Replicate Totals

Species	11
Animals	52
Sample weight (gin)	1,490

Shannon-Weaver Statistics

H Prime	1.9957
H Max	2.3979
J Prime	0.8323

Station V-C, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Parahollardia lineata	1	55
Lophiomus sp.	1	109
Prionotus alatus	5	216
Saurida normani	2	172
Hemanthias leptus	1	45
Trichopsetta ventralis	3	136
Citharichthys cornutus	4	29
Neobythites gilli	1	8
Paralichthys squamilentis	1	244
Urophycis floridanus	3	378
Monolene sessilicauda	21	305
Pontinus longispinis	24	1,476
Bembrops anatirostris	16	730
Zalieutes mcgintyi	9	53

Replicate Totals

Species	14
Animals	92
Sample weight (gin)	3,956

Shannon-Weaver Statistics

H Prime	2.0662
H Max	2.6391
J Prime	0.7829

Station VI-C, Sample Period 1

Species	Number of Specimens	Wet Weight (gm)
Neomerinthe hemingwayi	1	478
Lopholatilus chamaeleonticeps	1	403
Argentina striata	3	85
Hemanthias leptus	12	234
Poecilopsetta beani	6	61
Callionymus agassizi	3	50
Brmbrops anatirostris	28	909
Decapterus punctatus	4	280
Urophycis floridanus	1	155
Neoepinnula orientalism	2	166
Lepophidium sp. A.	3	47
Neobythites gilli	1	11
Antigonia combatia	3	21
Zalieutes mcgintyi	2	12
Ogcocephalus nasutus	4	85
Ogcocephalus vespertilio	3	143
Pontinus longispinis	20	448
Monolene sessilicauda	4	16
Prionotus paralatus	3	121
Prionotus stearnsi	26	582
Synagrops spinosa	15	155
Diaphus dumerili	4	10
Macrorhamphosus scolopax	173	858
Polymixia lowei	30	295
Peristedion gracila	16	33
Pikea mexicanus	1	29

Replicate Totals

Species	26
Animals	369
Sample weight (gin)	5,687

Shannon-Weaver Statistics

H Prime	2.1120
H Max	3.2581
J Prime	0.6482

Station I-A, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Etropus rimosus	1	17
Antennarius ocellatus	2	31
Symphurus diomedianus	1	27
Symphurus minor	1	0.1
Syacium papillosum	2	72
Monacanthus ciliatus	1	8
Centropristis ocyurus	1	6
Prionotus roseus	1	20
Scorpaena erasiliensis	1	29
Halieutichthys aculeatus	6	31
Synodus intermedius	2	162
Bothus robinsi	1	35
Sphoeroides spengleri	3	226
Hypoplectrus puella	3	96
Diplectrum formosum	3	274
Lutjanus synagris	4	809
Syacium papillosum	60	2,173
Trachinocephalus myops	1	75
Synodus foe-tens	1	245
Lactophrys quadricornis	5	1,286
Prionotus ophryas	4	418
Monacanthus hispidus	14	716
Chromis enchrysurus	1	14
Equetus lanceclatus	8	480
Equetus umbrosus	3	310
Monacanthus ciliatus	5	77
Centropristis ocyurus	2	26
Prionotus roseus	2	180
Pomacanthus arcuatus	1	423
Holacanthus bermudensis	5	1,579
Aluterus schoepfi	4	3,171
Priacanthus arenatus	2	898
Apogon aurolineatus	2	1
Scorpaena erasiliensis	4	498
Scorpaena calcarata	2	86
Ophidion sp.	9	1,038
Phaeoptyx pigmentaria	1	2
Apogon pseudomaculatus	2	17
Gobiesox strumosus	1	5
Canamus proridens	19	4,658
Haemulon aurolineatum	25	2,374

Replicate Totals

Species	41
Animals	216
Sample weight (gm)	22.593

Shannon-Weaver Statistics

H Prime	2.8837
H Max	3.7136
J Prime	0.7765

Station II-A, Sample Period 2

Species	Number of Specimens	wet Weight (gm)
Halieutichthys aculeatus	1	18
Cyclopsetta fimbriata	1	100
Monacanthus ciliatus	3	41
Bothus robinsi	1	44
Scorpaena calcarata	3	33
Monacanthus hispidus	18	579
Prionotus salnomicolor	1	64
Aluterus schoepfi	2	58
Scorpaena erasiliensis	5	376
Haemulon aurolineatum	1	99
Hippocampus erectus	1	8
Bothus Robinsi	1	22
Equetus lanceclatus	2	127
Diplectrum formosum	1	110
Centropristis ocyurus	2	184
Prionotus ophryas	3	129
Chilomycterus schoepfi	1	266
Bellator militaris	1	14
Lactophrys quadricornis	1	318
Balistes capriscus	3	252
Synodus intermedius	5	296
Synodus foetens	9	913
Prionotus roseus	10	432
Sphoeroides spengleri	4	171
Sphoeroides dorsalis	7	249
Monacanthus ciliatus	12	216
Etropus rimosus	11	88
Svacium papillosum	15	183
Saurida erasiliensis	1	0.5
Synodus poeyi	2	5
Lythrypnus nesiotes	2	0.2
Emblemaria piratula	1	0.1
Blennius marmoreus	3	2
Pristigenys alta	4	100

Replicate Totals

Species	34
Animals	3.38
Sample weight (gin)	5,498

Shannon-Weaver Statistics

H Prime	3.0732
H Max	3.5264
J Prime	0.8715

Station III-A, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Scorpaena calcarata	1	15
Bothus robinsi	1	36
Diplectrum formosum	1	108
Scorpaena calcarata	73	1,496
Bothus robinsi	31	960
Diplectrum formosum	2	119
Prionotus ophryas	1	43
Lythrypnus elasson	1	0.1
Gastropsetta frontalis	3	155
Trachinocephalus myops	4	207
Centropristis ocyurus	7	197
Gymnothorax nigromarginatus	2	225
Sphoeroides spengleri	3	158
Antennarius ocellatus	1	42
Rhomboplites aurorubens	2	23
Synodus poeyi	2	55
Sphoeroides dorsalis	1	35
Prionotus alatus	1	17
Monacanthus ciliatus	1	26
Sphoeroides sp."	1	0.4
Ioglossus Sp.	1	0.1
Monacanthus hispidus	3	8 0
Chromis scotti	1	2
Apogon pseudomaculatus	2	7
Apogon aurolineatus	1	2
Decapterus punctatus	1	18
Halieutichthys aculeatus	2	32
Synodus intermedius	13	653
Serranus phoebe	14	825
Prionotus roseus	28	1,228
Bellator militaris	13	287
Hippocampus erectus	3	39
Cyclopsetta fimbriata	3	173
Astrapogon alutus	2	4
Haemulon aurolineatum	90	2,564
Syacium papillosum	119	5,000

Replicate Totals

Species	36
Animals	435
Sample weight (gin)	3.4,832

Shannon-Weaver Statistics

H Prime	2.3152
H Max	3.5835
J Prime	0.6461

Station IV-A, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Ogcocephalus sp. (corniger)	1	63
Bothus robinsi	1	40
Chilomycterus schoepfi	1	33
Emblemaria piratula	2	0.2
Halieutichthys aculeatus	3	99
Aluterus schoepfi	9	4,253
Sardinella anchovia	1	52
Decapterus punctatus	1	39
Scorpaena calcarata	2	54
Ophidion sp.	1	50
Scorpaena erasiliensis	8	646
Echeneis neucratoides	2	588
Symphurus diomedianus	1	35
Balistes capriscus	1	18
Monacanthus ciliatus	2	45
Sphoeroides dorsalis	2	45
Gymnothorax nigromarginatus	3	218
Prionotus ophrvas	4	211
Monacanthus hispidus	23	607
Synodus intermedius	12	651
Riser ruber	2	0.2
Raja eglanteria	1	161
Diplectrum formosum	20	1,635
Centropristis ocyurus	16	865
Syacium papillosum	3	190

Replicate Totals

Species	25
Animals	122
Sample weight (gin)	10,598

Shannon-Weaver Statistics

H Prime	2.6206
H Max	3.2189
J Prime	0.8141

Station V-A, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Prionotus roseus	1	63
Antennarius ocellatus	2	25
Kathetostoma albigutta	1	100
Anarchias yoshiae	1	3
Syacium papillosum	5	95
Ogcocephalus parvus	2	28
Monacanthus hispicus	1	23
Ariosoma impressa	1	26
Ogcocephalus sp. (corniger)	1	22
Branchiostoma sp.	16	2
Ophidion sp.	3	183
Scorpaena calcarata	3	46
Hippocampus erectus	2	21
Monacanthus hispidus	2	71
Sphoeroides corsalis	2	93
Chilomycterus schoepfi	1	218
Hemipteronotus novacula	8	387
Synodus intermedius	5	284
Diplectrum formosum	3	279
Trachinocephalus mupos	6	748
Gymnothorax nigromarginatus	17	1,203
Prionotus roseus	13	758
Gobulus sp.	1	0.1
Synodus poeyi	3	4
Chaenopsis sp.	1	.1
Lythrypnus elasson	1	.1
Symphurus minor	1	.6
Pristigenys alta	1	13
Porichthys porosissimus	1	38
Centropristis ocyurus	12	708
Syacium papillosum	40	2,212

Replicate Totals

Species	31
Animals	157
Sample weight (gin)	7,654

Shannon-Weaver Statistics

H Prime	2.7197
H Max	3.4340
J Prime	0.7920

Station VI-A, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Symphurus diomedianus	1	34
Syacium papillosum	1	36
Etropus rimosus	6	23
Prionotus roseus	2	39
Syacium gunteri	1	25
Syacium gunteri	14	194
Prionotus roseus	8	239
Synodus foetens	8	656
Diplectrum bivtitatum	4	27
Rhomboplites aurorubens	2	64
Pagrus pagrus	1	259
Prionotus rubio	1	26
Centropristis ocyurus	3	274
Syacium papillosum	34	1,381
Synodus poeyi	1	3
Saurida brasiliensis	1	0.5
Symphurus minor	1	0.1
Cyclopsetta chittendeni	1	113
Cyclopsetta fimbriata	1	152
Etropus rimosus	18	55
Prionotus salmonicolor	2	95
Prionotus ophryas	4	60
Engyophrys senta	1	2
Hemipteronotus novacula	1	39
Serranus atrobranchus	2	12

Replicate Totals

Species	25
Animals	119
Sample weight (gin)	3,809

Shannon-Weaver Statistics

H Prime	2.4865
H Max	3.2189
J Prime	0.7725

Station I-B, Sample Period 2

Species	Number of Specimens	Wet Weight (gin)
Halieutichthys aculeatus	1	9
Ogcocephalus sp.	1	71
Scorpaena agassizi	1	0.6
Citharichthys gynmorhinus	1	0.5
Gymnothorax nigromarginatus	4	222
Saurida sp.	1	40.1
Saurida normani	3	42.7
Synodus intermedius	25	1,612
Synodus poeyi	1	2
Trachinocephalus myops	22	1,343
Halieutichthys aculeatus	4	40
Citharichthys gymnorhinus	1	0.8
Monacanthus ciliatus	1	19
Hippocampus erectus	3	23
Bellator militaris	5	142
Prionotus alatus	23	1,131
Scorpaena agassizi	20	717
Monacanthus hispidus	2	66
Centropristis ocyurus	4	201
Kathetostoma albigutta	2	103
Syacium papillosum	127	8,436
Sphoeroides dorsalis	3	183

Replicate Totals

Species	22
Animals	255
Sample weight (gin)	14,749

Shannon-Weaver Statistics

H Prime	1.8822
H Max	3.0910
J Prime	0.6089

Station II-B, Sample Period 2

Species	Number of Specimens	Wet Weight (gin)
Lepophidium graellsi	1	6
Gymnothorax nigromarginatus	4	412
Synodus intermedius	7	314
Saurida normani	18	1,460
Halieutichthys aculeatus	1	9
Sphoeroides dorsalis	2	85
Bellator egretta	1	30
Prionotus alatus	7	299
Scorpaena agassizi	10	411
Serranus notospilus	2	6
Pristipomoides aquilunaris	1	92
Priacanthus arenatus	1	224
Lagodon rhomboids	2	133
Syacium papillosum	40	1,880

Replicate Totals

Species	14
Animals	97
Sample weight (gin)	5,361

Shannon-Weaver Statistics

H Prime	1.8989
H Max	2.639I.
J Prime	0.7195

Station III-B, Sample Period 2

Species	Number of Specimens	Wet Weight (gin)
Lophiomus sp.	1	39
Gymnothorax nigromarginatus	1	95
Synodus intermedius	13	783
Trachinocephalus myops	6	313
Urophycis floridana	2	99
Urophycis regius	3	210
Halieutichthys aculeatus	5	58
Lophophidium jeannae	1	52
Sphoeroides dorsalis	5	245
Bellator militaris	36	866
Prionotus alatus	16	748
Scorpaena agassizi	3	114
Centropristis ocyurus	24	1,558
Scorpaena dispar	14	910
Scorpaena sp.	1	0.3
Holocentrus bullisi	2	89
Serranus notospilus	2	2
Rypticus bistrispinus	3	39
Serranus phoebe	28	1,346
Equetus sp.	5	243
Pristigenys alta	2	86
Chromis enchrysurus	3	82
Chaetodon aya	14	331
Chaetodon sedentarius	2	98
Lagodon rhomboids	42	3,289
Zalieutes mcgintyi	2	9
Stenotomus caprinus	1	84
Kathetostoma albigutta	4	191
Pagrus pagrus	2	150
Mullus auratus	12	752
Syacium papillosum	32	1,025
Symphurus diomedianus	3	79
Holacanthus bermudensis	1	448
Monacanthus ciliatus	56	1,142
Monacanthus hispidus	11	343
Acanthostracion quadricornis	1	79

Replicate Totals

Species	36
Animals	359
Sample weight (gin)	15,997

Shannon-Weaver Statistics

H Prime	2.9131
H Max	3.5835
J Prime	0.8129

Station IV-B, Sample Period 2

Species	Number of Specimens	wet Weight
Prionotus alatus	3	23
Syacium papillosum	5	163
Gymnothorax nigromarginatus	6	696
Synodus intermedius	7	330
Synodus foetens	1	99
Saurida normani	3	196
Halieutichthys aculeatus	5	50
Urophycis regius	4	151
Lepophidium jeannae	2	52
Bellator militaris	182	2,554
Prionotus alatus	32	568
Symphurus diomedianus	6	143
Prionotus stearnsi	4	67
Prionotus roseus	2	65
Prionotus salmonicolor	7	442
Peristidion gracile	127	3,857
Centropristis ocyurus	23	919
Kathetostoma albigutta	1	29
Stenotomus caprinus	6	406
Lagodon rhomboids	2	152
Mullus auratus	5	280
Syacium papillosum	38	1,554
Sphoeroides dorsalis	1	38
Citharichthys gymnorhinus	1	2

Replicate Totals

Species	24
Animals	473
Sample weight (gin)	12,836

Shannon-Weaver Statistics

H Prime	1.9539
H Max	3.1781
J Prime	0.6148

Station V-B, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Synodus intermedius	12	826
Synodus poeyi	3	44
Saurida normani	3	190
Trachinocephalus myops	12	733
Urophycis regius	29	1,247
Bellator militaris	3	42
Prionotus stearnsi	1	10
Prionotus roseus	4	170
Prionotus salmonicolor	1	80
Centropristis ocyurus	6	247
Trachurur lathami	8	261
Mullus auratus	6	326
Syacium papillosum	6	244
Citharichthys cornutus	1	3
Paralichthys squamilentis	1	101
Sphoeroides dorsalis	2	87
Stenotomus caprinus	16	633

Replicate Totals

Species	17
Animals	114
Sample weight (gin)	5,244

Shannon-Weaver Statistics

H Prime	2.3910
H Max	2.8332
J Prime	0.8439

Station VI-B, Sample Period 2

Species	Number of Specimens	Wet Weight (gin)
Opistognathidae	1	3
Gymnothorax nigromarginatus	1	87
Raja texana	1	340
Ophichthus ocellatus	1	82
Synodus poeyi	9	98
Halieutichthys aculeatus	5	5
Ogcocephalus vespertilio	1	3
Bellator egretta	5	86
Scorpaena agassizi	8	117
Serranus notospilus	212	1,185
Pristipomoides aquilonaris	33	227
Synagrops spinosa	7	193
Trachurus lathami	2	"119
Mustelus canis	1	417
Opistognathidae	1	0.7
Kathetostoma albigutta	1	47
Syacium papillosum	24	1,350
Parahollardia lineata	1	11
Sphoeroides dorsalis	1	0.3

Replicate Totals

Species	19
Animals	315
Sample weight (gin)	4,371

Shannon-Weaver Statistics

H Prime	1.3247
H Max	2.s)444
J Prime	0.4499

Station I-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Hemanthias leptus	4	7
Saurida normani	1	344
Serranus notospilus	2	16
Pontinus rathbuni	2	29
Lonchistium sp. A.	1	3
Prionotus stearnsi	25	134
Antigonia capros	1	19
Saurida brasiliensis	7	12
Citharichthys cornutus	20	53
Zalieutes mcgintyi	8	32
Bellator brachychir	1	0.3

Replicate Totals

Species	11
Animals	72
Sample weight (gin)	649

Shannon-Weaver Statistics

H Prime	1.7911
H Max	2.3979
J Prime	0.7469

Station II-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Ancylopsetta dilecta	5	206
Urophycis regius	1	83
Urophycis cirratus	2	98
Urophycis floridanus	11	3.,919
Pristipomoides aquilonaris	1	108
Glossanodon pygmaeus	1	1
Halieutichthys aculeatus	1	0.7
Scorpaena agassizi	10	471
Lepophidium sp. B	30	419
Serranus notospilus	4	32
Lepophidium sp. C	13	854
Prionotus stearnsi	1	15
Citharichthys cornutus	80	312
Pikea mexicanus	1	4
Gymnothorax nigromarginatus	3	381
Saurida normani	21	1,516
Raja garmani	8	653
Zalieutes mcgintyi	17	58

Replicate Totals

Species	18
Animals	210
Sample weight (gin)	7,131

Shannon-Weaver Statistics

H Prime	2.0978
H Max	2.8$104
J Prime	0.7258

Station III-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Mullus auratus	1	88
Bembrops anatirostris	19	901
Bellator egretta	3	78
Prionotus alatus	12	640
Lophiomus sp.	7	592
Urophycis floridanus	12	1,304
Pristipomoides aquilonaris	10	1,362
Trichopsetta ventralis	1	34
Saurida normani	21	1,692
Scorpaena agassizi	34	1,492
Bellator brachychir	8	9
Synodus poeyi	17	30
Ancylopsetta dilecta	13	772
Antigonia capros	1	12
Zalieutes mcgintyi	18	64
Citharichthys cornutus	143	534
Serranus notospilus	3	7
Pikea mexicanus	1	1
Prionotus stearnsi	2	8
Pontinus rathbuni	1	3
Glossanodon pygmaeus	4	2
Saurida brasiliensis	12	14
Gymnothorax nigromarginatus	2	190

Replicate Totals

Species	23
Animals	345
Sample weight (gin)	9,829

Shannon–Weaver Statistics

H Prime	2.2475
H Max	3.1355
J Prime	0.7'168

Station IV-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Pontinus longispinis	1	63
Prionotus stearnsi	3	6
Parahollardia lineata	1	63
Urophycis floridanus	2	256
Saurida normani	12	953
Lophiomus sp.	2	?39
Trichopsetta ventralis	1	47
Prionotus alatus	14	811
Scorpaena agassizi	20	795
Ancylopsetta dilecta	2	134
Saurida brasiliensis	10	12
Synodus poeyi	3	8
Citharichthys cornutus	112	299
Zalieutes mcgintyi	74	297
Bembrops anatirostris	18	880
Pristipomoides aquilonaris	6	1,052
Monolene sessilicauda	4	57
Glossanodon pygmaeus	3	2
Serranus notospilus	2	5

Replicate Totals

Species	19
Animals	290
Sample weight (gm)	5,979

Shannon-Weaver Statistics

H Prime	1.9442
H Max	2.9444
J Prime	0.6603

Station V-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Bembrops anatirostris	134	4,054
Saurida normani	16	2,563
Antigonia capros	2	116
Zenopsis ocellata	1	59
Paralichthys squamilentis	1	203
Trichopsetta ventralis	10	496
Pikea mexicanus	23	454
Decodon puellaris	4	145
Ancylopsetta dilecta	1	75
Ogcocephalus vespertilio	1	59
Saurida brasiliensis	8	20
Pontinus longispinis	148	6,421
Prionotus stearnsi	1	12
Serranus notospilus	7	50
Prionotus alatus	29	1,537
Zalieutes mcgintyi	38	197
Synagrops bells	3	3
Monolene sessilicauda	55	644
Citharichthys cornutus	46	136
Lophiomus sp.	3	359
Urophycis floridanus	10	1,632
Pristipomcides aquilonaris	8	1,152
Bellator egretta	1	19
Ophidiidae sp. A	1	0.3
Argentina striata	1	0

Replicate Totals

Species	25
Animals	552
Sample weight (gin)	20,406

Shannon-Weaver Statistics

H Prime	2.2352
H Max	3.2189
J Prime	0.6944

Station VI-C, Sample Period 2

Species	Number of Specimens	Wet Weight (gm)
Zalieutes mcgintyi	1	6
Steindachneria argentea	101	2,552
Monolene sessilicauda	1	20
Paralichthys squamilentis	1	413
Congrina macrosoma	3	107
Zalieutes mcgintyi	51	220
Citharichthys cornutus	5	10
Macrorhamphosus scolopax	1	5
Pontinus rathbuni	1	13
Pontinus longispinis	1	5
Urophycis regius	3	240
Ogcocephalus vespertilio	1	99
Poecilopsetta beani	35	317
Urophycis floridanus	3	674
Lepophidium cervinum	3	102
Congrina flava	13	462
Lepophidium sp. A.	11	195
Raja lentigenosa	18	290
Bembrops anatirostris	10	542
Polymixia lowei	55	906
Argentina striata	6	162
Synagrops spinosa	23	367

Replicate Totals

Species	22
Animals	347
Sample weight (gin)	7,707

Shannon-Weaver Statistics

H Prime	2.2460
H Max	3.0910
J Prime	0.7266

Station I-A, Sample Period 3

Species	Number of' Specimens	Wet Weight (gin)
Hippocampus erectus	1	12
Emblemaria atlantica	1	2
Emblemaria piratula	4	0.4
Corvphopterus punctipectophorus	1	0.7
Lythrypnus nesiotes	1	0.1
Riser ruber	1	0.1
Sphoeroides spengleri	1	0.3
Synodus foetens	3	354
Ophidion holbrooki	1	53
Halieutichthys aculeatus	5	52
Lepophidium jeannae	8	164
Centropristis ocyurus	2	401
Diplectrum formosum	2	181
Lutjanus synagris	1	277
Haemulon aurolineatum	17	742
Calamus leucosteus	1	178
Holacanthus ciliaris	1	328
Pomacanthus arcuatus	1	336
Evermannichthys spongicola	3	0.3
Scorpaena calcarata	14	363
Scorpaena brasiliensis	1	87
Bellator militaris	2	27
Prionotus ophyras	1	119
Prionotus salmonicolor	1	87'
Bothus robinsi	8	264
Etropus rimosus	26	796
Syacium papillosum	36	1,327
Symphurus diomedianus	1	11
Acanthostracion quadricornis	4	994
Sphoeroides spengleri	2	100 "
Hippocampus erectus	1	5
Synodus intermedius	1	68

Replicate Totals

Species	32
Animals	153
Sample weight (gin)	7,335

Shannon-Weaver Statistics

H Prime	2.6554
H Max	3.4657
J Prime	0.7662

Station II-A, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Ogcocephalus sp.	1	0.7
Zalieutes mcgintyi	1	0.5
Ophidiidae juv.	1	0.1
Scorpaena calcarata	1	63
Prionotus roseus	1	61
Hippocampus erectus	1	11
Synodus foetens	1	105
Sardinella anchovia	1	37
Synodus foetens	11	1,900
Synodus intermedius	4	702
Porichthys porosissimus	2	59
Ophidion holbrooki	5	39'7
Ophidion sp.	3	155
Hippocampus erectus	1	16
Centropristis ocyurur	7	367
Diplectrum formosum	20	2,746
Pristigenys alta	1	38
Rhomboplites aurorubens	2	248
Haemulon aurolineatum	27	2,413
Orthopristis chrysoptera	8	775
Equetus acuminates	3	88
Equetus lanceolatus	3	130
Lagodon rhomboids	8	620
Pagrus pagrus	3	314
Scorpaena brasiliensis	1	35
Scorpaena calcarata	26	701
Prionotus martis	10	472
Prionotus ophryas	1	47
Prionotus roseus	1	69
Prionotus tribulus	1	113
Bothus robinsi	4	107
Syacium papillosum	3	167
Gymnachirus melas	1	31
Acanthostracion quadricornis	1	194
Balistes capriscus	5	243
Monacanthus ciliatus	2	41
Monacanthus hispidus	94	3,765
Aluterus schoepfi	1	158
Sphoeroides nephelus	1	138
Sphoeroides spengleri	1	51

Replicate Totals

Species	40
Animals	269
Sample weight (gin)	1?,578

Station II-A, Sample Period 3 - page 2

Shannon-l'leaver Statistics

H Prime	2.6029
H Max	3.6889
J Prime	0.7056

Station III-A, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Hal. ieutichthysaculeatus	1	9
Scorpaena calcarata	1	38
Bothus robinsi	2	54
Etropus rimosus	4	41
Synodus intermedius	3	284
Porichthys porosissimus	4	63
Halieutichthys aculeatus	3	17
Ogcocephalus sp. No. 1	2	33
Ogcocephalus sp. No. 2	1	0.9
Lephophidium jeannae	1	20
Ophidion holbrooki	2	196
Centropristis ocyurus	1	20
Diplectrum formosum	1	121
Serranus phoebe	5	94
Apogon aurolineatus	5	45
Apogon pseudomaculatus	1	6
Haemulon aurolineatum	35	2,351
Chromis scotti	3	23
Hemipteronotus novacula	1	32
Scorpaena brasiliensis	2	301
Scorpaena calcarata	40	575
Bothus robinsi	2	26
Etropus rimosus	38	340
Syacium papillosum	39	1,359
Acanthostracion quadricornis	1	431
Monacanthus hispidus	1	54
Sphoeroides dorsalis	1	5
Sphoeroides spengleri	3	146

Replicate Totals

Species	28
Animals	203
Sample weight (gin)	6,685

Shannon-Weaver Statistics

H Prime	2.3556
H Max	3.3322
J Prime	0.7069

Station IV-A, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Ariosoma impressa	1	23
Rypticus bistrispinus	1	15
Emblemaria piratula	3	0.2
Ogcocephalus parvus	1	23
Raja eglanteria	1	310
Gymnothorax nigromarginatus	1	132
Trachinocephalus muops	1	56
Synodus intermedius	7	262
Ogcocephalus parvus	1	4
Halieutichthys aculeatus	4	46
Etrumeus teres	22	13
Diplectrum formosum	1	87
Prionotus roseus	3	141
Syacium papillosum	3	159
Bothus robinsi	3	99

Replicate Totals

'Species	15
Animals	53
Sample weight (gin)	1,370

Shannon-Weaver Statistics

H Prime	2.0768
H Max	2.7080
J Prime	0.7669

Station V-A, Sample Period 3

Species	Number of Specimens	Wet Weight (gin)
Gymnothorax nigromarginatus	1	39
Ariosoma impressa	2	54
Ogcocephalus sp.	1	2
Gobulus myersi	2	0.1
Scorpaena brasiliensis	3	276
Scorpaena calcarata	5	133
Prionotus roseus	1	27
Syacium papillosum	13	96
Monacanthus hispidus	1	33
Trachinocephalus myops	4	328
Halieutichthys aculeatus	2	31
Otophidium omostigmum	2	18
Diplectrum formosum	2	193
Centropristis ocyurus	14	843
Rypticus bistrispinus	1	13
Kathetostoma albigutta	1	34
Scorpaena brasiliensis	9	1,126
Scorpaena calcarata	6	44
Prionotus ophyras	2	75
Prionotus martis	3	67
Prionotus roseus	4	192
Prionotus salmonicolor	1	43
Bothus robinsi	1	30
Cyclopsetta fimbriata	1	202
Syacium papillosum	87	3,536
Gymnachirus melas	5	192
Monacanthus ciliatus	1	24
Monacanthus hispidus	9	268
Sphoeroides dorsalis	1	84

Replicate Totals

Species	29
Animals	185
Sample weight	8,003

Shannon-Weaver Statistics

H Prime	2.2408
H Max	3.3673
J Prime	0.6655

Station VI-A, Sample Period 3

Species	Number of Specimens	Wet Weight (gin)
Pontinus rathbuni	1	3
Symphurus papillosum	1	87
Symphurus diomedianus	2	26
Symphurus minor	1	7
Synodus foetens	1	193
Stenotomus caprinus	1	66
Bellator militaris	1	12
Etropus rimosus	4	15
Syacium papillosum	3	133

Replicate Totals

Species	9
Animals	15
Sample weight (gin)	542

Shannon-Weaver Statistics

H Prime	2.0262
H Max	2.1972
J Prime	0.9222

Station I-B, Sample Period 3

Species	Number of Specimens	Wet Weight (Cm)
Scorpaena agassizi	1	34
Trachinocephalus mypos	13	'770
Syacium papillosum	57	3,915 .
Synodus intermedius	7	452
Prionotus alatus	11	537
Be?.later militaris	7	215
Gymnothorax nigromarginatus	2	181
Mullus auratus	6	401
Halieutichthys aculeatus	6	80
Ogcocephalus parvus	1	13
Sphoeroides dorsalis	10	615
HIppocampus erectus	1	5
Citharichthys gymnorhinus	1	1
Scorpaena brasil iensis	1	153
Raja texana	1	182
Caulolatilus sp.	1	0.9
Carangidae	1	0.0
Saurida erasiliensis	1	0.2
Argentina silus	1	0.1
Scorpaena agassizi	8	4'79

Replicate Totals

Species	20
Animals	137
Sample weight (gin)	8,034

Shannon-Weaver Statistics

H Prime	2.1465
H Max	2.9957
J Prime	0.7165

Station II-B, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Prionotus stearnsi	1	1
Syacium papillosum	5	159
Halieutichthys aculeatus	3	37
Ogcocephalus parvus	1	13
Peristedion gracile	4	97
Mullus auratus	50	2,454
Prionotus stearnsi	5	7
Synodus foetens	1	122
Saurica normani	11	745
Syacium papillosum	35	1,488
Saurida brasiliensis	5	9
Prionotus alatus	7	221
Gymnothorax nigromarginatus	2	172
Kathetostoma albigutta	1	44
Halieutichthys aculeatus	4	39
Ogcocephalus parvus	2	26
Peristedion gracile	10	244
Citharichthys cornutus	1	3
Leptocephalus sp.	2	2
Scorpaena agassizi	10	305

Replicate Totals

Species	20
Animals	160
Sample weight (gm)	6,188

Shannon-Weaver Statistics

H Prime	2.2703
H Max	2.9957
J Prime	0.7579

Station III-B, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Scorpaena agassizi	1	o
Gymnothorax nigromarginatus	1	33
Chromis enchrysurus	1	16
Muraenesocidae	1	3
Scorpaena agassizi	1	0
Synodus intermedius	1	46
Syacium papillosum	3	146
Bellator militaris	7	124
Moacanthus hispidus	1	54
Centropristis ocyurus	5	170
Rypticus bistrispinus	1	13
Lepophidium jeannae	1	17
Hippocampus erectus	1	3
Citharichthys cornutus	1	3

Replicate Totals

Species	14
Animals	26
Sample Weight (gin)	628

Shannon–Weaver Statistics

H Prime	2.2979
H Max	2.6391
J Prime	0.8707

Station IV-B, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Syacium papillosum	1	30
Halieutichthys aculeatus	1	13
Lepophidium sp.	1	24
Trachinocephalus myops	1	75
Prionotus alatus	1	26
Prionotus stearnsi	4	71
Bellator militaris	33	530
Syacium papillosum	9	470
Saurida brasiliensis	3	10
Centropristis ocyurus	2	92
Raja Texana	1	353

Replicate Totals

Species	11
Animals	57
Sample weight (gin)	1,694

Shannon-Weaver Statistics

H Prime	1.4924
H Max	2.3979
J Prime	0.6224

Station V-B, Sample Period 3.

Species	Number of Specimens	Wet Weight (gm)
Verma kendalli	1	11
Halieutichthys aculeatus	2	27
Ophidion sp.	1	1
Saurida brasiliensis	1	4
Prionotus stearnsi	1	7
Dactylopterus volitans	1	51
Porichthys porosissimus	1	20
Bellator militaris	1	10
Syacium papillosum	2	05
Mullus auratus	1	47
Halieutichthys aculeatus	2	25
Raja olseni	1	37
Centropristis ocyurus	1	47
Leiostomus xanthurus	3	337
Pristipomoides aquilonaris	2	49
Decapterus punctatus	1	26
Scorpaena erasiliensis	1	75
Scorpaena agassizi	23	433
Stenotomus caprinus	22	57

Replicate Totals

Species	19
Animals	68
Sample weight (gin)	1,349

Shannon-Weaver Statistics

H Prime	2.0289
H Max	2.9444
J Prime	0.6891

Station VI-B, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Halieutichthys aculeatus	2	22
Parahollardia lineata	1	2
Antennarius radiosus	1	2
Synodus poeyi	9	84
Prionotus alatus	1	15
Bregmaceros atlanticus	1	0.3
Bellator egretta	11	152
Saurida brasiliensis	1	77
Sphoeroides sp.	1	3
Syacium papillosum	2	180
Kathetostoma albigutta	1	88
Halieutichthys aculeatus	4	25
Ogcocephalus parvus	5	51
Serranus notospilus	152	707

Replicate Totals

Species	14
Animals	192
Sample weight (gm)	1,408

Shannon-Weaver Statistics

H Prime	0.9546
H Max	2.6391
J Prime	0.3617

Station I-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gin)
Citharichthys cornutus	1	2
Bellator Egretta	1	6
Antigonia combatia	2	5
Lophiomus sp.	1	5
Prionotus stearnsi	18	93
Serranus notospilus	35	338
Antigonia capros	2	7
Saurida normani	15	289
Hemanthias leptus	10	36
Hemanthias vivanus	3	46
Citharichthys cornutus	103	359
Bellator egretta	3	15
Synagrops bells	1	5
Decodon puellaris	2	31
Pontinus rathbuni	1	21
Ancylopsetta dilecta	3	134
Synodus poeyi	1	5
Antennarius radiosus	1	1
Peristedion sp.	2	3
Lonchistium sp.	1	3
Bellator brachychir	1	2
Zalieutus mcgintyi	7	25

Replicate Totals

Species	22
Animals	214
Sample weight (gin)	1,431

Shannon-Weaver Statistics

H Prime	1.8775
H Max	3.0910
J Prime	0.6074

Station II-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Bembrops anatirostris	1	47
Lophiomus sp.	1	4
Zalieutes mcgintyi	3	5
Peristedion miniatum	1	119
Callionymus agassizi	2	48
Bembrops anatirostris	5	258
Prionotus alatus	5	255
Bellator egretta	5	160
Ancylopsetta dilecta	1	30
Synodus intermedius	1	38
Ophichthus ocellatus	2	252
Saurida normani	34	2,624
Serranus notospilus	19	145
Citharichthys cornutus	20	62
Synagrops bells	2	5
Saurida brasiliensis	7	19
Peristedion gracile	1	9
Antigonia combatia	4	16
Glossanodon pygmaeus	2	3
Macrorhamphosus scolopax	1	12
Zalieutes mcgintyi	6	32

Replicate Totals

Species	21
Animals	123
Sample weight (gin)	4,139

Shannon-Weaver Statistics

H Prime	2.3841
H Max	3.0445
J Prime	0.7831

Station III-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Peprilus burti	1	120
Prionotus alatus	1	59
Mullus auratus	1	66
Peristedion miniatum	4	582
Scorpaena agassizi	3	144
Bembrops anatirostris	1	11
Zalieutes mcgintyi	3	14
Citharichthys cornutus	4	16
Pikea mexicanus	3	8
Hippocampus erectus	1	5

Replicate Totals

Species	10
Animals	22
Sample weight (gin)	1,025

Shannon-Weaver Statistics

H Prime	2.1375
H Max	2.3026
J Prime	0.9283

Station IV-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gin)
Urophycis cirratus	1	0.6
Saurida normani	36	2,740
Mullus auratus	3	180
Prionotus alatus	3	184
Lophiomus sp.	1	92
Gnathagnis egregius	1	29
Peristedion miniatum	2	326
Decodon puellaris	1	41
Bembrops anatirostris	6	125
Prionotus stearnsi	8	41
Pontinus rathbuni	1	5
Citharichthys cornutus	5	22
Zalieutes mcgintyi	8	31
Monelene sessilicauda	1	2
Pikea mexicanus	1	2

Replicate Totals

Species	15
Animals	78
Sample weight (gin)	3,821

Shannon-Weaver Statistics

H Prime	1.9329
H Max	2.7080
J Prime	0.7138

Station V-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gin)
Paralichthys squamilentis	1	417
Poeciliopsetta beani	1	25
Monolene sessilicauda	1	10
Synagrops spinosa	2	15
Neobythites gilli	1	4
Zalieutus mcgintyi	1	2
Pontinus longispinis	8	432
Scorpaena agassizi	12	612

Replicate Totals

Species	8
Animals	27
Sample weight (gin)	1,517

Shannon-Weaver Statistics

H Prime	1.5240
H Max	2.0794
J Prime	0.7329

Station VI-C, Sample Period 3

Species	Number of Specimens	Wet Weight (gm)
Zalieutes mcgintyi	1	0.8
Bembrops anatirostris	1	34
Lophiomus sp.	1	16
Citharichthys cornutus	2	3
Zalieutes mcgintyi	3	10

Replicate Totals

Species	5
Animals	8
Sample weight (gm)	64

Shannon-Weaver Statistics

H Prime	1.4942
H Max	1.6094
J Prime	0.9284

APPENDIX II

Length Frequency Data

Species	Size Class (cm) 0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
Syacium papillosum	21	128	534	329	23	2						
Citharichthys cornutus	88	485										
Synodus poeyi	2	40	15									
Ogcocephalus sp. (corniger)		3	1									
Ogcocephalus sp. (declavirostris)		2										
Cyclopsetta fimbriata		2	1	6	4							
Bellator egretta	1	24	7									
Serranus atrobranchus	1	6										
Serranus notospilus	22	335										
Decodon puellaris		3	5									
Mullus auratus			79	5	1							
Centropristis ocyurus	2	26	100	14	2							
Hemanthias leptus	5	20	2	1								
Monolene antillarum		1										
Trachurus lathami		1	9	2								
Pontius longispinis	12	53	80	36								
Pristipomoides aquilonaris	4	40	8	24	2							
Bembrops anatirostris	1	10	64	129	13							
Urophycis floridanus				12	29	11	2					
Callionymus agassizi		4	5									
Peristedion gracile		17	29	1								
Stenotomus caprinus		16	36									
Halieutichthys aculeatus	15	100										
Pikea mexicana	3	9	1									
Trichopsetta ventralis		5	14	4								
Ogcocephalus sp.	2	4	3	1								
Saurida brasiliensis	14	51										
Bregmaceros atlanticus	4											
Physiculus fulvus		2										
Ariomma bondi		1										
Prionotus stearnsi	14	243	48									
Raja texana		1		2					2			
Lepophidium jeannae			5	3	5	1						
Monacanthus hispidus	1	137	85									

Species	Size Class (cm) 0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
Symphurus diomedianus			13	9								
Chriolepis sp.	1											
Lythrypnus nesiotes	8											
Muraena retifera								1				
Kathetostoma albigutta		10	8									
Neomerinthe hemingwayi			1			1						
Saurida normani	2	13	22	94	62	14	9					
Synodus intermedius	1		27	109	15	1	1					
Chromis enchrysurus	2	13										
Prionotus alatus	1	36	151	3								
Bellator militaris	42	254	7									
Sphoeroides dorsalis	2	7	47									
Pagrus pagrus			4	2	1							
Ogcocephalus parvus	1	14										
Gymnothorax nigromarginatus		2					18	15	15	3	1	
Ophiomus sp.	2	7	9	2								
Prionotus sp.	4											
Scorpaena agassizi	13	101	136								4	
Monacanthus ciliatus	1	105										
Hippocampus erectus			13	7	1							
Scorpaena sp.	2	1										
Urachinocephalus myops			13	70	9							
Ophidion holbrooki			1	3	7	6						
Lopholatilus chamaeleonticeps							1					
Argentina striata			8									
Poecilopsetta beani		30	11									
Decapterus punctatus			3	4								
Neopinnula orientalis				1	1							
Nepophidium sp. A.			4	9	1							
Neobythites gilli		1	2									
Antigonia combatia	8	1										
Malieutes mcgintyi	128	143										
Ogcocephalus nasutus		4										
Ogcocephalus vespertilio		2	4									

Species	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
onolene sessilicauda		9	79									
rionotus paralatus			3									
ynagrops spinosa		34	13									
iaphus dumerili		4										
acrorhamphosus scolopax		100	2									
olymixia lowei		83	2									
ikea mexicanus	3	20	7									
arahollardia lineata	2	3	1									
aralichthys squamilentis				1	2	2						
hriolepis sp. A.	11											
ollmania sp. A.	1											
ntennarius radiosus	4											
yacium sp.	1											
onchistium sp. A.	1	2										
ntigonia capros	2	7	4									
tropus rimosus	28	167	4									
phichthus gomesi			6	1								
ardinella anchovia				8	22	16	1					
ynodus foetens		1										
orichthys porosissimus		3	8									
phidion sp.	3	2		1	10	5						
tophidium omostigmum		1	3									
iplectrum bivittatum	3	3	1									
omer setapinnis	1											
quetus sp.	1		5									
rionotus roseus	4	24	82	9								
rionotus rubio		2	1									
rionotus salmonicolor			16	9								
eprilus burti	1			1								
itharichthys macrops			2	2								
yclopsetta chittendeni				1	1							
ymnachirus melas		4	7									
ranchiostoma floridae	55											
mblemaria piratula	59											

Species	Size Class (cm) 0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
Emblemaria sp.	2											
Palatagobius paradoxus	2											
Symphurus minor	3	2										
Risor ruber	5											
Raja eglanteria				1	1	2		2				
Hemipteronotus novacula	1		12	2								
Prionotus martis			14	2								
Scorpaena calcarata	13	160	23									
Diplectrum formosum	1		3	54	2							
Prionotus ophryas	2	8	8	7								
Bothus robinsi		9	73									
Opsanus pardus	1	1										
Monacanthus sp.		1										
Gymnothorax moringa												
Lythrypnus sp.	2											
Holocentrus bullisi			3									
Hypoplectrus puella	1	3	5									
Pristigenys alta		9										
Chaetodon sedentarius		2	2									
Holacanthus bermudensis			2	3	1	1						
Chromis scotti	44	49										
Emblemaria atlantica	1	2										
Evermannichthys spongicola	14											
Carapus bermudensis			1									
Gillelus sp. A	1											
Coglossus sp.	2											
Antennarius ocellatus	1	4										
Rypticus bistrispinus		7										
Chilomycterus schoepfi		2		4								
Scorpaena brasiliensis	2	3	2 0	17								1
Balistes capriscus		4	6	1								
Acanthostracion quadricornis			2	3	3							
Gastropsetta frontalis			4									
Blennius marmoreus	5											

	Size Class (cm)											
Species	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
Leiostomus xanthurus				2								1
Lepophidium sp.												
Muraenesocidae						1						
Leptocephalus sp.												
Caulolatilus sp.	1											
Carangidae	1											
Argentina silus	1											
Poeciliopsetta beani			1									
Zalieutus mcgintyi	7	1										
Gnathagnis egregius		1										
Peristedion miniatum				1	6							
Monelene sessilicauda		1										
Hemanthias vivanus		3										
Peristedion sp.	2											
Lonchistium sp.		1										
Gobulus myersi	2											
Prionotus ophyras			2									
Symphurus papillosum				1								
Ogcocephalus sp. No. 1		2										
Ogcocephalus sp. No. 2	1											
Lephophidium jeannae				1								
Gymnothorax nigomarginatus										1		
Etrumeus teres	22											
Ophidiidae juv.	1											
Hippocamphus erectus					1							
Orthopristis chrysoptera				7								
Equetus acuminatus												
Prionotus tribulus				1								
Sphoeroides nephelus				1								
Corvphopterus punctipectophorus	1											
Calamus leucosteus				1								
Holacanthus ciliaris				1								
Hippocampus eroctus			1									

	Size Class (cm)											
pecies	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
obiesox strumosus		1										
alamus proridens				14	5							
teindachneria argentea			3	40	55	1						
ongrina macrosoma						1	2					
ontinus rathbuni	2	5										
rophycis regius			22	16	2							
epophidium cervinum					3							
ongrina flava						1	2	9	1			
aja lentigenosa	1	15	2									
enopsis ocellata			1									
ncylopsetta dilecta		2	8	15								
ynagrops bella	2	4										
phididae sp. A		1										
lossanodon pygmaeus	7	3										
ellator brachychir	10											
rophycis cirratus	1			2								
epophidium sp. B			12	18								
epophidium sp. C				1	6	6						
aja garmani			6	2								
pistognathidae	1	1										
phichthus ocellatus									1		2	
ustelus canis										1		
eristidion gracile			28	69								
agodon rhomboides		2	45	9								
itharichthys gymnorhinus	3	1										
rophycis floridana			1	1								
corpaena dispar		1	12	1								
haetodon aya		14										
epophidium graellsi			1									
alieutichyhys aculeatus		1										
aurida sp.	1											
erma kendalli									1			
actylopterus volitans			1									
aja olseni		1										

	Size Class (cm)											
pecies	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-100	100 →
pogon quadrisquamatus	1											
oryphopterus punctipectophorus	1											
alichoeres caudalis	1			1								
gcocephalus radiosus					1	1						
phoeroides spengleri	1	4	12	1								
upomacentrus variabilis		1										
obiosoma xanthiprora	1											
othus ocellatus			1									
yacium gunteri		9	5	1								
homboplites aurorubens		2	2	2								
ngyophrys senta		1										
ntenarrius ocellatus		2										
narchias yoshiae			1									
riosoma impressa					2	1						
ranchiostoma sp.	11	1										
obulus sp.	1											
haenopsis sp.	1											
ythrypnus elasson	3											
luterus schoepfi			3		1	2	5	5				
chenesis neucratoides							1	1				
phoeroides sp.	2											
oglossus sp. ?	1											
pogon pseudomaculatus	1	4										
pogon aurolineatus	3	5										
erranus phoebe		6	41									
strapogon alutus	2											
aemulon aurolineatum		65	86	44								
quetus lanceolatus			10	3								
actophrys quadricornis				2	4							
utjanus synagris				3	2							
quetus umbrosus			1	2								
omacanthus arcuatus				1	1							
riacanthus arenatus			1		1		1					
haeoptyx pigmentaria	1											