

Final Data Report

CORAL REEF COMMUNITIES FROM NATURAL RESERVES IN PUERTO RICO:
a quantitative baseline assessment for prospective monitoring programs

Volume 3: Ponce, Guayanilla, Guayama, Arroyo

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PREFACE

A baseline quantitative assessment of coral reef communities in Natural Reserves is one of the priorities of the U. S. Coral Reef Initiative Program (NOAA) for Puerto Rico. This work is intended to serve as the framework of a prospective research program in which the ecological health of these valuable marine ecosystems can be monitored. An expanded and more specialized research program should progressively construct a far more comprehensive characterization of the reef communities than what this initial work provides. It is intended that the better understanding of reef communities and the available scientific data made available through this research can be applied towards management programs designed at the protection of coral reefs and associated fisheries in Puerto Rico and the Caribbean. More likely, this is not going to happen without a bold public awareness program running parallel to the basic scientific effort. Thus, the content of this document is simplified enough as to allow application into public outreach and education programs. This is the third of three volumes providing quantitative baseline characterizations of coral reefs from Natural Reserves in Puerto Rico.

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INTRODUCTION

Coral reefs are natural resources of fundamental importance in Puerto Rico. Reefs protect the coastline from erosion, contribute to the formation of (coralline) sandy beaches, sustain (local) commercial and recreational fisheries, are the main attraction of a rapidly growing recreational diving business and represent, as in many other Caribbean Islands the key coastal feature that supports tourism. Coral reefs promote development and growth of seagrass beds and fringing mangroves, which function as interdependent systems to produce a highly productive and biodiverse marine ecosystem. In recognition of their value and aiming at their protection, the Department of Natural and Environmental Resources (DNER) of the government of Puerto Rico has designated a series of marine areas with coral reefs and associated communities as Natural Reserves.

In support of Natural Reserve designations, DNER has prepared a series of technical documents that provide detailed qualitative surveys of the flora and fauna, as well as characterizations of the physical setting of reserve sites. The island-wide inventory of puertorrican reefs by Goenaga and Cintrón (1979) has been used as a key reference in designation of natural reserves. Its baseline data, with qualitative descriptions of reef geomorphology and comprehensive taxonomic surveys forms part of DNER technical supplements in most cases. Quantitative information of reef community structure, such as the percent cover of reef biota and/or substrate types, densities of organisms, topographic relief (rugosity), as well as archival photographic documentation of reef communities has been lacking from most natural reserves and elsewhere in Puerto Rico.

Puertorrican coral reefs have been subjected to a wide array of man induced and natural stressors operating on local, regional and global scales. Increments of sedimentation associated with deforestation and dredging, turbidity/eutrophication effects from domestic and industrial loading of sewage and other organic materials, overfishing, regional mass mortalities of sea urchins, coral bleaching effects, and mechanical destruction caused by hurricanes, boat anchors, ship groundings and military bombings, have all been mentioned as causes of reef degradation in Puerto Rico (Garcia et al., in press). The increasing scientific and public awareness of these potential stressors of coral reef health has stimulated initiatives for corrective action and protective strategies by both federal and local governmental agencies during the last decade. Some of these include the recent approval of coral reef protection laws, establishment of marine protected (no-take) zones, seasonal closures of fish and shellfish spawning grounds, enforcement of lobster size limits, stringent compliance regulations for marine sewage outfalls, reforestation programs and request of cease bombing operations on the coral reefs of Isla de Vieques.

Natural Reserves have been proposed as high priority sites where initiatives for coral reef protection, such as the "no-take" Marine Protected Areas (MPA) should be established, along with monitoring programs to evaluate their effectiveness as management strategies. This work forms part of the baseline quantitative characterization of coral reef communities from Natural Reserves in Puerto Rico. The Natural Reserve sites included in this survey are: Ponce, Guayanilla, Guayama and Arroyo. This baseline characterization targets one of the main objectives of the U. S. Coral Reef Initiative Program in Puerto Rico, prepared in consultation with the Department of Natural and Environmental Resources of P. R.

METHODS

Field Procedures

Sessile-Benthic Reef Communities

Initial exploratory scans of the area by echosounding runs and towed divers preceded quantitative survey work at reef habitats. This exercise provided a general perspective of reef morphometry and aided in the selection of reef zones to be surveyed. Reef sections of optimal coral growth were selected. Five replicate transects were permanently established at each reef using steel rods as markers. Specific positioning of transects aimed to follow consistency in depth range and structural formation of the reef. Three separate reefs were surveyed from each site, for a total of fifteen transects surveyed per site. A line with a surface buoy was tied from one end of the third transect as a location marker and the position of the buoy was recorded with a DGPS unit. Georeferences and depths of reefs surveyed are presented in Table 1.

Table 1. Geographic coordinates and depths of coral reef and seagrass habitats surveyed, February - May, 2001.

Reef Sites	Date	Depth (m)	Latitude	Longitude
Ponce				
Arrecife Boya 2	Feb. 7, 2001	12	18° 04.845' N	065° 25.057' W
Bajo Derrumbadero	Feb. 8, 2001	15.2	18° 05.512' N	065° 35.011, W
Bajo Tasmania	Feb. 9, 2001	9.1	18° 04.832' N	065° 29.277' W
Guayanilla				
Veril Maria Langa	May 17, 2001	4.5	18° 10.297' N	065° 28.126' W
Bajo Maria Langa	May 18, 2001	10.6	18° 09.804' N	065° 29.632' W
Arrecife Tallaboa	May 19, 2001	5.5	18° 09.465' N	065° 28.227' W
Guayama				
Arrecife Las Mareas	May 20, 2001	10.6	18° 09.896' N	065° 09.454' W
Canjilones de Las Mareas	May 21,2001	3.0	18° 10.563' N	065° 28.029' W
Cayos de La Barca	May 22,2001	30.3	18° 03.319' N	065° 27.794' W
Arroyo				
Arrecife Guayama	May 17, 2001	4.5	18° 10.297' N	065° 28.126' W
Arrecife Punta Guilarte				

Quantitative assessments of sessile-benthic reef communities were obtained using a modification of the Chain Transect Method (Porter, 1972). This is a continuous intercept transect technique that provides information of the percent linear cover by sessile biota and other substrate categories, and also allows construction of community profiles by assignment of metric units to each substrate transition. Marsh et al. (1984) discussed the range of biologically significant parameters that can be extracted from chain transect data on coral reef communities. For a review on reef survey methods see UNESCO

(1978); Bouchon (1981); Ohlhorst et al. (1988); UNEP (1993). Transects were established over the substrate using a 10 meter long fiberglass tape measure tensioned between two rods. Rods provided permanent markings that allow repeated observations of benthic community structure over time. A short linked chain was loosely draped over the reef and the linear area (number of chain links) of the different substrate types (or biota) occurring beneath the chain recorded. Chain links were 1.42 cm long. Steel nails were hammered into available hard substrate (dead coral sections) approximately 0.5 – 1.0 meter apart to provide fixed reference points along the linear transect.

Individual measurements of substrate categories, as recorded from the number of chain links were sorted, added and divided by the total distance (in chain links) on each transect to calculate cumulative percentages of linear cover by each category. Substrate categories represented by sessile-benthic organisms were recorded as growth forms using abbreviations, or codes (e.g. ENCCOR - encrusting coral), and identified to the lowest possible taxon (e.g. *Diploria strigosa*). This form of data reporting is compatible with CARICOMP (1994) and UNEP (1993) formats. Coral taxonomy followed the most recent revision by Veron (2000). Definitions to the codes used in reporting the different substrate categories are presented as Appendix A. Soft corals, with the exception of encrusting forms (e.g. *Erythropodium caribaeorum*), were counted as number of colonies present whenever any of their branches intersected the transect line. Soft corals have a small basal area relative to their colony size and therefore, are not well represented by their linear cover on the bottom.

The vertical relief of the reef, or rugosity, was calculated by subtracting 10 meters from the total length (links) recorded with the chain at the 10-meter marker of the reference tape. Underwater videos of each transect at each reef site were taken using a SONY TRV 520 videocamera on HI-8 format and an Ikelite housing. Each video transect was identified by a counter readout on each tape. All original transect data was recorded on XEROX never-tear paper and kept on file. Records of depth, transect number, date, and station identification appear on all transect data forms.

(B) Motile Megabenthic Invertebrates and Fishes

Motile megabenthic (larger than 1 cm) invertebrates (lobsters, crabs, echinoids, molluscs, etc.) and diurnal, non-cryptic fishes associated with reefs habitats were surveyed using the belt-transect technique. Transects were 10 meters long by 3 meters wide (surface area = 30 m²). We identified and enumerated fishes and megabenthic invertebrates present within 1.5 meters along each side of the linear transects used for the reef benthic community surveys. This method provides the basis for analysis of relationships between reef substrate variables, such as sessile biological components (e.g. live coral cover) and ichthyofaunal/megabenthic invertebrates taxonomic composition, diversity, and abundance (Fowler, 1987). A total of five (5) belt-transects were surveyed at each reef station (total area = 150 m²). Abundance data on motile megabenthic invertebrates and fishes was reported as number of individuals per 30 m² (belt-transect area). Fishes and megabenthic invertebrates observed outside belt-transect survey areas were recorded and included as supplemental taxonomic

information from each station. Panoramic videos from all stations were filmed to provide a qualitative assessment of the reef biota.

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Appendix A. Taxonomic codes used to identify substrate types in the field during reef community surveys

<u>CODE</u>	<u>SUBSTRATE TYPE</u>	<u>DESCRIPTION</u>
BRA COR	Branching coral	Stony forms with delicate or heavy branches
MAS COR	Massive coral	Stony forms with spherical or cone shapes
ENC COR	Encrusting coral	Stony forms of low vertical relief that follow bottom relief
FOL COR	Foliaceous coral	Stony forms with laminar growth
MILLE	Fire coral	Calcareous hydrozoans
GORG	Gorgonians	Erect gorgonians
ENC GOR	Gorgonians	Encrusting gorgonians
ZOAN	Anemones/Zoanthids	Encrusting or erect without calcareous exoskeleton
ERE SPO	Erect sponge	Forms of low basal area relative to colony size
ENC SPO	Encrusting sponge	Forms of high basal area relative to colony size
TURF ALG	Algal turf	Algal assemblages forming low relief mats over the bottom
FLE ALG	Fleshy algae	Macroalgae of fleshy texture projecting vertically in water column
CAL ALG	Calcareous algae	Algae of highly calcified structure
ASCI	Ascidians	Solitary and/or colonial tunicates
SAND	Sand	Sandy substrate
SILT	Silt	Silty substrate
RUBBLE	Coral rubble	Dead coral rubble

HOLE	Holes, crevices	Depressions on reef structure
RO	Reef overhang	Vertical projections of the reef structure

B.1.1 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
BUOY 2, PONCE. August 21, 2001

DEPTH: 16.1 m
RUGOSITY: 3.35 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	4	0.06
1	FOL COR	Agaricia agaricites	10	0.14
2	TURF ALG	mixed assemblage	4	0.06
3	GORG	Erythropodium caribaeorum	10	0.14
4	TURF ALG	mixed assemblage	21	0.30
5	MAS COR	Montastrea annularis	28	0.39
6	TURF ALG	mixed assemblage	6	0.08
7	MAS COR	Montastrea annularis	25	0.35
8	TURF ALG	mixed assemblage	5	0.07
9	RO	reef overhang	4	0.06
10	FOL COR	Agaricia agaricites	3	0.04
11	TURF ALG	mixed assemblage	6	0.08
12	RO	reef overhang	16	0.23
13	TURF ALG	mixed assemblage	45	0.63
14	FOL COR	Agaricia agaricites	4	0.06
15	TURF ALG	mixed assemblage	35	0.49
16	RO	reef overhang	19	0.27
17	MAS COR	Montastrea annularis	13	0.18
18	TURF ALG	mixed assemblage	4	0.06
19	MAS COR	Montastrea annularis	12	0.17
20	MAS COR	Montastrea annularis	5	0.07
21	TURF ALG	mixed assemblage	6	0.08
22	MAS COR	Montastrea annularis	9	0.13
23	TURF ALG	mixed assemblage	45	0.63
24	RO	reef overhang	17	0.24
25	TURF ALG	mixed assemblage	12	0.17
26	FOL COR	Agaricia agaricites	6	0.08
27	TURF ALG	mixed assemblage	5	0.07
28	FOL COR	Agaricia agaricites	3	0.04
29	TURF ALG	mixed assemblage	21	0.30
30	FOL COR	Agaricia agaricites	4	0.06
31	TURF ALG	mixed assemblage	41	0.58
32	FOL COR	Agaricia agaricites	4	0.06
33	TURF ALG	mixed assemblage	20	0.28
34	MAS COR	Montastrea cavernosa	9	0.13
35	GORG	Erythropodium caribaeorum	7	0.10

36	TURF ALG	mixed assemblage	4	0.06
37	ENC COR	Porites astreoides	5	0.07
38	TURF ALG	mixed assemblage	4	0.06
39	MAS COR	Montastrea cavernosa	9	0.13
40	RO	reef overhang	4	0.06
41	TURF ALG	mixed assemblage	40	0.56
42	RO	reef overhang	9	0.13
43	TURF ALG	mixed assemblage	4	0.06
44	RO	reef overhang	19	0.27
45	TURF ALG	mixed assemblage	8	0.11
46	FOL COR	Agaricia agaricites	4	0.06
47	GORG	gorgonian base	5	0.07
48	TURF ALG	mixed assemblage	30	0.42
49	ENC COR	Porites astreoides	5	0.07
50	TURF ALG	mixed assemblage	40	0.56
51	RO	reef overhang	8	0.11
52	TURF ALG	mixed assemblage	4	0.06
53	FOL COR	Agaricia agaricites	5	0.07
54	TURF ALG	mixed assemblage	20	0.28
55	FOL COR	Agaricia agaricites	9	0.13
56	RO	reef overhang	16	0.23
57	GORG	Erythropodium caribaeorum	5	0.07
58	RO	reef overhang	17	0.24
59	TURF ALG	mixed assemblage	4	0.06
60	MAS COR	Montastrea annularis	11	0.15
61	TURF ALG	mixed assemblage	24	0.34
62	RO	reef overhang	17	0.24
63	TURF ALG	mixed assemblage	5	0.07
64	MAS COR	Montastrea annularis	4	0.06
65	RO	reef overhang	4	0.06
66	TURF ALG	mixed assemblage	29	0.41
67	FOL COR	Agaricia agaricites	7	0.10
68	RO	reef overhang	9	0.13
69	TURF ALG	mixed assemblage	10	0.14
70	FOL COR	Agaricia fragilis	9	0.13
71	ENC COR	Porites astreoides	7	0.10
72	TURF ALG	mixed assemblage	46	0.65

Gorgonians = 37

Note: Turf Alg composed primarily of short filamentous algae, Halimeda copiosa and fine sediment

B.1.2 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2, BUOY 2, PONCE. August 21, 2001

DEPTH: 16.1 m

RUGOSITY: 1.87 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	22	0.31
1	MAS COR	Montastrea cavernosa	8	0.11
2	TURF ALG	mixed assemblage	6	0.08
3	BRA COR	Eusmilia fastigiata	2	0.03
4	TURF ALG	mixed assemblage	32	0.45
5	GORG	gorgonian base	2	0.03
6	TURF ALG	mixed assemblage	38	0.54
7	GORG	gorgonian base	4	0.06
8	TURF ALG	mixed assemblage	26	0.37
9	RO	reef overhang	7	0.10
10	TURF ALG	mixed assemblage	31	0.44
11	ENC SPO	encrusting sponge	16	0.23
12	TURF ALG	mixed assemblage	5	0.07
13	FOL COR	Agaricia agaricites	4	0.06
14	TURF ALG	mixed assemblage	37	0.52
15	FOL COR	Agaricia agaricites	4	0.06
16	TURF ALG	mixed assemblage	42	0.59
17	FOL COR	Agaricia fragilis	7	0.10
18	TURF ALG	mixed assemblage	44	0.62
19	RO	reef overhang	15	0.21
20	TURF ALG	mixed assemblage	29	0.41
21	ERE SPO	erect sponge	10	0.14
22	TURF ALG	mixed assemblage	10	0.14
23	FOL COR	Agaricia agaricites	12	0.17
24	TURF ALG	mixed assemblage	8	0.11
25	FOL COR	Agaricia agaricites	14	0.20
26	TURF ALG	mixed assemblage	6	0.08
27	FOL COR	Agaricia fragilis	4	0.06
28	TURF ALG	mixed assemblage	76	1.07
29	GORG	gorgonian base	4	0.06
30	TURF ALG	mixed assemblage	29	0.41
31	MAS COR	Meandrina meandrites	10	0.14
32	TURF ALG	mixed assemblage	13	0.18
33	FOL COR	Agaricia agaricites	7	0.10
34	TURF ALG	mixed assemblage	55	0.77
35	MAS COR	Mycetophyllia aliciae	11	0.15
36	TURF ALG	mixed assemblage	2	0.03
37	ENC COR	Stephanocoenia michilini	5	0.07
38	TURF ALG	mixed assemblage	11	0.15
39	ENC COR	Porites astreoides	12	0.17
40	TURF ALG	mixed assemblage	41	0.58
41	FOL COR	Agaricia agaricites	5	0.07
42	TURF ALG	mixed assemblage	12	0.17
43	MAS COR	Montastrea annularis	5	0.07
44	RO	reef overhang	20	0.28

45	TURF ALG	mixed assemblage	24	0.34
46	RO	reef overhang	7	0.10
47	TURF ALG	mixed assemblage	4	0.06
48	GORG	gorgonian base	3	0.04
49	FOL COR	Agaricia agaricites	4	0.06
50	TURF ALG	mixed assemblage	9	0.13
51	MAS COR	Dichocoenia stokesii	6	0.08
52	TURF ALG	mixed assemblage	5	0.07
53	MAS COR	Siderastrea radians	6	0.08
54	TURF ALG	mixed assemblage	5	0.07
55	MAS COR	Diploria labyrinthiformis	7	0.10

Gorgonians = 53

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.3 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
BUOY 2, PONCE. August 21, 2001

DEPTH: 16.1 m

RUGOSITY: 3.28 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	ENC COR	Porites astreoides	11	0.15
1	TURF ALG	mixed assemblage	45	0.63
2	MAS COR	Montastrea annularis	17	0.24
3	TURF ALG	mixed assemblage	10	0.14
4	RO	reef overhang	19	0.27
5	SAND	sand	8	0.11
6	TURF ALG	mixed assemblage	84	1.18
7	MAS COR	Montastrea annularis	34	0.48
8	TURF ALG	mixed assemblage	1	0.01
9	MAS COR	Siderastrea siderea	8	0.11
10	TURF ALG	mixed assemblage	2	0.03
11	MAS COR	Montastrea cavernosa	11	0.15
12	TURF ALG	mixed assemblage	4	0.06
13	RO	reef overhang	5	0.07
14	TURF ALG	mixed assemblage	14	0.20
15	RO	reef overhang	7	0.10
16	TURF ALG	mixed assemblage	42	0.59
17	ERE SPO	erect sponge	2	0.03
18	TURF ALG	mixed assemblage	24	0.34
19	GORG	Briareum asbestinum	9	0.13
20	TURF ALG	mixed assemblage	64	0.90
21	RO	reef overhang	11	0.15

22	TURF ALG	mixed assemblage	24	0.34
23	GORG	Erythropodium caribaeorum	10	0.14
24	TURF ALG	mixed assemblage	60	0.85
25	MAS COR	Montastrea annularis	3	0.04
26	TURF ALG	mixed assemblage	9	0.13
27	ERE SPO	erect sponge	2	0.03
28	TURF ALG	mixed assemblage	69	0.97
29	RO	reef overhang	16	0.23
30	TURF ALG	mixed assemblage	4	0.06
31	MAS COR	Montastrea annularis	9	0.13
32	TURF ALG	mixed assemblage	8	0.11
33	FOL COR	Agaricia agaricites	6	0.08
34	GORG	Erythropodium caribaeorum	9	0.13
35	TURF ALG	mixed assemblage	17	0.24
36	MAS COR	Meandrina meandrites	7	0.10
37	RO	reef overhang	9	0.13
38	TURF ALG	mixed assemblage	6	0.08
39	MAS COR	Montastrea annularis	8	0.11
40	TURF ALG	mixed assemblage	27	0.38
41	ENC COR	Porites astreoides	3	0.04
42	TURF ALG	mixed assemblage	4	0.06
43	FOL COR	Agaricia fragilis	3	0.04
44	FOL COR	Agaricia agaricites	4	0.06
45	FOL COR	Agaricia agaricites	4	0.06
46	RO	reef overhang	16	0.23
47	TURF ALG	mixed assemblage	21	0.30
48	RO	reef overhang	21	0.30
49	GORG	Erythropodium caribaeorum	7	0.10
50	TURF ALG	mixed assemblage	44	0.62
51	RO	reef overhang	11	0.15
52	TURF ALG	mixed assemblage	5	0.07
53	RO	reef overhang	10	0.14
54	TURF ALG	mixed assemblage	10	0.14
55	FOL COR	Agaricia agaricites	4	0.06
56	GORG	Erythropodium caribaeorum	8	0.11
57	MAS COR	Montastrea cavernosa	5	0.07
58	TURF ALG	mixed assemblage	4	0.06
59	GORG	Erythropodium caribaeorum	6	0.08
60	TURF ALG	mixed assemblage	18	0.25

Gorgonians = 29

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.4 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4, BUOY 2, PONCE. August 21, 2001

DEPTH: 16.1 m

RUGOSITY: 4.80 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	6	0.08
1	GORG	Erythropodium caribaeorum	7	0.10
2	FOL COR	Agaricia agaricites	9	0.13
3	TURF ALG	mixed assemblage	10	0.14
4	MAS COR	Montastrea cavernosa	41	0.58
5	TURF ALG	mixed assemblage	3	0.04
6	MAS COR	Montastrea annularis	22	0.31
7	TURF ALG	mixed assemblage	2	0.03
8	MAS COR	Montastrea cavernosa	24	0.34
9	GORG	Erythropodium caribaeorum	3	0.04
10	MAS COR	Montastrea annularis	4	0.06
11	TURF ALG	mixed assemblage	6	0.08
12	MAS COR	Montastrea annularis	2	0.03
13	GORG	Erythropodium caribaeorum	19	0.27
14	GORG	Erythropodium caribaeorum	8	0.11
15	TURF ALG	mixed assemblage	26	0.37
16	MAS COR	Montastrea annularis	12	0.17
17	TURF ALG	mixed assemblage	70	0.99
18	FOL COR	Agaricia agaricites	5	0.07
19	TURF ALG	mixed assemblage	4	0.06
20	FOL COR	Agaricia agaricites	12	0.17
21	TURF ALG	mixed assemblage	213	3.00
22	MAS COR	Montastrea annularis	25	0.35
23	RO	reef overhang	30	0.42
24	SAND	sand	10	0.14
25	TURF ALG	mixed assemblage	24	0.34
26	GORG	Erythropodium caribaeorum	8	0.11
27	TURF ALG	mixed assemblage	5	0.07
28	BRA COR	Porites porites	12	0.17
29	TURF ALG	mixed assemblage	32	0.45
30	GORG	gorgonian base	4	0.06
31	TURF ALG	mixed assemblage	18	0.25
32	GORG	Erythropodium caribaeorum	4	0.06
33	TURF ALG	mixed assemblage	26	0.37
34	ENC SPO	encrusting sponge	3	0.04
35	GORG	Erythropodium caribaeorum	5	0.07
36	TURF ALG	mixed assemblage	4	0.06
37	GORG	gorgonian base	3	0.04
38	TURF ALG	mixed assemblage	4	0.06
39	FOL COR	Agaricia agaricites	12	0.17
40	TURF ALG	mixed assemblage	3	0.04
41	FOL COR	Agaricia agaricites	7	0.10
42	TURF ALG	mixed assemblage	12	0.17
43	MAS COR	Dichocoenia stokesi	11	0.15
44	TURF ALG	mixed assemblage	5	0.07

45	GORG	Erythropodium caribaeorum	7	0.10
46	TURF ALG	mixed assemblage	13	0.18
47	MAS COR	Montastrea annularis	3	0.04
48	TURF ALG	mixed assemblage	14	0.20
49	MAS COR	Montastrea cavernosa	11	0.15
50	TURF ALG	mixed assemblage	14	0.20
51	SAND	sand	10	0.14
52	TURF ALG	mixed assemblage	16	0.23
53	SAND	sand	24	0.34
54	TURF ALG	mixed assemblage	30	0.42
55	FOL COR	Agaricia fragilis	12	0.17
56	ENC SPO	encrusting sponge	6	0.08
57	TURF ALG	mixed assemblage	19	0.27
58	MAS COR	Diploria strigosa	17	0.24
59	MAS COR	Diploria strigosa	6	0.08
60	MAS COR	Montastrea annularis	7	0.10
61	TURF ALG	mixed assemblage	9	0.13
62	ENC COR	Porites astreoides	2	0.03
63	TURF ALG	mixed assemblage	10	0.14
64	ERE SPO	erect sponge	7	0.10
65	FOL COR	Agaricia agaricites	6	0.08
66	TURF ALG	mixed assemblage	4	0.06
67	GORG	Erythropodium caribaeorum	5	0.07
68	TURF ALG	mixed assemblage	10	0.14
69	FOL COR	Agaricia agaricites	4	0.06
70	ERE SPO	erect sponge	6	0.08
71	GORG	Erythropodium caribaeorum	4	0.06

Gorgonians = 30

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.5 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5, BUOY 2, PONCE. August 21, 2001

DEPTH: 16.1 m

RUGOSITY: n/d

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	38	0.54
1	RO	reef overhang	12	0.17
2	TURF ALG	mixed assemblage	11	0.15
3	FLE ALG	Dictyota sp.	4	0.06
4	FOL COR	Agaricia agaricites	16	0.23
5	TURF ALG	mixed assemblage	8	0.11
6	GORG	Erythropodium caribaeorum	9	0.13

7	TURF ALG	mixed assemblage	7	0.10
8	GORG	gorgonian base	3	0.04
9	TURF ALG	mixed assemblage	5	0.07
10	RO	reef overhang	12	0.17
11	TURF ALG	mixed assemblage	20	0.28
12	MAS COR	Montastrea annularis	15	0.21
13	TURF ALG	mixed assemblage	8	0.11
14	MAS COR	Diploria strigosa	11	0.15
15	TURF ALG	mixed assemblage	10	0.14
16	MAS COR	Montastrea annularis	15	0.21
17	MAS COR	Montastrea cavernosa	9	0.13
18	TURF ALG	mixed assemblage	40	0.56
19	ENC COR	Porites astreoides	10	0.14
20	TURF ALG	mixed assemblage	4	0.06
21	FOL COR	Agaricia agaricites	3	0.04
22	TURF ALG	mixed assemblage	36	0.51
23	RO	reef overhang	15	0.21
24	TURF ALG	mixed assemblage	60	0.85
25	RO	reef overhang	35	0.49
26	TURF ALG	mixed assemblage	13	0.18
27	MAS COR	Montastrea annularis	12	0.17
28	TURF ALG	mixed assemblage	5	0.07
29	MAS COR	Montastrea annularis	9	0.13
30	TURF ALG	mixed assemblage	3	0.04
31	MAS COR	Montastrea annularis	18	0.25
32	TURF ALG	mixed assemblage	2	0.03
33	MAS COR	Montastrea annularis	11	0.15
34	TURF ALG	mixed assemblage	20	0.28
35	MAS COR	Montastrea annularis	7	0.10
36	TURF ALG	mixed assemblage	40	0.56
37	RO	reef overhang	30	0.42
38	SAND	sand	30	0.42
39	TURF ALG	mixed assemblage	20	0.28
40	MAS COR	Diploria strigosa	25	0.35
				9.31

Note: Transect not finished - not 10 meters

Gorgonians = 30

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.6 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
BAJO DERRUMBADERO REEF, PONCE. August 22, 2001

DEPTH: 16.7 m

RUGOSITY: 3.51 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	4	0.06
1	TURF ALG	mixed assemblage	16	0.23
2	MAS COR	Montastrea annularis	12	0.17
3	TURF ALG	mixed assemblage	2	0.03
4	FLE ALG	Lobophora variegata	6	0.08
5	TURF ALG	mixed assemblage	15	0.21
6	MAS COR	Montastrea annularis	26	0.37
7	RO	reef overhang	38	0.54
8	GORG	Erythropodium caribaeorum	5	0.07
9	TURF ALG	mixed assemblage	15	0.21
10	GORG	Erythropodium caribaeorum	10	0.14
11	TURF ALG	mixed assemblage	23	0.32
12	MAS COR	Meandrina meandrites	5	0.07
13	RO	reef overhang	4	0.06
14	MAS COR	Montastrea annularis	4	0.06
15	RO	reef overhang	9	0.13
16	MAS COR	Montastrea annularis	12	0.17
17	FOL COR	Agaricia agaricites	6	0.08
18	MAS COR	Montastrea annularis	12	0.17
19	TURF ALG	mixed assemblage	4	0.06
20	MAS COR	Siderastrea siderea	5	0.07
21	MAS COR	Montastrea annularis	11	0.15
22	RO	reef overhang	4	0.06
23	MAS COR	Meandrina meandrites	5	0.07
24	TURF ALG	mixed assemblage	25	0.35
25	ERE SPO	erect sponge	6	0.08
26	TURF ALG	mixed assemblage	8	0.11
27	RO	reef overhang	7	0.10
28	ERE SPO	erect sponge	6	0.08
29	MAS COR	Montastrea annularis	7	0.10
30	TURF ALG	mixed assemblage	22	0.31
31	ENC COR	Porites astreoides	4	0.06
32	TURF ALG	mixed assemblage	10	0.14
33	GORG	gorgonian base	4	0.06
34	TURF ALG	mixed assemblage	18	0.25
35	ENC SPO	encrusting sponge	3	0.04
36	RO	reef overhang	4	0.06
37	TURF ALG	mixed assemblage	5	0.07
38	MAS COR	Montastrea annularis	5	0.07
39	TURF ALG	mixed assemblage	5	0.07
40	ENC COR	Porites astreoides	8	0.11
41	TURF ALG	mixed assemblage	12	0.17
42	ENC COR	Porites astreoides	5	0.07
43	RO	reef overhang	10	0.14
44	BRA COR	Acropora cervicornis	50	0.70
45	MILLE	Millepora alcicornis	2	0.03
46	RO	reef overhang	10	0.14

47	MAS COR	Meandrina meandrites	9	0.13
48	BRA COR	Madracis decactis	3	0.04
49	TURF ALG	mixed assemblage	11	0.15
50	MAS COR	Montastrea annularis	14	0.20
51	ERE SPO	erect sponge	4	0.06
52	RO	reef overhang	6	0.08
53	TURF ALG	mixed assemblage	33	0.46
54	RO	reef overhang	10	0.14
55	ERE SPO	erect sponge	5	0.07
56	FOL COR	Agaricia agaricites	10	0.14
57	TURF ALG	mixed assemblage	12	0.17
58	FLE ALG	Lobophora variegata	4	0.06
59	FOL COR	Agaricia agaricites	2	0.03
60	TURF ALG	mixed assemblage	47	0.66
61	FOL COR	Agaricia agaricites	3	0.04
62	FOL COR	Agaricia agaricites	5	0.07
63	TURF ALG	mixed assemblage	6	0.08
64	MAS COR	Montastrea annularis	13	0.18
65	TURF ALG	mixed assemblage	32	0.45
66	MAS COR	Montastrea annularis	7	0.10
67	TURF ALG	mixed assemblage	7	0.10
68	ERE SPO	erect sponge	12	0.17
69	ENC COR	Porites astreoides	3	0.04
70	FLE ALG	Lobophora variegata	8	0.11
71	TURF ALG	mixed assemblage	7	0.10
72	RO	reef overhang	9	0.13
73	BRA COR	Acropora cervicornis	26	0.37
74	RO	reef overhang	6	0.08
75	TURF ALG	mixed assemblage	18	0.25
76	MAS COR	Montastrea annularis	22	0.31
77	MAS COR	Diploria labyrinthiformis	6	0.08
78	MILLE	Millepora alcicornis	1	0.01
79	MAS COR	Montastrea annularis	10	0.14
80	TURF ALG	mixed assemblage	13	0.18
81	ENC COR	Porites astreoides	6	0.08
82	TURF ALG	mixed assemblage	6	0.08
83	RO	reef overhang	8	0.11
84	MAS COR	Montastrea annularis	15	0.21
85	FOL COR	Agaricia agaricites	13	0.18
86	TURF ALG	mixed assemblage	10	0.14
87	BRA COR	Acropora cervicornis	25	0.35
88	TURF ALG	mixed assemblage	3	0.04

Gorgonians = 16

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Lobophora variegata*,

Halimeda copiosa and fine sediment

B.1.7 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
BAJO DERRUMBADERO REEF, PONCE. August 22, 2001

DEPTH: 16.7 m
RUGOSITY: 2.70 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	23	0.32
1	TURF ALG	mixed assemblage	10	0.14
2	MAS COR	Montastrea annularis	28	0.39
3	MAS COR	Montastrea annularis	14	0.20
4	FOL COR	Agaricia agaricites	9	0.13
5	ERE SPO	erect sponge	5	0.07
6	TURF ALG	mixed assemblage	10	0.14
7	RO	reef overhang	5	0.07
8	MAS COR	Montastrea annularis	15	0.21
9	RO	reef overhang	5	0.07
10	MAS COR	Montastrea cavernosa	6	0.08
11	TURF ALG	mixed assemblage	15	0.21
12	RO	reef overhang	5	0.07
13	MAS COR	Montastrea annularis	7	0.10
14	TURF ALG	mixed assemblage	8	0.11
15	MAS COR	Montastrea annularis	8	0.11
16	MAS COR	Montastrea annularis	8	0.11
17	MAS COR	Montastrea annularis	10	0.14
18	TURF ALG	mixed assemblage	3	0.04
19	ENC COR	Porites astreoides	23	0.32
20	TURF ALG	mixed assemblage	40	0.56
21	MAS COR	Montastrea annularis	8	0.11
22	RO	reef overhang	10	0.14
23	MAS COR	Diploria strigosa	10	0.14
24	FOL COR	Agaricia agaricites	19	0.27
25	TURF ALG	mixed assemblage	10	0.14
26	RO	reef overhang	5	0.07
27	TURF ALG	mixed assemblage	8	0.11
28	RO	reef overhang	16	0.23
29	ERE SPO	erect sponge	9	0.13
30	TURF ALG	mixed assemblage	30	0.42
31	MAS COR	Montastrea annularis	4	0.06
32	TURF ALG	mixed assemblage	42	0.59
33	RO	reef overhang	7	0.10
34	TURF ALG	mixed assemblage	19	0.27
35	ENC COR	Porites astreoides	3	0.04
36	TURF ALG	mixed assemblage	12	0.17
37	GORG	gorgonian base	5	0.07
38	TURF ALG	mixed assemblage	59	0.83
39	FOL COR	Agaricia agaricites	3	0.04

40	FLE ALG	Lobophora variegata	13	0.18
41	TURF ALG	mixed assemblage	72	1.01
42	FOL COR	Agaricia agaricites	4	0.06
43	TURF ALG	mixed assemblage	34	0.48
44	FOL COR	Agaricia agaricites	3	0.04
45	GORG	Erythropodium caribaeorum	8	0.11
46	TURF ALG	mixed assemblage	36	0.51
47	GORG	Erythropodium caribaeorum	13	0.18
48	TURF ALG	mixed assemblage	7	0.10
49	MAS COR	Montastrea annularis	7	0.10
50	RO	reef overhang	3	0.04
51	TURF ALG	mixed assemblage	50	0.70
52	MAS COR	Montastrea cavernosa	8	0.11
53	GORG	gorgonian base	5	0.07
54	TURF ALG	mixed assemblage	4	0.06
55	MAS COR	Montastrea annularis	14	0.20
56	RO	reef overhang	7	0.10
57	TURF ALG	mixed assemblage	14	0.20
58	BRA COR	Eusmilia fastigiata	3	0.04
59	TURF ALG	mixed assemblage	6	0.08
60	MAS COR	Montastrea cavernosa	4	0.06
61	TURF ALG	mixed assemblage	2	0.03
62	FOL COR	Agaricia agaricites	6	0.08
63	RO	reef overhang	5	0.07
64	TURF ALG	mixed assemblage	4	0.06
65	ENC COR	Porites astreoides	23	0.32
66	RO	reef overhang	8	0.11
67	TURF ALG	mixed assemblage	3	0.04

Gorgonians = 24

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Lobophora variegata*, *Halimeda copiosa* and fine sediment

B.1.8 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
BAJO DERRUMBADERO REEF, PONCE. August 22, 2001

DEPTH: 16.7 m
RUGOSITY: 3.18 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	18	0.25
1	MAS COR	Montastrea annularis	16	0.23
2	RO	reef overhang	9	0.13
3	MAS COR	Meandrina meandrites	5	0.07
4	RO	reef overhang	7	0.10
5	TURF ALG	mixed assemblage	22	0.31

6	MAS COR	Montastrea annularis	7	0.10
7	RO	reef overhang	7	0.10
8	ENC COR	Porites astreoides	4	0.06
9	TURF ALG	mixed assemblage	43	0.61
10	ENC COR	Porites astreoides	4	0.06
11	RO	reef overhang	3	0.04
12	TURF ALG	mixed assemblage	2	0.03
13	MAS COR	Montastrea annularis	28	0.39
14	MAS COR	Montastrea annularis	17	0.24
15	RO	reef overhang	4	0.06
16	TURF ALG	mixed assemblage	75	1.06
17	MAS COR	Montastrea annularis	6	0.08
18	TURF ALG	mixed assemblage	6	0.08
19	MAS COR	Montastrea annularis	3	0.04
20	TURF ALG	mixed assemblage	2	0.03
21	MAS COR	Montastrea annularis	4	0.06
22	FOL COR	Agaricia agaricites	6	0.08
23	TURF ALG	mixed assemblage	5	0.07
24	MAS COR	Montastrea annularis	4	0.06
25	TURF ALG	mixed assemblage	21	0.30
26	MAS COR	Montastrea annularis	14	0.20
27	TURF ALG	mixed assemblage	2	0.03
28	MAS COR	Montastrea cavernosa	9	0.13
29	TURF ALG	mixed assemblage	5	0.07
30	ENC COR	Porites astreoides	3	0.04
31	FOL COR	Agaricia agaricites	3	0.04
32	TURF ALG	mixed assemblage	17	0.24
33	MAS COR	Montastrea annularis	7	0.10
34	TURF ALG	mixed assemblage	27	0.38
35	ENC COR	Porites astreoides	4	0.06
36	RO	reef overhang	6	0.08
37	MAS COR	Montastrea annularis	12	0.17
38	MAS COR	Montastrea annularis	17	0.24
39	MAS COR	Montastrea cavernosa	4	0.06
40	TURF ALG	mixed assemblage	21	0.30
41	MAS COR	Montastrea cavernosa	4	0.06
42	TURF ALG	mixed assemblage	10	0.14
43	RO	reef overhang	13	0.18
44	TURF ALG	mixed assemblage	26	0.37
45	ERE SPO	erect sponge	8	0.11
46	FOL COR	Agaricia agaricites	12	0.17
47	TURF ALG	mixed assemblage	48	0.68
48	RO	reef overhang	5	0.07
49	MAS COR	Montastrea annularis	23	0.32
50	TURF ALG	mixed assemblage	22	0.31
51	MAS COR	Montastrea annularis	12	0.17
52	MAS COR	Montastrea annularis	17	0.24
53	MILLE	Millepora alcornis	4	0.06
54	TURF ALG	mixed assemblage	5	0.07
55	MAS COR	Mycetophyllia aliciae	10	0.14

56	TURF ALG	mixed assemblage	3	0.04
57	MAS COR	Diploria labyrinthiformis	8	0.11
58	TURF ALG	mixed assemblage	18	0.25
59	MAS COR	Diploria labyrinthiformis	5	0.07
60	ERE SPO	erect sponge	3	0.04
61	RO	reef overhang	5	0.07
62	TURF ALG	mixed assemblage	11	0.15
63	ENC COR	Porites astreoides	16	0.23
64	TURF ALG	mixed assemblage	63	0.89
65	RO	reef overhang	4	0.06
66	MAS COR	Diploria labyrinthiformis	19	0.27
67	TURF ALG	mixed assemblage	2	0.03
68	ENC COR	Porites astreoides	4	0.06
69	RO	reef overhang	8	0.11
70	TURF ALG	mixed assemblage	4	0.06
71	FOL COR	Agaricia agaricites	7	0.10
72	TURF ALG	mixed assemblage	8	0.11
73	MAS COR	Montastrea cavernosa	7	0.10
74	TURF ALG	mixed assemblage	13	0.18
75	ENC COR	Porites astreoides	3	0.04
76	MAS COR	Diploria strigosa	27	0.38

Gorgonians = 26

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Lobophora variegata*, *Halimeda copiosa* and fine sediment

B.1.9 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4,
BAJO DERRUMBADERO REEF, PONCE. August 22, 2001

DEPTH: 16.7 m

RUGOSITY: 3.27 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	4	0.06
1	MAS COR	Montastrea annularis	17	0.24
2	TURF ALG	mixed assemblage	12	0.17
3	MAS COR	Montastrea annularis	11	0.15
4	TURF ALG	mixed assemblage	2	0.03
5	MAS COR	Colpophyllia natans	39	0.55
6	RO	reef overhang	8	0.11
7	TURF ALG	mixed assemblage	7	0.10
8	ERE SPO	erect sponge	2	0.03
9	TURF ALG	mixed assemblage	6	0.08
10	MAS COR	Montastrea cavernosa	14	0.20
11	TURF ALG	mixed assemblage	3	0.04

12	MAS COR	Montastrea annularis	29	0.41
13	RO	reef overhang	8	0.11
14	TURF ALG	mixed assemblage	13	0.18
15	RO	reef overhang	6	0.08
16	MAS COR	Diploria strigosa	4	0.06
17	GORG	gorgonian base	5	0.07
18	MAS COR	Diploria strigosa	10	0.14
19	TURF ALG	mixed assemblage	12	0.17
20	MAS COR	Montastrea annularis	8	0.11
21	TURF ALG	mixed assemblage	20	0.28
22	FOL COR	Agaricia agaricites	3	0.04
23	TURF ALG	mixed assemblage	19	0.27
24	MAS COR	Montastrea annularis	21	0.30
25	TURF ALG	mixed assemblage	3	0.04
26	MAS COR	Montastrea cavernosa	48	0.68
27	TURF ALG	mixed assemblage	3	0.04
28	MAS COR	Montastrea annularis	37	0.52
29	MILLE	Millepora alcicornis	3	0.04
30	MAS COR	Montastrea annularis	45	0.63
31	RO	reef overhang	13	0.18
32	TURF ALG	mixed assemblage	4	0.06
33	MAS COR	Montastrea annularis	8	0.11
34	TURF ALG	mixed assemblage	3	0.04
35	MAS COR	Montastrea annularis	7	0.10
36	RO	reef overhang	2	0.03
37	FOL COR	Leptoseris cucullata	5	0.07
38	TURF ALG	mixed assemblage	11	0.15
39	FOL COR	Agaricia agaricites	6	0.08
40	TURF ALG	mixed assemblage	2	0.03
41	FOL COR	Agaricia agaricites	3	0.04
42	TURF ALG	mixed assemblage	4	0.06
43	MAS COR	Isophyllia sinuosa	7	0.10
44	TURF ALG	mixed assemblage	10	0.14
45	MAS COR	Montastrea annularis	12	0.17
46	TURF ALG	mixed assemblage	3	0.04
47	MAS COR	Montastrea cavernosa	12	0.17
48	RO	reef overhang	5	0.07
49	MAS COR	Mycetophyllia aliciae	8	0.11
50	RO	reef overhang	11	0.15
51	TURF ALG	mixed assemblage	6	0.08
52	RO	reef overhang	10	0.14
53	TURF ALG	mixed assemblage	15	0.21
54	MAS COR	Montastrea annularis	4	0.06
55	TURF ALG	mixed assemblage	17	0.24
56	MAS COR	Montastrea annularis	5	0.07
57	ERE SPO	erect sponge	2	0.03
58	TURF ALG	mixed assemblage	3	0.04
59	MAS COR	Montastrea annularis	11	0.15
60	TURF ALG	mixed assemblage	31	0.44
61	ERE SPO	Xestospongia muta	50	0.70

62	TURF ALG	mixed assemblage	2	0.03
63	MAS COR	Montastrea annularis	2	0.03
64	TURF ALG	mixed assemblage	10	0.14
65	MAS COR	Montastrea annularis	22	0.31
66	TURF ALG	mixed assemblage	28	0.39
67	ENC SPO	encrusting sponge	5	0.07
68	TURF ALG	mixed assemblage	20	0.28
69	RO	reef overhang	13	0.18
70	TURF ALG	mixed assemblage	7	0.10
71	ERE SPO	erect sponge	4	0.06
72	MAS COR	Montastrea annularis	4	0.06
73	MAS COR	Montastrea annularis	24	0.34
74	RO	reef overhang	12	0.17
75	TURF ALG	mixed assemblage	10	0.14
76	RO	reef overhang	7	0.10
77	MAS COR	Montastrea annularis	24	0.34
78	RO	reef overhang	7	0.10
79	MAS COR	Montastrea annularis	9	0.13
80	TURF ALG	mixed assemblage	2	0.03
81	MAS COR	Montastrea annularis	18	0.25

Gorgonians = 29

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Lobophora variegata*, *Halimeda copiosa* and fine sediment

B.1.10 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
BAJO DERRUMBADERO REEF, PONCE. August 22, 2001

DEPTH: 16.7 m
RUGOSITY: 2.89 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	30	0.42
1	RO	reef overhang	9	0.13
2	TURF ALG	mixed assemblage	10	0.14
3	RO	reef overhang	8	0.11
4	FOL COR	Agaricia fragilis	7	0.10
5	TURF ALG	mixed assemblage	5	0.07
6	MAS COR	Montastrea annularis	24	0.34
7	TURF ALG	mixed assemblage	10	0.14
8	MAS COR	Montastrea annularis	18	0.25
9	RO	reef overhang	2	0.03
10	MAS COR	Montastrea annularis	14	0.20
11	TURF ALG	mixed assemblage	25	0.35
12	GORG	Erythropodium caribaeorum	8	0.11

13	MAS COR	Montastrea annularis	13	0.18
14	RO	reef overhang	10	0.14
15	TURF ALG	mixed assemblage	15	0.21
16	FOL COR	Agaricia agaricites	12	0.17
17	TURF ALG	mixed assemblage	15	0.21
18	MAS COR	Montastrea cavernosa	8	0.11
19	MAS COR	Mycetophyllia ferox	5	0.07
20	TURF ALG	mixed assemblage	10	0.14
21	GORG	Erythropodium caribaeorum	3	0.04
22	TURF ALG	mixed assemblage	8	0.11
23	RO	reef overhang	4	0.06
24	TURF ALG	mixed assemblage	10	0.14
25	MAS COR	Diploria labyrinthiformis	16	0.23
26	TURF ALG	mixed assemblage	9	0.13
27	MAS COR	Montastrea annularis	16	0.23
28	TURF ALG	mixed assemblage	4	0.06
29	MAS COR	Montastrea annularis	6	0.08
30	TURF ALG	mixed assemblage	16	0.23
31	MAS COR	Montastrea annularis	15	0.21
32	TURF ALG	mixed assemblage	30	0.42
33	MAS COR	Montastrea cavernosa	4	0.06
34	TURF ALG	mixed assemblage	8	0.11
35	MAS COR	Montastrea annularis	26	0.37
36	MAS COR	Diploria labyrinthiformis	15	0.21
37	RO	reef overhang	8	0.11
38	MAS COR	Montastrea cavernosa	12	0.17
39	TURF ALG	mixed assemblage	11	0.15
40	MAS COR	Montastrea annularis	18	0.25
41	TURF ALG	mixed assemblage	16	0.23
42	MAS COR	Montastrea annularis	5	0.07
43	TURF ALG	mixed assemblage	5	0.07
44	ENC SPO	encrusting sponge	10	0.14
45	TURF ALG	mixed assemblage	7	0.10
46	GORG	Gorgonian base	3	0.04
47	RO	reef overhang	8	0.11
48	TURF ALG	mixed assemblage	3	0.04
49	MAS COR	Montastrea annularis	12	0.17
50	TURF ALG	mixed assemblage	7	0.10
51	BRA COR	Porites porites	3	0.04
52	TURF ALG	mixed assemblage	27	0.38
53	MAS COR	Meandrina meandrites	7	0.10
54	TURF ALG	mixed assemblage	8	0.11
55	MAS COR	Montastrea annularis	5	0.07
56	RO	reef overhang	8	0.11
57	GORG	Erythropodium caribaeorum	4	0.06
58	TURF ALG	mixed assemblage	13	0.18
59	MAS COR	Montastrea annularis	5	0.07
60	TURF ALG	mixed assemblage	3	0.04
61	GORG	Erythropodium caribaeorum	10	0.14
62	RO	reef overhang	4	0.06

63	GORG	Erythropodium caribaeorum	7	0.10
64	MAS COR	Montastrea annularis	8	0.11
65	FOL COR	Agaricia agaricites	4	0.06
66	ERE SPO	erect sponge	15	0.21
67	RO	reef overhang	5	0.07
68	MAS COR	Montastrea annularis	12	0.17
69	TURF ALG	mixed assemblage	9	0.13
70	MAS COR	Montastrea annularis	7	0.10
71	GORG	Gorgonian base	8	0.11
72	TURF ALG	mixed assemblage	9	0.13
73	MAS COR	Montastrea annularis	16	0.23
74	TURF ALG	mixed assemblage	5	0.07
75	MAS COR	Montastrea annularis	13	0.18
76	TURF ALG	mixed assemblage	2	0.03
77	ENC COR	Porites astreoides	4	0.06
78	MILLE	Millepora alcicornis	8	0.11
79	TURF ALG	mixed assemblage	9	0.13
80	ENC COR	Porites astreoides	2	0.03
81	MAS COR	Montastrea annularis	14	0.20
82	TURF ALG	mixed assemblage	10	0.14
83	MAS COR	Montastrea cavernosa	24	0.34
84	TURF ALG	mixed assemblage	10	0.14
85	FOL COR	Agaricia agaricites	6	0.08
86	ENC COR	Porites astreoides	10	0.14
87	TURF ALG	mixed assemblage	2	0.03
88	ENC COR	Porites astreoides	7	0.10
89	TURF ALG	mixed assemblage	8	0.11
90	MAS COR	Montastrea annularis	11	0.15

Gorgonians = 22

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Lobophora variegata*, *Halimeda copiosa* and fine sediment

B.1.11 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
BAJO TASMANIA REEF, PONCE. August 23, 2001

DEPTH: 9.1 m
RUGOSITY: 2.65 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	19	0.27
1	ASCI	colonial ascidian	4	0.06
2	GORG	Erythropodium caribaeorum	23	0.32
3	TURF ALG	mixed assemblage	26	0.37
4	MAS COR	Montastrea cavernosa	16	0.23

5	ENC SPO	encrusting sponge	2	0.03
6	GORG	Erythropodium caribaeorum	6	0.08
7	TURF ALG	mixed assemblage	26	0.37
8	CAL ALG	Halimeda copiosa	3	0.04
9	TURF ALG	mixed assemblage	40	0.56
10	GORG	Erythropodium caribaeorum	5	0.07
11	ERE SPO	erect sponge	8	0.11
12	RO	reef overhang	13	0.18
13	TURF ALG	mixed assemblage	27	0.38
14	MAS COR	Montastrea annularis	3	0.04
15	TURF ALG	mixed assemblage	18	0.25
16	GORG	Erythropodium caribaeorum	8	0.11
17	TURF ALG	mixed assemblage	11	0.15
18	FOL COR	Agaricia fragilis	6	0.08
19	TURF ALG	mixed assemblage	14	0.20
20	GORG	Erythropodium caribaeorum	56	0.79
21	RO	reef overhang	13	0.18
22	GORG	Erythropodium caribaeorum	20	0.28
23	TURF ALG	mixed assemblage	20	0.28
24	MAS COR	Montastrea cavernosa	4	0.06
25	TURF ALG	mixed assemblage	3	0.04
26	ZOAN	Palythoa caribaeorum	12	0.17
27	TURF ALG	mixed assemblage	10	0.14
28	MAS COR	Meandrina meandrites	11	0.15
29	TURF ALG	mixed assemblage	17	0.24
30	ENC SPO	encrusting sponge	5	0.07
31	TURF ALG	mixed assemblage	58	0.82
32	FOL COR	Agaricia fragilis	6	0.08
33	TURF ALG	mixed assemblage	20	0.28
34	ENC SPO	encrusting sponge	7	0.10
35	TURF ALG	mixed assemblage	20	0.28
36	ERE SPO	erect sponge	6	0.08
37	MAS COR	Montastrea cavernosa	24	0.34
38	TURF ALG	mixed assemblage	7	0.10
39	FOL COR	Agaricia fragilis	7	0.10
40	TURF ALG	mixed assemblage	19	0.27
41	MAS COR	Montastrea cavernosa	6	0.08
42	CAL ALG	Amphiroa sp.	10	0.14
43	TURF ALG	mixed assemblage	6	0.08
44	MAS COR	Montastrea annularis	17	0.24
45	GORG	gorgonian base	3	0.04
46	GORG	Erythropodium caribaeorum	6	0.08
47	RO	reef overhang	6	0.08
48	GORG	Erythropodium caribaeorum	11	0.15
49	TURF ALG	mixed assemblage	6	0.08
50	GORG	Erythropodium caribaeorum	31	0.44
51	CAL ALG	Halimeda copiosa	6	0.08
52	TURF ALG	mixed assemblage	29	0.41
53	RO	reef overhang	5	0.07
54	TURF ALG	mixed assemblage	50	0.70

55	MAS COR	Montastrea cavernosa	12	0.17
56	TURF ALG	mixed assemblage	6	0.08
57	MAS COR	Montastrea cavernosa	4	0.06
58	TURF ALG	mixed assemblage	2	0.03
59	ENC COR	Porites astreoides	4	0.06
60	ERE SPO	erect sponge	4	0.06
61	MAS COR	Montastrea cavernosa	6	0.08
62	RO	reef overhang	5	0.07
63	ENC COR	Porites astreoides	4	0.06
64	TURF ALG	mixed assemblage	25	0.35
65	RO	reef overhang	5	0.07
66	TURF ALG	mixed assemblage	6	0.08

Gorgonians = 75

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.12 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
BAJO TASMANIA REEF, PONCE. August 23, 2001

DEPTH: 9.1 m

RUGOSITY: 2.01 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	6	0.08
1	MAS COR	Siderastrea siderea	7	0.10
2	TURF ALG	mixed assemblage	17	0.24
3	RO	reef overhang	7	0.10
4	TURF ALG	mixed assemblage	13	0.18
5	GORG	Erythropodium caribaeorum	7	0.10
6	TURF ALG	mixed assemblage	7	0.10
7	BRA COR	Madracis decactis	13	0.18
8	GORG	Erythropodium caribaeorum	35	0.49
9	TURF ALG	mixed assemblage	7	0.10
10	GORG	Erythropodium caribaeorum	14	0.20
11	TURF ALG	mixed assemblage	106	1.49
12	GORG	Erythropodium caribaeorum	5	0.07
13	MAS COR	Montastrea cavernosa	6	0.08
14	TURF ALG	mixed assemblage	7	0.10
15	ERE SPO	erect sponge	3	0.04
16	CAL ALG	Halimeda copiosa	12	0.17
17	TURF ALG	mixed assemblage	22	0.31
18	RO	reef overhang	9	0.13
19	TURF ALG	mixed assemblage	19	0.27
20	GORG	gorgonian base	3	0.04
21	ENC COR	Porites astreoides	4	0.06

22	TURF ALG	mixed assemblage	12	0.17
23	ERE SPO	erect sponge	2	0.03
24	TURF ALG	mixed assemblage	5	0.07
25	ERE SPO	erect sponge	3	0.04
26	TURF ALG	mixed assemblage	28	0.39
27	RO	reef overhang	12	0.17
28	GORG	Erythropodium caribaeorum	18	0.25
29	TURF ALG	mixed assemblage	11	0.15
30	ERE SPO	erect sponge	3	0.04
31	MAS COR	Montastrea annularis	18	0.25
32	HOLE	hole	12	0.17
33	ERE SPO	erect sponge	4	0.06
34	TURF ALG	mixed assemblage	4	0.06
35	ERE SPO	erect sponge	3	0.04
36	GORG	Erythropodium caribaeorum	15	0.21
37	MAS COR	Siderastrea siderea	18	0.25
38	TURF ALG	mixed assemblage	19	0.27
39	ERE SPO	erect sponge	4	0.06
40	TURF ALG	mixed assemblage	8	0.11
41	ZOAN	Palythoa caribaeorum	5	0.07
42	FOL COR	Agaricia agaricites	3	0.04
43	TURF ALG	mixed assemblage	4	0.06
44	RO	reef overhang	16	0.23
45	TURF ALG	mixed assemblage	70	0.99
46	RO	reef overhang	9	0.13
47	TURF ALG	mixed assemblage	5	0.07
48	ENC COR	Porites astreoides	4	0.06
49	TURF ALG	mixed assemblage	3	0.04
50	MAS COR	Montastrea cavernosa	7	0.10
51	ZOAN	Palythoa caribaeorum	10	0.14
52	TURF ALG	mixed assemblage	1	0.01
53	MAS COR	Montastrea cavernosa	10	0.14
54	TURF ALG	mixed assemblage	4	0.06
55	MAS COR	Montastrea cavernosa	8	0.11
56	RO	reef overhang	6	0.08
57	TURF ALG	mixed assemblage	14	0.20
58	RO	reef overhang	12	0.17
59	GORG	Erythropodium caribaeorum	48	0.68
60	RO	reef overhang	7	0.10
61	TURF ALG	mixed assemblage	22	0.31
62	ZOAN	Palythoa caribaeorum	4	0.06
63	TURF ALG	mixed assemblage	23	0.32
64	GORG	Erythropodium caribaeorum	8	0.11
65	TURF ALG	mixed assemblage	22	0.31

Gorgonians = 67

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.13 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
BAJO TASMANIA REEF, PONCE. August 23, 2001

DEPTH: 9.1 m

RUGOSITY: 3.01 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	GORG	Erythropodium caribaeorum	26	0.37
1	RO	reef overhang	14	0.20
2	TURF ALG	mixed assemblage	32	0.45
3	GORG	Erythropodium caribaeorum	20	0.28
4	TURF ALG	mixed assemblage	9	0.13
5	GORG	Erythropodium caribaeorum	7	0.10
6	ENC SPO	encrusting sponge	5	0.07
7	GORG	Erythropodium caribaeorum	6	0.08
8	TURF ALG	mixed assemblage	71	1.00
9	ENC SPO	encrusting sponge	12	0.17
10	SAND	sand	10	0.14
11	RO	reef overhang	9	0.13
12	GORG	Erythropodium caribaeorum	25	0.35
13	TURF ALG	mixed assemblage	10	0.14
14	GORG	gorgonian base	2	0.03
15	TURF ALG	mixed assemblage	10	0.14
16	CAL ALG	Halimeda copiosa	8	0.11
17	TURF ALG	mixed assemblage	101	1.42
18	RO	reef overhang	21	0.30
19	GORG	gorgonian base	4	0.06
20	RO	reef overhang	17	0.24
21	ERE SPO	erect sponge	4	0.06
22	CAL ALG	Halimeda copiosa	6	0.08
23	TURF ALG	mixed assemblage	21	0.30
24	GORG	Erythropodium caribaeorum	4	0.06
25	ENC COR	Porites astreoides	7	0.10
26	RO	reef overhang	5	0.07
27	GORG	Erythropodium caribaeorum	28	0.39
28	TURF ALG	mixed assemblage	22	0.31
29	ERE SPO	erect sponge	10	0.14
30	GORG	Erythropodium caribaeorum	6	0.08
31	TURF ALG	mixed assemblage	41	0.58
32	BRA COR	Madracis decactis	20	0.28
33	TURF ALG	mixed assemblage	38	0.54
34	MAS COR	Montastrea cavernosa	16	0.23
35	TURF ALG	mixed assemblage	15	0.21
36	SILT	silt	25	0.35
37	MAS COR	Meandrina meandrites	19	0.27
38	RO	reef overhang	5	0.07
39	TURF ALG	mixed assemblage	7	0.10

40	MAS COR	Montastrea cavernosa	6	0.08
41	TURF ALG	mixed assemblage	4	0.06
42	ERE SPO	erect sponge	3	0.04
43	TURF ALG	mixed assemblage	69	0.97
44	GORG	Erythropodium caribaeorum	12	0.17
45	TURF ALG	mixed assemblage	6	0.08
46	MAS COR	Montastrea cavernosa	7	0.10
47	RO	reef overhang	7	0.10
48	GORG	Erythropodium caribaeorum	20	0.28
49	TURF ALG	mixed assemblage	40	0.56
50	MAS COR	Montastrea cavernosa	6	0.08
51	ENC SPO	encrusting sponge	4	0.06
52	ERE SPO	erect sponge	10	0.14
53	TURF ALG	mixed assemblage	3	0.04
54	ERE SPO	erect sponge	2	0.03
55	TURF ALG	mixed assemblage	7	0.10

Gorgonians = 93

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.14 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4, BAJO TASMANIA REEF, PONCE. August 23, 2001

DEPTH: 9.1 m

RUGOSITY: 1.72 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	GORG	Erythropodium caribaeorum	6	0.08
1	ENC SPO	encrusting sponge	4	0.06
2	TURF ALG	mixed assemblage	15	0.21
3	ENC SPO	encrusting sponge	3	0.04
4	TURF ALG	mixed assemblage	6	0.08
5	GORG	Erythropodium caribaeorum	4	0.06
6	TURF ALG	mixed assemblage	8	0.11
7	ENC SPO	encrusting sponge	5	0.07
8	GORG	Erythropodium caribaeorum	15	0.21
9	MAS COR	Montastrea cavernosa	4	0.06
10	TURF ALG	mixed assemblage	10	0.14
11	MAS COR	Montastrea cavernosa	7	0.10
12	ENC SPO	encrusting sponge	3	0.04
13	TURF ALG	mixed assemblage	4	0.06
14	GORG	Erythropodium caribaeorum	6	0.08
15	TURF ALG	mixed assemblage	20	0.28
16	SAND	sand	14	0.20
17	TURF ALG	mixed assemblage	50	0.70

18	GORG	Erythropodium caribaeorum	10	0.14
19	MAS COR	Montastrea cavernosa	5	0.07
20	TURF ALG	mixed assemblage	6	0.08
21	ENC SPO	encrusting sponge	2	0.03
22	TURF ALG	mixed assemblage	14	0.20
23	GORG	gorgonian base	3	0.04
24	TURF ALG	mixed assemblage	3	0.04
25	ENC SPO	encrusting sponge	4	0.06
26	TURF ALG	mixed assemblage	6	0.08
27	ENC SPO	encrusting sponge	4	0.06
28	TURF ALG	mixed assemblage	24	0.34
29	ENC SPO	encrusting sponge	4	0.06
30	TURF ALG	mixed assemblage	20	0.28
31	GORG	Erythropodium caribaeorum	10	0.14
32	TURF ALG	mixed assemblage	20	0.28
33	MAS COR	Montastrea cavernosa	19	0.27
34	TURF ALG	mixed assemblage	24	0.34
35	SAND	sand	8	0.11
36	GORG	Erythropodium caribaeorum	10	0.14
37	TURF ALG	mixed assemblage	4	0.06
38	GORG	gorgonian base	3	0.04
39	SAND	sand	11	0.15
40	ENC SPO	encrusting sponge	3	0.04
41	TURF ALG	mixed assemblage	57	0.80
42	ENC SPO	encrusting sponge	5	0.07
43	BRA COR	Porites porites	5	0.07
44	ENC SPO	encrusting sponge	4	0.06
45	TURF ALG	mixed assemblage	15	0.21
46	GORG	Erythropodium caribaeorum	7	0.10
47	TURF ALG	mixed assemblage	8	0.11
48	GORG	Erythropodium caribaeorum	13	0.18
49	MAS COR	Montastrea cavernosa	14	0.20
50	TURF ALG	mixed assemblage	22	0.31
51	GORG	Erythropodium caribaeorum	8	0.11
52	ENC SPO	encrusting sponge	4	0.06
53	GORG	Erythropodium caribaeorum	15	0.21
54	TURF ALG	mixed assemblage	45	0.63
55	ENC SPO	encrusting sponge	6	0.08
56	TURF ALG	mixed assemblage	8	0.11
57	ZOAN	Zoanthus sp.	3	0.04
58	MILLE	Millepora alcicornis	10	0.14
59	GORG	Erythropodium caribaeorum	12	0.17
60	TURF ALG	mixed assemblage	10	0.14
61	HOLE	hole	5	0.07
62	GORG	Erythropodium caribaeorum	7	0.10
63	TURF ALG	mixed assemblage	21	0.30
64	MAS COR	Montastrea cavernosa	8	0.11
65	TURF ALG	mixed assemblage	26	0.37
66	ENC SPO	encrusting sponge	13	0.18
67	TURF ALG	mixed assemblage	34	0.48

68	GORG	Erythropodium caribaeorum	12	0.17
69	TURF ALG	mixed assemblage	9	0.13
70	SAND	sand	4	0.06
71	RO	reef overhang	6	0.08
72	ENC SPO	encrusting sponge	9	0.13
73	MAS COR	Montastrea cavernosa	6	0.08

Gorgonians = 92

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.1.15 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
BAJO TASMANIA REEF, PONCE. August 23, 2001

DEPTH: 9.1 m

RUGOSITY: 2.07 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	5	0.07
1	FOL COR	Agaricia agaricites	10	0.14
2	GORG	Erythropodium caribaeorum	11	0.15
3	ENC SPO	encrusting sponge	6	0.08
4	TURF ALG	mixed assemblage	20	0.28
5	SAND	sand	8	0.11
6	TURF ALG	mixed assemblage	6	0.08
7	ENC SPO	encrusting sponge	4	0.06
8	TURF ALG	mixed assemblage	12	0.17
9	MAS COR	Montastrea cavernosa	9	0.13
10	TURF ALG	mixed assemblage	53	0.75
11	ENC SPO	encrusting sponge	3	0.04
12	GORG	Erythropodium caribaeorum	20	0.28
13	MILLE	Millepora alcicornis	8	0.11
14	ENC SPO	encrusting sponge	3	0.04
15	GORG	Erythropodium caribaeorum	6	0.08
16	TURF ALG	mixed assemblage	4	0.06
17	GORG	Erythropodium caribaeorum	9	0.13
18	TURF ALG	mixed assemblage	8	0.11
19	ENC SPO	encrusting sponge	7	0.10
20	TURF ALG	mixed assemblage	30	0.42
21	SAND	sand	20	0.28
22	TURF ALG	mixed assemblage	10	0.14
23	FOL COR	Agaricia agaricites	7	0.10
24	TURF ALG	mixed assemblage	8	0.11
25	GORG	gorgonian base	3	0.04
26	TURF ALG	mixed assemblage	4	0.06
27	GORG	Erythropodium caribaeorum	10	0.14

28	MAS COR	Siderastrea radians	7	0.10
29	TURF ALG	mixed assemblage	19	0.27
30	SAND	sand	8	0.11
31	MAS COR	Montastrea cavernosa	6	0.08
32	TURF ALG	mixed assemblage	35	0.49
33	GORG	Erythropodium caribaeorum	25	0.35
34	TURF ALG	mixed assemblage	8	0.11
35	GORG	Erythropodium caribaeorum	7	0.10
36	MILLE	Millepora alcicornis	12	0.17
37	MAS COR	Montastrea cavernosa	11	0.15
38	FLE ALG	unident. green algae	3	0.04
39	GORG	Erythropodium caribaeorum	8	0.11
40	TURF ALG	mixed assemblage	17	0.24
41	MAS COR	Montastrea cavernosa	8	0.11
42	GORG	Erythropodium caribaeorum	10	0.14
43	GORG	gorgonian base	5	0.07
44	GORG	Erythropodium caribaeorum	12	0.17
45	FLE ALG	unident. algae	3	0.04
46	TURF ALG	mixed assemblage	20	0.28
47	ENC SPO	encrusting sponge	5	0.07
48	GORG	Erythropodium caribaeorum	12	0.17
49	ENC SPO	encrusting sponge	4	0.06
50	TURF ALG	mixed assemblage	40	0.56
51	SAND	sand	23	0.32
52	ENC SPO	encrusting sponge	7	0.10
53	TURF ALG	mixed assemblage	8	0.11
54	FOL COR	Agaricia fragilis	13	0.18
55	TURF ALG	mixed assemblage	17	0.24
56	ZOAN	Palythoa caribaeorum	5	0.07
57	TURF ALG	mixed assemblage	22	0.31
58	GORG	Erythropodium caribaeorum	6	0.08
59	TURF ALG	mixed assemblage	10	0.14
60	GORG	Erythropodium caribaeorum	10	0.14
61	TURF ALG	mixed assemblage	78	1.10
62	MAS COR	Siderastrea radians	4	0.06
63	ENC SPO	encrusting sponge	6	0.08
64	TURF ALG	mixed assemblage	26	0.37
65	GORG	Erythropodium caribaeorum	6	0.08
66	ENC SPO	encrusting sponge	5	0.07
67	ENC COR	Porites astreoides	16	0.23
68	TURF ALG	mixed assemblage	6	0.08

Gorgonians = 97

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda copiosa* and fine sediment

B.2.1 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1, VERIL MARIA LANGA REEF , GUAYANILLA. August 27, 2001

DEPTH: 15.2 m
RUGOSITY: 3.16 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	FOL COR	Agaricia agaricites	3	0.04
1	TURF ALG	mixed assemblage	9	0.13
2	FOL COR	Agaricia agaricites	2	0.03
3	TURF ALG	mixed assemblage	6	0.08
4	FOL COR	Agaricia agaricites	11	0.15
5	TURF ALG	mixed assemblage	10	0.14
6	FOL COR	Agaricia agaricites	3	0.04
7	TURF ALG	mixed assemblage	6	0.08
8	FOL COR	Agaricia agaricites	4	0.06
9	TURF ALG	mixed assemblage	6	0.08
10	RO	reef overhang	10	0.14
11	TURF ALG	mixed assemblage	34	0.48
12	RO	reef overhang	26	0.37
13	MAS COR	Montastrea annularis	10	0.14
14	RO	reef overhang	3	0.04
15	MAS COR	Montastrea annularis	11	0.15
16	TURF ALG	mixed assemblage	8	0.11
17	MAS COR	Montastrea annularis	4	0.06
18	TURF ALG	mixed assemblage	36	0.51
19	HOLE	hole	6	0.08
20	TURF ALG	mixed assemblage	29	0.41
21	RO	reef overhang	5	0.07
22	TURF ALG	mixed assemblage	5	0.07
23	MAS COR	Siderastrea siderea	5	0.07
24	TURF ALG	mixed assemblage	8	0.11
25	MAS COR	Montastrea annularis	4	0.06
26	TURF ALG	mixed assemblage	39	0.55
27	MILLE	Millepora alcicornis	3	0.04
28	RO	reef overhang	15	0.21
29	MAS COR	Diploria strigosa	12	0.17
30	TURF ALG	mixed assemblage	15	0.21
31	RO	reef overhang	5	0.07
32	TURF ALG	mixed assemblage	4	0.06
33	FOL COR	Agaricia fragilis	6	0.08
34	TURF ALG	mixed assemblage	41	0.58
35	RO	reef overhang	16	0.23
36	MAS COR	Montastrea cavernosa	19	0.27
37	TURF ALG	mixed assemblage	8	0.11
38	MAS COR	Siderastrea siderea	2	0.03
39	TURF ALG	mixed assemblage	48	0.68
40	ZOAN	Palythoa caribaeorum	4	0.06
41	TURF ALG	mixed assemblage	7	0.10
42	RO	reef overhang	33	0.46
43	MAS COR	Montastrea annularis	46	0.65

44	RO	reef overhang	3	0.04
45	MAS COR	Montastrea annularis	7	0.10
46	DEA COR	dead Acropora cervicornis	23	0.32
47	TURF ALG	mixed assemblage	9	0.13
48	MAS COR	Montastrea annularis	7	0.10
49	RO	reef overhang	23	0.32
50	TURF ALG	mixed assemblage	32	0.45
51	RO	reef overhang	12	0.17
52	MAS COR	Montastrea cavernosa	12	0.17
53	TURF ALG	mixed assemblage	29	0.41
54	FOL COR	Agaricia agaricites	4	0.06
55	TURF ALG	mixed assemblage	13	0.18
56	FOL COR	Agaricia agaricites	4	0.06
57	RO	reef overhang	6	0.08
58	TURF ALG	mixed assemblage	33	0.46
59	GORG	Erythropodium caribaeorum	4	0.06
60	TURF ALG	mixed assemblage	4	0.06
61	GORG	Erythropodium caribaeorum	5	0.07
62	TURF ALG	mixed assemblage	26	0.37
63	FOL COR	Agaricia agaricites	4	0.06
64	TURF ALG	mixed assemblage	6	0.08
65	MAS COR	Montastrea cavernosa	7	0.10
66	TURF ALG	mixed assemblage	10	0.14
67	MAS COR	Meandrina meandrites	5	0.07
68	RO	reef overhang	4	0.06
69	TURF ALG	mixed assemblage	20	0.28
70	FOL COR	Agaricia agaricites	18	0.25
71	TURF ALG	mixed assemblage	17	0.24

Gorgonians = 31

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.2 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
VERIL MARIA LANGA REEF , GUAYANILLA. August 27, 2001

DEPTH: 15.2 m

RUGOSITY: 2.89 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	22	0.31
1	TURF ALG	mixed assemblage	17	0.24
2	ZOAN	Palythoa caribaeorum	11	0.15
3	RO	reef overhang	8	0.11
4	TURF ALG	mixed assemblage	3	0.04
5	RO	reef overhang	12	0.17

6	TURF ALG	mixed assemblage	42	0.59
7	FOL COR	Agaricia agaricites	7	0.10
8	TURF ALG	mixed assemblage	38	0.54
9	RO	reef overhang	5	0.07
10	TURF ALG	mixed assemblage	19	0.27
11	FOL COR	Agaricia agaricites	9	0.13
12	TURF ALG	mixed assemblage	2	0.03
13	FOL COR	Agaricia agaricites	4	0.06
14	TURF ALG	mixed assemblage	3	0.04
15	MAS COR	Montastrea annularis	12	0.17
16	TURF ALG	mixed assemblage	10	0.14
17	GORG	Erythropodium caribaeorum	7	0.10
18	TURF ALG	mixed assemblage	3	0.04
19	BRA COR	Madracis decactis	4	0.06
20	FOL COR	Agaricia agaricites	5	0.07
21	TURF ALG	mixed assemblage	9	0.13
22	ERE SPO	erect sponge	2	0.03
23	TURF ALG	mixed assemblage	9	0.13
24	MAS COR	Montastrea cavernosa	7	0.10
25	TURF ALG	mixed assemblage	19	0.27
26	MAS COR	Montastrea annularis	19	0.27
27	TURF ALG	mixed assemblage	18	0.25
28	MAS COR	Montastrea annularis	20	0.28
29	TURF ALG	mixed assemblage	29	0.41
30	MAS COR	Montastrea annularis	60	0.85
31	RO	reef overhang	45	0.63
32	TURF ALG	mixed assemblage	66	0.93
33	MAS COR	Meandrina meandrites	7	0.10
34	TURF ALG	mixed assemblage	12	0.17
35	BRA COR	Madracis decactis	3	0.04
36	TURF ALG	mixed assemblage	8	0.11
37	BRA COR	Madracis decactis	5	0.07
38	RO	reef overhang	15	0.21
39	MAS COR	Montastrea annularis	6	0.08
40	RO	reef overhang	6	0.08
41	MAS COR	Montastrea annularis	29	0.41
42	TURF ALG	mixed assemblage	2	0.03
43	RO	reef overhang	11	0.15
44	TURF ALG	mixed assemblage	22	0.31
45	MAS COR	Mycetophyllia lamarckiana	3	0.04
46	TURF ALG	mixed assemblage	6	0.08
47	ENC COR	Porites astreoides	4	0.06
48	TURF ALG	mixed assemblage	26	0.37
49	FOL COR	Agaricia agaricites	6	0.08
50	TURF ALG	mixed assemblage	4	0.06
51	GORG	Briareum asbestinum	6	0.08
52	TURF ALG	mixed assemblage	34	0.48
53	MAS COR	Montastrea annularis	46	0.65
54	MAS COR	Montastrea annularis	22	0.31
55	TURF ALG	mixed assemblage	10	0.14

56	MAS COR	Montastrea annularis	11	0.15
57	RO	reef overhang	12	0.17
58	TURF ALG	mixed assemblage	6	0.08
59	MAS COR	Siderastrea siderea	2	0.03
60	TURF ALG	mixed assemblage	15	0.21
61	FOL COR	Agaricia agaricites	11	0.15
62	TURF ALG	mixed assemblage	19	0.27

Gorgonians = 25

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.1.3 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
VERIL MARIA LANGA REEF , GUAYANILLA. August 27, 2001

DEPTH: 15.2 ms
RUGOSITY: 2.92 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	29	0.41
1	GORG	Erythropodium caribaeorum	3	0.04
2	TURF ALG	mixed assemblage	5	0.07
3	GORG	Erythropodium caribaeorum	11	0.15
4	FOL COR	Agaricia agaricites	8	0.11
5	MAS COR	Montastrea cavernosa	24	0.34
6	TURF ALG	mixed assemblage	12	0.17
7	GORG	Erythropodium caribaeorum	12	0.17
8	TURF ALG	mixed assemblage	15	0.21
9	GORG	Erythropodium caribaeorum	9	0.13
10	TURF ALG	mixed assemblage	5	0.07
11	MILLE	Millepora alcicornis	4	0.06
12	TURF ALG	mixed assemblage	26	0.37
13	GORG	Erythropodium caribaeorum	6	0.08
14	TURF ALG	mixed assemblage	23	0.32
15	GORG	Erythropodium caribaeorum	14	0.20
16	TURF ALG	mixed assemblage	27	0.38
17	MAS COR	Montastrea cavernosa	9	0.13
18	TURF ALG	mixed assemblage	21	0.30
19	GORG	Erythropodium caribaeorum	10	0.14
20	MAS COR	Diploria strigosa	7	0.10
21	TURF ALG	mixed assemblage	7	0.10
22	MAS COR	Montastrea cavernosa	7	0.10
23	TURF ALG	mixed assemblage	32	0.45
24	FOL COR	Agaricia agaricites	5	0.07
25	TURF ALG	mixed assemblage	11	0.15
26	FOL COR	Agaricia agaricites	3	0.04

27	TURF ALG	mixed assemblage	4	0.06
28	GORG	Erythropodium caribaeorum	3	0.04
29	MAS COR	Montastrea annularis	9	0.13
30	TURF ALG	mixed assemblage	7	0.10
31	GORG	Erythropodium caribaeorum	26	0.37
32	FOL COR	Agaricia agaricites	3	0.04
33	TURF ALG	mixed assemblage	30	0.42
34	FOL COR	Agaricia agaricites	10	0.14
35	TURF ALG	mixed assemblage	57	0.80
36	GORG	Erythropodium caribaeorum	5	0.07
37	TURF ALG	mixed assemblage	24	0.34
38	ERE SPO	erect sponge	9	0.13
39	TURF ALG	mixed assemblage	30	0.42
40	RO	reef overhang	13	0.18
41	MAS COR	Montastrea annularis	18	0.25
42	HOLE	hole	8	0.11
43	ENC SPO	Anthosigmella varians	24	0.34
44	ERE SPO	erect sponge	9	0.13
45	TURF ALG	mixed assemblage	14	0.20
46	MAS COR	Montastrea cavernosa	13	0.18
47	TURF ALG	mixed assemblage	7	0.10
48	ENC SPO	encrusting sponge	6	0.08
49	TURF ALG	mixed assemblage	33	0.46
50	GORG	Erythropodium caribaeorum	6	0.08
51	TURF ALG	mixed assemblage	10	0.14
52	MAS COR	Siderastrea siderea	13	0.18
53	GORG	Erythropodium caribaeorum	6	0.08
54	TURF ALG	mixed assemblage	40	0.56
55	MAS COR	Meandrina meandrites	6	0.08
56	TURF ALG	mixed assemblage	4	0.06
57	GORG	Erythropodium caribaeorum	6	0.08
58	TURF ALG	mixed assemblage	5	0.07
59	GORG	Erythropodium caribaeorum	10	0.14
60	MAS COR	Diploria strigosa	5	0.07
61	TURF ALG	mixed assemblage	8	0.11
62	ENC SPO	encrusting sponge	3	0.04
63	TURF ALG	mixed assemblage	8	0.11
64	MAS COR	Montastrea cavernosa	29	0.41
65	TURF ALG	mixed assemblage	2	0.03
66	MAS COR	Diploria strigosa	15	0.21
67	TURF ALG	mixed assemblage	17	0.24
68	FOL COR	Agaricia agaricites	9	0.13
69	TURF ALG	mixed assemblage	8	0.11

Gorgonians = 23

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.4 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4,
VERIL MARIA LANGA REEF , GUAYANILLA. August 27, 2001

DEPTH: 15.2 m

RUGOSITY: 2.07 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	4	0.06
1	ENC SPO	encrusting sponge	6	0.08
2	MAS COR	Montastrea annularis	15	0.21
3	GORG	Erythropodium caribaeorum	6	0.08
4	RO	reef overhang	5	0.07
5	GORG	Erythropodium caribaeorum	9	0.13
6	TURF ALG	mixed assemblage	9	0.13
7	ENC SPO	encrusting sponge	4	0.06
8	GORG	Erythropodium caribaeorum	5	0.07
9	TURF ALG	mixed assemblage	14	0.20
10	FOL COR	Agaricia agaricites	3	0.04
11	TURF ALG	mixed assemblage	6	0.08
12	FOL COR	Agaricia agaricites	4	0.06
13	MILLE	Millepora alcicornis	4	0.06
14	FOL COR	Agaricia agaricites	5	0.07
15	TURF ALG	mixed assemblage	4	0.06
16	FOL COR	Agaricia agaricites	10	0.14
17	TURF ALG	mixed assemblage	4	0.06
18	ENC SPO	encrusting sponge	3	0.04
19	FOL COR	Agaricia agaricites	10	0.14
20	TURF ALG	mixed assemblage	66	0.93
21	FOL COR	Agaricia agaricites	10	0.14
22	MAS COR	Montastrea annularis	12	0.17
23	TURF ALG	mixed assemblage	1	0.01
24	MAS COR	Diploria strigosa	9	0.13
25	TURF ALG	mixed assemblage	43	0.61
26	FOL COR	Agaricia agaricites	18	0.25
27	TURF ALG	mixed assemblage	20	0.28
28	MAS COR	Montastrea cavernosa	6	0.08
29	TURF ALG	mixed assemblage	3	0.04
30	MAS COR	Montastrea cavernosa	5	0.07
31	TURF ALG	mixed assemblage	5	0.07
32	GORG	Erythropodium caribaeorum	7	0.10
33	TURF ALG	mixed assemblage	5	0.07
34	FOL COR	Agaricia agaricites	22	0.31
35	GORG	Erythropodium caribaeorum	5	0.07
36	FOL COR	Agaricia agaricites	4	0.06
37	TURF ALG	mixed assemblage	7	0.10
38	GORG	Erythropodium caribaeorum	3	0.04
39	MAS COR	Montastrea annularis	4	0.06
40	GORG	Erythropodium caribaeorum	11	0.15

41	FOL COR	Agaricia agaricites	7	0.10
42	MILLE	Millepora complanata	4	0.06
43	TURF ALG	mixed assemblage	16	0.23
44	FOL COR	Agaricia agaricites	3	0.04
45	TURF ALG	mixed assemblage	12	0.17
46	GORG	Erythropodium caribaeorum	6	0.08
47	TURF ALG	mixed assemblage	66	0.93
48	FOL COR	Agaricia agaricites	3	0.04
49	TURF ALG	mixed assemblage	53	0.75
50	GORG	gorgonian base	6	0.08
51	FOL COR	Agaricia fragilis	5	0.07
52	TURF ALG	mixed assemblage	4	0.06
53	GORG	Erythropodium caribaeorum	14	0.20
54	TURF ALG	mixed assemblage	29	0.41
55	ENC COR	Porites astreoides	13	0.18
56	TURF ALG	mixed assemblage	14	0.20
57	MAS COR	Mycetophyllia lamarckiana	4	0.06
58	TURF ALG	mixed assemblage	4	0.06
59	GORG	Erythropodium caribaeorum	7	0.10
60	FOL COR	Agaricia agaricites	8	0.11
61	TURF ALG	mixed assemblage	9	0.13
62	FOL COR	Agaricia agaricites	6	0.08
63	GORG	Erythropodium caribaeorum	6	0.08
64	TURF ALG	mixed assemblage	10	0.14
65	FOL COR	Agaricia agaricites	5	0.07
66	TURF ALG	mixed assemblage	10	0.14
67	BRA COR	Eusmilia fastigiata	6	0.08
68	TURF ALG	mixed assemblage	27	0.38
69	ENC COR	Porites astreoides	4	0.06
70	TURF ALG	mixed assemblage	9	0.13
71	FOL COR	Agaricia agaricites	3	0.04
72	TURF ALG	mixed assemblage	8	0.11
73	ENC COR	Porites astreoides	3	0.04
74	TURF ALG	mixed assemblage	12	0.17
75	GORG	Erythropodium caribaeorum	9	0.13
76	FOL COR	Agaricia agaricites	11	0.15
77	GORG	Erythropodium caribaeorum	18	0.25
78	FOL COR	Agaricia agaricites	9	0.13
79	TURF ALG	mixed assemblage	13	0.18
80	GORG	Erythropodium caribaeorum	5	0.07

Gorgonians = 16

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.5 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
VERIL MARIA LANGA REEF , GUAYANILLA. August 27, 2001

DEPTH: 15.2 m
RUGOSITY: 4.90 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	17	0.24
1	MAS COR	Montastrea annularis	21	0.30
2	TURF ALG	mixed assemblage	9	0.13
3	MAS COR	Montastrea annularis	3	0.04
4	TURF ALG	mixed assemblage	5	0.07
5	RO	reef overhang	34	0.48
6	TURF ALG	mixed assemblage	32	0.45
7	FOL COR	Agaricia fragilis	4	0.06
8	GORG	Gorgonian base	2	0.03
9	TURF ALG	mixed assemblage	14	0.20
10	RO	reef overhang	10	0.14
11	TURF ALG	mixed assemblage	37	0.52
12	SILT	silt	18	0.25
13	RO	reef overhang	33	0.46
14	FOL COR	Agaricia agaricites	3	0.04
15	RO	reef overhang	9	0.13
16	ZOAN	Palythoa caribaeorum	11	0.15
17	ERE SPO	erect sponge	2	0.03
18	ZOAN	Palythoa caribaeorum	3	0.04
19	TURF ALG	mixed assemblage	5	0.07
20	MAS COR	Montastrea annularis	10	0.14
21	TURF ALG	mixed assemblage	9	0.13
22	RO	reef overhang	6	0.08
23	TURF ALG	mixed assemblage	5	0.07
24	RO	reef overhang	8	0.11
25	FOL COR	Agaricia agaricites	7	0.10
26	TURF ALG	mixed assemblage	40	0.56
27	GORG	Erythropodium caribaeorum	9	0.13
28	TURF ALG	mixed assemblage	7	0.10
29	RO	reef overhang	10	0.14
30	MAS COR	Montastrea annularis	10	0.14
31	TURF ALG	mixed assemblage	23	0.32
32	GORG	Erythropodium caribaeorum	10	0.14
33	TURF ALG	mixed assemblage	20	0.28
34	RO	reef overhang	23	0.32
35	MAS COR	Montastrea annularis	4	0.06
36	MAS COR	Montastrea annularis	3	0.04
37	TURF ALG	mixed assemblage	3	0.04
38	GORG	Gorgonian base	2	0.03
39	MAS COR	Montastrea annularis	5	0.07
40	TURF ALG	mixed assemblage	2	0.03
41	MAS COR	Montastrea annularis	5	0.07
42	TURF ALG	mixed assemblage	6	0.08

43	MAS COR	Montastrea annularis	23	0.32
44	RO	reef overhang	11	0.15
45	TURF ALG	mixed assemblage	5	0.07
46	FOL COR	Agaricia agaricites	2	0.03
47	RO	reef overhang	12	0.17
48	MAS COR	Montastrea annularis	16	0.23
49	RO	reef overhang	33	0.46
50	TURF ALG	mixed assemblage	26	0.37
51	RO	reef overhang	10	0.14
52	GORG	Erythropodium caribaeorum	6	0.08
53	RO	reef overhang	9	0.13
54	MAS COR	Montastrea annularis	24	0.34
55	TURF ALG	mixed assemblage	15	0.21
56	ERE SPO	erect sponge	8	0.11
57	TURF ALG	mixed assemblage	5	0.07
58	RO	reef overhang	10	0.14
59	MAS COR	Meandrina meandrites	6	0.08
60	TURF ALG	mixed assemblage	16	0.23
61	ZOAN	Palythoa caribaeorum	7	0.10
62	RO	reef overhang	4	0.06
63	TURF ALG	mixed assemblage	23	0.32
64	ERE SPO	erect sponge	2	0.03
65	TURF ALG	mixed assemblage	15	0.21
66	MAS COR	Montastrea annularis	76	1.07
67	TURF ALG	mixed assemblage	23	0.32
68	GORG	Erythropodium caribaeorum	30	0.42
69	TURF ALG	mixed assemblage	5	0.07
70	RO	reef overhang	5	0.07
71	TURF ALG	mixed assemblage	10	0.14
72	GORG	Erythropodium caribaeorum	6	0.08
73	TURF ALG	mixed assemblage	10	0.14
74	ENC COR	Porites astreoides	3	0.04
75	TURF ALG	mixed assemblage	8	0.11
76	ERE SPO	erect sponge	3	0.04
77	GORG	Erythropodium caribaeorum	17	0.24
78	TURF ALG	mixed assemblage	6	0.08
79	FOL COR	Agaricia agaricites	4	0.06
80	TURF ALG	mixed assemblage	17	0.24
81	FOL COR	Agaricia agaricites	10	0.14
82	TURF ALG	mixed assemblage	16	0.23
83	GORG	Erythropodium caribaeorum	7	0.10
84	TURF ALG	mixed assemblage	15	0.21

Gorgonians = 26

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.6 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,

MARIA LANGA REEF, GUAYANILLA. August 29, 2001

DEPTH: 10.0 m
RUGOSITY: 2.96 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	25	0.35
1	RO	reef overhang	14	0.20
2	TURF ALG	mixed assemblage	57	0.80
3	MAS COR	Siderastrea siderea	4	0.06
4	ENC COR	Porites astreoides	5	0.07
5	TURF ALG	mixed assemblage	23	0.32
6	FOL COR	Agaricia agaricites	2	0.03
7	TURF ALG	mixed assemblage	34	0.48
8	ERE SPO	erect sponge	5	0.07
9	TURF ALG	mixed assemblage	37	0.52
10	FOL COR	Agaricia agaricites	10	0.14
11	TURF ALG	mixed assemblage	12	0.17
12	MAS COR	Montastrea cavernosa	18	0.25
13	MAS COR	Siderastrea siderea	18	0.25
14	RO	reef overhang	8	0.11
15	GORG	Erythropodium caribaeorum	6	0.08
16	TURF ALG	mixed assemblage	7	0.10
17	ENC COR	Porites astreoides	10	0.14
18	TURF ALG	mixed assemblage	13	0.18
19	ZOAN	Palythoa caribaeorum	12	0.17
20	TURF ALG	mixed assemblage	16	0.23
21	RO	reef overhang	6	0.08
22	TURF ALG	mixed assemblage	7	0.10
23	RO	reef overhang	10	0.14
24	TURF ALG	mixed assemblage	8	0.11
25	ZOAN	Palythoa caribaeorum	37	0.52
26	HOLE	hole	4	0.06
27	GORG	Briareum asbestinum	9	0.13
28	TURF ALG	mixed assemblage	10	0.14
29	RO	reef overhang	8	0.11
30	TURF ALG	mixed assemblage	3	0.04
31	ENC COR	Stephanocoenia michilini	2	0.03
32	TURF ALG	mixed assemblage	35	0.49
33	ZOAN	Palythoa caribaeorum	30	0.42
34	TURF ALG	mixed assemblage	14	0.20
35	RO	reef overhang	6	0.08
36	TURF ALG	mixed assemblage	15	0.21
37	RO	reef overhang	10	0.14
38	TURF ALG	mixed assemblage	20	0.28
39	GORG	Erythropodium caribaeorum	7	0.10
40	TURF ALG	mixed assemblage	69	0.97
41	ZOAN	Palythoa caribaeorum	6	0.08

42	TURF ALG	mixed assemblage	15	0.21
43	GORG	gorgonian base	4	0.06
44	TURF ALG	mixed assemblage	16	0.23
45	ENC COR	Porites astreoides	9	0.13
46	GORG	Erythropodium caribaeorum	12	0.17
47	ZOAN	Palythoa caribaeorum	21	0.30
48	TURF ALG	mixed assemblage	4	0.06
49	GORG	Briareum asbestinum	3	0.04
50	TURF ALG	mixed assemblage	11	0.15
51	FOL COR	Agaricia agaricites	6	0.08
52	ENC COR	Porites astreoides	14	0.20
53	TURF ALG	mixed assemblage	32	0.45
54	MAS COR	Diploria strigosa	8	0.11
55	MAS COR	Montastrea cavernosa	11	0.15
56	RO	reef overhang	6	0.08
57	MAS COR	Montastrea annularis	9	0.13
58	TURF ALG	mixed assemblage	9	0.13
59	MAS COR	Montastrea annularis	70	0.99
60	TURF ALG	mixed assemblage	8	0.11

Gorgonians = 25

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.7 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
MARIA LANGA REEF, GUAYANILLA. August 29, 2001

DEPTH: 10.0 m

RUGOSITY: 3.24 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	12	0.17
1	FOL COR	Agaricia agaricites	6	0.08
2	RO	reef overhang	6	0.08
3	TURF ALG	mixed assemblage	15	0.21
4	MAS COR	Montastrea cavernosa	8	0.11
5	TURF ALG	mixed assemblage	54	0.76
6	MAS COR	Dichocoenis stokesi	2	0.03
7	TURF ALG	mixed assemblage	28	0.39
8	SAND	sand	22	0.31
9	MAS COR	Diploria strigosa	9	0.13
10	TURF ALG	mixed assemblage	45	0.63
11	SAND	sand	10	0.14
12	TURF ALG	mixed assemblage	30	0.42
13	ZOAN	Palythoa caribaeorum	6	0.08
14	TURF ALG	mixed assemblage	2	0.03

15	FOL COR	Agaricia agaricites	6	0.08
16	TURF ALG	mixed assemblage	13	0.18
17	MAS COR	Montastrea annularis	46	0.65
18	TURF ALG	mixed assemblage	4	0.06
19	MAS COR	Montastrea annularis	4	0.06
20	TURF ALG	mixed assemblage	5	0.07
21	RO	reef overhang	6	0.08
22	MAS COR	Montastrea annularis	10	0.14
23	TURF ALG	mixed assemblage	5	0.07
24	FOL COR	Agaricia agaricites	5	0.07
25	TURF ALG	mixed assemblage	4	0.06
26	RO	reef overhang	19	0.27
27	ERE SPO	Xestospongia muta	14	0.20
28	RO	reef overhang	25	0.35
29	SAND	sand	52	0.73
30	TURF ALG	mixed assemblage	48	0.68
31	MAS COR	Siderastrea siderea	2	0.03
32	TURF ALG	mixed assemblage	4	0.06
33	RO	reef overhang	4	0.06
34	TURF ALG	mixed assemblage	20	0.28
35	RO	reef overhang	12	0.17
36	MAS COR	Montastrea annularis	29	0.41
37	TURF ALG	mixed assemblage	3	0.04
38	MAS COR	Montastrea annularis	33	0.46
39	TURF ALG	mixed assemblage	18	0.25
40	PIL COR	Dendrogyra cylindrus	6	0.08
41	TURF ALG	mixed assemblage	12	0.17
42	PIL COR	Dendrogyra cylindrus	4	0.06
43	TURF ALG	mixed assemblage	83	1.17
44	BRA COR	Madracis decactis	2	0.03
45	TURF ALG	mixed assemblage	8	0.11
46	RO	reef overhang	5	0.07
47	TURF ALG	mixed assemblage	13	0.18
48	RO	reef overhang	5	0.07
49	TURF ALG	mixed assemblage	7	0.10
50	ENC COR	Porites astreoides	6	0.08
51	RO	reef overhang	16	0.23
52	TURF ALG	mixed assemblage	13	0.18
53	ZOAN	Palythoa caribaeorum	4	0.06
54	TURF ALG	mixed assemblage	4	0.06
55	RO	reef overhang	11	0.15
56	TURF ALG	mixed assemblage	6	0.08
57	ENC COR	Porites astreoides	10	0.14
58	MAS COR	Diploria strigosa	6	0.08
59	TURF ALG	mixed assemblage	21	0.30
60	ZOAN	Palythoa caribaeorum	3	0.04
61	GORG	Erythropodium caribaeorum	6	0.08
62	TURF ALG	mixed assemblage	43	0.61

Gorgonians = 28

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.8 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
MARIA LANGA REEF, GUAYANILLA. August 27, 2001

DEPTH: 10.0 m

RUGOSITY: 1.94 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	38	0.54
1	ENC COR	Porites astreoides	18	0.25
2	TURF ALG	mixed assemblage	2	0.03
3	ENC COR	Porites astreoides	7	0.10
4	TURF ALG	mixed assemblage	25	0.35
5	GORG	Erythropodium caribaeorum	28	0.39
6	MAS COR	Solenastrea bournoni	5	0.07
7	TURF ALG	mixed assemblage	29	0.41
8	ENC COR	Porites astreoides	12	0.17
9	RO	reef overhang	4	0.06
10	GORG	Erythropodium caribaeorum	8	0.11
11	TURF ALG	mixed assemblage	21	0.30
12	FOL COR	Agaricia agaricites	4	0.06
13	TURF ALG	mixed assemblage	15	0.21
14	BRA COR	Madracis decactis	7	0.10
15	RO	reef overhang	5	0.07
16	TURF ALG	mixed assemblage	14	0.20
17	RO	reef overhang	7	0.10
18	TURF ALG	mixed assemblage	54	0.76
19	MAS COR	Montastrea cavernosa	3	0.04
20	TURF ALG	mixed assemblage	8	0.11
21	ZOAN	Palythoa caribaeorum	9	0.13
22	TURF ALG	mixed assemblage	12	0.17
23	GORG	Erythropodium caribaeorum	9	0.13
24	TURF ALG	mixed assemblage	8	0.11
25	ENC COR	Porites astreoides	8	0.11
26	TURF ALG	mixed assemblage	56	0.79
27	SILT	silt	12	0.17
28	RO	reef overhang	15	0.21
29	GORG	Erythropodium caribaeorum	10	0.14
30	MAS COR	Dichocoenia stokesi	6	0.08
31	GORG	Erythropodium caribaeorum	20	0.28
32	TURF ALG	mixed assemblage	11	0.15
33	MAS COR	Montastrea cavernosa	6	0.08
34	TURF ALG	mixed assemblage	10	0.14
35	MAS COR	Montastrea cavernosa	6	0.08

36	TURF ALG	mixed assemblage	11	0.15
37	BRA COR	Porites porites	5	0.07
38	TURF ALG	mixed assemblage	48	0.68
39	GORG	Erythropodium caribaeorum	15	0.21
40	TURF ALG	mixed assemblage	7	0.10
41	FOL COR	Agaricia agaricites	3	0.04
42	TURF ALG	mixed assemblage	6	0.08
43	FOL COR	Agaricia agaricites	3	0.04
44	TURF ALG	mixed assemblage	11	0.15
45	GORG	Erythropodium caribaeorum	11	0.15
46	ZOAN	Palythoa caribaeorum	7	0.10
47	TURF ALG	mixed assemblage	14	0.20
48	GORG	Erythropodium caribaeorum	18	0.25
49	TURF ALG	mixed assemblage	12	0.17
50	MILLE	Millepora alcicornis	3	0.04
51	ZOAN	Palythoa caribaeorum	9	0.13
52	TURF ALG	mixed assemblage	4	0.06
53	HOLE	hole	4	0.06
54	TURF ALG	mixed assemblage	22	0.31
55	ENC COR	Porites astreoides	5	0.07
56	FOL COR	Agaricia agaricites	4	0.06
57	ZOAN	Palythoa caribaeorum	6	0.08
58	TURF ALG	mixed assemblage	10	0.14
59	ZOAN	Palythoa caribaeorum	6	0.08
60	TURF ALG	mixed assemblage	16	0.23
61	ZOAN	Palythoa caribaeorum	10	0.14
62	GORG	Erythropodium caribaeorum	3	0.04
63	TURF ALG	mixed assemblage	6	0.08
64	GORG	Erythropodium caribaeorum	5	0.07
65	RO	reef overhang	5	0.07
66	GORG	Erythropodium caribaeorum	5	0.07
67	TURF ALG	mixed assemblage	23	0.32
68	ERE SPO	erect sponge	3	0.04
69	TURF ALG	mixed assemblage	3	0.04
70	FOL COR	Agaricia agaricites	6	0.08
71	GORG	Erythropodium caribaeorum	7	0.10

Gorgonians = 23

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.9 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4, MARIA LANGA REEF, GUAYANILLA. August 29, 2001

DEPTH: 10.0 m

RUGOSITY: 2.06 m

TRANSITION	SUBSTRATE	TAXA	CHAIN	LINEAR
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	CODE		LINKS	COVER (m)
0	TURF ALG	mixed assemblage	33	0.46
1	MAS COR	Montastrea annularis	7	0.10
2	TURF ALG	mixed assemblage	8	0.11
3	MAS COR	Montastrea annularis	16	0.23
4	TURF ALG	mixed assemblage	4	0.06
5	MAS COR	Montastrea annularis	13	0.18
6	TURF ALG	mixed assemblage	2	0.03
7	MAS COR	Montastrea annularis	9	0.13
8	ZOAN	Palythoa caribaeorum	5	0.07
9	TURF ALG	mixed assemblage	76	1.07
10	ENC COR	Porites astreoides	7	0.10
11	TURF ALG	mixed assemblage	90	1.27
12	GORG	Erythropodium caribaeorum	5	0.07
13	GORG	gorgonian base	4	0.06
14	TURF ALG	mixed assemblage	7	0.10
15	MAS COR	Diploria strigosa	4	0.06
16	TURF ALG	mixed assemblage	4	0.06
17	MAS COR	Diploria strigosa	4	0.06
18	TURF ALG	mixed assemblage	8	0.11
19	MAS COR	Diploria strigosa	4	0.06
20	TURF ALG	mixed assemblage	23	0.32
21	RO	reef overhang	5	0.07
22	MAS COR	Montastrea cavernosa	23	0.32
23	TURF ALG	mixed assemblage	3	0.04
24	MAS COR	Montastrea cavernosa	11	0.15
25	TURF ALG	mixed assemblage	2	0.03
26	ENC COR	Porites astreoides	3	0.04
27	TURF ALG	mixed assemblage	20	0.28
28	GORG	Erythropodium caribaeorum	12	0.28
29	TURF ALG	mixed assemblage	50	0.70
30	ZOAN	Palythoa caribaeorum	6	0.08
31	RO	reef overhang	3	0.04
32	TURF ALG	mixed assemblage	27	0.38
33	ZOAN	Palythoa caribaeorum	4	0.06
34	MAS COR	Diploria strigosa	9	0.13
35	RO	reef overhang	2	0.03
36	ENC COR	Porites astreoides	5	0.07
37	RO	reef overhang	4	0.06
38	TURF ALG	mixed assemblage	11	0.15
39	MAS COR	Montastrea cavernosa	2	0.03
40	RO	reef overhang	3	0.04
41	GORG	Erythropodium caribaeorum	6	0.08
42	TURF ALG	mixed assemblage	93	1.31
43	ZOAN	Palythoa caribaeorum	7	0.10
44	TURF ALG	mixed assemblage	26	0.37
45	ENC COR	Porites astreoides	4	0.06
46	TURF ALG	mixed assemblage	14	0.20
47	ENC COR	Porites astreoides	4	0.06

48	TURF ALG	mixed assemblage	17	0.24
49	ENC COR	Porites astreoides	10	0.14
50	TURF ALG	mixed assemblage	24	0.34
51	RO	reef overhang	3	0.04
52	MAS COR	Montastrea annularis	53	0.75
53	TURF ALG	mixed assemblage	8	0.11
54	MAS COR	Montastrea annularis	11	0.15
55	RO	reef overhang	15	0.21
56	TURF ALG	mixed assemblage	15	0.21

Gorgonians = 18

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.10 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
MARIA LANGA REEF, GUAYANILLA. August 29, 2001

DEPTH: 10.0 m

RUGOSITY: 1.44 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	21	0.30
1	MAS COR	Montastrea annularis	6	0.08
2	RO	reef overhang	6	0.08
3	TURF ALG	mixed assemblage	19	0.27
4	ENC COR	Porites astreoides	10	0.14
5	GORG	Erythropodium caribaeorum	12	0.17
6	MAS COR	Montastrea cavernosa	6	0.08
7	GORG	Erythropodium caribaeorum	7	0.10
8	RO	reef overhang	10	0.14
9	FOL COR	Agaricia agaricites	4	0.06
10	TURF ALG	mixed assemblage	4	0.06
11	ENC COR	Porites astreoides	16	0.23
12	GORG	gorgonian base	2	0.03
13	ZOAN	Palythoa caribaeorum	21	0.30
14	TURF ALG	mixed assemblage	26	0.37
15	GORG	Erythropodium caribaeorum	6	0.08
16	TURF ALG	mixed assemblage	13	0.18
17	ENC COR	Porites astreoides	4	0.06
18	TURF ALG	mixed assemblage	31	0.44
19	GORG	Erythropodium caribaeorum	6	0.08
20	TURF ALG	mixed assemblage	15	0.21
21	MAS COR	Siderastrea siderea	4	0.06
22	MAS COR	Diploria strigosa	3	0.04
23	TURF ALG	mixed assemblage	4	0.06
24	MAS COR	Diploria strigosa	16	0.23

25	TURF ALG	mixed assemblage	7	0.10
26	MILLE	Millepora alcicornis	1	0.01
27	ENC COR	Porites astreoides	3	0.04
28	RO	reef overhang	4	0.06
29	TURF ALG	mixed assemblage	30	0.42
30	ZOAN	Palythoa caribaeorum	17	0.24
31	TURF ALG	mixed assemblage	18	0.25
32	CAL ALG	Amphiroa sp.	5	0.07
33	TURF ALG	mixed assemblage	9	0.13
34	MAS COR	Isophyllia sinuosa	4	0.06
35	TURF ALG	mixed assemblage	48	0.68
36	CAL ALG	Amphiroa sp.	10	0.14
37	ZOAN	Palythoa caribaeorum	5	0.07
38	TURF ALG	mixed assemblage	41	0.58
39	FOL COR	Agaricia agaricites	3	0.04
40	TURF ALG	mixed assemblage	3	0.04
41	GORG	Erythropodium caribaeorum	9	0.13
42	TURF ALG	mixed assemblage	12	0.17
43	GORG	Erythropodium caribaeorum	10	0.14
44	TURF ALG	mixed assemblage	39	0.55
45	GORG	gorgonian base	4	0.06
46	TURF ALG	mixed assemblage	16	0.23
47	RO	reef overhang	3	0.04
48	ENC COR	Porites astreoides	25	0.35
49	TURF ALG	mixed assemblage	26	0.37
50	ENC COR	Porites astreoides	10	0.14
51	TURF ALG	mixed assemblage	9	0.13
52	RO	reef overhang	4	0.06
53	TURF ALG	mixed assemblage	70	0.99
54	BRA COR	Madracis decactis	3	0.04
55	ZOAN	Palythoa caribaeorum	6	0.08
56	ZOAN	Palythoa caribaeorum	2	0.03
57	TURF ALG	mixed assemblage	4	0.06
58	RO	reef overhang	14	0.20
59	ENC COR	Porites astreoides	5	0.07
60	TURF ALG	mixed assemblage	3	0.04
61	ERE SPO	erect sponge	1	0.01
62	RO	reef overhang	12	0.17
63	TURF ALG	mixed assemblage	45	0.63

Gorgonians = 34

Note: Turf Alg composed primarily of short filamentous algae and fine sediment

B.2.11 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
TALLABOA REEF, TALLABOA. August 29, 2001

DEPTH: 10.6 m

RUGOSITY: 2.08 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	2	0.03
1	FOL COR	Agaricia agaricites	4	0.06
2	TURF ALG	mixed assemblage	12	0.17
3	ENC SPO	encrusting sponge	2	0.03
4	RO	reef overhang	3	0.04
5	MAS COR	Montastrea annularis	25	0.35
6	GORG	Erythropodium caribaeorum	8	0.11
7	RO	reef overhang	4	0.06
8	TURF ALG	mixed assemblage	43	0.61
9	ERE SPO	erect sponge	3	0.04
10	TURF ALG	mixed assemblage	25	0.35
11	RO	reef overhang	8	0.11
12	TURF ALG	mixed assemblage	21	0.30
13	ZOAN	Palythoa caribaeorum	11	0.15
14	TURF ALG	mixed assemblage	6	0.08
15	MAS COR	Montastrea annularis	12	0.17
16	TURF ALG	mixed assemblage	8	0.11
17	MAS COR	Montastrea annularis	3	0.04
18	TURF ALG	mixed assemblage	28	0.39
19	RO	reef overhang	5	0.07
20	TURF ALG	mixed assemblage	25	0.35
21	ERE SPO	erect sponge	2	0.03
22	TURF ALG	mixed assemblage	3	0.04
23	FOL COR	Agaricia agaricites	5	0.07
24	TURF ALG	mixed assemblage	10	0.14
25	FOL COR	Agaricia agaricites	4	0.06
26	TURF ALG	mixed assemblage	5	0.07
27	GORG	gorgonian base	1	0.01
28	ZOAN	Palythoa caribaeorum	8	0.11
29	TURF ALG	mixed assemblage	3	0.04
30	ERE SPO	erect sponge	2	0.03
31	TURF ALG	mixed assemblage	8	0.11
32	FOL COR	Agaricia agaricites	3	0.04
33	TURF ALG	mixed assemblage	8	0.11
34	RO	reef overhang	7	0.10
35	TURF ALG	mixed assemblage	3	0.04
36	MAS COR	Montastrea annularis	11	0.15
37	TURF ALG	mixed assemblage	7	0.10
38	ERE SPO	erect sponge	2	0.03
39	TURF ALG	mixed assemblage	8	0.11
40	GORG	gorgonian base	4	0.06
41	TURF ALG	mixed assemblage	28	0.39
42	GORG	gorgonian base	2	0.03
43	TURF ALG	mixed assemblage	38	0.54
44	GORG	Erythropodium caribaeorum	4	0.06
45	TURF ALG	mixed assemblage	22	0.31

46	ENC SPO	encrusting sponge	4	0.06
47	GORG	Erythropodium caribaeorum	3	0.04
48	ERE SPO	Xestospongia muta	6	0.08
49	TURF ALG	mixed assemblage	10	0.14
50	GORG	Erythropodium caribaeorum	4	0.06
51	TURF ALG	mixed assemblage	3	0.04
52	BRA COR	Porites porites	2	0.03
53	TURF ALG	mixed assemblage	24	0.34
54	ERE SPO	erect sponge	3	0.04
55	TURF ALG	mixed assemblage	3	0.04
56	BRA COR	Porites porites	2	0.03
57	ZOAN	Palythoa caribaeorum	8	0.11
58	RO	reef overhang	5	0.07
59	TURF ALG	mixed assemblage	128	1.80
60	BRA COR	Porites porites	4	0.06
61	TURF ALG	mixed assemblage	12	0.17
62	MAS COR	Diploria labyrinthiformis	19	0.27
63	TURF ALG	mixed assemblage	7	0.10
64	FOL COR	Agaricia agaricites	4	0.06
65	TURF ALG	mixed assemblage	5	0.07
66	FOL COR	Agaricia agaricites	8	0.11
67	TURF ALG	mixed assemblage	5	0.07
68	ERE SPO	erect sponge	2	0.03
69	TURF ALG	mixed assemblage	36	0.51
70	RO	reef overhang	11	0.15
71	GORG	Erythropodium caribaeorum	2	0.03
72	TURF ALG	mixed assemblage	14	0.20
73	RO	reef overhang	8	0.11
74	ERE SPO	erect sponge	5	0.07
75	TURF ALG	mixed assemblage	55	0.77

Gorgonians = 39

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda sp.*, *Dictyota sp.* and fine sediment

B.2.12 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2, TALLABOA REEF, TALLABOA. August 29, 2001

DEPTH: 10.6 m

RUGOSITY: 1.73 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	12	0.17
1	FOL COR	Agaricia agaricites	3	0.04
2	TURF ALG	mixed assemblage	88	1.24

3	MAS COR	Montastrea annularis	7	0.10
4	TURF ALG	mixed assemblage	10	0.14
5	MAS COR	Montastrea annularis	23	0.32
6	TURF ALG	mixed assemblage	17	0.24
7	ERE SPO	erect sponge	2	0.03
8	TURF ALG	mixed assemblage	3	0.04
9	ERE SPO	erect sponge	4	0.06
10	MAS COR	Montastrea annularis	10	0.14
11	TURF ALG	mixed assemblage	40	0.56
12	ERE SPO	erect sponge	2	0.03
13	TURF ALG	mixed assemblage	50	0.70
14	RO	reef overhang	5	0.07
15	MAS COR	Diploria labyrinthiformis	18	0.25
16	TURF ALG	mixed assemblage	24	0.34
17	RO	reef overhang	7	0.10
18	GORG	Erythropodium caribaeorum	2	0.03
19	TURF ALG	mixed assemblage	5	0.07
20	ENC COR	Porites astreoides	10	0.14
21	TURF ALG	mixed assemblage	10	0.14
22	RO	reef overhang	5	0.07
23	MAS COR	Montastrea annularis	30	0.42
24	RO	reef overhang	5	0.07
25	TURF ALG	mixed assemblage	14	0.20
26	ENC COR	Porites astreoides	3	0.04
27	GORG	Erythropodium caribaeorum	3	0.04
28	TURF ALG	mixed assemblage	28	0.39
29	ZOAN	Palythoa caribaeorum	3	0.04
30	TURF ALG	mixed assemblage	86	1.21
31	RO	reef overhang	4	0.06
32	MAS COR	Montastrea annularis	12	0.17
33	TURF ALG	mixed assemblage	10	0.14
34	FOL COR	Agaricia agaricites	4	0.06
35	TURF ALG	mixed assemblage	2	0.03
36	GORG	Erythropodium caribaeorum	7	0.10
37	TURF ALG	mixed assemblage	92	1.30
38	FOL COR	Agaricia agaricites	5	0.07
39	TURF ALG	mixed assemblage	4	0.06
40	ZOAN	Palythoa caribaeorum	3	0.04
41	TURF ALG	mixed assemblage	6	0.08
42	ERE SPO	erect sponge	4	0.06
43	TURF ALG	mixed assemblage	41	0.58
44	RO	reef overhang	3	0.04
45	FOL COR	Agaricia agaricites	4	0.06
46	ZOAN	Palythoa caribaeorum	3	0.04
47	TURF ALG	mixed assemblage	18	0.25
48	ERE SPO	erect sponge	3	0.04
49	TURF ALG	mixed assemblage	20	0.28
50	GORG	Erythropodium caribaeorum	8	0.11
51	TURF ALG	mixed assemblage	11	0.15
52	ERE SPO	Xestospongia muta	2	0.03

53	TURF ALG	mixed assemblage	20	0.28
54	BRA COR	Madracis decactis	4	0.06
55	TURF ALG	mixed assemblage	4	0.06
56	BRA COR	Madracis decactis	5	0.07
57	ZOAN	Palythoa caribaeorum	2	0.03
58	BRA COR	Madracis decactis	3	0.04

Gorgonians = 28

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda sp.*, *Dictyota sp.* and fine sediment

B.2.13 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
TALLABOA REEF, TALLABOA. August 29, 2001

DEPTH: 10.6 m

RUGOSITY: 1.44 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	GORG	Erythropodium caribaeorum	15	0.21
1	TURF ALG	mixed assemblage	7	0.10
2	MAS COR	Montastrea annularis	18	0.25
3	TURF ALG	mixed assemblage	5	0.07
4	MAS COR	Montastrea annularis	4	0.06
5	TURF ALG	mixed assemblage	7	0.10
6	MAS COR	Montastrea annularis	12	0.17
7	TURF ALG	mixed assemblage	14	0.20
8	FOL COR	Agaricia agaricites	7	0.10
9	TURF ALG	mixed assemblage	30	0.42
10	ZOAN	Palythoa caribaeorum	11	0.15
11	TURF ALG	mixed assemblage	13	0.18
12	RO	reef overhang	4	0.06
13	TURF ALG	mixed assemblage	13	0.18
14	ENC COR	Porites astreoides	3	0.04
15	TURF ALG	mixed assemblage	4	0.06
16	GORG	Erythropodium caribaeorum	4	0.06
17	TURF ALG	mixed assemblage	46	0.65
18	FOL COR	Agaricia agaricites	3	0.04
19	TURF ALG	mixed assemblage	3	0.04
20	MAS COR	Montastrea annularis	9	0.13
21	TURF ALG	mixed assemblage	7	0.10
22	MAS COR	Montastrea annularis	9	0.13
23	TURF ALG	mixed assemblage	33	0.46
24	ZOAN	Palythoa caribaeorum	5	0.07
25	GORG	Erythropodium caribaeorum	4	0.06
26	TURF ALG	mixed assemblage	21	0.30

27	RO	reef overhang	3	0.04
28	ERE SPO	erect sponge	5	0.07
29	ZOAN	Palythoa caribaeorum	8	0.11
30	TURF ALG	mixed assemblage	13	0.18
31	FOL COR	Agaricia agaricites	10	0.14
32	TURF ALG	mixed assemblage	4	0.06
33	RO	reef overhang	5	0.07
34	MAS COR	Montastrea annularis	14	0.20
35	TURF ALG	mixed assemblage	5	0.07
36	MAS COR	Montastrea annularis	4	0.06
37	TURF ALG	mixed assemblage	7	0.10
38	MAS COR	Montastrea annularis	8	0.11
39	TURF ALG	mixed assemblage	7	0.10
40	MAS COR	Montastrea annularis	8	0.11
41	RO	reef overhang	5	0.07
42	TURF ALG	mixed assemblage	3	0.04
43	MAS COR	Montastrea annularis	8	0.11
44	TURF ALG	mixed assemblage	17	0.24
45	GORG	gorgonian base	2	0.03
46	TURF ALG	mixed assemblage	3	0.04
47	ERE SPO	erect sponge	12	0.17
48	RO	reef overhang	6	0.08
49	TURF ALG	mixed assemblage	62	0.87
50	MAS COR	Montastrea annularis	4	0.06
51	ERE SPO	erect sponge	4	0.06
52	GORG	Erythropodium caribaeorum	6	0.08
53	TURF ALG	mixed assemblage	7	0.10
54	FOL COR	Agaricia agaricites	2	0.03
55	MAS COR	Siderastrea siderea	2	0.03
56	TURF ALG	mixed assemblage	10	0.14
57	MAS COR	Montastrea annularis	4	0.06
58	TURF ALG	mixed assemblage	15	0.21
59	MAS COR	Meandrina meandrites	22	0.31
60	TURF ALG	mixed assemblage	22	0.31
61	GORG	Erythropodium caribaeorum	3	0.04
62	TURF ALG	mixed assemblage	96	1.35
63	ENC COR	Porites astreoides	3	0.04
64	TURF ALG	mixed assemblage	5	0.07
65	RO	reef overhang	5	0.07
66	TURF ALG	mixed assemblage	10	0.14
67	MAS COR	Montastrea annularis	16	0.23
68	GORG	Erythropodium caribaeorum	5	0.07
69	TURF ALG	mixed assemblage	33	0.46
70	MAS COR	Diploria strigosa	5	0.07
71	TURF ALG	mixed assemblage	3	0.04

Gorgonians = 41

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda sp.*, *Dictyota sp.* and fine sediment

B.2.14 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4,
TALLABOA REEF, TALLABOA. August 29, 2001

DEPTH: 10.6 m

RUGOSITY: 2.63 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	22	0.31
1	TURF ALG	mixed assemblage	44	0.62
2	ENC SPO	encrusting sponge	11	0.15
3	TURF ALG	mixed assemblage	33	0.46
4	FOL COR	Agaricia agaricites	3	0.04
5	TURF ALG	mixed assemblage	30	0.42
6	GORG	Erythropodium caribaeorum	10	0.14
7	TURF ALG	mixed assemblage	31	0.44
8	ENC SPO	encrusting sponge	3	0.04
9	TURF ALG	mixed assemblage	58	0.82
10	GORG	gorgonian base	3	0.04
11	TURF ALG	mixed assemblage	15	0.21
12	GORG	Erythropodium caribaeorum	15	0.21
13	TURF ALG	mixed assemblage	10	0.14
14	GORG	Erythropodium caribaeorum	7	0.10
15	TURF ALG	mixed assemblage	11	0.15
16	GORG	Erythropodium caribaeorum	14	0.20
17	TURF ALG	mixed assemblage	5	0.07
18	GORG	gorgonian base	3	0.04
19	TURF ALG	mixed assemblage	60	0.85
20	GORG	Erythropodium caribaeorum	6	0.08
21	TURF ALG	mixed assemblage	42	0.59
22	CAL ALG	Amphiroa sp.	10	0.14
23	TURF ALG	mixed assemblage	35	0.49
24	ENC SPO	encrusting sponge	8	0.11
25	GORG	Erythropodium caribaeorum	4	0.06
26	TURF ALG	mixed assemblage	28	0.39
27	MAS COR	Diploria strigosa	21	0.30
28	TURF ALG	mixed assemblage	18	0.25
29	ENC SPO	encrusting sponge	9	0.13
30	TURF ALG	mixed assemblage	49	0.69
31	ENC SPO	encrusting sponge	5	0.07
32	TURF ALG	mixed assemblage	73	1.03
33	MAS COR	Diploria strigosa	14	0.20
34	TURF ALG	mixed assemblage	35	0.49
35	MAS COR	Montastrea annularis	39	0.55
36	TURF ALG	mixed assemblage	14	0.20
37	GORG	gorgonian base	5	0.07

38	ENC SPO	encrusting sponge	4	0.06
39	TURF ALG	mixed assemblage	6	0.08
40	MILLE	Millepora alcicornis	3	0.04
41	TURF ALG	mixed assemblage	4	0.06
42	ENC SPO	encrusting sponge	2	0.03
43	TURF ALG	mixed assemblage	4	0.06
44	GORG	gorgonian base	4	0.06
45	TURF ALG	mixed assemblage	52	0.73
46	GORG	Erythropodium caribaeorum	8	0.11
47	TURF ALG	mixed assemblage	7	0.10

Gorgonians = 46

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda sp.*, *Dictyota sp.* and fine sediment

B.2.15 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
TALLABOA REEF, TALLABOA. August 29, 2001

DEPTH: 10.6 m

RUGOSITY: 3.44 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea cavernosa	17	0.24
1	MAS COR	Montastrea annularis	6	0.08
2	TURF ALG	mixed assemblage	24	0.34
3	MAS COR	Meandrina meandrites	7	0.10
4	TURF ALG	mixed assemblage	20	0.28
5	ZOAN	Palythoa caribaeorum	7	0.10
6	TURF ALG	mixed assemblage	33	0.46
7	MILLE	Millepora alcicornis	4	0.06
8	TURF ALG	mixed assemblage	10	0.14
9	GORG	Erythropodium caribaeorum	10	0.14
10	ERE SPO	Xestospongia muta	45	0.63
11	CAL ALG	Amphiroa sp.	5	0.07
12	TURF ALG	mixed assemblage	8	0.11
13	GORG	Erythropodium caribaeorum	12	0.17
14	TURF ALG	mixed assemblage	9	0.13
15	GORG	Erythropodium caribaeorum	4	0.06
16	MAS COR	Siderastrea siderea	18	0.25
17	TURF ALG	mixed assemblage	8	0.11
18	MAS COR	Siderastrea siderea	8	0.11
19	ENC COR	Porites astreoides	7	0.10
20	ERE SPO	erect sponge	11	0.15
21	ZOAN	Palythoa caribaeorum	4	0.06
22	TURF ALG	mixed assemblage	10	0.14

23	ENC COR	Porites astreoides	13	0.18
24	TURF ALG	mixed assemblage	6	0.08
25	GORG	Erythropodium caribaeorum	4	0.06
26	TURF ALG	mixed assemblage	43	0.61
27	ZOAN	Palythoa caribaeorum	12	0.17
28	ERE SPO	erect sponge	11	0.15
29	TURF ALG	mixed assemblage	18	0.25
30	GORG	Erythropodium caribaeorum	4	0.06
31	TURF ALG	mixed assemblage	13	0.18
32	CAL ALG	Halimeda sp.	5	0.07
33	GORG	Briareum asbestinum	4	0.06
34	ENC SPO	encrusting sponge	4	0.06
35	FOL COR	Agaricia agaricites	3	0.04
36	ENC SPO	encrusting sponge	2	0.03
37	TURF ALG	mixed assemblage	4	0.06
38	MAS COR	Montastrea annularis	3	0.04
39	TURF ALG	mixed assemblage	36	0.51
40	GORG	Erythropodium caribaeorum	10	0.14
41	TURF ALG	mixed assemblage	140	1.97
42	GORG	Erythropodium caribaeorum	16	0.23
43	TURF ALG	mixed assemblage	15	0.21
44	GORG	gorgonian base	10	0.14
45	ENC SPO	encrusting sponge	5	0.07
46	TURF ALG	mixed assemblage	9	0.13
47	ERE SPO	erect sponge	13	0.18
48	CAL ALG	Amphiroa sp.	4	0.06
49	ZOAN	Palythoa caribaeorum	12	0.17
50	TURF ALG	mixed assemblage	11	0.15
51	FOL COR	Agaricia agaricites	6	0.08
52	TURF ALG	mixed assemblage	7	0.10
53	GORG	Erythropodium caribaeorum	4	0.06
54	TURF ALG	mixed assemblage	10	0.14
55	ERE SPO	erect sponge	2	0.03
56	TURF ALG	mixed assemblage	8	0.11
57	FOL COR	Agaricia agaricites	5	0.07
58	TURF ALG	mixed assemblage	50	0.70
59	ENC SPO	encrusting sponge	2	0.03
60	TURF ALG	mixed assemblage	56	0.79
61	ENC SPO	encrusting sponge	8	0.11
62	ZOAN	Palythoa caribaeorum	12	0.17
63	CAL ALG	Amphiroa sp.	3	0.04
64	TURF ALG	mixed assemblage	5	0.07
65	ENC COR	Porites astreoides	4	0.06
66	TURF ALG	mixed assemblage	20	0.28
67	SAND	sand	18	0.25
68	TURF ALG	mixed assemblage	17	0.24

Gorgonians = 36

Note: Turf Alg composed primarily of short filamentous algae, *Halimeda sp.*, *Dictyota sp.*

and fine sediment

B.3.1 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
LAS MAREAS RIDGE, GUAYAMA. September 1, 2001.

DEPTH: 16.7 m

RUGOSITY: 1.39 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	ENC SPO	encrusting sponge	10	0.14
1	TURF ALG	mixed assemblage	20	0.28
2	RO	reef overhang	15	0.21
3	TURF ALG	mixed assemblage	40	0.56
4	RO	reef overhang	7	0.10
5	TURF ALG	mixed assemblage	5	0.07
6	GORG	<i>Erythropodium caribaeorum</i>	12	0.17
7	ERE SPO	erect sponge	3	0.04
8	TURF ALG	mixed assemblage	24	0.34
9	ZOAN	<i>Palythoa caribaeorum</i>	2	0.03
10	TURF ALG	mixed assemblage	32	0.45
11	MAS COR	<i>Siderastrea siderea</i>	2	0.03
12	TURF ALG	mixed assemblage	5	0.07
13	FOL COR	<i>Agaricia agaricites</i>	3	0.04
14	TURF ALG	mixed assemblage	6	0.08
15	ENC COR	<i>Porites astreoides</i>	6	0.08
16	TURF ALG	mixed assemblage	7	0.10
17	FOL COR	<i>Agaricia agaricites</i>	4	0.06
18	RO	reef overhang	7	0.10
19	TURF ALG	mixed assemblage	15	0.21
20	ERE SPO	erect sponge	2	0.03
21	GORG	<i>Erythropodium caribaeorum</i>	20	0.28
22	TURF ALG	mixed assemblage	33	0.46
23	ENC COR	<i>Porites astreoides</i>	4	0.06
24	TURF ALG	mixed assemblage	3	0.04
25	ERE SPO	erect sponge	3	0.04
26	TURF ALG	mixed assemblage	12	0.17
27	RO	reef overhang	4	0.06
28	TURF ALG	mixed assemblage	12	0.17
29	GORG	<i>Erythropodium caribaeorum</i>	9	0.13
30	ENC SPO	encrusting sponge	4	0.06
31	GORG	<i>Erythropodium caribaeorum</i>	12	0.17
32	TURF ALG	mixed assemblage	15	0.21
33	ERE SPO	erect sponge	2	0.03
34	GORG	<i>Erythropodium caribaeorum</i>	5	0.07
35	TURF ALG	mixed assemblage	5	0.07

36	GORG	Erythropodium caribaeorum	7	0.10
37	TURF ALG	mixed assemblage	96	1.35
38	GORG	Erythropodium caribaeorum	10	0.14
39	TURF ALG	mixed assemblage	4	0.06
40	RO	reef overhang	7	0.10
41	TURF ALG	mixed assemblage	4	0.06
42	GORG	Erythropodium caribaeorum	5	0.07
43	TURF ALG	mixed assemblage	8	0.11
44	GORG	gorgonian base	2	0.03
45	TURF ALG	mixed assemblage	13	0.18
46	MAS COR	Siderastrea siderea	3	0.04
47	TURF ALG	mixed assemblage	20	0.28
48	GORG	Erythropodium caribaeorum	10	0.14
49	TURF ALG	mixed assemblage	40	0.56
50	RO	reef overhang	6	0.08
51	TURF ALG	mixed assemblage	25	0.35
52	GORG	Erythropodium caribaeorum	10	0.14
53	TURF ALG	mixed assemblage	4	0.06
54	MAS COR	Montastrea annularis	4	0.06
55	TURF ALG	mixed assemblage	8	0.11
56	FOL COR	Agaricia agaricites	4	0.06
57	TURF ALG	mixed assemblage	4	0.06
58	MAS COR	Diploria strigosa	9	0.13
59	TURF ALG	mixed assemblage	56	0.79
60	MAS COR	Siderastrea siderea	2	0.03
61	ENC SPO	encrusting sponge	5	0.07
62	TURF ALG	mixed assemblage	30	0.42
63	FOL COR	Agaricia agaricites	3	0.04
64	TURF ALG	mixed assemblage	4	0.06
65	MAS COR	Montastrea annularis	2	0.03
66	MAS COR	Montastrea annularis	9	0.13
67	TURF ALG	mixed assemblage	2	0.03
68	FOL COR	Agaricia agaricites	21	0.30
69	TURF ALG	mixed assemblage	2	0.03

Gorgonians = 31

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp. and fine sediment

B.3.2 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2, LAS MAREAS RIDGE, GUAYAMA. September 1, 2001.

DEPTH: 16.7 m
RUGOSITY: 1.56 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
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0	FLE ALG	Dictyota sp.	6	0.08
1	TURF ALG	mixed assemblage	11	0.15
2	MAS COR	Montastrea annularis	5	0.07
3	GORG	gorgonian base	2	0.03
4	ERE SPO	erect sponge	2	0.03
5	TURF ALG	mixed assemblage	2	0.03
6	MAS COR	Montastrea annularis	9	0.13
7	GORG	gorgonian base	4	0.06
8	RO	reef overhang	8	0.11
9	ENC COR	Porites astreoides	9	0.13
10	TURF ALG	mixed assemblage	18	0.25
11	MAS COR	Montastrea annularis	21	0.30
12	TURF ALG	mixed assemblage	9	0.13
13	ERE SPO	erect sponge	2	0.03
14	RO	reef overhang	4	0.06
15	TURF ALG	mixed assemblage	3	0.04
16	GORG	Erythropodium caribaeorum	6	0.08
17	FOL COR	Agaricia agaricites	3	0.04
18	TURF ALG	mixed assemblage	7	0.10
19	GORG	Erythropodium caribaeorum	3	0.04
20	RO	reef overhang	3	0.04
21	ENC COR	Porites astreoides	2	0.03
22	SAND	sand	16	0.23
23	ENC COR	Stephanocoenia michilini	4	0.06
24	TURF ALG	mixed assemblage	22	0.31
25	ENC SPO	encrusting sponge	14	0.20
26	TURF ALG	mixed assemblage	10	0.14
27	FOL COR	Agaricia agaricites	3	0.04
28	TURF ALG	mixed assemblage	11	0.15
29	GORG	Erythropodium caribaeorum	17	0.24
30	GORG	gorgonian base	4	0.06
31	GORG	Erythropodium caribaeorum	7	0.10
32	RO	reef overhang	7	0.10
33	TURF ALG	mixed assemblage	6	0.08
34	MAS COR	Montastrea annularis	6	0.08
35	TURF ALG	mixed assemblage	43	0.61
36	FLE ALG	Dictyota sp.	6	0.08
37	TURF ALG	mixed assemblage	5	0.07
38	GORG	gorgonian base	6	0.08
39	TURF ALG	mixed assemblage	16	0.23
40	ERE SPO	erect sponge	4	0.06
41	RO	reef overhang	5	0.07
42	TURF ALG	mixed assemblage	51	0.72
43	MAS COR	Siderastrea siderea	4	0.06
44	TURF ALG	mixed assemblage	61	0.86
45	ERE SPO	erect sponge	2	0.03
46	TURF ALG	mixed assemblage	5	0.07
47	ERE SPO	erect sponge	2	0.03
48	FOL COR	Agaricia agaricites	4	0.06

49	CAL ALG	Halimeda discoidea	6	0.08
50	TURF ALG	mixed assemblage	18	0.25
51	MAS COR	Montastrea cavernosa	6	0.08
52	TURF ALG	mixed assemblage	5	0.07
53	ERE SPO	erect sponge	5	0.07
54	TURF ALG	mixed assemblage	21	0.30
55	GORG	Erythropodium caribaeorum	5	0.07
56	TURF ALG	mixed assemblage	67	0.94
57	BRA COR	Porites porites	3	0.04
58	TURF ALG	mixed assemblage	2	0.03
59	MAS COR	Montastrea cavernosa	8	0.11
60	RO	reef overhang	5	0.07
61	GORG	Erythropodium caribaeorum	4	0.06
62	TURF ALG	mixed assemblage	7	0.10
63	GORG	Erythropodium caribaeorum	16	0.23
64	TURF ALG	mixed assemblage	6	0.08
65	ERE SPO	erect sponge	4	0.06
66	GORG	Erythropodium caribaeorum	12	0.17
67	MAS COR	Diploria strigosa	4	0.06
68	TURF ALG	mixed assemblage	22	0.31
69	FOL COR	Agaricia agaricites	3	0.04
70	TURF ALG	mixed assemblage	63	0.89
71	RO	reef overhang	5	0.07
72	MAS COR	Montastrea annularis	20	0.28
73	RO	reef overhang	3	0.04
74	TURF ALG	mixed assemblage	21	0.30

Gorgonians = 47

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp.
and fine sediment

B.3.3 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3, LAS MAREAS RIDGE, GUAYAMA. September 1, 2001.

DEPTH: 16.7 m
RUGOSITY: 1.75 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	25	0.35
1	MAS COR	Montastrea annularis	7	0.10
2	RO	reef overhang	11	0.15
3	ERE SPO	erect sponge	3	0.04
4	RO	reef overhang	5	0.07
5	TURF ALG	mixed assemblage	12	0.17
6	ENC SPO	encrusting sponge	4	0.06

7	TURF ALG	mixed assemblage	4	0.06
8	ERE SPO	erect sponge	4	0.06
9	MILLE	Millepora alcicornis	2	0.03
10	TURF ALG	mixed assemblage	21	0.30
11	GORG	Erythropodium caribaeorum	6	0.08
12	TURF ALG	mixed assemblage	29	0.41
13	ERE SPO	Xestospongia muta	40	0.56
14	TURF ALG	mixed assemblage	25	0.35
15	ERE SPO	erect sponge	3	0.04
16	TURF ALG	mixed assemblage	3	0.04
17	ENC SPO	encrusting sponge	15	0.21
18	TURF ALG	mixed assemblage	34	0.48
19	GORG	gorgonian base	3	0.04
20	TURF ALG	mixed assemblage	35	0.49
21	GORG	Erythropodium caribaeorum	5	0.07
22	TURF ALG	mixed assemblage	19	0.27
23	GORG	Erythropodium caribaeorum	5	0.07
24	PIL COR	Dendrogyra cylindrus	3	0.04
25	TURF ALG	mixed assemblage	5	0.07
26	ENC SPO	encrusting sponge	2	0.03
27	TURF ALG	mixed assemblage	20	0.28
28	PIL COR	Dendrogyra cylindrus	23	0.32
29	TURF ALG	mixed assemblage	5	0.07
30	ERE SPO	erect sponge	3	0.04
31	TURF ALG	mixed assemblage	3	0.04
32	ERE SPO	erect sponge	3	0.04
33	RO	reef overhang	3	0.04
34	TURF ALG	mixed assemblage	11	0.15
35	ENC SPO	encrusting sponge	4	0.06
36	TURF ALG	mixed assemblage	7	0.10
37	GORG	Erythropodium caribaeorum	9	0.13
38	TURF ALG	mixed assemblage	9	0.13
39	ENC SPO	encrusting sponge	10	0.14
40	SAND	sand	9	0.13
41	ERE SPO	erect sponge	2	0.03
42	GORG	Erythropodium caribaeorum	15	0.21
43	TURF ALG	mixed assemblage	6	0.08
44	MAS COR	Montastrea cavernosa	22	0.31
45	ERE SPO	erect sponge	3	0.04
46	RO	reef overhang	4	0.06
47	TURF ALG	mixed assemblage	15	0.21
48	ENC COR	Porites astreoides	2	0.03
49	TURF ALG	mixed assemblage	10	0.14
50	ENC COR	Porites astreoides	5	0.07
51	TURF ALG	mixed assemblage	2	0.03
52	MAS COR	Diploria strigosa	4	0.06
53	TURF ALG	mixed assemblage	4	0.06
54	MAS COR	Siderastrea siderea	2	0.03
55	TURF ALG	mixed assemblage	6	0.08
56	ERE SPO	erect sponge	2	0.03

57	TURF ALG	mixed assemblage	20	0.28
58	FOL COR	Agaricia agaricites	4	0.06
59	TURF ALG	mixed assemblage	27	0.38
60	MAS COR	Dichocoenia stokesi	9	0.13
61	TURF ALG	mixed assemblage	14	0.20
62	MAS COR	Siderastrea radians	4	0.06
63	TURF ALG	mixed assemblage	37	0.52
64	ERE SPO	erect sponge	3	0.04
65	TURF ALG	mixed assemblage	21	0.30
66	FOL COR	Agaricia agaricites	6	0.08
67	MAS COR	Montastrea annularis	4	0.06
68	TURF ALG	mixed assemblage	66	0.93
69	GORG	Erythropodium caribaeorum	5	0.07
70	TURF ALG	mixed assemblage	28	0.39
71	MAS COR	Siderastrea siderea	2	0.03
72	TURF ALG	mixed assemblage	2	0.03
73	FOL COR	Agaricia agaricites	3	0.04
74	TURF ALG	mixed assemblage	19	0.27
75	FOL COR	Agaricia agaricites	4	0.06
76	GORG	Erythropodium caribaeorum	3	0.04

Gorgonians = 42

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp. and fine sediment

B.3.4 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4, LAS MAREAS RIDGE, GUAYAMA. September 1, 2001.

DEPTH: 16.7 m

RUGOSITY: 1.18 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	53	0.75
1	TURF ALG	mixed assemblage	58	0.82
2	ERE SPO	erect sponge	2	0.03
3	GORG	Erythropodium caribaeorum	10	0.14
4	GORG	gorgonian base	2	0.03
5	GORG	Erythropodium caribaeorum	13	0.18
6	TURF ALG	mixed assemblage	35	0.49
7	FOL COR	Agaricia agaricites	4	0.06
8	TURF ALG	mixed assemblage	5	0.07
9	GORG	Erythropodium caribaeorum	23	0.32
10	TURF ALG	mixed assemblage	19	0.27
11	ERE SPO	erect sponge	4	0.06
12	BRA COR	Porites porites	4	0.06

13	TURF ALG	mixed assemblage	12	0.17
14	RO	reef overhang	4	0.06
15	GORG	Erythropodium caribaeorum	3	0.04
16	TURF ALG	mixed assemblage	6	0.08
17	ERE SPO	erect sponge	5	0.07
18	TURF ALG	mixed assemblage	9	0.13
19	ERE SPO	erect sponge	4	0.06
20	TURF ALG	mixed assemblage	8	0.11
21	GORG	Erythropodium caribaeorum	9	0.13
22	TURF ALG	mixed assemblage	36	0.51
23	GORG	Erythropodium caribaeorum	8	0.11
24	TURF ALG	mixed assemblage	2	0.03
25	GORG	Erythropodium caribaeorum	18	0.25
26	RO	reef overhang	6	0.08
27	TURF ALG	mixed assemblage	28	0.39
28	GORG	Erythropodium caribaeorum	5	0.07
29	TURF ALG	mixed assemblage	17	0.24
30	RO	reef overhang	8	0.11
31	ERE SPO	erect sponge	2	0.03
32	TURF ALG	mixed assemblage	28	0.39
33	GORG	Erythropodium caribaeorum	5	0.07
34	RO	reef overhang	5	0.07
35	TURF ALG	mixed assemblage	8	0.11
36	FOL COR	Agaricia agaricites	4	0.06
37	TURF ALG	mixed assemblage	35	0.49
38	GORG	Erythropodium caribaeorum	11	0.15
39	TURF ALG	mixed assemblage	3	0.04
40	FOL COR	Agaricia agaricites	9	0.13
41	TURF ALG	mixed assemblage	17	0.24
42	ERE SPO	erect sponge	6	0.08
43	TURF ALG	mixed assemblage	20	0.28
44	RO	reef overhang	5	0.07
45	TURF ALG	mixed assemblage	9	0.13
46	RO	reef overhang	6	0.08
47	TURF ALG	mixed assemblage	5	0.07
48	MAS COR	Montastrea annularis	8	0.11
49	TURF ALG	mixed assemblage	2	0.03
50	MAS COR	Montastrea cavernosa	2	0.03
51	ERE SPO	erect sponge	2	0.03
52	TURF ALG	mixed assemblage	10	0.14
53	MAS COR	Isophyllia sinuosa	4	0.06
54	TURF ALG	mixed assemblage	49	0.69
55	FOL COR	Agaricia agaricites	8	0.11
56	TURF ALG	mixed assemblage	7	0.10
57	RO	reef overhang	5	0.07
58	GORG	Erythropodium caribaeorum	9	0.13
59	TURF ALG	mixed assemblage	56	0.79
60	GORG	Erythropodium caribaeorum	5	0.07
61	TURF ALG	mixed assemblage	5	0.07
62	ERE SPO	erect sponge	6	0.08

63	TURF ALG	mixed assemblage	8	0.11
64	FOL COR	Agaricia agaricites	3	0.04
65	TURF ALG	mixed assemblage	7	0.10

Gorgonians = 32

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp. and fine sediment

B.3.5 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5, LAS MAREAS RIDGE, GUAYAMA. September 1, 2001.

DEPTH: 16.7 m

RUGOSITY: XXX m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	44	0.62
1	RO	reef overhang	14	0.20
2	TURF ALG	mixed assemblage	6	0.08
3	RO	reef overhang	7	0.10
4	MAS COR	Diploria strigosa	10	0.14
5	TURF ALG	mixed assemblage	6	0.08
6	RO	reef overhang	6	0.08
7	TURF ALG	mixed assemblage	10	0.14
8	GORG	gorgonian base	6	0.08
9	TURF ALG	mixed assemblage	19	0.27
10	RO	reef overhang	5	0.07
11	TURF ALG	mixed assemblage	37	0.52
12	ERE SPO	erect sponge	4	0.06
13	TURF ALG	mixed assemblage	3	0.04
14	FOL COR	Agaricia agaricites	2	0.03
15	TURF ALG	mixed assemblage	30	0.42
16	GORG	gorgonian base	5	0.07
17	TURF ALG	mixed assemblage	37	0.52
18	RO	reef overhang	6	0.08
19	FOL COR	Agaricia agaricites	9	0.13
20	TURF ALG	mixed assemblage	19	0.27
21	FOL COR	Agaricia agaricites	4	0.06
22	TURF ALG	mixed assemblage	11	0.15
23	ENC COR	Porites astreoides	5	0.07
24	TURF ALG	mixed assemblage	24	0.34
25	GORG	Erythropodium caribaeorum	3	0.04
26	ERE SPO	erect sponge	7	0.10
27	TURF ALG	mixed assemblage	8	0.11
28	RO	reef overhang	12	0.17
29	TURF ALG	mixed assemblage	18	0.25

30	GORG	Erythropodium caribaeorum	10	0.14
31	RO	reef overhang	5	0.07
32	TURF ALG	mixed assemblage	25	0.35
33	BRA COR	Porites porites	2	0.03
34	SAND	sand	20	0.28
35	GORG	Erythropodium caribaeorum	6	0.08
36	TURF ALG	mixed assemblage	31	0.44
37	FOL COR	Agaricia agaricites	4	0.06
38	TURF ALG	mixed assemblage	34	0.48
39	GORG	Erythropodium caribaeorum	4	0.06
40	PIL COR	Dendrogyra cylindrus	5	0.07
41	TURF ALG	mixed assemblage	17	0.24
42	ENC SPO	encrusting sponge	3	0.04
43	GORG	Erythropodium caribaeorum	7	0.10
44	ENC SPO	encrusting sponge	20	0.28
45	PIL COR	Dendrogyra cylindrus	4	0.06
46	ENC SPO	encrusting sponge	21	0.30
47	TURF ALG	mixed assemblage	12	0.17
48	GORG	Erythropodium caribaeorum	12	0.17
49	TURF ALG	mixed assemblage	17	0.24
50	FLE ALG	Dictyota sp.	5	0.07
51	TURF ALG	mixed assemblage	6	0.08
52	RO	reef overhang	6	0.08
53	TURF ALG	mixed assemblage	4	0.06
54	ERE SPO	erect sponge	9	0.13
55	TURF ALG	mixed assemblage	34	0.48
56	ENC COR	Porites astreoides	3	0.04
57	TURF ALG	mixed assemblage	77	1.08
58	RO	reef overhang	6	0.08
59	FOL COR	Agaricia agaricites	3	0.04
60	GORG	Erythropodium caribaeorum	10	0.14
61	TURF ALG	mixed assemblage	4	0.06
62	GORG	Erythropodium caribaeorum	7	0.10
63	RO	reef overhang	12	0.17
64	TURF ALG	mixed assemblage	31	0.44
65	RO	reef overhang	6	0.08
66	GORG	Erythropodium caribaeorum	5	0.07
67	TURF ALG	mixed assemblage	6	0.08
68	ERE SPO	erect sponge	4	0.06
69	TURF ALG	mixed assemblage	7	0.10

Gorgonians = 31

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp. and fine sediment

B.3.6 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1, CAYOS DE BARCA REEF, GUAYAMA. SEPTEMBER 2, 2001.

DEPTH: 10.6 m
 RUGOSITY: 1.82 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	23	0.32
1	MAS COR	Montastrea annularis	10	0.14
2	TURF ALG	mixed assemblage	29	0.41
3	CAL ALG	Halimeda opuntia	10	0.14
4	TURF ALG	mixed assemblage	3	0.04
5	MAS COR	Mycetophyllia lamarckiana	3	0.04
6	CAL ALG	Halimeda opuntia	10	0.14
7	TURF ALG	mixed assemblage	37	0.52
8	CAL ALG	Halimeda opuntia	6	0.08
9	TURF ALG	mixed assemblage	7	0.10
10	RO	reef overhang	6	0.08
11	TURF ALG	mixed assemblage	16	0.23
12	CAL ALG	Halimeda opuntia	30	0.42
13	TURF ALG	mixed assemblage	14	0.20
14	RO	reef overhang	6	0.08
15	TURF ALG	mixed assemblage	29	0.41
16	MAS COR	Meandrina meandrites	5	0.07
17	RO	reef overhang	5	0.07
18	TURF ALG	mixed assemblage	56	0.79
19	GORG	Erythropodium caribaeorum	12	0.17
20	TURF ALG	mixed assemblage	3	0.04
21	MAS COR	Montastrea cavernosa	23	0.32
22	CAL ALG	Halimeda opuntia	17	0.24
23	TURF ALG	mixed assemblage	34	0.48
24	RO	reef overhang	5	0.07
25	TURF ALG	mixed assemblage	65	0.92
26	MAS COR	Colpophyllia natans	25	0.35
27	TURF ALG	mixed assemblage	9	0.13
28	SILT	silt	10	0.14
29	TURF ALG	mixed assemblage	10	0.14
30	MAS COR	Montastrea cavernosa	16	0.23
31	TURF ALG	mixed assemblage	14	0.20
32	RO	reef overhang	6	0.08
33	MAS COR	Siderastrea siderea	3	0.04
34	TURF ALG	mixed assemblage	5	0.07
35	MAS COR	Isophyllia sinuosa	3	0.04
36	TURF ALG	mixed assemblage	41	0.58
37	ERE SPO	erect sponge	2	0.03
38	MAS COR	Montastrea annularis	13	0.18
39	TURF ALG	mixed assemblage	5	0.07
40	MAS COR	Montastrea annularis	12	0.17
41	TURF ALG	mixed assemblage	23	0.32
42	MAS COR	Montastrea annularis	12	0.17

43	TURF ALG	mixed assemblage	3	0.04
44	ERE SPO	erect sponge	3	0.04
45	TURF ALG	mixed assemblage	27	0.38
46	MAS COR	Montastrea cavernosa	3	0.04
47	TURF ALG	mixed assemblage	25	0.35
48	BRA COR	Porites porites	3	0.04
49	RO	reef overhang	5	0.07
50	TURF ALG	mixed assemblage	15	0.21
51	MAS COR	Siderastrea siderea	5	0.07
52	RO	reef overhang	5	0.07
53	ENC COR	Porites astreoides	9	0.13
54	ENC SPO	Xestospongia muta	10	0.14
55	RO	reef overhang	4	0.06
56	TURF ALG	mixed assemblage	6	0.08
57	CAL ALG	Halimeda opuntia	15	0.21
58	MAS COR	Meandrina meandrites	28	0.39

Gorgonians = 6

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Halimeda opuntia*, *Amphiroa* sp. and fine sediment

B.3.7 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
CAYOS DE BARCA REEF, GUAYAMA. SEPTEMBER 2, 2001.

DEPTH: 10.6 m

RUGOSITY: 1.86 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	25	0.35
1	RO	reef overhang	5	0.07
2	MAS COR	Montastrea cavernosa	22	0.31
3	CAL ALG	Halimeda opuntia	16	0.23
4	FOL COR	Agaricia agaricites	6	0.08
5	CAL ALG	Halimeda opuntia	13	0.18
6	TURF ALG	mixed assemblage	32	0.45
7	ENC CORR	Stephanocoenia michilini	5	0.07
8	TURF ALG	mixed assemblage	36	0.51
9	MAS COR	Diploria labyrinthiformis	4	0.06
10	TURF ALG	mixed assemblage	6	0.08
11	RO	reef overhang	6	0.08
12	TURF ALG	mixed assemblage	21	0.30
13	GORG	Erythropodium caribaeorum	4	0.06
14	TURF ALG	mixed assemblage	7	0.10
15	RO	reef overhang	6	0.08

16	TURF ALG	mixed assemblage	8	0.11
17	ERE SPO	erect sponge	2	0.03
18	TURF ALG	mixed assemblage	14	0.20
19	MAS COR	Diploria strigosa	16	0.23
20	MAS COR	Montastrea cavernosa	19	0.27
21	TURF ALG	mixed assemblage	10	0.14
22	MAS COR	Siderastrea siderea	9	0.13
23	CAL ALG	Halimeda opuntia	4	0.06
24	MAS COR	Montastrea annularis	7	0.10
25	CAL ALG	Halimeda opuntia	18	0.25
26	MAS COR	Siderastrea siderea	3	0.04
27	TURF ALG	mixed assemblage	23	0.32
28	MAS COR	Siderastrea siderea	3	0.04
29	CAL ALG	Halimeda opuntia	4	0.06
30	FOL COR	Agaricia fragilis	3	0.04
31	RO	reef overhang	10	0.14
32	SILT	silt	23	0.32
33	TURF ALG	mixed assemblage	10	0.14
34	ERE SPO	erect sponge	4	0.06
35	TURF ALG	mixed assemblage	3	0.04
36	MAS COR	Montastrea cavernosa	38	0.54
37	TURF ALG	mixed assemblage	6	0.08
38	ENC CORR	Porites astreoides	8	0.11
39	CAL ALG	Halimeda opuntia	3	0.04
40	FOL COR	Agaricia agaricites	4	0.06
41	TURF ALG	mixed assemblage	3	0.04
42	MAS COR	Montastrea cavernosa	21	0.30
43	TURF ALG	mixed assemblage	17	0.24
44	MAS COR	Montastrea cavernosa	3	0.04
45	TURF ALG	mixed assemblage	22	0.31
46	RO	reef overhang	10	0.14
47	ERE SPO	erect sponge	3	0.04
48	ERE SPO	erect sponge	4	0.06
49	TURF ALG	mixed assemblage	28	0.39
50	MAS COR	Diploria strigosa	9	0.13
51	TURF ALG	mixed assemblage	15	0.21
52	ERE SPO	erect sponge	4	0.06
53	TURF ALG	mixed assemblage	4	0.06
54	MAS COR	Montastrea cavernosa	19	0.27
55	TURF ALG	mixed assemblage	15	0.21
56	MAS COR	Montastrea cavernosa	6	0.08
57	TURF ALG	mixed assemblage	10	0.14
58	GORG	Erythropodium caribaeorum	12	0.17
59	TURF ALG	mixed assemblage	48	0.68
60	MAS COR	Siderastrea siderea	3	0.04
61	GORG	Erythropodium caribaeorum	3	0.04
62	TURF ALG	mixed assemblage	28	0.39
63	RO	reef overhang	5	0.07
64	SILT	silt	13	0.18
65	RO	reef overhang	10	0.14

66	ERE SPO	erect sponge	2	0.03
67	RO	reef overhang	4	0.06
68	MAS COR	Montastrea cavernosa	17	0.24
69	TURF ALG	mixed assemblage	15	0.21
70	ERE SPO	erect sponge	4	0.06
71	TURF ALG	mixed assemblage	13	0.18
72	MAS COR	Diploria strigosa	4	0.06
73	TURF ALG	mixed assemblage	2	0.03

Gorgonians = 11

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Halimeda opuntia*, *Amphiroa* sp. and fine sediment

B.3.8 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
CAYOS DE BARCA REEF, GUAYAMA. SEPTEMBER 2, 2001.

DEPTH: 10.6 m
RUGOSITY: 1.78 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	6	0.08
1	MAS COR	Montastrea cavernosa	25	0.35
2	TURF ALG	mixed assemblage	10	0.14
3	CAL ALG	Halimeda opuntia	25	0.35
4	MAS COR	Montastrea cavernosa	20	0.28
5	TURF ALG	mixed assemblage	11	0.15
6	MAS COR	Montastrea cavernosa	28	0.39
7	TURF ALG	mixed assemblage	14	0.20
8	CAL ALG	Halimeda opuntia	8	0.11
9	TURF ALG	mixed assemblage	25	0.35
10	CAL ALG	Halimeda opuntia	25	0.35
11	TURF ALG	mixed assemblage	21	0.30
12	MAS COR	Montastrea cavernosa	30	0.42
13	TURF ALG	mixed assemblage	45	0.63
14	RO	reef overhang	10	0.14
15	TURF ALG	mixed assemblage	19	0.27
16	MAS COR	Montastrea cavernosa	6	0.08
17	TURF ALG	mixed assemblage	10	0.14
18	ERE SPO	erect sponge	3	0.04
19	RO	reef overhang	6	0.08
20	TURF ALG	mixed assemblage	27	0.38
21	MAS COR	Montastrea cavernosa	8	0.11
22	TURF ALG	mixed assemblage	8	0.11
23	MAS COR	Montastrea cavernosa	22	0.31
24	RO	reef overhang	3	0.04

25	MAS COR	Diploria strigosa	13	0.18
26	TURF ALG	mixed assemblage	67	0.94
27	MAS COR	Montastrea cavernosa	10	0.14
28	TURF ALG	mixed assemblage	25	0.35
29	ERE SPO	Xestospongia muta	6	0.08
30	GORG	gorgonian base	2	0.03
31	ENC COR	Porites astreoides	6	0.08
32	TURF ALG	mixed assemblage	16	0.23
33	MAS COR	Montastrea cavernosa	7	0.10
34	RO	reef overhang	6	0.08
35	TURF ALG	mixed assemblage	18	0.25
36	RO	reef overhang	7	0.10
37	TURF ALG	mixed assemblage	10	0.14
38	ENC COR	Porites astreoides	11	0.15
39	TURF ALG	mixed assemblage	13	0.18
40	BRA COR	Porites porites	6	0.08
41	ERE SPO	erect sponge	5	0.07
42	TURF ALG	mixed assemblage	6	0.08
43	MAS COR	Montastrea cavernosa	11	0.15
44	TURF ALG	mixed assemblage	58	0.82
45	RO	reef overhang	10	0.14
46	CAL ALG	Halimeda opuntia	5	0.07
47	GORG	Briareum asbestinum	3	0.04
48	CAL ALG	Halimeda opuntia	5	0.07
49	GORG	gorgonian base	4	0.06
50	TURF ALG	mixed assemblage	11	0.15
51	FOL COR	Agaricia agaricites	5	0.07
52	TURF ALG	mixed assemblage	11	0.15
53	RO	reef overhang	6	0.08
54	TURF ALG	mixed assemblage	3	0.04
55	FOL COR	Agaricia agaricites	7	0.10
56	TURF ALG	mixed assemblage	36	0.51
57	SOL COR	Manicina areolata	5	0.07
58	TURF ALG	mixed assemblage	7	0.10

Gorgonians = 11

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Halimeda opuntia*, *Amphiroa* sp. and fine sediment

B.3.9 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4,
CAYOS DE BARCA REEF, GUAYAMA. SEPTEMBER 2, 2001.

DEPTH: 10.6 m
RUGOSITY: 1.90 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
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0	MAS COR	Montastrea cavernosa	28	0.39
1	TURF ALG	mixed assemblage	32	0.45
2	MAS COR	Montastrea cavernosa	10	0.14
3	TURF ALG	mixed assemblage	56	0.79
4	MAS COR	Montastrea cavernosa	26	0.37
5	TURF ALG	mixed assemblage	8	0.11
6	FLE ALG	fleshy algae	10	0.14
7	TURF ALG	mixed assemblage	26	0.37
8	MAS COR	Montastrea cavernosa	3	0.04
9	TURF ALG	mixed assemblage	26	0.37
10	MAS COR	Montastrea cavernosa	32	0.45
11	TURF ALG	mixed assemblage	38	0.54
12	MAS COR	Montastrea cavernosa	24	0.34
13	TURF ALG	mixed assemblage	23	0.32
14	MAS COR	Siderastrea siderea	5	0.07
15	TURF ALG	mixed assemblage	27	0.38
16	MAS COR	Montastrea cavernosa	25	0.35
17	TURF ALG	mixed assemblage	40	0.56
18	MAS COR	Siderastrea siderea	4	0.06
19	TURF ALG	mixed assemblage	17	0.24
20	ENC COR	Porites astreoides	5	0.07
21	TURF ALG	mixed assemblage	49	0.69
22	GORG	Erythropodium caribaeorum	5	0.07
23	TURF ALG	mixed assemblage	10	0.14
24	MAS COR	Montastrea cavernosa	8	0.11
25	TURF ALG	mixed assemblage	4	0.06
26	SOL COR	Meandrina brasiliensis	5	0.07
27	TURF ALG	mixed assemblage	33	0.46
28	CAL ALG	Amphiroa sp.	5	0.07
29	TURF ALG	mixed assemblage	4	0.06
30	CAL ALG	Amphiroa sp.	43	0.61
31	TURF ALG	mixed assemblage	14	0.20
32	MAS COR	Montastrea cavernosa	4	0.06
33	TURF ALG	mixed assemblage	8	0.11
34	MAS COR	Montastrea cavernosa	16	0.23
35	TURF ALG	mixed assemblage	23	0.32
36	MAS COR	Montastrea cavernosa	3	0.04
37	TURF ALG	mixed assemblage	78	1.10
38	ERE SPO	erect sponge	5	0.07
39	TURF ALG	mixed assemblage	33	0.46
40	HOLE	hole	4	0.06
41	MAS COR	Siderastrea siderea	18	0.25
42	TURF ALG	mixed assemblage	8	0.11

Gorgonians = 9

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Halimeda opuntia*, *Amphiroa* sp. and fine sediment

B.3.10 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
CAYOS DE BARCA REEF, GUAYAMA. SEPTEMBER 2, 2001.

DEPTH: 10.6 m
RUGOSITY: 4.49 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	ENC SPO	encrusting sponge	13	0.18
1	TURF ALG	mixed assemblage	8	0.11
2	MAS COR	Montastrea cavernosa	11	0.15
3	BRA COR	Porites porites	9	0.13
4	BRA COR	Oculina diffusa	14	0.20
5	MAS COR	Montastrea annularis	12	0.17
6	TURF ALG	mixed assemblage	29	0.41
7	CAL ALG	Amphiroa sp.	37	0.52
8	TURF ALG	mixed assemblage	3	0.04
9	FOL COR	Agaricia fragilis	7	0.10
10	TURF ALG	mixed assemblage	3	0.04
11	MAS COR	Montastrea annularis	25	0.35
12	TURF ALG	mixed assemblage	2	0.03
13	MAS COR	Montastrea cavernosa	12	0.17
14	TURF ALG	mixed assemblage	3	0.04
15	FLE ALG	fleshy algae	6	0.08
16	TURF ALG	mixed assemblage	6	0.08
17	MAS COR	Diploria strigosa	9	0.13
18	CAL ALG	Amphiroa sp.	3	0.04
19	MAS COR	Siderastrea radians	5	0.07
20	TURF ALG	mixed assemblage	9	0.13
21	ENC SPO	Xestospongia muta	23	0.32
22	FOL COR	Agaricia agaricites	4	0.06
23	TURF ALG	mixed assemblage	15	0.21
24	MAS COR	Siderastrea siderea	4	0.06
25	TURF ALG	mixed assemblage	5	0.07
26	BRA COR	Oculina diffusa	3	0.04
27	TURF ALG	mixed assemblage	18	0.25
28	MAS COR	Siderastrea siderea	4	0.06
29	TURF ALG	mixed assemblage	65	0.92
30	GORG	Erythropodium caribaeorum	18	0.25
31	TURF ALG	mixed assemblage	10	0.14
32	ENC SPO	Xestospongia muta	50	0.70
33	CAL ALG	Amphiroa sp.	20	0.28
34	TURF ALG	mixed assemblage	20	0.28
35	MAS COR	Montastrea cavernosa	15	0.21
36	TURF ALG	mixed assemblage	40	0.56
37	FLE ALG	fleshy algae	5	0.07
38	ENC SPO	encrusting sponge	6	0.08

39	TURF ALG	mixed assemblage	6	0.08
40	ENC SPO	encrusting sponge	3	0.04
41	RO	reef overhang	12	0.17
42	MAS COR	Mycetophyllia sp.	11	0.15
43	TURF ALG	mixed assemblage	10	0.14
44	GORG	Erythropodium caribaeorum	5	0.07
45	CAL ALG	Amphiroa sp.	5	0.07
46	MAS COR	Diploria strigosa	6	0.08
47	GORG	Erythropodium caribaeorum	8	0.11
48	TURF ALG	mixed assemblage	20	0.28
49	FLE ALG	fleshy algae	4	0.06
50	MAS COR	Montastrea annularis	25	0.35
51	TURF ALG	mixed assemblage	40	0.56
52	FLE ALG	fleshy algae	10	0.14
53	MAS COR	Siderastrea siderea	4	0.06
54	FLE ALG	fleshy algae	33	0.46
55	MAS COR	Montastrea annularis	16	0.23
56	TURF ALG	mixed assemblage	103	1.45
57	MAS COR	Montastrea cavernosa	24	0.34
58	TURF ALG	mixed assemblage	39	0.55
59	GORG	Erythropodium caribaeorum	10	0.14
60	TURF ALG	mixed assemblage	5	0.07
61	RO	reef overhang	12	0.17
62	TURF ALG	mixed assemblage	20	0.28
63	RO	reef overhang	5	0.07
64	FOL COR	Agaricia agaricites	14	0.20
65	MAS COR	Siderastrea siderea	8	0.11
66	CAL ALG	Amphiroa sp.	7	0.10
67	TURF ALG	mixed assemblage	8	0.11
68	CAL ALG	Amphiroa sp.	2	0.03
69	TURF ALG	mixed assemblage	3	0.04

Gorgonians = 9

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Halimeda opuntia*, *Amphiroa* sp. and fine sediment

B.3.11 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1, CANJILONES LAS MAREAS, GUAYAMA. September 2, 2001.

DEPTH: 21.2 m

RUGOSITY: 2.51 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	20	0.28
1	MAS COR	Diploria strigosa	9	0.13

2	RO	reef overhang	10	0.14
3	SAND	sand	17	0.24
4	RO	reef overhang	5	0.07
5	MAS COR	Montastrea cavernosa	18	0.25
6	TURF ALG	mixed assemblage	3	0.04
7	MAS COR	Montastrea annularis	8	0.11
8	TURF ALG	mixed assemblage	40	0.56
9	MAS COR	Montastrea annularis	20	0.28
10	RO	reef overhang	5	0.07
11	MAS COR	Montastrea annularis	6	0.08
12	FLE ALG	Lobophora variegata	10	0.14
13	MAS COR	Montastrea annularis	4	0.06
14	FIL ALG	Cyanobacteria	16	0.23
15	RO	reef overhang	7	0.10
16	ERE SPO	erect sponge	5	0.07
17	FLE ALG	Lobophora variegata	4	0.06
18	ERE SPO	erect sponge	10	0.14
19	RO	reef overhang	12	0.17
20	FLE ALG	Lobophora variegata	51	0.72
21	RO	reef overhang	10	0.14
22	MAS COR	Montastrea annularis	27	0.38
23	MAS COR	Diploria strigosa	12	0.17
24	TURF ALG	mixed assemblage	21	0.30
25	ENC SPO	encrusting sponge	21	0.30
26	TURF ALG	mixed assemblage	24	0.34
27	RO	reef overhang	5	0.07
28	MAS COR	Montastrea annularis	2	0.03
29	ERE SPO	erect sponge	4	0.06
30	MAS COR	Montastrea annularis	4	0.06
31	TURF ALG	mixed assemblage	7	0.10
32	ENC SPO	encrusting sponge	8	0.11
33	FLE ALG	Lobophora variegata	6	0.08
34	RO	reef overhang	11	0.15
35	SAND	sand	11	0.15
36	FLE ALG	Lobophora variegata	10	0.14
37	TURF ALG	mixed assemblage	17	0.24
38	FLE ALG	Lobophora variegata	32	0.45
39	RO	reef overhang	3	0.04
40	TURF ALG	mixed assemblage	15	0.21
41	FOL COR	Agaricia agaricites	4	0.06
42	FLE ALG	Lobophora variegata	9	0.13
43	FOL COR	Agaricia agaricites	9	0.13
44	TURF ALG	mixed assemblage	5	0.07
45	FOL COR	Agaricia agaricites	4	0.06
46	RO	reef overhang	3	0.04
47	FOL COR	Agaricia agaricites	3	0.04
48	RO	reef overhang	5	0.07
49	TURF ALG	mixed assemblage	37	0.52
50	MAS COR	Meandrina meandrites	3	0.04
51	TURF ALG	mixed assemblage	6	0.08

52	MAS COR	Montastrea annularis	8	0.11
53	RO	reef overhang	13	0.18
54	FLE ALG	Lobophora variegata	25	0.35
55	RO	reef overhang	4	0.06
56	MAS COR	Montastrea annularis	20	0.28
57	FLE ALG	Lobophora variegata	31	0.44
58	TURF ALG	mixed assemblage	8	0.11
59	MAS COR	Diploria strigosa	5	0.07
60	TURF ALG	mixed assemblage	3	0.04
61	ERE SPO	erect sponge	3	0.04
62	RO	reef overhang	7	0.10
63	TURF ALG	mixed assemblage	6	0.08
64	ERE SPO	erect sponge	2	0.03
65	FOL COR	Agaricia fragilis	6	0.08
66	TURF ALG	mixed assemblage	2	0.03
67	MAS COR	Siderastrea siderea	4	0.06
68	TURF ALG	mixed assemblage	4	0.06
69	ERE SPO	erect sponge	6	0.08
70	MAS COR	Montastrea annularis	5	0.07
71	TURF ALG	mixed assemblage	28	0.39
72	SAND	sand	14	0.20
73	ERE SPO	erect sponge	7	0.10
74	TURF ALG	mixed assemblage	20	0.28
75	FOL COR	Agaricia agaricites	9	0.13
76	TURF ALG	mixed assemblage	16	0.23
77	MAS COR	Meandrina meandrites	4	0.06
78	RO	reef overhang	10	0.14

Gorgonians = 16

Note: Turf Alg composed primarily of short filamentous algae, *Lobophora variegata* and fine sediment

B.3.12 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2, CANJILONES LAS MAREAS, GUAYAMA. September 2, 2001.

DEPTH: 21.2 m

RUGOSITY: 1.93 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	10	0.14
1	TURF ALG	mixed assemblage	4	0.06
2	RO	reef overhang	15	0.21
3	MAS COR	Montastrea annularis	11	0.15
4	TURF ALG	mixed assemblage	22	0.31
5	FOL COR	Agaricia fragilis	4	0.06

6	RO	reef overhang	6	0.08
7	MAS COR	<i>Siderastrea siderea</i>	22	0.31
8	FLE ALG	<i>Lobophora variegata</i>	8	0.11
9	RO	reef overhang	7	0.10
10	MAS COR	<i>Montastrea annularis</i>	14	0.20
11	MAS COR	<i>Montastrea annularis</i>	20	0.28
12	RO	reef overhang	5	0.07
13	TURF ALG	mixed assemblage	30	0.42
14	MAS COR	<i>Montastrea annularis</i>	8	0.11
15	FLE ALG	<i>Lobophora variegata</i>	27	0.38
16	MAS COR	<i>Montastrea annularis</i>	6	0.08
17	FLE ALG	<i>Lobophora variegata</i>	51	0.72
18	TURF ALG	mixed assemblage	35	0.49
19	MAS COR	<i>Siderastrea siderea</i>	2	0.03
20	TURF ALG	mixed assemblage	17	0.24
21	ERE SPO	erect sponge	8	0.11
22	TURF ALG	mixed assemblage	12	0.17
23	ZOAN	<i>Lebrunia danae</i>	7	0.10
24	MAS COR	<i>Montastrea cavernosa</i>	10	0.14
25	TURF ALG	mixed assemblage	17	0.24
26	MAS COR	<i>Diploria labyrinthiformis</i>	7	0.10
27	TURF ALG	mixed assemblage	3	0.04
28	ERE SPO	erect sponge	3	0.04
29	TURF ALG	mixed assemblage	8	0.11
30	FOL COR	<i>Agaricia fragilis</i>	11	0.15
31	RO	reef overhang	26	0.37
32	MAS COR	<i>Diploria labyrinthiformis</i>	3	0.04
33	HOLE	hole	6	0.08
34	FLE ALG	<i>Lobophora variegata</i>	77	1.08
35	MAS COR	<i>Montastrea annularis</i>	6	0.08
36	RO	reef overhang	10	0.14
37	TURF ALG	mixed assemblage	3	0.04
38	FOL COR	<i>Agaricia agaricites</i>	5	0.07
39	TURF ALG	mixed assemblage	83	1.17
40	BRA COR	<i>Porites porites</i>	2	0.03
41	TURF ALG	mixed assemblage	5	0.07
42	MAS COR	<i>Siderastrea siderea</i>	4	0.06
43	TURF ALG	mixed assemblage	3	0.04
44	MAS COR	<i>Montastrea annularis</i>	23	0.32
45	FLE ALG	<i>Lobophora variegata</i>	28	0.39
46	TURF ALG	mixed assemblage	8	0.11
47	MAS COR	<i>Montastrea annularis</i>	3	0.04
48	TURF ALG	mixed assemblage	6	0.08
49	MAS COR	<i>Montastrea annularis</i>	8	0.11
50	TURF ALG	mixed assemblage	20	0.28
51	MAS COR	<i>Montastrea annularis</i>	33	0.46
52	FLE ALG	<i>Lobophora variegata</i>	3	0.04
53	MAS COR	<i>Montastrea annularis</i>	57	0.80
54	MAS COR	<i>Montastrea annularis</i>	15	0.21

Gorgonians = 26

Note: Turf Alg composed primarily of short filamentous algae, *Lobophora variegata* and fine sediment

B.3.13 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3, CANJILONES LAS MAREAS, GUAYAMA. September 2, 2001.

DEPTH: 21.2 m

RUGOSITY: 2.56 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Diploria strigosa	30	0.42
1	TURF ALG	mixed assemblage	17	0.24
2	MAS COR	Montastrea annularis	8	0.11
3	TURF ALG	mixed assemblage	10	0.14
4	RO	reef overhang	7	0.10
5	MAS COR	Montastrea annularis	19	0.27
6	FLE ALG	Lobophora variegata	24	0.34
7	RO	reef overhang	5	0.07
8	TURF ALG	mixed assemblage	6	0.08
9	RO	reef overhang	6	0.08
10	MAS COR	Montastrea annularis	26	0.37
11	RO	reef overhang	8	0.11
12	TURF ALG	mixed assemblage	6	0.08
13	RO	reef overhang	5	0.07
14	MAS COR	Montastrea annularis	10	0.14
15	TURF ALG	mixed assemblage	4	0.06
16	ERE SPO	erect sponge	7	0.10
17	MAS COR	Montastrea cavernosa	7	0.10
18	FLE ALG	Lobophora variegata	18	0.25
19	MAS COR	Diploria strigosa	15	0.21
20	FLE ALG	Lobophora variegata	25	0.35
21	RO	reef overhang	4	0.06
22	FOL COR	Agaricia agaricites	15	0.21
23	TURF ALG	mixed assemblage	9	0.13
24	COR	juvenile coral	2	0.03
25	TURF ALG	mixed assemblage	29	0.41
26	MAS COR	Diploria strigosa	10	0.14
27	RO	reef overhang	10	0.14
28	MAS COR	Diploria strigosa	5	0.07
29	FLE ALG	Lobophora variegata	54	0.76
30	MAS COR	Colpophyllia natans	17	0.24
31	RO	reef overhang	19	0.27
32	ERE SPO	erect sponge	16	0.23
33	TURF ALG	mixed assemblage	2	0.03

34	MAS COR	Montastrea cavernosa	16	0.23
35	RO	reef overhang	6	0.08
36	FLE ALG	Lobophora variegata	13	0.18
37	ERE SPO	erect sponge	4	0.06
38	FLE ALG	Lobophora variegata	80	1.13
39	TURF ALG	mixed assemblage	81	1.14
40	FLE ALG	Lobophora variegata	32	0.45
41	MAS COR	Mycetophyllia aliciae	10	0.14
42	RO	reef overhang	7	0.10
43	TURF ALG	mixed assemblage	10	0.14
44	RO	reef overhang	7	0.10
45	MAS COR	Montastrea annularis	31	0.44
46	RO	reef overhang	7	0.10
47	TURF ALG	mixed assemblage	9	0.13
48	RO	reef overhang	5	0.07
49	GORG	Erythropodium caribaeorum	6	0.08
50	RO	reef overhang	5	0.07
51	FLE ALG	Lobophora variegata	15	0.21
52	MAS COR	Montastrea annularis	4	0.06
53	RO	reef overhang	3	0.04
54	MAS COR	Montastrea annularis	35	0.49
55	MAS COR	Montastrea annularis	4	0.06
56	RO	reef overhang	2	0.03
57	MAS COR	Montastrea annularis	6	0.08
58	FLE ALG	Lobophora variegata	5	0.07
59	MAS COR	Montastrea annularis	34	0.48

Gorgonians = 13

Note: Turf Alg composed primarily of short filamentous algae, *Lobophora variegata* and fine sediment

B.4.1 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1, ARRECIFE GUAYAMA, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 13.6 m

RUGOSITY: 1.23 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	8	0.11
1	PIL COR	Dendrogyra cylindrus	43	0.61
2	TURF ALG	mixed assemblage	6	0.08
3	RO	reef overhang	9	0.13
4	CAL ALG	Amphiroa sp.	6	0.08
5	TURF ALG	mixed assemblage	46	0.65
6	GORG	Erythropodium caribaeorum	5	0.07

7	TURF ALG	mixed assemblage	20	0.28
8	ENC COR	Porites astreoides	5	0.07
9	TURF ALG	mixed assemblage	55	0.77
10	MAS COR	Montastrea annularis	5	0.07
11	TURF ALG	mixed assemblage	64	0.90
12	ENC COR	Stephanocoenia michilini	4	0.06
13	TURF ALG	mixed assemblage	35	0.49
14	ENC COR	Porites astreoides	4	0.06
15	TURF ALG	mixed assemblage	4	0.06
16	MAS COR	Diploria strigosa	2	0.03
17	ERE SPO	erect sponge	5	0.07
18	TURF ALG	mixed assemblage	24	0.34
19	MILLE	Millepora alcornis	3	0.04
20	TURF ALG	mixed assemblage	4	0.06
21	MAS COR	Montastrea annularis	5	0.07
22	TURF ALG	mixed assemblage	33	0.46
23	ENC COR	Porites astreoides	6	0.08
24	TURF ALG	mixed assemblage	29	0.41
25	MAS COR	Diploria strigosa	8	0.11
26	TURF ALG	mixed assemblage	10	0.14
27	MAS COR	Diploria strigosa	4	0.06
28	TURF ALG	mixed assemblage	13	0.18
29	MAS COR	Montastrea cavernosa	17	0.24
30	RO	reef overhang	4	0.06
31	TURF ALG	mixed assemblage	24	0.34
32	MAS COR	Montastrea cavernosa	4	0.06
33	TURF ALG	mixed assemblage	15	0.21
34	MAS COR	Montastrea cavernosa	5	0.07
35	MAS COR	Montastrea cavernosa	5	0.07
36	TURF ALG	mixed assemblage	55	0.77
37	MAS COR	Montastrea annularis	5	0.07
38	TURF ALG	mixed assemblage	13	0.18
39	ERE SPO	erect sponge	3	0.04
40	MAS COR	Montastrea annularis	16	0.23
41	MAS COR	Montastrea annularis	5	0.07
42	TURF ALG	mixed assemblage	2	0.03
43	MAS COR	Montastrea annularis	56	0.79
44	ERE SPO	erect sponge	2	0.03
45	TURF ALG	mixed assemblage	32	0.45
46	CAL ALG	Halimeda sp.	5	0.07
47	TURF ALG	mixed assemblage	24	0.34
48	MAS COR	Diploria labyrinthiformis	3	0.04
49	TURF ALG	mixed assemblage	5	0.07
50	RO	reef overhang	4	0.06
51	TURF ALG	mixed assemblage	18	0.25
52	PIL COR	Dendrogyra cylindrus	5	0.07
53	MAS COR	Mycetophyllia lamarckiana	5	0.07

Gorgonians = 42

Note: Turf Alg composed primarily of short filamentous algae, *Amphiroa* sp. and *Halimeda* sp.

B.4.2 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
ARRECIFE GUAYAMA, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 13.6 m
RUGOSITY: 3.08 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	ENC COR	Porites astreoides	5	0.07
1	TURF ALG	mixed assemblage	24	0.34
2	ENC COR	Porites astreoides	4	0.06
3	ERE SPO	erect sponge	4	0.06
4	FOL COR	Agaricia agaricites	6	0.08
5	TURF ALG	mixed assemblage	14	0.20
6	ENC COR	Porites astreoides	7	0.10
7	CAL ALG	Amphiroa sp.	7	0.10
8	TURF ALG	mixed assemblage	22	0.31
9	FOL COR	Agaricia agaricites	3	0.04
10	TURF ALG	mixed assemblage	17	0.24
11	MAS COR	Montastrea annularis	5	0.07
12	ENC COR	Porites astreoides	5	0.07
13	TURF ALG	mixed assemblage	14	0.20
14	MAS COR	Montastrea cavernosa	14	0.20
15	RO	reef overhang	7	0.10
16	TURF ALG	mixed assemblage	12	0.17
17	RO	reef overhang	6	0.08
18	TURF ALG	mixed assemblage	9	0.13
19	RO	reef overhang	16	0.23
20	ERE SPO	erect sponge	8	0.11
21	CAL ALG	Halimeda sp.	32	0.45
22	TURF ALG	mixed assemblage	35	0.49
23	RO	reef overhang	12	0.17
24	TURF ALG	mixed assemblage	13	0.18
25	ERE SPO	erect sponge	3	0.04
26	RO	reef overhang	3	0.04
27	FOL COR	Agaricia agaricites	4	0.06
28	TURF ALG	mixed assemblage	2	0.03
29	FOL COR	Agaricia agaricites	3	0.04
30	TURF ALG	mixed assemblage	37	0.52
31	RO	reef overhang	4	0.06
32	TURF ALG	mixed assemblage	41	0.58
33	MAS COR	Montastrea annularis	2	0.03
34	TURF ALG	mixed assemblage	3	0.04
35	MAS COR	Montastrea annularis	5	0.07
36	TURF ALG	mixed assemblage	4	0.06

37	MAS COR	Montastrea annularis	3	0.04
38	ENC COR	Porites astreoides	7	0.10
39	TURF ALG	mixed assemblage	8	0.11
40	MAS COR	Diploria labyrinthiformis	12	0.17
41	TURF ALG	mixed assemblage	5	0.07
42	RO	reef overhang	2	0.03
43	MAS COR	Montastrea annularis	9	0.13
44	TURF ALG	mixed assemblage	4	0.06
45	MAS COR	Montastrea annularis	5	0.07
46	TURF ALG	mixed assemblage	5	0.07
47	MAS COR	Diploria labyrinthiformis	19	0.27
48	TURF ALG	mixed assemblage	2	0.03
49	MAS COR	Montastrea cavernosa	6	0.08
50	TURF ALG	mixed assemblage	27	0.38
51	MAS COR	Montastrea annularis	9	0.13
52	TURF ALG	mixed assemblage	9	0.13
53	MAS COR	Montastrea cavernosa	3	0.04
54	TURF ALG	mixed assemblage	6	0.08
55	RO	reef overhang	6	0.08
56	ERE SPO	erect sponge	9	0.13
57	MAS COR	Siderastrea siderea	4	0.06
58	TURF ALG	mixed assemblage	24	0.34
59	MAS COR	Montastrea cavernosa	3	0.04
60	RO	reef overhang	6	0.08
61	TURF ALG	mixed assemblage	3	0.04
62	ENC SPO	Xestospongia muta	43	0.61
63	MILLE	Millepora alcicornis	5	0.07
64	MAS COR	Montastrea cavernosa	5	0.07
65	TURF ALG	mixed assemblage	11	0.15
66	GORG	gorgonian base	5	0.07
67	TURF ALG	mixed assemblage	4	0.06
68	MAS COR	Montastrea cavernosa	15	0.21
69	ENC SPO	Anthosigmella varians	13	0.18
70	TURF ALG	mixed assemblage	5	0.07
71	ENC SPO	Anthosigmella varians	16	0.23
72	TURF ALG	mixed assemblage	6	0.08
73	ENC SPO	Anthosigmella varians	38	0.54
74	RO	reef overhang	5	0.07
75	MAS COR	Montastrea annularis	5	0.07
76	TURF ALG	mixed assemblage	5	0.07
77	MAS COR	Montastrea annularis	5	0.07
78	TURF ALG	mixed assemblage	4	0.06
79	MAS COR	Montastrea annularis	4	0.06
80	RO	reef overhang	9	0.13
81	TURF ALG	mixed assemblage	36	0.51
82	RO	reef overhang	6	0.08
83	TURF ALG	mixed assemblage	36	0.51
84	ENC COR	Porites astreoides	5	0.07
85	TURF ALG	mixed assemblage	2	0.03
86	MAS COR	Montastrea annularis	33	0.46

Gorgonians = 27

Note: Turf Alg composed primarily of short filamentous algae, *Amphiroa* sp. and *Halimeda* sp.

B.4.3 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
ARRECIFE GUAYAMA, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 13.6 m

RUGOSITY: 2.94 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	53	0.75
1	TURF ALG	mixed assemblage	7	0.10
2	MAS COR	Montastrea annularis	4	0.06
3	TURF ALG	mixed assemblage	5	0.07
4	FOL COR	Agaricia agaricites	3	0.04
5	TURF ALG	mixed assemblage	5	0.07
6	MAS COR	Montastrea annularis	11	0.15
7	RO	reef overhang	6	0.08
8	MAS COR	Montastrea annularis	33	0.46
9	TURF ALG	mixed assemblage	10	0.14
10	CAL ALG	Amphiroa sp.	6	0.08
11	MAS COR	Montastrea annularis	10	0.14
12	RO	reef overhang	14	0.20
13	CAL ALG	Halimeda sp.	5	0.07
14	MAS COR	Montastrea annularis	51	0.72
15	TURF ALG	mixed assemblage	16	0.23
16	MAS COR	Montastrea annularis	5	0.07
17	FOL COR	Agaricia agaricites	2	0.03
18	MAS COR	Montastrea annularis	3	0.04
19	TURF ALG	mixed assemblage	18	0.25
20	RO	reef overhang	5	0.07
21	TURF ALG	mixed assemblage	4	0.06
22	MAS COR	Diploria strigosa	8	0.11
23	FOL COR	Agaricia agaricites	6	0.08
24	TURF ALG	mixed assemblage	5	0.07
25	MILLE	Millepora alcicornis	2	0.03
26	TURF ALG	mixed assemblage	21	0.30
27	GORG	Erythropodium caribaeorum	6	0.08
28	TURF ALG	mixed assemblage	8	0.11
29	ENC SPO	Xestospongia muta	22	0.31
30	ENC SPO	encrusting sponge	6	0.08
31	ENC SPO	Xestospongia muta	29	0.41
32	MAS COR	Diploria strigosa	7	0.10
33	TURF ALG	mixed assemblage	4	0.06

34	MAS COR	Montastrea cavernosa	8	0.11
35	TURF ALG	mixed assemblage	4	0.06
36	ZOAN	Lebrunia danae	2	0.03
37	TURF ALG	mixed assemblage	30	0.42
38	RO	reef overhang	9	0.13
39	TURF ALG	mixed assemblage	5	0.07
40	CAL ALG	Halimeda sp.	5	0.07
41	GORG	gorgonian base	2	0.03
42	MAS COR	Siderastrea siderea	26	0.37
43	TURF ALG	mixed assemblage	89	1.25
44	MAS COR	Montastrea cavernosa	4	0.06
45	MILLE	Millepora alcornis	3	0.04
46	TURF ALG	mixed assemblage	15	0.21
47	MAS COR	Meandrina meandrites	8	0.11
48	TURF ALG	mixed assemblage	10	0.14
49	MAS COR	Montastrea annularis	53	0.75
50	MAS COR	Montastrea annularis	10	0.14
51	RO	reef overhang	7	0.10
52	TURF ALG	mixed assemblage	4	0.06
53	MAS COR	Siderastrea siderea	3	0.04
54	FOL COR	Agaricia agaricites	3	0.04
55	TURF ALG	mixed assemblage	21	0.30
56	GORG	Erythropodium caribaeorum	5	0.07
57	TURF ALG	mixed assemblage	17	0.24
58	MAS COR	Isophyllia rigida	3	0.04
59	TURF ALG	mixed assemblage	23	0.32
60	MAS COR	Montastrea annularis	6	0.08
61	TURF ALG	mixed assemblage	19	0.27
62	MAS COR	Diploria strigosa	9	0.13
63	TURF ALG	mixed assemblage	15	0.21
64	ZOAN	Palythoa caribaeorum	21	0.30
65	TURF ALG	mixed assemblage	9	0.13
66	MAS COR	Montastrea annularis	2	0.03
67	TURF ALG	mixed assemblage	3	0.04
68	MAS COR	Montastrea annularis	20	0.28
69	RO	reef overhang	9	0.13
70	MAS COR	Meandrina meandrites	10	0.14
71	TURF ALG	mixed assemblage	27	0.38

Gorgonians = 22

Note: Turf Alg composed primarily of short filamentous algae, *Amphiroa* sp. and *Halimeda* sp.

B.4.4 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4, ARRECIFE GUAYAMA, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 13.6 m
RUGOSITY: 2.51 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	TURF ALG	mixed assemblage	5	0.07
1	MAS COR	Montastrea annularis	18	0.25
2	TURF ALG	mixed assemblage	5	0.07
3	MAS COR	Montastrea annularis	6	0.08
4	TURF ALG	mixed assemblage	14	0.20
5	RO	reef overhang	6	0.08
6	TURF ALG	mixed assemblage	5	0.07
7	MAS COR	Montastrea cavernosa	19	0.27
8	TURF ALG	mixed assemblage	11	0.15
9	ENC SPO	encrusting sponge	8	0.11
10	TURF ALG	mixed assemblage	18	0.25
11	RO	reef overhang	13	0.18
12	ERE SPO	erect sponge	5	0.07
13	TURF ALG	mixed assemblage	41	0.58
14	RO	reef overhang	5	0.07
15	FOL COR	Agaricia fragilis	13	0.18
16	RO	reef overhang	5	0.07
17	ENC COR	Porites astreoides	7	0.10
18	TURF ALG	mixed assemblage	8	0.11
19	MAS COR	Montastrea annularis	10	0.14
20	TURF ALG	mixed assemblage	4	0.06
21	MAS COR	Montastrea annularis	7	0.10
22	TURF ALG	mixed assemblage	4	0.06
23	MAS COR	Montastrea annularis	11	0.15
24	RO	reef overhang	4	0.06
25	TURF ALG	mixed assemblage	10	0.14
26	MAS COR	Siderastrea siderea	5	0.07
27	MAS COR	Montastrea annularis	29	0.41
28	TURF ALG	mixed assemblage	12	0.17
29	MAS COR	Montastrea annularis	13	0.18
30	TURF ALG	mixed assemblage	39	0.55
31	RO	reef overhang	5	0.07
32	MAS COR	Montastrea cavernosa	8	0.11
33	TURF ALG	mixed assemblage	10	0.14
34	MAS COR	Montastrea cavernosa	8	0.11
35	RO	reef overhang	8	0.11
36	TURF ALG	mixed assemblage	5	0.07
37	BRA COR	Porites porites	4	0.06
38	TURF ALG	mixed assemblage	5	0.07
39	CAL ALG	Halimeda sp.	5	0.07
40	TURF ALG	mixed assemblage	14	0.20
41	MAS COR	Diploria strigosa	9	0.13
42	MAS COR	Montastrea annularis	18	0.25
43	TURF ALG	mixed assemblage	6	0.08
44	GORG	gorgonian base	2	0.03
45	TURF ALG	mixed assemblage	8	0.11

46	MAS COR	Montastrea annularis	6	0.08
47	TURF ALG	mixed assemblage	10	0.14
48	MAS COR	Montastrea annularis	36	0.51
49	TURF ALG	mixed assemblage	5	0.07
50	MAS COR	Montastrea annularis	8	0.11
51	HOLE	hole	5	0.07
52	TURF ALG	mixed assemblage	30	0.42
53	MAS COR	Montastrea annularis	22	0.31
54	TURF ALG	mixed assemblage	29	0.41
55	MAS COR	Montastrea annularis	11	0.15
56	TURF ALG	mixed assemblage	31	0.44
57	RO	reef overhang	15	0.21
58	TURF ALG	mixed assemblage	56	0.79
59	ERE SPO	erect sponge	2	0.03
60	TURF ALG	mixed assemblage	26	0.37
61	RO	reef overhang	8	0.11
62	MAS COR	Montastrea annularis	30	0.42
63	HOLE	hole	4	0.06
64	MAS COR	Montastrea annularis	8	0.11
65	TURF ALG	mixed assemblage	9	0.13
66	MAS COR	Montastrea annularis	3	0.04
67	TURF ALG	mixed assemblage	11	0.15
68	MAS COR	Montastrea annularis	48	0.68

Gorgonians = 25

Note: Turf Alg composed primarily of short filamentous algae, *Amphiroa* sp. and *Halimeda* sp.

B.4.5 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
ARRECIFE GUAYAMA, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 13.6 m

RUGOSITY: 2.42 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Montastrea annularis	11	0.15
1	TURF ALG	mixed assemblage	3	0.04
2	MAS COR	Colpophyllia natans	6	0.08
3	TURF ALG	mixed assemblage	36	0.51
4	MAS COR	Montastrea annularis	13	0.18
5	TURF ALG	mixed assemblage	9	0.13
6	MAS COR	Montastrea cavernosa	6	0.08
7	TURF ALG	mixed assemblage	2	0.03
8	MAS COR	Montastrea annularis	71	1.00
9	TURF ALG	mixed assemblage	6	0.08
10	MAS COR	Montastrea annularis	18	0.25
11	TURF ALG	mixed assemblage	9	0.13
12	MAS COR	Montastrea annularis	19	0.27

13	TURF ALG	mixed assemblage	6	0.08
14	MAS COR	Montastrea annularis	7	0.10
15	TURF ALG	mixed assemblage	2	0.03
16	MAS COR	Meandrina meandrites	11	0.15
17	TURF ALG	mixed assemblage	14	0.20
18	FOL COR	Agaricia fragilis	5	0.07
19	MAS COR	Montastrea annularis	7	0.10
20	MAS COR	Montastrea annularis	12	0.17
21	TURF ALG	mixed assemblage	4	0.06
22	MAS COR	Montastrea annularis	10	0.14
23	CAL ALG	Amphiroa sp.	6	0.08
24	TURF ALG	mixed assemblage	14	0.20
25	MAS COR	Montastrea annularis	4	0.06
26	TURF ALG	mixed assemblage	4	0.06
27	MAS COR	Montastrea annularis	43	0.61
28	TURF ALG	mixed assemblage	4	0.06
29	MAS COR	Montastrea annularis	14	0.20
30	RO	reef overhang	8	0.11
31	MAS COR	Montastrea annularis	14	0.20
32	RO	reef overhang	5	0.07
33	MAS COR	Montastrea annularis	5	0.07
34	RO	reef overhang	10	0.14
35	TURF ALG	mixed assemblage	22	0.31
36	MAS COR	Montastrea annularis	24	0.34
37	TURF ALG	mixed assemblage	4	0.06
38	MAS COR	Montastrea annularis	13	0.18
39	TURF ALG	mixed assemblage	45	0.63
40	MAS COR	Montastrea annularis	21	0.30
41	RO	reef overhang	8	0.11
42	MAS COR	Montastrea annularis	14	0.20
43	TURF ALG	mixed assemblage	12	0.17
44	MAS COR	Montastrea annularis	9	0.13
45	TURF ALG	mixed assemblage	12	0.17
46	MILLE	Millepora alcornis	17	0.24
47	MAS COR	Montastrea cavernosa	10	0.14
48	RO	reef overhang	13	0.18
49	TURF ALG	mixed assemblage	7	0.10
50	MAS COR	Montastrea annularis	16	0.23
51	TURF ALG	mixed assemblage	5	0.07
52	CAL ALG	Halimeda sp.	5	0.07
53	RO	reef overhang	7	0.10
54	TURF ALG	mixed assemblage	33	0.46
55	FOL COR	Agaricia agaricites	2	0.03
56	TURF ALG	mixed assemblage	29	0.41
57	MILLE	Millepora alcornis	7	0.10
58	TURF ALG	mixed assemblage	6	0.08
59	RO	reef overhang	5	0.07
60	TURF ALG	mixed assemblage	6	0.08
61	GORG	Erythropodium caribaeorum	12	0.17
62	MAS COR	Dendrogyra cylindrus	4	0.06

63	TURF ALG	mixed assemblage	9	0.13
64	RO	reef overhang	4	0.06
65	MAS COR	Montastrea annularis	14	0.20
66	TURF ALG	mixed assemblage	1	0.01
67	MAS COR	Montastrea annularis	3	0.04
68	TURF ALG	mixed assemblage	11	0.15
69	MAS COR	Montastrea annularis	7	0.10
70	TURF ALG	mixed assemblage	4	0.06
71	MAS COR	Montastrea annularis	7	0.10
72	TURF ALG	mixed assemblage	15	0.21
73	MAS COR	Montastrea annularis	5	0.07
74	TURF ALG	mixed assemblage	16	0.23

Gorgonians = 18

Note: Turf Alg composed primarily of short filamentous algae, *Amphiroa* sp. and *Halimeda* sp.

B.4.6 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 1,
PUNTA GUILARTE SHOAL, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 10.0 m

RUGOSITY: 0.96 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	ENC SPO	Xestospongia muta	16	0.23
1	TURF ALG	mixed assemblage	22	0.31
2	MAS COR	Montastrea cavernosa	3	0.04
3	TURF ALG	mixed assemblage	23	0.32
4	MAS COR	Montastrea cavernosa	14	0.20
5	TURF ALG	mixed assemblage	27	0.38
6	MAS COR	Siderastrea siderea	4	0.06
7	TURF ALG	mixed assemblage	36	0.51
8	MAS COR	Montastrea cavernosa	6	0.08
9	TURF ALG	mixed assemblage	26	0.37
10	RO	reef overhang	6	0.08
11	TURF ALG	mixed assemblage	9	0.13
12	MAS COR	Diploria strigosa	5	0.07
13	TURF ALG	mixed assemblage	14	0.20
14	FLE ALG	Dictyota sp.	7	0.10
15	TURF ALG	mixed assemblage	4	0.06
16	FLE ALG	Dictyota sp.	9	0.13
17	RO	reef overhang	4	0.06
18	TURF ALG	mixed assemblage	4	0.06
19	RO	reef overhang	5	0.07
20	TURF ALG	mixed assemblage	16	0.23
21	MAS COR	Montastrea cavernosa	7	0.10

22	TURF ALG	mixed assemblage	22	0.31
23	MAS COR	Montastrea cavernosa	13	0.18
24	TURF ALG	mixed assemblage	17	0.24
25	ENC SPO	Anthosigmella varians	3	0.04
26	TURF ALG	mixed assemblage	6	0.08
27	ENC COR	Porites astreoides	6	0.08
28	TURF ALG	mixed assemblage	31	0.44
29	MAS COR	Dichocoenia stokesi	2	0.03
30	TURF ALG	mixed assemblage	10	0.14
31	ERE SPO	erect sponge	2	0.03
32	RO	reef overhang	5	0.07
33	TURF ALG	mixed assemblage	105	1.48
34	MAS COR	Siderastrea siderea	3	0.04
35	TURF ALG	mixed assemblage	22	0.31
36	MAS COR	Montastrea cavernosa	5	0.07
37	FLE ALG	Dictyota sp.	9	0.13
38	MAS COR	Siderastrea siderea	3	0.04
39	MAS COR	Montastrea cavernosa	5	0.07
40	TURF ALG	mixed assemblage	20	0.28
41	GORG	Rerythropodium caribaeorum	10	0.14
42	TURF ALG	mixed assemblage	16	0.23
43	ERE SPO	erect sponge	3	0.04
44	TURF ALG	mixed assemblage	12	0.17
45	ENC COR	Porites astreoides	5	0.07
46	TURF ALG	mixed assemblage	30	0.42
47	CAL ALG	Amphiroa sp.	6	0.08
48	TURF ALG	mixed assemblage	13	0.18
49	ERE SPO	erect sponge	3	0.04
50	TURF ALG	mixed assemblage	12	0.17
51	FLE ALG	Dictyota sp.	4	0.06
52	MAS COR	Montastrea cavernosa	20	0.28
53	TURF ALG	mixed assemblage	22	0.31
54	MAS COR	Siderastrea siderea	4	0.06
55	TURF ALG	mixed assemblage	43	0.61
56	MAS COR	Diploria strigosa	8	0.11
57	TURF ALG	mixed assemblage	11	0.15

Gorgonians = 10

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Amphiroa* sp. and fine sediment

B.4.7 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 2,
PUNTA GUILARTE SHOAL, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 10.0 m

RUGOSITY: 1.18 m

	TRANSITION SUBSTRATE TAXA CHAIN LINEAR	CODE	LINKS COVER (m)
mixed assemblage	0 TURF ALG	15 0.21	1 ERE SPO
erect sponge	5 0.07	2 FLE ALG	5 0.07
Dictyota sp.			

	3
	TURF ALG
mixed assemblage	25
	0.35
	4
	BRA COR
Acropora cervicornis	15
	0.21
	5
	RO
reef overhang	6
	0.08
	6
	MILLE
Millepora alcicornis	4
	0.06
	7
	TURF ALG
mixed assemblage	16
	0.23
	8
MAS COR	
Diploria strigosa	4
	0.06
	9
	TURF ALG
mixed assemblage	102
	1.44
	10
	MAS COR
Montastrea cavernosa	4
	0.06
	11
	TURF ALG
mixed assemblage	9
	0.13
	12
	ERE SPO

erect sponge	5 0.07
	13 TURF ALG
mixed assemblage	12 0.17
	14 MAS COR
Montastrea cavernosa	14 0.20
	15 FLE ALG
Dictyota sp.	21 0.30
	16 GORG
gorgonian base	2 0.03
	17 BRA COR
Porites porites	3 0.04
	18 TURF ALG
mixed assemblage	56 0.79
	19 FLE ALG
Dictyota sp.	6 0.08
	20 TURF ALG
mixed assemblage	5 0.07
	21 FLE ALG
Dictyota sp.	6

	0.08
	22
	TURF ALG
mixed assemblage	7
	0.10
	23
	GORG
Erythropodium caribaeorum	13
	0.18
	24
	RO
reef overhang	5
	0.07
	25
	TURF ALG
mixed assemblage	11
	0.15
	26
	ENC COR
Stephanocoenia michilini	3
	0.04
	27
	TURF ALG
mixed assemblage	33
	0.46
	28
	FOL COR
Agaricia agaricites	2
	0.03
	29
	TURF ALG
mixed assemblage	30
	0.42
	30
	ENC COR
Porites astreoides	5
	0.07

	31 MILLE
Millepora alcicornis	5 0.07
	32 FLE ALG
Dictyota sp.	7 0.10
	33 FLE ALG
Dictyota sp.	5 0.07
	34 TURF ALG
mixed assemblage	20 0.28
	35 MILLE
Millepora alcicornis	2 0.03
	36 TURF ALG
mixed assemblage	26 0.37
	37 MAS COR
Montastrea cavernosa	2 0.03
	38 TURF ALG
mixed assemblage	54 0.76
	39 RO
reef overhang	5 0.07
	40 MAS COR

Montastrea cavernosa	6 0.08
mixed assemblage	41 TURF ALG 3 0.04
encrusting sponge	42 ENC SPO 5 0.07
mixed assemblage	43 TURF ALG 29 0.41
Dictyota sp.	44 FLE ALG 3 0.04
mixed assemblage	45 TURF ALG 23 0.32
Dictyota sp.	46 FLE ALG 4 0.06
mixed assemblage	47 TURF ALG 3 0.04
Millepora alcicornis	48 MILLE 4 0.06
mixed assemblage	49 TURF ALG 6

	0.08
	50
	FLE ALG
Dictyota sp.	5
	0.07
	51
	TURF ALG
mixed assemblage	9
	0.13
	52
	MAS COR
Montastrea cavernosa	4
	0.06
	53
	TURF ALG
mixed assemblage	48
	0.68
	54
	MAS COR
Diploria strigosa	12
	0.17
	55
	TURF ALG
mixed assemblage	36
	0.51
	56
	RO
reef overhang	9
	0.13
	57
	TURF ALG
mixed assemblage	10
	0.14

11.18

Gorgonians = 12

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Amphiroa* sp.

and fine sediment

B.4.8 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 3,
PUNTA GUILARTE SHOAL, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 10.0 m

RUGOSITY: 1.38 m

TRANSITION
SUBSTRATE
TAXA
CHAIN
LINEAR

CODE

LINKS
COVER (m)

	0
	TURF ALG
mixed assemblage	4
	0.06
	1
	MAS COR
Montastrea cavernosa	15
	0.21
	2
	TURF ALG
mixed assemblage	4
	0.06
	3
	MAS COR
Siderastrea siderea	10
	0.14
	4
	TURF ALG
mixed assemblage	8
	0.11
	5
	ERE SPO
erect sponge	3
	0.04
	6
	TURF ALG
mixed assemblage	12
	0.17
	7
	ERE SPO
erect sponge	3

	0.04
	8
	TURF ALG
mixed assemblage	54
	0.76
	9
	BRA COR
Oculina diffusa	1
	0.01
	10
	RO
reef overhang	6
	0.08
	11
	TURF ALG
mixed assemblage	9
	0.13
	12
	ENC COR
Porites astreoides	4
	0.06
	13
	TURF ALG
mixed assemblage	40
	0.56
	14
	MAS COR
Montastrea cavernosa	18
	0.25
	15
	TURF ALG
mixed assemblage	50
	0.70
	16
	RO
reef overhang	4
	0.06

	17 ENC COR
Porites astreoides	6 0.08
	18 FLE ALG
Dictyota sp.	15 0.21
	19 TURF ALG
mixed assemblage	26 0.37
	20 MAS COR
Montastrea cavernosa	5 0.07
	21 TURF ALG
mixed assemblage	38 0.54
	22 MAS COR
Dichocoenia stokesi	12 0.17
	23 TURF ALG
mixed assemblage	38 0.54
	24 MAS COR
Dichocoenia stokesi	5 0.07
	25 TURF ALG
mixed assemblage	8 0.11
	26 ERE SPO

erect sponge	2 0.03
Amphiroa sp.	27 CAL ALG 6 0.08
mixed assemblage	28 TURF ALG 7 0.10
Diploria strigosa	29 MAS COR 7 0.10
mixed assemblage	30 TURF ALG 20 0.28
Meandrina meandrites	31 MAS COR 10 0.14
mixed assemblage	32 TURF ALG 32 0.45
Diploria strigosa	33 MAS COR 4 0.06
mixed assemblage	34 TURF ALG 51 0.72
Meandrina meandrites	35 MAS COR 6

	0.08
	36
	TURF ALG
mixed assemblage	54
	0.76
	37
	ERE SPO
erect sponge	4
	0.06
	38
	TURF ALG
mixed assemblage	7
	0.10
	39
	MILLE
Millepora alcicornis	4
	0.06
	40
	TURF ALG
mixed assemblage	19
	0.27
	41
	ERE SPO
erect sponge	3
	0.04
	42
	TURF ALG
mixed assemblage	12
	0.17
	43
	ENC COR
Porites astreoides	5
	0.07
	44
	TURF ALG
mixed assemblage	21
	0.30

	45 RO
reef overhang	6 0.08
	46 ENC COR
Porites astreoides	12 0.17
	47 FLE ALG
Dictyota sp.	10 0.14
	48 TURF ALG
mixed assemblage	12 0.17
	49 MAS COR
Meandrina meandrites	7 0.10
	50 TURF ALG
mixed assemblage	30 0.42
	51 ERE SPO
erect sponge	5 0.07
	52 TURF ALG
mixed assemblage	54 0.76

Gorgonians = 14

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Amphiroa* sp.

and fine sediment

B.4.9 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 4,
PUNTA GUILARTE SHOAL, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 10.0 m
RUGOSITY: 1.63 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
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0	TURF ALG	mixed assemblage	6	0.08
1	MAS COR	Montastra cavernosa	4	0.06
2	RO	reef overhang	4	0.06
3	MAS COR	Siderastrea siderea	2	0.03
4	TURF ALG	mixed assemblage	42	0.59
5	RO	reef overhang	4	0.06
6	MAS COR	Siderastrea siderea	16	0.23
7	TURF ALG	mixed assemblage	39	0.55
8	MAS COR	Montastra cavernosa	6	0.08
9	TURF ALG	mixed assemblage	6	0.08
10	MAS COR	Siderastrea siderea	4	0.06
11	MAS COR	Siderastrea siderea	4	0.06
12	GORG	gorgonian base	2	0.03
13	TURF ALG	mixed assemblage	16	0.23
14	MAS COR	Diploria strigosa	3	0.04
15	TURF ALG	mixed assemblage	47	0.66
16	MAS COR	Meandrina meandrites	5	0.07
17	TURF ALG	mixed assemblage	58	0.82
18	FOL COR	Agaricia agaricites	4	0.06
19	TURF ALG	mixed assemblage	59	0.83
20	ERE SPO	Xestospongia muta	26	0.37
21	TURF ALG	mixed assemblage	10	0.14
22	MAS COR	Meandrina meandrites	5	0.07
23	TURF ALG	mixed assemblage	16	0.23
24	ERE SPO	erect sponge	3	0.04
25	TURF ALG	mixed assemblage	14	0.20
26	ERE SPO	Xestospongia muta	38	0.54
27	TURF ALG	mixed assemblage	34	0.48
28	MAS COR	Meandrina meandrites	4	0.06
29	TURF ALG	mixed assemblage	11	0.15
30	RO	reef overhang	5	0.07
31	MAS COR	Diploria strigosa	5	0.07
32	TURF ALG	mixed assemblage	55	0.77
33	GORG	gorgonian base	2	0.03
34	TURF ALG	mixed assemblage	10	0.14
35	ERE SPO	erect sponge	5	0.07
36	TURF ALG	mixed assemblage	75	1.06
37	RO	reef overhang	10	0.14
38	FLE ALG	Dictyota sp.	4	0.06
39	TURF ALG	mixed assemblage	12	0.17
40	FLE ALG	Dictyota sp.	5	0.07
41	RO	reef overhang	8	0.11
42	BRA COR	Porites porites	4	0.06
43	FLE ALG	Dictyota sp.	6	0.08
44	RO	reef overhang	3	0.04
45	MAS COR	Diploria strigosa	11	0.15
46	FLE ALG	Dictyota sp.	4	0.06
47	TURF ALG	mixed assemblage	3	0.04
48	GORG	Erythropodium caribaeorum	4	0.06
49	TURF ALG	mixed assemblage	6	0.08

50	SAND	sand	27	0.38
51	TURF ALG	mixed assemblage	44	0.62
52	MAS COR	Meandrina meandrites	9	0.13
53	TURF ALG	mixed assemblage	2	0.03
54	MAS COR	Montastra cavernosa	2	0.03
55	TURF ALG	mixed assemblage	13	0.18

Gorgonians = 15

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Amphiroa* sp. and fine sediment

B.4.10 REEF BENTHIC COMMUNITY PROFILE ALONG LINEAR TRANSECT 5,
PUNTA GUILARTE SHOAL, ARROYO. SEPTEMBER 3, 2001.

DEPTH: 10.0 m

RUGOSITY: 1.31 m

TRANSITION	SUBSTRATE CODE	TAXA	CHAIN LINKS	LINEAR COVER (m)
0	MAS COR	Siderastrea siderea	28	0.39
1	FLE ALG	Dictyota sp.	13	0.18
2	TURF ALG	mixed assemblage	20	0.28
3	RO	reef overhang	10	0.14
4	TURF ALG	mixed assemblage	26	0.37
5	MAS COR	Siderastrea siderea	14	0.20
6	TURF ALG	mixed assemblage	17	0.24
7	MAS COR	Montastrea cavernosa	8	0.11
8	FLE ALG	Dictyota sp.	10	0.14
9	TURF ALG	mixed assemblage	21	0.30
10	MAS COR	Dichocoenia stokesi	4	0.06
11	TURF ALG	mixed assemblage	64	0.90
12	MAS COR	Montastrea cavernosa	22	0.31
13	TURF ALG	mixed assemblage	10	0.14
14	ERE SPO	erect sponge	4	0.06
15	SAND	sand	18	0.25
16	TURF ALG	mixed assemblage	37	0.52
17	ERE SPO	erect sponge	2	0.03
18	TURF ALG	mixed assemblage	29	0.41
19	MAS COR	Diploria strigosa	4	0.06
20	TURF ALG	mixed assemblage	35	0.49
21	RO	reef overhang	9	0.13
22	ZOAN	Palythoa caribaeorum	6	0.08
23	TURF ALG	mixed assemblage	40	0.56
24	ENC COR	Porites astreoides	3	0.04
25	TURF ALG	mixed assemblage	25	0.35
26	MAS COR	Diploria labyrinthiformis	8	0.11
27	FLE ALG	Dictyota sp.	10	0.14

28	TURF ALG	mixed assemblage	74	1.04
29	MAS COR	Montastrea cavernosa	17	0.24
30	TURF ALG	mixed assemblage	50	0.70
31	ENC SPO	Xestospongia muta	16	0.23
32	TURF ALG	mixed assemblage	97	1.37
33	ERE SPO	erect sponge	2	0.03
34	TURF ALG	mixed assemblage	6	0.08
35	ERE SPO	erect sponge	4	0.06
36	TURF ALG	mixed assemblage	30	0.42
37	FLE ALG	Dictyota sp.	5	0.07
38	TURF ALG	mixed assemblage	5	0.07

Gorgonians = 13

Note: Turf Alg composed primarily of short filamentous algae, *Dictyota* sp., *Amphiroa* sp. and fine sediment

C.1.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT BUOY 2 REEF, PONCE.

DATE: August 21, 2001

DEPTH:16.7 m

LOCATION (GPS): 17 55.815' N 066 37.814' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
Abudefduf sexatilis						1	0.2
Acanthurus bahianus		1	1		1	2	1.0
Acanthurus chirurgus		1		1	1	2	1.0
Acanthurus coeruleus					1		0.2
Aulostomus maculatus				1			0.2
Bodianus rufus						1	0.2
Canthigaster rostrata			1	1	1	1	0.8
Cephalopis cruentata				1			0.2
Chaetodon capistratus			1	7	1	2	2.2
Chromis cyanea			6			5	2.2
Chromis multilineata						3	0.6
Clepticus parrae						16	3.2

<i>Coryphopterus lipernes</i>	1	3	1	2	1	1.6
<i>Coryphopterus personatus</i>					12	2.4
<i>Gobiosoma evelynae</i>	4	4	3	3	1	3.0
<i>Haemulon flavolineatum</i>			1		2	0.6
<i>Halichoeres garnoti</i>	1	1				0.4
<i>Holacanthus tricolor</i>				2		0.4
<i>Holocentrus ascensionis</i>		1				0.2
<i>Holocentrus rufus</i>	1	1		1	1	0.8
<i>Hypoplectrus nigricans</i>	1				1	0.4
<i>Hypoplectrus puella</i>		1	1			0.4
<i>Hypoplectrus unicolor</i>	1				1	0.4
<i>Myripristis jacobus</i>	3	2	1	4	6	3.2
<i>Ocyurus chrysurus</i>	1					0.2
<i>Pseudupeneus maculatus</i>					1	0.2
<i>Scarus iserti</i>	2		3	5	3	2.6
<i>Scarus taeniopterus</i>		1	2	2	1	1.2
<i>Scarus vetula</i>		1		2		0.6
<i>Sparisoma aurofrenatum</i>		2	1	1	2	1.2
<i>Sparisoma sadians</i>		3				0.6
<i>Stegastes partitus</i>	7	9	8	5	6	7.0
<i>Stegastes planifrons</i>	2	3	2	3	3	2.6
<i>Thalassoma bifasciatum</i>	7		10		12	5.8
TOTAL INDIVIDUALS	33	41	44	35	86	47.8
TOTAL SPECIES	14	17	16	16	24	17

Outside transects:

Decapterus macarellus
Sphyrna barracuda
Scomberomorus regalis
Holacanthus ciliaris
Chaetodon striatus
Carangoides ruber
Haemulon flavolineatum
Hypoplectrus chlorurus
Clepticus parrae
Cephalopis fulva
Equetus punctatus
Anisotremus virginicus
Euthynnus alleteratus

C.1.2 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT DERRUMBADERO REEF, PONCE.

DATE: August 22, 2001

DEPTH: 16.7 m

LOCATION (GPS): 17° 54.237'N; 066° 36.516'W

TRANSECS				
1	2	3	4	5

TAXA	COMMON NAME	(individuals/30 m2)					MEAN
Acanthurus bahianus			2		2	2	1.2
Acanthurus chirurgus		1	1	1	2		1.0
Acanthurus coeruleus			1				0.2
Aulostomus maculatus		2		1			0.6
Bodianus rufus				1			0.2
Cantherhines macrocerus						1	0.2
Canthigaster rostrata			3		1	1	1.0
Carangoides ruber		2	8		4		2.8
Cephalopis cruentata			1	2	1	1	1.0
Cephalopis fulva						1	0.2
Chaetodon aculeatus					1		0.2
Chaetodon capistratus		2	2	2	3	2	2.2
Chaetodon striatus						2	0.4
Chromis cyanea		18	4	5	13		8.0
Chromis multilineata		6		1		16	4.6
Clepticus parrae		17	8	13	17	36	18.2
Coryphopterus lipernes		8	12		8	9	7.4
Coryphopterus personatus		30	13	26	38	56	32.6
Flameo marianus		1					0.2
Gobiosoma evelynae		3	1	52	4	10	14.0
Haemulon flavolineatum		1		2	1	1	1.0
Haemulon macrostomum		1					0.2
Halichoeres garnoti		1		2	2	1	1.2
Holacanthus ciliaris						1	0.2
Holocentrus ascensionis						1	0.2
Holocentrus rufus			2				0.4
Hypoplectrus chlorurus		1				1	0.4
Hypoplectrus nigricans				1			0.2
Hypoplectrus puella		1	1		2	2	1.2
Hypoplectrus unicolor				1		1	0.4
Melichthys niger			1		2		0.6
Microspathodon chrysurus						1	0.2
Myripristis jacobus		4		1		3	1.6
Ocyurus chrysurus			1		2		0.6
Pomacanthus arcuatus						1	0.2
Scarus iserti		6	2	7	7	4	5.2
Scarus taeniopterus		1	5	1	3		2.0
Scarus vetula		1				1	0.4
Serranus tigrinus			2			1	0.6
Sparisoma aurofrenatum		2		2	5		1.8
Sparisoma radians				1		2	0.6
Sparisoma viride		3	2		1	5	2.2
Spyraena barracuda		1					0.2
Stegastes leucostictus			1	2		1	0.8
Stegastes partitus		20	17	22	24	24	21.4
Stegastes planifrons		2	1	1			0.8
Thalassoma bifasciatum		9	17	16	43	18	20.6
TOTAL INDIVIDUALS		144	108	163	186	206	161.4

	TOTAL SPECIES	26	24	23	23	30	25.2
Outside transects:							
Adiorix sp.							
Aetobatus narinari							
Balistes vetula							
Chaetodipterus faber							
Equetus punctatus							
Equetus striatus							
Gymnothorax miliaris							
Haemulon plumieri							
Hypoplectrus indigo							
Lutjanus apodus							
Lutjanus cyanopterus							
Mycteroperca venenosa							
Scomberomorus regalis							

C.1.3 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT BAJO TASMANIA REEF, PONCE.

DATE: August 23, 2001

DEPTH: 9.1 m

LOCATION (GPS): 17° 56.564' N 066° 37.147' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
			(individuals/30 m ²)				
Acanthurus bahianus			1	2	1		0.8
Aulostomus maculatus				1			0.2
Canthigaster rostrata		1				1	0.4
Chaetodon capistratus		2				2	0.8
Coryphopterus glaucofraenum			1				0.2
Gobiosoma evelynae		3					0.6
Haemulon flavolineatum				1		2	0.6
Halichoeres garnoti				1		1	0.4
Holocentrus rufus		1			1		0.4
Myripristis jacobus		1					0.2
Ocyurus chrysurus				1			0.2
Odontoscion dentex		1					0.2
Scarus iserti		7		3	4	1	3.0

<i>Scomberomorus regalis</i>	4					0.8
<i>Sparisoma aurofrenatum</i>		1		2	1	0.8
<i>Sparisoma viride</i>		1	1	1		0.6
<i>Stegastes dorsopunicans</i>	2	5		3	1	2.2
<i>Stegastes leucostictus</i>					1	0.2
<i>Stegastes partitus</i>	2	4	1			1.4
<i>Stegastes planifrons</i>		1				0.2
<i>Thalassoma bifasciatum</i>	1		8	1		2.0
TOTAL INDIVIDUALS	25	14	19	13	10	16.2
TOTAL SPECIES	11	7	9	7	8	8.4

Outside transects:

Chaetodon striatus
Acanthurus chirurgus
Cephalopolis cruentata
Bodianus rufus
Serranus tigrinus
Haemulon plumieri
Halichoeres radiatus
Mulloides martinicus
Chaetodon ocellatus
Holocentrus ascensionis
Pomacantus arcuatus
Lutjanus apodus
Epinephelus guttatus
Sparisoma radians
Scarus taeniopterus

C.2.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT MARIA LANGA REEF, GUAYANILLA.

DATE: August 27, 2001

DEPTH: 15.2 m

LOCATION (GPS): 17° 57.563' N 066°45.255' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
		(individuals/30 m ²)					
<i>Acanthurus bahianus</i>				1		1	0.4
<i>Acanthurus chirurgus</i>		1			1		0.2
<i>Acanthurus coeruleus</i>		8	4		6	3	1.8
<i>Amblycirrhitus pinos</i>		1		1			0.2
<i>Anisotremus virginicus</i>			1		1		0.2
<i>Aulostomus maculatus</i>			1				0.0
<i>Bodianus rufus</i>			2		1		0.2
<i>Canthigaster rostrata</i>		1	2	2	1	1	0.8
<i>Carangoides ruber</i>					6		1.2

Cephalopolis cruentatum	1	1	1	1	1	0.6
Chaetodon capistratus	1	3		2	2	0.8
Chaetodon ocellatus					1	0.2
Chaetodon striatus			2			0.4
Chromis cyanea	1	1		4		0.8
Clepticus parrae				3	6	1.8
Coryphopterus lipernes	9	18	9	4	9	4.4
Coryphopterus personatus	13	20			12	2.4
Epinephelus guttatus	1	2	1			0.2
Equetus acuminatus	1					0.0
Gobiosoma evelynae	5	9	3	3	6	2.4
Haemulon flavolineatum	1	2				0.0
Haemulon plumieri	2		1			0.6
Haemulon sciurus			1			0.2
Halichoeres garnoti		2		2		0.8
Holacanthus tricolor				1		0.2
Holocentrus rufus	2		1	1	1	1.0
Hypoplectrus indigo	1		1			0.4
Lachnolaimus maximus		2				0.4
Melichthys niger	5	3		2		2.0
Myripristis jacobus	3	1	1		2	1.4
Ocyurus chrysurus				1		0.2
Pomacanthus arcuatus	1					0.2
Pomacanthus paru		1				0.2
Pseudupeneus maculatus			1			0.2
Rypticus saponaceus			1			0.2
Scarus iserti	1	5	1	8	11	5.2
Scarus taeniopterus				4	1	1.0
Scarus vetula	2			1	1	0.8
Serranus tigrinus		1		1		0.4
Sparisoma aurofrenatum				3	1	0.8
Sparisoma radians		1	1		2	0.8
Sparisoma rubripinne					2	0.4
Sparisoma viride		1	2	3	1	1.4
Stegastes partitus	5	7	9	10	5	7.2
Stegastes planifrons	3	2	1	3		1.8
Thalassoma bifasciatum	7	9	8	22	21	13.4

TOTAL INDIVIDUALS	76	101	49	95	90	82.2
TOTAL SPECIES	24	25	21	26	21	23

Outside transects:

Abudefduf sexatilis
 Adioryx vexillarius
 Cephalopolis fulva
 Chromis multilineata
 Gramma loreto
 Haemulon chrysargyreum
 Hypoplectrus puella
 Lutjanus apodus
 Scomberomorus cavalla
 Scomberomorus regalis

C.2.2 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT MARIA LANGA REEF, GUAYANILLA.

DATE: August 29, 2001

DEPTH:10.0 m

LOCATION (GPS): 17° 57.630' N 066° 45.256' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
		(individuals/30 m2)					
Acanthurus bahianus		2	2	1	1	1	0.6
Acanthurus chirurgus			1				0.0
Acanthurus coeruleus		1					0.0
Adioryx vexillarius						1	0.2
Anisotremus virginicus		1					0.0
Aulostomus maculatus				1			0.2
Bodianus rufus				1			0.2
Cephalopolis cruentatus		1			1		0.2
Cantherhines pullus						1	0.2
Cephalopolis fulva				1			0.2
Chaetodon capistratus		2	2	2	1	3	1.2
Chaetodon ocellatus				1			0.2
Chaetodon striatus						2	0.4
Chromis cyanea			2		1		0.2
Epinephelus guttatus				1			0.2
Gobiosoma evelynae				3			0.6
Haemulon flavolineatum		1			1	1	0.6
Haemulon plumieri		1					0.2
Halichoeres garnoti		1	2	3		2	1.6
Holacanthus tricolor				1	1		0.4
Holocentrus ascensionis					1	1	0.4
Holocentrus rufus		1	1			1	0.6
Lachnolaimus maximus			1				0.2
Lutjanus apodus					1		0.2
Melichthys niger		5					1.0
Microspathodon chrysurus		1	1		1	2	1.0
Myripristis jacobus		4	1		3	3	2.2
Ocyurus chrysurus					2		0.4
Ophioblennius atlanticus			1				0.2
Pomacanthus paru				2			0.4
Pseudupeneus maculatus				1			0.2
Scarus iserti		1	7		1		1.8
Scarus taeniopterus		1	3		1		1.0
Scarus vetula			1				0.2
Scomberomorus regalis				1			0.2
Sparisoma aurofrenatum		1	1	2		1	1.0
Sparisoma radians			1	2			0.6
Sparisoma viride				2			0.4

Stegastes dorsopunicans		1		2		0.6
Stegastes partitus	8	10	8	5	4	7.0
Stegastes planifrons	1	1	1	2	3	1.6
Thalassoma bifasciatum		14	4	10	17	9.0
TOTAL INDIVIDUALS	33	53	38	35	43	40.4
TOTAL SPECIES	17	19	19	17	15	17

Outside transects:

Lutjanus
 Haemulon macrostomum
 Haemulon chrysargyreum
 Serranus tigrinus
 Haemulon carbonarium
 Sparisoma rubripinne

C.2.3 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT TALLABOA.

DATE: August 29, 2001

DEPTH: 10.6 m

LOCATION (GPS): 17° 56.759' N 066° 43.480' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
		(individuals/30 m2)					
Acanthurus bahianus		4	3	2	2	2	2.6
Acanthurus chirurgus					1	1	0.4
Acanthurus coeruleus					1		0.2
Anisotremus virginicus			1			1	0.4
Aulostomus maculatus				1			0.2
Bodianus rufus			1				0.2
Calamus pennatula		1					0.2
Cantherhines macrocerus					1		0.2
Canthigaster rostrata				1	1		0.4
Carangoides ruber		2					0.4
Cephalopis fulva		2	1	1	2	2	1.6
Chaetodon capistratus		1	1	2	2		1.2
Chaetodon ocellatus			2				0.4
Chaetodon striatus					2		0.4
Chromis multilineata					1		0.2
Epinephelus guttatus			1	1		1	0.6
Gobiosoma evelynae		2				1	0.6
Haemulon flavolineatum				1		3	0.8
Halichoeres garnoti		1	1	3	4	1	2.0
Holacanthus tricolor						1	0.2
Holocentrus rufus		1		1		1	0.6
Lachnolaimus maximus			1				0.2
Microspathodon chrysurus				1		1	0.4

Myripristis jacobus					1	0.2
Ocyurus chrysurus				2	2	0.8
Pseudupeneus maculatus		1		1	1	0.6
Stegastes variabilis					1	0.2
Scarus iserti	1	1	3	1	3	1.8
Scarus taeniopterus			3		5	1.6
Scarus vetula					1	0.2
Serranus tigrinus	2		1		1	0.8
Sparisoma aurofrenatum	1	3		3	2	1.8
Sparisoma radians	1		2			0.6
Sparisoma viride		1			1	0.4
Stegastes dorsopunicans					1	0.2
Stegastes partitus	8	7	11	10	12	9.6
Stegastes planifrons				1		0.2
Thalassoma bifasciatum	14	13	3	2	50	16.4
TOTAL INDIVIDUALS	41	38	37	37	96	50
TOTAL SPECIES	14	15	16	17	24	17

Outside transects:

Abudefduf sexatilis
 Haemulon chrysargyreum
 Halichoeres radiatus
 Cephalopis cruentatus
 Holocentrus ascensionis
 Haemulon plumieri
 Lutjanus synagris
 Scomberomorus regalis
 Chromis cyanea
 Halichoeres maculipina
 Malacanthus plumieri
 Lactophrys bicaudalis
 Lutjanus apodus
 Balistes vetula
 Carangoides crysos
 Rypticus saponaceus
 Pomacanthus paru

C.3.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT LAS MAREAS REEF, GUAYAMA.

DATE: September 1, 2001

DEPTH: 16.7 m

LOCATION (GPS): 17° 53.093' N; 066° 08.956' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
		(individuals/30 m ²)					

Stegastes partitus	23	18	30	35	16	24.4
Scarus iserti	3	16	4	6		5.8
Sparisoma radians	5	3	3	4	5	4.0
Thalassoma bifasciatum	17		1	1		3.8
Halichoeres garnoti	4	2		3	4	2.6
Scarus taeniopterus	4	2		3		1.8
Acanthurus bahianus	1	3	2	1	1	1.6
Sparisoma aurofrenatum	3		1	2	2	1.6
Chaetodon capistratus	2	2	2		1	1.4
Lutjanus apodus	6	1				1.4
Ocyurus chrysurus	1		3	2	1	1.4
Sparisoma viride		4	1	1		1.2
Acanthurus chirurgus		1	1		3	1.0
Cephalopolis fulva			2	1	2	1.0
Haemulon flavolineatum	2		1		1	0.8
Holocentrus rufus	2	1			1	0.8
Stegastes planifrons		3				0.6
Aulostomus maculatus			2			0.4
Calamus pennatula	1				1	0.4
Gobiosoma evelynae				1	1	0.4
Haemulon macrostomum			2			0.4
Scarus vetula		1	1			0.4
Sphyræna barracuda		1			1	0.4
Stegastes leucostictus	1	1				0.4
Acanthurus coeruleus			1			0.2
Amblycirrhitus pinos					1	0.2
Canthigaster rostrata			1			0.2
Cephalopolis cruentata			1			0.2
Halichoeres radiatus		1				0.2
Holacanthus tricolor			1			0.2
Myripristis jacobus		1				0.2
Pseudupeneus maculatus				1		0.2
Serranus tigrinus				1		0.2

TOTAL INDIVIDUALS	75	61	60	62	41	59.8
TOTAL SPECIES	15	17	19	14	15	16

Outside transects:

Abudefduf sexatilis
 Anisotremus virginicus
 Balistes vetula
 Bodianus rufus
 Carangoides ruber
 Chaetodon striatus
 Chromis cyanea
 Clepticus parrae
 Epinephelus guttatus
 Epinephelus striatus
 Equetus acuminatus
 Haemulon aurolineatum
 Haemulon carbonarium
 Haemulon chrysargyreum

Haemulon plumieri
 Haemulon sciurus
 Holocentrus ascensionis
 Lachnolaimus maximus
 Melichthys niger
 Microspathodon chrysurus
 Mulloides martinicus
 Pomacanthus paru
 Sargocentron vexillarium
 Scomberomorus cavalla
 Scomberomorus regalis

C.3.2 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT CAYOS DE BARCA REEF, GUAYAMA.

DATE: September 2, 2001

DEPTH: 10.6 m

LOCATION (GPS): 17° 54.830' N; 066° 14.866' W

TAXA	COMMON NAME	TRANSECT					MEAN
		1	2	3	4	5	
		(individuals/30 m2)					
Stegastes partitus		30	36	14	37	23	28.0
Thalassoma bifasciatum		5	1	2	12	15	7.0
Stegastes leucostictus		10	5	3	6	6	6.0
Scarus iserti		1	7	1	11	5	5.0
Stegastes planifrons			3	5	4	5	3.4
Gobiosoma evelynae		4	2	2		3	2.2
Halichoeres garnoti		3		3	4	1	2.2
Halichoeres bivittatus		1	2	1	3		1.4
Acanthurus bahianus			1	2	1	2	1.2
Hypoplectrus puella		1	1	1	2	1	1.2
Sparisoma aurofrenatum		1	1	3			1.0
Chromis cyanea		4					0.8
Sparisoma radians		1				2	0.6
Epinephelus guttatus		1			1		0.4
Haemulon flavolineatum		1				1	0.4
Halichoeres maculipinna			1		1		0.4
Holacanthus tricolor		1			1		0.4
Acanthurus coeruleus		1					0.2
Bodianus rufus						1	0.2
Cephalopolis cruentata				1			0.2
Halichoeres pictus				1			0.2
Holocentrus rufus			1				0.2
Hypoplectrus unicolor						1	0.2
Malacoctenus triangulatus						1	0.2
Pseudupeneus maculatus		1					0.2
Scarus vetula						1	0.2
Serranus sp.			1				0.2

Serranus tigrinus					1	0.2
Sparisoma viride		1				0.2
Stegastes dorsopunicans					1	0.2
TOTAL INDIVIDUALS	66	63	39	83	70	51
TOTAL SPECIES	16	14	13	12	17	11

Outside transects:

Chaetodon striatus
Coryphopterus sp.
Haemulon chrysargyreum
Halichoeres radiatus
Holacanthus ciliaris
Hypoplectrus indigo
Lutjanus apodus
Microspathodon chrysurus
Myripristis jacobus
Ocyurus chrysurus
Odontoscion dentex

C.3.3 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT LAS MAREAS REEF, GUAYAMA.

DATE: September 2, 2001

DEPTH: 21.2 m

LOCATION (GPS): 17° 53.057' N; 066°08.947' W

TAXA	COMMON NAME	TRANSECS			MEAN
		1	2	3	
		(individuals/30 m2)			
Chromis cyanea		8	34	16	19.3
Stegastes partitus		25		23	16.0
Chromis multilineata			17		5.7
Chaetodon capistratus		6	5	2	4.3
Holocentrus rufus			10		3.3
Equetus sp.			8		2.7
Cephalopolis fulva		1		5	2.0
Gobiosoma evelynae		2		4	2.0
Halichoeres garnoti		1	1	3	1.7
Thalassoma bifasciatum		1	4		1.7
Scarus iserti		3	1		1.3
Scarus taeniopterus		2		2	1.3
Sparisoma radians			1	3	1.3
Stegastes planifons				4	1.3

Acanthurus bahianus	3			1.0
Clepticus parrae	3			1.0
Pseudupeneus maculatus	2	1		1.0
Sargocentron vexillarium		2	1	1.0
Scarus vetula	1		2	1.0
Serranus tigrinus	1	1	1	1.0
Sparisoma aurofrenatum			3	1.0
Myripristis jacobus			3	1.0
Cephalopolis cruentata		2		0.7
Epinephelus guttatus	1		1	0.7
Haemulon aurolineatum		1	1	0.7
Hypoplectrus chlorurus	1		1	0.7
Ocyurus chrysurus		1	1	0.7
Pomacanthus arcuatus		1	1	0.7
Stegastes leucostictus		1	1	0.7
Acanthurus chirurgus			2	0.7
Calamus pennatula	1			0.3
Haemulon flavolineatum		1		0.3
Holacanthus tricolor		1		0.3
Hypoplectrus unicolor	1			0.3
Lachnolaimus maximus	1			0.3
Lactophrys triqueter	1			0.3
Sparisoma viride		1		0.3

TOTAL INDIVIDUALS	65	94	80	79.7
TOTAL SPECIES	20	20	21	20

Outside transects:

Chaetodon sedentarius
 Decapterus macarellus
 Halichoeres radiatus
 Hypoplectrus puella
 Malacanthus plumieri
 Scomberomorus regalis
 Sphyaena barracuda

C.4.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT ARRECIFE GUAYAMA, ARROYO.

DATE: September 3, 2001

DEPTH: 13.6 m

LOCATION (GPS): 17° 55.353' N; 066° 03.675' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
Thalassoma bifasciatum		26	26	38	40	48	35.6

Stegastes partitus	28	25	34	32	28	29.4
Coryphopterus personatus				27	60	17.4
Clepticus parrae	17		25		36	15.6
Chromis cyanea	10		10	17	30	13.4
Chromis multilineata			5	14	40	11.8
Coryphopterus lipernes			4	4	17	5.0
Gobiosoma evelynae	1	3	5	5	11	5.0
Halichoeres garnoti	2	6	5		4	3.4
Haemulon flavolineatum		1	4	4	5	2.8
Sparisoma viride	1	3	3	5	2	2.8
Carangoides ruber	12				1	2.6
Scarus iserti	4	2	2	2	3	2.6
Holocentrus rufus		2	5	2	2	2.2
Microspathodon chrysurus	2	3	4	2		2.2
Lutjanus apodus			3	3	3	1.8
Melichthys niger	1			7	1	1.8
Myripristis jacobus			4	2	3	1.8
Scarus taeniopterus	2	3	2			1.4
Cephalopolis cruentata	1	2	1	1	1	1.2
Sparisoma aurofrenatum	3	1		1	1	1.2
Acanthurus bahianus	2	2	1			1.0
Aulostomus maculatus	1		1	2	1	1.0
Chaetodon capistratus	2	1	2			1.0
Sparisoma radians	2		3			1.0
Abudefduf sexatilis					4	0.8
Acanthurus coeruleus		1		2	1	0.8
Stegastes plamifrons		3			1	0.8
Cephalopolis fulva			2		1	0.6
Haemulon macrostomum					3	0.6
Chaetodon striatus	2					0.4
Haemulon aurolineatum			2			0.4
Halichoeres maculipinna			2			0.4
Holacanthus ciliaris					2	0.4
Acanthurus chirurgus	1					0.2
Canthigaster rostrata	1					0.2
Coryphopterus sp.		1				0.2
Equetus acuminatus				1		0.2
Gymnothorax funebris					1	0.2
Haemulon chrysargyreum					1	0.2
Haemulon sciurus	1					0.2
Holacanthus tricolor			1			0.2
Malacoctenus triangulatus		1				0.2
Ophioblennius atlanticus				1		0.2
Pomacanthus arcuatus			1			0.2
Pseudupeneus maculatus			1			0.2
Scarus vetula				1		0.2
TOTAL INDIVIDUALS	122	86	170	174	311	172.6
TOTAL SPECIES	22	18	27	22	28	23

Outside transects:

Bodianus rufus

Calamus pluma
 Cantherhines macrocerus
 Chaetodon sedentarius
 Decapterus macarellus
 Diodon holacanthus
 Echeneis neucratoides
 Epinephelus guttatus
 Haemulon carbonarium
 Haemulon plumieri
 Hemiramphus brasiliensis
 Lachnolaimus maximus
 Lutjanus mahogani
 Lutjanus synagris
 Malacanthus plumieri
 Mulloides martinicus
 Pareques acuminatus
 Scomberomorus regalis
 Sphyraena barracuda

C.4.2 TAXONOMIC COMPOSITION AND ABUNDANCE OF FISHES ASSOCIATED WITH REEFS AT PUNTA GUILARTE SHOAL REEF, ARROYO.

DATE: September 3, 2001

DEPTH: 10.0 m

LOCATION (GPS): 17° 57.219' N; 066° 00.112' W

TAXA	COMMON NAME	TRANSECS					MEAN
		1	2	3	4	5	
		(individuals/30 m ²)					
Stegastes partitus		30	25	33	31	27	29.2
Chromis multilineata				26	5	26	11.4
Thalassoma bifasciatum		1	1	12	1		3.0
Halichoeres bivittatus		1	3	2	3	2	2.2
Chromis cyanea		3		4		3	2.0
Sparisoma aurofrenatum		2	2	3	1	2	2.0
Scarus iserti			1	3	3		1.4
Gobiosoma evelynae		1	1	1	2	1	1.2
Acanthurus chirurgus					2	3	1.0
Halichoeres maculipinna		1	1	2		1	1.0
Acanthurus bahianus		1	2	1			0.8
Amblycirrhitus pinos		1	2	1			0.8
Halichoeres garnoti		2		1	1		0.8
Pseudupeneus maculatus		2		1			0.6

Serranus sp.	1	2				0.6
Stegastes leucostictus	1		1	1		0.6
Serranus tigrinus				1	1	0.4
Sparisoma viride	1		1			0.4
Acanthurus coeruleus	1					0.2
Bodianus rufus			1			0.2
Canthigaster rostrata	1					0.2
Chaetodon sedentarius				1		0.2
Epinephelus guttatus		1				0.2
Halichoeres radiatus			1			0.2
Malacoctenus triangulatus				1		0.2
Scarus taeniopterus		1				0.2
Stegastes planifrons			1			0.2
TOTAL INDIVIDUALS	50	42	95	53	66	61.2
TOTAL SPECIES	16	12	18	13	9	14

Outside transects:

Balistes vetula
 Chaetodon capistratus
 Chaetodon striatus
 Coryphopterus sp.
 Haemulon flavolineatum
 Holacanthus tricolor
 Melichthys niger
 Sparisoma rubripinne
 Sphoeroides sp.

D.1.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF MEGA-BENTHIC INVERTEBRATES AT REEF PERMANENT TRANSECTS, PONCE.

BOYA 2

LOCATION (D-GPS): 17° 55.815' N; 066° 37.814'W

DATE: August 21, 2001

Depth: 16.1 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m ²)
		1	2	3	4	5	
No macroinvertebrates							0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	37	53	29	30	30	36

BAJO DERRUMBADERO

LOCATION (D-GPS): 17° 54.237' N; 066° 36.516' W

DATE: August 22, 2001

Depth: 16.7 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
Strombus gigas	Queen conch					1	0.2
	TOTALS	0	0	0	0	1	0.2
Octocorals	Gorgonians	16	24	26	29	22	MEAN 23

BAJO TASMANIA

LOCATION (D-GPS): 17° 56.564' N; 066° 37.147' W

DATE: August 23, 2001

Depth: 9.1 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
Panulirus argus		0	0	0	0	1	0.2
	TOTALS	0	0	0	0	1	0.2
Octocorals	Gorgonians	75	67	93	92	97	MEAN 85

**D.2.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF MEGA-BENTHIC
INVERTEBRATES AT REEF PERMANENT TRANSECTS, GUAYANILLA.**

VERIL MARIA LANGA 50'

LOCATION (D-GPS): 17° 57.563' N; 066° 45.255' W

DATE: August 27, 2001

Depth: 15.2 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	

No macroinvertebrates							0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	31	25	23	16	26	MEAN 24

MARIA LANGA 30'

LOCATION (D-GPS): 17° 57.630' N; 066° 45.256' W

DATE: August 29, 2001

Depth: 10.0 m

		TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
TAXA	COMMON NAME						
No macroinvertebrates							0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	23	18	34	28	25	MEAN 26

TALLABOA

LOCATION (D-GPS): 17° 56.759' N; 066° 43.480' W

DATE: August 29, 2001

Depth: 10.6 m

		TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
TAXA	COMMON NAME						
No macroinvertebrates		0	0	0	0	0	0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	39	28	41	46	36	MEAN 38

**D.3.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF MEGA-BENTHIC
INVERTEBRATES AT REEF PERMANENT TRANSECTS, GUAYAMA.**

LAS MAREAS RIDGE 55'

LOCATION (D-GPS): 17° 53.093' N; 066° 08.956' W

DATE: September 1, 2001
 Depth: 16.7 m

TAXA	DEPTH (m) COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
No macroinvertebrates							0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	31	47	42	32	31	MEAN 37

CANJILONES LAS MAREAS

LOCATION (D-GPS): 17° 53.057' N; 066° 08.947' W
 DATE: September 2, 2001
 Depth: 21.2 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
No macroinvertebrates					n/d	n/d	0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	16	26	13	n/d	n/d	MEAN 18

CAYOS DE BARCA

LOCATION (D-GPS): 17° 54.830' N; 066° 14.866' W
 DATE: September 2, 2001
 Depth: 10.6 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
No macroinvertebrates		0	0	0	0	0	0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	6	11	11	9	9	MEAN 9

D.4.1 TAXONOMIC COMPOSITION AND ABUNDANCE OF MEGA-BENTHIC

INVERTEBRATES AT REEF PERMANENT TRANSECTS, ARROYO.

ARRECIFE GUAYAMA

LOCATION (D-GPS): 17° 55.353' N; 066° 03.675' W

DATE: September 3, 2001

Depth: 13.6 m

TAXA	DEPTH (m) COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
Panulirus argus	Spiny lobster				1		0.2
	TOTALS	0	0	0	1	0	0.2
Octocorals	Gorgonians	42	27	22	25	18	MEAN 27

PUNTA GUILARTE SHOAL

LOCATION (D-GPS): 17° 57.219' N; 066° 00.112' W

DATE: September 3, 2001

Depth: 10.0 m

TAXA	COMMON NAME	TRANSECTS					MEAN ABUNDANCE (IND/30 m2)
		1	2	3	4	5	
No macroinvertebrates							0.0
	TOTALS	0	0	0	0	0	0.0
Octocorals	Gorgonians	10	12	14	15	13	MEAN 13

