

PORTOMAREA MARINE MONITORING

CORAL AND FISH/INVERTEBRATE SURVEY

by

Marjo van den Bulck

January 2005

PORTOMAREA MARINE MONITORING

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PORTOMAREA MARINE MONITORING

FISH/INVERTEBRATE AND CORAL SURVEY OVERVIEW

Survey dates: January 11 - January 27, 2005.

Data observed and recorded by: Marjo van den Bulck

During 2005 there will be two monitoring periods. These periods will be in January and in July.

This was advised by Mr. Paul Hoetjes after reviewing the data collected in 2002. Mr. Paul Hoetjes is the senior scientist of the Netherlands Antilles Coral Reef Initiative (NACRI) and the Ministry of Health and Social Development in the Department of Environment and Nature (MINA).

WATER TEMPERATURE & VISIBILITY

Water temperature: 26C during the first half of this monitoring period. Second half of this monitoring period the temperature went up to 27C

Visibility varied from 10m to 40m. Average visibility 20m.

This monitoring period strange currents (17/1,19/1,20/1) occurred in the bay and on the outer second reef. When those currents occurred, visibility dropped to 10 meter or less.

TRANSECTS

Three (3) transect lines 95m long were set up for the coral line and fish/invertebrate belt surveys. Each line was divided into four 20m sections with 5m intervals, in accordance with accepted monitoring practices. Transect numbers 1 and 2 are on the west side of the bay at depths of 12m and 6m respectively. Transect 3 is on the east side of the bay at 10m.

Coral monitoring was carried out over each 20m section with sampling points at .5m intervals.

Fish/invertebrate monitoring was done over a contiguous 5m-wide 'belt' along 20m sections of the above described transect lines.

Detailed transect setup information can be found in the PortoMarea Marine Monitoring Manual.

No rebar replacement, four blue tags renewed.

CORAL MONITORING

Health

The overall general condition of the reef reflects the damage sustained in 1999 from Hurricane Lenny. Large boulder corals were overturned, and the corals subsequently died off.

Curacao was struck by hurricane Ivan september 9th 2004. This resulted in damage of the shallow water parts of the reef and a sand layer on the outer side of the second reef.

Transects 1 and 2, on the west side of the bay exhibit regeneration, e.g. new maze and mustard hill corals have begun to grow on the old dead coral boulders.

Transect 2 is basically a shallow patch reef with a high percentage of sand cover between coral patches. More than average algae growth on this transect.

Damage

Signs of recent damage, e.g. broken hard and soft corals were recorded during this monitoring period. Caused by Hurricane Ivan september 2004.

FISH/INVERTEBRATE SURVEY

There are fluctuations in the Fish/Invertebrate population on the transects. For details, check page 22 of this Survey report.

REEF BALL CLUSTERS

There are 2 snorkel trails laid out, consisting of 10 reef ball clusters on the west side of the bay at depths ranging from 1.2 to 3.8m, and 12 clusters on the east side of the bay at depths from 1.5 to 4.3m.

On April 6, 2002, 6 additional reef ball clusters (approximately 100 balls) were placed on the east side of the bay along the top edge of the inner reef, at an average depth of 4.3m. This brings the total number of clusters to 18.

All the Reef Balls show new coral growth. First spontaneous soft coral growth on the Reef balls reported.

Hurricane Ivan struck the 9th of September 2004. Most of the Reef balls within the Cluster formations moved a little because of Ivan. Four Reef balls broke into parts because they were slammed against another Reef Ball.

A lot of sand movement took place because of Ivan, Cluster 1W, 2W and 3W disappeared half in the sand.

REEF BALL CLUSTERS CORAL PLUGS

On February 8, 2002, six (6) varied coral plugs, incorporating a new transplant method, were planted on Cluster 12E/L. Twenty-four (24) Staghorn coral plugs were planted on Cluster 12E/L on March 23, 2002. These new plugs have been included in the report.

Compared to the observations in the July 2002 survey period a number of plugs then considered dead where in fact still alive: 10R-23LP Finger coral, 10R-9P Finger coral, 10R-17P Leaf (lettuce), 10R-18LP Mustard Hill, 12L-2P Pencil.

One pencil coral plug, 12L-2P, overlooked in the number of original plugs has been added to the data.

One black sea rod plug, overlooked in the October 2002 survey has been added to the data.

The broken off staghorn pieces that were found at Cluster 10W/R are still alive and placed in a Reef ball.

On May 1, 2003, 21 varied coral plugs were planted on Cluster 18E/L. These coral plugs were made and placed in the water at the beginning of the project. They were then placed for the time being on a tray near Cluster 10W/R. The data collected from these plugs on Cluster 18E/L are added to this rapport as from July 2003.

All the staghorn plugs are growing fast. A percentage broke off and started filling the spaces between the Reef Balls. These new locations are mentioned in this report.

Hurricane Ivan struck on the 9th of September 2004. Damage was best visible in the shallow water parts. 99% of the staghorn plugs planted on the Reef balls broke off. Cluster 12 East: most of the staghorn parts landed in between the Reef Balls of this cluster and continue growing here. Cluster 10 West: 80% of the saghorn parts ended up somewhere on the reef. The remaining staghorn parts continue growing in between the Reef balls of this cluster. The other coral plugs were not affected.

The broken off Staghorn plugs are reported as GONE and will not be monitored from now on as separate plugs. This will be reflected in the report as an increased mortality rate compared to the previous monitoring period

REEF BALL CLUSTERS FISH/INVERTEBRATE SURVEY - OBSERVATIONS

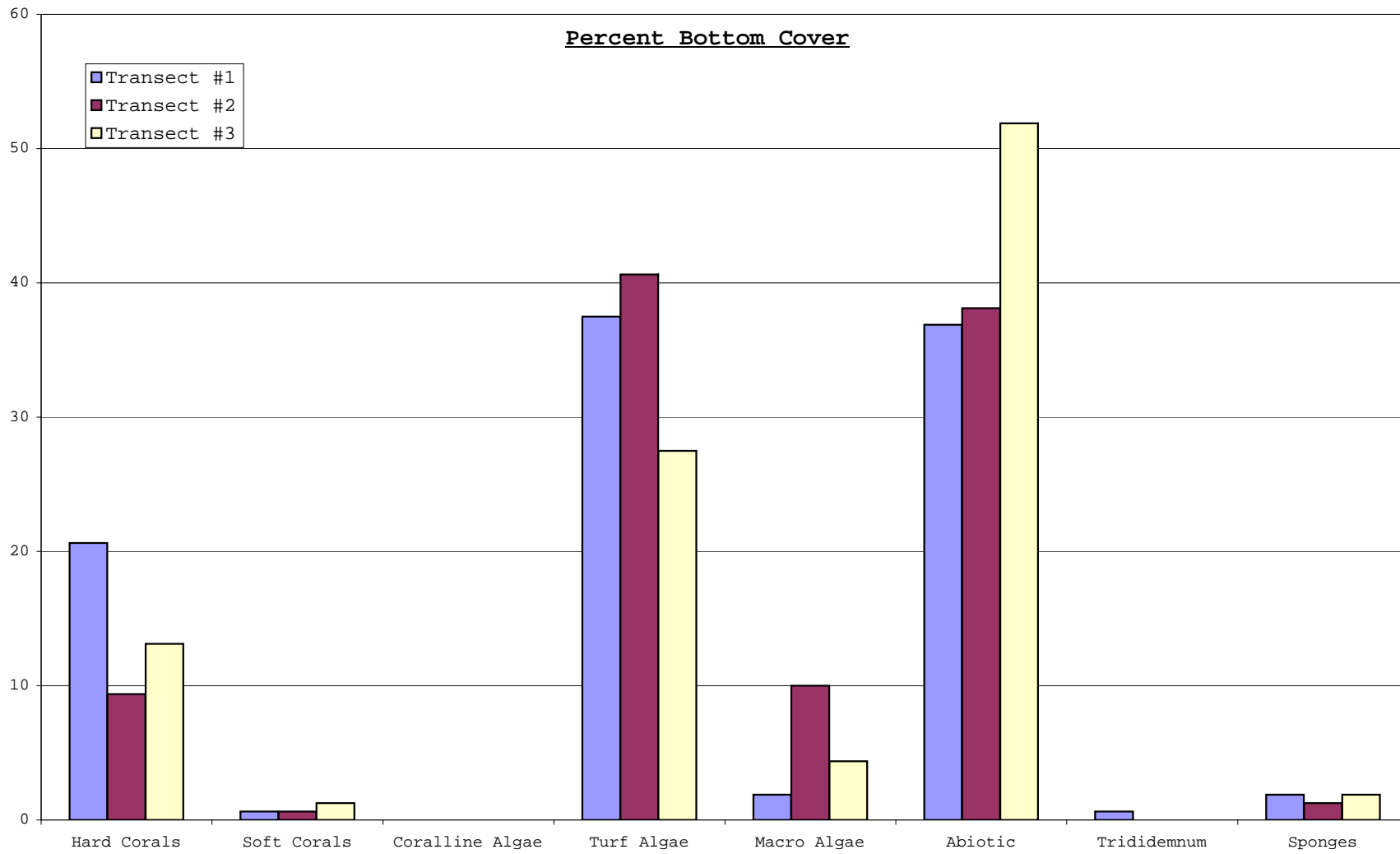
This report also shows an increased number of different species of Sea Urchins.

**PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT SUMMARY**

Date : January 2005
Observer: Marjo van den Bulck

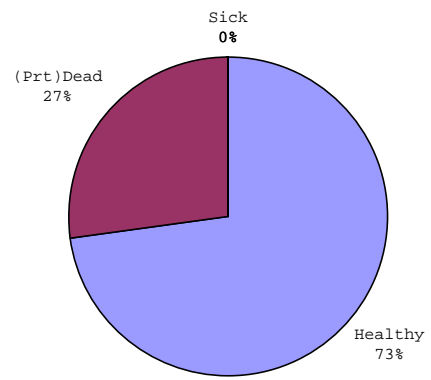
| Transect No. | Depth | Hard Corals | | | | | | Soft Corals | Coralline Algae | Turf Algae | Macro-Algae | Abiotic (Sand) | Trididem-num | Sponges | Total |
|--------------|--------------------|-------------|---------|-----------|------|--------|----------|-------------|-----------------|------------|-------------|----------------|--------------|---------|-------|
| | | Total | Healthy | (Prt)Dead | Sick | Broken | Bleached | | | | | | | | |
| 1 | 12m | | | | | | | | | | | | | | |
| | 0-20m | 12 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 12 | 1 | 0 | 40 |
| | 25-45m | 10 | 8 | 2 | 0 | 0 | 0 | 1 | 0 | 21 | 1 | 5 | 0 | 2 | 40 |
| | 50-70m | 7 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 12 | 1 | 20 | 0 | 0 | 40 |
| | 75-95m | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 22 | 0 | 1 | 40 |
| | Mean | 8 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 15 | 0 | 1 | 40 |
| | % cover | 21 | 73 | 27 | 0 | 0 | 0 | 1 | 0 | 38 | 2 | 37 | 1 | 2 | 100 |
| | standard deviation | 3,50 | 1,83 | 2,06 | 0,00 | 0,00 | 0,00 | 0,50 | 0,00 | 4,08 | 0,50 | 7,80 | 0,50 | 0,96 | 0,00 |
| | | | | | | | | | | | | | | | |
| Transect No. | Depth | Hard Corals | | | | | | Soft Corals | Coralline Algae | Turf Algae | Macro-Algae | Abiotic (Sand) | Trididem-num | Sponges | Total |
| | | Total | Healthy | (Prt)Dead | Sick | Broken | Bleached | | | | | | | | |
| 2 | 6m | | | | | | | | | | | | | | |
| | 0-20m | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 3 | 26 | 0 | 0 | 40 |
| | 25-45m | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 14 | 0 | 1 | 40 |
| | 50-70m | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 18 | 12 | 2 | 0 | 1 | 40 |
| | 75-95m | 4 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 15 | 1 | 19 | 0 | 0 | 40 |
| | Mean | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 16 | 4 | 15 | 0 | 1 | 40 |
| | % cover | 9 | 80 | 20 | 0 | 0 | 0 | 1 | 0 | 41 | 10 | 38 | 0 | 1 | 100 |
| | standard deviation | 2,36 | 2,16 | 0,50 | 0,00 | 0,00 | 0,00 | 0,50 | 0,00 | 5,85 | 5,48 | 10,11 | 0,00 | 0,58 | 0,00 |
| | | | | | | | | | | | | | | | |
| Transect No. | Depth | Hard Corals | | | | | | Soft Corals | Coralline Algae | Turf Algae | Macro-Algae | Abiotic (Sand) | Trididem-num | Sponges | Total |
| | | Total | Healthy | (Prt)Dead | Sick | Broken | Bleached | | | | | | | | |
| 3 | 10m | | | | | | | | | | | | | | |
| | 0-20m | 9 | 7 | 2 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 21 | 0 | 1 | 40 |
| | 25-45m | 3 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 26 | 0 | 2 | 40 |
| | 50-70m | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 25 | 0 | 0 | 40 |
| | 75-95m | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 19 | 5 | 11 | 0 | 0 | 40 |
| | Mean | 5 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 11 | 2 | 21 | 0 | 1 | 40 |
| | % cover | 13 | 81 | 19 | 0 | 0 | 0 | 1 | 0 | 28 | 4 | 52 | 0 | 2 | 100 |
| | standard deviation | 2,63 | 1,89 | 0,82 | 0,00 | 0,00 | 0,00 | 0,58 | 0,00 | 5,48 | 2,22 | 6,85 | 0,00 | 0,96 | 0,00 |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT SUMMARY

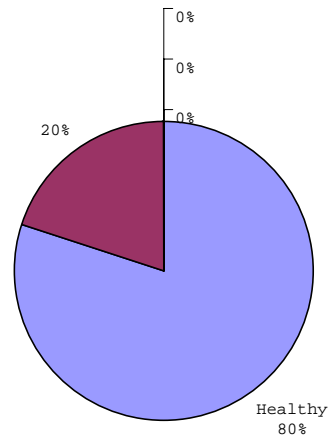


PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECTS - CORAL HEALTH CHART

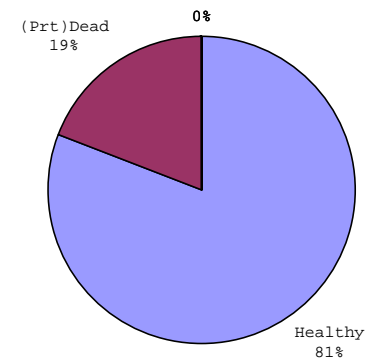
Transect 1, Depth 12m



Transect 2, Depth 6m



Transect 3, Depth 10m



**PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT**

| Transect No: 1, Depth 12m, Section 0-20m | | Visibility: 10 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | | | |
|--|-------------|------------------|---------|-------------------------------|--------|---------|------------|-------------|--------------------|-------------|---------|-------------|-------------|-------------|-------|----------|----|----|----|
| Date: January 20, 2005 | | Temperature: 27C | | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS | | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | | |
| 0,5 | | | | | | | | | | | | | | | | | RC | | |
| 1 | | | | | | | | | | | | | | | | | SD | | |
| 1,5 | | | Boulder | | | | | | Dead Partially 50% | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | TA | | |
| 2,5 | | | | | | | | | | | | | | | | | TA | | |
| 3 | | | | | | | | | | | | | | | | | YA | | |
| 3,5 | | | | | | | | | | | | | | | | | TA | | |
| 4 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 4,5 | | | | | | Lettuce | | | Healthy | | | | | | | | | | |
| 5 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 5,5 | | | | | | | | | | | | | | | | | | RC | |
| 6 | | | | | | | | | | | | | | | | | | SD | |
| 6,5 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | TA | | |
| 7,5 | | | | | | | | | | | | | | | | | YA | | |
| 8 | | | | | | | | | | | | | | | | | YA | | |
| 8,5 | | | Boulder | | | | | | Dead Partially 85% | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | SD | |
| 9,5 | | | | | | | | Flower | Healthy | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | SD | |
| 10,5 | | | | | | Lettuce | | | Healthy | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | YA | | |
| 11,5 | | Mustard | | | | | | | Healthy | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | SD | |
| 12,5 | | | | | | | | | | | | | | | | | | SD | |
| 13 | | | | | | | | | | | | | | | | MTA | | | |
| 13,5 | | | Boulder | | | | | | Dead Partially 40% | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | TA | | |
| 14,5 | | | | | | | | | | | | | | | | | YA | | |
| 15 | | | | | | | | | | | | | | | | | | RC | |
| 15,5 | | | Boulder | | | | | | Dead Partially 80% | | | | | | | | | | |
| 16 | | | | | | | | | | | | | TR | | | | | | |
| 16,5 | | | | | | | | | | | | | | | | | | RB | |
| 17 | | | | | | | | | | | | | | | | | YA | | |
| 17,5 | | | | | | | | | | | | | | | | | TA | | |
| 18 | | | | | | | | | | | | | | | | | YA | | |
| 18,5 | | | | | | | | | | | | | | | | | | SD | |
| 19 | | | Boulder | | | | | | Dead Partially 40% | | | | | | | | | | |
| 19,5 | | | | | | | | | | | | | | | | | TA | | |
| 20 | | | | | | | | | | | | | | | | | | SD | |
| Total | 0 | 1 | 8 | 0 | 0 | 2 | 0 | 1 | 5 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 14 | 12 |
| | 0 | 3 | 13 | 4 | 3 | 5 | 1 | 3 | 9 | 24 | 0 | 0 | 1 | 3 | 1 | 0 | 3 | 60 | 59 |

| Substrate Codes: | | | | | | | | | | | | | | | | | | | |
|------------------|------------------|----|-------------|----|------------------|-----|--------|--|--|--|--|--|--|--|--|--|--|--|--|
| PD | (Partially) Dead | RC | Rock | YA | Y Algae | BRO | Brown | | | | | | | | | | | | |
| H | Healthy | RB | Rubble | TA | Turf Algae | YE | Yellow | | | | | | | | | | | | |
| S | Sick | SD | Sand | BA | Blue Green Algae | PU | Purple | | | | | | | | | | | | |
| BL | Bleached | MA | Macro Algae | CA | Coralline Algae | BLA | Black | | | | | | | | | | | | |
| | | | | TR | Trididemnum | | | | | | | | | | | | | | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| HARD CORALS | | | | | | | | | | CONDITION/REMARKS | | | | SOFT CORALS/OTHER | | | | | |
|--------------|-----------|---------|---------|-------|--------|---------|------------|-------------|----------------------|-------------------|---------|-------------|-------------|-------------------|-------|----------|--|--|--|
| M | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | | |
| 0,5 | | | | | | | | | | | | | | | | SD | | | |
| 1 | | | | | Finger | | | | Healthy | | | | | | | | | | |
| 1,5 | | | | | | | | | | | | | | | YA | | | | |
| 2 | | | | | | | | | | | | | | | TA | | | | |
| 2,5 | | | | Brain | | | | | Healthy | | | | | | | | | | |
| 3 | | | | Brain | | | | | Healthy | | | | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | YA | | | | |
| 4 | | | | | | | | | | | | | | | YA | | | | |
| 4,5 | | | | | | | | | | | | | | | YA | | | | |
| 5 | | | | | | | | | | | | | | | TA | | | | |
| 5,5 | | | | | | | | | | | | | | | TA | | | | |
| 6 | | | | | | | | | | | | | | | TA | | | | |
| 6,5 | | | | | | | | | | | | | | | YA | | | | |
| 7 | | | | | | Lettuce | | | Dead Partially 50% | | | | | | | | | | |
| 7,5 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | YA | | | | |
| 8,5 | | | | | | | | | | | | | | | | SD | | | |
| 9 | | | | | | | | | | | | | | | YA | | | | |
| 9,5 | | | | | | | | | | | | | | | YA | | | | |
| 10 | | | | | | | | | | | | | | | | SD | | | |
| 10,5 | | | | | | | | | | | | | | | TA | | | | |
| 11 | | | | | | | | | | | | | | | | SD | | | |
| 11,5 | | | | | | | | | | | | | | MTA | | | | | |
| 12 | | | | | | | | | Black Sponge | BLA | | | | | | | | | |
| 12,5 | | | | | | | | | | | | | | | TA | | | | |
| 13 | | | | | | | | | | | | | | | | SD | | | |
| 13,5 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | YA | | | | |
| 14,5 | | | | | | | | | | | | | | | YA | | | | |
| 15 | | | Bushing | | | | | | Healthy | | | | | | | | | | |
| 15,5 | | Mustard | | | | | | | Healthy | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | BA | | | |
| 16,5 | | | | | | | | | Encrusting Gorgonian | ENCR | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | TA | | | |
| 17,5 | | | | | | | | | Brown Sponge | | BRO | | | | | | | | |
| 18 | | | | Brain | | | | | Dead Partially | | | | | | | | | | |
| 18,5 | | | | | | | | | | | | | | | | TA | | | |
| 19 | | | | | | | | Flower | Healthy | | | | | | | | | | |
| 19,5 | | | | | | | | | | | | | | | | TA | | | |
| 20 | | | | | | | | | | | | | | | | YA | | | |
| Total | 0 | 1 | 3 | 3 | 1 | 1 | 0 | 1 | | 2 | 8 | 0 | 0 | 1 | 21 | 5 | | | |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | BLA Black |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 1, Depth 12m, Section 50-70m | | | | Visibility: 25 m | | | | Observer: Marjo van den Bulck | | | | | | | | | | |
|---|-------------|-------|---------|------------------|--------|---------|------------|-------------------------------|--------------------|------------|---------|-------------|-------------|-------------|-------|----------|----|----|
| Date: January 24, 2005 | | | | Temperature: 27C | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | | Other Coral | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | |
| 0,5 | | | | | | | | | | | | | | | SD | | | |
| 1 | | | | | | | | | | | | | | | TA | | | |
| 1,5 | | | | | | | | | | | | | | | TA | | | |
| 2 | | | | | | | | | | | | | | | SD | | | |
| 2,5 | | | | | | | | | | | | | | | YA | | | |
| 3 | | | | | | | | | | | | | | | TA | | | |
| 3,5 | | | | | Finger | | | | Healthy | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | YA | | | |
| 4,5 | | | | | | | | | | | | | | | SD | | | |
| 5 | | | | | | | | | | | | | | | YA | | | |
| 5,5 | | | Boulder | | | | | | Healthy | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | SD | | | |
| 6,5 | | | | | | | | | | | | | | | YA | | | |
| 7 | | | | | | | | | | | | | | | RB | | | |
| 7,5 | | | | | | | | | | | | | | | SD | | | |
| 8 | | | | | | | | | | | | | | | SD | | | |
| 8,5 | | | | | | | | | | | | | | | SD | | | |
| 9 | | | | | | | | | | | | | | | SD | | | |
| 9,5 | | | | | | | | | | | | | | | SD | | | |
| 10 | | | | | | | | | | | | | | | SD | | | |
| 10,5 | | | | | | | | | | | | | | | SD | | | |
| 11 | | | | | | | | | | | | | | | SD | | | |
| 11,5 | | | | | | | | | | | | | | MTA | | | | |
| 12 | | | | | | | | | | | | | | | SD | | | |
| 12,5 | | | | | | | | | | | | | | | YA | | | |
| 13 | | | Boulder | | | | | | Dead Partially 70% | | | | | | | | | |
| 13,5 | | | | | | | | | | | | | | | YA | | | |
| 14 | | | | | | | | | | | | | | | RB | | | |
| 14,5 | | | | | | | | | | | | | | | SD | | | |
| 15 | | | | | | Lettuce | | | Healthy | | | | | | | | | |
| 15,5 | | | | | | | | | | | | | | | TA | | | |
| 16 | | | | | | | | | Dead Partially 30% | | | | | | | | | |
| 16,5 | | | | Brain | | | | | Healthy | | | | | | | | | |
| 17 | Mustard | | | | | | | | Healthy | | | | | | | | | |
| 17,5 | | | | | | | | | | | | | | | SD | | | |
| 18 | | | | | | | | | | | | | | | YA | | | |
| 18,5 | | | | | | | | | | | | | | | TA | | | |
| 19 | | | | | | | | | | | | | | | SD | | | |
| 19,5 | | | | | | | | | | | | | | | SD | | | |
| 20 | | | | | | | | | | | | | | | SD | | | |
| Total | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 1 | 12 | 20 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

Transect No: 1, Depth 12m, Section 75-95m Visibility: 25 m Observer: Marjo van den Bulck
Date: January 24, 2005 Temperature: 27C

| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | |
|--------------|-------------|-------|------|-------|--------|---------|------------|-------------|-------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | |
| 0,5 | | | | | | | | | | | | | | | SD | | |
| 1 | | | | | | | | | | | | | | | SD | | |
| 1,5 | | | | | | | | | | | | | | | SD | | |
| 2 | | | | | | | | | | | | | | | SD | | |
| 2,5 | | | | | | | | | | | | | | | RB | | |
| 3 | | | | | | | | | | | | | | TA | | | |
| 3,5 | | | | | | Lettuce | | Healthy | | | | | | | YA | | |
| 4 | | | | | | | | | | | | | | | YA | | |
| 4,5 | | | | | | | | | | | | | | | TA | | |
| 5 | | | | | | | | | | | | | | | | SD | |
| 5,5 | | | | | | | | | | | | | | | | RC | |
| 6 | | | | | | | | | | | | | | | | RC | |
| 6,5 | | | | | | | | | | | | | | | | SD | |
| 7 | | | | | | | | | | | | | | BA | | | |
| 7,5 | | | | | | | | | | | | | | | | SD | |
| 8 | | | | | | | | Brown Spong | | BRO | | | | | | | |
| 8,5 | | | | | | | | | | | | | | | | SD | |
| 9 | | | | | | | | | | | | | | | | SD | |
| 9,5 | | | | | | | | | | | | | | YA | | | |
| 10 | | | | | | | | Flower | Healthy | | | | | | BA | | |
| 10,5 | | | | | | | | | | | | | | | | | |
| 11 | | | | | Finger | | | | Healthy | | | | | | | | |
| 11,5 | | | | | | | Fire | | Healthy | | | | | | | | |
| 12 | | | | | | | | | | | | | | | TA | | |
| 12,5 | | | | | | | | | | | | | | | YA | | |
| 13 | | | | | | | | | | | | | | | | SD | |
| 13,5 | | | | | | | | | | | | | | | YA | | |
| 14 | | | | | | | | | | | | | | | | RB | |
| 14,5 | | | | | | | | | | | | | | | TA | | |
| 15 | | | | | | | | | | | | | | | YA | | |
| 15,5 | | | | | | | | | | | | | | | | SD | |
| 16 | | | | | | | | | | | | | | | | SD | |
| 16,5 | | | | | | | | | | | | | | | | SD | |
| 17 | | | | | | | | | | | | | | | | SD | |
| 17,5 | | | | | | | | | | | | | | | TA | | |
| 18 | | | | | | | | | | | | | | | YA | | |
| 18,5 | | | | | | | | | | | | | | | | SD | |
| 19 | | | | | | | | | | | | | | | | SD | |
| 19,5 | | | | | | | | | | | | | | | | SD | |
| 20 | | | | | | | | | | | | | | | | RC | |
| Total | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 13 | 22 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | OR Orange |
| | | TR Trididemnum | |

**PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT**

| Transect No: 2, Depth 6m, Section 0-20m | | Visibility: 25 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | | | | | |
|---|-------------|------------------|----------|-------------------------------|--------|------|------------|-------------|--------------------|----|---|---|-------------------|---------|-------------|-------------|-------------|-------|----------|----|--------------------|
| Date: January 21, 2005 | | Temperature: 27C | | | | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | | | | SOFT CORALS/OTHER | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | | | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | |
| 0,5 | | | | | | | | | | | | | | | | | | | TA | | |
| 1 | | | | | | | | | | | | | | | | | | | TA | | |
| 1,5 | | | | | | | | | | | | | | | | | | | | RB | |
| 2 | | | | | | | | | | | | | | | | | | MTA | | | |
| 2,5 | | | | | | | | | | | | | | | | | | MTA | | | |
| 3 | | | Blushing | | | | | | Healthy | | | | | | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | | | | | TA | | |
| 4 | | | | | | | | | | | | | | | | | | | TA | | |
| 4,5 | | | | | | | | | | | | | | | | | | MTA | | | |
| 5 | | | | | | | | | | | | | | | | | | | TA | | |
| 5,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 6 | | | | | | | | | | | | | | | | | | | TA | | |
| 6,5 | | | | | | | | | | | | | | | | | | | | RB | |
| 7 | | | | | | | | | | | | | | | | | | | | SD | |
| 7,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 8 | | | | | | | | | | | | | | | | | | | | SD | |
| 8,5 | | | | | | | Lettuce | | Dead Partially 30% | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | RB | |
| 9,5 | | | | | | | | | | | | | | | | | | | | RB | |
| 10 | | | | | | | | | | | | | | | | | | | | RB | |
| 10,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 11 | | | | | | | | | | | | | | | | | | | | RC | |
| 11,5 | | | | | | | | | | | | | | | | | | | TA | | |
| 12 | | | | | | | | | | | | | | | | | | | | RB | |
| 12,5 | | | | | | | | | | | | | | | | | | | | RB | |
| 13 | | | | | | | | | | | | | | | | | | | YA | | |
| 13,5 | | | | | | | | | | | | | | | | | | | | RC | |
| 14 | | | | | | | | | | | | | | | | | | | YA | | |
| 14,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 15 | | | | | | | | | | | | | | | | | | | | SD | |
| 15,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 16 | | | | | | | | | | | | | | | | | | | | SD | |
| 16,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 17 | | | | | | | | | | | | | | | | | | | | SD | |
| 17,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 18 | | | | | | | | | | | | | | | | | | | | RB | |
| 18,5 | | | | | | | | | | | | | | | | | | | | SD | |
| 19 | | | | | | | | | | | | | | | | | | | | TA | |
| 19,5 | | | | | | | | | | | | | | | | | | | | RB | |
| 20 | | | | | | | | | | | | | | | | | | | | RB | |
| | | | | | | | | | | | | | | | | | | | | | |
| Total | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | | 0 | 0 | 0 | 0 | 3 | 9 | 26 |
| | 0 | 1 | 8 | 2 | 0 | 2 | 0 | 2 | 3 | 12 | 0 | 0 | | 1 | 2 | 0 | 0 | 16 | 65 | 61 | GRAND TOTAL |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | BLA Black |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 2, Depth 6m, Section 25-45m | | Visibility: 25 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | | |
|--|-------------|------------------|------|-------------------------------|--------|------|------------|-------------|-------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|----|
| Date: January 21, 2005 | | Temperature: 27C | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | |
| 0,5 | | | | | | | | | | | | | | | | RB | | |
| 1 | | | | | | | | | | | | | | | | SD | | |
| 1,5 | | | | | | | | | | | | | | | | TA | | |
| 2 | | | | | | | | | | | | | | | | YA | | |
| 2,5 | | | | | | | | | | | | | | | | TA | | |
| 3 | | Mustard | | | | | | | Healthy | | | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | | TA | | |
| 4 | | | | | | | | | | | | | | | | | RB | |
| 4,5 | | | | | | | | | | | | | | | | BA | | |
| 5 | | | | | | | | | | | | | | | | TA | | |
| 5,5 | | | | | | | | | | | | | | | | TA | | |
| 6 | | | | | | | | | | | | | | | | YA | | |
| 6,5 | | | | | | | | | | | | | | | | YA | | |
| 7 | | | | | | | | | | | | | | | | | SD | |
| 7,5 | | | | | | | | | | | | | | | | | RB | |
| 8 | | | | | | | | | | | | | | | | TA | | |
| 8,5 | | | | | | | | | | | | | | | | TA | | |
| 9 | | | | | | | | | | | | | | | | BA | | |
| 9,5 | | | | | | | | | | | | | | | | | RB | |
| 10 | | | | Grooved | | | | | Healthy | | | | | | | | | |
| 10,5 | | | | | | | | | | | | | | | | TA | | |
| 11 | | | | | | | | | Black Sponge | | BLA | | | | | | | |
| 11,5 | | | | | | | | | | | | | | | | TA | | |
| 12 | | | | | | | | | | | | | | | | | RB | |
| 12,5 | | | | | | | | | | | | | | | | | RB | |
| 13 | | | | | | | | | | | | | | | | | SD | |
| 13,5 | | | | | | | | | | | | | | | | | SD | |
| 14 | | | | | | | | | | | | | | | | TA | | |
| 14,5 | | | | | | | | | | | | | | | | | SD | |
| 15 | | | | | | | | | | | | | | | | BA | | |
| 15,5 | | | | | | | | | | | | | | | | BA | | |
| 16 | | | | | | | | | | | | | | | | BA | | |
| 16,5 | | | | | | | | | | | | | | | | | RB | |
| 17 | | | | | | | | | | | | | | | | BA | | |
| 17,5 | | | | | | | | | | | | | | | | TA | | |
| 18 | | | | | | | | | | | | | | | | BA | | |
| 18,5 | | | | | | | | | | | | | | | | | RC | |
| 19 | | | | | | | | | | | | | | | | BA | | |
| 19,5 | | | | | | | | | | | | | | | | | SD | |
| 20 | | | | | | | | | | | | | | | | BA | | |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 23 | 14 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | BLA Black |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 2, Depth 6m, Section 50-70m | | | | Visibility: 25 m | | | | Observer: Marjo van den Bulck | | | | | | | | | |
|--|-------------|------|-------|------------------|---------|------------|-------------|-------------------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|---|
| Date: January 21, 2005 | | | | Temperature: 27C | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | |
| | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | |
| 0,5 | | | | | | | | | | | | | | | SD | | |
| 1 | | | | | | | | | | | | | | | SD | | |
| 1,5 | | | | | | | | | | | | | | | TA | | |
| 2 | | | | | | | | | | | | | | | TA | | |
| 2,5 | | | | | Lettuce | | | Healthy | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | TA | | |
| 3,5 | | | | | | | | | | | | | | | YA | | |
| 4 | | | | | | | | | | | | | | | TA | | |
| 4,5 | | | | | | | | | | | | | | | TA | | |
| 5 | | | | | | | | Enrusting Sponge | | ENCR | | | | | | | |
| 5,5 | | | | | | | | | | | | | | | TA | | |
| 6 | | | | | | | | | | | | | | | TA | | |
| 6,5 | | | | | | | | | | | | | | | TA | | |
| 7 | | | | | | | | | | | | | | | TA | | |
| 7,5 | | | | | | | | | | | | | | | RE | | |
| 8 | | | | | | | | | | | | | | | RE | | |
| 8,5 | | | | | | | | | | | | | | | RE | | |
| 9 | | | | | | | | | | | | | | | RE | | |
| 9,5 | | | | | | | | | | | | | | | BA | | |
| 10 | | | | | | | | | | | | | | | BA | | |
| 10,5 | | | | | | | | | | | | | | | TA | | |
| 11 | | | | | Boulder | | | Healthy | | | | | | | | | |
| 11,5 | | | | | | | | | | | | | | | TA | | |
| 12 | | | | | Boulder | | | Dead Partially 80% | | | | | | | | | |
| 12,5 | | | | | | | | | | | | | | | BA | | |
| 13 | | | | | | | | | | | | | | | BA | | |
| 13,5 | | | | | | | | | | | | | | | RE | | |
| 14 | | | | | | | | | | | | | | | YA | | |
| 14,5 | | | | | Boulder | | | Healthy | | | | | | | | | |
| 15 | | | | | Boulder | | | Healthy | | | | | | | | | |
| 15,5 | | | | | | | | Fire | Healthy | | | | | | | | |
| 16 | | | | | | | | | | | | | | | TA | | |
| 16,5 | | | | | | | | | | | | | | | TA | | |
| 17 | | | | | | | | | | | | | | | TA | | |
| 17,5 | | | | | | | | Fire | Healthy | | | | | | | | |
| 18 | | | | | | | | | | | | | | | TA | | |
| 18,5 | | | | | | | | | | | | | | | SD | | |
| 19 | | | | | | | | | | | | | | | RE | | |
| 19,5 | | | | | | | | | | | | | | | TA | | |
| 20 | | | | | | | | | | | | | | | SD | | |
| Total | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 2 | 1 | 6 | 0 | 0 | 0 | 0 | 12 | 18 | 2 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 2, Depth 6m, Section 75-95m | | Visibility: 25 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | |
|--|-------------|------------------|---------|-------------------------------|--------|------|------------|-------------|--------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|
| Date: January 21, 2005 | | Temperature: 27C | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | |
| 0,5 | | | | | | | | | | | | | | | | RB | |
| 1 | | | | | | | | | | | | | | | | SD | |
| 1,5 | | | | Brain | | | | | Healthy | | | | | | | | |
| 2 | | | Boulder | | | | | | Dead partially 70% | | | | | | | | |
| 2,5 | | | | | | | | | | | | | | | | SD | |
| 3 | | | | | | | | | Seaplume | PU | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | TA | | |
| 4 | | | | | | | | | | | | | | | | RC | |
| 4,5 | | | | | | | | | | | | | | | | SD | |
| 5 | | | Boulder | | | | | | Healthy | | | | | | | | |
| 5,5 | | | | | | | | | | | | | | | TA | | |
| 6 | | | | | | | | | | | | | | | | RB | |
| 6,5 | | | | | | | | | | | | | | | TA | | |
| 7 | | | Boulder | | | | | | Healthy | | | | | | | | |
| 7,5 | | | | | | | | | | | | | | | | SD | |
| 8 | | | | | | | | | | | | | | | | SD | |
| 8,5 | | | | | | | | | | | | | | | TA | | |
| 9 | | | | | | | | | | | | | | | | RC | |
| 9,5 | | | | | | | | | | | | | | | YA | | |
| 10 | | | | | | | | | | | | | | | TA | | |
| 10,5 | | | | | | | | | | | | | | | TA | | |
| 11 | | | | | | | | | | | | | | | | RB | |
| 11,5 | | | | | | | | | | | | | | | TA | | |
| 12 | | | | | | | | | | | | | | | TA | | |
| 12,5 | | | | | | | | | | | | | | | TA | | |
| 13 | | | | | | | | | | | | | | | | SD | |
| 13,5 | | | | | | | | | | | | | | | | SD | |
| 14 | | | | | | | | | | | | | | | | RB | |
| 14,5 | | | | | | | | | | | | | | | TA | | |
| 15 | | | | | | | | | | | | | MTA | | | | |
| 15,5 | | | | | | | | | | | | | | | TA | | |
| 16 | | | | | | | | | | | | | | | | SD | |
| 16,5 | | | | | | | | | | | | | | | TA | | |
| 17 | | | | | | | | | | | | | | | | RB | |
| 17,5 | | | | | | | | | | | | | | | YA | | |
| 18 | | | | | | | | | | | | | | | | RB | |
| 18,5 | | | | | | | | | | | | | | | | SD | |
| 19 | | | | | | | | | | | | | | | | SD | |
| 19,5 | | | | | | | | | | | | | | | | SD | |
| 20 | | | | | | | | | | | | | | | TA | | |
| Total | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 15 | 19 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | |
| | | TR Trididemnum | |

**PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT**

| Transect No: 3, Depth 10m, Section 0-20m | | Visibility: 40 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | | | | | |
|--|-------------|------------------|----------|-------------------------------|--------|------|------------|-------------|--------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|---|----|----|--------------------|
| Date: January 17, 2005 | | Temperature: 27C | | | | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | | | | |
| 0,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 1 | | | | | | | | | | | | | | | | RB | | | | | |
| 1,5 | | | | | | | | | | | | | | MTA | | | | | | | |
| 2 | | | | | | | | | | | | | | | TA | | | | | | |
| 2,5 | Pencil | | | | | | | | Healthy | | | | | | | | | | | | |
| 3 | | | | | | | | | Black Sponge | | BLA | | | | | | | | | | |
| 3,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 4 | | | | | | | | | | | | | | | YA | | | | | | |
| 4,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 5 | | | | | | | | | | | | | | | | RB | | | | | |
| 5,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 6 | | | | | | | | | | | | | | | TA | | | | | | |
| 6,5 | | | Boulder | | | | | | Healthy | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | RC | | | | | |
| 7,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 8 | | | | | | | | | | | | | | | | RB | | | | | |
| 8,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 9 | | | | | | | | | | | | | | | | RC | | | | | |
| 9,5 | | | | | | | Lettuce | | Dead Partially 30% | | | | | | | | | | | | |
| 10 | | | Blushing | | | | | | Healthy | | | | | | | | | | | | |
| 10,5 | | Mustard | | | | | | | Healthy | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | RC | | | | | |
| 11,5 | | | | | | | Lettuce | | Healthy | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | RC | | | | | |
| 12,5 | | | | Grooved | | | | | Healthy | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | RC | | | | | |
| 13,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 14 | | | | | | | | | | | | | | | | SD | | | | | |
| 14,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 15 | | | | | | | | | Purple Sea Rod | | PU | | | | | | | | | | |
| 15,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 16 | | | | | | | | | | | | | | | | SD | | | | | |
| 16,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 17 | | | | | | | | | | | | | | | | RC | | | | | |
| 17,5 | | | Boulder | | | | | | Dead 100% | | | | | | | | | | | | |
| 18 | | | Boulder | | | | | | Healthy | | | | | | | | | | | | |
| 18,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 19 | | | | | | | | | | | | | | | | SD | | | | | |
| 19,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 20 | | | | | | | | | | | | | | | | SD | | | | | |
| Total | 1 | 1 | 4 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | | 1 | 7 | 21 | | | | |
| | 1 | 3 | 7 | 2 | 0 | 7 | 0 | 1 | 4 | 17 | 0 | 0 | | 2 | 3 | 0 | 0 | 7 | 44 | 83 | GRAND TOTAL |

Substrate Codes:

| | | | | | | | |
|----|------------------|----|-------------|----|------------------|------|------------|
| PD | (Partially) Dead | RC | Rock | YA | Y Algae | BRO | Brown |
| H | Healthy | RB | Rubble | TA | Turf Algae | YE | Yellow |
| S | Sick | SD | Sand | BA | Blue Green Algae | PU | Purple |
| BL | Bleached | MA | Macro Algae | CA | Coralline Algae | ENCR | Encrusting |
| | | | | TR | Trididemnum | | |

**PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT**

| Transect No: 3, Depth 10m, Section 25-45m | | | | Visibility: 40 m | | | | Observer: Marjo van den Bulck | | | | | | | | | | | | | |
|---|-------------|-------|---------|------------------|--------|---------|------------|-------------------------------|--------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|---|---|---|---|----|
| Date: January 17, 2005 | | | | Temperature: 27C | | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | | | | |
| 0,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 1 | | | | | | Lettuce | | | Healthy | | | | | | | | | | | | |
| 1,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 2 | | | | | | | | | | | | | | | | RC | | | | | |
| 2,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 3 | | | | | | | | | | | | | | | TA | | | | | | |
| 3,5 | | | | | | | | | | | | | | | | RC | | | | | |
| 4 | | | | | | | | | | | | | | | | SD | | | | | |
| 4,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 5 | | | | | | | | | | | | | | | | SD | | | | | |
| 5,5 | | | | | | | | | | | | | | | YA | | | | | | |
| 6 | | | Boulder | | | | | | Healthy | | | | | | | | | | | | |
| 6,5 | | | | | | Lettuce | | | Healthy | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | SD | | | | | |
| 7,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 8 | | | | | | | | | | | | | | | | SD | | | | | |
| 8,5 | | | | | | | | | | | | | | | TA | | | | | | |
| 9 | | | | | | | | | | | | | | | | RB | | | | | |
| 9,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 10 | | | | | | | | | | | | | | | | RB | | | | | |
| 10,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 11 | | | | | | | | | | | | | | | | SD | | | | | |
| 11,5 | | | | | | | | | Sea Plume | PU | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | TA | | | | | | |
| 12,5 | | | | | | | | | Purple Tube Sponge | | PU | | | | | | | | | | |
| 13 | | | | | | | | | Brown Sponge | | BRO | | | | | | | | | | |
| 13,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 14 | | | | | | | | | | | | | | | TA | | | | | | |
| 14,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 15 | | | | | | | | | | | | | | | | SD | | | | | |
| 15,5 | | | | | | | | | | | | | | | | SD | | | | | |
| 16 | | | | | | | | | | | | | | | | SD | | | | | |
| 16,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 17 | | | | | | | | | | | | | | | | RB | | | | | |
| 17,5 | | | | | | | | | | | | | | | YA | | | | | | |
| 18 | | | | | | | | | | | | | | | | SD | | | | | |
| 18,5 | | | | | | | | | | | | | | | YA | | | | | | |
| 19 | | | | | | | | | | | | | | | | RB | | | | | |
| 19,5 | | | | | | | | | | | | | | | | RB | | | | | |
| 20 | | | | | | | | | | | | | | | | RB | | | | | |
| Total | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | | 0 | 3 | 0 | 0 | | 1 | 2 | 0 | 0 | 0 | 8 | 26 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | WH White |
| | | TR Trididemnum | ENCR Encrusting |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 3, Depth 10m, Section 50-70m | | | | Visibility: 20 m | | | | Observer: Marjo van den Bulck | | | | | | | | | | |
|---|-------------|---------|------|------------------|--------|---------|------------|-------------------------------|-------------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|----|----|
| Date: January 19, 2005 | | | | Temperature: 26C | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | |
| 0,5 | | | | | | | | | | | | | | | SD | | | |
| 1 | | | | | | | | | | | | | | | TA | | | |
| 1,5 | | | | | | | | | | | | | | | TA | | | |
| 2 | | | | | | | | | | | | | | | TA | | | |
| 2,5 | | | | | | | | | | | | | | | | SD | | |
| 3 | | | | | | | | | | | | | | | | SD | | |
| 3,5 | | | | | | | | | | | | | | | | SD | | |
| 4 | | | | | | | | | | | | | | | | SD | | |
| 4,5 | | | | | | | | | | | | | | | | SD | | |
| 5 | | | | | | | | | | | | | | | TA | | | |
| 5,5 | | | | | | | | | | | | | | | TA | | | |
| 6 | | | | | | | | | | | | | | | TA | | | |
| 6,5 | | | | | | | | | | | | | | | | SD | | |
| 7 | | | | | | | | | | | | | | | | SD | | |
| 7,5 | | | | | | | | | | | | | | | TA | | | |
| 8 | | | | | | | | | | | | | | | | SD | | |
| 8,5 | | | | | | | | | | | | | | | | SD | | |
| 9 | | | | | | | | | | | | | | | | SD | | |
| 9,5 | | | | | | | | | | | | | | | | RC | | |
| 10 | | | | | | | | | | | | | | | | SD | | |
| 10,5 | | | | | | | | | | | | | | | | RB | | |
| 11 | | | | | | | | | | | | | | | | SD | | |
| 11,5 | | Mustard | | | | | | | Healthy | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | RB | | |
| 12,5 | | | | | | | | | | | | | | | | RC | | |
| 13 | | | | | | | | | | | | | | | | RC | | |
| 13,5 | | | | | | | | | | | | | | | | SD | | |
| 14 | | | | | | | | | | | | | | | | SD | | |
| 14,5 | | | | | | Lettuce | | | Dead Partially 60% | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | SD | | |
| 15,5 | | | | | | | | | | | | | MTA | | | | | |
| 16 | | | | | | | | | | | | | | TA | | | | |
| 16,5 | | | | | | Lettuce | | | Healthy, diameter 10 cm | | | | | | | | | |
| 17 | | | | | | Lettuce | | | Healthy, diameter 5 cm | | | | | | | | | |
| 17,5 | | | | | | | | | | | | | | | | SD | | |
| 18 | | | | | | | | | | | | | | | | SD | | |
| 18,5 | | | | | | | | | | | | | | | | RC | | |
| 19 | | | | | | | | | | | | | | YA | | | | |
| 19,5 | | | | | | | | | | | | | | | | SD | | |
| 20 | | | | | | | | | | | | | | | TA | | | |
| Total | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 10 | 25 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | OR Orange |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING
CORAL LINE TRANSECT

| Transect No: 3, Depth 10m, Section 75-95m | | Visibility: 10 m | | Observer: Marjo van den Bulck | | | | | | | | | | | | | | | |
|---|-------------|------------------|---------|-------------------------------|--------|------|------------|-------------|--------------------|-------------------|---------|-------------|-------------|-------------|-------|----------|---|----|----|
| Date: January 19, 2005 | | Temperature: 26C | | | | | | | | | | | | | | | | | |
| M | HARD CORALS | | | | | | | | CONDITION/REMARKS | SOFT CORALS/OTHER | | | | | | | | | |
| | Branching | Mound | Star | Brain | Finger | Leaf | Fire Coral | Other Coral | | Gorgonians | Sponges | Trididemnum | Coralline A | Macro Algae | Algae | Abiotics | | | |
| 0,5 | | | | | | | | | | | | | | | SD | | | | |
| 1 | | | | | | | | | | | | | | | SD | | | | |
| 1,5 | | | | | | | | | | | | | | | SD | | | | |
| 2 | | | | | | | | | | | | | | YA | | | | | |
| 2,5 | | | Boulder | | | | | | Dead Partially 80% | | | | | | | | | | |
| 3 | | | | | | | | | | | | MTA | | | | | | | |
| 3,5 | | | | | | | | | | | | | | TA | | SD | | | |
| 4 | | | | | | | | | | | | | | TA | | | | | |
| 4,5 | | | | | | | | Maze | Healthy | | | | | YA | | | | | |
| 5 | | | | | | | | | | | | | | MTA | | | | | |
| 5,5 | | | | | | | | | | | | | | MTA | | | | | |
| 6 | | | | | | | | | | | | | | MTA | | | | | |
| 6,5 | | | | | | | | | | | | | | YA | | | | | |
| 7 | | | | | | | | | | | | | | TA | | | | | |
| 7,5 | | | | Grooved | | | | | Healthy | | | | | TA | | | | | |
| 8 | | | | | | | | | | | | | | TA | | | | | |
| 8,5 | | | | | | | | | | | | | | | RB | | | | |
| 9 | | | | | | | | | | | | | | MTA | | | | | |
| 9,5 | | | | | | | | | | | | | | | SD | | | | |
| 10 | | | | | | | | | | | | | | MTA | | | | | |
| 10,5 | | | | | | | | | | | | | | TA | | | | | |
| 11 | | | | | | | | | | | | | | | RB | | | | |
| 11,5 | | | | | | | | | | | | | | TA | | | | | |
| 12 | | | | | | | | | | | | | | | SD | | | | |
| 12,5 | | | | | | | | | | | | | | YA | | | | | |
| 13 | | | | | | | | | | | | | | TA | | | | | |
| 13,5 | | | | | | | | | | | | | | TA | | | | | |
| 14 | | | | | | | | | | | | | | TA | | | | | |
| 14,5 | | | | | | | | | | | | | | TA | | | | | |
| 15 | | | | | | | | | | | | | | TA | | | | | |
| 15,5 | | | | | | | | | | | | | | TA | | | | | |
| 16 | | | | | | | | | | | | | | | SD | | | | |
| 16,5 | | | Boulder | | | | | | Healthy | | | | | | | | | | |
| 17 | Mustard | | | | | | | | Healthy | | | | | | | | | | |
| 17,5 | | | | | | | | | | | | | | TA | | | | | |
| 18 | | | | | | | | | | | | | | TA | | | | | |
| 18,5 | | | | | | | | | | | | | | | SD | | | | |
| 19 | | | | | | | | | | | | | | TA | | | | | |
| 19,5 | | | | | | | | | | | | | | TA | | | | | |
| 20 | | | | | | | | | | | | | | | RB | | | | |
| Total | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 19 | 11 |

Substrate Codes:

| | | | |
|---------------------|----------------|---------------------|-----------|
| PD (Partially) Dead | RC Rock | YA Y Algae | BRO Brown |
| H Healthy | RB Rubble | TA Turf Algae | YE Yellow |
| S Sick | SD Sand | BA Blue Green Algae | PU Purple |
| BL Bleached | MA Macro Algae | CA Coralline Algae | |
| | | TR Trididemnum | |

PORTOMAREA MARINE MONITORING

ATLANTIC BELT TRANSECT SUMMARY: FISH and INVERTEBRATES

jan-05

Data collected by: Marjo van den Bulck

| PORTOMARIA Atlantic Belt Transects | | West side of Bay | | East side | Total | Mean | St.Dev. |
|---------------------------------------|-----------------------------|-------------------------|-------------------------|-------------------------|-------------|----------------|---------|
| Fish | | Transect 1 Depth:12m | Transect 2 Depth: 6m | Transect 3 Depth:10m | | | |
| ANGELFISH | Cherubfish | 2 | 2 | 2 | 6 | 2,00 | |
| | French Angelfish | 2 | 1 | | 3 | 1,00 | 1,00 |
| | Queen Angelfish | 1 | | | 1 | 1,00 | |
| | Rock Beauty | | | | | | |
| BASSLET | Fairy Basslet | 13 | | 4 | 17 | 8,50 | 6,36 |
| BLENNY | Redlip Blenny | | | | | | |
| BOXFISH | Honeycomb Cowfish | | | | | | |
| | Smooth Trunkfish | 2 | 1 | 1 | 4 | 1,33 | 0,58 |
| | Spotted Trunkfish | | 1 | | 1 | 1,00 | |
| BUTTERFLYFISH | Banded Butterflyfish | | 6 | | 6 | 3,00 | 4,24 |
| | Foureye Butterflyfish | 2 | 2 | 2 | 6 | 2,00 | |
| | Longsnout Butterflyfish | | | | | | |
| CHROMIS | Blue Chromis | 54 | 3 | 15 | 72 | 24,00 | 26,66 |
| | Brown Chromis | 288 | 99 | 525 | 912 | 304,00 | 213,45 |
| DAMSELFISH | Beaugregory Damselfish | | | | | | |
| | Bicolor Damselfish | 249 | 467 | 342 | 1058 | 352,67 | 109,39 |
| | Cocoa Damselfish | | 13 | 5 | 18 | 9,00 | 5,66 |
| | Dusky Damselfish | | 19 | | 19 | 9,50 | 13,44 |
| | Sergeant Major | | | | | | |
| | Threespot Damselfish | 57 | 13 | 44 | 114 | 38,00 | 22,61 |
| | Yellowtail Damselfish | | 2 | | 2 | 2,00 | |
| DRUM | Spotted Drum | | 1 | | 1 | 0,50 | 0,71 |
| EEL | Goldentail Moray | | 1 | 1 | 2 | 1,00 | |
| | Sharptail Eel | | | | | | |
| FILEFISH | Spotted Moray | 2 | | | 2 | 0,67 | 1,15 |
| | Orangespotted Filefish | 2 | 4 | 1 | 7 | 2,33 | 1,53 |
| | Whitespotted filefish | | | | | | |
| FLOUNDER | Peacock Flounder | 1 | | | 1 | 1,00 | |
| GOATFISH | Spotted Goatfish | | | | | | |
| GOBY | Yellow Goatfish | 30 | 3 | 9 | 42 | 14,00 | 14,18 |
| | Bridled Goby | 85 | 37 | 120 | 242 | 80,67 | 41,67 |
| GROUPE | Neon Goby | | 4 | 1 | 5 | 1,67 | 2,08 |
| | Peppermint Goby | 6 | 20 | 17 | 43 | 14,33 | 7,37 |
| | Coney | | 5 | | 5 | 2,50 | 3,54 |
| | Graysby | 9 | 3 | 7 | 19 | 6,33 | 3,06 |
| | Rock Hind | | | | | | |
| | Tiger Grouper | | | | | | |
| GRUNT | Bluestriped Grunt | | | | | | |
| | French Grunt | 7 | 2 | 5 | 14 | 4,67 | 2,52 |
| | Smallmouth Grunt | 15 | | 4 | 19 | 6,33 | 7,77 |
| HAMLET | Barred Hamlet | 3 | | | 3 | 1,00 | 1,73 |
| | Black Hamlet | | | | | | |
| | Butter Hamlet | 1 | 1 | 1 | 3 | 1,00 | |
| | Yellowtail Hamlet | 4 | 1 | 3 | 8 | 2,67 | 1,53 |
| HOGFISH | Spanish Hogfish | 2 | 1 | 1 | 4 | 1,33 | 0,58 |
| JACK | Bar Jack | 1 | | 1 | 2 | 0,67 | 0,58 |
| MACKEREL | Cero | | | | | | |
| PARROTFISH | Blue Parrotfish | | | | | | |
| | Princess Parrotfish | 39 | 17 | 17 | 73 | 24,33 | 12,70 |
| | Queen Parrotfish | | 1 | 5 | 6 | 2,00 | 2,65 |
| | Redband Parrotfish | 6 | 7 | 4 | 17 | 5,67 | 1,53 |
| | Stoplight Parrotfish | 14 | 3 | 9 | 26 | 8,67 | 5,51 |
| | Striped Parrotfish | 30 | 2 | 12 | 44 | 14,67 | 14,19 |
| PUFFER | Balloonfish | | 1 | | 1 | 1,00 | |
| | Sharpnose Puffer | 5 | 7 | 6 | 18 | 6,00 | 1,00 |
| RAY | Southern Stingray | | | | | | |
| SCORPIONFISH | Spotted Scorpionfish | 1 | 2 | 2 | 5 | 1,67 | 0,58 |
| SEABASS | Creolefish | | | | | | |
| | Harlequin Bass | 6 | 11 | 4 | 21 | 7,00 | 3,61 |
| | Tobaccofish | | | | | | |
| SNAPPER | Grey Snapper | 1 | | | 1 | 1,00 | |
| | Schoolmaster | | | 5 | 5 | 5,00 | |
| | Red Snapper | | | 1 | 1 | 1,00 | |
| SQUIRRELFISH | Blackbar Soldierfish | 6 | 8 | 10 | 24 | 8,00 | 2,00 |
| | Squirrelfish | 1 | 1 | | 2 | 0,67 | 0,58 |
| SURGEONFISH | Blue Tang | 2 | 8 | 1 | 11 | 3,67 | 3,79 |
| | Doctorfish | | 1 | 2 | 3 | 1,50 | 0,71 |
| | Ocean Surgeon | | | | | | |
| WRASSE | Bluehead Wrasse | 19 | 65 | 20 | 104 | 34,67 | 26,27 |
| | Clown Wrasse | | 3 | 6 | 9 | 3,00 | 3,00 |
| | Creole Wrasse | 2 | | 9 | 11 | 3,67 | 4,73 |
| | Rainbow Wrasse | | | | | | |
| | Slippery Dick | | | | | | |
| | Yellowhead Wrasse | 23 | 21 | 37 | 81 | 27,00 | 8,72 |
| OTHERS | Cornetfish | | | | | | |
| | Hawkfish, Redspotted | | | | | | |
| | Sand Diver | | 1 | | 1 | 0,50 | 0,71 |
| | Sand Tilefish | | | | | | |
| | Soapfish, Greater | | | 1 | 1 | 0,33 | 0,58 |
| | Trumpetfish | 2 | 2 | | 4 | 1,33 | 1,15 |
| TOTAL | | 995 | 873 | 1262 | 3130 | 1043,33 | |
| Invertebrates | | Transect 1 Depth:12m | Transect 2 Depth: 6m | Transect 3 Depth:10m | Total | Mean | St.Dev. |
| ANEMONE | Carpet Anemone | | | | | | |
| | Corkscrew Anemone | | | | | | |
| | Giant Anemone | 1 | 20 | 11 | 32 | 10,67 | 9,50 |
| | Knobby Anemone | 19 | 8 | 8 | 35 | 11,67 | 6,35 |
| TUBE WORMS | Christmas tree Worms | 216 | 477 | 252 | 945 | 315,00 | 141,45 |
| | Ghost Feather Duster | 4 | | 3 | 7 | 2,33 | 2,08 |
| | Magnificent Feather Duster | 2 | 1 | | 3 | 1,00 | 1,00 |
| | Social Feather Duster | | 1 | | 1 | 0,50 | 0,71 |
| | Split Crown Feather Duster | 10 | 1 | 15 | 26 | 8,67 | 7,09 |
| | Star Horseshoe Worm | | 3 | | 3 | 1,50 | 2,12 |
| | Variegated Feather Duster | 5 | 3 | 4 | 12 | 4,00 | 1,00 |
| | | | | | | | |
| CRUSTACEANS | Banded Coral Shrimp | | | | | | |
| | Hairy Clinging Crab | | | 1 | 1 | 1,00 | |
| | Pederson Cleaner Shrimp | 3 | 1 | 11 | 15 | 5,00 | 5,29 |
| | Red Snapping Cleaner Shrimp | | | 2 | 2 | 2,00 | |
| | Yellowline Arrow Crab | | | | | | |
| MOLLUSKS | Amber Pen Shell | | | | | | |
| | Lettuce Sea Slug | | | | | | |
| | Queen Conch | | | | | | |
| ECHINODERMS | Rough File Clam | | | | | | |
| | Reef Urchin | | | | | | |
| TOTAL | | 260 | 515 | 307 | 1082 | 360,67 | |

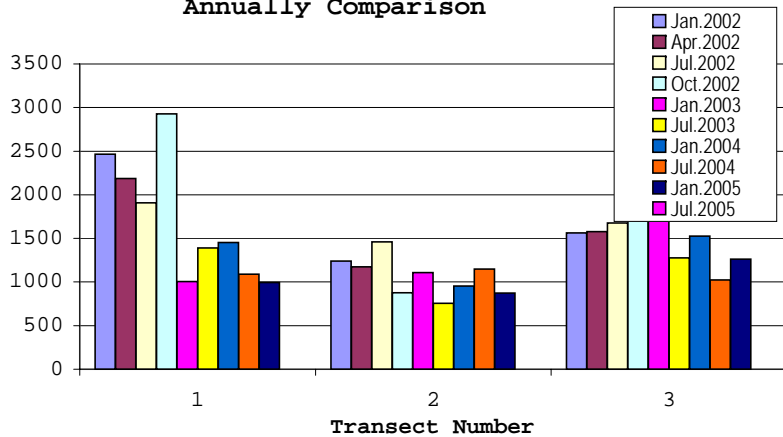
**PORTOMAREA MARINE MONITORING
FISH AND INVERTEBRATE QUARTERLY/SEMI-ANNUALLY COMPARISON**

| | Transect 1 - Depth 12m | | | | Transect 2 - Depth 6m | | | | Transect 3 - Depth 10m | | | |
|----------------------|------------------------|-----------|-----------|-----------|-----------------------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|
| | Jan.2002 | Apr. 2002 | July 2002 | Oct. 2002 | Jan.2002 | Apr. 2002 | July 2002 | Oct. 2002 | Jan. 2002 | Apr. 2002 | July 2002 | Oct. 2002 |
| Fish | 2466 | 2187 | 1908 | 2929 | 1241 | 1173 | 1459 | 877 | 1562 | 1576 | 1677 | 1830 |
| Invertebrates | 556 | 384 | 314 | 406 | 537 | 596 | 724 | 731 | 432 | 334 | 403 | 187 |

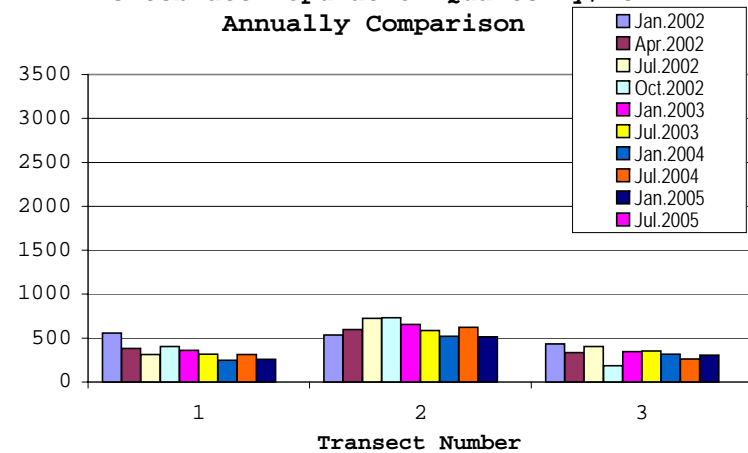
| | Transect 1 - Depth 12m | | Transect 2 - Depth 6m | | Transect 3 - Depth 10m | | Transect 1 - Depth 12m | | Transect 2 - Depth 6m | | Transect 3 - Depth 10m | |
|----------------------|------------------------|-----------|-----------------------|-----------|------------------------|-----------|------------------------|-----------|-----------------------|-----------|------------------------|-----------|
| | Jan.2003 | July 2003 | Jan.2003 | July 2003 | Jan. 2003 | July 2003 | Jan.2004 | July 2004 | Jan.2004 | July 2004 | Jan. 2004 | July 2004 |
| Fish | 1007 | 1390 | 1109 | 754 | 1767 | 1276 | 1454 | 1089 | 955 | 1149 | 1526 | 1024 |
| Invertebrates | 359 | 318 | 656 | 588 | 347 | 353 | 246 | 312 | 519 | 624 | 318 | 262 |

| | Transect 1 - Depth 12m | | Transect 2 - Depth 6m | | Transect 3 - Depth 10m | |
|----------------------|------------------------|-----------|-----------------------|-----------|------------------------|-----------|
| | Jan.2005 | July 2005 | Jan.2005 | July 2005 | Jan. 2005 | July 2005 |
| Fish | 995 | | 873 | | 1262 | |
| Invertebrates | 260 | | 515 | | 307 | |

Fish Population Quarterly/Semi-Annually Comparison

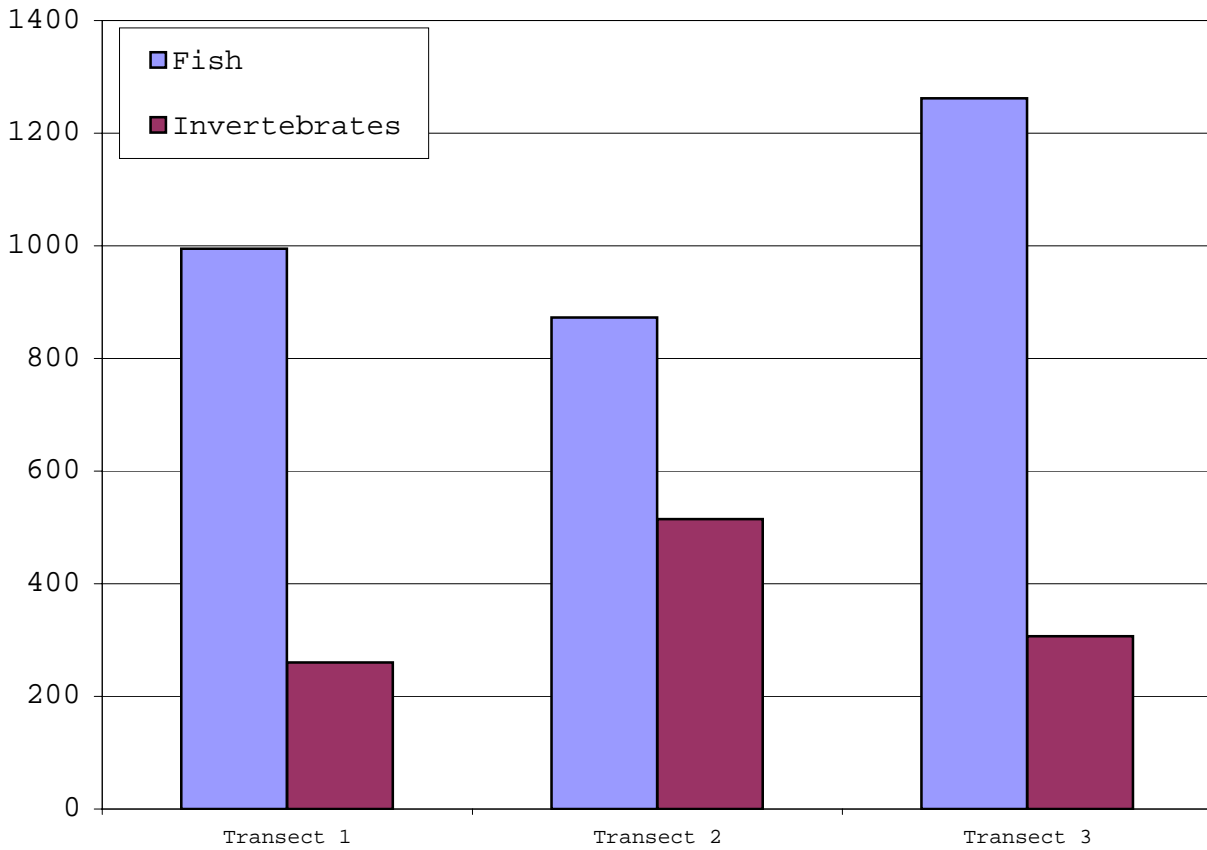


Invertebrate Population Quarterly/Semi-Annually Comparison



PORTOMAREA MARINE MONITORING
ATLANTIC BELT TRANSECT FISH AND INVERTEBRATE SUMMARY

Belt Transect Population Summary



PORTOMAREA MARINE MONITORING

ATLANTIC BELT TRANSECT: FISH and INVERTEBRATES

Transect #1, Depth: 12m
 Date: January 20/24, 2005
 Data collected by: Marjo van den Bulck

| Atlantic Belt Transect: Fish | | 0-20m | 25-45m | 50-70m | 75-95m | Total | Mean | St.Dev. |
|---------------------------------------|----------------------------|------------|------------|------------|------------|------------|---------------|---------|
| ANGELFISH | Cherubfish | 2 | | | | 2 | 2 | |
| | French Angelfish | | 2 | | | 2 | 2 | |
| | Queen Angelfish | | | | 1 | 1 | 1 | |
| BASSLET | Fairy Basslet | 5 | 4 | 1 | 3 | 13 | 3,25 | 1,71 |
| BLENNY | | | | | | | | |
| BOXFISH | Smooth Trunkfish | 1 | | | 1 | 2 | 1,00 | |
| | Honeycomb Cowfish | | | | | | | |
| BUTTERFLYFISH | Banded Butterflyfish | | | | | | | |
| | Foureye Butterflyfish | 2 | | | | 2 | 2 | |
| | Longsnout Butterflyfish | | | | | | | |
| CHROMIS | Blue Chromis | 5 | 10 | 34 | 5 | 54 | 13,50 | 13,87 |
| | Brown Chromis | 97 | 25 | 66 | 100 | 288 | 72,00 | 34,90 |
| DAMSELFISH | Bicolor | 54 | 39 | 91 | 65 | 249 | 62,25 | 21,93 |
| | Sergeant Major | | | | | | | |
| | Threespot | 14 | 9 | 25 | 9 | 57 | 14,25 | 7,54 |
| | Yellowtail | | | | | | | |
| DRUM | Spotted Drum | | | | | | | |
| EEL | Green Moray | | | | | | | |
| | Spotted Moray | 1 | 1 | | | 2 | 1 | |
| FILEFISH | Orangespotted Filefish | | 1 | | 1 | 2 | 1,00 | |
| | Whitespotted Filefish | | | | | | | |
| FLOUNDER | Peacock Flounder | | | | 1 | 1 | 1 | |
| GOATFISH | Yellow Goatfish | 13 | 9 | 2 | 6 | 30 | 7,5 | 4,65 |
| | Spotted Goatfish | | | | | | | |
| GOBY | Bridled Goby | 24 | 16 | 30 | 15 | 85 | 21,25 | 7,09 |
| | Neon Goby | | | | | | | |
| | Peppermint Goby | 3 | 1 | 2 | | 6 | 2 | 1,00 |
| GROUPE | Graysby | 2 | 1 | 4 | 2 | 9 | 2,25 | 1,26 |
| | Rock Hind | | | | | | | |
| GRUNT | Bluestriped Grunt | | | | | | | |
| | French Grunt | 2 | 1 | 2 | 2 | 7 | 1,75 | 0,50 |
| | Smallmouth Grunt | 9 | 6 | | | 15 | 7,50 | 2,12 |
| HAMLET | Barred Hamlet | | 2 | 1 | | 3 | 1,5 | 0,71 |
| | Butter Hamlet | | | | 1 | 1 | 1 | |
| | Yellowtail Hamlet | 1 | 1 | 1 | 1 | 4 | 1 | |
| HOGFISH | Spanish Hogfish | 1 | 1 | | | 2 | 1,00 | |
| JACK | Bar Jack | 1 | | | | 1 | 1 | |
| PARROTFISH | Blue Parrotfish | | | | | | | |
| | Princess Parrotfish | 12 | 11 | 5 | 11 | 39 | 9,75 | 3,20 |
| | Queen Parrotfish | | | | | | | |
| | Redband Parrotfish | 2 | | 3 | 1 | 6 | 2,00 | 1,00 |
| | Stoplight Parrotfish | 2 | 2 | 4 | 6 | 14 | 3,5 | 1,91 |
| | Striped Parrotfish | 14 | 5 | 3 | 8 | 30 | 7,50 | 4,80 |
| PUFFER | Balloonfish | | | | | | | |
| | Sharpnose Puffer | 1 | 1 | 1 | 2 | 5 | 1,25 | 0,50 |
| SCORPIONFISH | Spotted Scorpionfish | | | | 1 | 1 | 1 | |
| SEABASS | Creole Fish | | | | | | | |
| | Harlequin Bass | 3 | | 2 | 1 | 6 | 2 | 1,00 |
| SNAPPER | Gray Snapper | | | | 1 | 1 | 1,00 | |
| | Yellowtail Snapper | | | | | | | |
| SQUIRRELFISH | Blackbar Soldierfish | 3 | 1 | 2 | | 6 | 2,00 | 1,00 |
| | Squirrelfish | 1 | | | | 1 | 1 | |
| SURGEONFISH | Blue Tang | 2 | | | | 2 | 2 | |
| | Doctorfish | | | | | | | |
| | Ocean Surgeon | | | | | | | |
| WRASSE | Bluehead Wrasse | 4 | 6 | 3 | 6 | 19 | 4,75 | 1,50 |
| | Clown Wrasse | | | | | | | |
| | Creole Wrasse | 2 | | | | 2 | 2 | |
| | Slippery Dick | | | | | | | |
| | Yellowhead Wrasse | 6 | 4 | 5 | 8 | 23 | 5,75 | 1,71 |
| OTHERS | Sand Diver | | | | | | | |
| | Soapfish,greater | | | | | | | |
| | Trumpetfish | 1 | 1 | | | 2 | 1 | |
| TOTAL | | 290 | 160 | 287 | 258 | 995 | 248,75 | |
| Atlantic Belt Transect: Invertebrates | | 0-20m | 25-45m | 50-70m | 75-100m | Total | Mean | St.Dev. |
| ANEMONE | Corkscrew Anemone | | | | | | | |
| | Giant Anemone | | 1 | | | 1 | 1,00 | |
| | Knobby Anemone | 9 | 2 | 5 | 3 | 19 | 4,75 | 3,10 |
| TUBE WORMS | Christmas tree Worms | 53 | 51 | 41 | 71 | 216 | 54,00 | 12,49 |
| | Ghost Feather Duster | | | | 4 | 4 | 4 | |
| | Magnificent Feather Duster | | 1 | | 1 | 2 | 1,00 | |
| | Split Crown Feather Duster | 3 | | 5 | 2 | 10 | 3,333333 | 1,53 |
| | Star Horseshoe Worm | | | | | | | |
| | Variagated Feather Duster | 1 | | | 4 | 5 | 2,50 | 2,12 |
| CRUSTACEANS | Banded Coral Shrimp | | | | | | | |
| | Pederson Cleaner Shrimp | 1 | | 1 | 1 | 3 | 1 | |
| | Yellowline Arrow Crab | | | | | | | |
| MOLLUSKS | Rough File Clam | | | | | | | |
| | Queen Conch | | | | | | | |
| | Lettuce Sea Slug | | | | | | | |
| ECHINODERMS | Reef Urchin | | | | | | | |
| TOTAL | | 67 | 55 | 52 | 86 | 260 | 65 | |

Note: Previous observations (jan and april 2002) of Beaded Anemone are in fact Knobby Anemone.

PORTOMAREA MARINE MONITORING

ATLANTIC BELT TRANSECT: FISH and INVERTEBRATE:

Transect #2, Depth: 6m
 Date: January 21, 2005
 Data collected by: Marjo van den Bulck

| Atlantic Belt Transect: Fish | | 0-20m | 25-45m | 50-70m | 75-95m | Total | Mean | St.Dev. |
|---------------------------------------|----------------------------|------------|------------|------------|------------|------------|---------------|---------|
| ANGELFISH | Cherubfish | | 2 | | | 2 | 2,00 | |
| | French Angelfish | | 1 | | | 1 | 1,00 | |
| | Rock Beauty | | | | | | | |
| BASSLET | | | | | | | | |
| BIGEYE | | | | | | | | |
| BLENNY | Redlip Blenny | | | | | | | |
| BOXFISH | Smooth Trunkfish | | | 1 | | 1 | 1,00 | |
| | Spotted Trunkfish | | | 1 | | 1 | 1,00 | |
| BUTTERFLYFISH | Banded Butterflyfish | | 4 | 2 | | 6 | 3,00 | 1,41 |
| | Foureye Butterflyfish | 2 | | | | 2 | 2,00 | |
| | Longsnout Butterflyfish | | | | | | | |
| CARDINALFISH | | | | | | | | |
| CHROMIS | Blue Chromis | | 1 | 1 | 1 | 3 | 1,00 | |
| | Brown Chromis | 18 | 3 | 66 | 12 | 99 | 24,75 | 28,18 |
| DAMSELFISH | Bicolor Damselfish | 114 | 205 | 68 | 80 | 467 | 116,75 | 61,98 |
| | Cocoa Damselfish | 2 | 5 | 4 | 2 | 13 | 3,25 | 1,50 |
| | Dusky Damselfish | 3 | 1 | 14 | 1 | 19 | 4,75 | 6,24 |
| | Sergeant Major | | | | | | | |
| | Threespot Damselfish | 2 | 1 | 7 | 3 | 13 | 3,25 | 2,63 |
| | Yellowtail Damselfish | | | 2 | | 2 | 2,00 | |
| DRUM | Spotted Drum | | | | 1 | 1 | 1,00 | |
| EEL | Goldentail Moray | 1 | | | | 1 | 1,00 | |
| | Spotted Moray | | | | | | | |
| FILEFISH | Orangespotted Filefish | 2 | 2 | | | 4 | 2,00 | |
| FLOUNDER | Peacock Flounder | | | | | | | |
| GOATFISH | Spotted Goatfish | | | | | | | |
| | Yellow Goatfish | 2 | | 1 | | 3 | 1,50 | 0,71 |
| GOBY | Bridled Goby | 8 | 9 | 10 | 10 | 37 | 9,25 | 0,96 |
| | Neon Goby | 4 | | | | 4 | 4,00 | |
| | Peppermint Goby | 7 | 5 | 4 | 4 | 20 | 5,00 | 1,41 |
| GROUPE | Coney | 1 | 3 | | 1 | 5 | 1,67 | 1,15 |
| | Grasby | 1 | | 2 | | 3 | 1,50 | 0,71 |
| GRUNT | Bluestriped Grunt | | | | | | | |
| | French Grunt | 1 | 1 | | | 2 | 1,00 | |
| | Smallmouth Grunt | | | | | | | |
| HAMLET | Barred Hamlet | | | | | | | |
| | Butter Hamlet | | 1 | | | 1 | 1,00 | |
| | Yellowtail Hamlet | | | | 1 | 1 | 1,00 | |
| HOGFISH | Spanish Hogfish | | | | 1 | 1 | 1,00 | |
| JACK | Bar Jack | | | | | | | |
| MACKEREL | Cero | | | | | | | |
| PARROTFISH | Princess Parrotfish | 8 | 1 | 2 | 6 | 17 | 4,25 | 3,30 |
| | Queen Parrotfish | | | 1 | | 1 | 1,00 | |
| | Redband Parrotfish | 4 | | 2 | 1 | 7 | 2,33 | 1,53 |
| | Stoplight Parrotfish | 2 | | 1 | | 3 | 1,50 | 0,71 |
| | Striped Parrotfish | 1 | | 1 | | 2 | 1,00 | |
| PUFFER | Balloonfish | | | | 1 | 1 | 1,00 | |
| | Sharpnose Puffer | | 2 | 3 | 2 | 7 | 2,33 | 0,58 |
| RAY | | | | | | | | |
| SCORPIONFISH | Spotted Scorpionfish | 1 | 1 | | | 2 | 1,00 | |
| SEABASS | Creole Fish | | | | | | | |
| | Harlequin Bass | 2 | 4 | | 5 | 11 | 3,67 | 1,53 |
| | Tobaccofish | | | | | | | |
| SQUIRRELFISH | Blackbar Soldier | | 3 | | 5 | 8 | 4,00 | 1,41 |
| | Squirrelfish | 1 | | | | 1 | 1,00 | |
| SURGEONFISH | Blue Tang | 2 | 6 | | | 8 | 4,00 | 2,83 |
| | Doctorfish | | 1 | | | 1 | 1,00 | |
| WRASSE | Bluehead Wrasse | 42 | 4 | 4 | 15 | 65 | 16,25 | 17,93 |
| | Clown Wrasse | 1 | 2 | | | 3 | 1,50 | 0,71 |
| | Creole Wrasse | | | | | | | |
| | Slippery Dick | | | | | | | |
| OTHERS | Yellowhead Wrasse | 5 | 6 | 4 | 6 | 21 | 5,25 | 0,96 |
| | Redspotted Hawkfish | | | | | | | |
| | Lizardfish | | | | | | | |
| | Sand Diver | | | | 1 | 1 | 1,00 | |
| | Soapfish, Greater | | | | | | | |
| TOTAL | Trumpetfish | 1 | | 1 | | 2 | 1,00 | |
| TOTAL | | 238 | 274 | 202 | 159 | 873 | 218,25 | |
| Atlantic Belt Transect: Invertebrates | | 0-20m | 25-45m | 50-70m | 75-100m | Total | Mean | St.Dev. |
| ANEMONE | Carpet Anemone | | | | | | | |
| | Corkscrew Anemone | | | | | | | |
| | Giant Anemone | 7 | 7 | | 6 | 20 | 6,67 | 0,58 |
| TUBE WORMS | Knobby Anemone | | 1 | 2 | 5 | 8 | 2,67 | 2,08 |
| | Christmas tree Worms | 124 | 18 | 185 | 150 | 477 | 119,25 | 71,98 |
| | Ghost Feather Duster | | | | | | | |
| | Magnificent Feather Duster | 1 | | | | 1 | 1,00 | |
| | Social Feather Duster | 1 | | | | 1 | 1,00 | |
| | Split Crown Feather Duster | | | 1 | | 1 | 1,00 | |
| | Star Horseshoe Worm | | | 2 | 1 | 3 | 1,50 | 0,71 |
| CRUSTACEANS | Variegated Feather Duster | 3 | | | | 3 | 3,00 | |
| | Banded Coral Shrimp | | | | | | | |
| | Pederson Cleaner Shrimp | | | | 1 | 1 | 1,00 | |
| | Yellowline Arrow Crab | | | | | | | |
| MOLLUSKS | Atlantic Thorny-oyster | | | | | | | |
| | Penn Shell | | | | | | | |
| | Queen Conch | | | | | | | |
| ECHINODERMS | Rough Fileclam | | | | | | | |
| | Reef Urchin | | | | | | | |
| TOTAL | | 136 | 26 | 190 | 163 | 515 | 128,75 | |

Note: Previous observations (jan and april 2002) of Beaded Anemone are in fact Knobby Anemone.

PORTOMAREA MARINE MONITORING

ATLANTIC BELT TRANSECT: FISH and INVERTEBRATES

Transect #3, Depth: 10m

Date: January 17, 2005

Data collected and recorded by: Marjo van den Bulck

| Atlantic Belt Transect: Fish | | 0-20m | 25-45m | 50-70m | 75-95m | Total | Mean | St.Dev. |
|--|-----------------------------|--------------|---------------|---------------|----------------|--------------|--------------|----------------|
| ANGELFISH | Cherubfish | | 1 | 1 | | 2 | 1,00 | |
| | French Angelfish | | | | | | | |
| | Rock Beauty | | | | | | | |
| BARRACUDA | | | | | | | | |
| BASSLET | Fairy Basslet | 2 | | 2 | | 4 | 2,00 | |
| BIGEYE | | | | | | | | |
| BLENNY | | | | | | | | |
| BOXFISH | Honeycomb Cowfish | | | | | | | |
| | Smooth Trunkfish | | 1 | | | 1 | 1,00 | |
| BUTTERFLYFISH | Foureye Butterflyfish | | 1 | | 1 | 2 | 1,00 | |
| | Banded Butterflyfish | | | | | | | |
| | Longsnout Buuterflyfish | | | | | | | |
| CHROMIS | Blue Chromis | | 9 | 3 | 3 | 15 | 5,00 | 3,46 |
| | Brown Chromis | 78 | 102 | 145 | 200 | 525 | 131,25 | 53,56 |
| | Sunshenefish | | | | | | | |
| DAMSELFISH | Beaugregory Damselfish | | | | | | | |
| | Bicolor Damselfish | 108 | 80 | 101 | 53 | 342 | 85,50 | 24,72 |
| | Cocoa Damselfish | | | 2 | 3 | 5 | 2,50 | 0,71 |
| | Dusky Damselfish | | | | | | | |
| | Sergeant Major | | | | | | | |
| | Threespot Damselfish | 21 | 6 | 9 | 8 | 44 | 11,00 | 6,78 |
| DRUM | Spotted Drum | | | | | | | |
| EEL | Goldentail Moray | 1 | | | | 1 | 1,00 | |
| | Spotted Moray | | | | | | | |
| FILEFISH | Orangespotted Filefish | 1 | | | | 1 | 1,00 | |
| FLOUNDER | Peacock Flounder | | | | | | | |
| GOATFISH | Spotted Goatfish | | | | | | | |
| | Yellow Goatfish | 2 | 3 | 4 | | 9 | 3,00 | 1,00 |
| GOBY | Bridled Goby | 25 | 59 | 31 | 5 | 120 | 30,00 | 22,30 |
| | Neon Goby | 1 | | | | 1 | 1,00 | |
| | Peppermint Goby | 4 | 7 | 2 | 4 | 17 | 4,25 | 2,06 |
| GROUPEr | Coney | | | | | | | |
| | Graysby | 5 | 1 | 1 | | 7 | 2,33 | 2,31 |
| | Rock Hind | | | | | | | |
| | Tiger Grouper | | | | | | | |
| GRUNT | Bluestriped Grunt | | | | | | | |
| | French Grunt | 1 | 1 | 1 | 2 | 5 | 1,25 | 0,50 |
| | Smallmouth Striped Grunt | 1 | 2 | | 1 | 4 | 1,33 | 0,58 |
| HAMLET | Barred Hamlet | | | | | | | |
| | Black Hamlet | | | | | | | |
| | Butter Hamlet | | | | 1 | 1 | 1,00 | |
| | Yellowtail Hamlet | 1 | 1 | 1 | | 3 | 1,00 | |
| HOGFISH | Spanish Hogfish | | | | 1 | 1 | 1,00 | |
| JACK | Bar Jack | | 1 | | | 1 | 1,00 | |
| PARROTFISH | Blue Parrotfish | | | | | | | |
| | Princess Parrotfish | 4 | 6 | 5 | 2 | 17 | 4,25 | 1,71 |
| | Queen Parrotfish | | | 3 | 2 | 5 | 2,50 | 0,71 |
| | Redband Parrotfish | | 1 | 1 | 2 | 4 | 1,33 | 0,58 |
| | Stoplight Parrotfish | 3 | 1 | 4 | 1 | 9 | 2,25 | 1,50 |
| | Striped Parrotfish | 7 | 3 | | 2 | 12 | 4,00 | 2,65 |
| PUFFER | Sharpnose Puffer | 3 | 1 | 2 | | 6 | 2,00 | 1,00 |
| RAY | Southern Stingray | | | | | | | |
| SCORPIONFISH | Spotted Scorpionfish | | | 1 | 1 | 2 | 1,00 | |
| SEABASS | Creolefish | | | | | | | |
| | Harlequin Bass | 1 | | 1 | 2 | 4 | 1,33 | 0,58 |
| SNAPPER | Schoolmaster | | | 2 | 3 | 5 | 2,50 | 0,71 |
| | Red Snapper | | | 1 | | 1 | 1,00 | |
| | | | | | | | | |
| SQUIRRELFISH | Blackbar Soldierfish | 8 | | | 2 | 10 | 5,00 | 4,24 |
| | Squirrelfish | | | | | | | |
| SURGEONFISH | Blue Tang | | | | 1 | 1 | 1,00 | |
| | Doctorfish | | 2 | | | 2 | 2,00 | |
| | Ocean Surgeon | | | | | | | |
| WRASSE | Bluehead Wrasse | 9 | 1 | 2 | 8 | 20 | 5,00 | 4,08 |
| | Clown Wrasse | 1 | | 3 | 2 | 6 | 2,00 | 1,00 |
| | Creole Wrasse | | 9 | | | 9 | 9,00 | |
| | Puddingwife | | | | | | | |
| | Slippery Dick | | | | | | | |
| | Yellowhead Wrasse | 7 | 5 | 12 | 13 | 37 | 9,25 | 3,86 |
| OTHERS | Soapfish | 1 | | | | 1 | 1,00 | |
| | Trumpetfish | | | | | | | |
| TOTAL | | 295 | 304 | 340 | 323 | 1262 | 315,5 | |
| Atlantic Belt Transect: Invertebrates | | 0-20m | 25-45m | 50-70m | 75-100m | Total | Mean | St.Dev. |
| ANEMONE | Carpet Anemone | | | | | | | |
| | Corkscrew Anemone | | | | | | | |
| | Giant Anemone | 2 | 1 | 7 | 1 | 11 | 2,75 | 2,87 |
| | Knobby Anemone | 2 | 3 | 3 | | 8 | 2,67 | 0,58 |
| TUBE WORMS | Christmas tree Worm | 69 | 40 | 48 | 95 | 252 | 63,00 | 24,59 |
| | Ghost Feather Duster | 2 | | 1 | | 3 | 1,50 | 0,71 |
| | Magnificent Feather Duster | | | | | | | |
| | Social Feather Duster | | | | | | | |
| | Split Crown Feather Duster | 1 | 3 | 6 | 5 | 15 | 3,75 | 2,22 |
| | Star Horseshoe Worm | | | | | | | |
| | Variegated Feather Duster | 2 | 2 | | | 4 | 2,00 | |
| CRUSTACEANS | Hairy Clinging Crab | 1 | | | | 1 | 1,00 | |
| | Pederson Cleaner Shrimp | 4 | 5 | 2 | | 11 | 3,67 | 1,53 |
| | Red Snapping Cleaner Shrimp | | | 2 | | 2 | 2,00 | |
| MOLLUSKS | Amber Penshell | | | | | | | |
| TOTAL | | 83 | 54 | 69 | 101 | 307 | 76,75 | |

Note: Previous observations (jan and april 2002) of Beaded Anemone are in fact Knobby Anemone.

PORTOMAREA MARINE MONITORING
REEF BALL CORAL PLUG SUMMARY-1a, WEST SIDE OF BAY

Date : January 19, 2005
Observer: Marjo van den Bulck

| CN | B N/T | LP | Coral Species | Plug Orientation | | Number of Branches/ Cups | Height cm | Width cm | Coral Growth on Plug Base Y/N | Algae at Base Y/N | Algae at Top Y/N | Remarks |
|-----------------|-------------------------|----|-------------------------------------|------------------|--------------------------|-----------------------------|--------------|-------------|-------------------------------------|-------------------------|------------------------|---|
| | | | | position | height | | | | | | | |
| 10 R | 1 P | 1 | Leaf coral (lettuce) | NE | T | 7 | 4 | 5,5 | N | Y | Y | New coral growth on this ball |
| | | | Leaf coral (lettuce) | NW | M | GONE | | | | | | Fire coral on this ball |
| | | | Leaf coral (lettuce) | N | M | GONE | | | | | | |
| | | | Sea Rod, black | W | M | GONE | | | | | | |
| | | | Sea Rod, purple | SE | H | GONE | | | | | | |
| | | | Staghorn coral | W | T | GONE | | | | | | |
| 10 R | 2 LP | 2 | Sea Rod, black | S | M | 2 | 24 | 6 | N | N | N | New coral growth on this ball |
| | | | Star Coral, smooth | SW | H | | 5 | 7,5 | N | N | N | Fire coral on this ball |
| 10R | 3 P | 1 | Maze coral | NW | L | GONE | | | | | | New coral growth on this ball |
| | | | Sea Rod, purple | W | T | GONE | | | | | | |
| | | | Staghorn coral | NE | T | GONE | | | | | | Fire coral on this ball |
| | | | Star coral | NE | H | | 8 | 10 | N | N | N | |
| 10 R | 4 O | 0 | Finger coral | W | L | GONE | | | | | | New coral growth on this ball. |
| | | | Staghorn coral | | T | GONE | | | | | | Lumpy Overgrowing Sponge on this ball |
| 10R | 5 O | 1 | Sea Rod, purple | NE | H | GONE | | | | | | New coral growth on this ball |
| | | | Sea Rod, white | NW | M | GONE | | | | | | Algae on this ball |
| | | | Sea Rod, white | SW | H | GONE | | | | | | |
| | | | Staghorn coral | S | M | GONE | | | | | | |
| | | | Staghorn coral | | T | 5 | 9,5 | 8 | N | N | N | plus small piece stag, 4 growing tips, 2 by 2 |
| 10R | 6 LP | 0 | Sea Rod, purple | NE | M | GONE | | | | | | New growth on this ball. |
| | | | Sea Rod, purple | SE | M | GONE | | | | | | Fire coral on this ball |
| | | | Sea Rod, white | W | H | GONE | | | | | | Algae on this ball |
| | | | Sea Rod, white | NW | M | GONE | | | | | | |
| | | | Staghorn coral | | T | GONE | | | | | | |
| 10R | 7 O | 0 | No Plugs on this ball | STAGHORN | T | 12 | 18 | 19 | N | Y | N | New growth on this ball. |
| 10R | 8 P | 3 | Leaf coral (lettuce) | NE | H | GONE | | | | | | New coral growth on this ball |
| | | | Sea Rod, black | SE | H | GONE | | | | | | Fire coral on this ball |
| | | | Sea Rod, black | SE | M | 12 | 20 | 18 | Y | N | N | Position now SH |
| | | | Sea Rod, black | S | M | 6 | 16 | 6 | Y | N | N | Position now SWM, pointed downwards |
| | | | Sea Rod, white | E | H | over 150 | 23 | 46 | Y | N | N | Position now SEH |
| | | | Staghorn coral | S | T | GONE | | | | | | |
| | | | Staghorn coral | SW | T | GONE | | | | | | |
| | | | Staghorn coral | W | T | GONE | | | | | | P8 is broken in 3 parts after Ivan 9/2004 |
| Subtotal | | | 8 Number of live coral plugs | | | | | | | | | |
| Codes: | | | | | | | | | | | | |
| CN | Cluster Number | U | Ultra Ball | T | Top of the ball | | | | | | | |
| B N/T | Ball number/type | P | Pallet Ball | H | Upper third of the ball | | | | | | | |
| LP | No. of live coral plugs | B | Bay Ball | M | Middle third of the ball | | | | | | | |
| | | LP | LoPro Ball | L | Lower third of the ball | | | | | | | |
| | | O | Oyster Ball | | | | | | | | | |

PORTOMAREA MARINE MONITORING

REEF BALL CORAL PLUG SUMMARY-1b

| CN | B N/T | LP | Coral Species | Plug Orientation | | Number of Branches/ Cups | Height cm | Width cm | Coral Growth on Plug Base Y/N | Algae at Base Y/N | Algae at Top Y/N | Remarks |
|-----------------|-------|----|--------------------------------------|------------------|-------------|-----------------------------|--------------|-------------|-------------------------------------|-------------------------|------------------------|--|
| | | | | position | height | | | | | | | |
| 10R | 9 P | 0 | Finger coral | N | M-on oyster | GONE | | | | | | New coral growth on this ball |
| | | | Finger coral | NW | M-on oyster | GONE | | | | | | Fire coral on this ball |
| | | | Finger coral | NW | M | GONE | | | | | | |
| | | | Flower coral | NE | T | GONE | | | | | | |
| | | | Leaf coral (Lettuce) | NE | M | GONE | | | | | | |
| | | | Sea Rod, Black | NE | M | GONE | | | | | | |
| 10 R | 10 O | 0 | Finger coral | NE | M | GONE | | | | | | No new coral growth. |
| 10 R | 11 LP | 0 | Staghorn | N | H | GONE | IVAN | sep-04 | | | | No new coral growth on this ball |
| 10 R | 12 LP | 1 | Brain coral | NW | T | | 6 | 5 | N | Y | Y | Dying? Algae seems to overgrow brain |
| | | | Flower coral | NE | H | GONE | | | | | | No new coral growth on this ball. |
| | | | Flower coral | SE | L | GONE | | | | | | |
| | | | Mustard hill coral | S | T | GONE | | | | | | |
| 10 R | 13 B | 0 | Leaf coral (Lettuce) | N | M | GONE | | | | | | New coral growth on this ball |
| | | | Sea Rod, Black | NW | H | GONE | | | | | | Fire coral on this ball |
| | | | Sea Rod, Black | NW | M | GONE | | | | | | Fire coral on plug base |
| | | | Staghorn | SW | H | GONE | | | | | | Lying against Lo Pro 15 |
| 10 R | 14 U | 7 | Brain coral | N | L | | 5 | 8 | N | N | N | New coral growth on this ball |
| | | | Finger coral | N | M | On the sa | Branches | | | | | Fire coral on this ball |
| | | | Leaf coral (Lettuce) | E | M | 5 | 6 | 7 | Y | Y | N | |
| | | | Leaf coral (Lettuce) | NW | L | 4 | 4,5 | 6 | Y | Y | N | |
| | | | Leaf coral (Lettuce) | NE | M | 7 | 5 | 6,5 | Y | Y | N | |
| | | | Leaf coral (Lettuce) | SE | M | 1 | 4 | 7,5 | Y | N | N | 12o'clock |
| | | | Leaf coral (Lettuce) | SE | ML | GONE | | | | | | Dying? Position SEML in stead of SSEML |
| | | | Leaf coral (Lettuce) | SSE | ML | 3 | 4,5 | 5,5 | Y | N | N | 5 o'clock |
| | | | Leaf coral (Lettuce) | SSE | L | OVERGROWN BY FIRE CORAL | | | | | | 8 o'clock |
| | | | Leaf coral (Lettuce) | SE | M | GONE | | | | | | |
| | | | Leaf coral (Lettuce) | SW | ML | GONE | | | | | | Overgrown by Lumpy Overgrowing Sponge |
| | | | Leaf coral (Lettuce) | SW | M | GONE | | | | | | |
| | | | Pencil coral | NE | M | GONE | | | | | | |
| | | | Staghorn | S | H | GONE | | | | | | |
| | | | Staghorn | N | H | GONE | | | | | | |
| 10R | 15 LP | 2 | Brain coral | SW | T | - | 5 | 8 | N | N | N | New coral growth on this ball |
| | | | Brain coral | SE | H | - | 4,5 | 6 | N | Y | N | |
| 10R | 16 B | 1 | Brain coral | NW | H | - | 3 | 9 | Y | N | N | New coral growth on this ball |
| | | | Flower coral | NE | M | GONE | | | | | | Fire coral on this ball |
| 10R | 17 P | 0 | Leaf coral (lettuce) | E | M | GONE | | | | | | New coral growth on this ball |
| | | | Mustard Hill coral | NW | H | GONE | | | | | | |
| | | | Pencil coral | NW | T | GONE | | | | | | |
| 10R | 18 LP | 0 | Mustard hill coral | NE | H | GONE | | | | | | No new coral growth on this ball |
| | | | Sea Rod, black | W | T | GONE | | | | | | Oyster on sand now after Ivan 9/2004 |
| | | | Sea Rod, purple | NW | M | GONE | | | | | | Algae on this ball |
| Subtotal | | | 11 Number of live coral plugs | | | | | | | | | |

PORTOMAREA MARINE MONITORING
REEF BALL CORAL PLUG SUMMARY-1c

| CN | B N/T | LP | Coral Species | Plug Orientation | | Number of Branches/ Cups | Height cm | Width cm | Coral Growth on Plug Base Y/N | Algae at Base Y/N | Algae at Top Y/N | Remarks |
|-----------------|-------|--------------------------------------|----------------------|------------------|--------|-----------------------------|--------------|-------------|-------------------------------------|-------------------------|------------------------|---|
| | | | | position | height | | | | | | | |
| 10R | 19 O | 0 | | | | | | | | | | No new growth, Algae |
| 10R | 20 O | 0 | | | | | | | | | | No new growth, Algae |
| 10R | 21 O | 0 | | | | | | | | | | No new growth, Algae |
| 10R | 22 LP | 0 | | | | | | | | | | No new growth, Algae |
| 10R | 23 LP | 2 | Leaf coral (lettuce) | SE | H | GONE | | | | | | New coral growth on this ball Fire coral on this ball This baal moved, Ivan 9/2004 |
| | | | Mustard hill | N | H | GONE | | | | | | |
| | | | Sea rod, white | NW | H | 44 | 17 | 15 | Y | Y | N | |
| | | | Sea rod, white | NW | M | 39 | 18 | 16 | Y | Y | N | |
| | | | Finger coral | SW | H | GONE | | | | | | |
| 10R | 24 P | 1 | Brain coral | NW | T | GONE | | | | | | New coral growth on this ball Marine putty replugged Fire coral on this ball Found Broken off, placed on top of P 24 |
| | | | Maze coral | SE | ML | - | 3 | 8 | N | N | N | |
| | | | Mustard hill | NE | M | DEAD | | | | | | |
| | | | Sea rod, black | NW | T | GONE | | | | | | |
| | | | Sea rod, black | SW | T | GONE | | | | | | |
| | | | Staghorn coral | N | T | GONE | | | | | | |
| | | | Staghorn coral | | T | GONE | | | | | | |
| 10R | 25 B | 1 | Pencil coral | NW | M | 6 Tips | 0,5 | 0,5 | N | Y | N | 6 Tips 0,5 by 0,5. Rest (60%) dead New coral growth. Fire coral on this ball |
| 10R | 26 LP | 1 | Maze coral | W | T | - | 7 | 9,5 | N | N | N | No new coral growth on this ball. |
| 10R | 27 B | 1 | Sea Rod, black | SW | T | GONE | | | | | | New coral growth on this ball Fire coral on this ball |
| | | | Sea Rod, white | W | T | 111 | 25 | 27 | Y | N | N | |
| 10R | 28 P | 1 | Finger coral | SW | H | GONE | | | | | | New coral growth on this ball Fire coral on this ball Dying? Overgrown by Encrusting Algae |
| | | | Finger coral | NE | M | GONE | | | | | | |
| | | | Flower coral | SE | H | GONE | | | | | | |
| | | | Leaf coral (lettuce) | SW | M | 2 | 5 | 8 | N | Y | Y | |
| | | | Maze coral | W | M | GONE | | | | | | |
| | | | Sea Rod, black | SE | T | GONE | | | | | | |
| | | | Staghorn coral | W | H | GONE | | | | | | |
| 10R | 29 O | 0 | Mustard hill | W | M | GONE | | | | | | No new coral growth on this ball. Algae |
| 10R | 30 LP | 0 | Staghorn part in thi | | | | | | | | | Algae on this ball |
| 10R | 31 O | 0 | | | | | | | | | | |
| Subtotal | | 7 | | | | | | | | | | |
| Total | | 26 Number of live coral plugs | | | | | | | | | | |

PORTOMAREA MARINE MONITORING

REEF BALL CORAL PLUG SUMMARY - 2

EAST SIDE OF BAY

Date : January 14, 2004
 Observer: Marjo van den Bulck

| CN | B N/T | LP | Coral Species | Plug Orientation | | Number of Branches/ Cups | Height cm | Width cm | Coral Growth on Plug Base Y/N | Algae at Base Y/N | Algae at Top Y/N | Remarks |
|--------------|-------|----|-------------------------------------|------------------|--------|-----------------------------|--------------|-------------|-------------------------------------|-------------------------|------------------------|--|
| | | | | direction | height | | | | | | | |
| 12L | 1P | 4 | Leaf coral (lettuce) | NW | T | 4 | 11 | 14 | N | N | N | New coral growth on this ball. |
| | | | Pencil coral | NE | T | 37 | 5,5 | 8 | N | Y | N | 37 Growing tips, xmas tree worm grows in |
| | | | Pencil coral | N | H | 4 | 0,5 | 4 | N | Y | Y | 4 growing tips left |
| | | | Solitary Disk coral | N | L | DEAD | | | | | | |
| | | | Staghorn coral | N | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | S | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | SW | T | 71 | 29 | 52 | N | Y | Y | Algae on top of 5 branches |
| | | | Staghorn coral | NW | H | GONE | | | | | | |
| | | | Staghorn coral | SE | H | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| 12L | 2P | 3 | Pencil coral | NE | T | 5 | 0,5 | 1 | N | Y | N | 5 growing tips |
| | | | Pencil coral | SW | T | DEAD | | | | | | New coral growth on this ball |
| | | | Pencil coral | SE | H | 17 | 3 | 5 | N | N | N | Xmas tree worm in this pencil coral |
| | | | Staghorn coral | NE | T | GONE | | | | | | |
| | | | Staghorn coral | W | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | NW | T | 64 | 33 | 38 | Y | N | N | |
| | | | Staghorn coral | NE | H | GONE | | | | | | |
| | | | Staghorn coral | SE | H | GONE | | | | | | |
| 12L | 3B | 0 | Finger coral | NW | T | GONE | | | | | | New coral growth on this ball. |
| | | | Staghorn coral | SW | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | NE | H | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| 12L | 4B | 0 | Staghorn coral | NE | H | GONE | | | | | | New coral growth on this ball. |
| | | | Staghorn coral | SW | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | NW | H | GONE | | | | | | |
| 12L | 5P | 1 | Finger coral | NE | T | 1 | 0,5 | 3 | N | N | Y | Small living part |
| | | | Finger coral | NW | L | GONE | | | | | | |
| | | | Staghorn coral | SE | T | GONE | | | | | | New coral growth on this ball. |
| | | | Staghorn coral | SW | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | NW | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | N | H | GONE | | | | | | |
| | | | Staghorn coral | SE | H | GONE | | | | | | |
| | | | Staghorn coral | NE | H | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| | | | Staghorn coral | SW | H | GONE | | | | | | |
| | | | Staghorn coral | WSW | H | GONE | | | | | | |
| | | | Staghorn coral | NE | T | GONE | | | | | | Ivan 9/2004. In between Reef Balls |
| Total | | | 8 Number of live coral plugs | | | | | | | | | |

PORTOMAREA MARINE MONITORING

REEF BALL CORAL PLUG SUMMARY - 3

EAST SIDE OF BAY

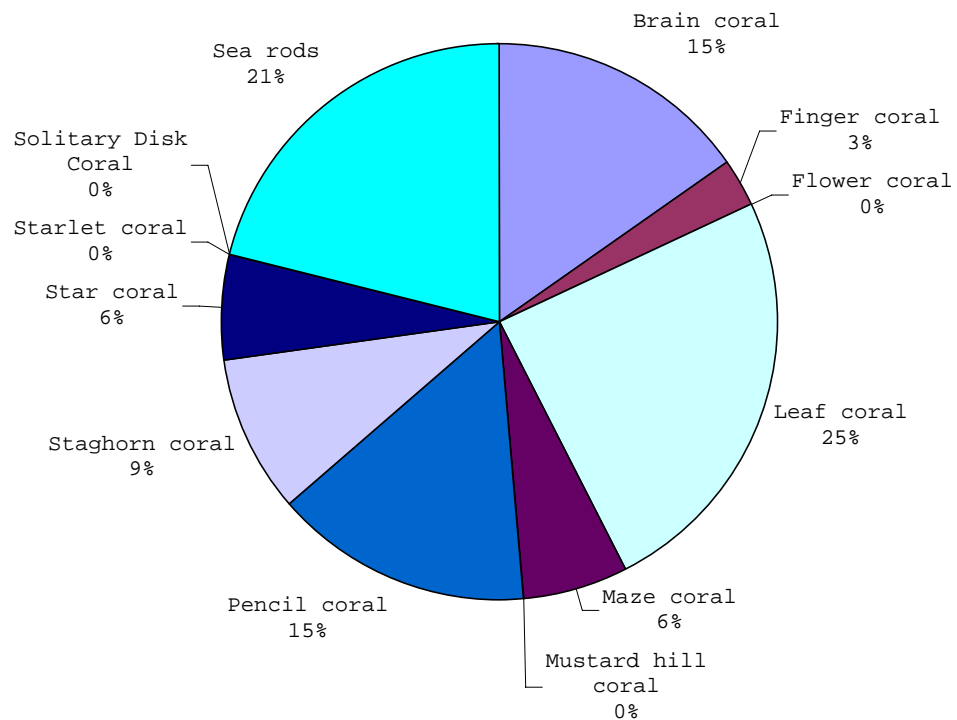
Date : January 14, 2005
 Observer: Marjo van den Bulck

| CN | B N/T | LP | Coral Species | Plug Orientation | | Number of Branches/ Cups | Height cm | Width cm | Coral Growth on Plug Base Y/N | Algae at Base Y/N | Algae at Top Y/N | Remarks |
|--------------|-------|----|--------------------------------------|------------------|--------|-----------------------------|--------------|-------------|-------------------------------------|-------------------------|------------------------|--|
| | | | | direction | height | | | | | | | |
| 18L | 1LP | 2 | Sea Rod, black | N | T | 12 | 20 | 26 | Y | N | N | New coral growth on this ball. |
| | | | Pencil coral | SE | M | 26 | 5 | 6 | N | N | N | |
| 18L | 2B | 2 | Flower coral | W | T | 24 | 5,5 | 9 | N | N | N | New coral growth on this ball. 5 branches 3,5 by 1 cm |
| | | | Finger coral | SE | M | 7 | 2 | 9 | N | Y | N | |
| 18L | 3B | 2 | Sea Rod, black | SW | T | 5 | 9 | 10 | N | N | N | Lumpy overgrowing Sponge at base of plug New coral growth on this ball. |
| | | | Leaf coral (Lettuce | W | H | 3 | 0,5 | 2 | N | Y | Y | |
| | | | Pencil coral | NE | H | GONE | | | | | | |
| 18L | 4LP | 2 | Sea Rod, black | NE | T | 11 | 15 | 16 | N | Y | N | New coral growth on this ball. |
| | | | Pencil coral | SE | M | 15 | 2,5 | 5 | Y | N | N | |
| 18L | 5B | 3 | Star coral | SE | T | | 2,5 | 6 | Y | N | N | New coral growth on this ball. |
| | | | Sea Rod, white | SW | H | 180 | 32 | 32 | Y | N | N | |
| | | | Leaf Coral (Lettuce | NW | H | 5 | 5 | 5,5 | Y | N | N | |
| 18L | 6P | 2 | Leaf coral (Lettuce | E | T | 3 | 3 | 5 | N | N | N | New coral growth on this ball. |
| | | | Star coral | SW | T | | 4,5 | 6,5 | Y | N | N | |
| 18L | 7P | 2 | Maze coral | E | T | | 8 | 12 | N | N | N | New coral growth on this ball. |
| | | | Star coral | W | T | | 4,5 | 7,5 | Y | N | N | |
| | | | Finger coral | NW | T | GONE | | | | | | |
| 18L | 8LP | 0 | | | | | | | | | | |
| 18L | 9B | 1 | Star coral | NE | H | - | 2,5 | 7 | Y | N | N | New coral growth on this ball. |
| 18L | 10B | 1 | Finger coral | N | T | GONE | | | | | | New coral growth on this ball. |
| | | | Pencil coral | E | H | 7 | 3,5 | 4 | Y | N | N | |
| | | | Leaf coral (Lettuce | SW | H | GONE | | | | | | |
| 18L | 11LP | 0 | | | | | | | | | | |
| 18L | 120 | 0 | | | | | | | | | | |
| Total | | | 17 Number of live coral plugs | | | | | | | | | |

**PORTOMAREA MARINE MONITORING
REEF BALL CORAL PLUG SPECIES SUMMARY**

**SPECIES DISTRIBUTION OF CORAL PLUGS ON REEF BALLS AS OF JANUARY 2005
CLUSTER 10 WEST/RIGHT, CLUSTER 12 EAST/LEFT**

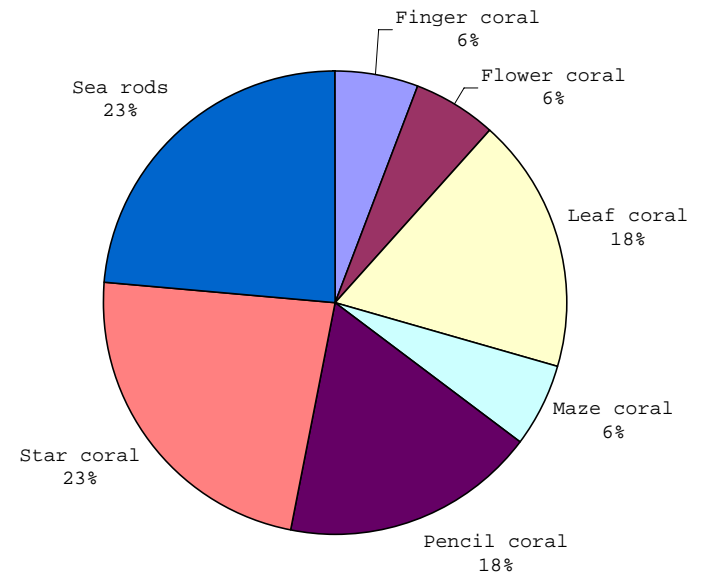
| Coral Species | Number of Live Plugs | % of Total |
|----------------------|-----------------------------|-------------------|
| Brain coral | 5 | 15,15 |
| Finger coral | 1 | 3,03 |
| Flower coral | 0 | 0,00 |
| Leaf coral | 8 | 24,24 |
| Maze coral | 2 | 6,06 |
| Mustard hill coral | 0 | 0,00 |
| Pencil coral | 5 | 15,15 |
| Staghorn coral | 3 | 9,09 |
| Star coral | 2 | 6,06 |
| Starlet coral | 0 | 0,00 |
| Solitary Disk Coral | 0 | 0,00 |
| Sea rods | 7 | 21,21 |
| black | 3 | |
| purple | | |
| white | 4 | |
| TOTAL | 33 | 100 |



PORTOMAREA MARINE MONITORING
REEF BALL CORAL PLUG SPECIES SUMMARY

SPECIES DISTRIBUTION OF CORAL PLUGS ON REEF BALLS AS OF JANUARY 2005
CLUSTER 18 EAST/LEFT

| Coral Species | Number of Live Plugs | | % of Total |
|---------------|----------------------|-----------|------------|
| Finger coral | | 1 | 5,88 |
| Flower coral | | 1 | 5,88 |
| Leaf coral | | 3 | 17,65 |
| Maze coral | | 1 | 5,88 |
| Pencil coral | | 3 | 17,65 |
| Star coral | | 4 | 23,53 |
| Sea rods | | 4 | 23,53 |
| | black | 3 | |
| | white | 1 | |
| TOTAL | | 17 | 100 |

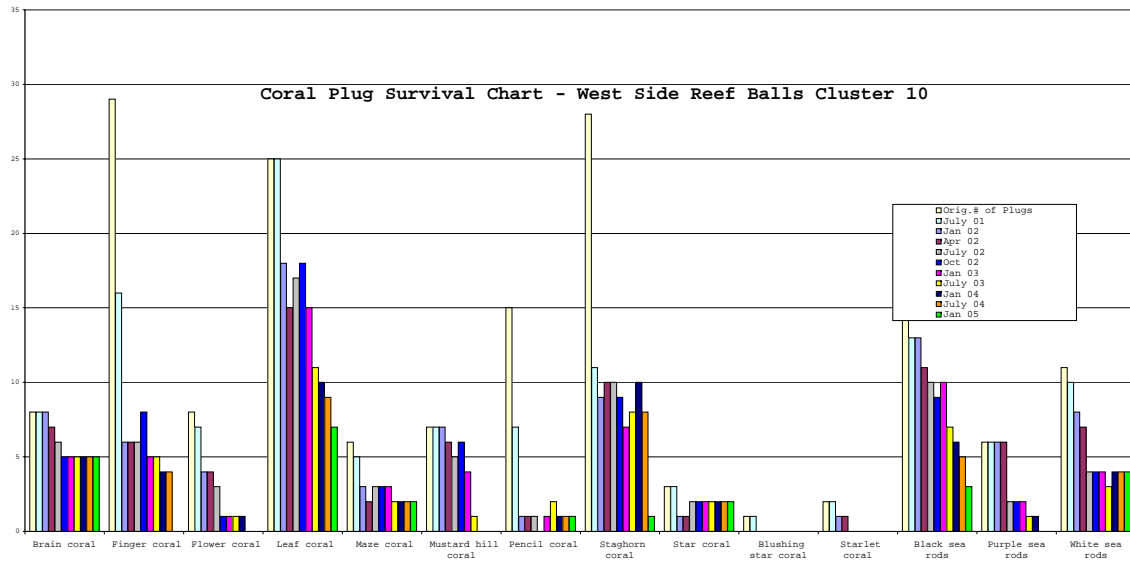


Coral Plug Survival Summary
West Side Reef Balls, Cluster 10

| July 2001 Monitoring (per M.Kuennen) | | | | January 2002 Monitoring | | April 2002 Monitoring | | July 2002 Monitoring | | October 2002 Monitoring | | January 2003 Monitoring | | July 2003 Monitoring | | January 2004 Monitoring | | July 2004 Monitoring | |
|--------------------------------------|-----------------|----------------------|-------------------|-------------------------|--------------------|-----------------------|---------------------|----------------------|---------------------|-------------------------|---------------------|-------------------------|---------------------|----------------------|---------------------|-------------------------|---------------------|----------------------|---------------------|
| Coral Species | Orig.# of Plugs | Number of Live Plugs | Mortality 90 days | Number of Live Plugs | Mortality 9 months | Number of Live Plugs | Mortality 12 months | Number of Live Plugs | Mortality 15 months | Number of Live Plugs | Mortality 18 months | Number of Live Plugs | Mortality 21 months | Number of Live Plugs | Mortality 27 months | Number of Live Plugs | Mortality 33 months | Number of Live Plugs | Mortality 39 months |
| Brain coral* | 8 | 8 | 0% | 8 | 0% | 7 | 13% | 6 | 25% | 5 | 38% | 5 | 38% | 5 | 38% | 5 | 38% | 5 | 38% |
| Finger coral | 29 | 16 | 45% | 6 | 79% | 6 | 79% | 6 | 79% | 8 | 72% | 5 | 83% | 5 | 83% | 4 | 86% | 4 | 86% |
| Flower coral | 8 | 7 | 13% | 4 | 50% | 4 | 50% | 3 | 63% | 1 | 88% | 1 | 88% | 1 | 88% | 1 | 88% | 0 | 100% |
| Leaf coral | 25 | 25 | 0% | 18 | 28% | 15 | 40% | 17 | 32% | 18 | 28% | 15 | 40% | 11 | 56% | 10 | 60% | 9 | 64% |
| Maze coral | 6 | 5 | 17% | 3 | 50% | 2 | 67% | 3 | 50% | 3 | 50% | 3 | 50% | 2 | 67% | 2 | 67% | 2 | 67% |
| Mustard hill coral* | 7 | 7 | 0% | 7 | 0% | 6 | 14% | 5 | 29% | 6 | 14% | 4 | 43% | 1 | 86% | 0 | 100% | 0 | 100% |
| Pencil coral | 15 | 7 | 53% | 1 | 93% | 1 | 93% | 1 | 93% | 0 | 100% | 1 | 93% | 2 | 87% | 1 | 93% | 1 | 93% |
| Staghorn coral | 28 | 11 | 61% | 9 | 68% | 10 | 64% | 10 | 64% | 9 | 68% | 7 | 75% | 8 | 71% | 10 | 64% | 8 | 71% |
| Star coral | 3 | 3 | 0% | 1 | 67% | 1 | 67% | 2 | 33% | 2 | 33% | 2 | 33% | 2 | 33% | 2 | 33% | 2 | 33% |
| Blushing star coral | 1 | 1 | 0% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% |
| Starlet coral | 2 | 2 | 0% | 1 | 50% | 1 | 50% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% |
| Sea rods black | 15 | 13 | 13% | 13 | 13% | 11 | 27% | 10 | 33% | 9 | 40% | 10 | 33% | 7 | 53% | 6 | 60% | 5 | 67% |
| Sea rods purple | 6 | 6 | 0% | 6 | 0% | 6 | 0% | 2 | 67% | 2 | 67% | 2 | 67% | 1 | 83% | 1 | 83% | 0 | 100% |
| Sea rods white | 11 | 10 | 9% | 8 | 27% | 7 | 36% | 4 | 64% | 4 | 64% | 4 | 64% | 3 | 73% | 4 | 64% | 4 | 64% |
| TOTALS | 164 | 121 | 26% | 85 | 48% | 77 | 53% | 69 | 58% | 67 | 59% | 59 | 64% | 48 | 71% | 46 | 72% | 40 | 76% |

* Number of original plugs adjusted to correspond to Jan/02 survey

| Coral Species | January 2005 Monitoring | | July 2005 Monitoring | |
|---------------------|-------------------------|---------------------|----------------------|---------------------|
| | Number of Live Plugs | Mortality 45 months | Number of Live Plugs | Mortality 51 months |
| Brain coral* | 5 | 38% | | |
| Finger coral | 0 | 100% | | |
| Flower coral | 0 | 100% | | |
| Leaf coral | 7 | 72% | | |
| Maze coral | 2 | 67% | | |
| Mustard hill coral* | 0 | 100% | | |
| Pencil coral | 1 | 93% | | |
| Staghorn coral | 1 | 96% | | |
| Star coral | 2 | 33% | | |
| Blushing star coral | 0 | 100% | | |
| Starlet coral | 0 | 100% | | |
| Sea rods black | 3 | 80% | | |
| Sea rods purple | 0 | 100% | | |
| Sea rods white | 4 | 64% | | |
| TOTALS | 25 | 85% | | |

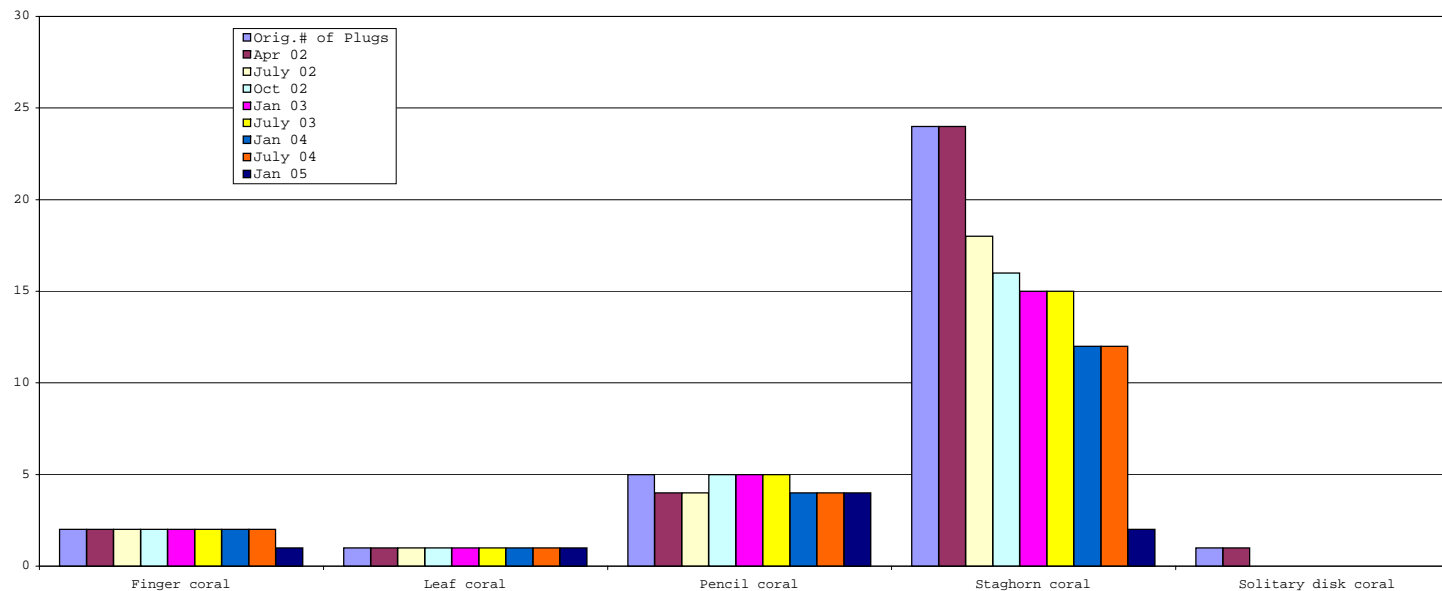


PORTOMAREA MARINE MONITORING
Coral Plug Survival Summary
East Side Reef Balls, Cluster 12

| | | April 2002 Monitoring | | July 2002 Monitoring | | October 2002 Monitoring | | January 2003 Monitoring | | July 2003 Monitoring | |
|---------------------|-----------------|-----------------------|-------------------|----------------------|----------------------|-------------------------|----------------------|-------------------------|----------------------|----------------------|-----------------------|
| Coral Species | Orig.# of Plugs | Number of Live Plugs | Mortality 15 days | Number of Live Plugs | Mortality 3.5 months | Number of Live Plugs | Mortality 6.5 months | Number of Live Plugs | Mortality 9.5 months | Number of Live Plugs | Mortality 15.5 months |
| Finger coral | 2 | 2 | 0% | 2 | 0% | 2 | 0% | 2 | 0% | 2 | 0% |
| Leaf coral | 1 | 1 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 1 | 0% |
| Pencil coral | 5 | 4 | 20% | 4 | 20% | 5 | 0% | 5 | 0% | 5 | 0% |
| Staghorn coral | 24 | 24 | 0% | 18 | 25% | 16 | 33% | 15 | 38% | 15 | 38% |
| Solitary disk coral | 1 | 1 | 0% | 0 | 100% | 0 | 100% | 0 | 100% | 0 | 100% |
| | | Mean | | Mean | | Mean | | Mean | | Mean | |
| TOTALS | 33 | 32 | 3% | 25 | 24% | 24 | 27% | 23 | 30% | 23 | 30% |

| | | January 2004 Monitoring | | July 2004 Monitoring | | January 2005 Monitoring | | July 2005 Monitoring | |
|---------------------|-----------------|-------------------------|-----------------------|----------------------|-----------------------|-------------------------|-----------------------|----------------------|-----------------------|
| Coral Species | Orig.# of Plugs | Number of Live Plugs | Mortality 21,5 months | Number of Live Plugs | Mortality 27,5 months | Number of Live Plugs | Mortality 33,5 months | Number of Live Plugs | Mortality 39,5 months |
| Finger coral | 2 | 2 | 0% | 2 | 0% | 1 | 50% | | 100% |
| Leaf coral | 1 | 1 | 0% | 1 | 0% | 1 | 0% | | 100% |
| Pencil coral | 5 | 4 | 20% | 4 | 20% | 4 | 20% | | 100% |
| Staghorn coral | 24 | 12 | 50% | 12 | 50% | 2 | 92% | | 100% |
| Solitary disk coral | 1 | 0 | 100% | 0 | 100% | 0 | 100% | | 100% |
| | | Mean | | Mean | | Mean | | Mean | |
| TOTALS | 33 | 19 | 42% | 19 | 42% | 8 | 76% | 0 | 100% |

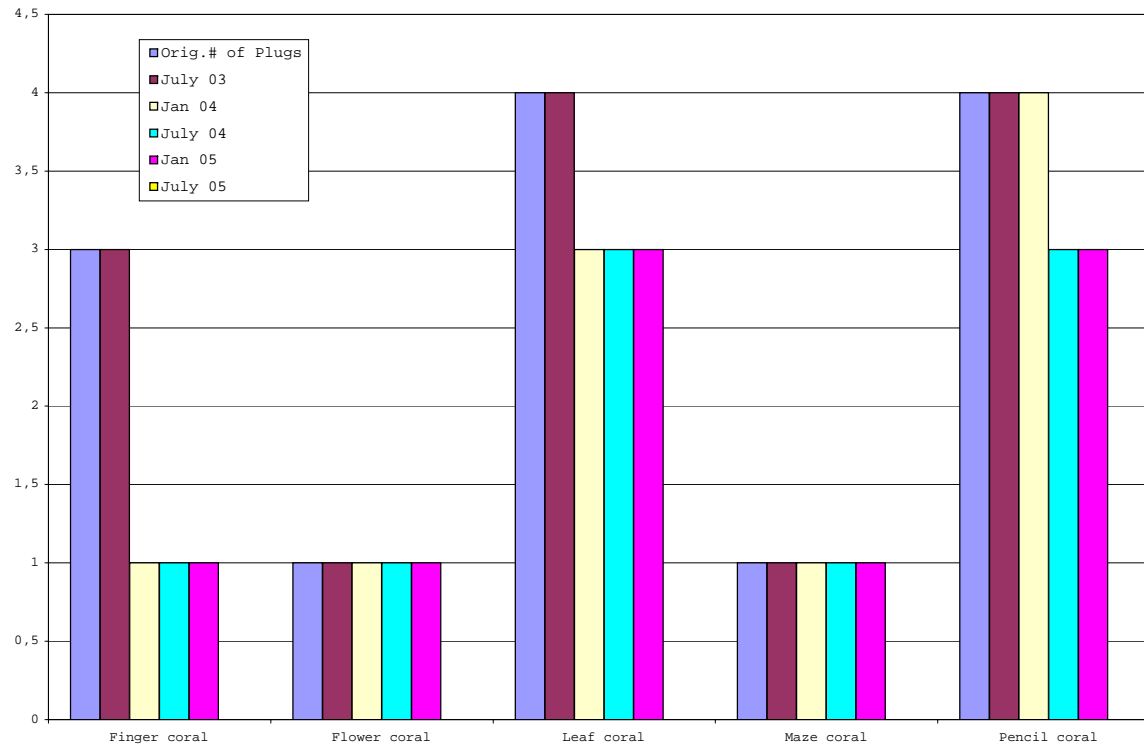
Coral Plug Survival Chart East Side Reef Balls Cluster 12



PORTOMAREA MARINE MONITORING
Coral Plug Survival Summary
East Side Reef Balls, Cluster 18

| Coral Species | Orig.# of Plugs | July 2003 Monitoring | | January 2004 Monitoring | | July 2004 Monitoring | | January 2005 Monitoring | | July 2005 Monitoring | |
|---------------|-----------------|----------------------|--------------------|-------------------------|--------------------|----------------------|---------------------|-------------------------|---------------------|----------------------|---------------------|
| | | Number of Live Plugs | Mortality 2 months | Number of Live Plugs | Mortality 8 months | Number of Live Plugs | Mortality 14 months | Number of Live Plugs | Mortality 20 months | Number of Live Plugs | Mortality 26 months |
| Finger coral | 3 | 3 | 0% | 1 | 67% | 1 | 67% | 1 | 67% | | |
| Flower coral | 1 | 1 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | | |
| Leaf coral | 4 | 4 | 0% | 3 | 25% | 3 | 25% | 3 | 25% | | |
| Maze coral | 1 | 1 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | | |
| Pencil coral | 4 | 4 | 0% | 4 | 0% | 3 | 25% | 3 | 25% | | |
| Star coral | 4 | 4 | 0% | 4 | 0% | 4 | 0% | 4 | 0% | | |
| Sea rod black | 3 | 3 | 0% | 3 | 0% | 3 | 0% | 3 | 0% | | |
| Sea rod white | 1 | 1 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| TOTALS | 21 | 21 | Mean 0% | 18 | Mean 14% | 17 | Mean 19% | 17 | Mean 19% | | Mean |

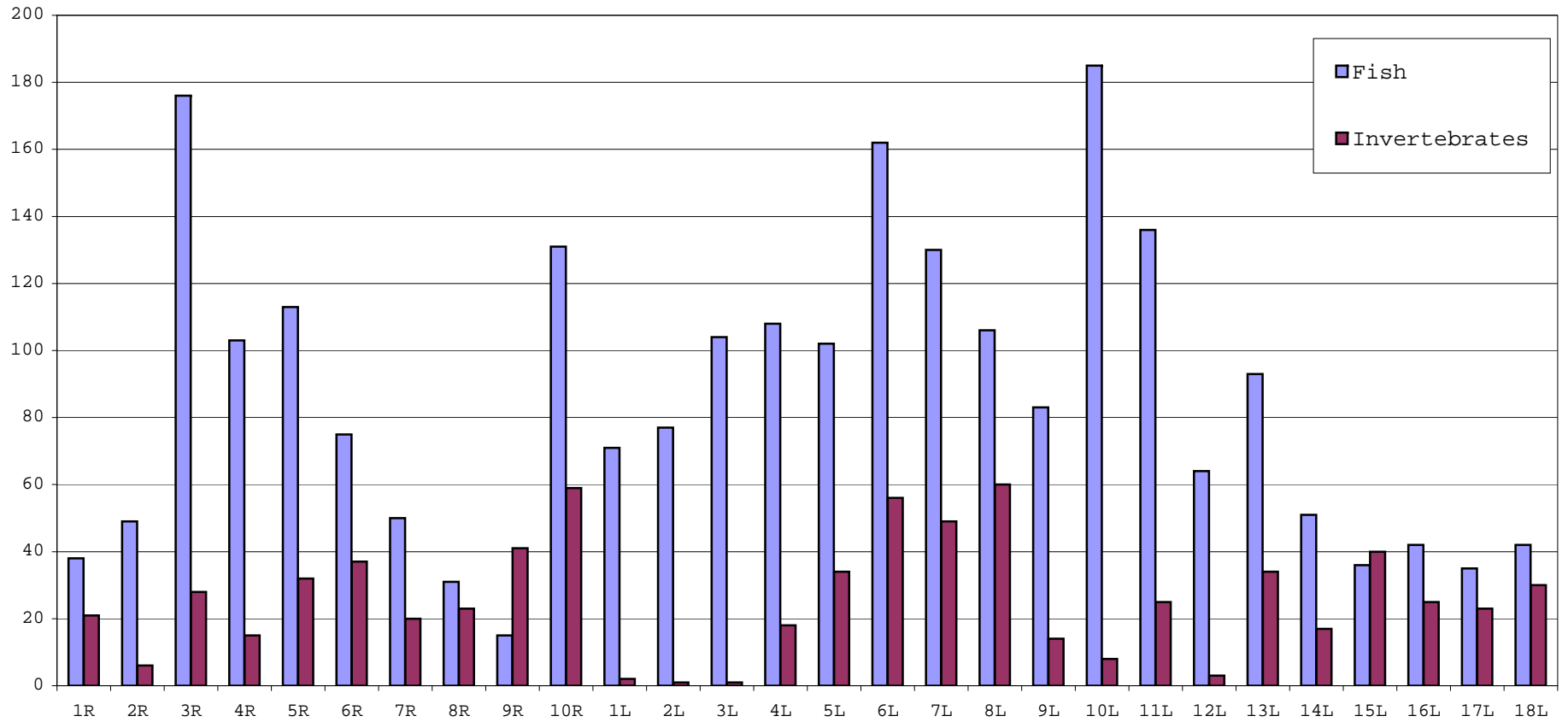
Coral Plug Survival Chart East Side Reef Balls Cluster 18



**PORTOMAREA MARINE MONITORING
REEF BALL CLUSTERS
FISH AND INVERTEBRATE POPULATION SUMMARY**

| Cluster No. | No.of Fish | % of Total | No.of Invertebrates | % of Total |
|--------------------|-------------------|-------------------|----------------------------|-------------------|
| 1R | 38 | 1,58 | 21 | 0,83 |
| 2R | 49 | 2,03 | 6 | 0,83 |
| 3R | 176 | 7,31 | 28 | 3,88 |
| 4R | 103 | 4,28 | 15 | 2,08 |
| 5R | 113 | 4,69 | 32 | 4,43 |
| 6R | 75 | 3,11 | 37 | 5,12 |
| 7R | 50 | 2,08 | 20 | 2,77 |
| 8R | 31 | 1,29 | 23 | 3,19 |
| 9R | 15 | 0,62 | 41 | 5,68 |
| 10R | 131 | 5,44 | 59 | 8,17 |
| 1L | 71 | 2,95 | 2 | 0,28 |
| 2L | 77 | 3,20 | 1 | 0,14 |
| 3L | 104 | 4,32 | 1 | 0,14 |
| 4L | 108 | 4,49 | 18 | 2,49 |
| 5L | 102 | 4,24 | 34 | 4,71 |
| 6L | 162 | 6,73 | 56 | 7,76 |
| 7L | 130 | 5,40 | 49 | 6,79 |
| 8L | 106 | 4,40 | 60 | 8,31 |
| 9L | 83 | 3,45 | 14 | 1,94 |
| 10L | 185 | 7,68 | 8 | 1,11 |
| 11L | 136 | 5,65 | 25 | 3,46 |
| 12L | 64 | 2,66 | 3 | 0,42 |
| 13L | 93 | 3,86 | 34 | 4,71 |
| 14L | 51 | 2,12 | 17 | 2,35 |
| 15L | 36 | 1,50 | 40 | 5,54 |
| 16L | 42 | 1,74 | 25 | 3,46 |
| 17L | 35 | 1,45 | 23 | 3,19 |
| 18L | 42 | 1,74 | 30 | 4,16 |
| TOTAL | 2408 | 100 | 722 | 97,92 |

PORTOMAREA MARINE MONITORING
 FISH AND INVERTEBRATE POPULATION SUMMARY CHART
 REEF BALL CLUSTERS



PORTOMAREA MARINE MONITORING

FISH and INVERTEBRATE SURVEY - REEF BALL CLUSTERS WEST

DATE: January 12, 2005

TIME: 8.00 a.m.

Data collected and recorded by: Marjo van den Bulck

| CLUSTER NUMBER | 1R | 2R | 3R | 4R | 5R | 6R | 7R | 8R | 9R | 10R | Total | Mean | St.Dev. | |
|----------------------|--------------------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|-----------|------------|------------|-------------|-------|
| DEPTH | 1.2m | 1.4m | 1.2m | 1.6m | 1.8m | 2.7m | 2.9m | 3.6m | 3.8m | 3.8m | | | | |
| FISH | | | | | | | | | | | | | | |
| ANGELFISH | Queen Angelfish | | | | | | | 1 | | | 1 | 1,00 | | |
| BASSLET | Fairy Basslet | | | | | | | | | | | | | |
| BLENNY | Redlip Blenny | 2 | | 6 | | 3 | | | 1 | | 12 | 3,00 | 2,16 | |
| | Saddled Blenny | | | 2 | | 1 | | | | | 3 | 1,50 | 0,71 | |
| BOXFISH | Smooth Trunkfish | 1 | | | | 1 | | | | | 2 | 1,00 | | |
| BUTTERFLYFISH | Banded Butterflyfish | | | | | | | | | 2 | 2 | 2,00 | | |
| | Foureye Butterflyfish | | | | 2 | | | 1 | | 1 | 4 | 1,33 | 0,58 | |
| CARDINALFISH | Belted Cardinalfish | 1 | | | | | | | | | 1 | 1,00 | | |
| CHROMIS | Blue Chromis | | | | | | | | | | | | | |
| | Brown Chromis | 6 | 8 | 30 | 3 | 50 | 22 | 23 | 3 | | 50 | 195 | 21,67 | 18,73 |
| DAMSELFISH | Beaugregory | | | 2 | 1 | 5 | 6 | | 3 | 1 | 7 | 25 | 3,57 | 2,44 |
| | Bicolor Damselfish | 5 | 6 | 7 | 8 | 8 | 12 | | 9 | 2 | 3 | 60 | 6,67 | 3,08 |
| | Cocoa Damselfish | | | 1 | 1 | | | | | | | 2 | 1,00 | |
| | Dusky Damselfish | | | | | 5 | 4 | 4 | | 2 | 11 | 26 | 5,20 | 3,42 |
| | Sergeant Major | | 18 | | | 1 | 5 | 1 | 1 | 1 | 14 | 41 | 5,86 | 7,17 |
| | Threespot Damselfish | 1 | | 3 | 2 | | | | | | | 6 | 2,00 | 1,00 |
| | Yellowtail Damselfish | | 1 | | 1 | 2 | 1 | 1 | | 1 | 1 | 8 | 1,14 | 0,38 |
| DRUM | Spotted Drum | | | | | | | | | | | | | |
| EEL | Sharptail Eel | | | | | | 1 | | | | 1 | 1,00 | | |
| | Spotted Moray | | | | | | | | | 1 | 1 | 1,00 | | |
| FILEFISH | Orange Filefish | | | | | | | | | | | | | |
| | Scrawled Filefish | | | | | | | | | | | | | |
| FLOUNDER | Peacock Flounder | | | | | | | | | | | | | |
| GOATFISH | Spotted Goatfish | | | | | | | | | | | | | |
| | Yellow Goatfish | | | | | | | | | | | | | |
| GOBY | Bridled Goby | | | 3 | 2 | | | 2 | 5 | 4 | | 16 | 3,20 | 1,30 |
| | Neon Goby | | | | | | | | | | | | | |
| GROUPEL | Coney | | | | | | | | | | | | | |
| | Graysby | | | | | | 1 | 1 | 1 | | 4 | 1,00 | | |
| | Rock Hind | | | | | | | | | | 1 | 1,00 | | |
| | White Margate | | | | | | | | | | 1 | 1,00 | | |
| GRUNT | Bluestriped Grunt | | | | 1 | | | | | | 1 | 1,00 | | |
| | French Grunt | 1 | 1 | 78 | 33 | 1 | 2 | 1 | 1 | 1 | 3 | 122 | 12,20 | 25,17 |
| | Smallmouth Grunt | | | | | | 1 | 1 | | | 2 | 1,00 | | |
| | White Grunt | | | | | | | | | | | | | |
| | White Margate | | | | | | | | | | | | | |
| HAMLET | Yellowtail Hamlet | | | | | | | | | 1 | 1 | 1,00 | | |
| HOGFISH | Spanish Hogfish | | | | | | 1 | | | | 1 | 1,00 | | |
| JACK | Bar Jack | | | | | | 1 | | | | 1 | 1,00 | | |
| | Palometa | | | | | | | | | | | | | |
| PARROTFISH | Blue Parrotfish | | | | | | | | | | | | | |
| | Princess Parrotfish | | 1 | | 2 | 4 | 5 | 1 | 1 | | 14 | 2,33 | 1,75 | |
| | Queen Parrotfish | | | | | 3 | | 2 | | 1 | 7 | 1,75 | 0,96 | |
| | Redband Parrotfish | | | | | | 3 | | | | 4 | 2,00 | 1,41 | |
| | Stoplight Parrotfish | | | | | | | | | 2 | 2 | 2,00 | | |
| | Striped Parrotfish | | | | | | | | | | | | | |
| PUFFER | Sharpnose Puffer | | 1 | 1 | | | | | 1 | | 3 | 1,00 | | |
| | Porcupine | | | | | | | | | | | | | |
| SCORPIONFISH | Spotted Scorpionfish | | | | 1 | | | | | | 1 | 1,00 | | |
| SEABASS | Harlequin Bass | | | | | 1 | | | | | 1 | 1,00 | | |
| SNAPPER | Gray Snapper | | | | | | 1 | | | | 1 | 1,00 | | |
| | Yellowtail Snapper | | | | | | 1 | | | 1 | 2 | 1,00 | | |
| | Mutton Snapper | | | | | | 1 | | | 2 | 3 | 1,50 | 0,71 | |
| | Squirrelfish | | | | | | 3 | 7 | | 2 | 9 | 21 | 5,25 | 3,30 |
| SURGEONFISH | Blue Tang | 2 | 1 | 1 | 1 | 2 | 1 | | | | 8 | 1,33 | 0,52 | |
| | Doctorfish | | | | | | | 2 | 1 | | 3 | 1,50 | 0,71 | |
| | Ocean Surgeonfish | | | 2 | 1 | | | | | | 3 | 1,50 | 0,71 | |
| | Bluehead Wrasse | | 5 | 31 | 36 | 26 | | 1 | 2 | | 10 | 111 | 15,86 | 14,74 |
| | Clown Wrasse | 3 | | 1 | 2 | | | | | | 6 | 2,00 | 1,00 | |
| WRASSE | Puddingwife | | | 1 | 1 | 1 | 1 | | | 1 | 6 | 1,00 | | |
| | Rainbow Wrasse | | | | | | | | | | | | | |
| | Slippery Dick | 15 | 7 | 5 | 5 | | | | | | 32 | 8,00 | 4,76 | |
| | Yellowhead Wrasse | | | | | | | | 1 | 4 | 5 | 2,50 | 2,12 | |
| | Lizardfish, Bluestriped | | | | | | | | | | | | | |
| OTHERS | Mojarra, Yellowfin | 1 | | | | | | | | | 1 | 1,00 | | |
| | Soapfish, Greater | | | 1 | | | 1 | | | | 2 | 1,00 | | |
| | Trumpetfish | | | 1 | | | 1 | | | | 2 | 1,00 | | |
| TOTAL | | 38 | 49 | 176 | 103 | 113 | 75 | 50 | 31 | 15 | 131 | 781 | 78,1 | |
| INVERTEBRATES | | | | | | | | | | | | | | |
| ANEMONE | Corkscrew Anemone | | | 1 | | 1 | 1 | | 2 | 2 | 7 | 1,40 | 0,55 | |
| | Knobby Anemone | | | | | | | | 1 | 2 | 3 | 1,50 | 0,71 | |
| | Giant Anemone | 1 | | 1 | 1 | 3 | 5 | 2 | | 1 | 2 | 16 | 2,00 | 1,41 |
| ENCHINODERMS | Pencil Urchin | | | 2 | | | | | | | 2 | 2,00 | | |
| | Rock Boring Urchin | 2 | | 2 | | | | | | | 4 | 2,00 | | |
| | Longspined Sea Urchin | 2 | 1 | 1 | 1 | 2 | | | | | 7 | 1,40 | 0,55 | |
| CRUSTACEANS | Red Snapping Shrimp | | | | | | | | 1 | | 1 | 1,00 | | |
| | Pederson Cleaner Shrimp | | | | | | 1 | | 1 | | 2 | 1,00 | | |
| | Nimble Spray Crab | | | 6 | 1 | | | | | | 7 | 3,50 | 3,54 | |
| | Yellowline Arrow Crab | | | | | | | 1 | 1 | | 2 | 1,00 | | |
| TUBE WORMS | Christmas Tree Worm | 12 | 2 | 11 | 10 | 20 | 25 | 10 | 12 | 22 | 40 | 164 | 16,40 | 10,71 |
| | Ghost Feather Duster | | | | | | | | | | | | | |
| | Magnificent Feather D. | | | | | | | | | | | | | |
| | Split Crown Feather D. | | | | | | | | | | | | | |
| | Star Horseshoe Worm | | | | | | 1 | 2 | 1 | 4 | 4 | 12 | 2,40 | 1,52 |
| MOLLUSKS | Variiegated Feather D. | | | | | | 1 | | 1 | 3 | 5 | 10 | 2,50 | 1,91 |
| | Amber Penshell | | | | | | | | | 2 | 2 | 2,00 | | |
| | Atlantic Pearl Oyster | | | | | | 1 | 1 | | | 2 | 4 | 1,33 | 0,58 |
| | File Clam | | | | | | | | | | | | | |
| SPONGES | Lumpy Overgrowing Sponge | 4 | 3 | 4 | 2 | 6 | 2 | 4 | 4 | 4 | 6 | 39 | 3,90 | 1,37 |
| TOTAL | | 21 | 6 | 28 | 15 | 32 | 37 | 20 | 23 | 41 | 59 | 282 | 28,2 | |

Note: Previous observations (jan and april 2002) of Beaded Anemone are in fact Knobby Anemone.

Note: CL 1,2,3,4 west total of 22 unidentified juveniles, silverys with yellow pectoral fins or black dot on end of box

PORTOMAREA MARINE MONITORING

FISH and INVERTEBRATE SURVEY - REEF BALL CLUSTERS EAS'

DATE: January 13, 2005

TIME: 08:30 a.m.

Data collected and recorded by: Marjo van den Bulck

| CLUSTER NUMBER | 1L | 2L | 3L | 4L | 5L | 6L | 7L | 8L | 9L | 10L | 11L | 12L | 13L | 14L | 15L | 16L | 17L | 18L | Total | Mean | St. Dev. | |
|----------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|----------|-----------------------|
| DEPTH | 1.5m | 1.5m | 1.6m | 1.6m | 2.1m | 2.1m | 2.1m | 2.4m | 2.7m | 3.2m | 3.4m | 4.3m | 4.3m | 4.3m | 4.3m | 4.3m | 4.3m | 4.3m | | | | |
| ANGELFISH | Queen Angelfish | | | | | | | | | | | | | | | | | | | 1 | 1,00 | |
| BLENNY | Redlip Blenny | | | | | | | | | | | | | | | | | | | 2 | | |
| | Saddled Blenny | | | | | | | | | | | | | | | | | | | | | 2 |
| | Spiny Head Blenny | | | | | | | | | | | | | | | | | | | | | 1 1 |
| BOXFISH | Smooth Trunkfish | | | | | | | | | | | | | | | | | | | | | 1 |
| | Spotted Trunkfish | | | | | | | | | | | | | | | | | | | | | 1 1 |
| BUTTERFLYFISH | Banded Butterflyfish | | | | | | | | | | | | | | | | | | | | | 1 |
| | Four-eye Butterflyfish | | | | | | | | | | | | | | | | | | | | | 1 1 2 |
| CARDINALFISH | Belted Cardinalfish | | | | | | | | | | | | | | | | | | | | | |
| CHROMIS | Brown Chromis | | | | | | | | | | | | | | | | | | | 24 | 33 | 55 |
| DAMSELFISH | Beaugregory Damsel | | | | | | | | | | | | | | | | | | | 5 | 3 | 5 |
| | Bicolor Damsel | | | | | | | | | | | | | | | | | | | 1 | 3 | 16 |
| | Cocoa Damsel | | | | | | | | | | | | | | | | | | | 2 | 6 | 5 |
| | Dusky Damsel | | | | | | | | | | | | | | | | | | | | | 1 4 |
| | Sergeant Major | | | | | | | | | | | | | | | | | | | 8 | | 1 1 |
| | Threespot Damsel | | | | | | | | | | | | | | | | | | | 9 | 2 | |
| | Yellowtail Damsel | | | | | | | | | | | | | | | | | | | | | 1 5 |
| EEL | Spotted Moray | | | | | | | | | | | | | | | | | | | 1 | | 1 1 |
| FILEFISH | Orangespotted Filefish | | | | | | | | | | | | | | | | | | | | | |
| | Whitespotted Filefish | | | | | | | | | | | | | | | | | | | | | 1 1 |
| FLOUNDER | Peacock Flounder | | | | | | | | | | | | | | | | | | | | | 1 |
| GOATFISH | Spotted Goatfish | | | | | | | | | | | | | | | | | | | | | |
| | Yellow Goatfish | | | | | | | | | | | | | | | | | | | | | 3 |
| GOBY | Bridled Goby | | | | | | | | | | | | | | | | | | | | | 4 |
| | Neon Goby | | | | | | | | | | | | | | | | | | | | | 1 5 5 |
| GROUPE | Coney | | | | | | | | | | | | | | | | | | | | | 2 |
| | Graysby | | | | | | | | | | | | | | | | | | | | | 1 |
| | Red Hind | | | | | | | | | | | | | | | | | | | | | 1 |
| GRUNT | Bluestriped Grunt | | | | | | | | | | | | | | | | | | | 1 | | 1 |
| | French Grunt | | | | | | | | | | | | | | | | | | | 1 | 1 | 2 8 |
| | Juvenile Grunt U.I. | | | | | | | | | | | | | | | | | | | | | 5 1 50 |
| HAMLET | Butter Hamlet | | | | | | | | | | | | | | | | | | | | | |
| HOGFISH | Spanish Hogfish | | | | | | | | | | | | | | | | | | | | | 1 |
| JACK | Bar Jack | | | | | | | | | | | | | | | | | | | | | |
| PARROTFISH | Princess Parrotfish | | | | | | | | | | | | | | | | | | | 2 | 3 | 5 |
| | Queen Parrotfish | | | | | | | | | | | | | | | | | | | | | 1 1 1 |
| | Redband Parrotfish | | | | | | | | | | | | | | | | | | | 1 | 1 | 2 2 |
| | Redtail Parrotfish | | | | | | | | | | | | | | | | | | | | | |
| | Striped Parrotfish | | | | | | | | | | | | | | | | | | | | | 1 1 |
| PUFFER | Ballonfish | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Sharpnose Puffer | | | | | | | | | | | | | | | | | | | | | 3 2 |
| SCORPIONFISH | Spotted Scorpionfish | | | | | | | | | | | | | | | | | | | | | 3 |
| SEABASS | Harlequin Bass | | | | | | | | | | | | | | | | | | | | | 1 1 |
| SNAPPER | Gray Snapper | | | | | | | | | | | | | | | | | | | 1 | | 2 1 |
| | Schoolmaster | | | | | | | | | | | | | | | | | | | | | 5 |
| SQUIRRELFISH | Squirrelfish | | | | | | | | | | | | | | | | | | | | | 2 1 1 2 |
| SURGEONFISH | Blue Tang | | | | | | | | | | | | | | | | | | | | | 12 1 6 |
| | Doctorfish | | | | | | | | | | | | | | | | | | | 2 | | 2 6 |
| | Ocean Surgeonfish | | | | | | | | | | | | | | | | | | | | | 5 3 2 |
| WRASSE | Bluehead Wrasse | | | | | | | | | | | | | | | | | | | 9 | 7 | 7 3 47 |
| | Clown Wrasse | | | | | | | | | | | | | | | | | | | 2 | 1 | 3 2 3 1 2 |
| | Puddingwife | | | | | | | | | | | | | | | | | | | 2 | 4 | 3 2 2 2 |
| | Slippery Dick | | | | | | | | | | | | | | | | | | | 2 | | 3 2 3 1 1 |
| | Yellowhead Wrasse | | | | | | | | | | | | | | | | | | | | | 7 4 18 |
| OTHERS | Mojarra, Yellowfin | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Sand Diver | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Soapfish, Greater | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Trumpetfish | | | | | | | | | | | | | | | | | | | 1 | | 1 1 |
| TOTAL | | 71 | 77 | 104 | 108 | 102 | 162 | 130 | 106 | 83 | 185 | 136 | 64 | 93 | 51 | 36 | 42 | 35 | 42 | 1627 | 90,39 | |
| INVERTEBRATES | | | | | | | | | | | | | | | | | | | | | | |
| ANEMONE | Corkscrew Anemone | | | | | | | | | | | | | | | | | | | | | |
| | Giant Anemone | | | | | | | | | | | | | | | | | | | | | 1 5 1 |
| | Knobby Anemone | | | | | | | | | | | | | | | | | | | | | 2 6 5 |
| CRUSTACEANS | Banded Coral Shrimp | | | | | | | | | | | | | | | | | | | | | 2 2 1 |
| | Nimble Spray Crab | | | | | | | | | | | | | | | | | | | 1 | | 10 6 27 16 14 |
| | Pederson Cleaner Shrimp | | | | | | | | | | | | | | | | | | | | | 6 |
| | Yellowline Arrow Crab | | | | | | | | | | | | | | | | | | | | | 1 1 |
| SEGM. WORMS | Bearded Fireworm | | | | | | | | | | | | | | | | | | | | | 1 |
| | Christmas Tree Worm | | | | | | | | | | | | | | | | | | | | | 15 13 12 30 7 |
| | Ghost Feather Duster | | | | | | | | | | | | | | | | | | | | | 24 15 8 35 22 17 21 |
| | Star Horse Shoe Worm | | | | | | | | | | | | | | | | | | | | | 2 |
| | Variegated Pth.Dstr. | | | | | | | | | | | | | | | | | | | | | 2 |
| MOLLUSKS | Amber Penshell | | | | | | | | | | | | | | | | | | | | | |
| | Atlantic Thorny Oyster | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Lettuce Sea Slug | | | | | | | | | | | | | | | | | | | | | 1 1 |
| SPONGES | Spiny File Clam | | | | | | | | | | | | | | | | | | | | | 1 1 |
| | Lumpy Overgrowing Sponge | | | | | | | | | | | | | | | | | | | | | 1 1 1 1 3 7 4 4 3 1 7 |
| ECHINODERMS | Pencil Urchin | | | | | | | | | | | | | | | | | | | | | 1 |
| | Longspined Sea Urchin | | | | | | | | | | | | | | | | | | | 1 | | 1 6 7 14 17 8 1 |
| | West Indian Sea Egg | | | | | | | | | | | | | | | | | | | | | 1 1 |
| TOTAL | | 2 | 1 | 1 | 18 | 34 | 56 | 49 | 60 | 14 | 8 | 25 | 3 | 34 | 17 | 40 | 25 | 23 | 30 | 440 | 24,44 | |

Note: Previous observations (jan and april 2002) of Beaded Anemone are in fact Knobby Anemone.