7. GENERAL CONCLUSIONS

The Pennekamp Coral Reef State Park was not formed until 1960 and the Key Largo National Marine Sanctuary until 1975. Studies conducted for the purpose of determining the state of the coral reefs and surrounding areas in relation to changing environmental conditions and resource management over a time span of little more than ten years. Even during this period, the data obtained are often inconclusive and are difficult to relate to the present data. The time span covered is also too brief to permit study of cyclical and natural changes in comparison with man-made changes.

Earlier studies covering a much longer time period were not designed for interpretation of the effects of environmental changes, addressed limited and often highly specialized problems and were often anecdotal. Thus the deductions and conclusions that may be drawn from the present study lack a sufficient data base to establish the validity of the inferences drawn. Nonetheless, based upon the reports and observations available from the many sources cited above, some conclusions may be drawn of importance to the future of the area.

As stated before, approximately 75 percent of the bottom within the 18-m isobath is covered by marine grasses, predominantly turtle grass. The present field studies were conducted during the summer and early fall in both years, times when the water temperatures are highest and turtle grass may show sloughing off of leaves and more than average growth of attached organisms (*Aufwuchs*). Despite these conditions, the general health of the seagrasses appeared good. Possible areas of stress were noted in the vicinity of Site 14 offshore of the South Channel into Largo Sound. This region is subjected to heavy boat travel causing nearly continuous turbidity. Several other areas showed heavy concentrations of sand mounds probably caused by large populations of a callianasid shrimp. These probably became established in areas of poor turtle grass coverage or when grass die-back occurred. The fine, loose soft sediments of which the mounds are composed contribute to the turbidity of shallow waters during periods of strong wave action. The vast extent of the seagrass meadows, however, seems at present little disturbed and probably still functions well as a nursery ground for shrimp, crawfish, finfish and other organisms. Further and more extensive deterioration should be viewed with alarm and steps taken to counteract it.

The extensive sand areas within the Sanctuary were only studied along the line transects but sieving of the sands in the 4 m^2 quadrats revealed a surprisingly low faunal biomass. Sieving with fine screens (1 mm^2 or less) would undoubtedly yield a much larger number of small organisms but nowhere in the present study were there indications of an expected brittle star community or significant numbers of polychaetes. The explanation may be two-fold. First, the calcareous sands along the outer third of the reef tract have a low organic component offering little nourishment for infaunal animals. Second, and more important, the calcareous sands along the bank margin are in relatively shallow water and are subject to scouring and movement by storm waves. Shifting sand offers a poor and even dangerous environment for many infaunal animals.

The hardbottom of the Sanctuary and Park includes not only the hardbottom itself but also the rubble and reef areas. The inner hardbottom of the Park was studied at sites 13 and 14 at the two entrances to Largo Sound. The North Channel hardbottom bar at present has only moderate boat traffic over it. Even so, changes have taken place over the last thirty years most obvious of which has been the loss of most of the extensive beds of Sargassum weed, one of the most extensive beds of this alga in the keys. Only at this site was the green alga *Enteromorpha* encountered. This alga is often considered to be a pollution indicator, growing where nutrient levels are abnormally high. Its presence here may denote the effects of shore run off. Increased amounts of this alga as the development of North Key Largo accelerates could be an indication of increasing pollution or eutrophication of inshore waters.

The hardbottom at South Channel and the surrounding grass beds showed signs of stress. This area bears the heaviest boat traffic within the Park waters causing continuous turbidity from boat wakes, with resulting siltation. The turtle grass reflected this disturbance in its present poor appearance as did the algae on the bar. Increased boat traffic will have an increasing detrimental effect. This area warrants monitoring.

The offshore hardbottom and rubble areas in the Sanctuary appeared to be in good health and showed no visible indications of deterioration. Damage by boat groundings and anchors was negligible in the areas surveyed.

The condition of the reefs is well indicated by the data given in Tables 2, 9, 10, 11 and 12. The outer reefs in general appear to be healthy. Corals, as cited earlier, have a surprising resiliency to detrimental factors and, when conditions again become favorable, recover quickly from even severe damage. It is, therefore, a cause for concern that Grecian Rocks has yet to recover from die-off in 1978. This is in direct contrast to coral destruction on other reefs in two hurricanes where recovery was nearly complete in three to five years. Both Grecian Rocks and Key Largo Dry Rocks sit somewhat inshore of the outer reef line and are perhaps somewhat more exposed to the waters of the Hawk Channel than the open sea. The slow recovery, if it is occurring, may be due to the lower quality of the inshore waters. Shinn reported that coral growth was slower at Grecian Rocks during the earlier periods of dredge and fill activities along the keys but increased after the moratorium on dredge and fill was enforced. This slow growth was probably due to increased silt loads from higher turbidity. The slow recovery of these reefs now may be an indication of increasing turbidity of the waters due to heavier boat traffic.

While the outer reefs in general appear in good condition, the stresses present at several sites need careful study and continuous monitoring and evaluation to determine if more extensive stresses appear with resultant degradation of the reefs. Since these studies were completed, the very warm weather of the summer of 1983 may have again stressed the reefs. Bleaching of corals has been reported and extensive kills of the sea urchin *Diadema antillarum* have occurred throughout the keys. The causes of their death and the coral bleaching have not been determined but warm water temperatures are suspect along with resultant blooms of pathogenic microorganisms perhaps brought on by the warmer waters. The long-term effect upon the reefs is unknown.

The patch reefs, more adapted to inshore waters, do not show obvious stress signs, at least those surveyed in this study. It is apparent, however, that water quality is changing in the keys.

Water clarity over much of the reef tract today is much reduced from former years (Voss, person. observ.) and undoubtedly plays an important part in the stresses seen today over the Sanctuary and Park. Water quality may well be reduced significantly as the proposed shore development of Key Largo continues. That and increased human contact will inexorably effect the reefs detrimentally. Their future viability is questionable without controls to safeguard them.

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9. APPENDIX A

TRANSECT DATA AND QUADRAT COUNTS

The recording system used here is slightly modified from that used by Antonius (1974) but permits comparisons with his data. The transect heading "Meter Mark" refers to the 5-m label number on the line. 0 refers to the unlabeled starting point of the line. Meter mark 1 is 5 m from 0, 2 is 10 m from 0, and so on, The end of the 400-m line is at meter mark 80. "Depth meters" is the bottom depth read from the calibrated diver depth gauge at each meter mark. "Bottom type and species" follows Antonius's method in which "bottom type", is given only when there was no organism under the meter marker. Bottom type is listed as sand, silty sand, mud, rock, hardbottom, rubble and dead coral. Organisms listed are those found under the 2-cm wide meter marker. When more than one species is listed, the meter marker lay on top of a piece of small rubble covered with sessile and adhering organisms in which case the piece of rubble was collected, all specimens identified, and their names given at the indicated meter mark in the lists.

Quadrats are given according to the zone in which they were sampled: coral, hardbottom, rubble, sand and grass. Species counts are given for each square meter and arranged in four separate columns. At a few stations, the samples from all four quadrats were inadvertently combined; in these cases only a single column, representing counts from all four quadrats, is given. Similarly, when only two columns occur, each column represents two combined quadrats. The letter "x" was used by the divers when small specimens of a species were very numerous and were difficult to count accurately *in situ*. In the analyses, "x" was arbitrarily given the value of 25.

9.1. Site 1. Molasses Reef

9.1.1. Transects

Transect 1. 625 m long run on a heading of 308° true ending at pipe on back reef.
9 June 1980

Meter mark	Depth meters	Bottom type and species
1	16.0	Algal mat
2	16.0	*Aiolochroia crassa*
3	15.7	*Ophiothrix lineata, Niphates digitalis*
4	15.4	*Galaxaura obtusata*, filamentous algae
5	15.0	Hardbottom
6	15.0	*Dictyota*
7	14.8	Green alga, *Galaxaura obtusata*
8	14.8	*Aiolochroia crassa*
9	14.8	*Pseudopterogorgia americana*
10	14.5	*Montastraea annularis*
11	13.9	Thin veneer of sediment on hardbottom
12	14.2	Hardbottom, *Porites furcata*, rubble
13	14.5	*Pseudopterogorgia acerosa*
14	14.2	*Dictyosphaeria cavernosa, Pocockiella variegata*
15	13.9	*Spinosella vaginalis, Halimeda opuntia*
16	13.9	*Muricea elongata*
17	13.5	*Dictyota* sp.
18	12.9	Red encrusting sponge
19	12.6	*Eunicea mammosa, Ophiothrix oerstedii, Dictyota* sp.
20	12.0	*Dictyota, Amphiroa fragilissima*
21	12.0	*Dictyota, Laurencia*, golden sponge, rubble
22	11.7	Sediment, *Dictyota*
23	11.7	Sediment, *Dictyota*
24	11.4	*Meandrina meandrites* with *Dictyota* on dead spot
25	11.8	Hardbottom, *Dictyota*
26	11.4	Hardbottom, *Dictyota*
27	11.7	*Pseudopterogorgia acerosa*, *Dictyota*
28	11.7	*Millepora alcicornis*, *Dictyota*
29	10.5	*Spinosella vaginalis*, *Eunicea mammosa*, *Ophiothrix lineata*
30	9.9	Hardbottom, *Dictyota*
31	9.9	*Dictyota*
32	9.5	*Pseudopterogorgia americana*
33	9.5	*P. americana*
34	9.2	*Dilophus alternans*
35	8.9	Encrusting coralline
36	8.3	*Dictyota*, coralline
37	7.7	*Dictyota*, coralline
38	7.7	Hardbottom, *Cliona delitor*, corallines
39	7.1	Hardbottom, corallines
40	7.4	Sediment, *Halimeda* plates

Site 1. Molasses Reef (cont.)

Transect 1. 625 m long run on a heading of 308° true ending at pipe on back reef.
9 June 1980

Meter mark	Depth meters	Bottom type and species
41	6.8	Rubble, corallines
42	6.5	Hardbottom, rubble, *Dictyota*
43	6.8	*Agaricia agaricites* (white spotting about 5%)
44	6.8	*Pseudopterogorgia americana*
45	6.8	Coral rubble
46	6.5	Rubble, *Dictyota*
47	6.4	*Pseudopterogorgia acerosa*, *Dictyota*
48	6.2	*P. acerosa, Dictyota*
49	7.1	Rubble, corallines
50	5.9	*Acropora palmata* (about 2% white spotting), *Melobesia*
51	5.2	*Gorgonia ventalina*
52	5.2	*Pseudopterogorgia americana*
53	5.2	*Acropora palmata* (white spotting about 2%)
54	7.1	Filamentous green alga
55	7.1	*Pseudopterogorgia americana*
56	6.8	Hardbottom, corallines
57	6.2	Hardbottom, corallines
58	5.9	*Halimeda opuntia minor*
59	5.5	*H. o. minor*
60	5.9	Rubble, *Clione delitor*
61	4.9	Hardbottom, rubble
62	4.0	*Gorgonia ventalina*
63	4.3	Rubble
64	4.0	*Porites asteroides* (about 10% white spotting)
65	4.0	Hardbottom
66	4.0	Hardbottom
67	3.7	Hardbottom
68	3.7	Hardbottom
69	3.7	*Gorgonia ventalina*
70	3.7	Hardbottom
71	3.4	Rubble with corallines
72	3.4	Hardbottom
73	3.4	*Halimeda opuntia*
74	3.4	*H. opuntia*
75	3.4	Hardbottom, *Dictyota*
76	3.4	Green tufted alga
77	3.4	Hardbottom, *Dictyota*
78	3.4	Hardbottom, *Dictyota*
79	3.1	Hardbottom, *Dictyota*
80	3.1	Hardbottom, rubble
81	3.1	Hardbottom, rubble
82	2.7	Rubble
83	2.7	Rubble

Site 1. Molasses Reef (cont.)

Transect 1. 625 m long run on a heading of 308° true ending at pipe on back reef.
9 June 1980

Meter mark	Depth meters	Bottom type and species
84	2.7	Rubble, *Dictyota*
85	2.7	Tufted green alga
86	2.7	Hardbottom, *Dictyota*
87	2.7	Rubble, tufted green alga
88	2.7	Rubble, *Dictyota*
89	2.7	Rubble
90	2.7	Rubble, *Dictyota*
91	2.7	Rubble, *Dictyota*
92	2.2	Rubble, *Dictyota*
93	2.2	Rubble, coralline
94	2.2	Rubble, *Dictyota*
95	2.2	Rubble, *Dictyota*
96	2.2	Rubble, *Dictyota, Laurencia papillosa*
97	2.2	*Porites asteroides*
98	2.2	Rubble, *Laurencia papillosa*
99	2.5	*Dasycladus vermicularis*, *Laurencia papillosa*
100	2.5	Rubble, *Laurencia papillosa*
101	2.5	*Thalassia, Laurencia papillosa*
102	2.5	*Thalassia, Syringodium, Caulerpa prolifera*
103	2.5	*Thalassia*
104	2.5	*Thalassia, Syringodium*
105	2.5	*Thalassia, Syringodium*
106	2.5	*Thalassia, Syringodium, Penicillus capitatus*
107	2.5	*Thalassia, Syringodium*
108	2.8	*Thalassia, Syringodium*
109	3.1	*Thalassia*, calcareous sediments
110	3.1	*Thalassia, Syringodium*
111	3.1	*Dasycladus vermicularis,* rubble
112	3.1	*Syringodium*
113	3.1	*Siderastrea radians, Pterogorgia citrina*, *Halimeda tuna*, *Dictyosphaeria cavernosa, Amphiroa fragilissima, Dictyota*
114	3.1	*Dictyosphaeria cavernosa*, *Thalassia*
115	3.1	*Thalassia*, *Syringodium*
116	3.1	*Thalassia*
117	3.1	*Halimeda tuna*, *Ophiothrix oerstedii, Amphiroa fragilissima,* bryozoans and corallines
118	3.1	*Pterogorgia citrina*, bryozoans and sponge
119	3.4	*Thalassia*, *Syringodium,* sponge
120	3.4	*Halimeda incrassata, Syringodium*

Site 1. Molasses Reef (cont.)

Transect 1. 625 m long run on a heading of 308° true ending at pipe on back reef.
9 June 1980

Meter mark	Depth meters	Bottom type and species
121	3.4	*Thalassia*, *Syringodium*
122	3.7	*Thalassia*, *Syringodium*
123	3.7	*Halimeda incrassata*, *Syringodium*
124	4.0	*Thalassia*, *Syringodium*

Site 1. Molasses Reef

Transect 2. 525 m long run on a heading of 308° true 300 m west of Transect 1.
2 November 1980

Meter mark	Depth meters	Bottom type and species
0	17.5	Hardbottom, filamentous red alga, sponge
1	17.4	Hardbottom
2	17.5	Red finger sponge
3	17.4	Red finger sponge
4	17.5	*Pseudopterogorgia bipinnata*
5	17.5	*Tedania ignis*
6	15.	Hardbottom, sponge
7	16.2	*Millepora alcicornis*
8	16.2	Hardbottom, *Homotrema rubrum*
9	16.2	Hardbottom, filamentous red alga
10	15.9	*Millepora alcicornis*
11	15.5	*M. alcicornis*
12	15.5	Hardbottom, filamentous red alga
13	15.5	*Dilophus alternans,* red alga
14	15.5	*Pseudopterogorgia elisabethae*
15	15.5	Solitary coral (less than 1 cm)
16	15.5	*Dilophus alternans*
17	14.3	*Pseudopterogorgia acerosa*
18	14.6	Aluminum chair, *Udotea* sp., *Homotrema rubrum*
19	14.3	*Porites asteroides*
20	14.3	Red alga
21	14.3	*Dilophus alternans*
22	14.0	Red alga
23	14.0	*Dilophus alternans*, solitary coral
24	14.0	*Gorgonia ventalina*
25	14.0	Sand, *Homotrema rubrum*, red alga
26	13.1	Orange sponge
27	13.1	Orange sponge, red alga
28	13.1	*Dilophus alternans*
29	12.8	*Spinosella vaginalis*
30	12.8	*S. vaginalis*
31	12.8	*Udotea* sp.
32	12.5	Orange sponge, *Erythropodium caribaeorum*, 3 polychaete worms, *Goniolithon* sp., *Stylaster roseus, Placospongia* sp.
33	12.5	*Udotea* sp.
34	12.2	*Udotea* sp.
35	12.2	*Pseudopterogorgia acerosa*
36	12.2	Hardbottom, *Udotea* sp.
37	12.2	*Udotea* sp.
38	11.6	*Udotea* sp.
39	10.6	*Millepora alcicornis, Agelas schmidti*, *Eunice* cf. *mutilata,* brittle star
40	11.0	*Pseudopterogorgia acerosa*

Site 1. Molasses Reef (cont.)

Transect 2. 525 m long run on a heading of 308° true 300 m west of Transect 1.
2 November 1980

Meter mark	Depth meters	Bottom type and species
41	11.0	Solitary coral
42	12.8	Sand
43	12.5	Sand
44	12.5	Sand
45	11.9	*Millepora alcicornis*
46	11.6	*Siderastrea radians*
47	10.7	Rubble, red algae
48	10.0	Red alga
49	10.4	Rubble, red alga
50	8.8	*Montastraea cavernosa* (white spotting 10%)
51	8.5	Hardbottom
52	8.5	*Udotea* sp.
53	8.2	*Pseudopterogorgia acerosa*
54	7.9	Hardbottom, *Homotrema rubrum*
55	7.6	*Palythoa mammillosa*
56	7.3	*Pseudopterogorgia elisabethae*
57	7.3	*P. acerosa*
58	7.0	*P. acerosa*
59	6.7	Hardbottom, *Udotea* sp.
60	7.0	*Pseudopterogorgia acerosa*
61	7.9	*P. acerosa*
62	8.5	*P. acerosa*
63	8.5	Red alga
64	8.8	Hardbottom, *Udotea* sp.
65	8.8	Red alga
66	8.8	Hardbottom
67	8.8	Rubble
68	8.5	*Millepora alcicornis*, *Palythoa mammillosa*
69	7.6	Red alga
70	7.6	*Pseudopterogorgia acerosa*
71	6.4	*Gorgonia ventalina*
72	6.0	Hardbottom, red alga, dead coral
73	6.0	Hardbottom, red alga
74	6.0	Sand, rubble
75	7.0	Sand, rubble
76	7.0	*Pseudopterogorgia acerosa*
77	7.6	*Millepora complanata*
79	7.0	*M. complanata*
79	7.6	*Pseudopterogorgia blanquillensis*
80	7.6	*Gorgonia ventalina*, *Pseudopterogorgia acerosa*
81	5.8	*Pseudopterogorgia kallos*
82	8.2	Rubble, red algae

Site 1. Molasses Reef (cont.)

Transect 2. 525 m long run on a heading of 308° true 300 m west of Transect 1.
2 November 1980

Meter mark	Depth meters	Bottom type and species
83	7.6	Rubble, red algae
84	7.9	Rubble, *Udotea* sp.
85	7.9	Hardbottom, red alga
86	7.9	Hardbottom, *Udotea* sp.
87	7.9	Hardbottom, red alga
88	8.2	Rubble, *Homotrema rubrum*
89	8.8	Rubble, dead *Halimeda*
90	9.1	Rubble, dead *Halimeda*
91	9.4	Rubble, red alga
92	9.4	Dead coral head, rubble
93	9.4	Coral rubble, sand, *Homotrema rubrum*
94	9.1	Coral rubble, sand, *H. rubrum*
95	9.1	Coral rubble, sand
96	8.5	Rubble, red alga, *Homotrema rubrum*
97	8.5	Rubble
98	8.5	*Gorgonia ventalina*
99	9.5	*G. ventalina*, *Pseudopterogorgia acerosa*
100	8.5	Rubble, sand
101	8.5	Coral rubble, *Homotrema rubrum*
102	8.5	*Siderastrea radians* (10% white spotting)
103	8.5	Rubble, *Homotrema rubrum*
104	8.5	Dead coral head, rubble
105	8.5	Sand, coral rubble
106	8.5	Sand, coral rubble
107	8.5	Rubble, *Homotrema rubrum*
108	8.5	Rubble

Site 1. Molasses Reef

Transect 3. About 600 m long run on a heading of 308° true 300 m east of Transect 1. 28 May 1981.

Meter mark	Depth meters	Bottom type and species
0	16.5	*Dilophus alternans*
1	16.5	*Xestospongia muta*
2	15.2	Sand
3	14.0	*Millepora alcicornis*
4	14.3	*Dilophus alternans*
5	13.7	*Erythropodium caribaeorum*
6	13.7	*Dilophus alternans*
7	14.0	Filamentous red alga
8	14.3	*Dilophus alternans*
9	14.3	*Pseudopterogorgia americana*, *Dilophus alternans*
10	14.0	Sand
11	13.7	*Dictyota cervicornis*, *Dilophus alternans*
12	14.0	*Dilophus alternans*
13	14.0	Sand
14	14.0	Xestospongia muta
15	14.0	Sand
16	14.6	Sand
17	14.0	Sand
18	13.7	Sand, *Dilophus alternans*
19	13.4	Hardbottom under 1/4" sand
20	13.4	*Dictyota cervicornis*
21	13.4	Sand, rubble
22	12.8	Sand, buried *Dasycladus vermicularis*
23	12.8	Sand, rubble
24	12.8	Hardbottom under sand, red alga
25	12.8	Sand
26	12.8	Sand
27	12.8	Sand
28	12.1	Sand
29	12.1	*Dasycladus vermicularis*
30	12.2	Sand, rubble
31	12.2	Sand, rubble, *Homotrema rubrum*
32	12.2	Hardbottom under sand
33	12.2	Sand
34	12.2	Sand, red alga
35	12.2	Sand, rubble, *Homotrema rubrum*
36	12.2	Sand
37	12.2	*Sargassum hystrix* var. buxifolium
38	12.2	Sand, *Dilophus alternans*
39	12.2	*Sargassum hystrix*
40	12.2	Sand, rubble, *Homotrema rubrum*
41	12.8	*Neofibularia nolitangere*

Site 1. Molasses Reef (cont.)

Transect 3. About 600 m long run on a heading of 308° true 300 m east of Transect 1. 28 May 1981.

Meter mark	Depth meters	Bottom type and species
42	13.7	Sand
43	13.4	Sand
44	13.7	Sand, rubble
45	13.7	*Dasycladus vermicularis*
46	13.7	*Dilophus alternans*
47	13.7	*D. alternans,* red alga, *Halimeda opuntia triloba*
48	13.1	*Galaxaura* sp.
49	13.1	*Galaxaura* sp., *Dilophus alternans*, *Dictyota cervicornis*
50	12.2	*Muriceopsis flavida*
51	13.1	*Penicillus capitatus*
52	13.1	Hardbottom under sand
53	12.8	*Dictyota cervicornis*
54	12.8	*D. cervicornis*
55	12.8	*Pseudopterogorgia americana*
56	12.8	Hardbottom, red alga
57	11.9	Hardbottom, red alga
58	11.9	*Galaxaura* sp.
59	11.9	Hardbottom, red alga
60	11.9	*Millepora alcicornis*, *Siderastrea radians*
61	11.9	*Aiolochroia crassa*
62	11.9	*Halimeda tuna*
63	11.6	Sand
64	11.6	Sand
65	10.6	*Stypopodium zonale*
66	10.6	*Dilophus alternans*
67	10.6	*Pseudopterogorgia americana*
68	10.6	Sand, *Dasycladus vermicularis*
69	12.2	Rubble, *Dictyota* sp., *Vania* sp., sand
70	10.6	Hardbottom, *Dictyota cervicornis*
71	10.6	Hardbottom, *Dilophus alternans*
72	10.6	Hardbottom, *D. alternans*
73	10.6	Hardbottom, *Stephanocoenia michilini*
74	9.6	Hardbottom, *Pseudopterogorgia bipinnata*
75	9.1	Hardbottom
76	9.1	Hardbottom, *Dilophus alternans*
77	8.5	Hardbottom, *Pseudopterogorgia americana*
78	8.5	Hardbottom, *Dilophus alternans*
79	8.5	*Favia fragum*
80	7.0	Hardbottom
81	7.3	*Millepora alcicornis*
82	6.7	*Montastraea cavernosa* (5% white spotting)
83	6.7	Hardbottom

Site 1. Molasses Reef (cont.)

Transect 3. About 600 m long run on a heading of 308° true 300 m east of Transect 1. 28 May 1981.

Meter mark	Depth meters	Bottom type and species
84	6.7	Hardbottom, *Dilophus alternans*
85	6.4	Hardbottom
86	6.4	Hardbottom, pink encrusting alga
87	6.1	*Acropora palmata* (5% white spotting)
88	6.1	*Pseudopterogorgia americana*
89	6.1	*P. americana*
90	5.8	*Millepora complanata*
91	5.5	*M. complanata*
92	5.5	*Gorgonia ventalina*
93	5.5	*Agaricia agaricites*
94	5.5	*Dilophus alternans*
95	6.2	*Pseudopterogorgia americana*
96	6.2	Hardbottom
97	6.0	*Dictyota cervicornis*
98	6.4	Hardbottom, *Halimeda opuntia triloba*
99	6.0	*Millepora alcicornis*
100	5.4	*Gorgonia ventalina*
101	5.4	*G. ventalina*
102	5.4	*G. ventalina*
103	5.2	*G. ventalina*
104	4.9	Hardbottom
105	4.6	*Gorgonia ventalina*
106	4.6	*Dilophus alternans*, *Halimeda incrassata*
107	5.2	Sand
108	5.2	Sand
109	4.3	*Dilophus alternans*
110	4.3	*Gorgonia ventalina*, *Siderastrea siderea*
111	4.3	*Halimeda incrassata*
112	3.9	Hardbottom
113	3.7	Rubble
114	3.7	Rubble
115	3.7	Hardbottom
116	3.7	Rubble
117	3.7	Hardbottom
118	3.6	Rubble, *Homotrema rubrum*
119	3.6	Rubble
120	3.6	Rubble

9.1.2. Quadrats

Site 1. Molasses Reef Hardbottom Quadrats
21 September 1980

Species	Quadrats 1-2	3-4	Species	Quadrats 1-2	3-4
PROTOZOA			*P. acerosa*	0	2
			Alcyonarian sp.	1	0
Homotrema rubrum	1	0	*Plexaurella fusifera*	0	1
			P. flexosa	0	15
ALGAE			*Muriceopsis flavida*	0	5
			Eunicea sp. A	0	1
Halimeda tuna	15	5	*E.* sp. B	0	1
H. incrassata	4	0	*Pterogorgia citrina*	1	0
Dilophus alternans	3	1			
Encrusting coralline	1	0	POLYCHAETA		
Matted alga	3	0			
Dictyota sp.	0	14	Sabellidae	1	0
Matted alga	0	14			
Encrusting coralline	0	1	CRUSTACEA		
PORIFERA			*Paguristes wassi*	1	0
			Gonobactrius sp.	1	0
Ircinia strobilina	1	0	*Pagurus provenzanoi*	2	0
Spinosella vaginalis	1	0	Burrowing shrimp	3	0
Agelas schmidti	1	1			
Keratosa indet.	1	0	ECHINODERMATA		
Haliclona compressa	1	2			
Niphates erects	0	2	*Diadema antillarum*	2	0
Niphates digitalis	1	0	*Echinometra viridis*	0	1
Geodia gibberosa	1	0	*Ophiocoma echinata*	1	0
Aplysina cauliformis	1	0			
COELENTERATA					
Millepora cervicornis	16	12	BRYOZOA		
Meandrina meandrites	1	0			
Dichocoenia stokesi	2	0	Colonial bryozoan	1	1
Montastraea annularis	4	0			
M. cavernosa	0	4	ASCIDIACEA		
Porites porites	1	1			
Agaricia agaricites	0	1	Solitary tunicate	1	0
Siderastrea radians	1	0	*Ascidia* sp.		
Pseudopterogorgia rigida	3	0	*Didemnum candidum*	1	0
P. americana	3	0			

Site 1. Molasses Reef Coral Quadrats
29 May 1981

Species	Quadrats 1	2	3	4
PROTOZOA				
Homotrema rubrum	1	0	0	7
ALGAE				
Halimeda incrassata	1	0	0	24
H. tuna	0	0	0	1
Dilophus alternans	1	0	0	0
Lithothamnion sp.	1	0	0	0
Alga	0	0	1	3
Galaxaura marginata	0	5	3	0
G. cylindrica	0	0	0	1
PORIFERA				
Demospongea sp.	5	0	0	0
Cliona sp.	1	0	0	0
Higginsia sp.	1	0	0	0
Agelas ensifer	0	0	2	0
Ircinia strobilina	0	0	1	0
Dysidea sp.	0	0	1	0
Xestospongia sp.	0	0	1	0
D. sp.	0	1	0	0
COELENTERATA				
Millepora complanata	4	4	13	26
M. alcicornis	0	7	0	3
Gorgonia ventalina	4	5	4	1
Pseudopterogorgia kallos	7	13	4	5
P. americana	1	0	0	0
Plexaurella dichotoma	3	0	0	0
Eunicea succinea	4	0	4	0
E. mammosa	0	3	0	2
Agaricia agaricites	4	7	6	20
Favia fragum	2	0	0	1
Siderastrea siderea	1	0	0	0
S. radians	3	12	0	0
Monastrea cavernosa	2	2	6	1
Porites astreoides	0	0	4	7
Acropora palmata	0	0	0	1
POLYCHAETA				
Sabellidae A	2	3	0	10
Sabellidae B	2	3	5	10
Sabellidae C	2	3	12	10
Serpulidae A	0	0	1	0
MOLLUSCA				
Cyphoma. gibbosa	0	2	0	1
Thais deltoides	0	1	0	0
Tridachia crispata	0	1	0	0
Leucozonia nassa	0	0	1	0
Nudibranch sp.	0	0	0	1
ECHINODERMATA				
Diadema antillarum	0	4	14	10
Eucidaris tribuloides	0	1	1	1
Brittle star A	0	0	1	0
Brittle star B	0	0	2	2
Brittle star C	0	0	0	2
CRUSTACEA				
Hermit crab	0	0	0	2
Thunor rathbuni	0	0	0	2
Paraliomera longimana	0	0	0	1
BRYOZOA				
Bryozoan	1	0	0	0
ASCIDIACEA				
Ascidia	1	0	0	0

Site 1. Molasses Reef Rubble Quadrats
21 September 1983

Species	Quadrats 1-2	3-4
PROTOZOA		
Homotrema rubrum	1	0
ALGAE		
Halimeda incrassata	0	1
H. sp.	9	0
H. opuntia	0	1
Algal mat	0	1
Goniolithon sp.	1	1
PORIFERA		
Tricheurypon viride	0	1
Siphonodictyon siphonum	1	0
Homaxinella rudis	1	0
COELENTERATA		
Millepora complanata	1	0
M. alcicornis	0	2
Siderastrea siderea	3	2
S. radians	0	6
Meandrina meandrites	1	0
Porites porites	1	2
Agaricia agaricites	0	1
Favia fragum	0	1
Pseudopterogorgia kallos	1	0
P. acerosa	12	1
Gorgonia ventalina	3	0
NEMERTEA		
Nemertina sp.	1	0
POLYCHAETA		
Eunice longicirrata	0	1

Site 1. Molasses Reef Sand Quadrats
21 September 1980

Species	Quadrats 1 - 4
ALGAE	
Halimeda tuna	1
Goniolithon sp.	1
POLYCHAETA	
Eunice sp.	6
CRUSTACEA	
Iridiopagurus sp.	1
Cycloes bairdii	1

9.2. Site 2. White Bank Dry Rocks

9.2.1. Transects

Transect 1. About 400 m long run on a heading of 298° true.
10 June 1981.

Meter mark	Depth meters	Bottom type and species
1	9.5	*Thalassia*, *Syringodium*
2	9.5	*Halimeda incrassata*
3	9.2	Ascidian
4	9.2	*Thalassia*, *Syringodium*
5	9.2	*Thalassia*, *Syringodium*
6	9.5	*Halimeda* sp.
7	9.5	*Thalassia*, *Syringodium*
8	9.2	*Thalassia*, *Syringodium*
9	9.5	*Thalassia*, *Syringodium*
10	9.2	Silty sand
11	9.5	*Syringodium*
12	9.8	Red alga
13	9.5	*Syringodium*
14	9.2	*Penicillus capitatus*
15	9.2	*Didemnum* sp.
16	9.2	Lost
17	9.2	*Thalassia*
18	9.2	*Thalassia*
19	9.5	Silty sand
20	9.2	Silty sand
21	9.2	Silty sand
22	9.2	*Thalassia*
23	9.2	*Thalassia*
24	9.2	*Thalassia*
25	9.2	*Thalassia*, *Syringodium*
26	9.2	*Thalassia, Syringodium*
27	9.2	*Thalassia*, *Syringodium*, *Erythropodium caribaeorum*, keratose sponge
28	9.2	*Thalassia*, *Syringodium*, red coralline
29	8.5	*Thalassia, Syringodium*
30	8.5	*Thalassia, Syringodium*
31	8.5	*Thalassia, Syringodium, Didemnum*
32	7.9	*Thalassia, Syringodium*, *Eucidaris tribuloides*
33	7.6	*Thalassia*
34	7.6	*Montastraea annularis*
35	7.6	Sand
36	7.6	*Millepora alcicornis*
37	6.1	Sand
38	6.1	Sand, rubble, *Homotrema rubrum*
39	7.3	Red coralline alga
40	7.0	*Plexaurella grisea*

Transect 1. About 400 m long run on a heading of 298° true.
10 June 1981.

Meter mark	Depth meters	Bottom type and species
41	6.7	*Dictyota cervicornis*
42	6.1	*Dilophus alternans*
43	6.1	Rubble, *Homotrema rubrum, Goniolithon* sp., *Clathrina coriacea*
44	5.5	*Dilophus alternans*
45	5.5	Sand
46	4.9	*Pseudopterogorgia bipinnata*
47	4.9	*P. americana*, *Gorgonia ventalina*, *Laurencia* sp., *Pocockiella variegata*
48	4.3	*Laurencia* sp.
49	3.7	*Pseudopterogorgia americana*
50	3.4	*Palythoa mammillosa, Muriceopsis flavida*
51	3.1	*Pseudopterogorgia americana*
52	3.1	*Erythropodium caribaeorum*
53	3.4	*Acropora cervicornis*, rubble
54	4.6	*Plexaura homomalla*
55	4.0	*Dilophus alternans*, *Galaxaura* cylindrica
56	4.6	*Acropora cervicornis*
57	4.3	*Pseudopterogorgia americana*
58	4.3	*Plexaura homomalla*
59	4.0	*Gorgonia ventalina*
60	3.7	*Briareum asbestinum*
61	3.7	*Millepora alcicornis*
62	3.7	*Stypopodium zonale*
63	3.7	*Pseudopterogorgia bipinnata*
64	3.7	Dead coral
65	4.0	*Stypopodium zonale*
66	4.0	*Pseudopterogorgia americana*
67	3.7	Red coralline alga
68	4.0	*Thalassia*
69	4.6	Rubble
70	4.6	*Dasycladus vermicularis*, *Dysidea etherea*
71	4.6	*Thalassia,* red coralline
72	4.6	*Thalassia*
73	4.6	*Thalassia*
74	4.6	*Homotrema rubrum* on rubble
75	4.6	*Thalassia*
76	4.6	*Halimeda incrassata*
77	4.6	Rubble, *Homotrema rubrum*
78	4.6	Hardbottom
79	4.6	Keratose sponge
80	4.9	*Dasycladus vermicularis*

Site 2. White Bank Dry Rocks

Transect 2. About 400 m long run on a heading of 298° true, 300 m west of Transect 1.
29 July 1981

Meter mark	Depth meters	Bottom type and species
0	5.4	*Haliclona compressa*
1	5.4	*Gorgonia ventalina*
2	4.9	*Millepora alcicornis*
3	4.3	*Porites porites*
4	4.3	*Gorgonia ventalina*
5	4.0	*Plexaura flexosa*
6	3.7	*Pseudopterogorgia acerosa*
7	3.1	*Dictyota cervicornis*, *Amphiroa tribulus*
8	3.1	Diadema, *Haliclona compressa*
9	4.6	Rubble
10	4.0	Rubble
11	3.1	*Porites asteroides*
12	3.	Rubble
13	3.	Rubble
14	3.	Rubble
15	3.1	*Acropora cervicornis*
16	3.1	Rubble
17	3.1	*Gorgonia ventalina*
18	3.1	*Dilophus alternans*, *Dictyota cervicornis*
19	3.1	Rubble
20	3.7	Rubble
21	3.7	*Udotea, Stypopodium zonale*
22	4.0	*Millepora alcicornis*
23	3.7	Rubble
24	4.6	*Eunicea tourneforti*
25	5.5	Rubble
26	4.6	Sand
27	4.0	Sand
28	3.1	Rubble
29	3.1	*Montastraea annularis*
30	3.1	*M. annularis*
31	4.6	*M. annularis*
32	6.1	*M. annularis*
33	6.1	*Thalassia*
34	6.1	*Thalassia*, *Syringodium*
35	5.8	*Thalassia*, *Syringodium*
36	6.1	*Thalassia*, *Syringodium*
37	6.1	*Thalassia*, *Syringodium*
38	6.1	*Thalassia*, *Syringodium*
39	6.1	*Thalassia*, *Syringodium*
40	6.1	*Thalassia*, *Syringodium*
41	6.1	*Thalassia*, *Syringodium*, *Clypeaster rosaceus*

Site 2. White Bank Dry Rocks (cont.)

Transect 2. About 400 m long run on a heading of 298° true, 300 m west of Transect 1.
29 July 1981

Meter mark	Depth meters	Bottom type and species
42	6.1	*Thalassia*, *Syringodium*
43	6.1	*Thalassia, Syringodium*
44	6.1	*Thalassia*, *Syringodium*
45	6.1	*Thalassia*, *Syringodium*
46	6.1	*Thalassia*, *Syringodium*
47	6.1	*Thalassia*, *Syringodium*, *Halimeda opuntia triloba*
48	6.1	*Thalassia*, *Syringodium, Halimeda monile*
49	6.1	*Thalassia*, *Syringodium*
50	6.1	*Thalassia*, *Syringodium*, *Halimeda incrassata*
51	6.1	*Thalassia*, *Syringodium, Halimeda incrassata*
52	6.1	*Thalassia*, *Syringodium*
53	6.1	*Thalassia*, *Syringodium*, *Penicillus capitatus*
54	6.1	*Thalassia*, *Syringodium*
55	6.1	*Thalassia, Syringodium*
56	6.1	*Thalassia, Syringodium*
57	6.1	*Thalassia, Syringodium*
58	6.1	*Thalassia, Syringodium, Didemnum amethysteum*
59	6.1	*Thalassia, Syringodium*
60	6.1	*Thalassia, Syringodium,* calcareous red alga
61	6.1	*Thalassia, Syringodium*
62	6.1	*Thalassia, Syringodium*
63	6.1	*Thalassia*, *Syringodium, Dysidea* sp.
64	6.1	*Thalassia, Syringodium*
65	6.1	*Thalassia, Syringodium, Americardia media*
66	6.1	*Thalassia*, *Syringodium*, red alga
67	6.1	*Thalassia*, *Syringodium*
68	6.1	*Thalassia, Syringodium*
69	6.1	*Thalassia, Syringodium*
70	6.1	*Thalassia, Syringodium*
71	6.1	*Thalassia, Syringodium*
72	6.1	*Thalassia*
73	6.1	*Pseudopterogorgia americana*
74	6.1	Rubble
75	6.1	*Gorgonia ventalina*
76	6.1	*Acropora cervicornis*
77	6.1	*Briareum asbestinum*
78	6.1	Rubble, *Dilophus alternans*, *Dictyota cervicornis*
79	6.1	*Thalassia*
80	6.1	*Thalassia*

Site 2. White Banks Dry Rocks

Transect 3. About 400 m long run on a heading of 298° true 300 m west of Transect 2.
29 July 1981

Meter mark	Depth meters	Bottom type and species
1	8.5	*Tridemnum savignii*
2	8.2	Sand
3	8.2	*Thalassia*, *Syringodium*
4	7.9	*Thalassia*, *Syringodium*
5	7.3	*Thalassia*, *Syringodium*
6	7.3	*Thalassia*, *Syringodium*
7	7.3	*Thalassia*, *Syringodium*, *Halimeda incrassata*
8	7.3	*Thalassia*, *Syringodium*
9	7.0	Sand
10	7.0	*Thalassia*, *Syringodium, Dasycladus vermicularis*
11	7.0	*Thalassia*, *Syringodium*
12	7.0	*Thalassia*, *Syringodium*
13	6.7	Sand
14	6.7	Sand
15	6.7	*Thalassia*
16	6.7	*Thalassia*
17	6.1	*Montastraea annularis*
18	5.5	*Erythropodium caribaeorum*
19	5.2	*Millepora alcicornis*
20	3.7	*Pseudopterogorgia americana*
21	3.0	Hardbottom
22	6.0	Sand
23	4.9	*Pseudopterogorgia americana*
24	5.5	*Plexaura homomalla*
25	5.5	Rock
26	4.9	*Aplysina cauliformis*
27	3.0	Hardbottom
28	3.0	*Gorgonia ventalina*
29	3.0	*Porites asteroides*
30	3.0	*Acropora cervicornis*
31	3.0	*Millepora complanata*
32	3.0	Sand
33	3.0	*Acropora cervicornis*
34	3.4	*Millepora alcicornis*
35	3.4	*M. alcicornis*
36	3.0	*Acropora cervicornis*
37	3.0	*A. cervicornis*
38	3.0	Rock
39	3.0	Rock
40	3.0	*Eunicea tourneforti*
41	3.0	*Aplysina fistularis*
42	3.0	*Acropora cervicornis*

Site 2. White Banks Dry Rocks (cont.)

Transect 3. About 400 m long run on a heading of 298° true 300 m west of Transect 2.
29 July 1981

Meter mark	Depth meters	Bottom type and species
43	3.0	Rock
44	3.0	*Erythropodium caribaeorum*
45	3.4	*Acropora cervicornis*
46	3.0	*A. cervicornis*
47	3.0	*A. cervicornis*
48	3.0	*Plexaura flexosa*
49	3.0	Rubble, sand
50	3.0	Rubble, *Thalassia*
51	3.0	*Thalassia*
52	3.0	*Thalassia*, *Batophora*
53	3.0	*Thalassia*
54	3.0	Sand
55	3.0	*Thalassia*
56	3.0	*Thalassia*, *Dasycladus vermicularis, Halimeda tuna*, *Ophionereis squamosa*, polychaete
57	3.0	*Thalassia*, *Valonia* sp.
58	3.0	*Thalassia*, *Halimeda incrassata, Ophionereis squamosa*
59	3.0	*Batophora*
60	3.7	Sand
61	3.0	*Thalassia, Syringodium, Halimeda tuna*
62	3.0	*Thalassia, Syringodium*
63	3.0	*Thalassia*, *Syringodium*, *Dasycladus vermicularis, Tridemnum savignii*
64	3.0	*Thalassia, Syringodium*
65	3.0	Rock
66	3.0	Sand
67	3.0	*Thalassia, Syringodium, Batophora*
68	3.0	*Thalassia, Syringodium*
69	3.0	*Thalassia, Syringodium, Batophora, Dictyota cervicornis*
70	3.0	*Thalassia, Syringodium*
71	3.0	*Thalassia, Syringodium, Halimeda monile*
72	3.0	*Thalassia, Syringodium*
73	3.0	*Thalassia, Syringodium*
74	3.0	*Thalassia, Syringodium, Dilophus alternans, Dictyota cervicornis*
75	3.0	*Plexaurella dichotoma*
76	3.0	*Dictyota cervicornis, Dilophus alternans, Amphiroa rigida antillens*
77	3.0	*Dictyota cervicornis, Amphiroa rigida*
78	3.0	*Halimeda incrassata*
79	3.7	*Thalassia, Syringodium*
80	4.0	*Thalassia, Syringodium*

9.2.2. Quadrats

Site 2. White Bank Dry Rocks Coral Quadrats
12 August 1981

Species	Quadrats 1	2	3	4
PROTOZOA				
Homotrema rubrum	x	x	x	x
ALGAE				
Halimeda incrassata	0	0	3	0
H. sp.	5	0	0	5
Dictyota cervicornis	0		0	2
Goniolithon sp.	x	x	x	x
Lithothamnion sp.	x	x	x	x
PORIFERA				
Spinosella vaginalis	0	1	1	0
S. vaginalis forma?	0	0	1	0
Aplysina cauliformis	0	0	1	0
Haliclona compressa	8	4	2	0
Aiolochroia crassa	0	3	1	0
Spinosella sp.	0	1	0	0
Keratosa indet.	0	1	0	0
Axinellid	0	1	0	0
Spongia sp.	1	0	0	0
Niphates sp.	0	0	0	8
COELENTERATA				
Briareum asbestinum	3	4	5	6
Erythropodium caribaeorum	0	0	0	1
Palythoa mammillosa	0	0	0	5
Anemones	0	1	0	0
Plexaura flexosa	0	1	0	1
Plexaura homomalla	1	0	0	0
Pseudopterogorgia americana	1	0	0	1
P. acerosa	0	0	5	0
Muriceopsis flavida	0	1	0	1
Euncea mammosa	0	1	1	0
E. tourneforti	0	0	1	0
Gorgonia ventalina	1	0	4	1
Diploria labyrinthiformis	1	1	0	0
Montastraea annularis	1	6	6	9
M. cavernosa	0	5	1	0
Siderastrea radians	0	4	2	0
Agaricia agaricites	0	3	5	1
Eusmilia fastigiata	0	0	1	0
Isophyllia sinuosa	0	1	0	0
Millepora *alcicornis*	1	0	0	1
POLYCHAETA				
Serpulid	1	0	0	0
Tube worm	0	1	0	0
Sabellids	0	0	3	0
CRUSTACEA				
Hermit crab	0	0	0	1

Site 2. White Bank Dry Rocks Rubble Quadrats
26 August 1981

Species	Quadrats 1	2	3	4
PROTOZOA				
Homotrema rubrum	0	1	0	0
ALGAE				
Halimeda opuntia	8	15	22	4
Dilophus alternans	13	1	0	0
Valonia sp.	4	0	3	0
Dictyota cervicornis	2	0	5	0
Batophora oerstedii	1	0	0	0
Stypopodium zonale	2	1	10	0
Amphiroa sp.	0	1	0	0
Goniolithon sp.	0	2	0	0
PORIFERA				
Ircinia strobilina	1	0	1	0
Haliclona compressa	1	0	0	0
Thalysias sp.	0	0	1	0
Aplysina sp.	1	1	1	0
Cliona sp.	0	0	0	1
Callyspongia sp.	0	1	0	0
Mycale sp.	0	1	0	0
Chondrilla nucula	0	0	1	0
COELENTERATA				
Favia fragum	2	0	1	0
Siderastrea siderea	1	2	0	1
Agaricia agaricites	1	0	0	0
Diploria clivosa	1	0	0	0
Porites porites	1	0	2	0
Acropora cervicornis	0	1	0	1
Pseudopterogorgia americana	1	0	3	0
Plexaura flexosa	0	1	0	0
Gorgonia ventalina	0	0	3	0

Species	Quadrats 1	2	3	4
POLYCHAETA				
Worms spp.	10	0	3	1
Sabellid	0	1	0	0
Eunice kingergi	0	1	0	0
Eunice sp.	0	0	4	0
Amphinomid	0	0	0	4
SIPUNCULIDA				
Sipunculid	0	1	0	0
MOLLUSCA				
Cerithium eburneum	0	0	6	0
C. guinaicum	0	1	0	0
C. litteratum	0	2	0	4
CRUSTACEA				
Isopod indet.	0	2	0	0
BRYOZOA				
Bryozoan sp.	0	1	0	1
ECHINODERMATA				
Brittle stars	5	36	4	0
Eucidaris tribuloides	0	0	1	0
Diadema antillarum	0	0	1	0

Site 2. White Bank Dry Rocks Grass Quadrats. 10 June 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					ECHINODERMATA				
Penicillus capitatus	5	2	6	5	*Eucidaris tribuloides*	1	0	0	0
Halimeda incrassata	0	4	2	2	*Clypeaster rosaceus*	1	0	0	0
H. lacrimosa	5	1	3	6					
Red alga A	1	1	0	0	POLYCHAETA				
Red alga B	0	1	0	0					
Red alga C	0	1	0	0	Sabellid	0	0	1	0
Dilophus alternans	0	0	1	0					
Dasycladus vermicularis	0	0	0	4	CRUSTACEA				
PORIFERA					Shrimp sp. A	0	0	1	0
Aplysina sp.	1	0	0	0	ASCIDIACEA				
Foliolina peltata	0	2	2	1					
Sponge A	0	0	0	1	Styelid	1	0	0	0
					Didemnum candidum	0	8	2	1
COELENTERATA					*Symplegma* sp.	4	1	1	1
					Didemnum sp.	0	1	0	0
Millepora alcicornis	0	1	0	0					
MOLLUSCA									
Murex recurvirostris rubidus	1	0	0	0					
Nudibranch (not collected)	1	0	0	0					
Glycymeris pectinata	0	0	1	0					
Nudibranch (not collected)	0	0	0	1					
Laevicardium laevigatum	1	0	0	0					

Site 2. White Bank Dry Rocks Sand Quadrats
21 August 1981

Species	Quadrats			
	1	2	3	4
POLYCHAETA				
Phascolion sp.	0	0	0	1
Worm indet.	0	0	0	1
MOLLUSCA				
Hastula hastata	0	0	1	0
Olivella nivea	0	0	2	1
CRUSTACEA				
Cycloes bairdii	1	0	0	0
Paguristes sp.	1	0	0	0
ECHINODERMATA				
Ophiothrix oerstedii	0	0	1	0

9.3. Site 3. French Reef

9.3.1. Transects

Transect 1. About 720 m long run on a heading of 308° true past the stake on the reef tract. 10 June 1980

Meter mark	Depth meters	Bottom type and species
1	18.5	*Montastraea annularis* (white spotting about 5%)
2	17.9	*Erythropodium caribaeorum*
3	16.9	*Halimeda opuntia*, *Dictyota*
4	16.0	*Eunicea calyculata* forma *coronata*
5	16.0	*Dictyota*
6	15.4	*Amphiroa rigida antillana*, red sponge
7	15.4	*Pseudopterogorgia* americana
8	15.4	*Goniolithon strictum*, *Dilophus alternans*
9	14.8	*Cladophora* sp.
10	14.8	*Montastraea annularis* (white spotting about 2%)
11	14.2	*Dictyota*, *Cladophora* sp.
12	13.9	*Dictyota*, *Cladophora* sp.
13	13.9	Filamentous green alga, red sponge
14	13.9	*Siderastrea siderea* (white spotting less than 1%)
15	13.9	Melobesia on rubble
16	16.9	Rubble
17	16.6	*Millepora alcicornis*
18	16.3	Sediment on hardbottom
19	16.0	Hardbottom, *Homotrema*, red sponge
20	15.4	*Amphiroa, Dictyota, Ophiothrix* sp., black sponge
21	15.4	Black sponge
22	15.4	Thin sediment on rock
23	15.1	*Dictyota, Melobesia*
24	14.8	*Acropora cervicornis*
25	14.8	Sediment, *Melobesia*
26	14.5	Sediment
27	14.5	Coral rubble, *Melobesia*
28	14.5	Coral rubble, *Melobesia*
29	14.2	Coral rubble
30	13.9	$1^1/_2$" sediment (*Halimeda* plates, etc.)
31	13.2	Sediment, coral rubble
32	12.9	*Pseudopterogorgia americana*
33	12.3	*Dictyota*
34	11.1	*Dictyota* on old coral heads
35	10.5	*Dictyota*
36	8.3	Dead section of *Montastraea annularis* (90% white spotting)
37	7.1	*Acropora palmata* (white spotting less than 1%)
38	8.3	Dead coral with encrusting *Melobesia,* tufted green alga
39	11.1	*Diploria strigosa*
40	11.1	Sediments (between spurs)

Site 3. French Reef (cont.)

Transect 1. About 720 m long run on a heading of 308° true past the stake on the reef tract. 10 June 1980

Meter mark	Depth meters	Bottom type and species
41	10.8	Hardbottom, *Pseudopterogorgia americana*
42	10.8	*P. americana*
43	8.6	*Millepora alcicornis*
44	9.2	*Agaricia agaricites*
45	9.2	Old coral head with *Melobesia* and *Dictyota*
46	8.0	*Porites asteroides* (white spotting about 30%)
47	8.3	*Melobesia*, *Dictyota*
48	6.8	Hardbottom, *Melobesia*
49	6.8	*Dictyota*
50	6.2	*Dictyota*, hardbottom (in spur)
51	8.9	Sand in groove
52	8.9	Sand In groove
53	9.9	Sand in groove
54	8.9	Sand in groove
55	8.9	Sand in groove
56	8.9	*Halimeda opuntia*
57	8.6	Coral rubble, *Melobesia*
58	8.3	Sand
59	8.2	Sand, coral rubble, *Melobesia*
60	7.7	Rubble with *Melobesia*
61	7.7	Rubble with *Melobesia*
62	6.8	*Melobesia* on rubble
63	6.8	Sand
64	7.1	Sand
65	7.1	*Dictyota*
66	7.1	Sand
67	6.8	Sand, rubble
68	6.8	*Dictyota* rubble, sabellid worm
69	5.9	*Pseudopterogorgia americana*
70	6.2	Brick red sponge, *Melobesia,* sand
71	7.1	Sand
72	6.2	Brick red sponge, *Dictyota*
73	6.2	Sand
74	6.2	Sand
75	6.2	Sand
76	6.2	Sand
77	5.9	*Chaetomorpha* sp., rubble, *Laurencia* sp.
78	5.9	Sand
79	5.9	*Laurencia* sp., filaments with rhizoids on rubble
80	5.9	Sand, *Melobesia* on rubble
81	5.5	Sand
82	5.5	Sand

Site 3. French Reef (cont.)

Transect 1. About 720 m long run on a heading of 308° true past the stake on the reef tract. 10 June 1980

Meter mark	Depth meters	Bottom type and species
83	4.9	*Halimeda opuntia*, rubble
84	4.3	*Gorgonia ventalina*
85	3.4	*Ceramium nitens, Cliona* delitrix, rubble
86	3.4	Rubble
87	3.5	Sand, rubble, *Cladophora* sp., *Amphiroa rigida antillana*
88	4.3	Sand, *Cladophora*, sp.
89	3.7	Old coral head, *Melobesia, Ceramium nitens*
90	3.7	Sand
91	3.4	Rubble, *Cladophora*
92	3.4	Sand
93	3.4	Rubble, *Melobesia*
94	3.1	*Millepora alcicornis*
95	3.1	Rubble, sand, *Ceramium nitens*
96	3.1	Rubble, *Laurencia* sp.
97	3.1	Rubble, *Melobesia*, sand
98	2.5	Rubble, unidentified sponge fragment
99	1.9	Rubble, *Melobesia*
100	1.9	Rubble, *Ceramium nitens, Melobesia*
101	1.9	Rubble, *Ceramium nitens*
102	2.2	Rubble, encrusting orange sponge
103	2.2	Rubble
104	1.9	*Halimeda opuntia*
105	1.9	Rubble, *Melobesia*
106	1.9	Rubble and sand
107	1.9	Green tufted alga
108	1.2	Green tufted alga, rubble
109	1.2	Rubble, *Melobesia*
110	0.6	*Dictyota*
111	0.6	Rubble
112	0.6	*Halimeda tuna*. *Dictyota* sp., rubble
113	0.6	Orange sponge, rubble
114	0.6	*Dictyota*, sand, rubble
115	0.6	Rubble, sand
116	0.6	Rubble, *Melobesia*
117	0.6	*Dasycladus*, sand, rubble
118	0.6	Rubble, *Dictyota*
119	0.9	Rubble
120	0.9	*Dictyota*, rubble
121	1.2	Rubble
122	1.2	Rubble, *Dictyota*
123	1.5	Rubble

Site 3. French Reef (cont.)

Transect 1. About 720 m long run on a heading of 308° true past the stake on the reef tract. 10 June 1980

Meter mark	Depth meters	Bottom type and species
124	1.5	*Dasycladus*, rubble, *Padina*, *Dictyota*
125	1.2	Rubble, *Melobesia, Dasycladus*, *Laurencia*
126	1.2	*Gracilaria ferox*, *Dasycladus vermicularis*, rubble
127	1.2	Rubble, *Dictyota*
128	1.2	*Dasycladus, Dictyota,* rubble
129	1.2	*Homotrema rubrum, Melobesia,* rubble
130	1.2	*Laurencia poitei*, rubble
131	1.2	*Laurencia* sp., green tufted alga, rubble
132	1.2	Padina
133	1.2	Sand
134	1.2	*Pocockiella variegata*, filamentous alga on rubble
135	1.5	Rubble, *Melobesia*, *Homotrema rubrum*
136	1.5	Rubble, *Homotrema*
137	1.5	*Laurencia*, rubble
138	1.5	*Laurencia*, rubble
139	1.5	*Laurencia,* rubble
140	1.5	*Dasycladus*, rubble
141	1.5	Green alga, rubble, *Laurencia*, *Dasycladus*, *Amphiroa rigida antillana*
142	1.5	*Padina*, rubble
143	1.5	Rubble
144	1.5	*Laurencia*

Site 3. French Reef

Transect 2. About 400 m long run on a heading of 308° true and 300 m to the west of Transect 1.
1 November 1983

Meter mark	Depth meters	Bottom type and species
0	16.8	*Montastraea annularis*
1	15.9	*Pseudopterogorgia bipinnata*
2	15.5	*Dilophus annularis*
3	15.5	*Montastraea annularis*
4	15.2	Sand, hardbottom
5	15.0	Sponge
6	15.0	Rubble, *Dilophus alternans*
7	14.6	*Pseudopterogorgia elisabethae*
8	14.3	*Dilophus alternans*
9	14.3	*Dilophus alternans*, Christmastree worm
10	14.0	*Dilophus alternans*, hardbottom, *Homotrema rubrum*
11	13.7	*Dilophus alternans,* hardbottom
12	13.4	*Amphiroa fragilissima*
13	15.2	*Pseudopterogorgia bipinnata*
14	15.2	Hardbottom
15	15.2	Hardbottom
16	15.2	Hardbottom
17	15.2	Hardbottom
18	15.2	Hardbottom, *Halimeda* sp.
19	14.3	*Dilophus alternans*
20	14.3	*Dilophus alternans*, red algal mat
21	14.0	*Dilophus*
22	13.7	Sponge
23	13.4	Hardbottom, *Homotrema rubrum*
24	13.4	Rubble, hardbottom
25	13.4	Sand, hardbottom
26	12.5	Hardbottom
27	12.2	Hardbottom
28	11.9	*Spinosella vaginalis*
29	10.7	*Colpophyllia natans* (white spot 10%)
30	10.1	*Favia fragrum*
31	9.8	*Pseudopterogorgia bipinnata*
32	9.1	*Dilophus alternans*
33	8.8	*Dilophus alternans*
34	8.2	Hardbottom, *Homotrema rubrum*
35	8.2	*Spongia cerebriformis*
36	7.3	*Dilophus alternans*
37	8.5	*Halimeda opuntia minor*
38	9.1	*Dilophus alternans*, *Millepora alcicornis*
39	9.4	Sand
40	9.4	*Pseudopterogorgia bipinnata*

Site 3. French Reef (cont.)

Transect 2. About 400 m long run on a heading of 308° true and 300 m to the west of Transect 1.
1 November 1983

Meter mark	Depth meters	Bottom type and species
41	7.0	Hardbottom, *Dilophus alternans*
42	7.0	*Pseudopterogorgia bipinnata*
43	6.7	Hardbottom
44	6.7	*Dilophus alternans*
45	6.7	*Dilophus alternans*
46	6.4	*Dilophus alternans*
47	6.1	*Muriceopsis flavida*, *Dilophus alternans*
48	6.4	*Udotea,* hardbottom
49	6.4	*Udotea*, hardbottom
50	6.4	*Udotea*, hardbottom
51	6.4	Gorgonid
52	6.4	*Millepora alcicornis*
53	7.0	Rubble
54	7.0	Hardbottom
55	7.0	*Udotea,* hardbottom
56	6.7	*Millepora alcicornis*
57	6.1	*Pseudopterogorgia americana*
58	6.4	*Pseudopterogorgia americana*
59	6.7	Hardbottom, *Udotea*
60	6.4	Hardbottom, *Udotea*
61	6.4	*Halimeda opuntia minor, Udotea*
62	6.1	Hardbottom, *Udotea*
63	6.7	Brown alga
64	6.7	Hardbottom, *Udotea*
65	6.4	Hardbottom, *Udotea*
66	6.7	Hardbottom, *Udotea*
67	6.7	Calcareous alga, orange sponge, *Udotea*
68	6.7	Rubble, *Udotea*
69	6.7	*Udotea*
70	6.4	*Udotea,* rubble
71	6.4	Hardbottom, *Udotea*
72	6.4	Sand, rubble
73	6.4	Sand, rubble
74	6.7	Sand
75	6.4	Sand, rubble
76	6.7	Sand
77	6.4	*Pseudopterogorgia bipinnata*
78	6.4	Rubble
79	6.4	*Udotea*, *Pseudopterogorgia bipinnata*
80	6.4	Rubble

Site 3. French Reef

Transect 3. About 610 m run on a heading of 308° true, 300 m east of Transect 1.
30 May 1981

Meter mark	Depth meters	Bottom type and species
1	15.2	*Dilophus alternans*
2	14.6	*Pseudopterogorgia elisabethae*
3	14.6	*Acropora cervicornis*
4	14.6	*Sargassum* sp.
5	14.3	*Siderastrea radians*
6	13.7	Alga, *Sargassum*
7	12.8	*Pseudopterogorgia americana*
8	12.8	*Dilophus alternans*
9	12.8	*Millepora alcicornis*
10	12.8	*Pseudopterogorgia americana*
11	12.8	*Dilophus alternans*
12	12.8	*Favia fragum*
13	12.5	*Pseudopterogorgia elisabethae*
14	12.2	*Muricea pinnata*
15	12.2	Alga
16	12.2	*Dictyota cervicornis*
17	12.2	*Dilophus alternans*
18	11.9	*Millepora alcicornis*
19	11.9	*Dictyota cervicornis*
20	12.2	*Pseudopterogorgia americana*
21	11.9	*Dilophus alternans*, *Dictyota cervicornis*
22	11.6	*Sargassum*
23	11.6	Sand, *Dictyota cervicornis*
24	11.6	*Dictyota cervicornis*
25	11.6	*Acropora cervicornis*
26	11.6	*Sargassum*, *Dilophus alternans*
27	11.6	Hardbottom
28	11.6	Hardbottom, *Sargassum*
29	11.6	Hardbottom
30	11.6	*Dictyota cervicornis*
31	11.6	*Dilophus alternans*
32	11.6	Hardbottom
33	11.6	*Halimeda tuna*
34	10.7	*Eunicea tourneforti*
35	10.7	Sargassum
36	10.7	*Dictyota cervicornis*
37	10.7	*Siderastrea radians*
38	10.7	*Favia fragum*
39	10.7	Sand
40	10.7	Coarse sand
41	10.7	*Dilophus alternans*, *Dictyota cervicornis*
42	10.7	Agaricia agaricites

Site 3. French Reef (cont.)

Transect 3. About 610 m run on a heading of 308° true, 300 m east of Transect 1.
30 May 1981

Meter mark	Depth meters	Bottom type and species
43	10.7	Hardbottom, pink encrusting alga
44	10.7	*Dilophus alternans*
45	10.7	*Dictyota cervicornis*
46	10.7	Coarse sand
47	10.7	*Spinosella vaginalis*, *Ophiothrix suensonii*
48	10.7	*Pseudopterogorgia americana*
49	10.7	Sand
50	10.7	*Plexaura flexosa*
51	9.8	*Dictyota cervicornis*
52	9.8	Sand
53	9.8	Hardbottom
54	9.8	*Acropora cervicornis*
55	9.8	*Dilophus alternans*
56	9.8	Sand
57	10.7	*Eunicea tourneforti*
58	9.1	*Pseudopterogorgia americana*
59	9.1	*P. bipinnata*
60	9.1	*Halimeda tuna*
61	9.1	*Siderastrea siderea*
62	9.1	*Stypopodium zonale*
63	9.1	Hardbottom, *Dilophus alternans*
64	9.1	Rubble
65	9.1	*Dictyota cervicornis*
66	9.1	*Pseudopterogorgia americana*
67	9.1	Hardbottom
68	8.8	Coarse sand, pink encrusting alga
69	8.8	Hardbottom
70	8.8	Hardbottom, *Dilophus alternans*
71	8.8	*Stypopodium zonale*
72	8.5	Hardbottom
73	8.5	Rubble
74	8.5	*Dilophus alternans*
75	8.5	*Dictyota cervicornis*
76	8.5	Rubble
77	7.6	Rubble, *Homotrema rubrum*
78	7.6	*Dilophus alternans*
79	7.6	Rubble
80	7.6	*Halimeda tuna*
81	7.6	Rubble
82	7.6	Rubble
83	7.6	Rubble
84	7.6	Rubble

Transect 3. About 610 m run on a heading of 308° true, 300 m east of Transect 1.
30 May 1981

Meter mark	Depth meters	Bottom type and species
85	7.6	Rubble, *Homotrema rubrum*
86	6.7	*Pseudopterogorgia americana*
87	6.7	Rubble
88	6.7	Rubble
89	6.7	*Gorgonia ventalina*
90	6.7	*Dilophus alternans*
91	6.7	Rubble
92	5.5	Rubble
93	5.5	*Halimeda incrassata*
94	5.5	*Muricea pinnata*
95	5.5	Rubble
96	5.2	Rubble
97	5.5	*Stypopodium zonale*
98	5.5	*Stypopodium zonale*
99	5.2	Green alga
100	5.2	*Stypopodium zonale*
101	4.9	Rubble, *Homotrema rubrum*
102	5.5	Rubble, *Homotrema rubrum*
103	5.5	Alga
104	4.0	*Dilophus alternans*
105	3.7	*Stypopodium zonale*
106	3.4	*Stypopodium zonale,* rubble
107	3.0	*Dictyota cervicornis*
108	3.0	*Stypopodium zonale*
109	3.0	Rubble, alga
110	3.0	Rubble, *Homotrema rubrum*, *Dilophus alternans, Dictyota* sp.
111	5.5	*Dictyota cervicornis*
112	5.5	*Stypopodium zonale*
113	4.9	*Stypopodium zonale*
114	1.8	*Plexaurella dichotoma*
115	1.8	Rubble, *Dictyota cervicornis*
116	1.8	*Gorgonia ventalina*
117	1.8	*Acropora cervicornis*
118	1.8	*Halimeda incrassata*
119	1.5	Rubble, *Homotrema rubrum*
120	1.5	*Dictyota cervicornis*
121	1.5	*Halimeda incrassata*
122	1.5	*Dilophus alternans*

9.3.2. Quadrats

Site 3. French Reef Coral
13 September 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
PROTOZOA					*Briarum asbestinum*	0	0	1	0
					Millepora alcicornis	11	3	0	2
Homotrema rubrum	0	0	0	1	*M. complanata*	0	0	1	0
					Anemone indet.	1	6	1	40
ALGAE					*Montastraea annularis*	1	2	1	3
					Acropora palmata	1	8	1	8
Filamentous algae	2	2	0	1	*A. cervicornis*	1	0	1	0
Galaxaura sp.	1	0	1	0	*Agaricia agaricites*	1	0	6	2
Halimeda incrassata	1	0	1	0	*A. lamarckiana*	0	0	0	1
H. opuntia minor	1	0	2	30	*Mycetophyllia lamarckiana*	0	0	0	1
Dictyota sp.	1	1	0	0	*M. ferox*	0	0	1	0
Slimy red alga	0	3	0	0	*Porites porites*	0	6	1	0
Amphiroa rigida antillana	0	2	0	0	*P. astreoides*	0	0	1	4
Amphiroa sp.	1	1	0	0					
Goniolithon sp.	0	0	1	0	POLYCHAETA				
Lithothamnion sp.	0	0	1	0					
					Sabellid A	1	0	0	0
PORIFERA					Sabellid B	1	0	0	0
					Xmas-tree worm, yellow	0	1	0	2
Agelas schmidti	10	0	1	0	Xmas-tree worm, blue	0	3	0	2
Agelas sp.	0	3	1	0					
Ircinia strobilina	0	2	0	1	CRUSTACEA				
Foliolina peltata	0	3	0	0					
Niphates erecta	0	0	0	3	Crab A	1	0	0	0
Black sponge, Indet.	1	0	0	0	Crab B	0	1	0	0
Encrusting yellow sponge	0	0	1	0	*Mithrax spinossissimus*	1	0	0	0
COELENTERATA					ECHINODERMATA				
Pseudopterogorgia americana	0	1	0	0	*Ophionereis squamosa*	0	1	0	0
					Ophiothrix sp.	1	0	0	0
P. kallos	0	0	4	0	Brittle stars	1	0	0	0
Erthyropodium caribaeorum	1	0	1	0	*Eucidaris tribuloides*	1	0	0	0

Site 3. French Reef Rubble Quadrats
1 November 1980

Species	Quadrats 1-2	Quadrats 3-4	Species	Quadrats 1-2	Quadrats 3-4
PROTOZOA			MOLLUSCA		
Homotrema rubrum	2	4	*Polinices lactea*	1	0
			Barbatia candida	1	0
ALGAE			*Cerithium litteratum*	3	1
			C. eburneum	2	1
Halimeda opuntia minor	1	0	*Stenoplax floridana*	0	2
H. incrassata	29	0	*Ischnochiton erythronotus*	1	2
H. opuntia	0	3			
Dictyosphaeria cavernosa	1	0	CRUSTACEA		
Pink coralline	x	x			
Laurencia spp.	1	1	Shrimp	2	0
Branching coralline	0	1	*Mithrax forceps*	0	1
Algal mat	0	1			
Amphiroa rigida antillana	1	0	ECHINODERMATA		
PORIFERA			*Eucidaris tribuloides*	1	0
			Ophiocoma echinata	1	0
Callyspongia sp.	1	0	Brittle stars	2	0
			Diadema antillarum	1	0
COELENTERATA			Brittle stars	0	1
Gorgonia ventalina	3	0	ASCIDIACEA		
Millepora complanata	1	0			
Siderastrea radians	3	0	*Didemnum candidum*	0	1
POLYCHAETA			BRYOZOA		
Maldanid	1	0	Bryozoan	0	1
Eunice longicirrata	2	2	White encrusting form	0	1
Glycera sp.	1	0	Encrusting	1	0
Phyllodocid	1	0			
Terebellid	1	0			
Sabellid	0	1			

Site 3. French Reef Hardbottom Quadrats
1 November 1980

Species	Quadrats 1-2	3-4	Species	Quadrats 1-2	3-4
PROTOZOA			COELENTERATA		
Homotrema rubrum	6	0	*Millepora alcicornis*	25	13
			Pseudopterogorgia americana	4	36
ALGAE			*P. acerosa*	13	0
			P. rigida	6	0
Halimeda opuntia	0	2	*Pseudoplexaura* sp.	2	0
Dilophus alternans	0	1	*Pterogorgia citrina*	1	0
Dictyota sp.	11	0	*Briareum asbestinum*	1	0
Amphiroa sp.	1	0	*Eunicea calyculata*	3	0
Coralline	x	0	*Muriceopsis flavida*	1	0
			Erythropodium caribaeorum	2	1
PORIFERA			*Porites* astreoides	2	0
			Porites furcata	0	4
Aiolochroia crassa	16	0	*Porites* form?	0	1
Niphates erecta	1	2	*Agaricia agaricites*	4	2
Niphates digitalis	2	0	*Eusmilia fastigiata*	1	0
Cliona sp.	1	0	*Siderastrea siderea*	3	2
Orange encrusting sponge	2	0	*S. radians*	0	2
Aplysina sp.	2	0	*Dichocoenia stokesi*	0	1
Aplysina fistularis	8	0	*Montastraea cavernosa*	0	2
Aplysina cauliformis	0	22	*Diploria labyrinthiformis*	0	1
Spinosella vaginalis	0	1			
Aplysina sp.	0	1	POLYCHAETA		
Porifera Indet.	0	1			
Axinellia sp.	0	1	Lumbrinereis	1	0
Murocionid	1	0			
			BRYOZOA		
			Encrusting bryozoan	1	0
			MOLLUSCA		
			Cerithium litteratum	1	0
			Nudibranch	0	1
			ECHINODERMATA		
			Ophiothrix lineata	0	1
			Brittle stars	2	0

Site 3. French Reef Sand Quadrats
1 November 1980

Species	Quadrats 1-4
POLYCHAETA	
Ophelids	1
SIPINCULIDA	
Sipunculids	1
MOLLUSCA	
Hastula hastata	2

9.4. Site 4. Mosquito Bank

9.4.1. Transects

Transect 1. About 400 m long run on a heading of 303° true.
11 June 1981

Meter mark	Depth meters	Bottom type and species
1	3.7	*Thalassia*, *Syringodium*
2	3.7	*Thalassia*, *Syringodium, Halimeda monile*
3	3.7	*Syringodium, H. monile, Aplysina* sp.
4	3.7	*Thalassia*, *Syringodium*, *H. incrassata*
5	3.7	*Thalassia*, *Syringodium*, *H. monile*
6	3.7	*Thalassia*, *Syringodium*, *H. opuntia triloba*
7	3.7	*Thalassia*, *Syringodium*
8	3.7	*Thalassia, Syringodium*
9	3.4	*Thalassia*, *Syringodium*
10	3.4	*Thalassia*
11	3.0	*Thalassia*
12	3.0	*Dictyota* sp., *H. monile*
13	3.0	Sand, hardbottom
14	2.4	*Halimeda tuna, Dictyota* sp., coralline
15	2.1	*Millepora alcicornis*
16	1.8	*Siderastrea siderea*
17	1.8	*Pseudoplexaura porosa*
18	1.8	*Acanthophora* sp.
19	1.8	*Halimeda tuna, Dictyota* sp.
20	3.0	*Chondrilla nucula*
21	3.0	*Thalassia*
22	3.3	*Thalassia*
23	3.7	*Thalassia*
24	3.7	*Thalassia*
25	3.7	*Thalassia*
26	3.7	*Thalassia*, *Halimeda opuntia triloba*
27	3.7	*Thalassia*
28	3.7	*Thalassia*
29	3.7	*Thalassia, Syringodium, Lytechinus*
30	3.7	*Thalassia, Syringodium*
31	3.7	*Thalassia, Syringodium, Halimeda monile*
32	3.7	*Thalassia, Syringodium*
33	3.7	*Penicillus dumetosus*
34	4.3	*Halimeda incrassata*, *H. opuntia triloba*
35	4.3	*Thalassia*, *Syringodium*, *Penicillus lamourouxii*
36	4.0	*Thalassia*, *Syringodium*, *Halimeda opuntia triloba*
37	4.0	*Thalassia*
38	4.0	*Thalassia*
39	4.0	*Syringodium*, *Halimeda tuna, Penicillus dumetosus*
40	4.0	*Loimia* sp.

Site 4. Mosquito Bank (cont.)

Transect 1. About 400 m long run on a heading of 303° true.
11 June 1981

Meter mark	Depth meters	Bottom type and species
41	4.3	*Thalassia*, crab
42	4.3	*Thalassia*, *Loimia* sp.
43	4.3	*Thalassia*, *Halimeda incrassata*
44	4.3	*Halodule*, *Halimeda incrassata*
45	4.0	*Halodule*, *Thalassia, Halimeda incrassata*
46	3.4	*Thalassia, H. incrassata, Ascidinella* sp.
47	3.4	*Penicillus capitatus*
48	4.0	*Thalassia*, *Loimia* sp.
49	4.0	*Thalassia, Loimia* sp.
50	4.0	*Thalassia*, green alga
51	4.0	*Thalassia*
52	4.0	*Thalassia*, *Halimeda incrassata, H. opuntia triloba*
53	4.0	*Syringodium*
54	4.0	*Thalassia, Syringodium*, *Loimia* sp.
55	4.0	Thalassia, *Syringodium*
56	4.0	*Thalassia, Syringodium*, *Halimeda opuntia triloba*
57	4.0	*Thalassia, Syringodium*
58	4.0	*Thalassia, Syringodium*, *Loimia* sp.
59	4.0	*Thalassia*
60	4.0	*Thalassia*, *Loimia* sp.
61	4.0	*Thalassia*, *Lytechinus variegatus*
62	4.0	*Thalassia*
63	4.0	*Thalassia, Acetabularia crenulata*
64	4.3	*Thalassia*, *Loimia* sp.
65	4.3	*Thalassia*, *Loimia* sp., *Penicillus capitatus*
66	4.3	*Thalassia*
67	4.3	*Thalassia*
68	4.0	*Thalassia*, *Halimeda incrassata, H. opuntia triloba*
69	4.0	*Thalassia*
70	4.0	*Thalassia*
71	4.0	*Thalassia*, *Penicillus capitatus*
72	4.0	*Thalassia*
73	4.0	*Thalassia*, *Syringodium*
74	4.6	*Thalassia*, *Syringodium*
75	4.0	*Thalassia*
76	4.0	*Thalassia*, *Syringodium*
77	4.0	*Thalassia*, *Syringodium*
78	4.0	*Thalassia*, *Syringodium*
79	4.0	*Thalassia*, *Syringodium*
80	4.0	*Thalassia*, *Loimia* sp.

Site 4. Mosquito Bank

Transect 2. About 400 m long run on a heading of 303° true 300 m west of Transect 1.
11 June 1981

Meter mark	Depth meters	Bottom type and species
0	2.7	Sand, hardbottom
1	2.7	*Plexaura flexosa*
2	3.0	*Pseudoplexaura porosa*
3	3.0	*Pseudopterogorgia americana*
4	3.0	Sand
5	3.0	*Halimeda incrassata*
6	3.4	*Penicillus lamourouxii*
7	3.7	Sand
8	3.7	Thalassia
9	3.7	*Thalassia*
10	4.0	*Thalassia*
11	4.0	*Thalassia, Penicillus lamourouxii*
12	4.0	*Thalassia*
13	4.0	*Thalassia*, *Loimia*
14	4.0	*Thalassia*
15	4.0	*Thalassia*, *Halimeda opuntia triloba*
16	4.0	*Thalassia*
17	4.0	*Thalassia*
18	4.0	*Thalassia*
19	4.0	*Thalassia*
20	4.0	*Thalassia*
21	4.0	*Thalassia, Syringodium*
22	4.0	*Thalassia*, *Syringodium*
23	3.7	*Thalassia*
24	3.7	*Thalassia*, *Syringodium*
25	3.7	*Thalassia*, *Syringodium*
26	3.7	*Thalassia, Syringodium*
27	3.7	*Thalassia*, *Syringodium*
28	3.3	*Thalassia*, *Lytechinus variegatus*
29	3.3	*Thalassia*, *Syringodium*
30	3.3	*Thalassia*, *Porites furcata, Halimeda incrassata*
31	3.3	*Thalassia*, *Syringodium*
32	3.3	*Thalassia*, *Syringodium, H. incrassata*
33	3.3	*Thalassia*, *Syringodium*, *H. monile*
34	3.3	*Thalassia*
35	3.3	*Thalassia*, *Syringodium*
36	3.3	*Thalassia, Syringodium*, *Penicillus capitatus*
37	3.7	*Thalassia, Syringodium, H. monile, Tagelus* sp., *Adoria*
38	3.7	*Thalassia*
39	3.7	*Thalassia*, *Loimia*, *H. monile*
40	3.7	*Thalassia*
41	4.0	*Thalassia*, *Syringodium*, *Penicillus lamourouxii*

Site 4. Mosquito Bank (cont.)

Transect 2. About 400 m long run on a heading of 303° true 300 m west of Transect 1.
11 June 1981

Meter mark	Depth meters	Bottom type and species
42	4.0	*Thalassia*
43	4.0	*Thalassia*, *Syringodium*
44	4.0	*Thalassia*
45	4.0	*Thalassia*
46	4.0	*Thalassia*
47	3.7	*Thalassia*
48	3.4	*Pseudoplexaura porosa*
49	3.0	*Colpophyllia natans*
50	3.0	*Pseudoplexaura porosa*
51	3.0	*P. porosa*
52	3.4	*Siderastrea siderea*
53	3.7	Sand
54	4.0	*Thalassia*
55	4.0	Sand
56	4.0	*Thalassia*
57	4.0	*Thalassia*
58	4.0	Sand
59	4.0	*Thalassia*
60	4.3	*Thalassia*
61	4.3	*Thalassia*, *Loimia* sp.
62	4.3	*Thalassia*, *Lytechinus variegatus*
63	4.3	*Thalassia*
64	4.3	*Thalassia*
65	4.0	*Thalassia*, *Loimia* sp.
66	4.3	*Thalassia*
67	4.3	*Thalassia*, *Loimia* sp.
68	4.3	*Thalassia*
69	4.3	*Thalassia, Halimeda incrassata, Adoria*
70	4.3	*Thalassia*, *H. incrassata, Lytechinus variegatus*
71	4.3	*Thalassia, Loimia*
72	4.3	*Thalassia*
73	4.3	*Thalassia*
74	4.3	*Thalassia, Anadara notabilis*
75	4.3	*Thalassia, Loimia*
76	4.6	*Thalassia, Halodule*
77	4.6	*Syringodium*, *Halodule*
78	4.3	*Thalassia, Syringodium*, *Halimeda incrassata*
79	4.3	*Thalassia*, *Syringodium*, *Anadara notabilis*
80	4.3	*Thalassia*, *Halimeda monile*

Site 4. Mosquito Bank

Transect 3. About 400 m long run on a heading of 303° true, 300 m west of Transect 2. 12 June 1981.

Meter mark	Depth meters	Bottom type and species
1	3.4	Sand
2	3.4	*Pseudopterogorgia americana*
3	3.4	*Pseudoplexaura porosa*
4	3.0	*Pseudopterogorgia rigida*
5	3.0	Sand
6	3.0	*Millepora alcicornis*, *Plexaurella grisea*
7	3.4	Sand
8	3.4	*Thalassia*
9	3.4	*Thalassia*
10	3.4	*Thalassia*
11	3.7	*Thalassia*, *Udotea spinulosa*
12	3.7	*Thalassia, Syringodium*
13	3.7	*Thalassia*, *Syringodium*, *Didemnum candidum*
14	3.7	*Thalassia, Syringodium*
15	3.7	*Thalassia, Syringodium*
16	4.0	*Thalassia, Syringodium*
17	4.0	*Thalassia, Syringodium*, *Lytechinus, Batophora, Avrainvillea nigricans*
18	4.0	*Thalassia, Aplysina, Porites furcata, Avrainvillea nigricans*
19	3.7	*Thalassia, Halodule*
20	3.7	*Thalassia, Syringodium*, *Halodule, Halimeda monile*
21	3.7	*Thalassia, Syringodium*, *Lytechinus variegatus*
22	3.7	*Thalassia, Haliclona viridis, Halimeda incrassata*
23	3.7	*Thalassia, Halodule*
24	3.7	*Thalassia, Manicina areolata*
25	3.7	*Thalassia*, *Lytechinus variegatus*
26	3.7	*Thalassia*, *Syringodium*, *Halimeda incrassata*
27	3.7	*Thalassia*, *Syringodium*
28	3.7	*Thalassia*, *Syringodium*
29	3.7	*Thalassia*, *Syringodium,* crab
30	3.7	*Thalassia*, *Syringodium*
31	3.4	*Thalassia*, *Syringodium, Lytechinus variegatus*
32	3.4	*Thalassia*, *Syringodium*
33	3.4	*Thalassia*, *Syringodium*, *Halimeda monile,* ascidian
34	3.4	*Thalassia*, *Syringodium*
35	3.4	*Thalassia*, *Syringodium*
36	3.4	*Thalassia*, *Syringodium, Halimeda incrassata*
37	3.4	*Thalassia*, *Syringodium*
38	3.4	*Thalassia*, *Syringodium, Lytechinus variegatus*
39	3.4	*Thalassia*, *Syringodium, Halimeda opuntia, Codakia orbicularis*
40	3.4	*Thalassia*
41	3.4	*Thalassia*

Site 4. Mosquito Bank (cont.)

Transect 3. About 400 m long run on a heading of 303° true, 300 m west of Transect 2. 12 June 1981.

Meter mark	Depth meters	Bottom type and species
42	3.0	*Thalassia*, *Aplysina*
43	2.7	*Ircinia strobilina*
44	2.4	*Pseudopterogorgia americana, Dichocoenia stokesi*
45	2.4	*Thalassia, Halimeda incrassata*, *Batophora*, *Udotea*, *Pseudopterogorgia acerosa, Eunice filamentosa*
46	2.4	*Aplysina cauliformis*
47	2.1	*Thalassia*, *Batophora*
48	2.1	*Thalassia, Batophora, Phascolion* sp., *Dasycladus vermicularis*, bryozoan
49	2.1	*Thalassia*, *Avrainvillea nigricans*
50	2.1	*Thalassia, Millepora alcicornis, Pseudopterogorgia americana*
51	2.1	*Thalassia*, *Millepora alcicornis, Siderastrea siderea*, *Pseudoplexaura porosa*
52	2.1	*Porites porites, Dictyota, Halimeda tuna*, *Siderastrea siderea*
53	3.0	*Thalassia*, *Aplysina cauliformis*, *Halimeda incrassata*, *Batophora*
54	3.0	*Thalassia*, *Acetabularia crenulata*
55	3.0	*Thalassia, Clypeaster rosaceus*
56	3.0	*Thalassia*
57	3.0	*Thalassia*
58	3.0	*Thalassia*
59	3.0	*Thalassia*
60	3.3	Sand
61	3.3	*Thalassia, Penicillus capitatus, Halimeda monile*
62	3.0	*Thalassia, Codakia orbicularis*
63	3.3	*Thalassia*
64	3.3	*Thalassia*
65	3.3	*Thalassia*
66	3.3	*Thalassia, Loimia*
67	3.3	*Thalassia*
68	3.3	*Thalassia*
69	3.3	*Thalassia*
70	3.3	*Thalassia*, *Anthosigmella varians*
71	3.3	*Thalassia*
72	3.3	*Thalassia*
73	3.3	*Thalassia*
74	3.3	*Thalassia*
75	3.3	*Thalassia, Codakia orbicularis*
76	3.3	*Thalassia*, *Arca* sp.
77	3.3	*Thalassia*
78	3.0	*Thalassia*
79	3.3	*Thalassia*
80	3.3	*Thalassia*, *Halimeda incrassata, Loimia* sp.

9.4.2. Quadrats

Site 4. Mosquito Bank Coral

Species	Quadrats 1	2	3	4
ALGAE				
Halimeda incrassata	6	10	15	15
H. tuna	7	6	13	2
H. opuntia triloba	4	0	0	0
H. monile	2	2	0	0
H. lacrimosa	0	1	0	0
Dilophus alternans	17	7	14	7
Udotea conglutinata	1	8	8	4
Neomeris annulata	1	0	0	0
Batophora oerstedii	0	2	0	0
Jania sp.	0	1	0	0
Valonia sp.	0	0	1	0
PORIFERA				
Haliclona compressa	1	1	12	2
Ircinia felix	0	2	0	2
I. strobilina	1	1	4	0
I. campana	2	0	0	0
Aplysina cauliformis	5	1	0	0
Dysidea etherea	0	2	0	25
Niphates erecta	0	1	0	0
Keratosa indet.	0	1	0	0
Demospongia indet.	0	1	0	0
Chondrilla nucula	0	3	4	0
Callyspongia fallax	0	0	4	0
Spinosella vaginalis	0	0	0	4
Epipolasis sp.	0	0	0	4
Epipolasis sp.	0	0	0	6
COELENTERATA				
Millepora alcicornis	1	5	4	5
Gorgonia ventalina	1	3	1	2
Pseudopterogorgia americana	7	3	8	1
P. rigida	0	1	0	0
Pterogorgia anceps	0	0	0	1
Pseudoplexaura porosa	1	0	5	5
P. flagellosa	0	0	0	1
Plexaurella dichotoma	0	1	0	3
P. pumila (?)	0	0	0	2
P. fusifera	6	0	0	0

Species	Quadrats 1	2	3	4
Muricea muricata	6	1	0	2
Eunicea fusca	1	0	0	0
E. mammosa	0	0	2	0
Plexaura homomalla	4	9	0	0
Erthyropodium caribaeorum	3	1	0	6
Eunicea clavigera	0	0	2	0
Plexaura flexosa	0	1	5	0
Siderastrea siderea	3	5	0	5
S. radians	1	1	1	0
Dichocoenia stokesi	0	2	0	0
Porites porites	4	1	0	0
Porites asteroides	0	0	0	1
Stephanocoenia michelini	0	1	0	0
Diploria strigosa	2	0	1	0
Anemone	0	1	0	0
Lebrunia danae	0	0	0	5
POLYCHAETA				
Eunice filamentosa	3	0	0	0
Eunice rubra	0	0	1	0
Sabellids (not collected)	0	4	0	0
Sabellids	0	0	2	0
Sabellids	0	0	1	0
Terebellid	0	1	0	0
MOLLUSCA				
Pinctada imbricata	0	0	0	1
Ostrea frons	0	0	0	3
CRUSTACEA				
Alpheid (not collected)	0	1	0	0
Crab (not collected)	0	1	0	0
Alpheus hemphilli	0	0	0	1
ECHINODERMATA				
Echinometra viridis	1	0	0	0
Ophiothrix oerstedii	0	0	0	2
Astrophyton muricatum	0	0	0	1
Brittle star (not collected)	1	0	0	0

Site 4. Mosquito Bank Grass Quadrats
12 June 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					POLYCHAETA				
Penicillus capitatus	1	0	0	0	Polychaete indet.	1	0	0	0
Halimeda incrassata	2	0	2	3	Terebellid	3	0	0	1
H. opuntia triloba	0	1	2	0	Flabelligerid	0	1	0	0
H. tuna	0	1	0	0	Sabellid A	0	0	0	1
H. monile	0	0	6	0	Sabellid B	0	0	0	1
PORIFERA					MOLLUSCA				
Haliclona viridis	2	0	7	2	*Linga pensylvanica*	1	0	4	0
Aplysina cauliformis	4	1	4	0	*Modiolus americana*	1	0	4	0
Foliolina peltata	1	0	1	5	*Astraea phoebia*	0	0	3	3
Porifera sp.	1	0	1	0	*Astraea tecta*	1	0	0	0
Ircinia strobilina	0	2	0	0	*Tegula fasciata*	0	1	0	2
Haliclona sp.	0	1	1	0	*Laevicardium laevigatum*	0	0	0	1
Porifera sp.	0	0	0	1	*Glycymeris pectinata*	2	0	0	1
Hymeniaciden sp.	0	0	0	1	*Crepidula aculeata*	1	0	0	1
Dysidea sp.	0	0	0	1	*Cerithium eburneum algicola*	0	0	0	1
Haliclona compressa	3	0	0	0					
Siphonodictyon siphonum	0	0	0	1	*Arca zebra*	1	1	0	1
COELENTERATA					CRUSTACEA				
Porites furcata	4	0	0	5	Crab	0	0	0	1
P. porites	0	1	0	0	Green shrimp	0	0	0	1
Hydroidea indet.	0	0	x	0					
					ECHINODERMATA				
					Lytechinus variegatus	7	5	8	0
					Actinopyga agassizi	0	0	1	0
					ASCIDIACEA				
					Styelid	0	0	4	0
					Compound ascidian indet.	1	0	0	0

9.5. Site 5. Grecian Rocks

9.5.1. Transects

Transect 1. About 400 m long run on a heading of 308° true on a line with the buoy WOR "E" and the microwave tower.
25 June 1980

Meter mark	Depth meters	Bottom type and species
1	10.0	Sand, algal mat, pink coralline alga
2	9.5	Sand
3	9.0	Sand, *Homotrema rubrum* on rubble, *Goniolithon* sp.
4	9.0	Sand
5	9.0	Sand
6	8.8	Sand
7	8.8	Sand, rubble with *Homotrema rubrum*
8	8.7	Sand, rubble with *H. rubrum*
9	8.7	Sand, *Batophora oerstedii,* rubble, *Homotrema*
10	8.7	Sand
11	9.0	Sand, *Homotrema*, brick red bryozoan
12	9.0	Sand, red coralline, mustard color bryozoan, *Batophora oerstedii, Laurencia* sp.
13	8.8	Sand
14	8.5	Sand, *Homotrema*, coralline
15	8.6	Sand
16	8.6	Sand
17	8.6	Sand
18	8.6	Sand
19	8.6	Sand
20	8.5	Sand, *Batophora oerstedii*, *Laurencia* sp., pink coralline
21	8.5	Sand
22	8.5	Sand
23	8.5	Sand, coralline on rubble
24	8.4	Sand, coralline on rubble
25	8.6	Sand
26	8.2	Sand, unident. alga on dead gorgonian, *Pterogorgia americana*
27	8.2	*Pseudopterogorgia acerosa*
28	7.8	*Dictyota* sp. on old coral
29	7.3	*Dictyota*
30	7.0	*Dictyota*
31	5.5	*Palythoa mammilosa*
32	4.2	Old dead coral with encrusting coralline
33	4.5	Old dead coral with encrusting coralline
34	4.5	*Millepora complanata*
35	4.1	*Gorgonia ventalina*
36	4.2	*Halimeda* opuntia
37	3.5	Encrusting pink coralline
38	3.5	Encrusting pink coralline on dead portion of *Acropora cervicornis*

Site 5. Grecian Rocks (cont.).

Transect 1. About 400 m long run on a heading of 308° true on a line with the buoy WOR "E" and the microwave tower.
25 June 1980

Meter mark	Depth meters	Bottom type and species
39	1.2	Encrusting pink coralline on old coral
40	1.0	Encrusting pink coralline on old coral
41	1.3	*Acropora palmata*
42	2.0	Sand and rubble between live coral stands
43	1.2	Coralline on old coral
44	1.5	Coralline on old coral
45	1.0	Coralline on old coral
46	1.0	*Gorgonia ventalina*
47	1.5	*Gorgonia ventalina*
48	1.1	Coralline on old coral
49	1.1	Coralline on old coral
50	1.0	Coralline on old coral
51	1.0	Coralline on old coral
52	0.5	Coralline on old coral
53	1.0	Sand
54	1.1	*Acropora cervicornis*
55	1.0	Rubble with *Homotrema*
56	1.0	*Porites asteroides*
57	0.5	*Acropora cervicornis*
58	1.0	*Halimeda opuntia*
59	0.5	Rubble with coralline
60	0.3	*Acropora cervicornis*
61	0.2	Old coral with *Dictyota* sp.
62	0.1	Dead *Acropora palmata* with coralline
63	0.1	Sand, rubble with associated microfauna
64	0.4	Sand, *Thalassia*
65	0.8	Sand, *Thalassia*
66	0.6	Sand, *Thalassia*
67	0.3	Sand, *Thalassia*
68	1.2	Sand, rubble
69	1.5	Sand
70	1.5	Sand, rubble
71	1.8	Sand, rubble
72	1.8	Sand, *Thalassia*
73	1.8	Dead stand of *Acropora cervicornis* with encrusting corallines
74	1.9	*Thalassia*, *Syringodium*
75	2.1	*Thalassia*, *Syringodium*
76	2.3	*Thalassia*, *Syringodium*

Site 5. Grecian Rocks (cont.).

Transect 1. About 400 m long run on a heading of 308° true on a line with the buoy WOR "E" and the microwave tower.
25 June 1980

Meter mark	Depth meters	Bottom type and species
77	2.8	*Thalassia*, *Syringodium*
78	2.6	*Thalassia, Syringodium*
79	2.5	*Thalassia*, *Syringodium*
80	2.4	*Thalassia*, *Syringodium*

Site 3. Grecian Rocks

Transect 2. About 400 m long run on a heading of 308° true 200 m west of Transect 1.
25 June 1980

Meter mark	Depth meters	Bottom type and species
1	9.5	Sand, coralline on rubble
2	9.5	Sand, coralline on rubble
3	9.5	Sand, coralline on rubble, *Batophora oerstedii*
4	9.5	Sand, coralline on rubble, *Dasycladus vermicularis*
5	9.5	Sand
6	9.6	Sand, *Meoma ventricosa*
7	9.5	Sand, coralline on rubble
8	9.5	Sand
9	9.0	Sand, coralline on rubble
10	9.0	Sand, rubble with small algae
11	9.0	Sand, rubble with small algae
12	9.0	Sand, rubble with corallines
13	9.0	Sand, rubble, *Batophora oerstedii*
14	9.0	Sand
15	9.0	Sand
16	9.0	Sand, rubble, *Batophora*
17	9.0	Sand, rubble with *Neomeris annulata, Gracilaria cylindrica*, *Homotrema rubrum*
18	9.0	Sand
20	9.1	Sand
21	8.5	Old coral with corallines
22	8.4	*Millepora alcicornis*
23	8.4	Old coral with corallines
24	8.4	Sand
25	8.3	Sand, rubble with *Goniolithon*
26	8.3	Sand
27	8.3	Sand, old coral with corallines
28	8.0	Old coral with corallines
29	7.3	Sand
30	7.3	*Pseudopterogorgia americana*
31	7.2	*Dichocoenia stokesi*
32	5.6	Old coral with corallines
33	5.3	*Palythoa mammillosa*
34	4.7	*Millepora complanata*
35	3.6	*Pseudopterogorgia acerosa*
36	3.3	*Muriceopsis flavida*
37	3.2	*Millepora complanata*
38	3.2	*Chondrilla nucula*
39	3.0	Old coral with corallines
40	3.0	*Porites porites*
41	3.7	*Plexaura flexosa*
42	2.2	Old coral with corallines

Site 3. Grecian Rocks (cont.)

Transect 2. About 400 m long run on a heading of 308° true 200 m west of Transect 1.
25 June 1980

Meter mark	Depth meters	Bottom type and species
43	2.2	Old coral with corallines
44	4.1	*Gorgonia ventalina*
45	3.2	Old coral with corallines, *Dictyota* sp.
46	4.2	Old coral with corallines
47	3.5	Old coral with corallines
48	3.0	*Gorgonia ventalina*
49	1.2	Old coral with corallines
50	1.5	*Acropora palmata*
51	1.2	*Palythoa mammillosa*
52	1.1	*Gorgonia ventalina*
53	1.1	*Acropora palmata*
54	1.1	*A. palmata*
55	1.1	*A. palmata*
56	1.0	*A. palmata*
57	0.3	*A. palmata*
58	0.1	Dead *Millepora complanata* with corallines
59	0.1	*M. complanata*
60	0.5	Old coral with corallines, *Aplysina, Laurencia*, *Dictyota*
61	0.4	*Halimeda opuntia*, *Dictyota*
62	0.3	Old coral with corallines
63	0.3	Old coral with corallines
64	0.2	Old coral with corallines
65	0.2	*Porites asteroides*
66	0.2	Dead portion of *Acropora palmata*
67	1.2	*A. palmata*
68	1.8	Sand
69	2.0	Rubble, *Goniolithon*, *Dictyota*
70	2.1	Rubble with corallines
71	2.3	Sand, rubble
72	1.0	Sand, rubble
72	2.6	Sand, rubble
73	2.6	*Montastraea annularis*
74	2.7	Sand
75	2.6	Sand, rubble, *Thalassia*
76	2.6	Sand, *Thalassia*
77	2.5	Sand, *Thalassia*
78	2.5	*Syringodium*
79	2.5	*Syringodium*
80	2.5	*Syringodium*

Site 5. Grecian Rocks

Transect 3. Approximately 400 m long run on a heading of 308° true east of Transect 1.
29 June 1980

Meter mark	Depth meters	Bottom type and species
1	10.5	Hardbottom
2	9.3	Orange sponge, *Dictyota* sp.
3	9.3	*Erythropodium caribaeorum*
4	10.5	Sand, rubble
5	10.8	Sand, rubble
6	11.0	Sand, rubble
7	11.1	Sand
8	11.1	Sand
9	11.0	Sand
10	10.9	Red algal mat
11	10.9	Sand, rubble
12	10.8	Sand
13	10.9	Sand
14	11.0	Sand
15	11.2	Sand
16	11.4	Sand
17	11.6	Algal mat
18	11.3	*Syringodium*
19	11.0	*Thalassia*
20	10.8	Sand, *Thalassia*
21	10.9	Sand
22	10.9	Sand
23	10.9	Sand
24	10.8	Sand
25	10.8	Sand, *Dilophus alternans, Dictyota* sp.
26	10.8	Sand
27	10.8	Sand
28	10.8	Sand
29	10.8	Sand
30	10.8	Sand, *Dictyota* sp.
31	10.8	Sand
32	10.8	Sand
33	10.8	Sand
34	10.9	Sand
35	10.8	Sand
36	10.8	Hardbottom with encrusting algae
37	9.6	*Acropora cervicornis*
38	8.4	*A. cervicornis*
39	8.4	*Palythoa mammillosa*
40	9.0	*Amphiroa rigida*, corallines, *Gracilaria* sp., *Dictyota* sp., *Dilophus alternans*

Site 5. Grecian Rocks (cont.)

Transect 3. Approximately 400 m long run on a heading of 308° true east of Transect 1.
29 June 1980

Meter mark	Depth meters	Bottom type and species
41	9.0	*Amphiroa rigida*, *Dilophus alternans, Dictyota cervicornis*, *Gracilaria* sp., *Xytopsues griseus*
42	9.0	*Dictyota cervicornis*
43	9.1	Sand
44	9.3	Sand
45	9.6	Sand, rubble
46	9.6	*Palythoa mammillosa*
47	10.8	*Dictyota*
48	6.0	Sand
49	7.3	*Pseudopterogorgia acerosa*
50	6.5	*Muriceopsis flavida*
51	5.0	*Dictyota cervicornis*
52	4.5	Dead *A. palmata* with algae
53	4.3	*Acropora palmata*
54	4.7	*Dictyota*
55	6.0	*Acropora palmata*
56	6.3	Rubble with *Dictyota cervicornis*, *Dilophus alternans*
57	6.0	Rubble
58	5.0	*Millepora complanata*
59	4.5	Rock with corallines and filamentous green algae
60	3.0	*Millepora complanata*
61	3.0	*Montastraea annularis*
62	3.2	*Pseudopterogorgia americana*
63	3.9	*Halimeda opuntia*
64	4.2	Coral rubble with corallines
65	4.5	*Acropora* cervicornis rubble with corallines
66	4.5	Coral rubble with corallines
67	4.0	*Acropora cervicornis* rubble with pink corallines
68	3.6	*A. cervicornis* rubble with corallines
69	4.7	Sand
70	4.9	*Acropora cervicornis*
71	4.9	*Halimeda opuntia*
72	4.9	Sand, rubble
73	4.9	Sand, rubble
74	4.8	Sand, rubble
75	4.8	Sand
76	4.7	Rubble
77	4.8	*Thalassia*
78	4.8	*Thalassia*
79	5.0	*Dictyota* sp., *Cladophora* sp., *Pseudaxinella* sp.
80	5.5	Sand

9.5.2. Quadrats

Site 5. Grecian Rocks Coral
24 July 1980

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
PROTOZOA					POLYCHAETA				
Homotrema rubrum	4	4	0	0	Sabellids spp.	4	0	0	1
					Serpulid sp.	1	0	0	0
ALGAE									
					CRUSTACEA				
Halimeda opuntia	7	10	4	2					
H. incrassata	1	0	0	0	Stomatopod	1	0	0	0
Goniolithon sp.	1	0	0	0	Crabs (not collected)	3	0	0	0
Dictyota sp.	7	0	0	0					
Amphiroa sp.	x	x	x	x	MOLLUSCA				
Coralline alga	x	x	x	x					
Valonia sp.	3	0	0	0	*Thais deltoides*	0	0	0	1
PORIFERA					ECHINODERMATA				
Chondrilla nucula	1	8	1	0	*Diadema antillarum*	4	4	0	1
Haliclona sp.	8	15	7	5	*Ophiothrix oerstedii*	1	0	0	0
Thalysias juniperina	2	9	2	1	Brittle star	1	0	0	0
Callyspongia fallax	0	0	0	1					
COELENTERATA									
Millepora complanata	3	5	0	0					
Gorgonia ventalina	0	0	1	0					
Eunicea mammosa	0	3	0	0					
Acropora palmata	1	3	4	5					
Porites porites	11	7	6	12					
Siderastrea siderea	0	0	1	0					
Anemone	4	0	0	4					
Palythoa mammillosa	0	2	0	1					

Site 5. Grecian Rocks Rubble Quadrats
24 July 1980

Species	Quadrats 1-4	Species	Quadrats 1-4
PROTOZOA		*Dichocoenia stokesi*	3
		Palythos mammillosa	1
Homotrema rubrum	12	*Mycetophyllia lamarckiana*	1
ALGAE		POLYCHAETA	
Dictyota sp.	266	*Eunice schenocephala*	3
Halimeda opuntia	17	*E. kinbergi*	9
Stypopodium zonale	2	*Eunice* sp.	9
Valonia ventricosa	3	*Marphysa* sp.	2
Laurencia sp.	2	Terebellid	3
Goniolithon sp.	2		
Amphiroa sp.	1	SIPINCULIDA	
Amphiroa rigida antillana	2		
Dilophus alternans	1	Sipunculid	1
Galaxaura cylindrica	1		
		NEMATODA	
PORIFERA			
		Nematodes	3
Haliclona compressa	6		
Aplysina cauliformis	1	MOLLUSCA	
Spinosella vaginalis	1		
Ircinia campana	1	*Lima pellucida*	1
Thalysias juniperina	1	*Plicatula gibbosa*	1
Keratose indet.	1	*Lepidochitona liozonas*	4
Merriamium tortugaensis	1	*Arca* sp.	1
Dysidea sp.	1		
Niphates erecta	3	ECHINODERMATA	
Spongia cerebriformis	1		
Spinosella vaginalis	1	*Diadema antillarum*	1
Pseudaxenella sp.	1	*Eucidaris tribuloides*	1
		Ophiocoma echinata	1
COELENTERATA		*O. pumila*	2
		Ophiothrix oerstedii	1
Millepora alcicornis	3	*O.* sp.	1
Pseudopterogorgia americana	11	*Ophiozona impressa*	1
Plexaurella dichotoma	2	BRYOZOAN	
Plexaura flexosa	2		
Eunicea tourneforti	1	Encrusting colonial	1
E. fusca	1		
E. mammosa	1	ASCIDIACEA	
Muriceopsis flavida	2		
Montastraea annularis	2	Solitary tunicate	1

Site 5. Grecian Rocks Grass Quadrats
24 July 1980

Species	Quadrats 1-4	Species	Quadrats 1-4
ALGAE		*Strombus raninus*	1
		Musculus lateralis	6
Penicillus capitatus	27		
Halimeda incrassata	55	POLYCHAETA	
H. tuna	5		
H. monile	3	*Eunice longicirrata*	1
H. lacrimosa	4	Sabellis	1
Udotea flabellum	8	*Megalomma* sp.	1
Udotea sp. A	1		
Udotea sp. B	1	CRUSTACEA	
Amphiroa fragilissima	13		
		Pagurus brevidactylus	1
PORIFERA		Hermit crab	1
		Crab	1
Tedaniid	4	*Mithrax forceps*	5
Dysidea etherea	1	*Processa* sp.	1
Dysidea sp.	1	*Processa fimbriata*	3
Dysidea sp.	1	Shrimp	1
Dysidea sp.	5	Isopod	4
Dysidea sp.	2	Isopod	3
Porifera indet.	58	*Leucothoe spinicarpa*	1
Porifera indet.	4	*Paguristes grayi*	1
Porifera indet.	2	*Pitho lherminieri*	1
Porifera indet.	1		
Porifera Indet.	1	ECHINODERMATA	
MOLLUSCA		*Diadema antillarum*	1
		Ophiothrix suensonii	1
Astraea phoebia	3		
Trivia pediculus	1	ASCIDIACEA	
Crepidula aculeata	5		
C. plana	1	Colonial tunicate sp. A	1
Columbella mercatoris	8	Colonial tunicate sp. B	1
Lima pellucida	1	Colonial tunicate sp. C	1
Chama congregata	1	Colonial tunicate sp. D	1
Papyridea semisulcata	1	Colonial tunicate sp. E	1
Modulus modulus	1	*Didemnum candidum*	1
Tricolia affinis	2		

Site 5. Grecian Rocks Sand Quadrats
24 July 1980

Species	Quadrats 1-4
PROTOZOA	
Homotrema rubrum	1
POLYCHAETA	
Capitellid	3
Flabelligerid	1
NEMATODA	
Nematodes	19
MOLLUSCA	
Calliostoma jujubinum	1
CRUSTACEA	
Cycloes bairdii	1

9.6. Site 5. Grecian Rocks Rerun

9.6.1. Transects

Transect 1. 10 September 1981

Meter mark	Depth meters	Bottom type and species
0	0.3	*Halimeda tuna*
1	0.6	Rubble
2	0.6	*Lithothamnion*
3	0.6	*Millepora complanata*
4	0.6	*Palythoa mammillosa*
5	0.6	*Halimeda tuna*
6	0.6	Filamentous green
7	1.2	*Porites asteroides*
8	1.5	Filamentous alga
9	1.5	Red alga
10	2.4	*Acropora cervicornis*, rubble
11	2.1	*A. cervicornis* (70% dead)
12	2.4	Filamentous green
13	2.4	*A. cervicornis*
14	1.8	*Palythoa mammillosa, Millepora complanata*
15	2.1	M. *complanata*
16	2.4	*Dictyota cervicornis*
17	1.8	Green algal balls
18	1.8	*Halimeda incrassata*
19	3.6	*Lithothamnion*, *Dictyota cervicornis*
20	3.7	Rubble
21	2.4	Rubble
22	4.6	Coarse sand
23	3.6	*Palythoa mammillosa*
24	3.0	*Gorgonia ventalina*
25	3.6	*Montastraea annularis*
26	4.6	*M. annularis*
27	6.0	*Dictyota cervicornis*
28	6.0	*Gorgonia ventalina*
29	6.0	Rubble, sand
30	6.9	Rubble, sand
31	7.0	Sand
32	7.6	Sand
33	7.6	Sand
34	7.6	Sand
35	7.6	Sand
36	7.6	Sand
37	7.6	Sand
38	7.6	Sand
39	7.6	Sand
40	7.6	Sand

Site 3. Grecian Rocks Rerun (cont.)

Transect 1. 10 September 1981

Meter mark	Depth meters	Bottom type and species
41	7.6	Sand
42	7.6	Sand
43	7.6	Sand
44	7.6	Sand
45	7.6	Sand
46	7.6	Sand, *Dasycladus vermicularis*
47	7.6	Sand
48	7.6	Sand
49	7.6	Sand
50	7.6	Sand
51	7.6	Sand
52	7.6	Sand
53	7.6	Sand
54	7.6	Sand
55	7.6	Sand
56	7.6	Sand
57	7.6	Sand
58	7.6	Sand
59	7.6	Sand
60	7.6	Sand
61	7.6	*Pseudopterogorgia americana*
62	7.0	Rubble
63	7.0	*Pseudopterogorgia americana*
64	6.7	*Briareum asbestinum*
65	6.7	Hardbottom
66	6.7	Sand
67	6.7	*Pseudopterogorgia americana*
68	6.7	Sand
69	6.7	Sand
70	6.7	Hardbottom
71	6.7	*Pseudopterogorgia americana*
72	6.7	*P. americana*
73	6.7	Hardbottom
74	6.7	Sand
75	7.6	Sand
76	7.6	Sand, rubble
77	7.6	Sand, rubble
78	7.6	Worm (not found in collections)
79	7.6	Sand
80	7.6	Sand

Site 5. Grecian Rocks Rerun

Transect 2. 10 September 1981

Meter mark	Depth meters	Bottom type and species
1	2.4	*Thalassia*
2	2.4	*Thalassia*
3	2.4	Brown epiphyte
4	2.4	*Thalassia*
5	2.4	*Thalassia*
6	2.4	*Thalassia, Dictyota cervicornis*
7	2.4	*Thalassia*
8	2.4	*Dictyota cervicornis*, *Dasycladus vermicularis*
9	2.4	*Thalassia*, *Dictyota cervicornis*
10	2.4	Rubble
11	2.4	Rubble
12	2.4	Sand
13	2.4	Sand
14	2.4	Sand
15	2.7	Sand, *Acropora cervicornis* (70% dead)
16	2.7	Sand
17	3.0	Sand, rubble
18	3.0	Rubble
19	3.0	Rubble
20	3.9	*Acropora cervicornis*
21	3.0	*A. cervicornis* (30% dead)
22	3.0	*Dictyota cervicornis*
23	3.0	*Dictyota cervicornis*
24	3.0	Sand
25	3.6	*Favia fragum*
26	3.6	*D. cervicornis*
27	3.6	*D. cervicornis*
28	3.6	Sand
29	3.6	*Acropora cervicornis*
30	3.6	Sand
31	3.6	*Millepora alcicornis*
32	3.6	*Gorgonia ventalina*
33	4.0	*Dictyota, Dilophus*
34	4.6	*Haliclona compressa*
35	4.6	Red alga
36	4.6	*Dictyota cervicornis*
37	4.6	*D. cervicornis*
38	4.6	*D. cervicornis*
39	5.2	*Dictyota, Dilophus*
40	5.5	Sand
41	6.1	Sand
42	6.1	*Dictyota cervicornis*
43	6.4	Coarse sand

Site 5. Grecian Rocks Rerun (cont.)

Transect 2. 10 September 1981

Meter mark	Depth meters	Bottom type and species
44	6.4	*Pseudopterogorgia americana*
45	6.4	Sand, rubble
46	6.7	Sand
47	6.7	Sand
48	6.7	Sand
49	6.7	Sand
50	6.7	Sand
51	6.7	Sand
52	6.7	Sand
53	6.7	Sand
54	6.7	Sand
55	6.7	Sand
57	6.7	Sand
58	6.7	Sand
59	6.7	*Meoma ventricosa*
60	6.7	*M. ventricosa*
61	6.7	Worm
62	6.7	Sand
63	6.7	Sand
64	6.7	Sand
65	6.7	Sand
66	6.7	Sand
67	6.7	Sand
68	6.7	Sand
69	6.7	Sand
70	6.7	Sand
71	6.7	Sand
72	6.4	*Thalassia*
73	6.4	Sand, rubble
74	6.4	Sand
75	6.4	Sand
76	6.4	Sand
77	6.4	Sand
78	6.4	Sand
79	6.4	Sand
80	6.4	Sand
81	6.4	Sand

Site 5. Grecian Rocks Rerun

Transect 3. 10 September 1981

Meter mark	Depth meters	Bottom type and species
0	5.3	*Thalassia, Syringodium*
1	4.9	*Thalassia, Syringodium*
2	4.9	*Thalassia, Syringodium*
3	4.9	*Thalassia, Syringodium*
4	4.6	*Thalassia*
5	4.6	*Thalassia*
6	4.6	*Thalassia*
7	4.3	*Thalassia*
8	4.3	*Thalassia*
9	4.3	*Thalassia*, *Syringodium*
10	3.6	*Thalassia, Syringodium*
11	3.6	*Thalassia, Syringodium*
12	3.6	*Thalassia, Syringodium*
13	3.6	*Thalassia, Syringodium*
14	3.6	*Thalassia, Syringodium*
15	3.6	*Thalassia*
16	3.6	*Thalassia*
17	3.6	*Thalassia*
18	4.3	Rubble
19	4.6	*Pseudopterogorgia americana*
20	4.6	*Dictyota cervicornis*
21	4.6	*Dictyota, Dilophus*
22	4.6	*Dictyota*, *Dilophus*
23	4.6	*Thalassia*
24	4.6	*Thalassia*, *Dilophus alternans*
25	4.6	*Thalassia*, *Syringodium*
26	4.6	*Thalassia*, *Syringodium*
27	4.6	*Thalassia, Syringodium*
28	4.6	*Dilophus alternans*
29	4.6	Rubble
30	4.6	*Dictyota*, *Dilophus*
31	4.6	*Halimeda incrassata*, *Dictyota,* brittle star
32	4.6	*Thalassia*, *Dilophus alternans*
33	4.9	*Thalassia*
34	4.9	*Dictyota cervicornis*
35	4.8	*Thalassia, Dilophus alternans*
36	5.9	*Thalassia, D. alternans*
37	5.8	*Thalassia*
38	6.1	*Thalassia,* filamentous alga, *Dictyota*
39	6.1	*Thalassia, Dictyota*
40	6.1	*Thalassia*
41	6.1	*Thalassia*
42	6.1	*Thalassia*

Site 5. Grecian Rocks Rerun (cont.)

Transect 3. 10 September 1981

Meter mark	Depth meters	Bottom type and species
43	6.1	*Thalassia*, *Syringodium*
44	6.1	*Thalassia*, *Syringodium*
45	5.5	*Thalassia*
46	5.5	Sand
47	5.5	*Thalassia*, *Syringodium,* filamentous alga
48	5.5	*Thalassia*, *Syringodium*
49	4.9	*Thalassia,* filamentous alga
50	4.6	*Thalassia*
51	4.6	*Pseudopterogorgia americana*
52	4.6	*Dilophus alternans*
53	4.6	*D. alternans*
54	4.6	*Dictyota*, *Dilophus*
55	4.6	Rubble
56	3.6	*Favia fragum*
57	3.3	*Dictyota, Dilophus*
58	3.0	Rubble
59	3.0	*Millepora complanata*
60	3.0	*Dictyota, Dilophus*, *Halimeda incrassata*
61	2.4	*Dictyota, Dilophus*
62	3.0	*Dictyota cervicornis, Amphiroa* sp.
63	2.4	*Palythoa mammillosa*
64	1.8	*Millepora alcicornis*
65	1.8	*Dictyota, Dilophus*
66	1.8	*Favia fragum*
67	1.8	*Dictyota, Dilophus*
68	1.8	*Plexaura flexosa*
69	1.5	*Gorgonia ventalina*
70	1.5	Rubble
71	1.5	*Pseudopterogorgia americana*
72	1.5	*Acropora palmata*
73	1.5	*A. palmata*
74	1.5	Rubble
75	1.5	*Dictyota, Dilophus*
76	3.0	Sand
77	6.7	Sand
78	6.7	Sand
79	6.7	Sand
80	6.1	*Acropora cervicornis*
81	6.7	*Pseudopterogorgia americana*

9.7. Site 6. Key Largo Dry Rocks

9.7.1. Transects

Transect 1. About 400 m long run on a heading of 278° true past Dry Rocks buoy "D". 30 July 1981

Meter mark	Depth meters	Bottom type and species
0	10.7	*Laurencia, Dictyota, Gracilaria*
1	10.7	Sand
2	10.7	Sand
3	10.7	Sand
4	11.3	Sand
5	11.3	Sand
6	10.7	Sand
7	10.7	Sand
8	10.7	Sand
9	10.7	Sand
10	10.7	Sand
11	10.4	Sand
12	9.1	*Dilophus alternans, Dictyota cervicornis*
13	9.1	*Dictyota cervicornis*
14	7.6	*Dilophus alternans, Dictyota cervicornis*
15	6.1	*Gorgonia ventalina*
16	5.5	Rubble
17	4.6	*Dictyota cervicornis*
18	4.0	*Dilophus alternans, Dictyota cervicornis*
19	6.1	Sand
20	7.6	*Colpophyllia natans*
21	6.1	Rubble
22	6.1	*Acropora palmata*
23	5.5	Red alga
24	4.6	Rubble
25	4.0	Red alga
26	1.5	*Millepora complanata*
27	1.5	*Palythoa mammillosa*
28	1.5	*Millepora complanata*
29	1.5	*Halimeda opuntia minor*
30	1.5	*Acropora palmata*
31	1.5	*A. palmata*
32	1.5	*A. palmata*
33	1.5	*A. palmata*
34	1.5	*A.* palmata
35	1.5	*A. palmata*
36	1.5	*A. palmata*
37	1.5	*A. palmata*
38	1.5	*Halimeda opuntia*
39	1.5	*H. opuntia, Dictyota cervicornis*

Site 6. Key Largo Dry Rocks (cont.)

Transect 1. About 400 m long run on a heading of 278° true past Dry Rocks buoy "D".
30 July 1981

Meter mark	Depth meters	Bottom type and species
40	1.5	*Acropora cervicornis*
41	1.5	Rubble
42	1.5	*Halimeda incrassata, Dictyota cervicornis*
43	1.5	*Dilophus, Dictyota cervicornis*
44	1.5	*Acropora palmata*
45	1.5	Rubble
46	1.5	Rubble
47	1.5	*Acropora cervicornis*
48	1.5	*A. palmata*
49	1.5	*A. cervicornis*
50	1.5	*A. palmata*
51	1.5	*A. palmata*
52	3.4	*A. palmata*
53	3.0	*A. cervicornis*
54	4.6	*Thalassia*, *Dilophus alternans*
55	4.6	*Thalassia*, *Dilophus alternans, Dictyota cervicornis*
56	3.4	*Thalassia*, *Dilophus alternans, Dictyota cervicornis*
57	3.4	*Thalassia*, *Dilophus alternans, Dictyota cervicornis*
58	3.4	*Thalassia*, *Dilophus alternans, Dictyota cervicornis*
59	5.5	*Thalassia*, *Dilophus alternans, Dictyota cervicornis*
60	5.5	*Thalassia*, *Syringodium*
61	5.5	*Thalassia*, *Syringodium*
62	5.8	*Thalassia*, *Syringodium*
63	6.1	*Thalassia*, *Syringodium*
64	6.1	*Thalassia*
65	6.1	*Thalassia*
66	6.1	*Thalassia*
67	6.1	*Thalassia, Syringodium*
68	6.1	*Thalassia, Syringodium*
69	6.1	*Thalassia*, *Syringodium*
70	6.1	*Thalassia*, *Syringodium*
71	6.1	*Thalassia*, *Syringodium*
72	6.1	*Penicillus dumetosus*
73	6.1	*Thalassia*
74	6.1	*Thalassia*
75	6.1	*Thalassia*
76	5.5	*Thalassia*
77	5.5	*Thalassia*, *Syringodium*, *Halimeda monile*
78	5.5	*Thalassia*
79	5.5	*Thalassia*
80	5.5	*Thalassia*, *Syringodium*

Site 6. Key Largo Dry Rocks

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 30 July 1981

Meter mark	Depth meters	Bottom type and species
1	10.4	*Thalassia*
2	10.7	*Halimeda lacrimosa*
3	10.7	*Thalassia*
4	10.4	*Thalassia*
5	10.4	Red alga
6	10.4	*Thalassia*
7	10.4	*Thalassia*
8	10.7	*Thalassia*
9	10.7	*Thalassia*
10	10.7	*Thalassia*
11	10.7	Sand
12	10.7	Sand
13	10.7	*Thalassia*, *Syringodium*
14	10.7	*Thalassia*, *Syringodium*
15	10.7	*Thalassia*, *Syringodium*
16	10.7	*Thalassia*, *Syringodium*
17	10.7	*Thalassia*, *Syringodium*
18	10.7	*Thalassia*, *Syringodium*
19	10.7	*Thalassia*, *Syringodium*
20	10.7	*Thalassia*, *Syringodium*
21	10.7	Sand
22	10.7	Sand
23	10.7	Sand
24	10.7	Sand
25	10.7	Sand
26	10.7	Filamentous alga
27	10.7	Sand
28	10.1	*Thalassia*
29	10.1	*Thalassia*, *Syringodium*
30	10.1	*Thalassia*, *Syringodium*
31	10.1	*Thalassia*, *Syringodium*
32	9.1	*Thalassia*, *Syringodium*
33	9.1	*Thalassia*, *Syringodium*
34	8.9	*Thalassia*, *Syringodium*
35	8.8	*Thalassia*, *Syringodium*
36	8.8	*Thalassia*, *Syringodium*
37	8.5	*Thalassia*, *Syringodium*
38	9.2	*Thalassia*, *Syringodium*
39	7.9	*Thalassia*, *Syringodium*
40	7.9	*Thalassia, Syringodium*
41	7.9	*Thalassia*, *Syringodium*
42	7.3	*Thalassia*, *Syringodium*, *Murex recurvirostris rubidus*

Site 6. Key Largo Dry Rocks (cont.)

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 30 July 1981

Meter mark	Depth meters	Bottom type and species
43	7.3	*Thalassia*, *Syringodium*
44	7.3	*Thalassia*, *Syringodium*
45	7.3	*Thalassia, Syringodium*
46	7.6	*Thalassia, Syringodium*
47	7.6	*Halimeda lacrimosa*
48	7.6	*Thalassia, Syringodium*
49	7.6	*Thalassia*, *Syringodium*
50	7.3	*Thalassia, Syringodium*
51	7.3	*Thalassia, Syringodium*
52	7.3	*Thalassia*
53	6.4	*Dilophus alternans*, *Dictyota cervicornis, Gorgonia ventalina*
54	6.4	*Acropora cervicornis*
55	7.0	*A. cervicornis*
56	7.0	*Dictyota cervicornis*
57	7.0	*Acropora cervicornis*
58	7.0	*Dictyota cervicornis*
59	7.0	*Porites porites*
60	7.6	*Dictyota cervicornis*
61	7.6	*Thalassia*
62	7.6	*Thalassia*
63	7.6	*Thalassia, Syringodium*
64	7.6	*Thalassia,* alga indet.
65	7.6	*Thalassia, Syringodium*
66	7.6	Dilophus alternans, alga indet.
67	7.6	*Thalassia*, *Syringodium*
68	7.6	Filamentous algal mat
69	7.6	*Plexaura flexosa*
70	7.6	*Thalassia*, *Syringodium*
71	7.6	*Thalassia*, *Syringodium*
72	7.6	*Thalassia*, *Syringodium*
73	7.6	*Thalassia*, *Syringodium*
74	7.6	*Thalassia*, *Syringodium*, *Dilophus alternans*
75	7.6	*Thalassia*
76	7.6	*Thalassia*
77	7.6	*Thalassia*
78	7.6	Sand
79	7.6	*Thalassia*, *Syringodium, Batophora, Dasycladus vermicularis*
80	7.6	*Thalassia*, *Syringodium*

Site 6. Key Largo Dry Rocks

Transect 3. About 400 m long run on a heading of 278° true and 300 m west of Transect 1. 31 July 1981

Meter mark	Depth meters	Bottom type and species
0	9.1	Sand
1	9.1	Sand
2	9.1	*Dilophus alternans, Dictyota* sp.
3	9.1	*Halimeda incrassata*, *Dictyota* sp.
4	7.6	*Dilophus alternans*
5	6.1	*Dilophus alternans*
6	6.1	*Acropora cervicornis*
7	6.1	*Niphates digitalis*
8	6.1	Sand
9	6.1	Sand
10	6.1	Sand
11	6.1	Sand
12	6.1	Sand
13	6.1	Sand
14	6.1	Sand
15	9.1	Sand
16	9.1	*Thalassia, Syringodium*
17	9.1	*Thalassia*, algae spp., *Dictyota*
18	9.1	Sand
19	9.1	Sand
20	9.1	Sand
21	9.1	Sand
22	7.6	Sand
23	7.6	Sand
24	7.6	Sand
25	7.6	Sand
26	7.6	Sand
27	7.6	Sand
28	7.6	Sand
29	7.6	Sand
30	7.6	Sand
31	7.6	Sand
32	7.6	*Dictyota* sp.
33	7.6	Sand
34	7.6	Sand
35	7.6	Sand
36	7.6	*Thalassia*
37	7.6	*Thalassia*
38	7.6	Sand
39	7.6	Sand
40	7.6	Sand
41	7.6	Sand

Site 6. Key Largo Dry Rocks (cont.)

Transect 3. About 400 m long run on a heading of 278° true and 300 m west of Transect 1. 31 July 1981

Meter mark	Depth meters	Bottom type and species
42	7.6	Hydroid indet., sponge indet.
43	7.6	Sand
44	7.6	Sand
45	7.6	Sand
46	7.6	Sand
47	7.6	Sand
48	7.6	Sand
49	7.6	Sand
50	7.6	Sand
51	7.6	Sand
52	7.6	Sand
53	7.6	Sand
54	7.6	Sand
55	7.6	Sand
56	7.6	Crustacean
57	7.6	Sand
58	7.6	Sand
59	7.6	Sand
60	7.6	Sand
61	7.6	*Eunicea calyculata*
62	7.6	Rubble
63	7.6	*Dilophus alternans*
64	7.6	*Dilophus alternans, Acropora cervicornis*
65	6.1	*Dilophus alternans*
66	6.1	*Dilophus alternans, Porites porites*
67	6.1	*Ircinia felix*
68	6.1	Rubble
69	6.1	*Pseudopterogorgia americana*
70	6.1	*Dilophus alternans, Gorgonia ventalina*
71	6.1	*Aplysina cauliformis*
72	6.1	*Dilophus alternans, Acropora cervicornis*
73	6.1	*Dilophus alternans*
74	6.1	Alga indet.
75	6.1	*Thalassia*
76	6.1	*Thalassia*
77	6.1	Rubble
78	6.1	*Thalassia*
79	6.1	*Thalassia*
80	6.1	*Thalassia*

9.7.2. Quadrats

Site 6. Key Largo Dry Rocks Coral
26 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
PROTOZOA					*Acropora cervicornis*	0	0	1	0
					Agaricia agaricites	1	0	0	3
Homotrema rubrum	x	x	x	x	*Porites porites*	0	0	1	0
					P. astreodides	0	2	2	0
ALGAE					*Montastraea annularis*	x	0	1	x
					M. cavernosa	0	0	1	0
Halimeda opuntia	1	0	0	0	*Siderastrea siderea*	0	0	3	6
Avrainvillea nigricans	0	24	5	18	*Mycetophyllia ferox*	2	0	0	1
Dictyota cervicornis	0	1	0	4	*M. lamarckiana*	0	0	1	0
Sargassum hystrix	0	51	0	0	*Diploria labyrinthiformis*	0	0	4	0
Galaxaura sp.	0	0	3	0	*Eusmilia fastigiata*	0	0	1	0
PORIFERA					MOLLUSCA				
Agelas schmidti	8	0	2	1	*Lopha frons*	1	0	0	0
Aplysina fistularis	0	0	8	0					
A. cauliformis	0	0	3	0	POLYCHAETA				
Verongula ardis	0	0	0	1					
Ircinia strobilina	0	0	0	1	Featherdusters	6	3	4	1
Niphates digitalis	0	1	2	0	Christmas tree worms	0	2	0	0
Haliclona compressa	0	0	1	0					
Chondrilla nucula	0	1	0	1	CRUSTACEA				
Sponge indet.	5	0	0	0					
Cliona sp.	0	12	0	0	*Paguristes cadenati*	0	0	1	0
COELENTERATA					ECHINODERMATA				
Gorgonia ventalina	4	0	0	0	*Diadema antillarum*	0	0	1	0
Pseudopterogorgia acerosa	1	4	4	3	Brittle star	1	0	0	0
P. americana	0	1	4	1					
Muriopsis flavida	0	1	0	0	ASCIDIACEA				
Eunicea tourneforti	1	0	0	0					
Palythoa mammillosa	0	0	0	1	Colonial sp.	0	1	0	0
Zoanthus sp.	0	0	1	0	Ascidian sp.	0	1	0	0
Hydroid sp.	1	0	0	0					

Site 6. Key Largo Dry Rocks Rubble Quadrats
1 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
PROTOZOA					*Millepora alcicornis*	0	1	3	1
					Acropora cervicornis	3	3	0	0
Homotrema rubrum	x	x	x	x	*Porites porites*	2	0	0	0
					Siderastrea siderea	0	0	0	2
ALGAE					*Agaricia agaricites*	1	0	0	0
Halimeda incrassata	1	0	2	2	POLYCHAETA				
H. tuna	0	1	0	0					
H. sp.	0	3	0	0	*Eunice mutilata*	1	0	0	0
Dilophus alternans	1	0	0	0	*E. longicirrata*	1	0	0	0
Valonia ventricosa	1	0	0	0	*E. kinbergi*	0	1	0	0
Dictyota cervicornis	x	x	0	x	*E.* sp. A	1	1	0	1
Caulerpa sp.	0	0	1	0	*E.* sp. B	1	0	0	0
Stypopodium zonale	3	0	0	1	Sabellid	0	1	0	1
PORIFERA					MOLLUSCA				
Iotrochota birotulata	4	2	0	9	Nudibranch	1	0	0	0
Niphates erecta	1	3	4	0	*Periglyphus listeri*	1	0	0	0
Aplysina cauliformis	4	2	2	0	*Vasum muricatum*	0	0	0	1
A. fistularis	14	0	3	0					
Spinosella vaginalis	1	0	0	0	ECHINODERMATA				
Callyspongia fallax	1	0	0	1					
Ircinia strobilina	1	0	0	0	*Diadema antillarum*	0	1	0	0
I. felix	0	1	0	0	*Echinometra viridis*	0	1	0	1
Microcionid	13	12	2	0	*Eucidaris tribuloides*	3	0	0	0
Porifera indet.	11	0	0	0	*Ophiothrix oerstedii*	1	0	0	0
					Crinoid sp. (no sample)	1	0	0	0
COELENTERATA					CRUSTACEA				
Pseudopterogorgia rigida	6	1	0	0					
P. bipinnata	0	0	0	1	*Paguristes wassi*	1	0	0	0
P. acerosa	0	0	1	0					
P. elisabethae	0	0	1	0	BRYOZOA				
Plexaura flexosa	1	0	0	1					
P. homomalla	0	1	0	0	Bryozoan indet.	0	1	0	0
Eunicea tourneforti	0	0	1	0					
Muriceopsis flavida	0	0	0	1	ASCIDIACEA				
Gorgonia ventalina	4	0	0	0					
Palythoa mammillosa	5	0	3	0	*Didemnum candidum*	1	1	0	1

Site 6. Key Largo Dry Rocks Grass Quadrats
1 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					POLYCHAETA				
Dictyota sp.	8	1	0	0	*Eunice kinbergi*	0	0	4	0
Halimeda tuna	13	0	4	1	Terebellid	0	0	2	0
H. lacrimosa	0	0	0	1	Amphiromid	0	0	1	0
Penicillus capitatus	0	1	1	2	*Hesione picta*	0	0	1	0
P. dumetosus	10	0	0	0	Terebellid	0	0	1	0
Udotea flabellum	0	0	4	2	*Eupholae* sp.	0	0	1	0
Rhipocephalus phoenix	0	0	4	3	Sabellid	0	0	1	0
Valonia ventricosa	0	0	1	0					
Anadyomene stellata	0	0	0	1	MOLLUSCA				
Amphiroa sp.	0	0	0	1					
Goniolithon sp.	0	0	0	1	*Glycymeris* sp.	0	0	1	0
Algal mat	0	0	0	1	*Diplodonta punctata*	0	0	1	0
Encrusting alga	0	1	0	0					
					ECHINODERMATA				
PORIFERA									
					Eucidaris tribuloides	1	0	2	1
Foliolina peltata	0	0	3	1					
Dysidea etherea	0	0	1	0	ASCIDIACEA				
Haliclona sp.	0	0	0	1					
					Didemnum candidum	0	1	1	0
COELENTERATA					*D. amethysteum*	0	1	0	0
					Ascidian sp. A	1	0	0	0
Muricea muricata	0	1	0	0	Ascidian sp. B	0	0	5	0
Eunicea mammosa	0	0	0	1					
Plexaurella dichotoma	0	0	0	1					

Site 6. Key Largo Dry Rocks Sand Quadrats
31 July 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					SIPINCULIDA				
Laurencia sp.	1	0	0	0	*Phascolion* sp.	3	0	0	0
Dasycladus vermicularis	20	3	18	7					
Acetabularia crenulata	6	0	0	4					
Encrusting alga	1	0	0	0	MOLLUSCA				
Alga sp. A	0	0	0	1					
Alga sp. B	0	0	0	1	*Crepidula aculeata*	1	0	0	0
Alga sp. C	0	0	1	0	*Olivella nivea*	1	1	0	1
Alga sp. D	0	0	1	0	*Dentalium calamus*	0	0	0	1
POLYCHAETA					ECHINODERMATA				
Hesionid	1	0	0	0	*Meoma ventricosa*	0	1	0	0
Capitellid	1	0	0	0	*Holothuria* indet.	1	0	0	0
Glycera sp.	1	0	0	0					
Terebellid	1	0	0	0	ASCIDIACEA				
Sabellid	3	0	0	0					
Capitellid	0	0	1	0	Solitary tunicate	0	0	0	1
Flabelligerid	0	0	1	0					
Lumbrinereid	0	0	1	0					
Goniadid	0	0	1	0					
Cirratulid	0	0	0	1					
Sabellid	0	0	0	1					
Nereid	0	0	0	1					
Onuphid	0	0	0	1					
Nereid	0	0	1	0					

9.8. Site 7. The Elbow

9.8.1. Transects

Transect 1. About 590 m long run on a heading of 278° true passing alongside of the light and over the wreck.
12 June 1980

Meter mark	Depth meters	Bottom type and species
1	18.3	Sand
2	18.3	*Acropora cervicornis*
3	18.3	*Dictyota* sp.
4	16.8	*Pagurus* sp., *Halimeda opuntia minor, Pocockiella variegata*
5	16.8	*Millepora alcicornis,* red algal mat
6	16.8	*Millepora alcicornis, Dictyota* sp.
7	16.8	*Pocockiella variegata*
8	16.8	*Acropora cervicornis*
9	16.8	*Homotrema rubrum*
10	16.8	*Dictyota*
11	15.2	*Dictyota* algal mat, *Pocockiella variegata*
12	15.2	Hardbottom
13	13.7	Hardbottom, *Dictyota*
14	13.7	*Halimeda* sp., *Placospongia* sp.
15	13.7	*Amphiroa fragilissima*, *Enteromorpha* sp.
16	13.7	Hardbottom
17	13.7	*Enteromorpha*
18	13.7	*Dictyota* sp.
19	13.7	*Dictyota* sp.
20	13.7	Sand
21	13.7	*Dictyota*
22	13.7	*Dictyota*
23	13.7	*Pseudopterogorgia acerosa*
24	13.1	Red alga
25	13.1	*Pseudopterogorgia americana*
26	13.1	*P. acerosa*
27	13.1	*Pocockiella variegata*
28	13.1	*Spinosella vaginalis, Millepora alcicornis*
29	12.2	*Siderastrea siderans*
30	13.4	*Dictyota* sp.
31	12.2	Rubble, *Caulerpa*, hydroid, *Amphora*, *Dictyota, Laurencia*, *Eunice, Aplysina*, *Halimeda*
32	12.2	*Dictyota* sp.
33	12.2	*Dictyota* sp.
34	12.2	Sand
35	12.2	Rubble
36	12.2	*Homotrema rubrum*
37	11.6	*Dictyota*
38	11.6	*Dictyota,* red alga

Site 7. The Elbow (cont.)

Transect 1. About 590 m long run on a heading of 278° true passing alongside of the light and over the wreck.
12 June 1980

Meter mark	Depth meters	Bottom type and species
39	11.3	*Dictyota*
40	10.9	*Dictyota, Millepora alcicornis*
41	10.9	*Dictyota, Homotrema rubrum*, red alga
42	11.9	*Millepora alcicornis*
43	10.7	*Dictyota*
44	10.1	*Dictyota*, *Homotrema rubrum*
45	10.1	*Dictyota, Homotrema rubrum*, *Agaricia agaricites*
46	9.8	*Dictyota*, *Halimeda opuntia*
47	9.8	*Homotrema rubrum*
48	9.8	*H. rubrum,* red alga
49	9.4	*Dictyota* sp.
50	9.4	*Homotrema rubrum*
51	9.1	*Pseudopterogorgia acerosa*
52	9.1	*Dictyota, Homotrema rubrum*
53	8.8	*H. rubrum*
54	10.7	*Dictyota, Pseudopterogorgia acerosa*
55	10.4	*Homotrema rubrum*
56	9.8	Sand, *H. rubrum*
57	10.1	*Agaricia agaricites*
58	8.8	Rubble;
59	8.6	*Dictyota*, *Homotrema rubrum,* filamentous red alga
60	8.2	*Dictyota*
61	10.4	Sand
62	10.1	Sand.
63	10.1	Sand
64	10.1	Sand
65	10.1	Sand, rubble
66	9.1	Sand, rubble
67	10.4	*Dictyota* sp.
68	10.7	Rubble
69	10.4	Sand
70	9.8	Sand, rubble
71	9.4	Sand, rubble
72	9.4	Rubble
73	10.1	*Dictyota*
74	9.8	Sand
75	8.8	*Dictyota*
76	9.4	Rubble
77	9.4	Sand
78	9.4	Sand
79	9.4	Rubble, *Haliclona* sp.

Site 7. The Elbow (cont.)

Transect 1. About 590 m long run on a heading of 278° true passing alongside of the light and over the wreck.
12 June 1980

Meter mark	Depth meters	Bottom type and species
80	9.4	Rubble
81	9.4	Sand
82	9.4	Sand
83	8.8	Rubble
84	8.8	*Dictyota, Homotrema rubrum*
85	8.5	*Dictyota, H. rubrum*
86	7.9	Rubble
87	7.6	Rubble
88	6.1	Rubble
89	7.9	*Thais deltoidea,* wreck
90	6.7	Rubble
91	7.6	Rubble, *Pocockiella variegata*
92	7.6	Rubble
93	7.6	Rubble
94	7.6	Sand, rubble, *Laurencia, Dictyota, Amphiroa*
95	7.3	Sand
96	7.3	Rubble
97	7.0	*Cliona deletrix*, rubble
98	4.9	*Gorgonia ventalina*
99	3.7	*Acropora palmata*
100	4.6	*Pseudopterogorgia acerosa*
101	4.6	*Acropora palmata*
102	6.1	*Halimeda opuntia*
103	6.1	Rubble, *Dasycladus vermicularis*
104	6.1	Rubble, *Homotrema rubrum*
105	5.8	*Dictyota*
106	5.8	*Dictyota*
107	5.8	*Dictyota*
108	5.5	Rubble
109	5.5	Rubble, *Dictyota*
110	5.8	Rubble, *Homotrema rubrum*
111	5.5	Rubble, *H. rubrum*
112	5.5	Rubble, *H. rubrum*
113	5.2	Rubble, *H. rubrum*
114	5.5	Rubble, *H. rubrum*
115	4.9	Rubble, *H. rubrum*
116	4.6	Rubble, *H. rubrum*
117	4.6	Rubble, *H. rubrum*
118	4.3	Rubble, *H. rubrum*

Site 7. The Elbow

Transect 2. About 540 m long run on a heading of 278° true and 300 m west of Transect 1. 28 June 1980

Meter mark	Depth meters	Bottom type and species
1	16.5	*Dictyota*
2	17.1	Sand
3	17.1	*Millepora alcicornis*
4	17.1	*Dictyota*
5	15.8	*Dictyota*
6	15.8	Sand
7	15.8	*Pocockiella variegata*
8	15.8	*Dictyota*
9	15.1	*Dictyota*
10	15.1	*Pocockiella variegata*
11	15.1	*Dictyota*, *Amphiroa fragilissima*
12	15.1	*Spheciospongia vesparia, Parazoanthus* sp.
13	15.1	*Dictyota*
14	14.6	*Dictyota*
15	14.0	*Dictyota, Cerithium litteratum, Amphiroa fragilissima*
16	14.0	*Dictyota, Amphiroa fragilissima*, *Dilophus alternans*, *Laurencia* sp., brittle star
17	14.0	Coralline indet.
18	14.0	*Dictyota*
19	14.0	*Porites divaricata, Amphiroa rigida antillana*
20	13.1	*Amphiroa, Dictyota*
21	13.1	*Amphiroa rigida*, *Dictyota* sp.
22	13.1	*Pocockiella variegata*
23	12.8	*Dictyota*
24	12.8	*Pocockiella variegata*
25	12.8	*Dictyota*
26	12.5	*Siderastrea radians, Dictyota*
27	12.5	*Porites asteroides*
28	11.6	*Dictyota*
29	11.6	*Stypopodium zonale*, *Dilophus alternans, Dictyota*
30	11.6	*Solenaster hyades*
31	11.6	Sand
32	11.6	*Dictyota*
33	12.2	*Dictyota*
34	11.6	Sand
35	10.7	*Dictyota*
36	10.4	*Amphiroa* sp.
37	10.4	*Muriceopsis flavida*
38	10.4	*Pterogorgia citrina*
39	10.4	*Dictyota*
40	10.4	Coralline
41	8.5	*Dictyota*

Site 7. The Elbow (cont.)

Transect 2. About 540 m long run on a heading of 278° true and 300 m west of Transect 1. 28 June 1980

Meter mark	Depth meters	Bottom type and species
42	8.5	*Dictyota*
43	8.5	Coralline
44	7.9	*Dictyota*
45	7.9	*Dictyota*
46	7.9	Coralline
47	9.1	*Dichocoenia stokesi*
48	8.2	Rock
49	6.1	Sand
50	6.1	*Dictyota*
51	6.1	*Dictyota*
52	6.1	Coralline
53	6.1	*Dictyota*
54	6.1	Rubble
55	7.6	Rock
56	8.2	*Dictyota*
57	8.2	*Dictyota*
58	8.2	Coralline
59	8.2	Hardbottom
60	7.3	*Favia fragum*
61	6.4	Rubble, *Goniolithon* sp., *Homotrema rubrum*
62	6.4	Sand
63	6.1	*Dictyota*
64	6.1	Hardbottom
65	6.1	Hardbottom
66	6.1	*Halimeda opuntia*
67	6.1	*Goniolithon* sp.
68	6.7	Sand
69	6.7	Hardbottom
70	6.7	*Gorgonia ventalina*
71	6.1	*G. ventalina*
72	6.1	Rubble
73	6.1	Sand
74	6.1	Rubble, *Goniolithon*, *Homotrema rubrum*
75	4.6	Rubble, *Goniolithon*, *H. rubrum*
76	4.6	Rubble, *Goniolithon*, *H. rubrum*, wreck
77	4.6	*Pseudopterogorgia americana*
78	4.9	*Haliclona compressa*
79	4.9	*Gorgonia ventalina*
80	4.9	Rubble
81	4.9	*Diadema antillarum*
82	4.9	Rock
83	4.9	*Palythoa mammillosa*

Site 7. The Elbow (cont.)

Transect 2. About 540 m long run on a heading of 278° true and 300 m west of Transect 1. 28 June 1980

Meter mark	Depth meters	Bottom type and species
84	4.9	Rubble, *Penicillus capitatus*
85	4.9	Rubble
86	3.4	*Dictyota*
87	3.4	*Halimeda opuntia*, *Dictyota, Dilophus, Jania*
88	3.4	Rubble, *Goniolithon*
89	3.4	Rubble, *Goniolithon*
90	4.0	Sand
91	4.0	Rubble
92	3.0	*Penicillus capitatus*
93	3.0	*Gorgonia ventalina*
94	3.0	Rubble
95	3.0	Sand
96	3.0	Rubble
97	3.0	Sand
98	2.7	*Dictyota*
99	2.7	Rubble
100	2.7	*Dictyota*
101	2.7	Rubble
102	2.1	*Dilophus*
103	2.1	*Dilophus*
104	2.1	Rubble
105	1.5	*Stypopodium zonale*
106	1.5	*Dilophus*
107	1.5	Rubble
108	1.5	*Dilophus*
109	1.5	*Dilophus*
110	1.5	*Dilophus*
111	1.5	*Halimeda opuntia*

Site 7. The Elbow

Transect 3. About 410 m long run on a heading of 278° true and 300 m to the east of Transect 1.
19 July 1981

Meter mark	Depth meters	Bottom type and species
1	13.7	*Pseudopterogorgia rigida*
2	13.1	*Dilophus alternans, Dictyota cervicornis*
3	13.1	*Dilophus alternans*, *Dictyota cervicornis*
4	13.1	*Dilophus alternans, Dictyota cervicornis*
5	12.8	Algal mat
6	12.8	*Montastraea annularis*
7	12.8	*Dilophus, Dictyota*
8	12.8	*Dictyota cervicornis*, algal mat
9	13.7	Sand
10	13.7	*Pseudopterogorgia americana*
11	12.1	*Favia fragum*
12	12.2	Rock
13	11.3	*Pseudaxinella longichaeta*
14	11.0	Hardbottom
15	10.7	*Dilophus, Dictyota*
16	11.3	*Pseudopterogorgia americana, Acropora cervicornis*
17	10.4	*Higginsia strigulata*
18	10.1	*Dilophus, Dictyota*
19	9.8	*Dilophus, Dictyota*
20	9.4	*Dictyota cervicornis*
21	11.9	*Bartholomea, Stenorhynchus seticornis*
22	12.5	Sand
23	12.2	Sand
24	12.2	Sand
25	12.2	*Dilophus, Dictyota, Millepora alcicornis*
26	12.2	Sand
27	12.2	Sand
28	12.2	*Meandrina meandrites*
29	12.2	*Tethya crypta*
30	11.9	Sand
31	11.9	*Millepora alcicornis*
32	11.9	Sand, *Dictyota*
33	11.6	*Dilophus, Dictyota, Sargassum*
34	11.6	Rubble
35	11.6	Rubble
36	11.6	Sand
37	11.6	*Siderastrea siderea*
38	11.6	Sand
39	11.6	*Dictyota*
40	11.3	*Dilophus, Dictyota*
41	11.6	Sand, *Lithothamnion*

Transect 3. About 410 m long run on a heading of 278° true and 300 m to the east of Transect 1.
19 July 1981

Meter mark	Depth meters	Bottom type and species
42	11.6	*Spinosella vaginalis*
43	11.6	Rubble
44	11.6	*Pseudopterogorgia americana*
45	10.7	*Halimeda opuntia minor*
46	10.7	*Briareum asbestinum*
47	11.3	*Dilophus*, *Dictyota*
48	11.3	Sand
49	11.3	*Pseudopterogorgia americana*
50	11.0	Rock
51	10.4	*Dilophus*, *Dictyota*
52	9.8	Rock
53	10.1	*Millepora alcicornis*, *Dictyota*
54	10.1	Algal mat
55	11.6	*Pterogorgia citrina*
56	11.3	Rubble
57	11.3	Rock
58	11.3	Sand, rubble
59	11.3	Sand
60	11.3	*Pseudopterogorgia americana*
61	11.0	*Dilophus, Dictyota*, rock
62	10.7	Alga
63	10.4	Sand
64	11.0	Alga
65	11.0	Sand
66	11.0	Sand
67	10.4	Rubble
68	10.1	Sand
69	9.8	Sand
70	9.8	*Dilophus alternans*
71	9.8	*Dilophus alternans*, sand
72	9.8	*Plexaurella dichotoma*
73	9.8	Sand, rubble
74	9.8	Sand, rubble
75	10.1	Sand, rubble
76	10.1	*Dasycladus vermicularis*
77	10.1	Sand
78	10.1	*Dasycladus vermicularis*
79	10.1	Sand
80	10.1	Filamentous green
81	10.1	*Dasycladus vermicularis*
82	10.1	Algal mat

9.8.2. Quadrats

Site 7. The Elbow Coral
30 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*caribaeorum*				
					Pseudopterogorgia	0	0	0	5
Dilophus alternans	x	0	x	0	*acerosa*				
Dictyota cervicornis	x	12	x	2	*P. kallos*	1	0	0	0
Amphiroa tribulus	0	0	0	2	*Plexaura flexosa*	1	0	0	0
A. fragilissima	0	1	0	0	*Gorgonia ventalina*	0	0	0	1
A. sp.	0	1	0	0	*Acropora palmata*	x	x	x	17
Goniolithon sp.	0	0	1	0	*Agaricia agaricites*	5	15	4	8
Jania sp.	0	1	0	0	*Favia fragum*	1	0	1	0
Lithothamnion sp.	0	1	0	0	*Helioseris cucullata*	2	3	0	6
					Mycetophyllia lamarckiana	1	2	1	1
PORIFERA					*Siderastrea siderea*	11	0	1	0
Aplysina cauliformis	0	1	1	0	*Montastraea annularis*	0	x	0	0
Agelas schmidti	0	0	0	3	*Dichocoenia stokesi*	0	0	0	2
Ircinia strobilina	0	1	0	0					
Haliclona compressa	0	1	0	0	POLYCHAETA				
Niphates erecta	0	3	0	4					
Chondrilla nucula	1	0	0	5	Bristle worm	1	0	0	1
Dysidea sp.	0	1	0	7	Tube worm	0	0	0	2
Cliona sp.	0	6	0	0	Sabellid	1	1	0	0
Spongia sp.	0	0	1	0					
Siphonodictyon sp.	0	0	0	1	MOLLUSCA				
Microciona sp.	0	1	0	0					
Myxellid sp.	0	1	0	0	Nudibranch	2	0	1	0
Sponge sp. A	1	0	0	0					
Sponge sp. B	1	0	0	0	CRUSTACEA				
Sponge sp. C	0	0	1	0					
					Pagurus provenzanoi	1	1	1	0
COELENTERATA					*Paguristes cadenati*	0	1	0	0
Millepora alcicornis	1	0	1	1	ECHINODERMATA				
Hydroid sp.	x	0	0	0					
Anemone	0	12	0	13	*Diadema antillarum*	1	1	1	3
Erythropodium	1	3	0	0					

Site 7. The Elbow Rubble Quadrats
19 July 1981

Species	Quadrats 1	2	3	4
PROTOZOA				
Homotrema rubrum	x	x	x	x
ALGAE				
Halimeda incrassata	7	8	6	9
Neomeris annulata	4	3	5	0
Dictyota cervicornis	0	1	0	0
Anadyomene stellata	0	0	5	0
Valonia ventricosa	0	0	4	0
Penicillus capitatus	0	0	1	0
Dasycladus vermicularis	0	2	2	0
Filamentous green	x	0	x	1
Lithothamnion sp.	x	0	x	0
Goniolithon sp.	1	0	2	0
Amphiroa sp.	1	0	0	1
Filamentous red alga	0	1	0	0
Alga indet	0	0	5	0
Padina sp.	0	0	0	1
PORIFERA				
Cliona sp.	1	0	0	x
Dysidea spp.	1	0	2	0
Sponge indet.	0	0	4	0
COELENTERATA				
Pseudopterogorgia americana	0	0	1	2
Bartholomea sp.	0	0	0	1
Diploria labyrinthiformis	0	1	0	0
Favia fragum	2	4	2	0
Porites porites	0	2	0	0
Siderastrea radians	2	1	0	3
POLYCHAETA				
Sabellid sp.	1	1	0	1
Serpulid sp.	1	0	0	0
Featherduster	3	0	0	0
Worm Indet.	0	1	0	0

Species	Quadrats 1	2	3	4
MOLLUSCA				
Chiton sp.	2	0	1	0
Lithophaga sp.	0	0	0	1
Cerithium algicola	0	0	1	0
CRUSTACEA				
Snapping shrimp	0	0	0	1
Mantis shrimp	0	0	0	1
Crab	1	1	0	0
Hermit crab	1	0	0	0
BRYOZOA				
Orange bryozoans	3	0	2	1
ECHINODERMATA				
Eucidaris tribuloides	0	0	0	1
Ophiothrix oerstedii	0	1	0	2
Brittle stars spp.	2	0	4	1
Ophiocoma echinata	0	1	0	0
ASCIDIACEA				
Tunicata sp. A	1	0	0	0
Tunicate sp. B	0	1	0	0
Tunicate sp. C	0	1	2	0
Ascidia nigra	0	1	0	0
Didemnum candidum	0	3	0	1

Site 7. The Elbow Hardbottom Quadrats
30 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*Pterogorgia citrina*	12	6	15	1
					P. anceps	0	1	0	0
Padina sp.	23	23	21	8	*Eunicea calyculata*	0	1	0	0
Dilophus alternans	x	x	x	x	*calyculata*				
Udotea flabellum	4	15	6	6	*Plexaura* sp.	0	1	0	0
Halimeda tuna	2	1	20	7	*Porites porites*	2	0	0	0
H. incrassata	0	0	0	11	*Favia fragum*	2	0	0	0
Laurencia sp.	0	0	0	1	*Siderastrea siderea*	0	2	0	2
Amphiroa tribulus	0	0	0	1	*S. radians*	1	0	1	0
A. sp. A	0	0	0	1	*Acropora cervicornis*	0	x	0	x
					Dichocoenia stokesi	0	0	0	1
PORIFERA					*Porites asteroides*	0	0	0	1
					Diploria labyrinthiformis	0	0	0	1
Haliclona compressa	1	0	0	0	Zooanthids sp. A	0	1	0	1
H. sp.	1	0	1	0	*Zoanthus* sp. B	0	0	0	1
Niphates digitalis digitalis	1	0	0	0	Anemone	0	0	0	2
Epipolasis sp.	1	0	0	0					
Aplysina cauliformis	0	1	0	0	POLYCHAETA				
Tethya crypta	0	0	0	1					
Ircinia strobilina	0	0	1	10	Sabellid	1	0	1	1
					Arabella sp.	1	0	0	0
COELENTERATA					Nereid	1	0	0	0
					Eunice kinbergi	1	0	0	0
Millepora alcicornis	6	5	6	2					
Erythropodium caribaeorum	2	0	0	0	CRUSTACEA				
Plexaura homomalla	3	0	0	0	Crab	1	0	0	0
Pseudopterogorgia americana	6	6	6	3	Hermit crab	0	0	0	1
P. acerosa	3	0	1	0	ECHINODERMATA				
Plexaurella dichotoma	2	1	3	0					
P. grisea	0	2	0	0	*Ophionereis squamulosa*	0	1	0	0

Site 7. The Elbow Sand Quadrats
30 August 1981

Species	Quadrats 1	2	3	4
PROTOZOA				
Homotrema rubrum	14	17	7	0
SIPUNCULIDA				
Phascolion sp.	3	0	0	0
Sipunculid indet.	1	0	0	0
POLYCHAETA				
Eunice sp.	1	1	0	1
Glycera sp.	1	0	0	0
Nephthys sp.	0	1	0	0
Sigalionid	0	1	0	0
MOLLUSCA				
Dentalium calamus	3	2	3	0
Olivella nivea	1	0	0	0
Tellina listeri	1	0	0	0

9.9. Site 8. Carysfort Reef

9.9.1. Transects

Transect 1. About 785 m long run on a heading of 293° true to and past Carysfort Light. 15 July 1981

Meter mark	Depth meters	Bottom type and species
0	16.8	*Dictyota cervicornis*
1	16.8	*Dictyota cervicornis*, *Amphiroa fragilissima*
2	16.5	Algal mat
3	16.2	*Dictyota cervicornis*
4	16.2	*Dilophus alternans*
5	16.5	Sand
6	16.2	*Spinosella vaginalis*
7	16.2	*Dilophus*, *Dictyota*
8	15.8	*Dictyota cervicornis*
9	15.8	*Dasycladus vermicularis*
10	15.5	Rock
11	15.0	*Dilophus*, *Dictyota*
12	15.0	*Dilophus*, *Dictyota*
13	14.9	Filamentous red
14	14.9	*Dictyota cervicornis*
15	14.9	*Galaxaura obtusata*, *Dictyota cervicornis*
16	14.6	*Dilophus alternans*
17	14.0	*Sargassum hystrix*
18	14.6	Sand
19	14.6	Sand
20	13.7	*Halimeda tuna*
21	13.4	*Dilophus alternans*
22	13.4	Rock
23	13.4	*Dilophus alternans, Dictyota cervicornis*
24	13.4	Sand
25	13.1	*Dictyota cervicornis*, *Amphiroa tribulus*
26	12.8	*Dictyota cervicornis*, *Galaxaura obtusata*
27	12.5	*Dilophus, Dictyota*
28	12.8	Sand over rock
29	12.8	Sand over rock
30	12.5	Sand
31	12.2	Sand
32	11.9	*Dictyota cervicornis*
33	11.9	*Millepora alcicornis*
34	11.6	*Halimeda tuna, Dictyota cervicornis*
35	11.6	*Dilophus alternans*, *Dictyota cervicornis*
36	11.6	*Dilophus alternans*, *Dictyota cervicornis*
37	11.3	*Dilophus alternans*, *Dictyota cervicornis*
38	11.3	Sand
39	11.0	*Galaxaura obtusata, Cerithium litteratum, Dilophus*, *Dictyota*

Site 8. Carysfort Reef (cont.)

Transect 1. About 785 m long run on a heading of 293° true to and past Carysfort Light.
15 July 1981

Meter mark	Depth meters	Bottom type and species
40	10.7	Sand
41	10.7	Sand
42	10.7	Rock
43	9.8	Sponge
44	9.1	Rock
45	9.1	*Dilophus alternans*
46	9.1	*Dictyota cervicornis*
47	8.5	*Anthosigmella varians*
48	8.5	*Cerithium litteratum*, algal mat
49	9.1	Rock
50	9.1	Rock
51	9.8	*Galaxaura obtusata*
52	10.7	*Pseudopterogorgia bipinnata*
53	11.0	Algal mat
54	11.0	*Millepora complanata*
55	11.0	Sand, rubble
56	11.3	*Dilophus*, *Dictyota, Amphiroa tribulus*
57	11.6	*Dilophus*, *Dictyota*
58	11.6	*Dilophus alternans*
59	12.2	*Dilophus*, *Dictyota*
60	13.7	Sand
61	13.7	Sand
62	15.5	Sand
63	15.5	Algal mat
64	16.2	Algal mat, rubble
65	16.8	Algal mat, rubble
66	16.8	*Halimeda incrassata*
67	16.8	*Dictyota, Amphiroa fragilissima*, *Jania* sp.
68	16.8	Sand, rubble
69	16.8	Algal mat
70	16.8	Sand
71	16.8	Sand
72	16.5	*Pseudaxinella lunaecharta*
73	15.2	Sand
74	14.9	Coralline
75	13.7	*Dictyota cervicornis*
76	12.5	*Dictyota cervicornis*
77	11.9	*Dictyota cervicornis*
78	11.3	*Dictyota cervicornis*
79	11.0	*Dictyota*
80	11.0	*Erythropodium caribaeorum*
81	10.7	*Acropora cervicornis*

Site 8. Carysfort Reef (cont.)

Transect 1. About 785 m long run on a heading of 293° true to and past Carysfort Light.
15 July 1981

Meter mark	Depth meters	Bottom type and species
82	11.0	*Acropora cervicornis*, *Pseudopterogorgia americana*
83	11.0	Hardbottom
84	11.0	*Dictyota cervicornis*
85	10.4	*Dilophus, Dictyota*
86	10.4	*Siderastrea siderea*
87	11.0	*Dictyota cervicornis*
88	10.7	Rubble
89	10.7	*Dictyota cervicornis*
90	9.8	*Acropora* cervicornis
91	8.0	Algal mat
92	7.6	*Dilophus, Dictyota*
93	7.6	Hardbottom
94	7.6	*Dilophus alternans*
95	7.6	*Dilophus, Dictyota*
96	7.6	*Dilophus, Dictyota*
97	7.3	*Dilophus, Dictyota*
98	6.7	*Montastraea annularis*
99	6.4	*Dilophus alternans*
100	7.0	*D. alternans*
101	6.4	*D. alternans*
102	6.1	*D. alternans*
103	6.4	Algal mat
104	6.4	*Dilophus, Dictyota*
105	6.4	*Millepora complanata*
106	6.4	*Gorgonia*n
107	4.6	Hardbottom
108	4.6	Hardbottom
109	6.1	Hardbottom
110	4.6	Hardbottom
111	6.1	Hardbottom
112	6.1	Hardbottom
113	6.1	Hardbottom
114	3.0	*Millepora complanata*
115	4.6	*M. complanata*
116	3.7	*Plexaura mammosa*
117	2.7	*P. mammosa, Gorgonia ventalina*
118	2.1	*Gorgonia ventalina*
119	3.0	*G. ventalina*
120	2.1	Hardbottom
121	1.8	Hardbottom
122	1.8	*Porites porites*
123	1.8	*Porites porites*

Site 8. Carysfort Reef (cont.)

Transect 1. About 785 m long run on a heading of 293° true to and past Carysfort Light.
15 July 1981

Meter mark	Depth meters	Bottom type and species
124	1.8	Hardbottom
125	1.2	Hardbottom
126	0.6	*Acropora palmata*
127	0.3	Rubble
128	0.1	*Acropora palmata*
129	0.1	*A. palmata*
130	0.1	*A. palmata*
131	0.1	*A. palmata*
132	0.1	*A. palmata*
133	0.1	*A. palmata*
134	0.1	*A. palmata*
135	0.1	*A. palmata*
136	0.1	*A. palmata*
137	0.1	*A. palmata*
138	0.1	*Plexaura mammosa*
139	0.1	*Acropora palmata*
140	0.1	Dead coral
141	0.1	*Acropora palmata*
142	0.1	Dead coral
143	0.1	Dead coral
144	0.1	Dead coral
145	0.1	Dead coral
146	0.1	*Acropora palmata*
147	0.1	Dead coral
148	0.1	*Dictyota cervicornis*
149	0.1	*Halimeda incrassata*
150	0.1	Algal mat
151	0.1	*Diploria strigosa*
152	0.2	Dead coral
153	0.2	*Pseudopterogorgia americana*
154	0.2	*Acropora cervicornis*
155	0.1	Sand
156	0.1	*Condylactis gigantea*
157	0.1	*Dilophus alternans*

Site 8. Carysfort Reef

Transect 2. About 780 m long run on a heading of 293° true and 300 m east of Transect 1. 16 July 1981

Meter mark	Depth meters	Bottom type and species
1	17.1	*Sargassum hystrix*
2	16.5	*Dictyota cervicornis*
3	16.5	*Sargassum hystrix*
4	15.8	*Dictyota cervicornis*
5	15.8	Rock
6	15.2	*Dictyota cervicornis*
7	15.2	Rock
8	15.2	*Halimeda opuntia minor*, *Dilophus alternans*
9	15.2	Sand
10	15.0	*Dictyota cervicornis*
11	15.0	*Pseudopterogorgia elisabethae*
12	15.2	Rubble
13	14.6	Coralline alga
14	14.6	Hardbottom
15	14.3	*Amphiroa fragilissima*, *Dictyota* sp., sponge
16	14.0	*Dictyota cervicornis*
17	14.0	Algal mat
18	13.7	Sponge
19	13.7	Sand
20	13.7	Sand
21	13.7	*Siderastrea siderea*
22	13.7	*Dictyota cervicornis*
23	13.4	*Dictyota cervicornis*, calcareous alga
24	12.8	*Agaricia agaricites*
25	12.9	*Sargassum hystrix, Dictyota cervicornis*
26	12.8	Hardbottom
27	12.8	*Dictyota cervicornis*
28	12.5	*D. cervicornis*
29	12.2	*D. cervicornis*
30	12.2	Hardbottom, *Homotrema rubrum*
31	12.2	*Dictyota cervicornis*
32	12.2	*Halimeda*. sp.
33	11.9	*Udotea flabellum*
34	11.0	*Sargassum hystrix*
35	11.0	Hardbottom
36	10.7	Hardbottom
37	10.7	*Dictyota cervicornis*, coralline
38	10.4	*Halimeda* sp., *Dictyota* sp.
39	10.4	*Dilophus alternans*
40	10.4	*Dictyota cervicornis*
41	9.8	*Dilophus alternans*

Site 8. Carysfort Reef (cont.)

Transect 2. About 780 m long run on a heading of 293° true and 300 m east of Transect 1. 16 July 1981

Meter mark	Depth meters	Bottom type and species
42	9.1	*Pseudopterogorgia americana*
43	9.1	*Niphates* sp.
44	9.1	*Dilophus alternans*, *Sargassum hystrix*
45	9.1	*Dictyota cervicornis*
46	9.1	*Dictyota cervicornis*, *Sargassum hystrix*
47	9.8	*Dilophus alternans*
48	10.7	*Dilophus alternans*
49	11.0	*Dictyota cervicornis*
50	11.6	*Plexaurella dichotoma*
51	12.2	Hardbottom
52	12.2	*Pseudopterogorgia elisabethae*
53	12.2	Hardbottom, *H. rubrum*
54	12.2	*Dictyota cervicornis*
55	12.2	Hardbottom
56	12.8	*Pseudopterogorgia americana*
57	12.8	Sand, rubble
58	12.8	Sand, rubble
59	12.8	Sand, rubble
60	12.8	Sand, rubble
61	12.8	Sand
63	13.1	Sand, rubble
64	12.9	*Syringodium*
65	12.8	*Pseudopterogorgia elisabethae*, green alga
66	12.8	*Syringodium*
67	13.1	*Halimeda, Pseudopterogorgia elisabethae*
68	13.4	*Dictyota, Halimeda*
69	13.4	Sand
70	13.4	Alga
71	14.6	Sand
72	14.3	Sand
73	14.0	*Dilophus alternans*
74	14.3	*Agaricia agaricites*, *Dictyota*, *Lithothamnion*
75	14.3	Sand
76	14.0	*Dasycladus vermicularis*
77	14.3	Sand
78	14.6	Sand
79	14.6	Sand
80	14.6	Sand
81	14.6	Sand
82	13.1	*Dictyota cervicornis*
83	12.2	*Dilophus, Dictyota*
84	11.6	Calcareous alga

Site 8. Carysfort Reef (cont.)

Transect 2. About 780 m long run on a heading of 293° true and 300 m east of Transect 1. 16 July 1981

Meter mark	Depth meters	Bottom type and species
85	10.7	*Udotea flabellum, Dilophus alternans*
86	10.1	*Dilophus, Dictyota*
87	9.4	*Dilophus alternans*
88	9.1	*Dilophus, Dictyota*
89	8.8	*Dilophus, Dictyota*
90	8.5	*Dilophus, Dictyota*
91	7.9	*Dilophus, Dictyota*
92	7.9	*Dilophus, Dictyota*
93	7.6	*Dilophus, Dictyota, Agaricia agaricites*
94	7.0	*Meandrina meandrites*
95	6.1	*Dictyota cervicornis*
96	6.1	*Dilophus, Dictyota*
97	6.1	Rock
98	6.1	Rock
99	6.1	*Dilophus alternans*
100	5.5	*Eunicea succinea*
101	6.4	*Dictyota cervicornis*, *Gorgonia ventalina*
102	6.4	*Dictyota cervicornis*
103	5.8	*Dilophus alternans*
104	5.5	*Pseudopterogorgia americana*
105	5.8	*Porites asteroides*
106	4.6	*Gorgonia ventalina*
107	3.7	*Pseudoplexaura* porosa
108	4.3	*Palythoa mammillosa*
109	3.4	*P. mammillosa*
110	2.4	Hardbottom
111	2.7	*Millepora complanata*
112	2.4	*Halimeda incrassata*
113	2.4	*Gorgonia ventalina*
114	2.1	Sand
115	2.4	Rock
116	3.4	*Gorgonia ventalina, Diploria clivosa*
117	3.0	*Halimeda incrassata*
118	3.4	Rubble
119	2.4	*Dictyota cervicornis*
120	2.4	Rubble
121	2.7	*Dictyota cervicornis*, *H. incrassata*
122	2.7	Rubble
123	2.4	*Acropora cervicornis*
124	1.8	Rubble
125	1.8	Rubble
126	1.5	Filamentous algal mat

Site 8. Carysfort Reef (cont.)

Transect 2. About 780 m long run on a heading of 293° true and 300 m east of Transect 1. 16 July 1981

Meter mark	Depth meters	Bottom type and species
127	1.5	*Dictyota cervicornis*
128	1.5	*D. cervicornis*
129	1.5	*D. cervicornis*
130	1.2	*Porites asteroides*
131	1.2	*Halimeda incrassata*
132	1.2	Rubble
133	1.5	Rubble
134	1.5	*Porites asteroides*
135	1.5	*Dictyota cervicornis*
136	1.8	Filamentous alga

Site 8. Carysfort Reef

Transect 3. About 210 m long run on a heading of 293° true and 300 m west of Transect 1. 17 July 1981

Meter mark	Depth meters	Bottom type and species
1	21.9	*Amphiroa fragilissima*, *Dictyota* sp., *Jania* sp.
2	21.9	*Amphiroa fragilissima*, *Dictyota* sp., *Jania* sp.
3	18.5	Sand
4	18.3	*Dictyota cervicornis*
5	16.5	*D. cervicornis*
6	15.5	*Erythropodium caribaeorum*, *Dysidea* sp., *Dictyota* sp.
7	14.9	*Erythropodium caribaeorum*, *Dysidea* sp.
8	13.7	*Dictyota* sp., *D. cervicornis*
9	13.1	*Dilophus alternans, Sargassum hystrix*, *Galaxaura obtusata*
10	12.2	Rubble
11	10.7	*Siderastrea siderea*
12	9.1	*Dilophus alternans*
13	8.5	*Dilophus alternans, Dictyota cervicornis*
14	7.6	*Dilophus alternans*, *Dictyota cervicornis*
15	6.7	*Dilophus alternans*, *Dictyota cervicornis,* brittle stars
16	6.7	*Dilophus alternans*, *Plexaura flexosa*
17	5.5	*Pseudopterogorgia kallos*
18	4.9	*Millepora alcicornis*
19	5.8	*Erythropodium caribaeorum*
20	4.8	Rubble
21	6.1	*Pseudopterogorgia kallos*
22	5.5	Coral indet.
23	4.6	*Siderastrea siderea*
24	4.3	Rock
25	6.1	*Millepora alcicornis*
26	5.5	*M. alcicornis*
27	4.6	Rubble
28	3.4	Filamentous algal mat
29	2.7	*Pseudopterogorgia kallos*
30	2.7	*Millepora alcicornis*
31	4.6	Rock
32	4.9	Rock
33	3.0	*Pseudopterogorgia americana*
34	3.0	Sand
35	3.0	*Millepora complanata*
36	2.4	*Palythoa mammillosa*
37	2.4	*P. mammillosa*
38	4.3	Hardbottom
39	5.5	*Palythoa mammillosa*
40	7.0	*Gorgonia ventalina*
41	7.6	*Dilophus*, *Dictyota*
42	7.6	*Dilophus*, *Dictyota*

9.9.2. Quadrats

Site 8. Carysfort Reef Coral
18 July 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*Dichocoenia stokesi*	1	0	0	5
					Diploria strigosa	0	0	4	0
Halimeda opuntia triloba	1	x	2	1	*Mycetophyllia* sp.	0	0	0	1
Valonia ventricosa	0	1	0	4	Anemones	3	0	2	1
Dictyota cervicornis	0	x	1	7					
Dilophus alternans	0	1	0	1	POLYCHAETA				
Amphiroa tribulus	0	1	0	1					
Lithothamnion sp.	1	0	x	0	Sabellid A	3	0	1	0
Green alga A	0	0	1	0	Sabellid B	0	0	0	2
Filamentous alga	0	4	0	1					
Red coralline	0	1	0	0	MOLLUSCA				
PORIFERA					*Thais deltoides*	0	0	0	3
					Cyphoma gibbosum	0	0	0	2
Chondrilla nucula	0	2	0	0	Gastropod sp.	0	2	0	0
Chondrosia collectrix	0	0	1	0	Nudibranch	2	0	1	0
Dysidea sp.	0	1	0	0	*Lima lima*	0	0	0	1
Aplysina	0	4	0	0	*Lithophaga* sp.	0	0	0	1
Aplysella sp.	0	0	3	6					
Dark orange sponge A	12	0	1	0	ECHINODERMATA				
Light orange sponge B	6	0	2	0					
					Diadema antillarum	7	1	5	6
COELENTERATA					*Eucidaris tribuloides*	1	1	2	2
					Ophiothrix oerstedii	0	1	0	0
Eunicea mammosa	4	0	1	1	*Ophioderma* sp.	0	0	0	1
E. tourneforti	0	1	0	0	Large brittle stars	0	0	5	0
E. calyculata	0	1	0	0	Brittle star	0	0	0	1
E. succinea	0	1	0	0					
Muricea muricata	1	0	1	0	BRYOZOA				
Pseudoplexaura porosa	5	1	1	1					
Gorgonia ventalina	0	0	4	0	Bryozoan indet.	0	1	0	1
Briareum asbestinum	0	0	3	3					
Palythoa mammillosa	0	x	1	2	CRUSTACEA				
Millepora alcicornis	0	0	0	1					
M. complanata	9	x	6	x	*Paguristes tortugae*	0	1	0	1
Favia fragum	1	0	0	0					
Agaricia agaricites	17	13	20	13	ASCIDIACEA				
Porites porites	7	x	16	x					
P. asteroides	7	3	4	x	Ascidian, compound	0	1	0	x
Siderastrea siderea	2	0	0	1					

Site 8. Carysfort Reef Hardbottom Quadrats
18 July 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*P. kallos*	1	0	0	0
					P. bipinnata	0	9	0	14
Halimeda opuntia minor	0	0	1	1	*P. rigida*	0	0	1	0
H. incrassata	0	0	0	2	*Plexaurella dichotoma*	4	1	2	1
H. lacrimosa	0	0	0	2	*Plexaura flexosa*	0	1	0	2
H. sp.	17	0	0	0	*Muriceopsis flavida*	0	1	0	0
Udotea flabellum	8	5	0	8	*Pterogorgia citrina*	1	0	0	1
Dilophus alternans	x	x	x	x	*Erythropodium*	5	0	1	1
Dictyota cervicornis	x	x	x	x	*caribaeorum*				
Valonia ventricosa	0	0	1	0	*Briareum asbestinum*	0	1	0	3
Neomeris annulata	8	0	4	0	*Zoanthus* sp.	0	1	0	2
Sargassum hystrix	6	0	7	10	*Millepora alcicornis*	9	2	4	4
hystrix					*Montastraea cavernosa*	0	0	0	1
S. h. buxifolium	0	7	0	1	*Agaricia agaricites*	0	0	1	3
Goniolithon sp.	5	0	0	0	*Porites porites*	0	2	0	0
Amphiroa brasiliana	0	10	0	0	*P. asteroides*	0	0	1	0
Alga indet.	x	x	6	x	*P. furcata*	2	0	2	0
Red epiphyte	1	0	0	0	*Favia fragum*	1	0	0	0
Filamentous alga	0	0	0	1	*Siderastrea radians*	2	0	0	0
Calcareous alga indet.	0	0	17	0	*Bartholomea* sp.	1	3	0	0
PORIFERA					POLYCHAETA				
Spinosella vaginalis	2	1	1	1	Sabellid	0	1	0	0
Ircinia strobilina	2	0	0	3					
Niphates sp.	0	1	0	1	MOLLUSCA				
Axinellid	0	0	0	1					
Black sponge	3	0	0	0	*Cerithium eburneum*	1	1	1	0
Sponge indet.	0	0	0	1					
					CRUSTACEA				
COELENTERATA									
					Periclimenes pedersoni	0	5	0	0
Eunicea tourneforti	4	0	0	0	*Stenorhynchus*	0	2	0	0
Eunicea sp.	0	5	0	1	*seticornis*				
Pseudopterogorgia	3	3	4	2	Alpheid shrimp	0	3	0	0
americana					Snapping shrimp	1	0	8	0
P. acerosa	1	2	4	14	Hermit crab	0	2	0	0

Site 8. Carysfort Reef Sand Quadrats
18 July 1981

Species	Quadrats			
	1	2	3	4
PROTOZOA				
Homotrema rubrum	28	16	21	17
POLYCHAETA				
Eunice sp.	40	19	7	9
Glycera sp.	0	3	1	0
Capitellid	0	0	2	1
SIPUNCULIDA				
Phascolion sp.	1	0	0	0
MOLLUSCA				
Olivella nivea	0	1	4	5
CRUSTACEA				
Processa fimbriata	1	0	0	0
Iridiopagurus sp.	1	0	0	0
Shrimp sp.	1	0	0	0

Site 8. Carysfort Reef Rubble Quadrats
16 July 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
PROTOZOA					POLYCHAETA				
Homotrema rubrum	x	x	x	x	Sabellid	0	4	1	0
					Polychaetes indet.	1	0	0	1
ALGAE									
					MOLLUSCA				
Halimeda incrassata	4	10	2	x					
Dictyota cervicornis	x	x	0	0	*Ischnochiton* sp.	2	2	1	1
Laurencia sp.	0	1	0	0	Nudibranch	1	0	0	0
Goniolithon sp.	0	1	1	1	*Thais deltoides*	2	1	0	4
Lithothamnion sp.	0	0	1	0	*Cerithium* sp.	0	0	1	0
Amphiroa sp.	0	1	1	1	*Gorio* sp.	0	0	1	0
Alga sp. A	3	0	x	0	*Barbatia domingensis*	1	0	0	0
Alga sp. B	0	x	0	0	*Anadara notabilis*	0	1	0	1
Algal mats	0	x	0	0	Bivalve indet.	0	3	1	0
Filamentous red alga	0	x	0	x					
					ECHINODERMATA				
PORIFERA									
					Eucidaris tribuloides	1	0	0	1
Leucosella floridana	0	1	0	0	*Ophiothrix* sp.	0	1	0	0
Cliona sp.	0	1	0	0	Brittle stars spp.	1	3	2	0
Microcionid	1	0	0	0	Starfish (juv.)	0	1	0	0
Sponge indet.	1	1	0	0					
					CRUSTACEA				
COELENTERATA									
					Xantha denticulata	0	0	1	0
Gorgonia ventalina	13	0	0	0	*Calcinus tibicens*	4	0	0	0
Palythoa mammillosa	2	1	0	0					
Millepora complanata	1	0	0	0	BRYOZOA				
Anemone	0	1	0	1					
Porites porites	4	0	0	0	Bryozoans indet.	0	1	0	0
P. asteroides	0	14	6	3					
Dilporia clivosa	0	0	0	1	ASCIDIACEA				
					Styelid sp.	0	1	0	0
					Tunicate A	0	1	0	0
					Tunicate B	0	0	0	1
					Tunicate C	0	0	0	1

9.10. Site 9. Basin Hill Shoals

9.10.1. Transects

Transect 1. About 400 m long run on a heading of 288° true ending at day marker BH19.
26 June 1980

Meter mark	Depth meters	Bottom type and species
1	4.3	*Thalassia*
2	4.3	*Thalassia*
3	4.3	*Thalassia*
4	4.3	Sand
3	4.3	Sand
6	4.3	*Thalassia*
7	4.3	*Thalassia*
8	3.7	*Thalassia, Chirodota* sp.
9	3.4	*Thalassia,* red alga
10	3.4	*Thalassia*
11	3.4	*Thalassia*
12	3.4	*Thalassia*
13	3.4	*Thalassia*
14	3.4	*Thalassia, Syringodium*, *Halimeda tuna*
15	3.0	*Thalassia*
16	3.0	*Thalassia*
17	3.0	*Dasycladus vermicularis*
18	3.0	Mud
19	2.1	Mud
20	2.1	*Pseudoplexaura crucis*
21	1.5	*Millepora alcicornis*
22	2.1	*M. alcicornis*
23	2.1	*Thalassia*, *Syringodium*
24	2.1	*Thalassia*, *Halimeda incrassata*, *Dasycladus vermicularis*
25	2.1	*Thalassia*, filamentous alga
26	2.1	*Thalassia*
27	2.1	*Thalassia, Syringodium*
28	2.1	Silty sand
29	2.1	*Pseudoplexaura crucis*
30	2.1	Sand
31	2.1	*Thalassia*, *Syringodium*, *Dasycladus vermicularis*
32	2.1	*Thalassia*, *Syringodium*
33	2.1	*Thalassia*, *Syringodium*
34	2.7	*Thalassia*, *Syringodium*
35	2.7	*Thalassia*, *Syringodium*
36	2.7	*Thalassi*a, *Syringodium*, *Halimeda incrassata, Dasycladus vermicularis*
37	2.7	*Thalassia*
38	2.7	*Montastraea annularis*
39	2.4	*Halimeda tuna*
40	2.4	Sand

Site 9. Basin Hill Shoals (cont.)

Transect 1. About 400 m long run on a heading of 288° true ending at day marker BH19.
26 June 1980

Meter mark	Depth meters	Bottom type and species
41	2.4	*Pseudoplexaura crucis*
42	2.4	*Thalassia*
43	2.4	*Thalassia*, *Syringodium*
44	2.4	*Thalassia*
45	2.4	*Thalassia*, *Syringodium, Didemnum candidum*
46	2.4	*Thalassia*, *Syringodium*
47	2.4	*Montastraea annularis*
48	1.5	*Pseudopterogorgia americana*
49	1.5	*Plexaurella homomalla*
50	2.7	Sand
51	2.7	*Eunicea calyculata*
52	2.7	*Thalassi*a, *Dasycladus vermicularis*
53	2.7	*Thalassi*a, *D. vermicularis*
54	2.7	*Thalassi*a
55	2.4	*Thalassia*
56	2.4	*Pseudopterogorgia americana*
57	2.4	*Thalassia, Syringodium*
58	2.4	*Plexaura flexosa*
59	2.4	*Pseudoplexaura americana*
60	2.4	*Thalassia, Pterogorgia anceps*
61	2.4	*Thalassi*a, *Syringodium*
62	2.4	*Thalassi*a, *Syringodium, Paguristes tortugae*
63	2.4	*Thalassi*a, *Syringodium*
64	2.4	*Thalassi*a, *Syringodium*
65	2.4	*Thalassia, Halimeda monile*
66	2.4	*Thalassia*
67	2.4	*Thalassia, Dictyosphaeria cavernosa, Anthosigmella varians, Ircinia* sp.
68	2.4	*Thalassia, Haminoea*
69	2.4	*Thalassia*
70	2.4	*Thalassia*
71	2.4	*Thalassia, Haminoea*
72	2.4	*Thalassia*
73	2.4	*Thalassia, Haminoea*
74	2.4	*Thalassia, Dysidea crawshayi*
75	2.4	*Thalassia*
76	2.4	*Thalassia*, *Syringodium*
77	2.4	*Thalassia*, *Syringodium, Haminoea*, *Porites porites,* hydroid, flabelligerid, sipunculid
78	2.4	*Thalassia*, *Syringodium*
79	2.4	*Thalassia, Didemnum candidum*
80	2.4	*Thalassia, D. candidum*
81	2.4	*Thalassia, D. candidum*

Site 9. Basin Hill Shoals

Transect 2. About 400 m long run on a heading of 288° true and 300 m to the west of Transect 1.
26 June 1980

Meter mark	Depth meters	Bottom type and species
0	6.0	Sand
1	6.0	*Thalassia*
2	6.0	*Thalassia*
3	6.0	Silty mud, *Argopecten gibbosa*
4	6.0	Silty mud
5	6.0	Silty mud, *Thalassia*
6	5.5	Silty mud, *Thalassia*
7	5.5	Silty mud
8	5.5	Silty mud, *Thalassia*
9	5.5	Silty mud, *Thalassia*
10	5.5	Silty mud
11	5.5	Silty mud
12	5.5	*Thalassia*
13	5.5	Silty mud
14	5.5	*Thalassia*
15	5.5	Silty mud
16	5.5	Silty mud
17	5.5	*Thalassia*
18	5.5	*Thalassia*
19	5.5	*Thalassia*
20	5.5	*Thalassia*
21	4.9	Silty mud
22	4.9	*Thalassia*
23	4.9	*Thalassia*
24	4.6	*Thalassia*
25	4.6	*Thalassia*
26	4.6	*Thalassia*
27	4.6	Mud
28	4.6	*Thalassia*
29	4.6	*Thalassia*
30	4.3	Silty mud
31	4.3	*Thalassia*
32	4.3	*Thalassia*
33	4.0	*Thalassia*
34	4.0	*Thalassia*
35	4.0	*Thalassia,* silty mud
36	3.7	*Thalassia*
37	3.7	*Thalassia*
38	3.7	*Thalassia*, *Cistinides gouldi*
39	3.7	Mud
40	3.4	*Thalassia*

Site 9. Basin Hill Shoals (cont.)

Transect 2. About 400 m long run on a heading of 288° true and 300 m to the west of Transect 1.
26 June 1980

Meter mark	Depth meters	Bottom type and species
41	3.4	*Thalassia*
42	3.4	*Thalassia*
43	3.4	*Thalassia*
44	3.0	*Thalassia*, *Didemnum candidum*
45	3.0	*Thalassia*
46	2.7	*Thalassia*
47	2.7	Mud
48	2.4	*Thalassia*, *Codakia orbicularis*
49	2.4	Mud
50	2.1	Mud, *Thalassia*
51	2.1	*Thalassia*
52	2.1	*Thalassia*
53	1.8	*Thalassia*
54	1.8	*Thalassia*, tunicate
55	1.8	*Thalassia*
56	1.8	*Thalassia, Codakia orbicularis*
57	1.8	*Thalassia*
58	1.5	*Thalassia*
59	1.5	*Thalassia*
60	1.5	*Thalassia*
61	1.5	*Thalassia, Syringodium*
62	1.5	*Thalassia*
63	1.5	*Thalassia*
64	1.5	*Thalassia*
65	1.5	*Thalassia,* mud
66	1.5	Mud
67	1.5	*Pseudoplexaura crucis*
68	1.5	*Diploria strigosa*
69	1.5	*Halimeda opuntia*
70	1.3	*Thalassia*
71	1.3	*Thalassia*
72	1.3	*Thalassia*
73	1.3	*Thalassia*
74	1.3	*Thalassia*
75	1.3	*Thalassia*
76	1.3	*Thalassia*
77	1.3	*Thalassia*
78	1.3	*Thalassia*, *Syringodium*
79	1.3	*Thalassia*
80	1.3	*Thalassia*

Site 9. Basin Hill Shoals

Transect 3. About 400 m long run on a heading of 288° true and 300 m to the west of Transect 1.
29 June 1980

Meter mark	Depth meters	Bottom type and species
1	5.2	Silty mud
2	5.2	Silty mud
3	5.2	Silty mud
4	5.2	*Thalassia*
5	5.2	*Thalassia,* silty mud
6	5.2	*Thalassia*
7	5.2	Silty mud
8	5.2	Silty mud
9	5.2	*Thalassia*
10	5.2	*Syringodium*
11	5.2	*Syringodium, Thalassia*
12	5.2	*Syringodium*
13	5.2	Silty mud
14	5.2	*Syringodium*
15	5.2	*Syringodium*
16	5.2	*Thalassia*
17	4.6	*Syringodium*
18	4.6	*Syringodium*
19	4.6	*Syringodium*
20	4.6	Silty mud
21	4.3	*Thalassia*
22	4.3	*Thalassia*
23	4.3	*Syringodium*
24	4.3	*Thalassia*
25	4.3	*Thalassia*
26	4.3	*Syringodium*
27	3.7	*Thalassia*
28	3.7	*Thalassia*
29	3.7	*Thalassia*
30	3.7	*Thalassia, Batophora oerstedii*
31	3.7	Silty mud
32	3.7	*Thalassia*
33	3.7	*Thalassia, Syringodium*
34	3.7	*Thalassia*
35	3.7	*Thalassia*
36	3.7	*Thalassia*
37	3.7	*Thalassia, Trididemnum savignii*
38	3.7	*Thalassia*
39	3.7	*Thalassia*
40	3.7	*Thalassia*
41	3.7	Silty sand

Site 9. Basin Hill Shoals (cont.)

Transect 3. About 400 m long run on a heading of 288° true and 300 m to the west of Transect 1.
29 June 1980

Meter mark	Depth meters	Bottom type and species
42	3.7	*Thalassia*
43	3.7	*Thalassia, Syringodium*
44	3.7	*Thalassia, Syringodium*
45	3.7	Silty mud
46	3.7	*Dasycladus vermicularis*
47	3.7	*Syringodium*, *Dasycladus vermicularis*
48	2.4	Sand
49	2.4	Sand
50	2.4	Rubble
51	2.4	Rubble
52	2.4	*Pseudoplexaura crucis*
53	3.0	Sand
54	3.0	*Thalassia*
55	3.0	*Thalassia*, *Dasycladus vermicularis*
56	3.0	*Thalassia*
57	3.0	*Thalassia*
58	3.0	*Dasycladus vermicularis*, *Haminoea* sp.
59	2.7	*Thalassia*
60	3.0	*Dasycladus vermicularis, Halimeda tuna*, *Anadyomene stellata*, terebellid, *Dysidea* sp.
61	3.0	*Dasycladus vermicularis*, *Haminoea* sp., *Thalassia*, polychaete worm
62	3.0	*Thalassia*
63	3.0	*Thalassia, Dasycladus vermicularis*
64	3.0	*Dasycladus vermicularis*
65	3.0	Sand
66	3.0	*Dasycladus vermicularis, Haminoea* sp.
67	3.0	*Thalassia*
68	3.0	*Thalassia*
69	3.0	*Thalassia*, *Syringodium*, *Haminoea* sp.
70	3.0	*Thalassia*, *Tridemnum savignii*
71	3.0	Mud, *Thalassia*
72	3.0	*Thalassia*, *Syringodium*
73	3.0	*Thalassia*
74	3.0	*Anthosigmella varians*
75	3.0	Sand
76	3.0	*Thalassia*
77	3.0	*Thalassia, Syringodium*
78	3.0	*Clypeaster rosaceus*
79	3.0	Sand
80	3.0	*Thalassia*
81	3.0	*Thalassia*

9.10.2. Quadrats

Site 9. Basin Hill Shoals Coral Quadrats
21 July 1980

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*Pseudopterogorgia americana*	0	0	0	4
Halimeda tuna	16	40	35	4	*Muricea muricata*	0	1	0	0
H. opuntia	0	0	5	0	*Plexaurella dichotoma*	0	0	1	1
Goniolithon sp.	0	0	1	0	*Briareum asbestinum*	1	2	0	0
					Erythropodium caribaeorum	6	12	0	2
PORIFERA					*Diploria strigosa*	3	1	0	0
Chondrilla nucula	9	5	1	0	*Siderastrea siderea*	0	2	0	0
Ircinia strobilina	2	0	0	0	*Porites asteroides*	0	0	1	1
I. felix	0	0	1	0	*Dichocoenia stokesi*	0	1	0	0
Haliclona compressa	0	4	0	0	*Montastraea cavernosa*	0	0	0	1
Aplysina cauliformis	0	2	6	0					
A. sp.	0	0	1	0	POLYCHAETA				
Haliclona sp.	0	0	0	4					
Cliona sp.	0	0	0	3	Polychaete indet.	0	0	0	1
Spongia sp.	0	0	0	1					
					MOLLUSCA				
COELENTERATA									
					Barbatia cancellaria	0	1	0	0
Millepora alcicornis	4	6	0	0					
Pseudoplexaura flagellosa	3	1	0	3	ECHINODERMATA				
P. porosa	1	5	0	0					
Eunicea mammosa	1	3	0	1	*Ophiothrix oerstedii*	0	0	2	0
E. calyculata coronata	0	0	1	1					
E. knighti	0	0	1	1	ASCIDIACEA				
Gorgonia ventalina	1	0	0	1					
Plexaura homomalla	1	1	3	0	Ascidian indet.	0	1	0	0
P. flexosa	3	2	0	0					

Site 9. Basin Hill Shoals Grass Quadrats
21 July 1980

Species	Quadrats 1	2	3-4
ALGAE			
Dasycladus vermicularis	24	38	73
Halimeda incrassata	9	17	26
H. tuna	6	11	5
H. monile	0	0	7
Amphiroa fragilissima	1	0	0
Udotea flabellum	2	1	3
Acetabularia sp.	0	1	0
PORIFERA			
Aplysina cauliformis	1	0	1
Dysidea sp. A	2	0	0
Dysidea sp. B	1	1	0
Dysidea sp. C	1	0	0
COELENTERATA			
Plexaurella dichtoma	1	0	0
P. fusiformis	0	0	1
POLYCHAETA			
Polychaete indet.	8	0	0
MOLLUSCA			
Columbella mercatoria	1	0	0
ECHINODERMATA			
Brittle stars	3	0	0
ASCIDIACEA			
Colonial tunicate indet.	4	0	0

Site 9. Basin Hill Shoals Sand Quadrats
21 July 1980

Species	Quadrats 1-2	3-4
PORIFERA		
Aplysina cauliformis	2	0
Ircinia strobilina	0	1
Mycale angulosa	1	0
COELENTERATA.		
Millepora alcicornis	1	0
Plexaura homomalla	1	0
Eunicea tourneforti	1	0
Siderastrea siderea	6	0
Favia fragum	1	1
Agaricia agaricites	0	2
Porites asteroides	0	1
POLYCHAETA		
Polychaete indet.	0	1
MOLLUSCA		
Chama macerophylla	0	2
Arca imbricata	0	2
ASCIDIACEA		
Solitary tunicate indet.	0	1

9.11. Site 10. Turtle Rocks

9.11.1. Transects

Transect 1. About 400 m long run on a heading of 238° true due east of marker "6".
13 August 1981

Meter mark	Depth meters	Bottom type and species
0	3.0	*Millepora alcicornis*
1	3.0	Sand, *Thalassia*
2	3.0	Sand, rubble, *Amphiroa* sp.
3	3.0	*Pseudopterogorgia americana*
4	3.7	*Plexaurella mammosa*
5	3.7	*Amphiroa* sp.
6	3.7	*Halimeda tuna*
7	3.7	Rock, *Amphiroa* sp.
8	4.0	*Pseudopterogorgia americana*
9	4.3	*Iotrochota birotulata*
10	4.3	Sand, *Thalassia*
11	4.0	Sand, *Thalassia*
12	3.7	Sand, *Thalassia*
13	3.7	Sand, *Thalassia*
14	3.7	*Eunicea tourneforti*
15	3.4	*Spinosella vaginalis*
16	3.4	*Chondrilla nucula*
17	3.4	*Chondrilla, Thalassia*
18	3.7	*Chondrilla, Syringodium*
19	3.7	*Chondrilla*
20	3.7	*Didemnum amethysteum*
21	4.3	*Dasycladus vermicularis*
22	4.3	Sand
23	4.3	*Thalassia, Syringodium*
24	4.3	*Thalassia, Syringodium*
25	4.3	*Anadara* sp.
26	4.3	*Thalassia, Syringodium*
27	4.3	*Thalassia, Syringodium*
28	4.3	*Thalassia, Syringodium*
29	4.3	Green ball alga
30	4.3	*Thalassia, Syringodium*
31	4.3	*Thalassia, Syringodium*
32	4.3	*Thalassia*, sand
33	4.3	*Thalassia*, sand
34	4.3	*Dilophus alternans*
35	4.3	*Anthosigmella varians*
36	4.3	*Dilophus alternans*
37	4.3	*Thalassia*
38	4.3	Rubble, *Dasycladus vermicularis*
39	4.3	*Didemnum amethysteum*

Site 10. Turtle Rocks (cont.)

Transect 1. About 400 m long run on a heading of 238° true due east of marker "6".
13 August 1981

Meter mark	Depth meters	Bottom type and species
40	4.3	Sand
41	4.3	*Thalassia*, *Dilophus alternans*
42	4.3	*Thalassia, Dilophus alternans*
43	4.3	*Dasycladus vermicularis*
44	4.3	*Spinosella vaginalis*
45	4.0	*Dasycladus vermicularis*
46	4.0	*Didemnum amethysteum*
47	4.0	*Dictyota cervicornis*
48	4.0	*Thalassia, Syringodium*, *Halimeda incrassata*
49	4.0	*Thalassia, Syringodium*, *Halimeda incrassata*
50	4.0	*Halimeda incrassata*
51	4.0	*Chondrilla nucula, Ophiotrix* sp.
52	4.0	*Thalassia, Syringodium*, sand
53	4.0	Sand
54	4.0	Sand
55	4.0	Sand
56	4.0	Sand
57	4.0	*Dasycladus vermicularis*
58	4.0	*Thalassia,* sand
59	4.0	Sand
60	4.0	Sand
61	4.0	Sand
62	4.0	*Dasycladus vermicularis*
63	4.0	*Didemnum amethysteum*
64	4.0	Sand
65	4.0	Sand
66	4.0	*Thalassia, Syringodium*, *Homotrema rubrum*
67	4.0	*Thalassia, Syringodium*, *Homotrema rubrum*
68	4.0	*Dasycladus vermicularis*
69	4.3	*D. vermicularis*, *Thalassia*
70	4.6	*D. vermicularis, Rhipocephalus phoenix*
71	4.6	*Goniolithon* sp.
72	4.6	Sand
73	4.6	Sand
74	4.6	Sand
75	4.6	Sand
76	4.6	Sand
77	4.6	Sand
78	4.6	Sand
79	4.6	Sand
80	4.6	*Halimeda incrassata*

Site 10. Turtle Rocks

Transect 2. About 400 m long run on a heading of 238° true and 300 m east of Transect 1. 13 August 1981

Meter mark	Depth meters	Bottom type and species
0	6.8	*Thalassia, Syringodium*
1	6.8	*Thalassia*, *Syringodlum*
2	6.8	*Thalassia*, *Syringodlum*, *Dictyota cervicornis*
3	6.8	*Thalassia*, *Syringodium*, sand
4	6.8	*Thalassia, Syringodium*
5	6.1	*Thalassia, Syringodium, Didemnum amethysteum*
6	6.1	*Thalassia, Syringodium, Dilophus alternans*
7	5.5	*Thalassia, Syringodium*
8	5.5	Sand
9	5.5	Rubble, *Dysidea, Dictyota, Halimeda,* bryozoan, chiton
10	5.5	*Thalassia, Syringodium*
11	5.2	Rubble, *Didemnum amethysteum*
12	4.0	*Didemnum amethysteum*
13	4.6	*Thalassia, Syringodium, Dictyota cervicornis.*
14	4.6	*Thalassia, Syringodium, Dictyota cervicornis*
15	4.6	*Porites porites, Dasycladus vermicularis*
16	4.6	*Penicillus* sp.
17	4.6	*Dilophus alternans, Didemnum amethysteum*
18	4.6	*Thalassia*
19	4.6	Rubble
20	4.6	Filamentous alga
21	4.6	*Thalassia*
23	4.6	*Didemnum amethysteum*
24	4.6	*Thalassia, Syringodium*
25	4.6	*Dasycladus vermicularis*
26	4.6	*Thalassia*, rubble
27	4.6	*Thalassia, Syringodium, Didemnum amethysteum*
28	4.6	*Thalassia*
29	4.6	*Dasycladus vermicularis*
30	4.6	*Thalassia*
31	4.6	*Thalassia*
32	4.6	*Dasycladus vermicularis*
33	4.6	Sand
34	4.6	Sand
35	3.7	Sand
36	3.7	Sand, *Thalassia*
37	3.7	Sand, *Thalassia*
38	3.7	*Didemnum amethysteum*
39	3.7	Sand
40	3.7	*Thalassia*, sand
41	3.7	*Dilophus alternans*

Site 10. Turtle Rocks (cont.)

Transect 2. About 400 m long run on a heading of 238° true and 300 m east of Transect 1. 13 August 1981

Meter mark	Depth meters	Bottom type and species
42	3.7	*Dilophus alternans*
43	3.7	Sand, *Thalassia*, *Syringodium*
44	3.7	Sand
45	3.7	*Thalassia*
46	4.6	Sand, *Thalassia, Dilophus alternans*
47	4.6	Sand, *Thalassia*
48	4.6	Sand, *Thalassia*
49	4.6	*Thalassia*
50	4.6	*Thalassia*, sand
51	4.6	*Anthosigmella varians*
52	4.6	*Thalassia*
53	4.6	*Porites porites*
54	4.6	*Dysidea etherea*, *Didemnum amethysteum*
55	4.6	*Thalassia*, sand
56	4.6	*Thalassia*
57	4.6	*Thalassia*
58	4.6	*Clypeaster rosaceus*
59	4.6	*Thalassia*
60	4.6	*Dysidea etherea*
61	4.6	*Thalassia*
62	4.6	*Dictyota cervicornis*, *Dilophus alternans*
63	4.6	*Thalassia*
64	4.6	*Thalassia*
65	4.6	*Thalassia*
66	4.6	*Dysidea etherea*
67	4.6	*Thalassia*
68	4.6	*Thalassia*
69	4.6	*Dilophus alternans*
70	4.6	Filamentous alga
71	4.6	*Thalassia*
72	4.6	*Thalassia*
73	4.6	Olivella nivea
74	4.6	Sand
75	4.6	Sand
76	4.6	Sand
77	4.6	Sand
78	4.6	Sand
79	4.6	Sand
80	4.6	Sand

Site 10. Turtle Rocks

Transect 3. About 400 m long run on a heading of 238° true and 300 m east of Transect 2. 13 August 1981

Meter mark	Depth meters	Bottom type and species
1	3.0	*Pseudopterogorgia americana*
2	3.0	*Pseudoplexaura porosa*
3	3.0	*Briareum asbestinum*
4	2.4	Red coralline, *Dictyota cervicornis*
5	2.4	*Pseudopterogorgia americana*
6	1.8	*Acropora palmata* (50% white spot)
7	1.8	*A. cervicornis*
8	1.8	Sand
9	1.8	*Plexaura flexosa*
10	1.8	*Acropora cervicornis*
I 1	1.8	*Muricea muricata*
12	1.8	Hardbottom
13	1.8	*Siderastrea radians*
14	1.8	Filamentous alga
15	1.8	*Plexaura homomalla*
16	1.8	*Porites porites*
17	1.8	Rubble
18	1.8	*Laurencia* sp.
19	1.8	*Acropora cervicornis* (50% white spot)
20	1.8	Sand
21	1.8	*Porites porites*
22	1.8	*Laurencia* sp.
23	1.8	*Diploria strigosa*
24	1.8	*Montastraea cavernosa*
25	1.8	*Muricea muricata*
26	1.8	Sand, rubble
27	1.8	*Muricea muricata*
28	1.8	Rubble, sand
29	1.8	Rubble, sand
30	3.0	Rubble, *Thalassia*
31	3.0	Rubble, *Homotrema rubrum* on rubble
32	3.0	*Dasycladus vermicularis*
33	3.0	*Thalassia*
34	3.0	*Halimeda incrassata, Dilophus alternans*
35	3.0	*Millepora alcicornis*
36	3.0	*Cistenides regalis*
37	3.0	*Tedania ignis*
38	3.0	*Dilophus alternans*
39	3.0	*Syringodium*, *Dilophus alternans*
40	3.0	*Thalassia*
41	3.0	*Thalassia*
42	3.0	*Thalassia*

Site 10. Turtle Rocks (cont.)

Transect 3. About 400 m long run on a heading of 238° true and 300 m east of Transect 2. 13 August 1981

Meter mark	Depth meters	Bottom type and species
43	3.0	*Thalassia*
44	3.0	*Thalassia*
45	3.0	*Thalassia*
46	3.0	*Thalassia*, *Syringodium*
47	3.0	*Thalassia, Syringodium*
48	3.0	*Anadyomene stellata*, *Dictyota,* solitary tunicate
49	3.0	*Thalassia*
50	3.0	*Thalassia*
51	3.0	*Dysidea* sp.
52	3.o	*Thalassia*
53	3.0	*Thalassia*
54	3.0	*Halimeda opuntia triloba, Chondrilla nucula*
55	3.0	*Laurencia*
56	3.0	*Thalassia*
57	3.0	*Halimeda incrassata*
58	3.0	*Thalassia*
59	3.0	*Thalassia*
60	3.0	*Halimeda monile*
61	3.0	*Thalassia*
62	3.0	*Thalassia*
63	3.0	*Thalassia*
64	3.0	*Thalassia*
65	3.0	*Thalassia*
66	3.0	*Thalassia*
67	3.0	*Clypeaster rosaceus*
68	3.0	*Thalassia*
69	3.0	*Thalassia*
70	3.0	*Thalassia*
71	3.0	*Thalassia*
72	3.0	*Thalassia*
73	3.0	*Thalassia*
74	3.0	*Thalassia*
75	3.0	*Thalassia*
76	3.0	*Thalassia*
77	3.0	*Thalassia*
78	3.0	*Rhipocephalus phoenix*
79	3.0	*Thalassia*
80	3.0	*Thalassia*

9.11.2. Quadrats

Site 10. Turtle Rocks Coral Quadrats
3 October 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					*Erythropodium caribaeorum*	2	0	5	0
Thalassia	5	3	15	0	*Palythoa mammillosa*	0	0	0	1
Halimeda incrassata	0	4	2	0	*Millepora alcicornis*	4	2	4	4
H. tuna	0	0	2	0	*Porites asteroides*	4	7	6	10
Dilophus alternans	0	1	0	1	*P. porites*	1	1	0	1
Dictyota cervicornis	2	3	x	1	*Favia fragum*	4	0	1	0
Valonia ventricosa	0	5	2	3	*Agaricia agaricites*	1	0	0	0
Amphiroa sp.	0	1	0	1	*Diploria clivosa*	1	0	1	0
Algal mat	x	0	0	0	*Acropora cervicornis*	x	x	x	2
Filamentous red	0	1	0	0	*Dichocoenia stokesi*	0	1	0	0
					Siderastrea siderea	0	1	0	2
PORIFERA					*S. radians*	0	0	2	0
					Diploria labyrinthiformis	0	0	1	x
Aplysina sp.	0	0	0	1	*Montastraea annularis*	0	0	0	x
Chondrilla nucula	2	0	5	1					
Haliclona compressa	1	0	0	0	POLYCHAETA				
H. oculata	1	0	0	0					
Ircinia strobilina	2	2	0	2	Polychaetes spp.	0	1	0	0
Niphates erecta	1	1	1	0	Sabellids	0	0	3	1
Spinosella vaginalis	0	0	4	0	Serpulid	0	0	0	2
Thalysias juniperina	0	6	0	1					
Keratose indet.	1	0	3	1	MOLLUSCA				
Orange sponge indet.	0	0	1	0					
					Coralliophila caribaea	0	1	0	0
COELENTERATA					Snail sp.	0	1	0	0
					Barbatia cancellaria	0	0	0	2
Gorgonia ventalina	2	2	0	0	*Isognomon* sp.	0	0	0	1
Pseudopterogorgia americana	4	x	3	0	CRUSTACEA				
P. acerosa	0	1	0	0					
Pseudoplexaura flagellosa	3	2	3	0	*Paguristes* sp.	0	1	0	0
P. crucis	1	0	0	0					
P. porosa	2	1	0	0	ECHINODERMATA				
Plexaura homomalla	1	1	1	0					
P. flexosa	1	0	2	0	Brittle star	1	1	0	0
Eunicea mammosa	1	1	1	0	*Eucidaris tribuloides*	0	0	0	?
E. fusca	0	0	1	0					
Muricea muricata	0	1	0	0	ASCIDIACEA				
Briareum asbestinum	3	3	2	1					
					Solitary tunicate	0	0	0	1

Site 10. Turtle Rocks Grass Quadrats
27 August 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					COELENTERATA				
Halimeda incrassata	19	0	0	0	*Manicina areolata*	0	1	0	0
H. tuna	2	0	3	0	*Cladocora arbuscula*	0	1	2	1
Opuntia triloba	0	23	14	17	*Porites porites*	0	1	0	2
H. discoides	0	0	0	6	*Siderastrea siderea*	0	0	0	2
Penicillus capitatus	0	1	0	1					
P. dumetosus	0	0	0	4	POLYCHAETA				
Batophora oerstedii	0	0	0	5					
Dictyosphaeria cavernosa	0	3	0	0	Feather worms	2	0	4	4
Valonia ventricosa	0	3	0	0	Tube worms in sponges	0	5	0	0
Udotea flabellum	2	0	2	0	*Hermodice carunculata*	0	5	0	0
Dilophus alternans	22	30	20	16					
Rhipocephalus phoenix	0	2	1	4	MOLLUSCA				
PORIFERA					*Astraea phoebia*	2	0	1	0
					Tegula fasciata	0	0	1	0
Dysidea etherea	8	10	7	8	*Murex recurvirostris*	0	0	0	4
Dysidea sp.	0	3	2	4					
Tedania ignis	7	18	0	18	CRUSTACEA				
Chondrilla nucula	4	0	5	0					
Ircinia strobilina	0	3	0	0	Crab (got away)	0	1	0	0
Anthosigmella vaginalis	0	1	0	1					
Haliclona viridis	0	0	0	1	ECHINODERMATA				
Choristida sp.	0	0	0	2					
Red sponge indet.	0	0	3	0	*Clypeaster rosaceus*	0	1	0	0
Sponge indet.	0	0	0	2	*Lytechinus variegatus*	0	0	0	1
Sponge indet.	0	0	0	2	*Eucidaris tribuloides*	0	1	0	0
					Ophiothrix oerstedii	0	1	1	0
					Brittle star indet.	1	3	0	5
					Starfish	0	0	1	0
					ASCIDIACEA				
					Didemnum candidum	0	1	0	1
					D. amethysteum	0	2	0	0

Site 10. Turtle Rocks Sand Quadrats
27 August 1981

Species	Quadrats			
	1	2	3	4
ALGAE				
Penicillus capitatus	6	0	0	2
P. sp.	3	0	0	2
Dasycladus vermicularis	1	8	0	1
Caulerpa prolifera	0	0	0	1
Bostrychia montagnei	0	1	0	0
Alga sp. A	0	1	0	0
Alga sp. B	0	0	1	0
Alga sp. C	0	0	1	0
Alga sp. D	0	0	0	1
ECHINODERMATA				
Astropecten duplicatus	1	0	0	0
Lytechinus variegatus	0	1	0	0
Mellita sexiesperforata	0	0	1	0

9.12. Site 11. Ocean Reef

9.12.1. Transects

Transect 1. About 400 m long run on a heading of 288° true ending 500 m from navigation marker "2".
27 July 1980

Meter mark	Depth meters	Bottom type and species
1	4.0	*Thalassia*
2	4.0	*Thalassia*
3	4.0	Silty sand
4	4.0	*Halimeda monile*
5	4.0	*H. tuna*
6	4.0	*Thalassia*
7	4.0	Silty sand
8	4.0	*Thalassia*
9	4.0	*Thalassia*
10	4.0	*Thalassia*
11	4.0	Silty sand
12	4.0	*Thalassia*
13	4.0	Silty sand
14	4.0	*Thalassia*
15	4.0	Silty sand with small fecal pellets
16	4.0	*Thalassia*
17	4.0	Silty sand
18	4.0	Silty sand, *Thalassia*
19	4.0	Silty sand mound
20	4.0	*Thalassia*
21	4.0	*Thalassia*
22	4.0	Silty sand
23	4.0	*Thalassia*
24	4.0	*Thalassia*
25	4.0	*Thalassia, Codakia orbicularis*
26	4.0	*Thalassia*
27	4.0	*Thalassia*
28	4.0	*Halimeda monile*
29	4.0	*Thalassia*
30	4.0	*Thalassia*
31	4.0	*Thalassia*
32	4.0	Silty sand
33	4.0	*Halimeda monile*
34	4.0	Silty sand
35	4.0	Silty sand mound
36	4.0	*Thalassia*
37	4.0	*Penicillus capitatus*
38	4.0	Silty sand
39	4.0	*Thalassia*

Site 11. Ocean Reef (cont.)

Transect 1. About 400 m long run on a heading of 288° true ending 500 m from navigation marker "2".
27 July 1980

Meter mark	Depth meters	Bottom type and species
40	4.0	*Thalassia*
41	4.0	*Thalassia*
42	4.0	Silty sand
43	4.0	*Halimeda incrassata*
44	4.0	*Thalassia*
45	4.0	*Thalassia*
46	4.0	*Thalassia*
47	4.0	Silty sand
48	4.0	Silty sand, *Thalassia*
49	4.0	*Thalassia*
50	4.0	Silty sand mound
51	4.0	*Thalassia*
52	4.0	Silty sand mound
54	4.0	*Thalassia*
55	4.0	*Thalassia*
56	4.0	*Halimeda* sp.
57	4.0	Silty sand mound
58	4.0	*Thalassia*
59	4.0	Silty sand mound
60	4.0	*Thalassia*
61	4.0	*Thalassia*
62	4.0	*Thalassia*
63	4.0	Silty sand mound
64	4.0	*Thalassia*
65	4.0	Silty sand
66	4.0	*Thalassia*
67	4.0	*Thalassia*
68	4.0	*Thalassia*
69	4.0	Hydroid
70	4.0	*Thalassia*
71	4.0	*Haliclona viridis*
72	4.0	*Thalassia*
73	4.0	*Thalassia*
74	4.0	*Thalassia*
75	4.0	*Thalassia*
76	4.0	Silty sand
77	4.0	Silty sand
78	4.0	*Thalassia*
79	4.0	*Thalassia*
80	4.0	Silty sand mound

Site 11. Ocean Reef

Transect 2. About 400 m long run on a heading of 288° true and 300 m east of Transect 1. 23 August 1980

Meter mark	Depth meters	Bottom type and species
1	4.0	*Thalassia*
2	4.0	*Thalassia*
3	4.0	*Thalassia*
4	4.0	*Thalassia*, *Tegula fasciata*
5	4.0	*Thalassia*
6	4.0	Sand mound
7	4.0	*Thalassia*
8	4.0	*Thalassia*
9	4.0	*Thalassia*
10	4.0	*Thalassia*
11	4.0	*Thalassia*
12	4.0	*Thalassia*
13	4.0	*Thalassia*
14	4.0	*Thalassia*, *Plexaura lamourouxii*
15	4.0	*Thalassia*, sand mound
16	4.0	*Thalassia*, sand mound
17	4.0	*Thalassia*, *Demospongia* indet.
18	4.0	*Thalassia*
19	4.0	*Thalassia*
20	4.3	*Thalassia*, *Codakia orbicularis*
21	4.3	*Thalassia*
22	4.3	*Thalassia,* sand mound
23	4.3	*Thalassia*, sand mound
24	4.3	*Thalassia*
25	4.3	*Thalassia*
26	4.3	*Thalassia*
27	4.3	Sand
28	4.3	*Thalassia*
29	4.3	*Thalassia*
30	4.3	*Thalassia*
31	4.3	*Thalassia, Codakia orbicularis*
32	4.3	*Thalassia*, *Halimeda* sp.
33	4.3	*Thalassia*
34	4.3	*Thalassia*
35	4.3	Sand mound, *Codakia orbicularis*
36	4.3	*Thalassia*
37	4.3	*Thalassia*
38	4.3	*Thalassia, Codakia orbicularis*
39	4.3	*Thalassia*
40	4.6	*Thalassia*
41	4.6	*Thalassia*
42	4.6	*Thalassia*

Site 11. Ocean Reef (cont.)

Transect 2. About 400 m long run on a heading of 288° true and 300 m east of Transect 1. 23 August 1980

Meter mark	Depth meters	Bottom type and species
43	4.6	*Thalassia*
44	4.6	*Thalassia,* sand mound
45	4.6	*Thalassia*
46	4.6	*Thalassia*
47	4.6	*Thalassia*, *Codakia orbicularis*
48	4.6	*Thalassia*
49	4.6	*Thalassia*
50	4.6	*Thalassia*, *Halimeda incrassata*
51	4.6	*Thalassia*, *H. incrassata*
52	4.6	*Thalassia*
53	4.6	*Thalassia*
54	4.6	Sand
55	4.6	*Thalassia*
56	4.6	*Thalassia*
57	4.6	*Thalassia*
58	4.6	*Thalassia*
59	4.6	*Thalassia*
60	4.6	*Thalassia*
61	4.6	*Thalassia*
62	4.2	*Thalassia*
63	4.2	*Thalassia*
64	4.2	*Thalassia*
65	4.2	*Thalassia*
66	4.2	Sand
67	4.2	*Thalassia*
68	4.2	*Thalassia*
69	4.2	*Thalassia*, sand
70	4.6	*Thalassia*
71	4.6	*Thalassia*
72	4.6	*Thalassia*
73	4.6	*Thalassia*
74	4.6	*Thalassia*
75	4.6	*Thalassia*
76	4.6	*Thalassia*
77	4.6	*Thalassia*
78	4.6	*Halimeda incrassata*
79	4.6	*Thalassia*
80	4.6	*Thalassia*

Site 11. Ocean Reef

Transect 3. About 400 m long run on a heading of 288° true and 300 m west of Transect 1. 23 August 1980

Meter mark	Depth meters	Bottom type and species
0	3.7	*Thalassia*
1	3.7	*Thalassia*, *Codakia orbicularis*
2	3.7	*Thalassia*
3	3.7	Sand mound
4	3.7	*Thalassia*, *Codakia orbicularis*
5	3.7	*Thalassia*
6	3.7	*Thalassia*
7	3.7	*Thalassia*
8	3.7	*Thalassia*
9	3.7	*Thalassia, Halimeda*
10	3.7	*Thalassia*
11	3.7	*Thalassia*
12	3.7	Sand mound
13	3.7	Sand
14	3.7	*Thalassia*
15	3.7	*Thalassia*
16	3.7	*Thalassia, Halimeda*
17	3.7	*Thalassia*
18	4.0	*Thalassia*
19	4.0	*Thalassia*
20	4.0	*Thalassia, Codakia orbicularis*
21	4.0	*Thalassia*, *C. orbicularis*
22	4.0	*Thalassia*
23	4.0	*Thalassia*
24	4.0	*Thalassia*
25	4.0	Sand
26	4.0	*Thalassia,* sand
27	4.0	*Thalassia*
28	4.0	Sand mound
29	4.0	*Thalassia*
30	4.0	*Thalassia*
31	4.0	*Thalassia*
32	4.0	*Thalassia*
33	4.0	Sand mound
34	4.0	*Thalassia*
35	4.0	*Thalassia*
36	4.0	*Thalassia*
37	4.0	*Thalassia*
38	4.0	*Thalassia*
39	4.0	Sand
40	4.0	*Thalassia, Codakia orbicularis*
41	4.0	Sand mound

Site 11. Ocean Reef (cont.)

Transect 3. About 400 m long run on a heading of 288° true and 300 m west of Transect 1. 23 August 1980

Meter mark	Depth meters	Bottom type and species
42	4.0	*Thalassia*
43	4.0	*Thalassia*
44	4.0	*Thalassia*
45	4.0	Sand mound, *Codakia orbicularis*
46	4.0	Sand mound, *Codakia orbicularis*
47	4.0	*Thalassia*
48	4.0	*Thalassia*
49	4.0	*Thalassia*
50	4.0	*Thalassia*
51	4.0	*Thalassia*, *Halimeda incrassata*
52	4.0	*Thalassia*
53	4.0	Sand mound
54	4.0	*Thalassia*
55	4.0	Sand mound
56	4.0	Sand
57	4.0	Sand mound
58	4.0	*Halimeda incrassata*
59	4.0	*Thalassia*
60	4.0	*Thalassia*
61	4.0	Sand mound
62	4.0	Sand mound
63	4.0	*Thalassia*, *Codakia orbicularis*
64	4.0	*Thalassia*
65	4.0	*Thalassia*
66	4.0	Sand mound, *Codakia orbicularis*
67	4.0	Sand mound
68	4.0	*Thalassia*
69	4.0	*Thalassia*, *Codakia orbicularis*
70	4.0	*Thalassia*
71	4.0	Sand mound, *Codakia orbicularis*
72	4.0	Sand mound
73	4.0	*Thalassia*
74	4.0	*Thalassia*
75	4.0	*Thalassia*
76	4.0	Sand mound
77	4.3	*Thalassia*
78	4.3	*Thalassia*
79	4.3	*Thalassia*
80	3.0	*Thalassia*

9.12.2. Quadrats

Site 11. Ocean Reef Grass Quadrats
23 August 1980

Species	Quadrats 1	2	3	4
ALGAE				
Rhipocephalus phoenix	0	0	0	1
Halimeda incrassata	7	0	0	0
Penicillus capitatus	3	0	0	0
Penicillus sp.	0	0	0	2
PORIFERA				
Chondrilla nucula	0	1	0	0
Desmacella sp.	1	0	0	0
MOLLUSCA				
Modulus modulus	1	0	0	8
Astraea phoebia	1	0	0	0
A. tecta tecta	1	0	0	0
Codakia orbicularis	1	2	0	3
Anadara floridana	1	2	0	3
Glycymeris pectinata	0	0	1	0
Laevicardium laevigatum	0	0	1	1
ECHINODERMATA				
Schizaster orbignyana	0	0	0	1
ASCIDIACEA				
Microcosmus jelleri	0	0	2	0

9.13. Site 12. Turtle Harbor

9.13.1. Transects

Transect 1. About 400 m long run on a heading of 318° true starting 100 m inshore of marker "27" on a range with Carysfort Light.
28 August 1981

Meter mark	Depth meters	Bottom type and species
0	4.3	*Thalassia*, muddy sand
1	4.3	*Thalassia*
2	4.3	Muddy sand
3	4.5	*Thalassia*
4	4.5	Muddy sand
5	4.5	*Thalassia*
6	4.5	*Thalassia*
7	4.5	Muddy sand
8	4.5	Muddy sand
9	4.5	*Thalassia*
10	4.5	*Thalassia*
11	4.5	*Thalassia*
12	4.5	*Thalassia*
13	4.5	*Thalassia*
14	4.5	*Thalassia*
15	4.5	Muddy sand
16	4.5	*Thalassia*
17	4.5	Muddy sand
18	4.5	Muddy sand
19	4.5	*Thalassia*
20	4.5	*Thalassia*
21	4.5	Muddy sand
22	4.3	*Thalassia*
23	4.5	*Thalassia*
24	4.5	*Thalassia*
25	4.5	*Thalassia*
26	4.5	Muddy sand
27	4.5	*Thalassia*
28	4.5	Muddy sand
29	4.3	*Thalassia*
30	4.5	*Thalassia*
31	4.5	*Thalassia*
32	4.5	*Thalassia*
33	4.5	Muddy sand
34	4.5	Muddy sand
35	4.5	Muddy sand
36	4.5	*Thalassia*
37	4.5	*Thalassia*
38	4.5	Muddy sand

Site 12. Turtle Harbor (cont.)

Transect 1. About 400 m long run on a heading of 318° true starting 100 m inshore of marker "27" on a range with Carysfort Light.
28 August 1981

Meter mark	Depth meters	Bottom type and species
39	4.5	*Thalassia*
40	4.5	*Thalassia*
41	4.5	*Thalassia*
42	4.5	*Thalassia*
43	4.5	*Thalassia*
44	4.5	*Thalassia*
45	4.5	*Thalassia*
46	4.5	Muddy sand
47	4.5	*Thalassia*
48	4.5	*Thalassia*
49	4.5	Muddy sand
50	4.5	*Thalassia*
51	4.5	*Thalassia*
52	4.5	*Lytechinus variegatus*
53	4.5	*Thalassia*
54	4.5	Muddy sand
55	4.5	Muddy sand
56	4.5	*Thalassia*
57	4.5	Muddy sand
58	4.5	Muddy sand
59	4.5	*Thalassia*
60	4.5	*Thalassia*
61	4.5	*Thalassia*
62	4.5	*Thalassia*
63	4.5	*Thalassia*
64	4.5	Muddy sand
65	4.5	*Thalassia*
66	4.5	Muddy sand
67	4.5	Muddy sand
68	4.5	*Thalassia*
69	4.5	*Thalassia*
70	4.5	*Thalassia*
71	4.5	*Thalassia*
72	4.5	*Thalassia*
73	4.5	*Thalassia*
74	4.5	*Thalassia*
75	4.5	Muddy sand
76	4.5	*Thalassia*
77	4.5	*Thalassia*

Site 12. Turtle Harbor (cont.)

Transect 1. About 400 m long run on a heading of 318° true starting 100 m inshore of marker "27" on a range with Carysfort Light.
28 August 1981

Meter mark	Depth meters	Bottom type and species
78	4.5	*Thalassia*
79	4.5	*Thalassia*
80	4.5	Muddy sand

Site 12. Turtle Harbor

Transect 2. About 400 m long run on a heading of 318° true and 300 m west of Transect 1. 28 August 1981

Meter mark	Depth meters	Bottom type and species
1	5.5	*Thalassia*
2	5.5	Muddy sand
3	5.5	*Thalassia*
4	5.5	*Thalassia*
5	5.5	Muddy sand
6	5.5	*Thalassia*
7	5.5	Muddy sand
8	5.5	*Thalassia*
9	5.5	Muddy sand
10	5.5	Muddy sand
11	5.5	Muddy sand
12	5.5	*Thalassia*
13	5.5	*Syringodium*
14	5.5	*Thalassia*
15	5.5	*Thalassia*
17	5.5	Muddy sand
18	5.5	Muddy sand
19	5.5	*Thalassia*
20	5.5	Sand
21	5.5	*Thalassia*
22	5.5	*Thalassia*
23	5.5	Muddy sand
24	5.5	*Thalassia*
25	5.5	*Thalassia*
26	5.5	Muddy sand
27	5.5	*Thalassia*
28	5.5	Muddy sand
29	5.5	*Thalassia*
30	5.5	*Thalassia*
31	5.5	Muddy sand
32	5.5	Muddy sand
33	5.5	*Thalassia*
34	5.5	*Thalassia*
35	5.5	*Thalassia*
36	5.5	*Thalassia*
37	5.5	*Penicillus dumetosus*
38	5.5	*Thalassia*
39	5.5	*Andara notabilis*
40	5.5	Muddy sand
41	5.5	Muddy sand
42	5.5	*Thalassia*
43	5.5	*Thalassia*

Site 12. Turtle Harbor (cont.)

Transect 2. About 400 m long run on a heading of 318° true and 300 m west of Transect 1. 29 August 1981

Meter mark	Depth meters	Bottom type and species
44	5.5	Muddy sand
45	5.5	Muddy sand
46	5.5	*Cistenides regalis*
47	5.5	*Thalassia*
48	5.5	*Thalassia*
49	5.5	*Thalassia*
50	5.5	Muddy sand
51	5.5	*Thalassia*
52	5.5	*Thalassia*
53	5.5	Muddy sand
54	5.5	Muddy sand
55	5.5	*Thalassia*
56	5.5	Muddy sand
57	5.5	*Thalassia*
58	5.5	*Thalassia*
59	5.5	*Thalassia*
60	5.5	Sand
61	5.5	Muddy sand
62	5.5	*Thalassia*
63	5.5	*Thalassia*
64	5.5	*Thalassia*
65	5.5	*Thalassia*
66	5.5	Muddy sand
67	5.5	*Thalassia*
68	5.5	*Thalassia*
69	5.5	Muddy sand
70	5.5	*Thalassia*
71	5.5	*Thalassia*
72	5.5	Muddy sand
73	5.5	*Thalassia*
74	5.5	*Thalassia*
75	5.5	Muddy sand
76	5.5	Muddy sand
77	5.5	*Thalassia*
78	5.5	*Thalassia*
79	5.5	*Thalassia*
80	5.5	Muddy sand

Site 12. Turtle Harbor

Transect 3. About 400 m long run on a heading of 318° true and 300 m east of Transect 1. 28 August 1981

Meter mark	Depth meters	Bottom type and species
0	6.1	*Halimeda incrassata*
1	6.1	*Thalassia*
2	6.1	*Thalassia*
3	6.1	*Thalassia*, *Laevicardium laevigatum*
4	6.1	*Thalassia*
5	6.1	*Thalassia*
6	6.1	*Thalassia, Penicillus capitatus, Codakia orbicularis*
7	6.1	*Thalassia*
8	6.1	*Thalassia*
9	6.1	*Thalassia,* Dorid nudibranch
10	6.1	*Spheciospongia vesparia*
11	6.1	*Thalassia*
12	6.1	*Thalassia*, *Halimeda incrassata*
13	6.1	*Thalassia*
14	6.1	*Thalassia*
15	6.1	*Thalassia*
16	6.1	*Thalassia*, *Halimeda monile*
17	6.1	*Thalassia*
18	6.1	*Thalassia*
19	6.1	*Thalassia*
20	6.1	*Thalassia*
21	6.1	*Penicillus capitatus*
22	6.1	*Thalassia*
23	6.1	*Thalassia*
24	6.1	*Thalassia*
25	6.1	Sand
26	6.1	*Thalassia*
27	6.1	*Thalassia*, *Halimeda incrassata*
28	6.1	*Thalassia*
29	6.1	*Thalassia, Linga pensylvanica*
30	6.1	*Thalassia*, *Penicillus capitatus*
31	6.1	*Thalassia*
32	6.1	*Thalassia*
33	6.1	*Thalassia*
34	6.1	*Thalassia*
35	6.1	*Thalassia*
36	6.1	*Thalassia*
37	6.1	*Thalassia*, *Halimeda incrassata*
38	6.1	*Thalassia, Lytechinus variegatus*
39	6.1	*Thalassia*
40	6.1	*Thalassia*
41	6.1	*Thalassia*

Site 12. Turtle Harbor (cont.)

Transect 3. About 400 m long run on a heading of 318° true and 300 m east of Transect 1. 28 August 1981

Meter mark	Depth meters	Bottom type and species
42	6.1	*Thalassia*
43	6.1	*Thalassia*
44	6.1	*Thalassia*
45	6.1	*Thalassia*
46	6.1	*Thalassia*
47	6.1	*Thalassia, Codakia orbicularis*
48	6.1	*Thalassia*
49	6.1	*Thalassia*
50	6.1	*Thalassia, Penicillus dumetosus*
51	6.1	*Thalassia, Halimeda incrassata, Codakia orbicularis*
52	6.1	*Thalassia*, sand burrows
53	6.1	*Thalassia*
54	6.1	*Thalassia*
55	6.1	*Thalassia*
56	6.1	*Thalassia, Penicillus capitatus*
57	6.1	*Thalassia*
58	6.1	*Thalassia*
59	6.1	*Thalassia*
60	6.1	*Thalassia, Astraea* sp.
61	6.1	*Thalassia*
62	6.1	*Thalassia*
63	6.1	*Thalassia*
64	6.1	*Thalassia*
65	6.1	*Thalassia*
66	6.1	*Thalassia*
67	6.1	*Thalassia*
68	6.1	*Thalassia*
69	6.1	*Thalassia*
70	6.1	*Thalassia*
71	6.1	*Thalassia*
72	6.1	*Thalassia*
73	6.1	*Thalassia*
74	6.1	*Thalassia*
75	6.1	*Thalassia*, *Halimeda monile*
76	6.1	*Thalassia*, *Halimeda incrassata*
77	6.1	*Thalassia*
78	6.1	*Thalassia*
79	6.1	*Thalassia, Halimeda incrassata*
80	6.1	*Thalassia*

9.13.2. Quadrats

Site 12. Turtle Harbor Grass Quadrats
29 August 1981

Species	Quadrats			
	1	2	3	4
ALGAE				
Halimeda incrassata	3	0	5	0
H. sp.	0	1	0	9
Penicillus capitatus	5	3	10	6
P. lamourouxii	0	0	1	0
P. sp.	0	2	0	1
Udotea flabellum	5	0	0	0
Avrainvillea nigricans	5	0	0	0
POLYCHAETA				
Loimia sp.	0	0	3	0
Terebellid A	2	0	0	0
Terebellid B	0	0	0	1
Sabella melanostigma	1	0	0	0
MOLLUSCA				
Modulus modulus	2	5	1	1
Astraea tecta	0	0	1	1
A. phoebia	0	1	0	0
Modiolus americanus	1	1	0	0
Glycymeris pectinata	1	0	0	0
Arca zebra	0	0	1	0
Codakia orbicular	0	0	0	1
Pecten antillarum	0	0	1	0
Laevicardium laevigatum	0	0	0	1
CRUSTACEA				
Paguristes puncticeps	1	0	0	0
P. sp. A	1	0	0	0
Callianassid sp.	0	0	0	6
ECHINODERMATA				
Actinopyga agassizi	1	0	0	1

9.14. Site 13. North Channel

9.14.1. Transects

Transect 1. About 400 m long run on a heading of 278° true starting at the base of marker "32".
11 June 1980

Meter mark	Depth meters	Bottom type and species
0	4.6	*Thalassia*
1	4.6	Mud
2	4.6	*Thalassia*
3	3.7	*Thalassia*, *Manicina areolata*, sponge indet.
4	3.7	*Thalassia*
5	3.7	Silty mud
6	3.7	Silty mud, *Halimeda incrassata*
7	3.5	*Thalassia*
8	3.7	*Thalassia*
9	3.7	*Thalassia*, silty mud
10	3.7	Silty mud
11	3.7	*Thalassia*
12	3.7	*Thalassia*, silty mud
13	3.7	Silty mud
14	3.7	*Halimeda* sp., *Ophionereis squamulosa*
15	3.7	*Thalassia*
16	3.7	*Thalassia*
17	3.7	*Aplysina* cauliformis
18	3.7	Silty mud on hardbottom
19	3.7	Silty mud on hardbottom
20	3.7	Silty mud on hardbottom
21	3.7	Silty mud on hardbottom
22	3.7	Silty mud on hardbottom
23	3.7	*Millepora alcicornis*
24	3.7	*Udotea, Ircinia felix*
25	3.7	*Enteromorpha, Halimeda* sp.
26	3.7	*Thalassia*
27	3.7	*Arca zebra*, *Homotrema rubrum*
28	3.7	*Halimeda incrassata*
29	3.7	Silty mud over hardbottom
30	3.7	*Halimeda* sp.
31	3.7	*Aplysina cauliformis, Enteromorpha, Dasycladus vermicularis*
32	3.7	Silty mud
33	3.7	Silty mud
34	1.8	Silty mud
35	1.8	*Gracilaria ferox, Dasycladus vermicularis*
36	1.8	*Dasycladus vermicularis*
37	1.8	*Halimeda* sp.
38	1.8	*Halimeda* sp., *Dasycladus vermicularis*

Site 13. North Channel

Transect 1. About 400 m long run on a heading of 278° true starting at the base of marker "32".
11 June 1980

Meter mark	Depth meters	Bottom type and species
39	1.8	*Gracilaria ferox*, *Dasycladus*
40	3.0	*Dasycladus*
41	3.0	*Ophionereis squamulosa*
42	3.0	*Sargassum pteropleuron*
43	3.0	Sand
44	3.0	Sandy mud
45	3.0	*Enteromorpha*, *Dasycladus*
46	3.0	*Dasycladus*
47	3.0	Sandy mud
48	3.0	*Ircinia felix*
49	3.0	*Dasycladus*
50	3.0	Sandy mud over hardbottom
51	3.0	*Enteromorpha*
52	3.0	*Dasycladus*
53	3.0	*Gracilaria ferox*, *Enteromorpha*
54	3.0	Sponge
55	3.0	*Enteromorpha*
56	3.0	*Enteromorpha*, *Acetabularia crenulata*
57	3.0	*Thalassia, Enteromorpha, Dictyosphaeria cavernosa*
58	3.0	*Enteromorpha*
59	1.8	*Dasycladus*
60	1.8	*Sargassum pteropleuron*
61	3.0	*Enteromorpha*
62	3.0	*Enteromorpha*
63	3.0	*Ircinia felix*
64	3.0	*Siderastrea siderea*
65	3.0	*Dasycladus*
66	3.0	*Enteromorpha*
67	3.0	*Gracilaria ferox*
68	3.0	*Enteromorpha*
69	1.8	*Enteromorpha*
70	1.8	*Enteromorpha, Halimeda* sp.
71	1.8	*Dasycladus*
72	1.8	*Enteromorpha*
73	1.8	*Sargassum pteropleuron*
74	1.5	*Dasycladus*
75	1.5	*Enteromorpha*, *Halimeda* sp.
76	1.5	*Dasycladus*

Site 13. North Channel

Transect 1. About 400 m long run on a heading of 278° true starting at the base of marker "32".
11 June 1980

Meter mark	Depth meters	Bottom type and species
77	1.5	Muddy sand, hardbottom, *Caulerpa prolifera*
78	1.5	Sandy mud, *Cliona deletrix*
79	1.5	*Thalassia*
80	1.5	*Acetabularia crenulata, Halimeda incrassata*

Site 13. North Channel

Transect 2. About 400 m long run on a heading of 278° true and 300 m west of Transect 1. 13 June 1980

Meter mark	Depth meters	Bottom type and species
1	4.6	*Thalassia,* silty mud
2	4.6	*Thalassia*
3	4.6	*Thalassia*
4	4.6	*Thalassia*
5	4.6	Mud, *Chione paphia*
6	4.6	*Thalassia*
7	4.6	*Thalassia*
8	4.6	*Thalassia*
9	4.6	*Thalassia*
10	4.6	*Thalassia*
11	4.6	*Thalassia*
12	4.6	*Thalassia*
13	4.6	*Thalassia*
14	4.6	*Thalassia*
15	4.6	*Thalassia*
16	4.6	Silty mud
17	4.6	Silty mud
18	4.6	*Thalassia,* silty mud
19	4.6	*Thalassia*
20	4.1	*Thalassia*
21	4.1	*Thalassia*
22	4.1	*Thalassia*
23	4.1	*Thalassia*
24	4.1	Mud
25	4.1	*Thalassia,* silty mud
26	4.1	Silty mud
27	4.1	*Thalassia*
28	4.9	*Thalassia*
29	4.9	*Thalassia*
30	4.9	*Thalassia*
31	4.9	*Thalassia,* silty mud
32	4.6	*Thalassia*
33	4.6	*Thalassia*
34	4.3	*Thalassia, Glycymeris pectinata*
35	4.3	*Thalassia,* silty mud
36	4.3	Silty mud
37	4.3	Silty mud
38	4.3	*Thalassia*
39	4.3	*Thalassia*
40	4.3	*Thalassia*
41	4.3	*Thalassia*
42	4.3	*Thalassia, Manicina areolata*

Site 13. North Channel (cont.)

Transect 2. About 400 m long run on a heading of 278° true and 300 m west of Transect 1. 13 June 1980

Meter mark	Depth meters	Bottom type and species
43	4.3	*Thalassia*
44	4.3	*Thalassia*, *Porites divaricata*
45	4.3	*Thalassia*
46	4.3	*Thalassia*
47	4.3	*Thalassia*
48	4.3	*Thalassia*
49	4.3	Silty mud
50	4.3	*Thalassia*
51	4.3	*Thalassia*
52	4.3	*Thalassia,* silty mud
53	4.3	*Haliclona coerulescens*
54	4.3	*Thalassia*
55	4.6	*Thalassia*
56	4.6	Silty mud
57	4.6	*Thalassia*
58	4.6	*Thalassia*
59	4.3	Silty mud
60	4.3	*Thalassia*
61	3.7	Silty mud
62	3.7	*Thalassia*
63	3.7	*Thalassia*
64	3.7	*Thalassia*
65	3.7	*Thalassia*
66	3.7	*Halimeda incrassata*
67	3.7	Sand over hardbottom
68	3.7	*Dasycladus*, *Laurencia*, *Homotrema rubrum*
69	3.7	*Dasycladus*
70	3.7	*Clypeaster rosaceus*
71	3.7	Sand on hardbottom
72	3.7	*Halimeda incrassata*
73	3.7	*H. incrassata*
74	3.7	*Dasycladus*
75	3.7	Sand over hardbottom
76	3.7	*Halimeda incrassata*
77	3.7	*H. incrassata*
78	3.7	*Laurencia*, *Halimeda* sp.
79	3.7	Sand over hardbottom
80	4.2	Sand over hardbottom

Site 13. North Channel

Transect 3. About 400 m long run on a heading of 278° true and 300 m east of Transect 1.
13 June 1980

Meter mark	Depth meters	Bottom type and species
0	4.3	*Thalassia*, silty mud
1	4.3	*Thalassia*, silty mud
2	4.0	*Thalassia*
3	4.0	*Thalassia*, silty mud
4	4.0	*Thalassia,* silty mud
5	3.7	Silty mud
6	3.7	Silty mud
7	3.7	Silty mud, *Thalassia*
8	3.7	Silty mud, *Thalassia*
9	3.7	*Thalassia*
10	3.7	*Thalassia*
11	3.7	Silty mud
12	3.7	*Ircinia felix*
13	3.7	*Aplysina cauliformis*
14	3.7	*Porites divaricata*
15	4.0	*Briareum asbestinum*, *Millepora alcicornis*
16	4.0	*Thalassia*
17	3.7	*Aplysina cauliformis*
18	3.7	Hardbottom
19	4.0	Hardbottom
20	4.0	Silty mud
21	4.0	*Thalassia*
22	4.0	Silty mud
23	3.4	Silty mud
24	3.4	Hardbottom
25	3.4	Hardbottom
26	3.4	*Thalassia*
27	3.4	*Thalassia*, *Halimeda incrassata*
28	3.4	Hardbottom
29	3.4	*Enteromorpha*, *Laurencia*, *Dasycladus*
30	3.4	*Dasycladus*
31	3.4	*Dasycladus*
32	3.4	*Halimeda incrassata*
33	3.4	*Dasycladus, Enteromorpha,* polynoid, *Amphiroa rigida*
34	3.4	*Halimeda incrassata, Pseudopterogorgia rigida*
35	3.4	*Pomatostegus stellatus*, *Marphysa* sp., *Dasycladus*
36	3.4	Hardbottom
37	3.4	Hardbottom
38	3.4	Hardbottom
39	3.4	Hardbottom
40	3.4	*Halimeda incrassata*, *Acetabularia crenulata*
41	3.4	*Enteromorpha*
42	3.4	Hardbottom

Site 13. North Channel (cont.)

Transect 3. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 13 June 1980

Meter mark	Depth meters	Bottom type and species
43	3.4	*Penicillus capitatus*
44	3.0	*Ophionereis squamulosa*
45	3.0	*Halimeda incrassata, Laurencia*
46	3.0	*Laurencia, Dasycladus*
47	3.0	*Dasycladus*
48	2.8	Hardbottom
49	2.8	*Halimeda incrassata*
50	2.8	*Dasycladus*
51	2.8	*Dasycladus*
52	2.8	*Halimeda tuna*, *Acetabularia crenulata*
53	2.8	*Halimeda, Enteromorpha*
54	2.8	*Sargassum pteropleuron*
55	2.8	*Sargassum*, *Laurencia*
56	2.8	*Verongia longissima, Aplysina cauliformis*
57	2.8	*Udotea flabellum*, *Laurencia*
58	2.8	*Halimeda incrassata*
59	2.8	*Halimeda, Enteromorpha*
60	2.8	*Sargassum pteropleuron*
61	2.8	*Pseudopterogorgia acerosa*
62	2.8	*Enteromorpha*
63	2.8	*Halimeda incrassata*, *Enteromorpha*
64	2.8	Hardbottom
65	2.5	*Penicillus capitatus*
66	2.5	*Halimeda incrassata*
67	2.5	*Enteromorpha*
68	2.5	Hardbottom
69	2.5	*Thalassia, Laurencia*
70	2.5	*Dasycladus*
71	2.5	*Enteromorpha*
72	2.5	*Enteromorpha*
73	2.5	*Enteromorpha*
74	2.5	*Dasycladus*
75	1.8	*Dasycladus, Halimeda incrassata*
76	1.8	*Halimeda incrassata, Sargassum pteropleuron*
77	1.8	*Dasycladus*
78	1.8	*Enteromorpha*
79	1.8	*Thalassia*
80	1.5	*Thalassia*

9.14.2. Quadrats

Site 13. North Channel Hardbottom Quadrats
21 September 1980

Species	Quadrats 1-2	3-4	Species	Quadrats 1-2	3-4
ALGAE			COELENTERATA		
Penicillus dumetosus	6	0	*Millepora alcicornis*	3	0
P. capitatus	1	0	*Pseudoplexaura flagellosa*	1	1
P. pyriformis	0	20	*Pseudopterogorgia acerosa*	1	0
Acetabularia crenulata	1	0	*P. rigida*	0	1
Rhipocephalus phoenix	1	0	*Pterogorgia* anceps	0	1
Anadyomene stellata	1	0	*Siderastrea siderea*	3	2
Halimeda incrassata	32	45	*Porites furcata*	1	0
H. monile	0	1			
H. tuna	72	63	POLYCHAETA		
Dasycladus vermicularis	12	1200			
Dictyota sp.	80	0	Amphinomid	1	0
Udotea flabellum	0	8			
Udotea sp.	5	0	SIPUNCULIDA		
Caulerpa cupressoides	0	12			
Colpomenia sinuosa	3	0	Sipunculid	1	0
Laurencia sp.	0	8			
Sargassum pteropleuron	10	60	MOLLUSCA		
Filamentous red	32	37			
			Arca zebra	0	1
PORIFERA			*Glycymeris pectinata*	6	0
Ircinia strobilina	1	2	CRUSTACEA		
I. felix	1	1			
Aplysina cauliformis	6	0	*Paguristes* sp.	2	0
Spongia sp.	2	0			
Sponge sp.	1	0	ECHINODERMATA		
Niphates digitalis	0	5			
			Clypeaster rosaceus	1	4
			Brittle star sp. A	2	0
			Brittle star sp. B	0	6

Site 13. North Channel Grass Quadrats
21 September 1980

Species	Quadrats 1	2	3-4	Species	Quadrats 1	2	3-4
ALGAE				COELENTERATA			
Halimeda monile	2	0	7	*Manicina areolata*	2	5	4
H. incrassata	x	x	x	*Porites porites*	0	0	1
H. sp.	1	4	0				
Acetabularia crenulata	1	0	0	POLYCHAETA			
Penicillus pyriformis	0	0	4				
Udotea flabellum	0	0	14	Polychaete fragment	0	0	1
Avrainvillea nigricans	1	0	0	Sabellid	0	0	1
Rhipocephalus phoenix	1	1	5				
Dictyosphaerea cavernosa	0	0	1	MOLLUSCA			
Colpomenia sinuosa	0	0	1				
				Ark shells	0	3	0
PORIFERA				*Arca zebra*	0	0	7
				Bivalve sp.	0	2	0
Aplysina cauliformis	3	6	1	*Laevicardium laevigatum*	0	0	3
Haliclona viridis	0	4	0	*Anadara notabilis*	0	0	1
Chondrilla nucula	0	2	2	*Codakia orbicularis*	0	0	1
Myriastra kallitetilla	0	0	1	*Chione cancellata*	0	0	1
Ircinia felix	0	0	1				
Haliclona sp.	0	0	1	ECHINODERMATA			
Lissodendorix sp.	0	0	3				
Siphonodictyon siphonum	0	0	1	*Lytechinus variegatus*	2	0	6
				Clypeaster rosaceus	0	0	1
				Brittle star sp.	0	0	1

9.15. Site 14. South Channel

9.15.1. Transects

Transect 1. About 400 m long run on a heading of 328° true starting at navigation marker "2". 13 September 1981

Meter mark	Depth meters	Bottom type and species
0	4.6	*Thalassia*
1	4.6	*Acanthophora, Batophora*, *Udotea flabellum*
2	4.6	*Halimeda monile*
3	4.6	*Thalassia*
4	4.6	*Astraea tecta*, *Thalassia, Udotea*
5	4.6	*Thalassia*
6	4.6	*Thalassia*
7	4.6	*Thalassia*
8	4.6	*Thalassia*
9	4.6	*Thalassia*, *Avrainvillea nigricans*
10	4.6	*Thalassia, Astraea tecta*
11	4.6	*Thalassia*
12	4.6	*Thalassia*, *Penicillus*
13	4.6	*Thalassia*
14	4.6	*Thalassia*
15	4.6	*Thalassia*
16	4.6	*Thalassia*
17	4.6	*Thalassia*, *Codakia orbicularis*
18	4.4	*Thalassia*
19	4.4	*Thalassia*
20	4.4	*Udotea flabellum*
21	4.4	*Sargassum pteropleuron*, *Halimeda incrassata*
22	4.4	Sand
23	4.4	*Porites divaricata, Batophora, Acanthophora*
24	4.4	*Halimeda monile, Ulva lactuca*
25	4.4	*Thalassia*, *Dasycladus*
26	4.4	Alga sp.
27	4.0	Alga sp.
28	4.0	Alga sp.
29	4.0	*Dasycladus, Aplysina cauliformis*
30	4.0	Sand
31	4.0	*Udotea, Halimeda tuna*
32	4.0	*Acanthophora*, *Udotea, Batophora*
33	4.0	*Acanthophora*
34	4.0	*Acanthophora, Udotea*
35	4.0	*Thalassia*
36	4.0	*Acanthophora, Halimeda tuna*
37	4.0	*Acanthophora*, *Udotea*
38	4.0	*Dasycladus*
39	4.0	*Acanthophora, Caulerpa* sp.

Site 14. South Channel (cont.)

Transect 1. About 400 m long run on a heading of 328° true starting at navigation marker "2". 13 September 1981

Meter mark	Depth meters	Bottom type and species
40	4.0	*Udotea, Halimeda tuna, Dasycladus*
41	4.0	*Halimeda monile, Acanthophora , Glycymeris pectinata*
42	4.0	*Udotea* sp.
43	4.0	Alga sp.
44	4.0	*Dasycladus*
45	4.0	*Acanthophora, Dasycladus*
46	4.0	*Thalassia*
47	4.0	*Dasycladus*
48	4.0	*Dasycladus, Haliclona viridis, Geodia gibberosa*
49	4.0	Sand
50	3.9	*Udotea, Valonia, Dasycladus*
51	3.9	*Porites divaricata, Dasycladus*
52	3.9	*Udotea, Halimeda tuna*
53	3.9	*Udotea*
54	3.9	*Thalassia*
55	3.9	*Dasycladus*
56	3.9	*Dasycladus*
57	3.9	*Dasycladus, Acanthophora*
58	3.9	*Udotea*
59	3.9	*Dasycladus*
60	3.9	*Avrainvillea nigrans*
61	3.9	*A. nigrans*
62	3.9	*Dasycladus*
63	3.9	*Dasycladus*
64	3.9	*Acanthophora*
65	3.9	*Acanthophora*
66	3.9	*Dasycladus*
67	3.9	*Avrainvillea nigricans*
68	3.9	*A. nigricans*
69	3.9	Alga sp.
70	3.7	*Thalassia*
71	3.7	*Dasycladus*
72	3.7	*Dasycladus*
73	3.7	*Millepora alcicornis*
74	3.7	*Dasycladus*
75	3.7	*Siderastrea radians*, *Halimeda* sp.
76	3.7	*Acanthophora*
77	3.7	*Sargassum pteropleuron*
78	3.7	*Udotea*
79	3.7	*Thalassia*
80	3.7	*Halimeda tuna*

Site 14. South Channel

Transect 2. About 400 m long run on a heading of 328° true and 300 m east of Transect 1. 14 September 1981

Meter mark	Depth meters	Bottom type and species
0	4.0	*Ircinia campana*
1	4.0	*Acanthophora*
2	3.7	*Halimeda monile*
3	3.7	Alga sp.
4	3.7	Alga sp.
5	3.7	*Dasycladus*
6	4.0	*Dasycladus*
7	4.3	*Batophora*
8	4.3	*Batophora, Avrainvillea*
9	4.3	Alga sp.
10	4.3	*Halimeda monile*
11	4.3	Alga sp.
12	4.3	*Dasycladus*, *Batophora*
13	4.3	*Siderastrea radians*
14	4.3	*Halimeda monile*
15	4.3	*Cinachyra* sp.
16	4.3	*Sargassum pteropleuron*
17	4.3	Alga sp.
18	4.3	Alga sp.
19	4.3	*Thalassia*
20	4.3	Alga sp.
21	4.3	Alga sp.
22	4.3	*Halimeda tuna*
23	4.3	*H. tuna*
24	4.3	Sand
25	4.3	*Halimeda tuna*
26	4.3	Alga sp.
27	4.3	*Udotea*
28	4.0	*Halimeda monile, Ulva lactuca*
29	4.0	*H. monile*
30	4.0	*Cinachyra* sp.
31	4.0	*Halimeda globosa*
32	4.0	*Udotea*
33	4.3	*Batophora, Halimeda tuna*
34	4.3	Sand
35	4.3	*Halimeda monile*
36	4.3	*Thalassia*
37	4.3	Sand
38	4.3	Alga sp.
39	4.3	*Siderastrea radians*
40	4.3	Alga sp.
41	4.3	*Halimeda lacrimosa*

Site 14. South Channel (cont.)

Transect 2. About 400 m long run on a heading of 328° true and 300 m east of Transect 1. 14 September 1981

Meter mark	Depth meters	Bottom type and species
42	4.3	*H. lacrimosa*
43	4.3	Sand
44	4.3	*Batophora*
45	4.3	*Thalassia*
46	4.0	*Sargassum pteropleuron*
47	4.0	Alga sp.
48	4.0	Alga sp.
49	4.3	Sand
50	3.7	*Halimeda monile*
51	3.7	*Batophora, Valonia*
52	3.7	*Penicillus capitatus*
53	3.7	*Sargassum pteropleuron*
54	3.7	*Udotea*
55	3.7	*Thalassia*
56	3.7	*Udotea*
57	3.7	*Thalassia*, *Halimeda monile*
58	3.7	Alga sp.
59	3.7	*Thalassia*
60	3.7	Sand
61	3.7	Sand
62	3.7	*Thalassia*
63	3.7	*Halimeda opuntia triloba*
64	3.7	*H. monile*
65	3.7	*Udotea*
66	3.7	Sand
67	3.7	*Thalassia*, *Modulus modulus*
68	3.7	Alga sp.
69	3.7	*Penicillus capitatus*
70	3.7	*Halimeda tuna*
71	3.7	Sand
72	3.7	*Rhipocephalus phoenix*
73	3.7	*Cinachyra* sp.
74	3.7	Alga sp.
75	3.7	Alga sp.
76	3.7	*Sargassum pteropleuron*
77	3.7	Alga sp.
78	3.7	*Halimeda tuna*
79	3.7	*H. tuna*
80	3.7	Alga sp.

Site 14. South Channel

Transect 3. About 400 m long run on a heading of 328° true and 300 m east of Transect 2. 4 October 1981.

Meter mark	Depth meters	Bottom type and species
0	3.7	*Codakia orbicularis*
1	4.0	*Thalassia*
2	3.7	*Thalassia*
3	3.7	*Thalassia*
4	3.7	*Thalassia*
5	3.7	*Thalassia, Codakia orbicularis*
6	3.7	*Thalassia*
7	3.7	*Thalassia*
8	3.7	*Thalassia*
9	3.7	*Halimeda* sp.
10	3.4	*Halimeda* sp.
11	3.4	*Thalassia*.
12	3.4	Sand, hardbottom
13	3.4	Sand, hardbottom
14	3.4	*Dasycladus*
15	3.4	Algal ball
16	3.4	*Siderastrea siderea*
17	3.4	*Laurencia* sp.
18	3.4	*Laurencia* sp.
19	3.4	Algal ball
20	3.4	*Laurencia*
21	3.4	*Laurencia*
22	3.4	*Laurencia*
23	3.4	Alga sp.
24	3.4	*Laurencia*
25	3.4	*Halimeda incrassata*
26	3.4	*H. monile*
27	3.4	*Laurencia*
28	3.4	*Laurencia*
29	3.4	*Siderastrea siderea*
30	3.4	*Avrainvillea*
31	3.4	*Spheciospongia vesparia*
32	3.4	*Laurencia*
33	3.4	*Sargassum pteropleuron*, *Laurencia*
34	3.4	Hardbottom
35	3.4	Algal mat
36	3.4	*Siderastrea siderea*
37	3.4	Hardbottom
38	3.4	Hardbottom
39	3.4	*Aplysina cauliformis*
40	3.4	Alga sp.
41	3.4	*Laurencia* sp.

Site 14. South Channel (cont.)

Transect 3. About 400 m long run on a heading of 328° true and 300 m east of Transect 2. 4 October 1981.

Meter mark	Depth meters	Bottom type and species
42	3.4	*Aplysina cauliformis*
43	3.4	*Halimeda tuna*
44	3.4	*Laurencia*
45	3.4	*Laurencia*
46	3.4	*Laurencia, Halimeda tuna*
47	3.4	*Plexaurella grisea*
48	3.4	*Halimeda tuna*
49	3.4	Hardbottom
50	3.4	*Laurencia*
51	3.4	*Halimeda monile, Dasycladus*
52	3.4	Alga sp.
53	3.4	Hardbottom
54	3.4	*Dasycladus*
55	3.4	*Penicillus capitatus*
56	3.4	Hardbottom
57	3.4	*Avrainvillea*
58	3.4	Hardbottom
59	3.4	*Laurencia*
60	3.4	Algal mat
61	3.4	*Laurencia*
62	3.4	Hardbottom
63	3.4	*Laurencia*
64	3.4	Hardbottom
65	3.4	*Thalassia*
66	3.4	*Dasycladus*
67	3.4	Hardbottom
68	3.4	*Avrainvillea*
69	3.4	*Dasycladus*
70	3.4	Hardbottom
71	3.4	Alga sp.
72	3.4	Alga sp.
73	3.4	Alga sp.
74	3.4	*Thalassia*
75	3.4	Hardbottom
76	3.4	Hardbottom
77	3.4	Hardbottom
78	3.4	*Thalassia*
79	3.4	*Thalassia*
80	3.4	*Halimeda tuna*

9.15.2. Quadrats

Site 14. South Channel Grass Quadrats
14 September 1981

Species	Quadrats 1	2	3	4	Species	Quadrats 1	2	3	4
ALGAE					COELENTERATA				
Udotea flabellum	12	10	4	x	*Briareum asbestinum*	1	2	1	1
Batophora oerstedii	11	x	x	x	*Plexaurella dichotoma*	0	2	1	1
Dictyosphaerea cavernosa	4	0	2	1	*Pterogorgia americana*	0	0	2	0
Acetabularia crenulata	3	3	0	1	*Stephanocoenia michelini*	1	0	1	0
Anadyomene stellata	3	0	0	0	*Solenastrea hyades*	0	0	3	0
Avrainvillea negricans	4	1	0	0	*Favia fragum*	0	0	1	0
Valonia ventricosa	1	3	0	2	*Siderastrea radians*	0	0	0	3
Penicillus capitatus	0	2	0	0	Anemone	0	1	0	1
P. dumetosus	0	3	0	1					
Dasycladus vermicularis	0	0	0	x	POLYCHAETA				
Ulva lactuca	0	2	0	0					
Halimeda tuna	0	1	0	0	Polychaete sp.	0	1	0	0
H. incrassata	0	1	0	0	Sabellid	0	0	0	1
Caulerpa sp.	0	0	1	0					
Halimeda monile	16	11	16	4	MOLLUSCA				
Dictyota sp.	0	1	0	1					
Acanthophora sp.	1	x	0	0	Nudibranch sp.	1	1	0	0
Sargassum pteropleuron	7	6	0	0	*Astraea tecta*	1	0	0	2
Alga	10	x	12	x	*Modulus modulus*	0	0	2	0
Alga	0	1	x	x	*Cerithium* sp.	0	1	0	0
Alga	0	x	x	0	*Anadara notabilis*	1	0	0	0
Alga	0	1	0	0	*Arca zebra*	4	0	0	6
Alga	0	1	0	0	*Glycymeris pectinata*	0	0	0	1
Alga	0	0	5	0	*Pecten* sp.	0	0	1	0
Filamentous red	0	1	0	1					
					CRUSTACEA				
PORIFERA									
					Paguristes puncticeps	4	1	1	1
Dysidea etherea	8	1	0	0	*Panulirus argus*	0	0	0	1
Aplysina cauliformis	4	6	4	0	*Pagurid* sp.	0	1	0	0
Ircinia strobilina	0	4	1	0					
Chondrilla nucula	0	0	1	0	ECHINODERMATA				
Niphates sp.	1	0	1	0					
Spongia sp.	2	0	1	0	*Lytechinus variegatus*	0	3	0	0
Ircinia sp.	0	0	0	1	*Ophiothrix oerstedii*	1	0	0	0
Cinachyra sp.	0	0	0	1	*Ophioderma rubicundum*	0	0	0	1
Keratosa indet.	0	1	0	0	Brittle star A	0	0	2	0
Sponge A	0	1	0	0	Brittle star B	0	0	0	6
Sponge B	0	3	0	0					
Sponge C	0	0	0	4					

9.16. Site 15. Rodriguez Key

9.16.1. Transects

Transect 1. About 400 m long run on a heading of 278° true starting approximately 1400 m northeast of navigation buoy "J".
7 June 1980

Meter mark	Depth meters	Bottom type and species
0	2.7 to 3.0	*Thalassia, Halimeda incrassata*
1	2.7 to 3.0	*Thalassia*
2	2.7 to 3.0	*Thalassia*
3	2.7 to 3.0	*Thalassia*
4	2.7 to 3.0	*Thalassia*
5	2.7 to 3.0	*Thalassia*
6	2.7 to 3.0	*Thalassia, Lytechinus variegatus*
7	2.7 to 3.0	*Thalassia*
8	2.7 to 3.0	*Thalassia*
9	2.7 to 3.0	*Thalassia*
10	2.7 to 3.0	*Thalassia, Acetabularia crenulata*, *Halimeda incrassata*
11	2.7 to 3.0	*Thalassia*
12	2.7 to 3.0	*Thalassia*
13	2.7 to 3.0	*Thalassia*
14	2.7 to 3.0	*Thalassia, Penicillus lamourouxii*
15	2.7 to 3.0	*Aplysina cauliformis, Penicillus dumetosus, P. lamourouxii*
16	2.7 to 3.0	*Penicillus dumetosus*
17	2.7 to 3.0	*Thalassia*
18	2.7 to 3.0	*Thalassia*
19	2.7 to 3.0	*Thalassia, Penicillus lamourouxii, Udotea flabellum*
20	2.7 to 3.0	*Thalassia, Halimeda monile*
21	2.7 to 3.0	*Thalassia*
22	2.7 to 3.0	*Thalassia*
23	2.7 to 3.0	*Thalassia*, *Penicillus pyriformis*
24	2.7 to 3.0	*Thalassia, Udotea flabellum*
25	2.7 to 3.0	*Thalassia*
26	2.7 to 3.0	*Thalassia*
27	2.7 to 3.0	*Thalassia*
28	2.7 to 3.0	*Thalassia*
29	2.7 to 3.0	*Thalassia*
30	2.7 to 3.0	*Thalassia*
31	2.7 to 3.0	*Thalassia*
32	2.7 to 3.0	*Thalassia*
33	2.7 to 3.0	*Thalassia*
34	2.7 to 3.0	*Thalassia*
35	2.7 to 3.0	*Thalassia*
36	2.7 to 3.0	*Thalassia, Avrainvillea nigricans, Lytechinus variegatus, Aplysina cauliformis*
37	2.7 to 3.0	*Thalassia*

Site 15. Rodriguez Key (cont.)

Transect 1. About 400 m long run on a heading of 278° true starting approximately 1400 m northeast of navigation buoy "J".
7 June 1980

Meter mark	Depth meters	Bottom type and species
38	2.7 to 3.0	*Thalassia*
39	2.7 to 3.0	*Thalassia*
40	2.7 to 3.0	*Thalassia, Avrainvillea nigricans*
41	2.7 to 3.0	*Thalassia, Aplysina cauliformis*
42	2.7 to 3.0	*Thalassia*
43	2.7 to 3.0	*Thalassia*
44	2.7 to 3.0	*Thalassia*
45	2.7 to 3.0	*Thalassia, Porites divaricata, Avrainvillea nigricans*
46	2.7 to 3.0	*Thalassia, Halimeda incrassata*
47	2.7 to 3.0	*Thalassia*
48	2.7 to 3.0	*Thalassia*
49	2.7 to 3.0	*Thalassia, Halimeda incrassata*
50	2.7 to 3.0	*Thalassia, Astraea tecta*
51	2.7 to 3.0	*Thalassia*
52	2.7 to 3.0	*Thalassia*
53	2.7 to 3.0	*Thalassia*
54	2.7 to 3.0	*Thalassia*
55	2.7 to 3.0	*Thalassia*
56	2.7 to 3.0	*Thalassia*
57	2.7 to 3.0	*Thalassia*
58	2.7 to 3.0	*Thalassia*
59	2.7 to 3.0	*Thalassia, Ircinia felix*
60	2.7 to 3.0	*Thalassia*
61	2.7 to 3.0	*Thalassia*
62	2.7 to 3.0	*Thalassia*
63	2.7 to 3.0	*Thalassia*
64	2.7 to 3.0	*Thalassia, Aplysina cauliformis*
65	2.7 to 3.0	*Thalassia*
66	2.7 to 3.0	*Thalassia*
67	2.7 to 3.0	*Thalassia, Lytechinus variegatus*
68	2.7 to 3.0	*Thalassia*
69	2.7 to 3.0	*Thalassia*
70	2.7 to 3.0	*Thalassia*
71	2.7 to 3.0	*Thalassia, Haliclona viridis*
72	2.7 to 3.0	*Thalassia*
73	2.7 to 3.0	*Thalassia*
74	2.7 to 3.0	*Thalassia*
75	2.7 to 3.0	*Thalassia, Halimeda incrassata*

Site 15. Rodriguez Key (cont.)

Transect 1. About 400 m long run on a heading of 278° true starting approximately 1400 m northeast of navigation buoy "J".
7 June 1980

Meter mark	Depth meters	Bottom type and species
76	2.7 to 3.0	*Thalassia*
77	2.7 to 3.0	*Thalassia*, *Rhipocephalus phoenix*
78	2.7 to 3.0	*Thalassia*, *Halimeda incrassata*
79	2.7 to 3.0	*Thalassia*
80	2.7 to 3.0	*Thalassia*

Site 15. Rodriguez Key

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 8 June 1980

Meter mark	Depth meters	Bottom type and species
0	2.7 to 3.0	*Thalassia*
1	2.7 to 3.0	*Thalassia*, *Astraea tecta*
2	2.7 to 3.0	*Thalassia*
3	2.7 to 3.0	*Thalassia*
4	2.7 to 3.0	*Thalassia*
5	2.7 to 3.0	*Thalassia*
6	2.7 to 3.0	*Thalassia*
7	2.7 to 3.0	*Thalassia*
8	2.7 to 3.0	*Thalassia*
9	2.7 to 3.0	*Thalassia*
10	2.7 to 3.0	*Thalassia*, mud
11	2.7 to 3.0	*Thalassia*
12	2.7 to 3.0	*Thalassia*
13	2.7 to 3.0	*Thalassia*
14	2.7 to 3.0	*Thalassia, Aplysina cauliformis, Haliclona* sp.
15	2.7 to 3.0	*Thalassia*
16	2.7 to 3.0	*Thalassia, Astraea phoebia*
17	2.7 to 3.0	*Thalassia*
18	2.7 to 3.0	*Thalassia*
19	2.7 to 3.0	*Thalassia, Halimeda incrassata*
20	2.7 to 3.0	*Thalassia*
21	2.7 to 3.0	*Thalassia*
22	2.7 to 3.0	*Thalassia*
23	2.7 to 3.0	*Thalassia*, *Halimeda incrassata*
24	2.7 to 3.0	*Thalassia*
25	2.7 to 3.0	*Thalassia*
26	2.7 to 3.0	*Thalassia*
27	2.7 to 3.0	*Thalassia*
28	2.7 to 3.0	*Thalassia*, *Halimeda incrassata*, *Tegula fasciata*
29	2.7 to 3.0	*Thalassia*, *Astraea phoebia*, brittle star
30	2.7 to 3.0	*Thalassia*, *Chondrilla nucula*
31	2.7 to 3.0	*Thalassia*, *Haliclona compressa*
32	2.7 to 3.0	*Thalassia*, *Haliclona compressa*
33	2.7 to 3.0	Burrows in mud
34	2.7 to 3.0	Burrows In mud
35	2.7 to 3.0	*Thalassia*
36	2.7 to 3.0	*Thalassia*
37	2.7 to 3.0	*Thalassia*
38	2.7 to 3.0	*Thalassia*
39	2.7 to 3.0	*Thalassia*, *Chondrilla nucula*
40	2.7 to 3.0	*Thalassia*, *Syringodium*, burrows
41	2.7 to 3.0	*Thalassia*

Site 15. Rodriguez Key (cont.)

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 8 June 1980

Meter mark	Depth meters	Bottom type and species
42	2.7 to 3.0	*Thalassia*
43	2.7 to 3.0	*Thalassia*
44	2.7 to 3.0	*Thalassia, Syringodium*
45	2.7 to 3.0	*Thalassia*, *Haliclona* sp., *Ircinia strobilina*
46	2.7 to 3.0	*Thalassia*, *Syringodium*
47	2.7 to 3.0	*Thalassia, Lytechinus variegatos*
48	2.7 to 3.0	*Thalassia*
49	2.7 to 3.0	*Thalassia*, *Haliclona compressa*
50	2.7 to 3.0	*Thalassia*
51	2.7 to 3.0	*Thalassia*
52	2.7 to 3.0	*Thalassia, Ophioderma brevispinum*
53	2.7 to 3.0	*Thalassia*
54	2.7 to 3.0	*Thalassia*, *Tethya* sp.
55	2.7 to 3.0	*Thalassia*
56	2.7 to 3.0	*Thalassia*, *Chondrilla nucula*
57	2.7 to 3.0	*Thalassia*
58	2.7 to 3.0	Mound
59	2.7 to 3.0	*Thalassia*
60	2.7 to 3.0	*Thalassia*
61	2.7 to 3.0	*Thalassia*, *Porites furcata*
62	2.7 to 3.0	*Thalassia*
63	2.7 to 3.0	*Thalassia*
64	2.7 to 3.0	*Thalassia*
65	2.7 to 3.0	*Thalassia*
66	2.7 to 3.0	*Thalassia, Porites furcata*
67	2.7 to 3.0	*Thalassia*
68	2.7 to 3.0	*Thalassia*, *Halimeda incrassata*
69	2.7 to 3.0	*Thalassia*
70	2.7 to 3.0	*Thalassia*, *Halimeda incrassata*
71	2.7 to 3.0	*Thalassia*
72	2.7 to 3.0	*Thalassia, Halimeda incrassata*
73	2.7 to 3.0	*Thalassia*
74	2.7 to 3.0	*Thalassia*
75	2.7 to 3.0	*Thalassia*
76	2.7 to 3.0	*Thalassia*
77	2.7 to 3.0	*Halimeda incrassata*
78	2.7 to 3.0	*Thalassia*, *Porites furcata*
79	2.7 to 3.0	*Thalassia*
80	2.7 to 3.0	*Thalassia*

Site 15. Rodriguez Key

Transect 3. About 400 m long run on a heading of 278° true and 300 m east of Transect 2. 8 June 1980

Meter mark	Depth meters	Bottom type and species
0	3.4 to 4.0	*Thalassia*
1	3.4 to 4.0	*Thalassia*
2	3.4 to 4.0	*Thalassia*
3	3.4 to 4.0	*Thalassia, Aplysina cauliformis*
4	3.4 to 4.0	*Thalassia*
5	3.4 to 4.0	*Thalassia*
6	3.4 to 4.0	*Thalassia*
7	3.4 to 4.0	*Thalassia*
8	3.4 to 4.0	*Thalassia*
9	3.4 to 4.0	*Thalassia*, *Halimeda incrassata*
10	3.4 to 4.0	*Thalassia*
11	3.4 to 4.0	*Thalassia*
12	3.4 to 4.0	*Thalassia*
13	3.4 to 4.0	*Thalassia*
14	3.4 to 4.0	*Thalassia*
15	3.4 to 4.0	*Thalassia*
16	3.4 to 4.0	*Halimeda incrassata*
17	3.4 to 4.0	*Thalassia, Aplysina cauliformis*
18	3.4 to 4.0	*Thalassia*
19	3.4 to 4.0	*Thalassia*
20	3.4 to 4.0	*Thalassia*
21	3.4 to 4.0	*Thalassia*
22	3.4 to 4.0	*Thalassia*
23	3.4 to 4.0	*Thalassia*
24	3.4 to 4.0	*Thalassia*
25	3.4 to 4.0	*Thalassia*
26	3.4 to 4.0	Mud
27	3.4 to 4.0	*Dictyosphaerea cavernosa*
28	3.4 to 4.0	Mud
29	3.4 to 4.0	*Thalassia*
30	3.4 to 4.0	*Thalassia*
31	3.4 to 4.0	*Astichopus multifidus*
32	3.4 to 4.0	*Rhipocephalus phoenix*
33	3.4 to 4.0	*Thalassia*
34	3.4 to 4.0	*Thalassia*
35	3.4 to 4.0	*Cladocora arbuscula, Dictyosphaerea vanbosseae*
36	3.4 to 4.0	*Thalassia*
37	3.4 to 4.0	*Thalassia*
38	3.4 to 4.0	*Thalassia*
39	3.4 to 4.0	*Thalassia*
40	3.4 to 4.0	*Thalassia*
41	3.4 to 4.0	*Thalassia, Halimeda incrassata, Didemnum candidum*
42	3.4 to 4.0	*Thalassia*

Transect 3. About 400 m long run on a heading of 278° true and 300 m east of Transect 2. 8 June 1980

Meter mark	Depth meters	Bottom type and species
43	3.4 to 4.0	*Penicillus pyriformis*
44	3.4 to 4.0	*Thalassia, Halimeda opuntia triloba*
45	3.4 to 4.0	*Udotea flabellum*
46	3.4 to 4.0	*Thalassia*
47	3.4 to 4.0	*Gracilaria* sp.
48	3.4 to 4.0	Mud
49	3.4 to 4.0	*Thalassia, Halimeda incrassata*
50	3.4 to 4.0	*Thalassia*
51	3.4 to 4.0	*Thalassia*
52	3.4 to 4.0	*Thalassia*, *Haliclona viridis*, *Halimeda incrassata*
53	3.4 to 4.0	*Thalassia*
54	3.4 to 4.0	*Thalassia, Halimeda incrassata*
55	3.4 to 4.0	*Thalassia*
56	3.4 to 4.0	*Thalassia*
57	3.4 to 4.0	*Thalassia*
58	3.4 to 4.0	*Thalassia*
59	3.4 to 4.0	*Thalassia*
60	3.4 to 4.0	*Thalassia*
61	3.4 to 4.0	Mud
62	3.4 to 4.0	*Thalassia*
63	3.4 to 4.0	*Thalassia*, *Halimeda incrassata*
64	3.4 to 4.0	*Thalassia*
65	3.4 to 4.0	*Thalassia*
66	3.4 to 4.0	*Thalassia*
67	3.4 to 4.0	*Thalassia*, *Dictyosphaerea vanbosseae*
68	3.4 to 4.0	*Thalassia*
69	3.4 to 4.0	Sponge
70	3.4 to 4.0	*Thalassia*
71	3.4 to 4.0	*Thalassia*
72	3.4 to 4.0	*Thalassia*
73	3.4 to 4.0	*Thalassia*
74	3.4 to 4.0	*Thalassia*
75	3.4 to 4.0	*Thalassia*
76	3.4 to 4.0	*Thalassia*
77	3.4 to 4.0	*Thalassia*
78	3.4 to 4.0	*Thalassia*
79	3.4 to 4.0	*Thalassia, Haliclona viridis*
80	3.4 to 4.0	*Thalassia*

9.16.2. Quadrats

Site 15. Rodriguez Key Grass Quadrats
8 June 1980

Species	Quadrats			
	1	2	3	4
ALGAE				
Halimeda incrassata	8	13	22	21
H. opuntia triloba	1	0	0	0
Penicillus capitatus	0	0	1	0
Avrainvillea negricans	0	1	0	0
PORIFERA				
Aplysina cauliformis	1	1	0	1
Haliclona compressa	1	1	0	2
H. viridis	0	0	1	5
Lissodendoryx sigmata	0	0	1	0
COELENTERATA				
Porites divaricata	1	0	0	0
P. furcata	0	0	1	0
P. sp.	0	0	1	0
Manicina areolata	0	1	0	0
MOLLUSCA				
Calliostoma jujubinum	0	1	0	0
ECHINODERMATA				
Lytechinus variegatus	1	0	0	3

9.17. Site 16. Point Elizabeth

9.17.1. Transects

Transect 1. About 400 m long run on a heading of 308° true.
14 August 1981

Meter mark	Depth meters	Bottom type and species
0	4.6	*Halimeda opuntia triloba*
1	4.6	Sand mound
2	4.6	Sand mound
3	4.6	Sand mound
4	4.6	Sand mound
5	4.6	Sand mound
6	4.6	*Haliclona molitba*
7	4.6	*Thalassia*
8	4.6	*Thalassia*
9	4.6	*Sabella melanostigma, Eunice unifrons*
10	4.6	Mytilid
11	4.6	*Thalassia*
12	4.6	*Thalassia*
13	4.6	Sand mound
14	4.6	*Diplodonta punctata*
15	4.6	Sand mound
16	4.6	*Thalassia*
17	4.6	*Thalassia*
18	4.6	*Thalassia*
19	4.6	*Thalassia*
20	4.6	*Thalassia*
21	4.6	*Halimeda opuntia triloba*
22	4.6	*Thalassia*
23	4.6	*Thalassia*
24	4.6	Sand mound
25	4.6	Sand mound
26	4.6	*Thalassia*
27	4.6	*Halimeda opuntia triloba*
28	4.6	Sand mound
29	4.6	*Halimeda opuntia triloba*
30	4.6	*Codakia orbicularis*
31	4.6	*Thalassia*
32	4.6	Sand mound
33	4.6	*Thalassia*
34	4.6	*Thalassia*
35	4.6	*Thalassia*
36	4.6	Sand mound
37	4.6	*Thalassia*, onuphid
38	4.6	*Thalassia*, onuphid
39	4.6	Sand mound

Transect 1. About 400 m long run on a heading of 308° true.
14 August 1981

Meter mark	Depth meters	Bottom type and species
40	4.3	*Thalassia*
41	4.3	*Haliclona* sp.
42	4.3	Sand mound
43	4.3	*Thalassia*
44	4.6	Sand
45	4.6	*Thalassia*
46	4.6	*Modiolus modiolus squamosus*
47	4.6	Sand mound
48	4.6	Sand mound
49	4.6	*Codakia*
50	4.6	Sand mound
51	4.6	Sand mound
52	4.6	*Thalassia*
53	4.6	*Halimeda opuntia triloba*
54	4.6	*Thalassia*
55	4.6	Algal mat
56	4.6	*Linga pensylvanica*
57	4.3	*Codakia orbicularis*
58	4.3	*Thalassia*
59	4.3	Sand mound
60	4.3	*Thalassia*
61	4.3	*Thalassia*
62	4.3	*Thalassia*
64	4.3	*Codakia orbicularis*
65	4.3	*Penicillus capitatus*
66	4.3	*Thalassia*
67	4.3	Sand mound
68	4.3	*Codakia orbicularis*
69	4.3	*Codakia orbicularis*
70	4.3	*Thalassia*
71	4.3	*Thalassia*
72	4.3	*Thalassia*
73	4.3	Terebellid
74	4.3	Sand mound
75	4.3	Sand mound
76	4.3	*Haliclona* sp., *Octopus* sp.
77	4.3	*Thalassia,* green algal mat
78	4.3	Green algal mat
79	4.3	*Thalassia*
80	4.3	*Thalassia*

Site 16. Point Elizabeth

Transect 2. About 400 m long run on a heading of 308° true.
14 August 1981.

Meter mark	Depth meters	Bottom type and species
0	4.3	*Codakia orbicularis*
1	4.3	*Halimeda tuna*
2	4.3	*Thalassia*
3	4.3	*Thalassia*
4	4.3	Holothurian
5	4.3	*Thalassia*
6	4.3	*Thalassia,* onuphid
7	4.3	*Thalassia*
8	4.3	*Thalassia*
9	4.3	*Thalassia*
10	4.3	*Thalassia*
11	4.3	*Thalassia*
12	4.3	*Thalassia*
13	4.3	*Thalassia*
14	4.3	*Thalassia*
15	4.3	*Thalassia*
16	4.3	*Thalassia*, sand mound
17	4.3	*Thalassia*
18	4.3	*Thalassia*
19	4.3	*Thalassia*
20	4.3	*Codakia orbicularis*
21	4.3	*Thalassia*
22	4.3	*Thalassia*
23	4.3	*Thalassia*
24	4.3	*Thalassia*
25	4.3	*Thalassia,* onuphid
26	4.3	*Thalassia*
27	4.3	Sand mound
28	4.3	*Thalassia*
29	4.3	*Thalassia*
30	4.3	*Thalassia*
31	4.3	*Thalassia*
32	4.3	*Thalassia,* onuphid
33	4.3	*Thalassia*
34	4.3	*Thalassia*
35	4.3	*Thalassia*
36	4.3	*Thalassia*
37	4.3	*Thalassia*
38	4.3	*Thalassia*
39	4.3	*Thalassia*
40	4.0	*Thalassia*

Site 16. Point Elizabeth (cont.)

Transect 2. About 400 m long run on a heading of 308° true.
14 August 1981.

Meter mark	Depth meters	Bottom type and species
41	4.0	*Thalassia*
42	4.0	Holothurian
43	4.0	*Codakia*
44	3.7	*Thalassia*
45	4.3	*Codakia*
46	3.7	*Thalassia*
47	3.7	*Thalassia*
48	3.7	*Thalassia*
49	3.7	*Strombus raninus*
50	3.7	*Thalassia*
51	3.7	*Thalassia*
52	3.7	*Thalassia*
53	3.7	*Thalassia*
54	3.7	*Thalassia*, onuphid
55	3.7	Sand mound
56	3.7	*Thalassia*
57	3.7	Sand mound
58	3.7	*Thalassia*
59	3.7	*Thalassia*
60	3.7	*Codakia orbicularis*
61	3.7	*C. orbicularis*
62	3.7	Algal mat
63	3.7	*Penicillus capitatus*
64	3.7	*Thalassia*
65	3.7	Sand mound
66	3.7	*Lytechinus variegatus*
67	3.7	Sand mound
68	3.7	*Thalassia*
69	3.7	*Thalassia*
70	3.7	*Thalassia*
71	3.7	Sand mound
72	3.7	*Thalassia*
73	3.7	*Codakia orbicularis*
74	3.7	*Codakia orbicularis*
75	3.7	*Thalassia*
76	3.7	*Codakia orbicularis*
77	3.7	*Thalassia*
78	3.7	*Thalassia*
79	3.7	*Thalassia*
80	3.7	Sand mound

Site 16. Point Elizabeth

Transect 3. About 400 m long run on a heading of 308° true.
15 August 1981

Meter mark	Depth meters	Bottom type and species
0	4.0	*Thalassia*
1	4.0	*Thalassia*
2	4.0	*Callyspongia fallax*
3	4.0	*Thalassia*
4	4.0	*Thalassia*
5	4.0	*Thalassia*
6	4.0	*Thalassia*
7	4.0	*Penicillus capitatus*
8	4.0	*Thalassia*
9	4.0	*Thalassia,* onuphid
10	4.0	*Thalassia*
11	4.0	*Thalassia*
12	4.0	*Thalassia*
13	4.0	*Codakia orbicularis*
14	4.0	Sand mound
15	4.0	*Thalassia*
16	4.0	*Thalassia*
17	4.0	*Halimeda tuna*
18	4.0	*Thalassia*
19	4.0	*Thalassia*
20	4.0	*Thalassia*
21	4.0	*Callyspongia fallax*
22	4.0	*Codakia orbicularis*
23	4.0	*Thalassia*
24	4.0	*Codakia orbicularis*
25	4.0	*Thalassia*
26	4.0	*Codakia orbicularis*
27	4.0	*Thalassia*
28	4.0	*Thalassia*
29	4.0	*Codakia orbicularis*
30	4.0	*Thalassia*
31	4.0	*Thalassia*
32	4.0	*Thalassia*
33	4.0	*Thalassia*
34	4.0	*Thalassia*
35	4.0	*Thalassia*
36	4.0	*Thalassia*
37	4.0	*Thalassia*
38	4.0	Sand mound
39	4.0	*Thalassia*
40	4.0	*Thalassia*
41	4.0	*Thalassia*

Site 16. Point Elizabeth (cont.)

Transect 3. About 400 m long run on a heading of 308° true.
15 August 1981

Meter mark	Depth meters	Bottom type and species
42	4.0	*Thalassia*
43	4.0	*Thalassia*
44	4.0	*Thalassia*
45	4.0	*Thalassia*.
46	4.0	*Thalassia*
47	4.0	*Thalassia*
48	4.0	*Thalassia*
49	4.0	*Thalassia*
50	4.0	*Thalassia*
51	4.0	Onuphid
52	4.5	*Penicillus capitatus*
53	4.5	Sand mound
54	4.5	Sand mound
55	4.0	*Thalassia*
56	4.0	*Thalassia*
57	4.0	*Thalassia*
58	4.0	Sand mound
59	4.0	*Thalassia*
60	4.0	*Codakia orbicularis*
61	4.0	*Thalassia*
62	4.0	*Thalassia*
63	4.0	Sand mound
64	4.0	*Thalassia*, *Codakia orbicularis*
65	4.0	*Thalassia*
66	4.0	*Thalassia*
67	4.0	*Penicillus capitatus*
68	4.0	Sand mound
69	4.0	*Codakia orbicularis*
70	4.0	*Thalassia*
71	4.0	*Thalassia*
72	4.0	*Thalassia*
73	4.0	*Penicillus capitatus*
74	4.0	*Thalassia*
75	4.0	*Thalassia*
76	4.0	*Thalassia*
77	4.0	*Thalassia*
78	4.0	*Thalassia*
79	4.0	*Thalassia*
80	4.0	*Thalassia*

9.17.2. Quadrats

Site 16. Point Elizabeth Grass Quadrats
16 August 1981

Species	Quadrats 1	2	3	4
ALGAE				
Rhipocephalus phoenix	3	0	0	0
Penicillus capitatus	1	0	0	3
P. sp.	1	0	0	0
Udotea flabellum	0	6	0	0
Halimeda incrassata	0	4	0	0
PORIFERA				
Desmacella sp.	1	0	3	0
Tethya sp.	1	0	0	0
Dysidea sp.	0	0	0	1
Sponge indet.	0	1	0	0
POLYCHAETA				
Sabellid	0	1	0	0
Terebellid	1	1	0	0
MOLLUSCA				
Calliostoma jujubinum	0	0	1	0
Astraea phoebia	0	0	1	0
Modulus modiolus	0	0	0	1
Codakia orbicularis	0	0	0	1
Chione cancellata	1	0	1	0
Diplodonta punctata	1	0	0	0
Linga pensylvanica	0	0	2	0
Anadara notabilis	0	0	1	0
Octopus joubini	0	0	0	1
CRUSTACEA				
Paguristes sp. A	0	0	6	1
ASCIDIACEA				
Didemnum candidum	0	0	0	1

9.18. Site 17. Angelfish Creek

9.18.1. Transects

Transect 1. About 400 m long run on a heading of 278° true from marker "2" toward marker "PA" at the creek entrance.
22 July 1980

Meter mark	Depth meters	Bottom type and species
0	4.3	*Thalassia*
1	4.3	*Thalassia*
2	4.9	*Syringodium*
3	4.9	*Amphiroa*, *Halimeda tuna*, *Dictyota, Dysidea*
4	4.9	*Thalassia*
5	4.9	*Thalassia*
6	4.9	*Thalassia*, *Syringodium*
7	4.9	*Thalassia*
8	4.9	*Dasycladus*
9	4.9	*Dasycladus*, *Siderastrea siderea*
10	5.5	*Thalassia*
11	5.5	*Clypeaster rosaceus*
12	5.5	*C. rosaceus*
13	5.5	*Syringodium*
14	5.5	*Syringodium, Thalassia*
15	5.5	*Dasycladus*, *Udotea* sponge
16	5.5	*Dictyota*, *Enteromorpha*
17	5.5	*Janea* sp.
18	5.5	*Dasycladus*
19	6.1	*Dictyota*
20	6.1	*Dysidea* sp., *Halimeda tuna*
21	6.1	*Batophora oerstedii, Anadyomene stellata, Ophionereis squamulosa*
22	6.1	Alga sp. I
23	6.1	*Thalassia*, *Haminoea*
24	6.1	*Thalassia*
25	6.1	Rubble, *Amphiroa fragilissima, Halimeda tuna, Dysidea* sp.
26	5.4	*Thalassia*
27	5.4	*Thalassia*
28	5.4	*Thalassia*
29	5.4	*Thalassia*
30	5.4	*Thalassia*
31	5.4	*Thalassia*
32	5.4	*Thalassia*
33	5.4	*Thalassia*
34	5.4	*Thalassia, Syringodium, Halimeda lacrimosa*
35	5.4	*Thalassia*
36	5.4	*Dasycladus*
37	5.4	*Halimeda incrassata, Haminoea*, *Dictyota*
38	5.4	*Syringodium*

Site 17. Angelfish Creek (cont.)

Transect 1. About 400 m long run on a heading of 278° true from marker "2" toward marker "PA" at the creek entrance.
22 July 1980

Meter mark	Depth meters	Bottom type and species
39	5.4	*Syringodium, Thalassia*
40	5.4	*Syringodium, Thalassia*
41	5.4	*Syringodium, Thalassia*
42	4.9	*Syringodium, Thalassia*
43	4.9	*Clypeaster rosaceus*
44	4.9	*Anthosigmella varians*
45	4.9	*Dasycladus*
46	4.9	*Thalassia*
47	4.9	Sand
48	4.9	*Thalassia*
49	4.9	*Thalassia*
50	4.9	*Thalassia, Syringodium, Didemnum candidum*
51	4.9	*Thalassia*
52	4.9	*Thalassia*
53	4.9	*Thalassia*, *Syringodium*
54	4.9	*Thalassia, Dysidea, Jania*
55	4.9	*Thalassia, Amphiroa, Ophioderma brevispinum, Ophionereis squamulosa*
56	4.3	*Thalassia*
57	4.3	*Thalassia, Syringodlum*
58	4.3	*Halimeda opuntia, Ophionereis squamulosa*
59	4.3	*Thalassia*
60	3.7	*Thalassia*
61	3.7	*Syringodium*
62	3.7	*Thalassia, Jania*
63	3.7	*Thalassia*, *Syringodium*
64	3.4	*Thalassia*, *Syringodium*
65	3.4	*Thalassia*, *Syringodium*
66	3.4	*Thalassia*, *Syringodium*
67	3.4	*Thalassia, Aplysina cauliformis*
68	3.4	*Thalassia, Syringodium*
69	3.4	*Thalassia, Syringodium*, *Cystenides gouldi*
70	3.4	*Thalassia*, *Syringodium*
71	3.7	*Syringodium, Halimeda lacrimosa*
72	3.7	*Syringodium*, *H. lacrimosa*
73	3.0	*Syringodium, Ophiothrix oerstedii*
74	3.0	*Syringodlum, H. lacrimosa, Didemnum candidum*
75	3.0	*Thalassia, D. candidum*

Transect 1. About 400 m long run on a heading of 278° true from marker "2" toward marker "PA" at the creek entrance.
22 July 1980

Meter mark	Depth meters	Bottom type and species
76	3.0	*Thalassia*
77	3.0	Sand
78	3.0	*Plexaurella grisea*
79	3.0	*P. grisea*
80	3.0	Sand

Site 17. Angelfish Creek

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 22 July 1980

Meter mark	Depth meters	Bottom type and species
0	6.1	*Thalassia*.
1	6.1	*Thalassia*
2	6.1	*Thalassia*
3	6.1	*Thalassia*
4	6.1	*Modiolus m. squamosus*
5	6.1	*Thalassia*
6	6.1	*Thalassia*
7	6.1	*Thalassia*
8	6.1	*Halimeda incrassata*
9	6.1	*Thalassia*
10	6.1	*Thalassia*
11	6.1	*Thalassia*
12	6.1	*Thalassia*
13	6.1	*Thalassia*
14	6.1	*Thalassia, Halimeda incrassata*
15	6.1	*Thalassia*
16	6.1	*Thalassia*
17	6.1	*Thalassia, Syringodium*
18	6.1	*Thalassia*
19	6.1	*Thalassia*
20	6.1	*Thalassia*
21	6.1	*Thalassia, Dasycladus vermicularis*
22	6.1	Sand
23	6.1	*Syringodium*
24	6.1	Sand
25	6.1	Sand
26	6.1	*Thalassia*
27	6.1	*Thalassia*
28	6.1	*Thalassia*
29	6.1	*Thalassia*
30	6.1	*Thalassia*, *Modiolus m. squamosus*
31	6.1	*Thalassia*
32	6.1	Sand
33	6.1	*Thalassia*
34	6.1	*Thalassia*
35	6.1	*Thalassia*
36	6.1	Sand, *Halimeda incrassata*
37	6.1	*Thalassia*
38	6.1	Sand
39	6.1	*Thalassia*
40	6.1	*Thalassia*
41	6.1	Sand

Site 17. Angelfish Creek

Transect 2. About 400 m long run on a heading of 278° true and 300 m east of Transect 1. 22 July 1980

Meter mark	Depth meters	Bottom type and species
42	6.1	*Syringodium*
43	6.1	Sand
44	6.1	*Thalassia*
45	6.1	Sand
46	6.1	*Thalassia*
47	6.1	*Thalassia*
48	6.1	*Thalassia*
49	6.1	*Thalassia*
50	6.1	*Thalassia*
51	6.1	*Dasycladus, Porites divaricata, Chondrilla nucula, Amphiroa*
52	6.1	*Thalassia, Dysidea*
53	6.1	Sand
54	6.1	*Thalassia*
55	6.1	*Halimeda incrassata*
56	6.1	*Thalassia*
57	6.1	*Dasycladus, Halimeda tuna*
58	6.1	*Thalassia*
59	6.1	*Thalassia*
60	6.1	*Thalassia*
61	6.1	Sand
62	6.1	*Thalassia*
63	6.1	*Thalassia*
64	6.1	*Thalassia*
65	6.1	Sand
66	6.1	*Dasycladus, Halimeda tuna*
67	6.1	Sand
68	6.1	*Thalassia*
69	6.1	*Thalassia*
70	6.1	*Thalassia*
71	6.1	*Thalassia*
72	6.1	*Thalassia*
73	6.1	*Thalassia*
74	6.1	*Thalassia*
75	6.1	*Thalassia*
76	6.1	*Thalassia*
77	6.1	*Thalassia*, *Syringodium*
78	6.1	*Thalassia*
79	6.5	*Pitho anisodon*
80	6.5	*Syringodium*

Site 17. Angelfish Creek

Transect 3. About 400 m long run on a heading of 278° true and 300 m west of Transect 2. 22 July 1980

Meter mark	Depth meters	Bottom type and species
0	6.7	Sand
1	6.7	*Thalassia*
2	6.7	*Thalassia*
4	6.7	*Thalassia*
5	6.7	*Syringodium*
6	6.7	*Aplysina cauliformis*
7	6.7	*Thalassia*
8	6.7	*Thalassia*
9	6.7	*Thalassia*
10	6.7	*Thalassia*
11	6.7	Sand
12	6.7	*Thalassia, Syringodium*
13	6.7	Sand
14	6.7	*Thalassia, Syringodium*
15	6.7	*Thalassia*
16	6.7	Sand
17	6.7	*Thalassia*
18	6.7	Sand, *Americardia media*
19	6.7	*Thalassia*
20	6.7	*Thalassia*
21	6.7	*Thalassia*
22	6.7	*Thalassia*
23	6.7	*Thalassia*
24	6.7	Sand, *Americardia media*
25	6.7	*Thalassia*
26	6.7	*Thalassia*
27	6.7	*Thalassia, Syringodium*
28	6.7	*Thalassia, Syringodium*
29	6.7	*Thalassia*
30	6.7	Sand
31	6.7	*Thalassia*
32	6.7	*Thalassia, Syringodium*
33	6.7	*Thalassia*, *Syringodium*
34	6.7	*Thalassia*
35	6.7	*Syringodium*
36	6.7	*Thalassia*, *Syringodium*
37	6.7	*Thalassia*
38	6.7	*Thalassia*
39	6.7	*Thalassia*
40	6.7	*Thalassia*
41	6.7	Sand
42	6.7	*Thalassia, Syringodium, Halimeda opuntia*

Site 17. Angelfish Creek (cont.)

Transect 3. About 400 m long run on a heading of 278° true and 300 m west of Transect 2. 22 July 1980

Meter mark	Depth meters	Bottom type and species
43	6.7	*Thalassia*, *Syringodium*
44	6.7	*Thalassia*, *Syringodium*
43	6.7	*Thalassia*, *Syringodium*
46	6.7	*Thalassia*
47	6.7	*Thalassia*
48	6.7	*Thalassia*
49	6.7	*Thalassia*, *Syringodium*
50	6.7	*Thalassia*
51	6.7	*Thalassia*, *Syringodium*
52	6.7	*Thalassia*
53	6.7	*Thalassia*, *Syringodium*
54	6.7	*Thalassia*, *Syringodium, Aplysina cauliformis*
55	6.7	*Thalassia, Halimeda monile*
56	6.7	*Thalassia*
57	6.7	*Thalassia*, *Syringodium*
58	6.7	*Thalassia*, *Syringodium*
59	6.7	*Thalassia, Syringodium*
60	6.7	*Thalassia*, *Syringodium*
61	6.7	*Thalassia, Porites divaricata*
62	6.7	*Thalassia*, *Syringodium*
63	6.7	*Syringodium*
64	6.7	*Thalassia,* compound ascidean
65	6.7	*Thalassia*, *Syringodium*, *Halimeda lacrimosa*, amphinomid
66	6.7	Sand
67	6.7	*Thalassia, Syringodium, Halimeda lacrimosa*
68	6.4	*Thalassia, Syringodium*
69	6.4	*Thalassia*, *Syringodium*
70	6.1	*Thalassia, Syringodium*
71	6.1	*Thalassia, Aplysina cauliformis, Ophiothrix oerstedii*
72	6.1	*Thalassia, Dardanus venosus*, *Valonia ventricosa*
73	6.1	*Thalassia, Didemnum candidum*
74	6.1	*Thalassia, Syringodium*
75	6.1	*Thalassia, Halimeda lacrimosa*
76	6.1	*Thalassia, Syringodium*
77	6.1	*Syringodium,* brittle star, *Halimeda* sp.
78	6.1	*Syringodium*
79	6.1	*Syringodium, Halimeda opuntia*
80	6.1	*Halimeda lacrimosa, H. incrassata,* brittle star, *Syringodium, Amphiroa rigida*

9.18.2. Quadrats

Site 17. Angelfish Creek Coral Quadrats
22 July 1980

Species	Quadrats 1-4	Species	Quadrats 1-4
ALGAE		*Muricea muricata*	8
		M. elongata	1
Halimeda opuntia	1	*M. laxa*	1
H. o. minor	1	*Pseudoplexaura wagenaari*	1
H. tuna	31	*P. porosa*	16
Dilophus alternans	3	*P. flagellosa*	2
Dictyota sp.	100	*Muriceopsis flavida*	3
Laurencia sp.	9	*Eunicea calyculata*	3
Stypopodium zonale	6	*E. succinea succinea*	2
Amphiroa fragilissima	10	*E. succinea plantaginea*	2
		E. tournefortl	6
PORIFERA		*E. fusca*	1
		E. sp.	3
Aplysina cauliformis	22	*Gorgonia ventalina*	15
Haliclona compressa	23	*Plexaura* sp.	1
Spinosella vaginalis vaginalis	9	*Plexaura* sp.	1
Spongia sp.	8	*Siderastrea siderea*	18
Higginsia sp.	1	*Busmilia fastigiata*	2
Ircinia strobilina	5	*Dichocoenia stokesi*	13
Niphates erecta	36	*Montastraea annularis*	2
Ircinia campana	2	*M. cavernosa*	4
Cliona deletrix	1	*Porites asteroides*	8
Chondrilla nucula	4	*P.* sp.	15
Microciona sp.	1	*Agaricia agaricites*	6
		Stephanocoenia michelini	2
COELENTERATA		*Oculina diffusa*	1
		Mussa angulosa	1
Millepora alcicornis	22	*Palythos mammillosa*	1
Plexaurella grisea	5	*Bartholomea* sp.	1
P. fusifera	8	*Zoanthus sociatus*	3
P. dichotoma	2	*Lebrunea danae*	1
Pseudopterogorgia acerosa	1		
P. bipinnata	1	POLYCHAETA	
P. americana	21		
P. rigida	1	Serpulid	3
P. kallos	5	Sabellid	17
Plexaura flexosa	14	Hesionid	1
P. homomalla	5		

Site 17. Angelfish Creek Coral Quadrats (cont.).
22 July 1980

Species	Quadrats 1-4
MOLLUSCA	
Barbatia cancellaria	8
Ostrea (Lopha) frons	3
CRUSTACEA	
Synalpheus hemphilli	1
ECHINODERMATA	
Ophiothrix lineata	2
Brittle stars	2
ASCIDIACEA	
Didemnum candidum	1

Site 17. Angelfish Creek Grass Quadrats
22 July 1980

Species	Quadrats 1-4	Species	Quadrats 1-4
ALGAE		POLYCHAETA	
Halimeda incrassata	69	*Eunice* sp.	1
H. lacrimosa	1	Amphinomid	1
H. tuna	7		
H. monile	10	MOLLUSCA	
H. opuntia	2		
Dasycladus vermicularis	63	*Strombus* egg case	1
Udotea flabellum	9	*Acmaea* sp.	1
Rhipocephalus phoenix	11	*Musculus lateralis*	1
Penicillus capitatus	16		
Acetabularia crenulata	1	CRUSTACEA	
Caulerpa sp.	20		
Amphiroa sp.	3	*Paguristes tortugae*	1
PORIFERA		ECHINODERMATA	
Dysidea sp.	8		
Dysidea fragilis	16	*Ophiotrix oerstedii*	3
Lissodendorix sp.	2	Brittle star sp.	x
Foliolina peltata	1	Brittle star sp.	x
		Clypeaster rosaceus	2
COELENTERATA		*Eucidaris tribuloides*	1
Millepora sp.	10	ASCIDIACEA	
Plexaurella fusifera	1		
		Didemnum candidum	2
		D. savigni	61
		Styela sp.	1
		Tunicate sp.	5

9.19. Site 18. Molasses Reef, Deep Sites

9.19.1. Transects

Transect 1. Molasses Reef Light bearing 328° true run on heading of 328° true.
30 November 1981

Meter mark	Depth meters	Bottom type and species
0	27.4	Sand
1	26.1	*Halimeda triloba*, *Dictyota* sp.
2	24.3	Sand
3	23.4	Filamentous algae
4	22.5	*Pseudopterogorgia bipinnata*
5	21.3	Filamentous algae
6	20.4	*Anthosigmella varians*
7	18.9	*Halimeda tuna*
8	16.1	*Pocockiella variegata*
9	14.9	*Anthosigmella varians, Parazanthus* sp.
10	14.3	*Pseudopterogorgia americana*
11	14.3	*Xestospongia muta*
12	14.3	Sand

Site 18. Molasses Reef, Deep Sites

Transect 2. 300 m west of Transect 1 run on heading of 328° to 298° true.
30 November 1981

Meter mark	Depth meters	Bottom type and species
0	28.9	*Muricea atlantica*
1	28.0	*Erythropodium caribaeorum*
2	27.7	*Spongia* indet.
3	27.4	*Agelas* sp.
4	26.8	Sand
5	25.8	*Plexaurella grisea*
6	24.9	Sand
7	23.7	*Iotrochota birotulata*
8	22.8	*I. birotulata*
9	21.9	*Lithothamnion* sp., *Haliclona viridis*
10	21.9	*Haliclona viridis*
11	20.7	Rubble
12	20.7	Bryozoan (encrusted), filamentous algae

Site 18. Molasses Reef, Deep Sites

Transect 3. 300 m west of Transect 2 run on heading of 328° true.
1 December 1981

Meter mark	Depth meters	Bottom type and species
0	30.4	Sand
1	30.4	Filamentous algae
2	28.9	*Pseudopterogorgia americana*
3	28.0	*Erythropodium caribaeorum*
4	25.8	*Halimeda tuna*
5	25.2	Filamentous red alga
6	24.3	*Galaxaura* sp., *Pocockiella variegata*
7	23.4	*Homaxinella* sp.
8	21.3	Encrusting sponge
9	19.2	Tedaniid
10	18.5	*Homaxinella* sp.
11	18.2	*Millepora alcicornis*
12	18.2	*Siderastrea siderea*

10. APPENDIX B

PERCENTAGE CALCULATIONS OF ORGANIC AND BARE COVER ON TRANSECTS

The percentage calculations given here are in the form presented by Antonius (1974). This method was chosen to permit comparisons of the two studies. In the calculations Composition of Total Transect "total" equals the total number of sample (observation) points on the transect and Is equivalent to 100%. Bare substrate is when the sample point was on bare sand, rubble, rock or hardbottom with no living organism present. Organic cover was when a living organism lay under the observation point. The number of samples of bare substrate and organic cover is indicated as a percentage of the total number of sample points. In the calculations of Composition of Organic Portion, the same methods are used. Only plants (algae or seagrasses), sponges, other coelenterates and reefbuilding corals are listed. "Other coelenterates" include sea anemones, hydroids and scleractinians, except stinging corals, *Millepora.* "Reefbuilding corals" include all of the stony corals and stinging corals.

When percentage figures in Composition of Organic Portion do not add up to 100%, the missing percentages are organisms that are not included in the four categories listed above. They are usually mollusks or tunicates. In cases where more than one group of organisms is listed at a sample point, the first group listed was arbitrarily used in the calculations as indicating the most prominent organism.

10.1. Site 1. Molasses Reef

Transect 1.

Composition of Total Transect

Total	124	sample points	100%
Bare substrate	21	"	17%
Organic cover	103	"	83%

Composition of Organic Portion

Total	103	sample points	100%
Plants	70	"	68%
Sponges	7	"	7%
Other coelenterates	16	"	16%
Reefbuilding corals	10	"	10%

Transect 2.

Composition of Total Transect

Total	109	sample points	100%
Bare substrate	29	"	27%
Organic cover	80	"	73%

Composition of Organic Portion

Total	80	sample points	100%
Plants	36	"	45%
Sponges	8	"	10%
Other coelenterates	22	"	27.5%
Reefbuilding corals	14	"	17.5%

Transect 3.

Composition of Total Transect

Total	120	sample points	100%
Bare substrate	40	"	33%
Organic cover	80	"	67%

Composition of Organic Portion

Total	80	sample points	100%
Plants	48	"	60%
Sponges	4	"	5%
Other coelenterates	16	"	20%
Reefbuilding corals	12	"	15%

10.2. Site 2. White Banks

Transect 1.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	15	"	19%
Organic cover	65	"	81%

Composition of Organic Portion

Total	65	sample points	100%
Plants	42	"	65%
Sponges	1	"	2%
Other coelenterates	14	"	22%
Reefbuilding corals	5	"	8%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	13	"	16%
Organic cover	68	"	84%

Composition of Organic Portion

Total	68	sample points	100%
Plants	42	"	62%
Sponges	2	"	3%
Other coelenterates	14	"	21%
Reefbuilding corals	10	"	14%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	16	"	20%
Organic cover	65	"	81%

Composition of Organic Portion

Total	65	sample points	100%
Plants	35	"	53%
Sponges	2	"	3%
Other coelenterates	9	"	13%
Reefbuilding corals	14	"	21%

10.3. Site 3. French Reef

Transect 1.

Composition of Total Transect

Total	144	sample points	100%
Bare substrate	65	"	45%
Organic cover	78	"	55%

Composition of Organic Portion

Total	78	sample points	100%
Plants	53	"	68%
Sponges	5	"	6%
Other coelenterates	8	"	10%
Reefbuilding corals	12	"	15%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	23	"	28%
Organic cover	58	"	72%

Composition of Organic Portion

Total	58	sample points	100%
Plants	36	"	62%
Sponges	5	"	9%
Other coelenterates	11	"	19%
Reefbuilding corals	6	"	10%

Transect 3.

Composition of Total Transect

Total	122	sample points	100%
Bare substrate	36	"	30%
Organic cover	86	"	70%

Composition of Organic Portion

Total	86	sample points	100%
Plants	55	"	64%
Sponges	1	"	1%
Other coelenterates	18	"	21%
Reefbuilding corals	12	"	14%

10.4. Site 4. Mosquito Bank

Transect 1.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	1	"	1%
Organic cover	79	"	99%

Composition of Organic Portion

Total	79	sample points	100%
Plants	75	"	95%
Sponges	1	"	1%
Other coelenterates	1	"	1%
Reefbuilding corals	2	"	3%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	6	"	7%
Organic cover	75	"	93%

Composition of Organic Portion

Total	75	sample points	100%
Plants	67	"	89%
Sponges	0	"	0%
Other coelenterates	6	"	8%
Reefbuilding corals	2	"	3%

Transect 3.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	4	"	5%
Organic cover	76	"	95%

Composition of Organic Portion

Total	76	sample points	100%
Plants	66	"	87%
Sponges	2	"	3%
Other coelenterates	6	"	7%
Reefbuilding corals	2	"	3%

10.5. Site 5. Grecian Rocks

Transect 1.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	47	"	59%
Organic cover	33	"	41%

Composition of Organic Portion

Total	33	sample points	100%
Plants	22	"	67%
Sponges	0	"	0%
Other coelenterates	5	"	15%
Reefbuilding corals	6	"	18%

Transect 2.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	38	"	48%
Organic cover	42	"	53%

Composition of Organic Portion

Total	80	sample points	100%
Plants	17	"	40%
Sponges	1	"	2%
Other coelenterates	9	"	21%
Reefbuilding corals	15	"	36%

Transect 3.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	46	"	58%
Organic cover	34	"	42%

Composition of Organic Portion

Total	34	sample points	100%
Plants	19	"	56%
Sponges	1	"	3%
Other coelenterates	6	"	17%
Reefbuilding corals	8	"	24%

10.6. Site 6. Key Largo Dry Rocks

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	18	"	22%
Organic cover	63	"	78%

Composition of Organic Portion

Total	63	sample points	100%
Plants	39	"	62%
Sponges	0	"	0%
Other coelenterates	2	"	3%
Reefbuilding corals	22	"	35%

Transect 2.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	9	"	11%
Organic cover	71	"	89%

Composition of Organic Portion

Total	71	sample points	100%
Plants	66	"	93%
Sponges	0	"	0%
Other coelenterates	1	"	1%
Reefbuilding corals	4	"	6%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	52	"	64%
Organic cover	29	"	36%

Composition of Organic portion

Total	29	sample points	100%
Plants	21	"	72%
Sponges	4	"	14%
Other coelenterates	2	"	7%
Reefbuilding corals	1	"	3%

10.7. Site 7. The Elbow

Transect 1.

Composition of Total Transect

Total	118	sample points	100%
Bare substrate	52	"	44%
Organic cover	66	"	56%

Composition of Organic Portion

Total	66	sample points	100%
Plants	49	"	74%
Sponges	3	"	5%
Other coelenterates	6	"	9%
Reefbuilding corals	9	"	14%

Transect 2.

Composition of Total Transect

Total	111	sample points	100%
Bare substrate	38	"	34%
Organic cover	73	"	66%

Composition of Organic Portion

Total	73	sample points	100%
Plants	56	"	77%
Sponges	2	"	3%
Other coelenterates	8	"	11%
Reefbuilding corals	7	"	10%

Transect 3.

Composition of Total Transect

Total	82	sample points	100%
Bare substrate	34	"	41%
Organic cover	48	"	59%

Composition of Organic Portion

Total	48	sample points	100%
Plants	28	"	58%
Sponges	4	"	8%
Other coelenterates	9	"	19%
Reefbuilding corals	6	"	13%

10.8. Site 8. Carysfort Reef

Transect 1.

Composition of Total Transect

Total	157	sample points	100%
Bare substrate	48	"	31%
Organic cover	109	"	69%

Composition of Organic Portion

Total	109	sample points	100%
Plants	66	"	61%
Sponges	4	"	4%
Other coelenterates	9	"	8%
Reefbuilding corals	28	"	26%

Transect 2.

Composition of Total Transect

Total	136	sample points	100%
Bare substrate	42	"	31%
Organic cover	94	"	69%

Composition of Organic Portion

Total	94	sample points	100%
Plants	67	"	71%
Sponges	2	"	2%
Other coelenterates	13	"	14%
Reefbuilding corals	9	"	10%

Transect 3.

Composition of Total Transect

Total	42	sample points	100%
Bare substrate	9	"	21%
Organic cover	33	"	79%

Composition of Organic Portion

Total	33	sample points	100%
Plants	14	"	42%
Sponges	0	"	0%
Other coelenterates	11	"	33%
Reefbuilding corals	8	"	24%

10.9. Site 9. Basin Hill Shoals

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	8	"	10%
Organic cover	73	"	90%

Composition of Organic Portion

Total	73	sample points	100%
Plants	60	"	82%
Sponges	1	"	1%
Other coelenterates	9	"	12%
Reefbuilding corals	4	"	5%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	16	"	20%
Organic cover	65	"	80%

Composition of Organic Portion

Total	65	sample points	100%
Plants	63	"	97%
Sponges	0	"	0%
Other coelenterates	1	"	2%
Reefbuilding corals	1	"	2%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	18	"	22%
Organic cover	63	"	78%

Composition of Organic Portion

Total	63	sample points	100%
Plants	60	"	95%
Sponges	1	"	2%
Other coelenterates	1	"	2%
Reefbuilding corals	0	"	0%

10.10. Site 10. Turtle Rocks

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	20	"	25%
Organic cover	61	"	75%

Composition of Organic Portion

Total	61	sample points	100%
Plants	41	"	67%
Sponges	8	"	13%
Other coelenterates	4	"	7%
Reefbuilding corals	1	"	2%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	15	"	19%
Organic cover	66	"	81%

Composition of Organic Portion

Total	66	sample points	100%
Plants	53	"	80%
Sponges	1	"	2%
Other coelenterates	1	"	2%
Reefbuilding corals	2	"	3%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	9	"	11%
Organic cover	72	"	89%

Composition of Organic Portion

Total	72	sample points	100%
Plants	47	"	65%
Sponges	1	"	1%
Other coelenterates	9	"	13%
Reefbuilding corals	10	"	14%

10.11. Site 11. Ocean Reef

Transect 1.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	23	"	29%
Organic cover	57	"	71%

Composition of Organic Portion

Total	57	sample points	100%
Plants	55	"	96%
Sponges	1	"	2%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	7	"	9%
Organic cover	73	"	91%

Composition of Organic Portion

Total	73	sample points	100%
Plants	73	"	100%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	21	"	26%
Organic cover	60	"	74%

Composition of Organic Portion

Total	60	sample points	100%
Plants	59	"	98%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

10.12. Site 12. Turtle Harbor

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	25	"	31%
Organic cover	56	"	69%

Composition of Organic Portion

Total	56	sample points	100%
Plants	55	"	98%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	80	sample points	100%
Bare substrate	30	"	38%
Organic cover	50	"	62%

Composition of Organic Portion

Total	50	sample points	100%
Plants	48	"	96%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	1	"	1%
Organic cover	80	"	99%

Composition of Organic Portion

Total	80	sample points	100%
Plants	79	"	99%
Sponges	1	"	1%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

10.13. Site 13. North Channel

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	19	"	23%
Organic cover	62	"	77%

Composition of Organic Portion

Total	62	sample points	100%
Plants	54	"	87%
Sponges	5	"	8%
Other coelenterates	0	"	0%
Reefbuilding corals	2	"	3%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	16	"	20%
Organic cover	65	"	80%

Composition of Organic Portion

Total	65	sample points	100%
Plants	62	"	95%
Sponges	1	"	2%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	20	"	25%
Organic cover	61	"	75%

Composition of Organic Portion

Total	61	sample points	100%
Plants	52	"	85%
Sponges	4	"	7%
Other coelenterates	2	"	3%
Reefbuilding corals	1	"	2%

10.14. Site 14. South Channel

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	3	"	4%
Organic cover	78	"	96%

Composition of Organic Portion

Total	78	sample points	100%
Plants	74	"	95%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	4	"	5%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	9	"	11%
Organic cover	72	"	89%

Composition of Organic Portion

Total	72	sample points	100%
Plants	66	"	92%
Sponges	1	"	1%
Other coelenterates	0	"	0%
Reefbuilding corals	2	"	3%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	16	"	20%
Organic cover	65	"	80%

Composition of Organic Portion

Total	65	sample points	100%
Plants	57	"	88%
Sponges	3	"	5%
Other coelenterates	1	"	2%
Reefbuilding corals	3	"	5%

10.15. Site 15. Rock Harbor

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	0	"	0%
Organic cover	81	"	100%

Composition of Organic Portion

Total	81	sample points	100%
Plants	81	"	100%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	3	"	4%
Organic cover	78	"	96%

Composition, of Organic Portion

Total	78	sample points	100%
Plants	78	"	100%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	4	"	5%
Organic cover	77	"	95%

Composition of Organic Portion

Total	77	sample points	100%
Plants	74	"	96%
Sponges	1	"	1%
Other coelenterates	0	"	0%
Reefbuilding corals	1	"	1%

10.16. Site 16. Point Elizabeth

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	23	"	28%
Organic cover	58	"	72%

Composition of Organic Portion

Total	38	sample points	100%
Plants	42	"	72%
Sponges	3	"	5%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	7	"	9%
Organic cover	74	"	91%

Composition of Organic Portion

Total	74	sample points	100%
Plants	63	"	85%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrates	7	"	9%
Organic cover	74	"	91%

Composition of Organic Portion

Total	74	sample points	100%
Plants	64	"	86%
Sponges	2	"	3%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

10.17. Site 17. Angelfish Creek

Transect 1.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	3	"	4%
Organic cover	78	"	96%

Composition of Organic Portion

Total	78	sample points	100%
Plants	71	"	91%
Sponges	1	"	1%
Other coelenterates	2	"	3%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	12	"	15%
Organic cover	69	"	85%

Composition of Organic Portion

Total	69	sample points	100%
Plants	66	"	96%
Sponges	0	"	0%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	81	sample points	100%
Bare substrate	9	"	11%
Organic cover	72	"	89%

Composition of Organic Portion

Total	72	sample points	100%
Plants	70	"	97%
Sponges	1	"	1%
Other coelenterates	0	"	0%
Reefbuilding corals	0	"	0%

10.18. Site 18. Molasses Reef - Deep Dive

Transect 1.

Composition of Total Transect

Total	13	sample points	100%
Bare substrate	3	"	23%
Organic cover	10	"	77%

Composition of Organic Portion

Total	10	sample points	100%
Plants	5	"	50%
Sponges	2	"	20%
Other coelenterates	1	"	10%
Reefbuilding corals	0	"	0%

Transect 2.

Composition of Total Transect

Total	13	sample points	100%
Bare substrate	3	"	23%
Organic cover	10	"	77%

Composition of Organic Portion

Total,	10	sample points	100%
Plants	2	"	20%
Sponges	4	"	40%
Other coelenterates	3	"	30%
Reefbuilding corals	0	"	0%

Transect 3.

Composition of Total Transect

Total	13	sample points	100%
Bare substrates	1	"	8%
Organic cover	12	"	92%

Composition of Organic Portion

Total	12	sample points	100%
Plants	4	"	33%
Sponges	4	"	33%
Other coelenterates	2	"	17%
Reefbuilding corals	2	"	17%

11. APPENDIX C

LIST OF FAUNA AND FLORA WITH COMMON NAMES

The following species list of the fauna and flora of the study area is compiled from the identifications of organisms from the transects, quadrats and poison stations. The scientific names conform to those given in the papers and monographs referred to by the specialists. In some cases name changes may have occurred later. The species names are accompanied by their author's names to facilitate cross-checking. Identification sources are cited in the species photographic card catalog deposited with NOAA.

Many algae and invertebrates have no common names. Rather than invent new ones, those without a known common name have been left blank. Common names of plants and invertebrates were taken from Voss (1980) Seashore Life of Florida and the Caribbean, Smith (1949) Atlantic Reef Corals, and Warmke and Abbott (1961) Caribbean Seashells.

The common names of fishes were taken from Robins *et al.* (1980) A List of Common and Scientific Names of Fishes from the United States and Canada, fourth edition.

ALGAE

Greens

Acetabularia crenulata Lamouroux	Mermaid's Wine Glass
Anadyomene stellata (Wulfen) C. Agardh	Star Alga
Avrainvillea nigricans Decaisne	
Batophora oerstedii J. Agardh	Batophora
Caulerpa cupressoides (West) C. Agardh	
Caulerpa prolifera (Forsskal) Lamouroux	
Caulerpa sp.	
Chaetomorpha sp.	
Cladophora sp.	
Dasycladus vermicularis (Scopoli) Krasser	Worm Alga
Dictyosphaeria cavernosa (Forsskal) Borgesen	Green Bubble Alga
Dictyosphaeria versluysii Weber-van Bosse	
Enteromorpha sp.	
Halimeda discoidea Decaisne	
Halimeda lacrimosa Howe	
Halimeda incrassata (Ellis) Lamouroux	
Halimeda monile (Ellis and Solander) Lamouroux	
Halimeda opuntia (Linnaeus) Lamouroux	
Halimeda opuntia minor Vickers	
Halimeda opuntia triloba (Decaisne) Barton	
Halimeda tuna (Ellis and Solander) Lamouroux	
Neomeris annulata Dickie	
Penicillus capitatus Lamarck	Shaving Brush Alga
Penicillus dumetosus (Lamouroux) Blainsville	
Penicillus lamourouxii Decaisne	
Penicillus pyriformis A. and E. S. Gepp	
Rhipocephalus phoenix (Ellis and Solander) Kutzing	
Udotea conglutinata (Ellis and Solander) Lamouroux	
Udotea flabellum (Ellis and Solander) Lamouroux	Mermaid's Fan
Udotea spinulosa Howe	
Udotea sp.	
Ulva lactuca Linnaeus	Sea Lettuce
Valonia ventricosa J. Agardh	Sea Bottles
Valonia sp.	

Browns

Dictyota cervicornis Kutzing	
Dictyota sp.	
Dilophus alternans J. Agardh	
Padina sanctae-crucis Borgesen	
Pocockiella variegata (Lamouroux) Papenfuss	
Sargassum hystrix J. Agardh	Gulfweed, Sargassum
Sargassum hystrix buxifolium (Chauvin) J. Agardh	Gulfweed, Sargassum
Sargassum pteropleuron Grunow	Gulfweed, Sargassum
Sargassum sp.	
Stypopodium zonale (Lamouroux) Papenfuss	

Reds

Acanthophora sp.	
Amphiroa brasiliana Decaisne	
Amphiroa fragilissima (Linnaeus) Lamouroux	Fragile Coral
Amphiroa rigida antillana (Borgesen) Lamouroux	
Amphiroa tribulus (Ellis and Solander) Lamouroux	
Amphiroa sp.	
Bostrychia montagnei Harvey	
Ceramium nitens (C. Agardh) J. Agardh	
Colpomenia sinuosa (Roth) Derbes and Solier	
Galaxaura cylindrica (Ellis and Solander) Lamouroux	
Galaxaura marginata (Ellis and Solander) Lamouroux	
Galaxaura sp.	
Goniolithon strictum Foslie	Coralline
Goniolithon sp.	Coralline
Gracilaria cylindrica Borgesen	
Gracilaria ferox J. Agardh	
Gracilaria sp.	
Jania sp.	Coralline
Laurencia papillosa (Forsskal) Greville	
Laurencia poitei (Lamouroux) Howe	
Laurencia sp.	
Lithothamnion sp.	Coralline

Seagrasses

Diplanthera wrightii (Ascherson)	Cuban Shoal Grass
Syringodium filiforme Kutzing	Manatee Grass
Thalassia testudinum Koenig and Sims	Turtle Grass

11.2. INVERTEBRATES

PORIFERA

Agelas schmidti Wilson	Tub Sponge
Aiolochroia crassa (Hyatt)	
Anthosigmella varians (Duchassaing and Michelotti)	Variable Sponge
Aplysella sp.	
Aplysina cauliformis (Carter)	
Aplysina fistularis (Pallas)	Yellow Tube Sponge
Callyspongia fallax Duchassaing and Michelotti	Round Tube Sponge
Callyspongia sp.	
Chondrilla nucula Schmidt	Chicken Liver Sponge
Chondrosia collectrix (Schmidt)	
Choristida sp.	
Cinachyra sp.	
Cliona delitrix Rang	Red Boring Sponge
Desmacella sp.	
Dysidea etherea de Laubenfels	Heavenly Sponge
Dysidea fragilis (Montagu)	
Dysidea sp.	
Epipolasis sp.	
Foliolina peltata Schmidt	

Geodia gibberosa Lamarck	
Haliclona coerulescens Topsent	
Haliclona compressa Duchassaing and Michelotti	
H. oculata (Linnaeus)	
Haliclona viridis (Duchassaing and Michelotti)	Tube Sponge
Higginsia strigilata (Lamarck)	
Higginsia sp.	
Iotrochota birotulata (Higgin)	Purple Bleeding Sponge
Ircinia campana (Lamarck)	Vase Sponge
Ircinia felix (Duchassaing and Michelotti)	
Ircinia strobilina (Lamarck)	Pillow Stinking Sponge
Lissodendoryx sigmata (de Laubenfels)	
Merriamium tortugasensis de Laubenfels	
Microciona sp.	
Mycale sp.	
Myriastra kallifetilla de Laubenfels	
Neofibularia nolitangere (Duchassaing and Michelotti)	Do-not-touch Sponge
Niphates digitalis (Lamarck)	Gray Cornucopia Sponge
Niphates erecta Duchassaing and Michelotti	
Placospongia sp.	
Pseudaxinella lunaechartia (Ridley and Dendy)	
Siphonodictyon siphonum (de Laubenfels)	Boring Sponge
Siphonodictyon sp.	
Spheciospongia vesparia (Lamarck)	Loggerhead Sponge
Spinosella vaginalis (Lamarck)	Lavender Tube Sponge
Spinostrella sp.	
Spongia cerebriformis (Duchassaing and Michelotti)	
Spongia sp.	
Tedania ignis (Duchassaing and Michelotti)	Fire Sponge
Tethya crypta (de Laubenfels)	
Tethya sp.	
Thalysias juniperina (Lamarck)	
Thalysias sp.	
Verongia longissima (Carter)	Branching Candle Sponge
Verongula ardis (de Laubenfels)	
Xestospongia muta (Schmidt)	Basket Sponge

11.3. COELENTERATA

Hydrozoa

Millepora alcicornis (Linnaeus)	Stinging Fire Coral
Millepora complanata (Lamarck)	Leafy Fire Coral
Stylaster roseus (Pallas)	Pink Cave Coral

Anthozoa

Gorgonacea

Briareum asbestinum (Pallas)	Corky Seafingers
Erythropodium caribaeorum (Duchassaing and Michelotti)	Encrusting Soft Coral
Eunicea calyculata Ellis and Solander	Warty *Eunice*a
Eunicea calyculata forma *coronata* Bayer	
Eunicea clavigera Bayer	

Eunicea fusca Duchassaing and Michelotti	
Eunicea knighti Bayer	
Eunicea mammosa Lamouroux	Mammillated *Eunice*a
Eunicea succinea forma *plantaginea* (Lamarck)	
Eunicea succinea forma *succinea* (Pallas)	
Eunicea tourneforti forma *tourneforti* Milne Edwards and Haime	
Gorgonia ventalina Linnaeus	Sea Fan
Muricea elongata (Lamouroux)	
Muricea laxa Verrill	
Muricea muricata (Pallas)	Spiny Muricea
Muriceopsis flavida (Lamarck)	
Plexaura flexosa Lamouroux	Sea Rod, Bent Plexaura
Plexaura homomalla (Esper)	Black Sea Rod
Plexaura dichtoma (Esper)	Double-forked Plexaurella
Plexaurella fusifera Kunze	
Plexaurella grisea Kunze	Grey Plexaurella
Plexaurella pumila Verrill	
Pseudoplexaura crucis Bayer	
Pseudoplexaura flagellosa (Houttuyn)	
Pseudoplexaura porosa (Houttuyn)	
Pseudoplexaura wagenaari (Stiasny)	
Pseudopterogorgia acerosa (Pallas)	Purple Sea Plume
Pseudopterogorgia americana (Gmelin)	Slimy Sea Plume
Pseudopterogorgia bipinnata (Verrill)	Bipinnate Sea Feather
Pseudopterogorgia blanquillensis (Stiasny)	
Pseudopterogorgia elisabethae Bayer	
Pseudopterogorgia kallos (Bielschowsky)	
Pseudopterogorgia rigida (Bielschowsky)	
Pterogorgia anceps (Pallas)	Angular Sea Whip
Pterogorgia citrina (Esper)	Yellow Sea Whip

Actiniaria

Bartholomea sp.	
Lebrunia danae (Duchassaing and Michelotti)	Giant Stinging Anemone
Palythoa mammillosa (Ellis and Solander)	Knobby Zoanthidean
Parazoanthus sp.	
Zoanthus sociatus Ellis	Green Sea Mat Anemone
Zoanthus sp.	

Scleractina

Acropora cervicornis (Lamarck)	Staghorn Coral
Acropora palmata (Lamarck)	Elkhorn Coral
Agaricia agaricites (Linnaeus)	Lettuce Coral
Agaricia lamarcki Milne Edwards and Haime	Sheet Coral
Cladocora arbuscula Lesueur	Tube Coral
Colpophyllia natans (Muller)	Brain Coral
Dichocoenia stokesi Milne Edwards and Haime	Star Coral
Diploria clivosa (Ellis and Solander)	Knobbed Brain Coral
Diploria labyrinthiformis (Linnaeus)	Brain Coral
Diploria strigosa (Dana)	Brain Coral
Eusmilia fastigiata (Pallas)	Flower Coral

Favia fragum (Esper)	Star Coral
Helioseris cucullata (Ellis and Solander)	Saucer Coral
Isophyllia sinuosa (Ellis and Solander)	Sinous Cactus Coral
Manicina areolata (Linnaeus)	Rose Coral
Meandrina meandrites (Linnaeus)	Brain Coral
Montastraea annularis (Ellis and Solander)	Boulder Coral
Montastraea cavernosa (Linnaeus)	Large Star Coral
Mussa angulosa Pallas	Large Flower Coral
Mycetophyllia lamarckiana (Milne Edwards and Haime)	Large Cactus Coral
Mycetophyllia ferox Wells	Grooved Fungus Coral
Porites astreoides Lamarck	Porous Coral
Porites divaricata Lesueur	
Porites furcata Lamarck	Finger Coral
Porites porites (Pallas)	Clubbed Finger Coral
Siderastrea radians (Pallas)	Starlet Coral
Siderastrea siderea (Ellis and Solander)	Starlet Coral
Solenaster hyades (Dana)	Lobed Star Coral
Stephanocoenia michelini (Milne Edwards and Haime)	Blushing Star Coral

11.4. ANNELIDA

Polychaeta

Arabella sp.	
Cistenides regalis Verrill	Royal Tube Worm
Cistenides gouldi Verrill	Golden Tube Worm
Eunice filamentosa Grube	
Eunice kinbergi (Webster)	
Eunice longicirrata Webster	
Eunice mutilata Webster	
Eunice rubra Grube	
Eunice schemacephala Schmarda	Atlantic Palolo
Eunice unifrons (Verrill)	
Eunice sp.	
Eupholae sp.	
Eurythoe complanata (Pallas)	
Glycera sp.	
Hermodice carunculata (Pallas)	Green Bristle Worm
Hesione picta	
Loimia sp.	
Lumbrinereis sp.	
Marphysa sp.	
Nephthys sp.	
Notopygos crinita Grube	
Sabella melanostigma Schmarda	Banded Feather Duster

11.5. SIPUNCULIDA

Phascolion sp.

11.6. MOLLUSCA

Gastropoda

Adoria sp.	
Aplysia parvula Morch	
Astraea phoebia Roding	Long-spined Star-shell
Astraea tecta americana (Gmelin)	American Star-shell
Calliostoma jujubinum (Gmelin)	Jujube Top-shell
Cerithium eburneum forma *algicola* C. B. Adams	Ivory Cerith
Cerithium guinaicum Philippi	Schwengel's Cerith
Cerithium litteratum Born	Stocky Cerith
Columbella mercatoria (Linnaeus)	Common Dove-shell
Coralliophila caribaea Abbott	Caribbean Coral-shell
Crepidula aculeata (Gmelin)	Spiny Slipper-shell
Crepidula plana Say	Eastern-white Slipper-shell
Cyphoma gibbosum (Linnaeus)	Flamingo Tongue
Gorio sp.	
Haminoea sp.	
Leucozonia nassa (Gmelin)	Chestnut Latirus
Modulus modulus (Linnaeus)	Atlantic Modulus
Murex recurvirostris rubidus F. C. Baker	Rose Murex
Olivella nivea (Gmelin)	West Indian Dwarf Olive
Papyridea semisulcata (Grey)	Frilled Paper Cockle
Polinices lacteus (Guilding)	Milk Moon-shell
Strombus raninus Gmelin	Hawk-winged Conch
Tegula fasciata Born	Smooth Atlantic Tegula
Hastula hastata (Gmelin)	Shiny Atlantic Auger
Thais deltoidea (Lamarck)	Deltoid Rock-shell
Tricolia affinis (C. B. Adams)	Checkered Pheasant
Tridachia crispata (Morch)	Common Lettuce Slug
Trivia pediculus (Linnaeus)	Coffee Bean Trivia
Vasum muricatum (Born)	Caribbean Vase

Pelecypoda

Americardia media (Linnaeus)	Atlantic Strawberry Cockle
Anadara notabilis (Roding)	Eared Ark
Arca imbricata Bruguiere	Mossy Ark
Arca zebra (Swainson)	Turkey Wing
Argopecten gibbus (Linnaeus)	Calico Scallop
Barbatia cancellaria (Lamarck)	Red-Brown Ark
Barbatia candida (Heibling)	White Bearded Ark
Barbatia domingensis (Lamarck)	White Minature Ark
Chama macerophylla (Gmelin)	Leafy Jewel Box
Chione cancellata (Linnaeus)	Cross-barred Venus
Chione paphia (Linnaeus)	King Venus
Codakia orbicularis (Linnaeus)	Tiger Lucina
Diplodonta punctata (Say)	Common Atlantic Diplodon
Glycymeris pectinata (Gmelin)	Comb Bittersweet
Laevicardium laevigatum (Linnaeus)	Common Egg Cockle
Lima lima (Linnaeus)	Spiny Lima
Lima pellucida C. B. Adams	Antillean Lima
Linga pensylvanica (Linnaeus)	Pennsylvania Lucina

Lithophaga sp.	
Lopha frons (Linnaeus)	Frons Oyster
Lyropecten antillarum (Recluz)	Antillean Scallop
Modiolus americanus (Leach)	Tulip Mussel
Modiolus modiolus squamosus Beauperthuy	False Tulip Shell
Musculus lateralis Say	Lateral Musculus
Ostrea frons Linnaeus	Coon Oyster
Pecten sp.	
Periglypta listeri Grey	Princess Venus
Pinctada imbricata Röding	Atlantic Pearl Oyster
Plicatula gibbosa Lamarck	Kitten's Paw
Tagelus sp. Grey	
Tellina listeri Röding	Speckled Tellin

Amphineura

Chiton sp.	
Ischnochiton sp.	
Lepidochitona liozonis (Dall and Simpson)	Puerto Rico Red Chiton
Stenoplax erythronota (C. B. Adams)	Ashy Slender Chlton
Stenoplax floridana (Pilsbry)	Florida Slender Chiton

Scaphopoda

Dentalium calamus Dall	Reed Tusk

Octopoda

Octopus joubini Adam	Joubin's Octopus

11.7. CRUSTACEA

Isopoda

Leucothoe spinicarpa (Abildgaard)

Decapoda

Natantia

Alpheus amblyonyx Chace	Snapping Shrimp
A. cristulifrons Rathbun	
A. formosus (Gibbes)	Striped snapping Shrimp
A. normanni Kingsley	
A. ridleyi Pocock	
A. sp. A	
A. sp. B	
Brachycarpus biunguiculatus (Lucas)	Two-clawed Shrimp
Lysmata intermedia (Kingsley)	Cleaning Shrimp
Periclimenes pedersoni Chase	Pederson's Cleaning Shrimp
Synalpheus fritzmuelleri Coutiere	Snapping Shrimp
S. hemphilli Coutiere	
S. minus Say	
S. townsendi Coutiere	

Thor manningi Chace
Thunor rathbunae (Schmitt)

Reptantia

Calcinus tibicen (Herbst)	
Dardanus venosus (Milne Edwards)	Bar-eyed Hermit Crab
Gonodactylus sp.	
Iridopagurus sp.	
Paguristes cadenati Provenzano	Red hermit crab
Paguristes grayi Benedict	
Paguristes puncticeps Benedict	
Paguristes tortugae Schmitt	
Paguristes wassi Provenzano	
Paguristes sp.	
Pagurus brevidactylus (Stimpson)	
Pagurus provenzanoi Forest and De Saint Laurent	
Panulirus argus Latreille	Crawfish, Spiny Lobster
Petrolisthes galathinus (Bosc)	Porcellan Crab

Brachyura

Cycloes bairdi Stimpson	
Mithrax spinosissimus (Lamarck)	Spiny Spider Crab
Mithrax forceps (A. Milne Edwards)	
Paraliomera longimana (A. Milne Edwards)	
Pitho anisodon (Von Martens)	Marten's Pitho
Pitho lherminieri (Schramm)	
Stenorhynchus seticornis (Herbst)	Arrow Crab
Xantho denticulata Stimpson	

11.8. ECHINODERMATA

Ophiuroidea

Astrophyton muricatum (Lamarck)	Basket Starfish
Ophiocoma echinata (Lamarck)	Spiny Ophiocoma
Ophioderma brevispinum Lutken	Snakeskin Brittle Star
Ophioderma rubicundum Lutken	
Ophionereis squamulosa Koehler	
Ophiothrix lineata Lyman	Lined Brittle Star
Ophiothrix oerstedii Lutken	Oersted's Brittle Star
Ophiothrix suensonii Lutken	Suenson's Brittle Star
Ophiozona impressa (Lutken)	Scaly Brittle Star

Echinoidea

Clypeaster rosaceus (Linneaus)	Brown Sea Biscuit
Diadema antillarum (Philippi)	Long-spined Urchin
Echinometra viridis (Agassiz)	Green Rock-boring Urchin
Eucidaris tribuloides (Lamarck)	Slate-pencil Urchin
Lytechinus variegatus (Leske)	Variegated Urchin
Mellita sexiesperforata (Leske)	Six-holed Urchin
Meoma ventricosa (Lamarck)	West Indian Sea Biscuit

Holothuroidea

Actinopyga agassizi (Selenka)	Agassiz's Sea Cucumber
Astichopus multifidus (Sluiter)	Furry Sea Cucumber
Chirodota sp.	Swarf Sea Cucumber

Asteroidea

Astropecten duplicatus Grey	Two-spined Starfish

ASCIDIACEA

Ascidia sp.	
Didemnum amethysteum Van Name	
Didemnum candidum Savigny	White Sponge Tunicate
Microcosmus helleri Herdman	Ragged Sea Squirt
Styela sp.	
Symplegma sp.	
Tridemnum savignii (Herdman)	Encrusting ascidian

11.9. VERTEBRATES

SHARKS AND RAYS

Ginglymostoma cirratum (Bonneterre)	Nurse Shark
Carcharhinus leucas (Valenciennes)	Bull Shark
Sphyrna tiburo (Linnaeus)	Bonnet Head
Dasyatis americana (Hildebrand and Schroeder)	Southern Stingray
Urolophus jamaicensis (Cuvier)	Yellow Stingray
Aetobatus narinari (Euphrasen)	Spotted Eagle Ray

BONY FISHES

Family Elopidae

Megalops atlanticus Valenciennes	Tarpon

Family Muraenidae

Gymnothorax funebris Ranzani	Green Moray
G. moringa (Cuvier)	Spotted Moray
G. vicinus (Castelnau)	Purplemouth Moray
Muraena miliaris (Kaup)	Goldentail Moray

Family Ophichthidae

Ahlia egmontis (Jordan)	Key Worm Eel
Myrichthys oculatus (Kaup)	Goldspotted Eel

Family Clupeidae

Harengula clupeola (Cuvier)	False Pilchard
Harengula sp.	
Jenkinsia sp.	
Sardinella aurita Valenciennes	Spanish Sardine

Family Synodontidae

Synodus intermedius (Agassiz)	Sand Diver

Family Batrachoididae

Opsanus beta (Goode and Bean)	Gulf Toadfish

Family Gobiesocidae

Gobiesox strumosus Cope	Skilletfish

Family Exocoetidae

Hemiramphus brasiliensis (Linnaeus)	Ballyhoo

Family Belonidae

Strongylura notata (Poey)	Redfin Needlefish
Tylosurus crocodilus (Peron and Lesueur)	Houndfish

Family Atherinidne

Atherinomorus stipes (Muller and Troschel)	Hardhead Silverside

Family Holocentridae

Holocentrus adscensionis (Osbeck)	Squirrelfish
H. rufus (Walbalm)	Longspine Squirrelfish
H. vexillarius (Poey)	Dusky Squirrelfish
Myripristis jacobus Cuvier	Cardinal Soldierfish

Family Aulostomidae

Aulostomus maculatus Valenciennes	Trumpetfish

Family Sygnathidae

Cosmocampus albirostris (Heckel)	Whitenose Pipefish
Hippocampus erectus Perry	Lined Seahorse
H. zosterae Jordan and Gilbert	Dwarf Seahorse

Family Centropomidae

Centropomus undecimalis (Bloch)	Snook

Family Serranidae

Diplectrum formosum (Linnaeus)	Sand Perch
Epinephelus adscensionis (Osbeck)	Rock Hind
E. afer (Bloch)	Mutton Hamlet
E. cruentatus (Lacepede)	Graysby
E. guttatus (Linnaeus)	Red Hind
E. itajara (Lichtenstein)	Jewfish
E. morio (Valenciennes)	Red Grouper
E. *striatus* (Bloch)	Nassau Grouper
Hypoplectrus unicolor (Walbaum)	Butter Hamlet
H. aberrans (Poey)	Yellowbelly Hamlet
H. gemma (Poey)	Blue Hamlet
H. chlorurus (Cuvier and Valenciennes)	Yellowtail Hamlet
H. guttavarius (Poey)	Shy Hamlet
H. indigo (Poey)	Indigo Hamlet
H. nigricans (Poey)	Black Hamlet
H. puella (Cuvier and Valenciennes)	Barred Hamlet
Liopropoma rubre Poey	Peppermint Bass
Mycteroperca bonaci (Poey)	Black Grouper
M. tigris (Valenciennes)	Tiger Grouper
M. venenosa (Linnaeus)	Yellowfin Grouper
Serranus baldwini (Evermann and Marsh)	Lantern Bass
S. tabacarius (Cuvier)	Tobaccofish
S. tigrinus (Bloch)	Harlequin Bass

Family Grammistidae

Rypticus saponaceus (Schneider)	Greater Soapfish

Family Priacanthidae

Priacanthus arenatus Cuvier	Bigeye
P. cruentatus (Lacepede)	Glasseye Snapper

Family Apogonidae

Apogon binotatus (Poey)	Barred Cardinalfish
A. lachneri Bohlke	Whitestar Cardinalfish
A. maculatus (Poey)	Flamefish
A. pseudomaculatus Longley	Twospot Cardinalfish
A. townsendi (Breder)	Belted Cardinalfish
Astrapogon stellatus (Cope)	Conchfish
Phaeoptyx pigmentaria (Poey)	Dusky Cardinalfish

Family Malacanthidae

Malacanthus plumieri (Bloch)	Sand Tilefish

Family Echeneidae

Echeneis naucrates Linnaeus	Sharksucker

Family Carangidae

Caranx bartholomaei Cuvier	Yellow Jack
C. crysos (Mitchill)	Blue Runner
C. ruber (Bloch)	Bar Jack
Oligoplites saurus (Schneider)	Leather Jack
Seriola dumerili (Risso)	Greater Amberjack
Trachinotus falcatus (Linnaeus)	Permit

Family Lutjanidae

Lutjanus analis (Cuvier)	Mutton Snapper
L. apodus (Walbaum)	Schoolmaster
L. cyanopterus (Cuvier)	Cubera Snapper
L. griseus (Linnaeus)	Gray Snapper
L. jocu (Schneider)	Dog Snapper
L. mahogoni (Cuvier)	Mahogany Snapper
L. synagris (Linnaeus)	Lane Snapper
Ocyurus chrysurus (Bloch)	Yellowtail Snapper

Family Gerreidae

Eucinostomus sp. 1	Mojarra
Eucinostomus sp. 2	Mojarra
Gerres cinereus (Walbaum)	Yellowfin Mojarra

Family Haemulidae

Anisotremus surinamensis (Bloch)	Black Margate
A. virginicus (Linnaeus)	Porkfish
Haemulon album Cuvier	Margate
H. carbonarium Poey	Caesar Grunt
H. chrysargyreum Gunther	Smallmouth Grunt
H. flavolineatum (Desmarest)	French Grunt
H. macrostomum Gunther	Spanish Grunt
H. melanurum (Linnaeus)	Cottonwick
H. parra (Desmarest)	Sailors Choice
H. plumieri (Lacepede)	White Grunt
H. sciurus (Shaw)	Bluestriped Grunt

Family Inermiidae

Inermia vittata Poey	Boga

Family Sparidae

Archosargus probatocephalus (Walbaum)	Sheepshead
A. rhomboidalis (Linnaeus)	Sea Beam
Calamus bajonado (Schneider)	Jolthead Porgy
C. calamus (Valenciennes)	Saucereye Porgy
C. penna (Valenciennes)	Sheepshead Porgy
Lagodon rhomboides (Linnaeus)	Pinfish

Family Sciaenidae

Equetus acuminatus (Schneider)	High-hat
E. lanceolatus (Linnaeus)	Jackknife-fish
E. punctatus (Schneider)	Spotted Drum
Odontoscion dentex (Cuvier)	Reef Croaker

Family Mullidae

Mulloidichthys martinicus (Cuvier)	Yellow Goatfish
Pseudupeneus maculatus (Bloch)	Spotted Goatfish

Family Pempheridae

Pempheris poeyi Bean	Sweeper
P. schomburgki Muller and Troschel	Glassy Sweeper

Family Ephippidae

Chaetodipterus faber (Broussonet)	Atlantic Spadefish

Family Chaetodontidae

Chaetodon capistratus (Linnaeus)	Foureye Butterflyfish
C. ocellatus Bloch	Spotfin Butterflyfish
C. sedentarius Poey	Reef Butterflyfish
C. striatus Linnaeus	Banded Butterflyfish

Family Pomacanthidae

Holacanthus bermudensis Goode	Blue Angelfish
H. ciliaris (Linnaeus)	Queen Angelfish
H. tricolor (Bloch)	Rock Beauty
Pomacanthus arcuatus (Linnaeus)	Gray Angelfish
P. paru (Bloch)	French Angelfish

Family Pomacentridae

Abudefduf saxatilis (Linnaeus)	Sergeant Major
Chromis cyanea (Poey)	Blue Chromis
C. insolatas (Cuvier)	Sunshinefish
C. multilineata (Guichenot)	Brown Chromis
C. scotti Emery	Purple Reeffish
Microspathodon chrysurus (Cuvier)	Yellowtail Damselfish
Pomacentrus diencaeus (Jordan and Rutter)	Longfin Damselfish
P. leucostictus Muller and Troschel	Beau Gregory
P. partitus Poey	Bicolor Damselfish
P. planifrons Cuvier	Threespot Damselfish
P. variabilis (Castelnau)	Cocoa Damselfish

Family Cirrhitidae

Amblycirrhitus pinos (Mowbray)	Redspotted Hawkfish

Family Labridae

Bodianus rufus (Linnaeus)	Spanish Hogfish
Halichoeres bivittatus (Bloch)	Slippery Dick
H. garnoti (Valenciennes)	Yellowhead Wrasse
H. maculipinna (Muller and Troschel)	Clown Wrasse
H. poeyi (Steindachner)	Blackear Wrasse
H. radiatus (Linnaeus)	Puddingwife
Hemipteronotus martinicensis (Valenciennes)	Rosy Razorfish
H. novacula (Linnaeus)	Pearly Razorfish
H. splendens (Castelnau)	Green Razorfish
Lachnolaimus maximus (Walbaum)	Hogfish

Family Scaridae

Cryptotomus roseus Cope	Bluelip Parrotfish
Scarus coelestinus Valenciennes	Midnight Parrotfish
S. coeruleus (Bloch)	Blue Parrotfish
S. croicensis Bloch	Striped Parrotfish
S. guacamaia Cuvier	Rainbow Parrotfish
S. taeniopterus Desmarest	Princess Parrotfish
S. vetula Schneider	Queen Parrotfish
Sparisoma aurofrenatum (Valenciennes)	Redband Parrotfish
S. chrysopterum (Bloch and Schneider)	Redtail Parrotfish
S. radians (Valenciennes)	Bucktooth Parrotfish
S. rubripinne (Valenciennes)	Redfin Parrotfish
S. viride (Bonnaterre)	Stoplight Parrotfish

Family Sphyraenidae

Sphyraena barracuda (Walbaum)	Great Barracuda

Family Opistognathidae

Opistognathus aurifrons (Jordan and Thompson)	Yellowhead Jawfish
O. maxillosus Poey	Mottled Jawfish
O. whitehursti (Longley)	Dusky Jawfish

Family Dactyloscopidae

Platygillelus rubrocinctus Longley	Saddle Stargazer

Family Clinidae

Acanthemblemaria chaplini Bohlke	Papillose Blenny
A. sp. 1	
A. sp. 2	
A. sp. 3	
Chaenopsis ocellata Poey	Bluethroat Pikeblenny
Emblemaria pandionis Evermann and Marsh	Sailfin Blenny
Enneanectes jordani (Evermann and Marsh)	Triplefin Blenny
Hemiemblemaria simulus Longley and Hildebrand	Wrasse Blenny
Labrisomus bucciferus (Poey)	Puffcheek Blenny
Malacoctenus aurolineatus Smith	Goldline Blenny
M. roseus	
M. triangulatus Springer	Saddled Blenny
M. sp.	
Paraclinus marmoratus (Steindachner)	Marbled Blenny
Paraclinus sp.	Blenny
Starksia ocellata (Steindacher)	Checkered Blenny
Stathmonotus hemphilli Bean	Blackbelly Blenny

Family Blenniidae

Hypleurochilus aequipinnis (Gunther)	Oyster Blenny
H. bermudensis Beebe and Tee-Van	Barred Blenny
Ophioblennius atlanticus (Valenciennes)	Redlip Blenny
Parablennius marmoreus (Poey)	Seaweed Blenny
Scartella cristata (Linnaeus)	Molly Miller

Family Callionymidae

Callionymus bairdi Jordan	Lancer Dragonet
C. pauciradiatus Gill	Spotted Dragonet

Family Gobiidae

Barbulifer sp.	Goby
Coryphopterus dicrus Bohlke and Robins	Colon Goby
C. glaucofraenum Gill	Bridled Goby
C. lipernes Bohlke and Robins	Peppermint Goby
C. personatus (Jordan and Thompson)	Masked Goby
Gnatholepis thompsoni Jordan	Goldspot Goby
Gobionellus saepepallens Gilbert and Randall	Dash Goby
Gobiosoma grosvenori (Robins)	Rockcut Goby
G. macrodon Beebe and Tee-Van	Tiger Goby
G. oceanops (Jordan)	Neon Goby
Ioglossus calliurus Bean	Blue Goby
Microgobius carri Fowler	Seminole Goby
M. microlepis Longley and Hildebrand	Banner Goby
Nes longus (Nichols)	Orangespotted Goby

Family Acanthuridae

Acanthurus bahianus Castelnau	Ocean Surgeon
A. chirurgus (Bloch)	Doctorfish
A. coeruleus Schneider	Blue Tang

Family Scombridae

Scomberomorus regalis (Bloch)	Cero

Family Scorpaenidae

Scorpaena plumieri Bloch	Spotted Scorpionfish

Family Bothidae

Bothus lunatus (Linnaeus)	Peacock Flounder
B. sp. 1	
B. sp. 2	

Family Balistidae

Aluterus schoepfi (Walbaum)	Orange Filefish
A. scriptus (Osbeck)	Scrawled Filefish
Balistes capriscus Gmelin	Gray Triggerfish
B. vetula Linnaeus	Queen Triggerfish
Cantherhines macrocerus (Hollard)	Whitespotted Filefish
C. pullus (Ranzani)	Orangespotted Filefish
Canthidermis sufflamen (Mitchill)	Ocean Triggerfish
Monacanthus ciliatus (Mitchill)	Fringed Filefish
M. tuckeri Bean	Slender Filefish

Family Ostraciidae

Lactophrys bicaudalis (Linnaeus)	Spotted Trunkfish
L. polygonia (Poey)	Honeycomb Cowfish
L. quadricornis (Linnaeus)	Scrawled Cowfish
L. trigonus (Linnaeus)	Trunkfish
L. triqueter (Linnaeus)	Smooth Trunkfish

Family Tetraodontidae

Canthigaster rostrata (Bloch)	Sharpnose Puffer
Sphoeroides spengleri (Bloch)	Bandtail Puffer

Family Diodontidae

Diodon Holacanthus Linnaeus	Balloonfish
D. hystrix Linnaeus	Porcupinefish