50-275/323

Pacific Gas and Electric Company

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April 30, 2001

PG&E Letter DCL-2001-535

Mr. Roger Briggs, Executive Officer
Central Coast Regional Water Quality Control Board
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-3147

Re: PG&E Diablo Canyon Submittal -

Receiving Water Monitoring Program 2000 Annual Report

Dear Mr. Briggs:

Attached is a copy of the Receiving Water Monitoring Program 2000 Annual Report. This report presents the physical and biological data collected in the Receiving Water Monitoring Program during 2000. Per our agreement, no analysis or interpretation of the data were performed. Tables in the appendices provide summary statistics for each task.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

David H. Oatley

2001535/JLK/kmo

Enclosure

cc: See Attached

C001

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Diablo Canyon Power Plant

Receiving Water Monitoring Program:

2000 Annual Report

April 26, 2001

Prepared for:
Pacific Gas and Electric Company
Diablo Canyon Power Plant
Avila Beach, CA 93424

Document No. E2001-129.1

TENERA Project Manager:
John R. Steinbeck

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RWMP PROJECT ORGANIZATION

Key Project Personnel (TENERA):

Principal Investigator/ Project Manager:	Mr. John Steinbeck
Project Scientists:	Mr. Jim Blecha Mr. Jay Carroll Mr. Paul Dunn Mr. David Innis Mr. Scott Kimura Mr. Rich Moran Mr. Steve Pengilley Mr. Jim Strampe
Project Staff:	Ms. Susan Helberg Mr. John Lindsey

1.0 INTRODUCTION

Monitoring of the marine environment near the Diablo Canyon Power Plant (DCPP) is required by National Pollutant Discharge Elimination System (NPDES) Permit Order No. 90-09 as revised in a letter from the Central Coast Regional Water Quality Control Board (CCRWQCB) in December 1998. Changes in the marine environment in the vicinity of DCPP (**Figure 1**) are monitored by the Receiving Water Monitoring Program (RWMP) in accordance with the NPDES Permit.

This report presents the water temperature and biological data collected from January through December 2000 in the program's intertidal and subtidal monitoring tasks (**Table 1**). The report sections are divided according to the program's individual tasks. Sampling methods of the intertidal and subtidal studies are followed by the results for the surveys completed in 2000. This report does not include any analysis or discussion of results.

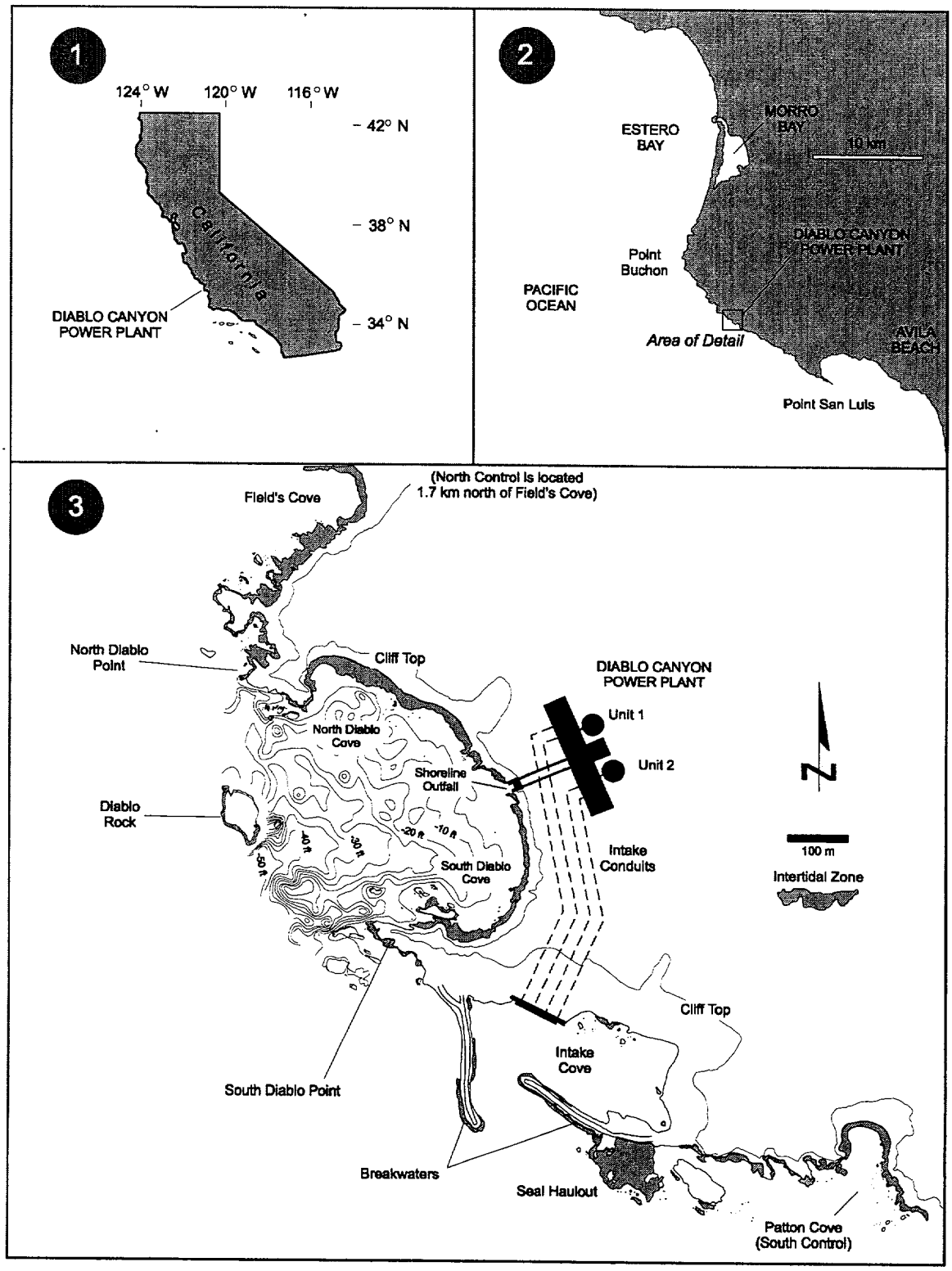

Figure 1. Location of the Diablo Canyon Power Plant.

Table 1. Tasks, stations, and frequency of surveys for the DCPP Receiving Water Monitoring Program, 2000.

Task and Sampling Frequency	Stations
Temperature Monitoring (continuous readings every 20 min)	
Intertidal	NC-2, FC-1, -2, and -3, NDC-1, -2, and -3, SDC-1, 2, and -3, SDP-1 and -2, SC-1, and SC 1-V
Subtidal	NC 1 -3m, FC 1 -3m, NDC 2 -3m, NDC 3 -3m, NDC 4 -4m, SDC 1 -3m, SDC 4 -4m, SC 1 -3m, and SC 2 -6m
Intertidal Horizontal Band Transects (algae, invertebrates, substrate)	
4 surveys per year	NC-1 and -2, FC-1, -2, and –3, NDC-1, -2, and -3, SDC-1, 2, and -3, SDP-1 and -2, SC-1
Intertidal Vertical Band Transects (fishes)	
4 surveys per year	NC 1-V, FC 1-V, NDC 1-V, SDC 2-V, and SC 1-V
Subtidal Benthic Stations (algae, invertebrates, substrate)	
4 surveys per year	FC 1 -3m, NDC 2 -3m, NDC 3 -3m, NDC 4 -4m, SDC 2 -3m, SDC 3 -4m 1, SC 1 -3m, and SC 2 -6m
Subtidal Fish Assessment (fishes)	
4 surveys per year	FC FO-1, -2, and -3, NDC FO-1, -2, and -3, SDC FO-1, -2, and -3; SC FO-1, -2, and –3
Habitat-Forming Kelp Survey (bull kelp, giant kelp)	
1 survey per year	Diablo Cove

2.0 TEMPERATURE MONITORING

Intertidal and subtidal seawater temperatures were recorded at permanent stations located along the Diablo coastline. Temperature units at intertidal stations were located along the rocky shore at the +0.6 m mean lower low water (MLLW) elevation (**Figure 2**). Subtidal temperature recorders were located at depths from -3 to -6 m MLLW (**Figure 3**). The designation of individual subtidal stations reflects the area location and number, followed by the elevation or depth, relative to MLLW (e.g., NDC 1-3m is subtidal station 1 at North Diablo Cove at a depth of -3 m MLLW).

The following 13 stations were nearest to the point of discharge in Diablo Cove, and were contacted regularly by the discharge plume:

- Intertidal (NDC-1, NDC-2, NDC-3, SDC-1, SDC-2, SDC-3, SDP-1, and SDP-2)
- Subtidal (NDC 2-3m, NDC 3-3m, NDC 4-4m, SDC 1-3m, and SDC 3-4m)

The following four stations were located in Field's Cove, approximately one kilometer upcoast of Diablo Cove:

- Intertidal (FC-1, FC-2, and FC-3)
- Subtidal (FC 1-3m)

The six following control stations measure ambient ocean temperatures at sites beyond the influence of the discharge:

- Intertidal (NC-2, SC-1 and SC-1V)
- Subtidal (NC 1-3m, SC 1 -3m and SC 2 -6m)

Each instrument synchronously logged temperatures every 20 minutes throughout its deployment period. Instrument precision was 0.01°C with an accuracy of ± 0.2°C. Temperature units were deployed at a station for approximately 60 days and then exchanged with a serviced unit. Intertidal temperature units recorded air temperatures when tidal levels receded below about +0.6 m MLLW.

Results

Results from the temperature monitoring are summarized monthly for each station. Air temperatures were not analyzed and were removed from the database by referencing tidal height

measurements calculated as the average tidal height from local NOAA tide stations at Morro Bay to the north and Port San Luis to the south. Results for all stations are included in the appendices.

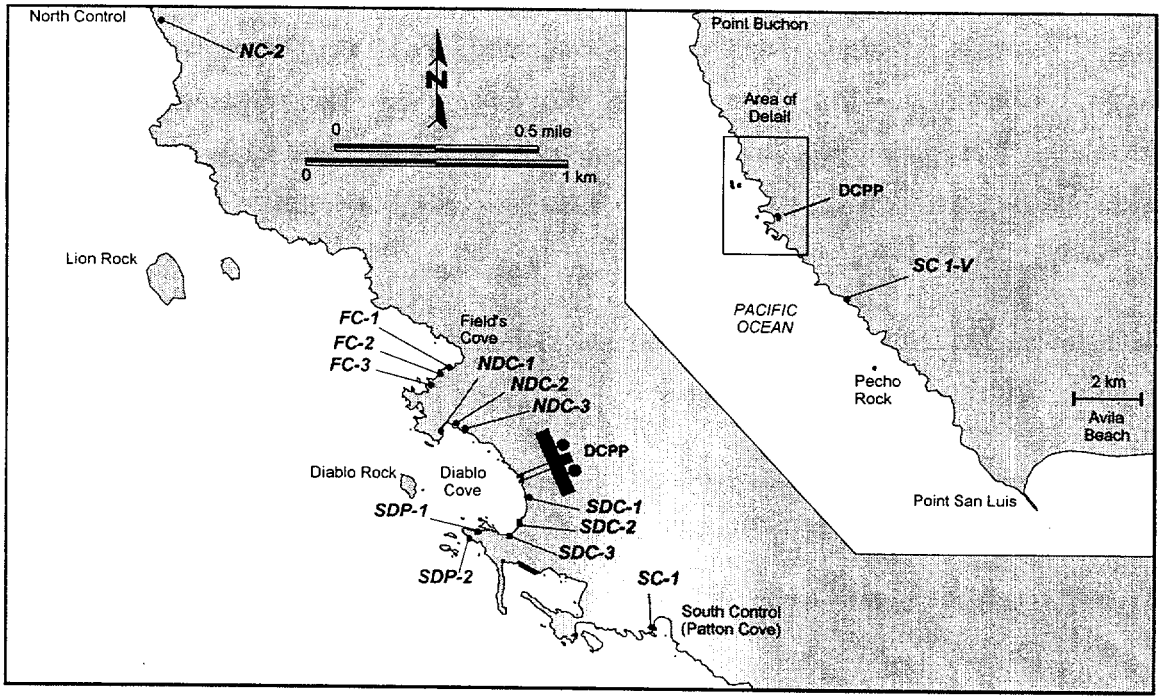

Figure 2. Locations of intertidal temperature monitoring stations.

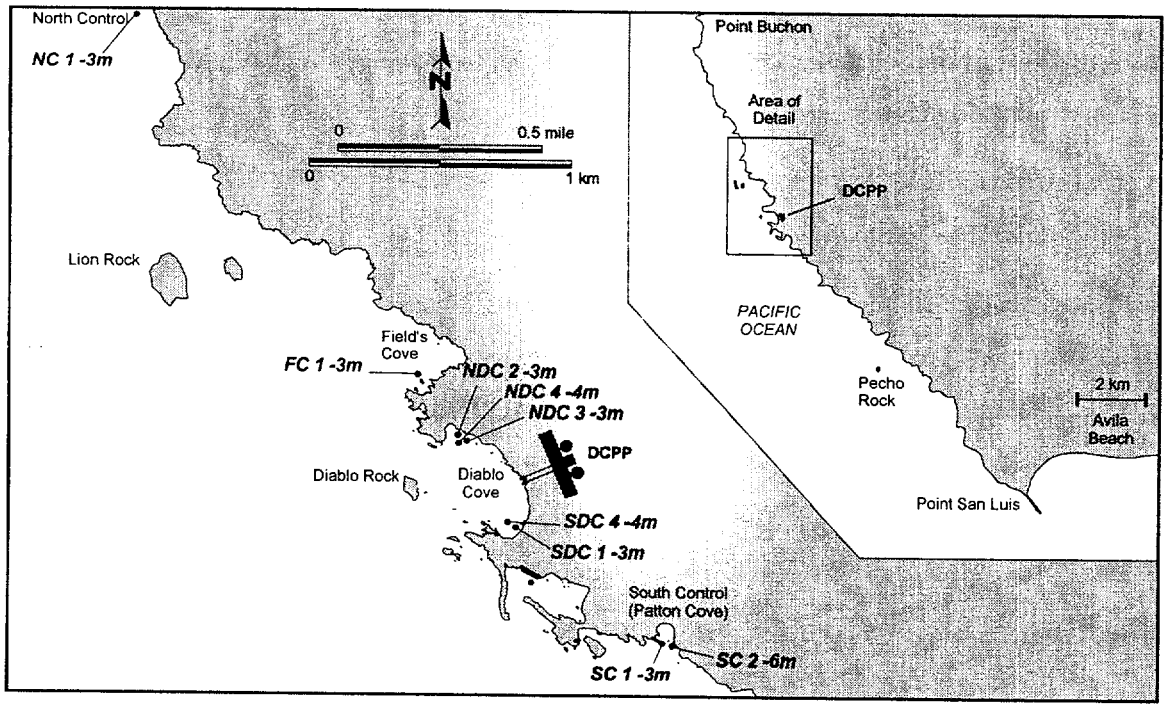

Figure 3. Locations of subtidal temperature monitoring stations.

3.0 INTERTIDAL ALGAE AND INVERTEBRATES

Intertidal algae and invertebrates were sampled using the horizontal band transect (HBT) sampling method at the locations shown in **Figure 4**. Most HBT stations consisted of an upper and lower elevation sampling transect, one at the +0.9 m (3 ft) and the other at the +0.3 m (1 ft) MLLW tide level, both oriented parallel to the waterline. Only one transect at the +0.9 m (3 ft) MLLW tide level were sampled at stations SDP-1 and SDP-2. Each transect was about 30 m long. The sampling area of each transect consisted of ten 1 m^2 fixed quadrats. Stations were mainly on bedrock and boulders, but various amounts of cobble and sand also occurred at the stations. However, the substrate at the +0.9 m MLLW level and at higher elevations at SDC-1 near the discharge was mainly barren cobble. Therefore, the upper transect at that station was located lower at the +0.6 m MLLW tide level where intertidal biota was more abundant.

Visual estimates of percent cover were made for all algal species and bare substrate. Overstory species were sampled first for coverage estimates, and then their branches and blades were brushed aside to allow estimates of understory and crustose species cover. Species less than one percent cover were recorded as "present" on the data sheet. Total algal cover plus bare substrate cover per quadrat often exceeded 100 percent due to layering of multiple algal taxa on the rocks.

Intertidal invertebrates were sampled in the same quadrats as the algae at both the +0.9 m and +0.3 m MLLW tidal elevations. In five of ten quadrats, all species were recorded as either present or absent, and individuals larger than 2.5 cm in greatest dimension were counted. In the remaining five quadrats (count quadrats), the same method was used except that select species of invertebrates were counted regardless of size. The percent cover of sessile invertebrates such as sponges and tunicates was estimated using the same methods as used for algae. All sizes of black abalone were counted within these ten quadrats and within an additional five quadrats.

Results

Results from the four surveys completed during the year are presented in the appendix tables showing the survey mean and standard deviation for each taxon at each transect level. The tables also show the overall mean for the entire year. Survey statistics for algae and substrates were calculated for all ten quadrats sampled along a transect, while statistics for the invertebrates are calculated from the data for the five 'count' quadrats. If a taxon was only recorded as present in a

quadrat, its abundance was given a value of 0.000001 for calculating summary statistics for the transect. Results for invertebrates and algae at all stations are included in the appendices.

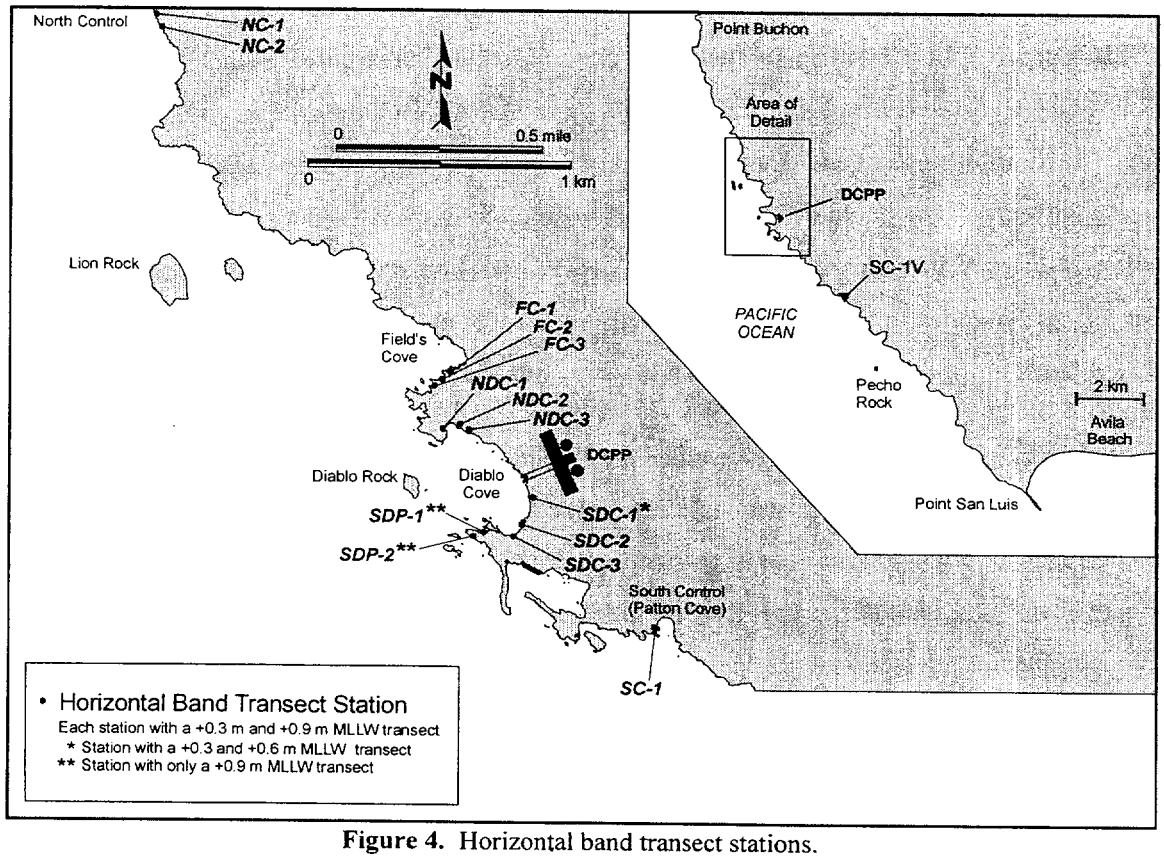

Figure 4. Horizontal band transect stations.

4.0 INTERTIDAL FISHES

Intertidal fishes were sampled using the Vertical Band Transect (VBT) sampling method. At each of five stations, three transects were positioned perpendicularly to the shoreline at fixed locations (**Figure 5**). Each transect originated in the high intertidal zone (approximately +1.5 m MLLW) and terminated in the low intertidal zone (approximately -0.2 m MLLW). Transects at each station were separated by approximately 3 m. Each transect was used as a reference line to position twelve 1 m^2 permanent sampling quadrats, for a total of thirty-six 1 m^2 quadrats per station. Moveable rocks were carefully lifted and any fishes seen were captured in small hand nets. We also searched for cryptic fishes among the foliose algae. Fishes were identified to the lowest practical taxonomic level, measured, and returned to the quadrat. Newly settled juvenile fishes were not identified to the species level but were grouped into composite taxa (e.g., *Anoplarchus/Cebidichthys*).

Results

Results from the four surveys completed during the year are presented in the appendix tables showing the survey total, mean and standard deviation for each taxon at each station. The tables also show the mean for the entire year.

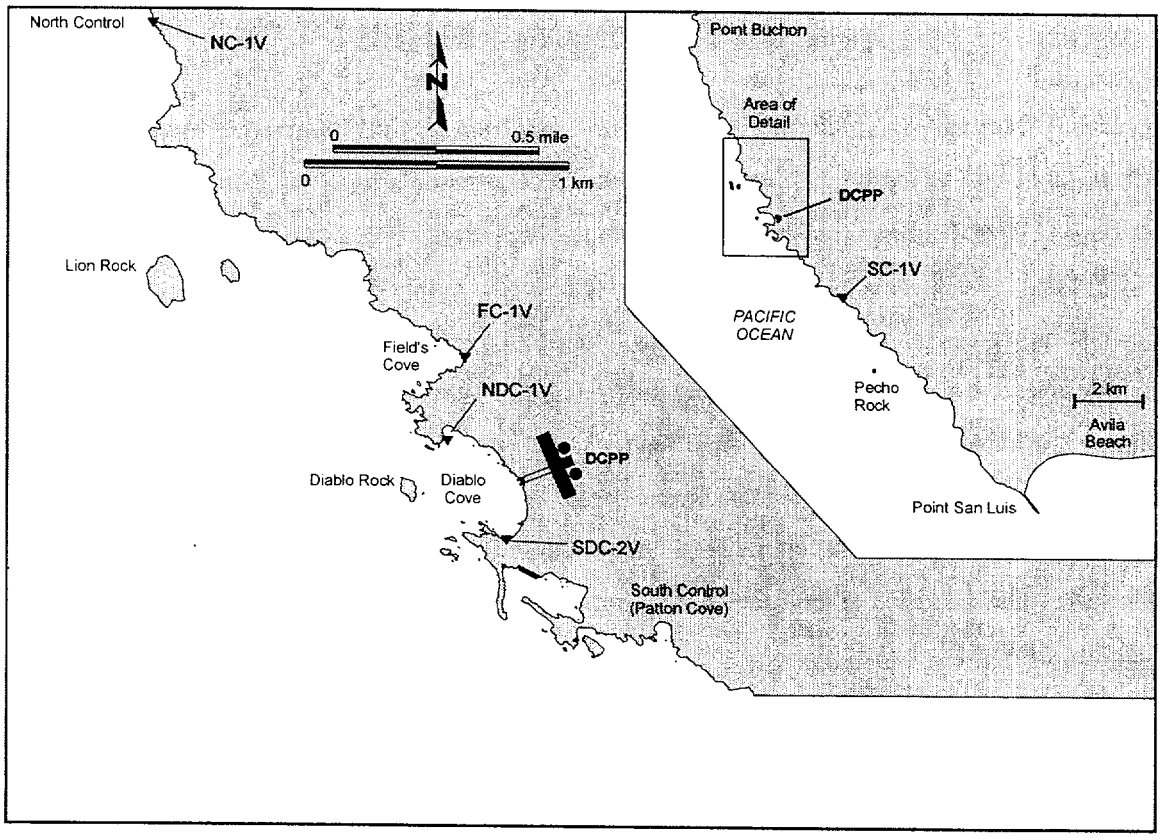

Figure 5. Vertical band transect stations.

5.0 SUBTIDAL ALGAE AND INVERTEBRATES

Subtidal algae and invertebrates were sampled at fixed stations (**Figure 6**) using three sampling methods. Each station was circular with a radius of 3.15 m and a sampling area of 28 m^2. The center 3.1 m^2 area, which contained a mooring wheel, was not sampled to avoid any unnatural algal and invertebrate growth associated with the mooring. Each station was divided into four equal sections, or "arc quadrants", 7 m^2 in area. All stations were established primarily on substrates of mixed bedrock and boulders with small amounts of cobble and sand. Depths ranged from -3 m to -6 m (-10 ft to -20 ft) MLLW.

Kelp species (brown algae of the order Laminariales and Fucales) were sampled as counts of individuals by species using the subtidal arc quadrant (SAQ) sampling method. Juvenile plants of the kelps that could not be identified to the species level were counted and recorded as "Laminariales." Macroinvertebrates were also counted in each of these quadrants. All individuals of select invertebrate taxa were counted regardless of their size. Individuals of other non-encrusting invertebrates were counted if they were larger than 2.5 cm (length or width). A few common species that generally occurred in numbers too high to accurately count were sampled only in the first one-third (2.33 m^2) of each quadrant.

Other subtidal algal species are more difficult to count because they are usually small or occur as dense clumps. These species are often collectively referred to as the algal understory as they occur beneath kelp fronds. We quantified all understory species at the stations in percent cover using a random point contact (RPC) sampling method. A line with ten points positioned at increasing intervals toward the station perimeter was attached to the center of the station and used to locate sampling loci in each quadrant. Fifty points within each quadrant, or 200 points per station, were randomly selected (using a random numbers table) before sampling. For each survey we sampled a new set of randomly selected points. The presence of all algal species, sessile invertebrates, and substrates observed directly under the points was recorded. Holdfasts of kelp species were also included when contacted by the sample points. Percent cover of the understory algae was calculated by dividing the number of 'contacts' by the number of points sampled. Species were identified to the lowest taxonomic level practical. Unknown taxa were collected outside the sampling area, if possible, and returned to the laboratory for identification.

Smaller motile or attached invertebrates were sampled using the subtidal fixed quadrat (SFQ) method. This task sampled four circular quadrats with an area of 0.25 m^2 at fixed locations at each subtidal station to determine the species composition and abundance of the smaller, cryptic, subtidal invertebrates. Each fixed quadrat was located within an SAQ quadrant at a subtidal station, generally on bedrock or boulder substrate. Depending upon the degree of topographical relief, two quadrats were located on horizontal-aspect substrate and two quadrats were located on vertical-aspect substrate. Non-encrusting taxa were identified and counted. The coverage of encrusting taxa (e.g., colonial/social tunicates) was quantified in square centimeters if the total equaled or exceeded 6.5 square centimeters, or was recorded as "present" if coverage was less. There was no minimum or maximum size limits for invertebrates in the SFQ study.

Maps of surface kelp canopies in Diablo Cove are used to document changes in kelp distribution and abundance outside the fixed benthic stations. Near the end of the annual growth cycle in October, bull kelp plants have reached the surface and can be counted. Two observers at the headland of north Diablo Cove and two observers at the headland of south Diablo Cove (south Diablo Point) are used to count and map the extent of bull kelp plants and giant kelp canopies. The occurrence of bull kelp plants with bare bulbs, indicating early senescence in plants, are also noted in this method when possible.

Results

Results from the four surveys completed during the year are presented in the appendix tables showing the survey mean and standard deviation for each taxon at each station. The means are based on the data from the four quadrats or quadrants at each station. The tables also show the mean for the entire year. If an algal taxon was only recorded as present in the RPC study, its abundance was given a value of 0.000001 for calculating statistics for the station.

We conducted the annual habitat-forming kelp survey for Nereocystis luetkeana (bull kelp) and Macrocystis pyrifera (giant kelp) on October 26, 2000 for North and South Diablo Cove. A single bull kelp was observed near south Diablo Point in the October 26, 2000 survey (**Figure 7**). The blades of the plant were well formed, indicating the plant was healthy. As in past recent years, giant kelp was the most abundant canopy-forming kelp species in north and south Diablo Cove.

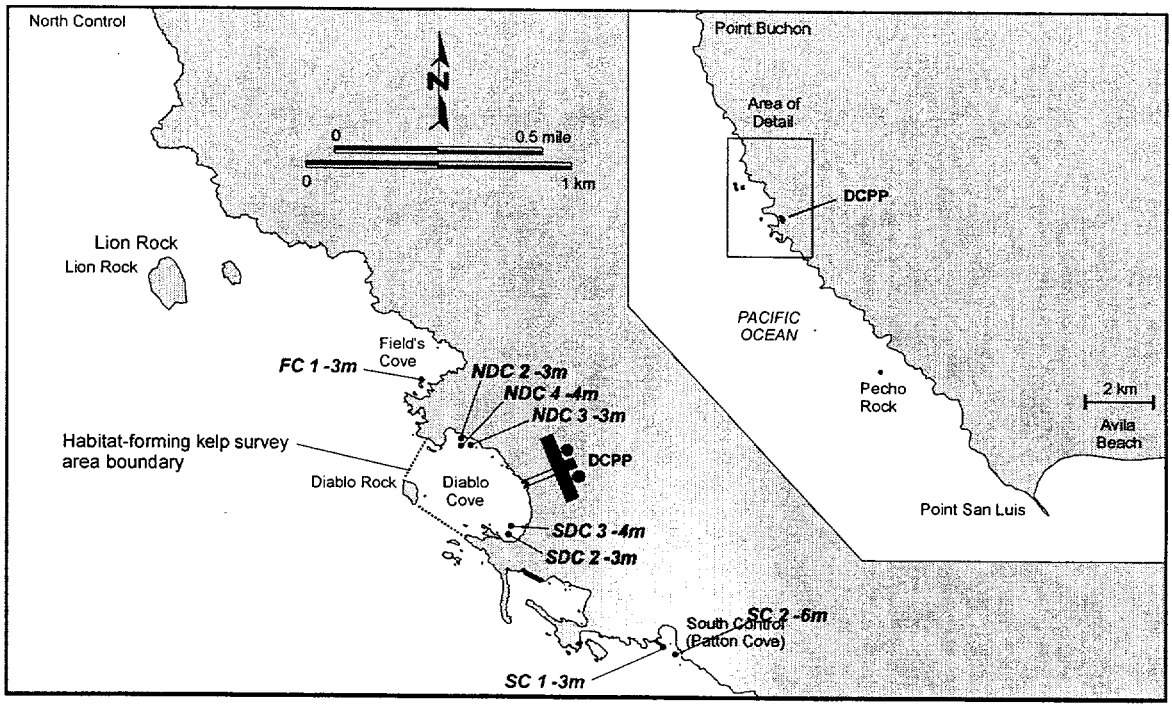

Figure 6. Subtidal benthic stations and habitat-forming kelp survey area in Diablo Cove.

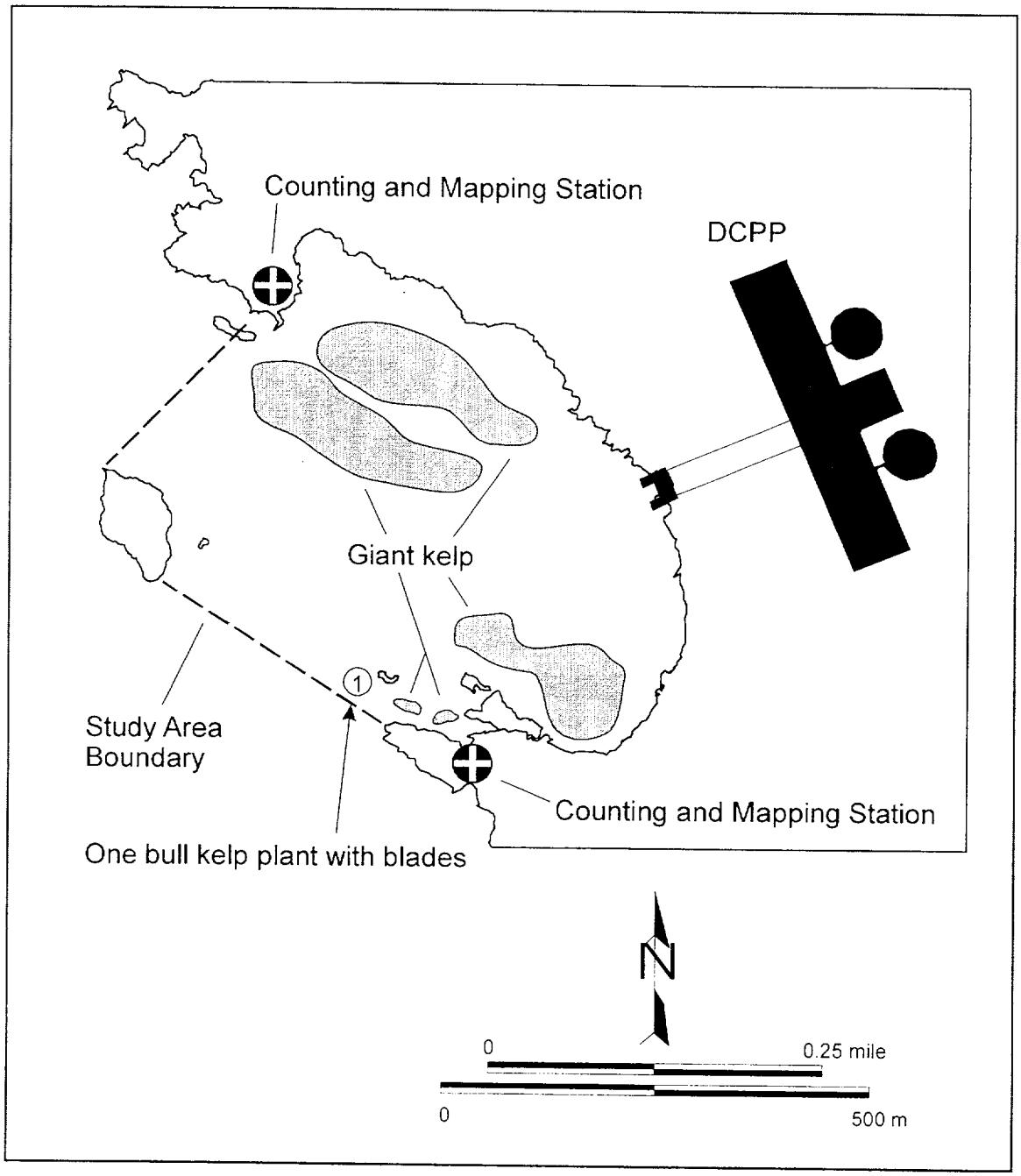

Figure 7. Map of surface bull kelp and giant kelp in Diablo Cove from the habitat-forming kelp survey completed in October 2000.

6.0 SUBTIDAL FISHES

Visual counts of fishes were conducted within fixed subtidal stations shown in **Figure 8**. Each fish assessment station consisted of a permanent midwater and benthic transect where midwater and benthic fishes were counted separately due to differences in habitat and fish assemblages. A station was sampled by deploying a weighted 50 m transect line from a boat, beginning at a permanent marker buoy and extending along a pre-determined compass course away from the buoy. The benthic sampling corridor was 2 m to either side of the line (4 m width) and 1 m above the bottom. The midwater sampling corridor was a cylinder 4 m in diameter, centered 3 m above the benthic transect. Some transects crossed each other in the same area because some were positioned parallel to depth contours, and others were positioned perpendicular to depth contours. The area common to both transects in these cases was 2%. This small overlap did not affect the data summaries because the numbers of fish counted were averaged by area, and the mobility of most fish added to the independence of transects.

A survey team consisted of two divers, each counting fish along the benthic and midwater portions of a transect independently, but in opposite directions. This sampling technique allowed a more thorough inspection of potential fish habitats from all angles of view than would have been possible by a single diver progressing along a transect in only one direction. Fish were identified to species if possible, but juveniles of some species with similar appearances were combined into broader categories.

The resulting survey data were the combined species counts of both divers, divided by two. This yielded an average count for each taxon per 50 m benthic or midwater transect. During each survey, the stations were usually sampled a second time within approximately one to two weeks of the initial sampling effort, unless adverse sea conditions precluded a second replicate. Replicate transects were pooled by survey and area. The areas were Field's Cove, north Diablo Cove, south Diablo Cove, and South Control.

Results

Results from the four surveys completed during the year are presented in the appendix tables showing the survey mean and standard deviation for each taxon within each sampling area. The dates shown for the surveys were calculated as the average date among the stations and replicates

sampled in each area. The means are based on the data from the three transects within each area. The tables also show the overall mean for the entire year. The last survey of the year was started in December, but was not completed until February 2001 due to poor diving conditions typical of the winter months.

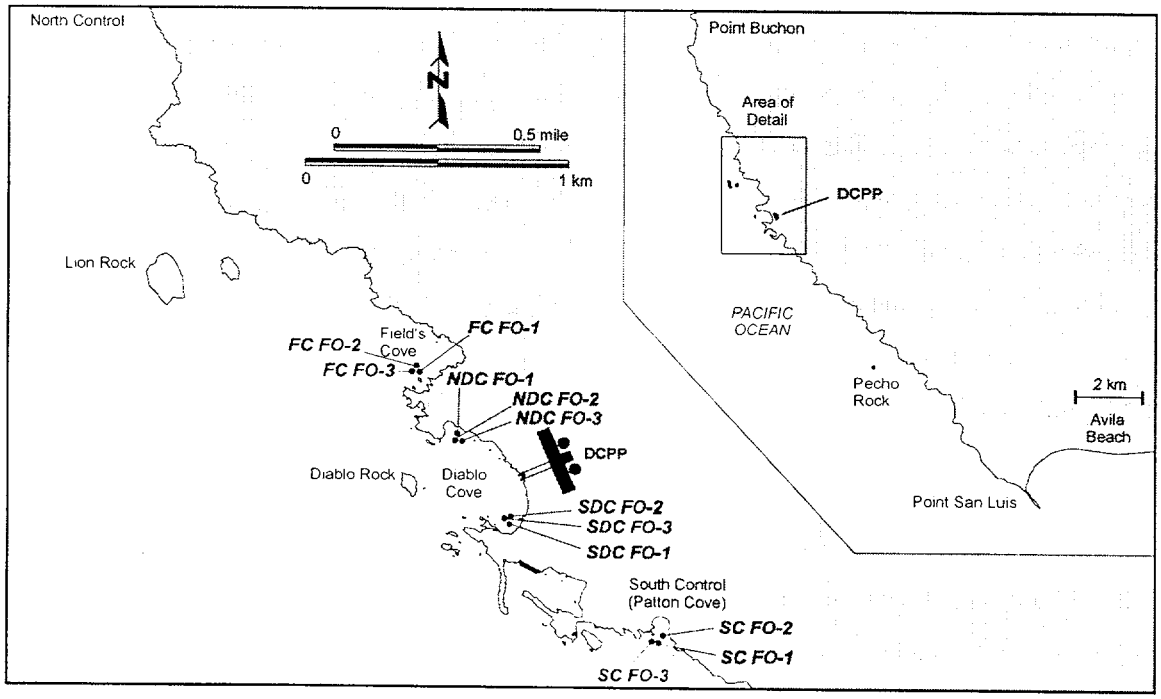

Figure 8. Subtidal fish observation transects.

Appendix Tables

Subtidal Temperature Results

Station NC 1-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std.Dev.	N
Jan	13.5	11.3	12.3	0.47	2231
Feb	14.4	12.2	13.3	0.42	2088
Mar	13.0	9.6	11.1	0.75	2232
Apr	13.8	9.4	11.3	0.93	2160
May	12.8	9.1	10.7	0.76	2231
Jun	16.8	9.8	13.3	1.92	2160
Jul	15.6	11.4	13.2	0.83	2232
Aug	15.3	12.1	13.6	0.68	2232
Sep	17.5	12.2	14.9	1.10	2160
Oct	15.9	11.5	14.1	0.98	2232
Nov	14.6	11.3	12.4	0.79	2160
Dec	14.5	11.6	12.9	0.64	2232

Station FC 1-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	15.6	12.0	13.7	0.71	2232
Feb	17.1	12.4	14.0	0.77	2088
Mar	14.2	9.6	11.6	1.01	2232
Apr	15.3	9.5	12.1	1.25	2160
May	13.8	9.1	11.1	0.82	2232
Jun	18.0	10.1	14.3	2.20	2160
Jul	16.6	12.1	14.2	0.85	2232
Aug	16.5	13.0	14.9	0.70	2231
Sep	19.3	12.8	16.0	1.35	2160
Oct	17.5	11.5	15.0	1.29	2232
Nov	15.6	11.7	13.1	1.01	2160
Dec	16.3	11.9	13.8	1.01	2232

Station NDC 2-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	20.7	12.4	17.2	1.59	2232
Feb	21.5	12.4	16.5	2.43	2088
Mar	19.9	9.6	13.9	2.30	2232
Apr	20.1	9.8	15.5	2.00	2160
May	19.4	10.0	14.1	1.84	2232
Jun	22.6	11.0	17.7	2.54	2159
Jul	21.2	13.1	17.7	1.51	2232
Aug	21.6	15.0	18.7	1.23	2232
Sep	24.0	15.4	19.6	1.64	2160
Oct	22.4	11.5	18.2	2.08	2232
Nov	20.7	11.6	14.6	1.62	2160
Dec	22.2	11.9	16.9	2.46	2232

Station NDC 3-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	21.1	12.4	17.4	1.72	2232
Feb	23.2	12.4	17.2	2.64	2088
Mar	20.7	9.6	14.4	2.51	2232
Apr	20.8	9.9	15.6	1.99	2160
May	19.5	10.4	14.3	1.97	2232
Jun	22.6	11.0	17.7	2.48	2160
Jul	21.0	12.9	17.6	1.53	2232
Aug	21.9	14.8	18.5	1.48	2232
Sep	23.5	14.8	19.3	1.80	2160
Oct	23.2	11.6	18.3	2.19	2232
Nov	21.3	11.7	14.9	1.69	2160
Dec	22.5	12.0	17.3	2.50	2232

Station NDC 4-4m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	20.6	12.4	17.0	1.67	2232
Feb	21.4	12.4	16.5	2.42	2088
Mar	19.7	9.5	13.8	2.25	2232
Apr	19.9	9.8	15.1	1.93	2160
May	19.0	10.0	13.7	1.77	2232
Jun	22.1	10.7	17.2	2.43	2159
Jul	20.5	12.8	16.9	1.49	2232
Aug	21.2	13.2	17.6	1.63	2232
Sep	23.1	13.8	18.3	1.92	2160
Oct	22.3	11.4	17.4	2.12	2232
Nov	20.9	11.6	14.6	1.59	2160
Dec	22.1	11.9	16.8	2.37	2232

Station SDC 1-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	22.3	12.7	15.9	1.95	2231
Feb	24.1	13.7	16.9	1.78	2088
Mar	22.8	11.7	15.7	1.99	2232
Apr	20.1	10.4	14.6	1.81	2161
May	20.2	9.7	14.2	1.89	2232
Jun	21.6	11.6	15.4	1.78	2160
Jul	21.3	11.3	14.5	2.05	2232
Aug	22.5	11.8	15.3	2.24	2232
Sep	23.6	12.1	16.2	2.01	2160
Oct	21.1	12.4	16.5	1.87	2232
Nov	23.2	12.4	16.1	1.87	2160
Dec	23.4	12.8	16.7	2.03	2232

Station SDC 4-4m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	21.5	11.4	14.2	1.81	2231
Feb	22.7	13.1	16.3	1.53	2088
Mar	21.9	10.2	15.0	1.85	2232
Apr	17.7	9.1	12.6	1.61	2160
May	19.0	9.1	12.1	1.73	2232
Jun	18.4	10.0	13.1	1.61	2160
Jul	19.9	10.4	12.6	1.47	2232
Aug	21.0	11.3	13.3	1.74	2232
Sep	21.2	11.2	14.7	1.58	2160
Oct	19.3	12.1	15.1	1.64	2232
Nov	21.5	11.6	14.8	1.77	2160
Dec	23.2	12.2	15.5	1.97	2232

Station SC 1-3m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	13.4	11.4	12.3	0.35	2232
Feb	14.0	12.3	13.2	0.31	2088
Mar	13.6	9.6	11.2	0.84	2232
Apr	13.5	9.2	11.0	0.92	2160
May	13.1	8.8	10.4	0.81	2232
Jun	16.1	9.6	13.0	2.02	2160
Jul	14.7	11.2	12.6	0.75	2232
Aug	14.7	11.8	13.3	0.63	2232
Sep	17.2	12.0	14.7	1.08	2159
Oct	16.0	11.5	14.1	0.88	2232
Nov	15.0	11.2	12.5	0.87	2160
Dec	14.3	11.8	12.9	0.54	2232

Station SC 2-6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev.	N
Jan	13.5	11.5	12.3	0.30	2232
Feb	13.8	12.3	13.2	0.30	2088
Mar	13.3	9.5	11.1	0.85	2232
Apr	12.9	9.1	10.7	0.92	2160
May	12.8	8.7	10.1	0.76	2232
Jun	15.9	9.5	12.6	2.00	2158
Jul	14.2	10.3	11.9	0.74	2232
Aug	14.5	11.1	12.7	0.71	2232
Sep	16.7	11.2	14.1	1.15	2160
Oct	15.8	11.6	13.9	0.89	2232
Nov	14.9	11.4	12.4	0.80	2160
Dec	14.0	11.7	12.8	0.52	2232

Intertidal Temperature Results

Station NC 2+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	13.5	10.7	12.2	0.55	1212
Feb	14.5	12.2	13.2	0.42	1068
Mar	12.7	9.7	11.1	0.77	1122
Apr	13.6	9.0	11.3	0.95	1071
May	13.9	7.9	11.0	0.87	1120
Jun	17.3	10.1	13.8	1.89	1136
Jul	16.4	11.5	13.9	0.89	1211
Aug	15.9	12.2	14.1	0.71	1245
Sep	17.9	12.7	15.2	1.07	1245
Oct	16.3	11.5	14.3	0.92	1292
Nov	14.9	11.5	13.1	1.01	530

Station FC 1+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	15.5	12.1	13.6	0.72	1458
Feb	16.1	12.4	13.9	0.76	1310
Mar	13.9	9.6	11.7	1.02	1353
Apr	15.9	9.4	12.1	1.37	1259
May	15.2	8.4	11.5	1.07	1323
Jun	19.7	9.9	15.1	2.35	1347
Jul	18.4	11.3	15.2	1.24	1469
Aug	18.4	10.7	15.8	1.06	1478
Sep	20.4	10.7	16.5	1.47	1421
Oct	18.3	11.0	15.1	1.39	1457
Nov	16.0	9.4	13.1	1.07	1412
Dec	15.9	11.8	13.7	1.01	1476

Station FC 2+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	15.5	11.9	13.7	0.73	1212
Feb	16.1	12.4	13.9	0.74	1068
Mar	13.9	9.7	11.6	1.00	1122
Apr	15.9	9.6	12.1	1.35	1071
May	14.9	8.9	11.5	1.02	1120
Jun	19.1	10.0	15.0	2.34	1136
Jul	18.5	11.6	15.1	1.16	1211
Aug	18.6	11.9	15.7	0.98	1245
Sep	20.1	12.6	16.4	1.44	1245
Oct	18.1	11.4	15.1	1.35	1292
Nov	16.0	11.7	13.1	1.07	1253
Dec	16.0	11.9	13.7	1.00	1291

Station FC 3+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	15.6	11.5	13.7	0.73	1212
Feb	16.0	12.3	13.9	0.74	1068
Mar	13.9	9.6	11.6	1.00	1122
Apr	16.4	9.3	12.0	1.33	1071
May	14.6	7.8	11.4	1.00	1120
Jun	19.2	9.9	14.9	2.36	1136
Jul	18.2	11.1	14.9	1.19	1211
Aug	18.7	11.3	15.6	1.01	1245
Sep	20.5	12.1	16.4	1.47	1245
Oct	18.3	10.9	15.1	1.35	1292
Nov	15.9	9.2	13.2	1.07	1253
Dec	16.1	11.8	13.7	1.00	1291

Station NDC 1+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	21.0	12.4	16.8	1.58	1458
Feb	21.4	12.4	15.8	2.15	1310
Mar	19.1	9.5	13.3	1.96	1353
Apr	19.3	9.7	14.7	1.95	1259
May	18.9	9.8	13.7	1.72	1323
Jun	23.4	11.0	17.8	2.66	1347
Jul	22.7	13.0	18.1	1.71	1469
Aug	22.5	14.8	19.3	1.34	1478
Sep	24.1	16.1	20.1	1.49	1421
Oct	22.3	11.4	17.8	2.12	1457
Nov	20.6	11.6	14.6	1.62	1412
Dec	21.6	11.9	16.2	2.30	1476

Station NDC 2+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	20.6	12.3	16.9	1.55	1167
Feb	20.7	12.4	15.8	2.14	1035
Mar	18.9	9.7	13.3	2.01	1072
Apr	19.8	8.6	15.0	2.19	1040
May	19.9	8.3	14.2	1.88	1097
Jun	23.8	9.4	18.2	2.69	1105
Jul	22.5	10.9	18.2	1.90	1173
Aug	22.3	11.1	19.5	1.53	1206
Sep	23.7	12.0	20.2	1.65	1206
Oct	21.7	11.5	18.2	2.12	1059
Nov	20.6	12.3	16.9	1.55	1167
Dec	20.7	12.4	15.8	2.14	1035

Station NDC 3+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	20.6	12.4	17.1	1.56	1469
Feb	20.9	12.4	16.0	2.26	1331
Mar	19.4	9.7	13.5	2.09	1359
Apr	19.8	9.8	15.2	2.08	1280
May	20.0	10.0	14.2	1.91	1332
Jun	23.5	10.5	18.1	2.57	1363
Jul	22.2	12.0	18.1	1.74	1490
Aug	22.3	14.3	19.4	1.26	1489
Sep	23.7	14.1	20.2	1.50	1433
Oct	22.2	11.6	18.3	2.08	1473
Nov	20.3	11.7	14.7	1.63	1422
Dec	21.6	12.0	16.5	2.40	1485

Station SDC 1+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	22.9	13.6	16.7	2.00	1483
Feb	24.0	14.6	19.2	2.71	1341
Mar	23.3	12.3	17.2	2.57	1370
Apr	21.3	12.2	15.5	2.07	1291
May	21.5	11.7	15.5	2.13	1340
Jun	22.9	12.6	17.5	2.28	1379
Jul	22.2	13.8	17.4	1.55	1509
Aug	22.6	15.1	18.3	1.34	1500
Sep	24.5	13.8	18.3	2.01	1440
Oct	23.8	13.9	18.2	1.54	1484
Nov	23.5	13.5	17.5	2.07	1432
Dec	24.0	14.4	18.0	2.29	1494

Station SDC 2+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	21.6	12.7	16.1	1.57	1212
Feb	22.1	13.8	16.5	1.42	1068
Mar	21.3	11.5	15.2	1.79	1122
Apr	21.0	10.8	15.1	1.97	1071
May	21.2	9.9	15.5	2.10	1120
Jun	23.3	12.7	17.6	2.30	1136
Jul	22.5	13.1	17.6	1.66	1211
Aug	22.9	13.9	18.4	1.35	1245
Sep	24.0	13.7	18.3	1.92	1245
Oct	22.9	13.3	17.8	1.42	1292
Nov	22.4	13.2	16.4	1.67	1253
Dec	23.1	12.8	16.5	1.58	1291

Station SDC 3+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	19.4	12.6	15.4	0.94	1349
Feb	18.5	13.5	15.6	0.97	1207
Mar	18.5	11.1	14.4	1.33	1245
Apr	18.5	11.6	14.0	1.19	1182
May	18.4	11.3	13.9	1.31	1238
Jun	21.0	12.0	16.5	2.17	1258
Jul	20.1	12.9	16.5	1.16	1364
Aug	21.6	14.4	17.5	1.10	1381
Sep	22.1	13.4	17.6	1.79	1337
Oct	20.2	13.1	17.1	1.14	1390
Nov	19.0	12.7	15.6	1.13	1340
Dec	19.4	12.7	15.9	1.16	1396

Station SDP 1+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	18.0	12.6	15.4	0.86	1535
Feb	18.2	13.4	15.5	0.97	1383
Mar	18.6	10.9	14.3	1.33	1416
Apr	17.2	11.4	13.9	1.11	1329
May	17.6	11.3	13.8	1.24	1389
Jun	21.0	12.0	16.4	2.13	1415
Jul	19.4	13.7	16.4	1.05	1558
Aug	20.7	14.6	17.3	1.06	1548
Sep	22.4	13.4	17.5	1.82	1476
Oct	20.1	13.1	17.1	1.19	1523
Nov	19.0	12.5	15.6	1.14	1462
Dec	19.4	12.7	16.0	1.18	1529

Station SDP 2+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	17.3	12.7	14.7	0.77	1458
Feb	17.6	13.1	14.7	0.84	1310
Mar	17.7	10.3	13.2	1.24	1353
Apr	17.2	10.7	13.3	0.96	1259
May	15.7	9.2	12.4	1.14	1323
Jun	19.3	10.7	15.0	2.18	1347
Jul	18.6	11.7	15.2	1.09	1469
Aug	19.5	11.2	15.7	1.47	1478
Sep	21.3	12.9	16.4	1.65	1421
Oct	19.1	12.2	15.7	1.20	1457
Nov	17.4	12.0	14.4	1.24	1412
Dec	17.9	12.1	15.0	1.11	1476

Station SC 1+.6m monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	13.3	11.4	12.3	0.38	1335
Feb	13.7	12.3	13.1	0.32	1189
Mar	13.2	9.6	11.1	0.86	1233
Apr	13.3	9.2	10.9	0.95	1165
May	13.1	8.8	10.4	0.83	1225
Jun	16.3	9.6	13.3	2.08	1240
Jul	15.7	11.1	13.0	0.89	1346
Aug	15.7	11.9	13.6	0.67	1368
Sep	17.4	12.0	14.7	1.09	1324
Oct	16.0	11.5	14.2	0.88	1375
Nov	14.9	11.2	12.5	0.91	1331
Dec	14.0	11.8	12.8	0.53	1387

Station SC 1-V monthly temperature (°C) summaries for January 2000 through December 2000.

Month	High	Low	Mean	Std. Dev	N
Jan	19.4	9.2	12.5	0.94	2232
Feb	22.8	10.5	13.4	1.08	2088
Mar	23.3	5.5	12.0	1.76	2230
Apr	25.3	8.2	12.9	2.61	2160
May	22.5	7.3	12.4	2.22	2231
Jun	22.9	8.5	15.0	2.30	2160
Jul	23.7	10.8	15.3	1.39	2232
Aug	18.5	11.0	15.3	1.36	2232
Sep	19.6	11.2	16.0	1.20	2159
Oct	19.5	9.0	14.6	1.22	2232
Nov	16.2	6.8	12.4	1.48	2160
Dec	16.4	8.2	12.7	0.90	2231

Intertidal Horizontal Band Transect Results

Horizontal Band Transects Station NC 1+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	16-Feb-00		2-Jun-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Mazzaella flaccida	12.2	7.41	52.5	19.21	49.7	13.51	16.5	6.85	32.7
Phyllospadix spp.	23.4	20.13	16.6	18.37	20.8	19.68	24.9	25.54	21.4
Mazzaella affinis	11.1	12.32	17.9	14.02	20.3	17.12	12.2	12.55	15.4
non-coralline crust	17.4	11.41	9.3	5.02	7.4	6.88	14.7	12.23	12.2
Gelidium coulteri	5.4	5.49	7.2	5.98	8.5	7.70	6.0	4.48	6.8
Mastocarpus papillatus	3.4	2.13	8.1	3.71	9.1	7.44	4.2	4.73	6.2
Chondracanthus canaliculatus	7.1	3.48	3.8	5.03	4.2	2.84	7.5	8.20	5.7
Gastroclonium subarticulatum	4.9	6.32	4.4	6.24	4.3	5.79	6.5	6.90	5.1
coralline crust	3.4	2.21	4.7	3.48	3.3	4.02	2.1	2.64	3.4
Cryptopleura violacea	1.9	2.98	3.0	1.79	2.8	2.54	5.6	3.01	3.3
Endocladia muricata	1.9	4.02	4.4	10.45	3.3	5.83	2.0	4.61	2.9
Codium setchellii	1.8	3.33	2.6	7.18	0.6	1.55	0.8	1.49	1.5
Mastocarpus jardinii	1.1	1.19	1.5	1.81	2.0	3.01	0.8	0.97	1.4
Mazzaella leptorhynchos	0.4	0.75	3.1	3.00	1.7	2.08	0.1	0.29	1.3
filamentous red algae-complex	0.2	0.47	1.9	1.97	2.8	3.87	0.0	0.00	1.2
Corallina vancouveriensis	1.5	1.72	0.9	1.79	0.4	0.75	0.5	1.14	0.8
Smithora naiadum	0.0	0.00	< .1	< .01	< .1	< .01	2.4	3.14	0.6
Egregia menziesii	< .1	0.22	0.0	0.00	0.6	1.98	1.4	3.93	0.5
Calliarthron/Bossiella spp.-complex	1.1	2.18	0.1	0.29	0.3	0.49	0.1	0.44	0.4
Mazzaella heterocarpa	0.3	0.67	0.5	0.57	0.3	0.49	0.5	0.74	0.4
juv. articulated coralline algae	1.2	0.87	0.3	0.36	< .1	< .01	< .1	< .01	0.4
Ulva/Enteromorpha spp.	0.0	0.00	0.6	1.76	0.3	0.75	0.5	0.74	0.3
Porphyra spp.	0.0	0.00	0.3	0.59	0.5	1.31	0.1	0.44	0.2
Prionitis spp.	0.8	1.75	0.0	0.00	< .1	< .01	0.1	0.44	0.2
Callithamnion pikeanum	< .1	< .01	0.3	0.67	0.2	0.66	0.0	0.00	0.1
Pterosiphonia dendroidea	0.2	0.66	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Mazzaella lilacina	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.66	< .1
Osmundea spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.1	0.44	< .1
Gelidium pusillum	< .1	0.22	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Microcladia coulteri	0.0	0.00	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Corallina officinalis	0.0	0.00	< .1	< .01	0.0	0.00	< .1	0.22	< .1
Chondria decipiens	< .1	0.22	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Cladophora spp.	< .1	< .01	< .1	0.00	< .1	< .01	< .1	< .01	< .1
Melobesia mediocris	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Bryopsis spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	121.4	73.44	92.8	55.92	60.6	65.09	18.4	27.93	73.3
Pagurus spp.	9.8	5.50	19.0	13.17	37.0	45.59	7.0	6.00	18.2
Pista spp.	4.9	4.39	0.6	0.91	2.6	3.16	6.9	4.93	3.8
Anthopleura elegantissima	2.8	5.72	0.4	0.55	0.6	0.89	0.2	0.45	1.0
Tegula brunnea	0.2	0.45	0.2	0.45	2.2	2.95	1.0	1.00	0.9
Leptasterias spp.	0.6	0.89	1.4	1.34	0.4	0.89	0.2	0.45	0.7
Nemertea unid.	0.0	0.00	0.6	0.89	0.2	0.45	1.6	1.82	0.6
Epiactis prolifera	0.2	0.45	0.6	0.55	0.4	0.89	0.4	0.55	0.4
Lottia pelta	0.4	0.89	0.2	0.45	0.2	0.45	0.2	0.45	0.3
Macclintockia scabra	0.2	0.45	0.0	0.00	0.6	0.89	0.0	0.00	0.2
Serpulorbis squamigerus	0.0	0.00	0.8	1.30	0.0	0.00	0.0	0.00	0.2
Pugettia spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.6	0.89	0.2
Fissurella volcano	0.2	0.45	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Tectura scutum	0.4	0.89	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ocenebra spp.	0.2	0.45	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Lacuna spp.	0.2	0.45	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Serpulidae unid.	0.0	0.00	< .1	< .01	0.2	0.45	0.0	0.00	< .1
Tonicella lineata	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Nereididae unid.	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1

(*continued*)

Horizontal Band Transects Station NC 1+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	16-Feb-00		2-Jun-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Pachygrapsus crassipes	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Strongylocentrotus purpuratus	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Diaulula sandiegensis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Haliotis spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.00	< .1
tunicates, colonial/social unid.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Crepidula spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Porifera unid. (encrusting)	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Phragmatopoma californica	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Bryozoa, unid. (encrusting)	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Alia spp.	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Acmaeidae unid.	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Haliclona spp.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Grapsidae (juv.)	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Pisaster/Henricia (juv.)	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Cyanoplax spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Hermissenda crassicornis	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Pycnogonida unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Chthamalus fissus	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Amphissa spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Lissothuria nutriens	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Salmacina tribranchiata	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Homolopoma/Lirularia spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Substrate									
sand (shell gravel)	10.6	9.95	3.7	3.94	6.6	4.12	11.4	5.90	8.1
bare rock	2.6	2.34	4.0	1.69	2.6	4.02	5.6	5.81	3.7
bare cobble	2.5	5.97	0.7	1.31	2.9	3.37	0.5	0.93	1.6

Horizontal Band Transects Station NC 1+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	16-Feb-00		12-May-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	37.0	23.55	36.9	21.62	36.3	22.99	36.4	27.16	36.6
non-coralline crust	18.3	10.94	18.4	8.93	15.3	7.14	24.2	12.55	19.1
Mazzaella flaccida	13.6	13.44	5.4	8.42	8.9	9.64	18.4	17.01	11.6
Mastocarpus papillatus	6.9	5.92	7.6	8.20	12.8	9.91	12.0	12.20	9.8
coralline crust	5.8	6.00	6.3	4.38	5.8	3.68	5.8	4.05	5.9
Pelvetia compressa	6.6	14.16	4.2	10.86	4.7	12.11	5.9	11.81	5.3
Codium setchellii	2.7	5.99	2.4	5.62	3.1	7.72	0.5	1.14	2.2
Mazzaella affinis	1.6	3.22	0.2	0.47	4.4	6.14	1.9	2.95	2.0
Corallina vancouveriensis	1.9	2.12	2.5	2.48	1.6	1.64	1.1	1.32	1.8
Mastocarpus jardinii	0.5	0.66	1.0	1.97	2.4	2.58	0.9	1.43	1.2
Phyllospadix spp.	0.6	1.98	0.9	2.62	0.6	1.55	1.2	3.07	0.8
Mazzaella heterocarpa	1.0	0.75	0.4	1.10	0.6	0.91	0.5	0.57	0.6
Porphyra spp.	< .1	0.22	< .1	0.22	1.8	3.09	0.4	1.10	0.6
Gelidium pusillum	0.6	1.06	1.4	2.12	< .1	< .01	0.3	0.49	0.6
Gelidium coulteri	0.5	0.57	0.6	1.52	0.9	1.35	0.3	0.49	0.6
Cryptopleura violacea	0.3	1.10	0.6	1.98	0.4	1.32	0.3	1.10	0.4
Prionitis spp.	< .1	0.22	0.4	0.75	0.3	0.59	0.3	0.67	0.3
Chondracanthus canaliculatus	< .1	0.22	< .1	0.22	< .1	< .01	0.3	0.37	0.1
juv. articulated coralline algae	< .1	0.22	0.3	0.59	< .1	0.22	< .1	0.00	0.1
Mazzaella leptorhynchos	< .1	0.22	< .1	< .01	< .1	< .01	0.3	0.88	< .1
Calliarthron/Bossiella spp.-complex	0.0	0.00	0.3	0.67	< .1	< .01	0.0	0.00	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	0.3	0.59	0.0	0.00	< .1
Gastroclonium subarticulatum	0.0	0.00	0.2	0.66	0.0	0.00	< .1	< .01	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	0.22	< .1	< .01	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Analipus japonicus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Callithamnion spp./Pleonosporium spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
filamentous red algae-complex	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Invertebrates									
Tegula funebralis	70.2	51.77	110.6	77.38	113.0	87.60	72.2	89.69	91.5
Pagurus spp.	3.2	7.16	3.4	7.60	31.4	32.99	8.8	13.14	11.7
Anthopleura elegantissima	8.6	19.23	2.0	3.08	9.0	20.12	8.4	14.33	7.0
Pollicipes polymerus	7.0	15.65	7.6	16.99	0.6	1.34	7.4	16.55	5.7
Lottia limatula	0.2	0.45	0.8	1.30	16.2	20.85	1.4	1.95	4.7
Macclintockia scabra	3.4	3.91	4.2	5.85	2.2	3.19	3.4	6.54	3.3
Tectura scutum	0.4	0.55	0.0	0.00	0.0	0.00	3.0	5.66	0.9
Lottia pelta	0.6	1.34	0.4	0.55	0.8	1.10	1.2	2.17	0.8
Mopalia spp.	0.4	0.89	0.2	0.45	1.6	1.52	0.2	0.45	0.6
Nuttallina californica	0.4	0.89	0.4	0.89	1.2	2.17	0.4	0.55	0.6
Pachygrapsus crassipes	0.0	0.00	0.0	0.00	2.0	2.00	0.2	0.45	0.6
Nemertea unid.	0.0	0.00	0.0	0.00	2.0	2.00	0.0	0.00	0.5
Mytilus californianus	0.8	1.79	0.6	1.34	0.0	0.00	0.4	0.89	0.5
Leptasterias spp.	0.0	0.00	0.0	0.00	1.0	1.22	0.4	0.89	0.4
Ocenebra spp.	0.8	1.30	0.2	0.45	0.4	0.89	0.0	0.00	0.4
Haliclona spp.	0.6	0.58	0.4	0.93	0.1	0.31	0.3	0.38	0.3
Strongylocentrotus purpuratus	0.4	0.89	0.0	0.00	0.2	0.45	0.2	0.45	0.2
Phragmatopoma californica	< .1	< .01	0.6	0.91	< .1	< .01	< .1	< .01	0.1
Tetraclita rubescens	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Epiactis prolifera	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Lottia digitalis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Nucella emarginata	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Tegula brunnea	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lottia asmi	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Chthamalus fissus	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Crepidula spp.	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1

(*continued*)

Horizontal Band Transects Station NC 1+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	16-Feb-00		12-May-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Pista spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Grapsidae (juv.)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Mytilus galloprovincialis	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mytilus spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Substrate									
bare rock	13.6	9.89	11.5	9.71	17.3	13.11	14.9	13.50	14.3
bare cobble	2.5	6.38	3.5	9.00	3.9	9.76	4.2	9.77	3.5
sand (shell gravel)	0.7	1.50	4.9	12.20	4.5	6.03	1.4	2.22	2.9

Horizontal Band Transects Station NC 2+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	16-Feb-00		2-Jun-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Mazzaella flaccida	11.3	10.27	41.7	24.13	30.4	21.34	8.8	6.18	23.0
Phyllospadix spp.	18.9	19.72	20.5	20.80	14.7	15.79	24.0	22.29	19.5
non-coralline crust	18.3	11.51	14.6	13.12	7.7	5.69	15.8	10.38	14.1
Mazzaella affinis	9.9	14.45	9.9	8.02	6.3	6.25	11.5	14.06	9.4
Chondracanthus canaliculatus	13.8	8.08	5.1	3.57	7.4	4.70	8.8	6.01	8.8
Gastroclonium subarticulatum	6.1	8.94	4.1	7.91	6.2	8.93	7.7	10.67	6.0
Mastocarpus papillatus	4.9	4.04	2.8	2.23	4.7	4.57	1.1	1.51	3.4
coralline crust	3.3	1.73	2.2	1.24	2.5	1.91	4.2	2.46	3.0
Gelidium coulteri	2.6	1.94	2.3	1.54	2.8	2.35	4.0	2.32	2.9
Egregia menziesii	0.0	0.00	4.6	10.34	5.5	9.70	0.6	1.22	2.7
Neorhodomela larix	1.5	2.75	4.9	8.94	2.1	3.39	1.5	2.47	2.5
Ulva/Enteromorpha spp.	0.8	1.68	0.7	1.73	3.5	4.83	2.3	2.47	1.8
Mastocarpus jardinii	1.1	1.54	2.2	3.01	2.1	2.36	1.3	1.89	1.7
Codium setchellii	2.1	4.04	0.8	1.59	1.0	2.25	1.6	3.47	1.4
Mazzaella leptorhynchos	0.6	0.69	1.9	2.25	1.9	2.53	0.6	1.98	1.3
Porphyra spp.	< .1	< .01	1.3	1.38	3.3	6.93	0.6	1.53	1.3
Mazzaella heterocarpa	0.2	0.34	1.0	0.94	2.0	3.16	0.8	1.93	1.0
Corallina vancouveriensis	1.1	2.02	0.8	1.34	0.3	0.59	1.3	1.93	0.9
Cryptopleura violacea	0.3	0.88	1.0	1.24	0.3	0.49	1.0	1.19	0.7
Calliarthron/Bossiella spp.-complex	0.7	0.87	0.1	0.29	0.3	0.49	1.5	2.08	0.6
Spongomorpha/Acrosiphonia-complex	0.0	0.00	1.9	5.93	0.1	0.29	< .1	< .01	0.5
Endocladia muricata	0.3	0.67	0.8	1.20	0.7	1.18	< .1	0.22	0.5
Smithora naiadum	0.0	0.00	< .1	< .01	1.0	2.02	0.4	0.49	0.4
filamentous red algae-complex	0.2	0.47	1.0	1.23	0.2	0.34	0.0	0.00	0.3
juv. articulated coralline algae	0.5	1.09	< .1	0.22	0.1	0.29	0.6	1.11	0.3
Prionitis spp.	< .1	0.22	0.1	0.29	0.5	1.31	0.3	0.49	0.3
Mazzaella lilacina	0.0	0.00	0.1	0.44	0.3	1.10	0.0	0.00	0.1
Gelidium pusillum	0.2	0.47	< .1	< .01	< .1	< .01	0.2	0.47	0.1
Osmundea spp.	< .1	< .01	< .1	0.22	< .1	< .01	0.3	0.88	0.1
Microcladia coulteri	0.0	0.00	< .1	< .01	0.2	0.34	0.1	0.29	< .1
Callithamnion pikeanum	< .1	< .01	0.3	0.36	< .1	< .01	0.0	0.00	< .1
Halymenia/Schizymenia spp.-complex	< .1	< .01	0.2	0.66	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	0.1	0.29	< .1	< .01	< .1
Bryopsis spp.	0.0	0.00	0.1	0.44	0.0	0.00	0.0	0.00	< .1
Chondracanthus corymbiferus	0.0	0.00	0.1	0.29	0.0	0.00	0.0	0.00	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	< .1	0.22	< .1	< .01	0.0	0.00	< .1
Colpomenia spp.	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	< .1	0.22	0.0	0.00	< .1	< .01	< .1
Chrysophyta unid.	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Melobesia mediocris	0.0	0.00	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Pterosiphonia dendroidea	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Laminaria setchellii	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Farlowia/Pikea spp.-complex	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Halosaccion americanum	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Microcladia borealis	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	74.2	49.73	45.6	30.25	14.2	13.01	11.4	7.40	36.4
Pagurus spp.	12.0	7.71	19.0	14.30	2.2	1.79	1.8	2.49	8.8
Anthopleura elegantissima	7.8	14.17	8.6	18.68	10.4	22.14	5.4	10.43	8.1
Macclintockia scabra	22.2	39.02	3.8	5.76	1.2	2.68	0.8	0.84	7.0
Tectura scutum	0.6	1.34	1.2	1.79	10.2	12.38	5.6	6.69	4.4
Lottia pelta	9.2	13.74	3.0	2.74	3.6	4.83	1.4	2.61	4.3
Pista spp.	2.9	2.27	0.8	0.76	6.1	7.12	4.6	5.02	3.6
Tegula brunnea	2.0	4.47	4.2	7.26	4.4	2.70	1.0	1.73	2.9
Tetraclita rubescens	3.8	8.50	0.8	1.79	1.0	1.41	1.6	2.30	1.8
Lottia limatula	1.4	2.19	3.2	3.56	1.0	1.22	0.6	0.89	1.6
Epiactis prolifera	1.2	1.30	0.4	0.89	1.8	4.02	0.2	0.45	0.9
Leptasterias spp.	0.2	0.45	0.6	0.89	0.8	1.30	0.4	0.55	0.5

(*continued*)

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Horizontal Band Transects Station NC 2+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	16-Feb-00		2-Jun-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Nemertea unid.	0.0	0.00	0.4	0.89	1.0	1.00	0.6	0.89	0.5
Mopalia spp.	1.0	1.22	0.2	0.45	0.4	0.55	0.2	0.45	0.5
Fissurella volcano	0.4	0.89	0.0	0.00	0.4	0.55	0.0	0.00	0.2
Pugettia spp.	0.0	0.00	0.0	0.00	0.6	0.55	0.2	0.45	0.2
Mytilus spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.6	1.34	0.2
Ocenebra spp.	0.2	0.45	0.0	0.00	0.2	0.45	0.2	0.45	0.2
Serpulidae unid.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Diodora spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Lottia gigantea	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Serpulorbis squamigerus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tonicella lineata	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Nuttallina californica	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
tunicates, colonial/social unid.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	< .01	< .1	< .01	< .1
Chthamalus fissus	< .1	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lacuna spp.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	0.00	< .1
Phragmatopoma californica	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Ischnochitonidae	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Crepidula spp.	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Lottia asmi	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Bryozoa, unid. (encrusting)	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Calliostoma ligatum	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Megatebennus bimaculatus	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Isopoda unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	18.1	16.39	14.3	21.78	14.2	18.08	12.4	13.00	14.7
sand (shell gravel)	4.3	4.29	4.9	6.53	8.3	5.71	10.1	8.07	6.9
bare cobble	4.0	5.72	1.0	2.41	2.1	4.22	1.5	2.12	2.2

Horizontal Band Transects Station NC 2+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	16-Feb-00		12-May-00		16-Jul-00		14-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	39.2	21.04	42.8	18.95	43.8	27.84	37.4	30.21	40.8
non-coralline crust	19.0	8.84	15.1	9.15	9.5	4.71	12.9	7.45	14.1
Mastocarpus papillatus	8.0	9.14	7.4	6.00	12.8	6.73	13.3	10.01	10.4
Mazzaella affinis	7.0	7.48	1.5	3.61	7.0	7.53	10.5	10.20	6.5
coralline crust	6.4	6.11	6.5	7.95	3.7	3.85	4.4	4.22	5.2
Mazzaella flaccida	5.0	6.05	1.5	3.91	2.7	3.62	8.8	9.66	4.5
Mastocarpus jardinii	0.6	0.89	0.5	1.09	0.8	1.16	1.5	1.96	0.9
Corallina vancouveriensis	1.0	1.77	0.2	0.66	0.7	1.96	0.4	0.67	0.6
Gelidium coulteri	0.3	0.75	< .1	< .01	0.7	2.20	0.9	1.27	0.5
Calliarthron/Bossiella spp.-complex	0.1	0.44	0.8	1.68	0.2	0.66	0.2	0.66	0.3
Mazzaella heterocarpa	0.2	0.34	0.0	0.00	0.7	0.80	0.3	0.67	0.3
Mazzaella leptorhynchos	< .1	0.22	< .1	< .01	0.5	0.66	0.5	1.09	0.3
Chondracanthus canaliculatus	0.3	1.10	0.0	0.00	0.0	0.00	0.2	0.47	0.1
Porphyra spp.	0.1	0.44	< .1	0.22	0.1	0.29	0.1	0.29	0.1
Gelidium pusillum	< .1	0.22	0.1	0.44	< .1	< .01	< .1	< .01	< .1
Cryptopleura violacea	0.0	0.00	0.0	0.00	0.2	0.66	< .1	< .01	< .1
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.66	< .1
juv. articulated coralline algae	< .1	0.22	0.0	0.00	< .1	0.22	< .1	< .01	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	0.22	< .1	< .01	< .1
Prionitis spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Cumagloia andersonii	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Pelvetia compressa	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Gastroclonium subarticulatum	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Microcladia coulteri	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	165.4	115.51	41.0	39.06	264.6	194.45	86.4	46.19	139.4
Macclintockia scabra	29.4	27.78	13.8	15.50	63.2	85.68	23.6	20.97	32.5
Anthopleura elegantissima	18.0	13.82	13.2	13.33	14.4	11.01	10.0	6.00	13.9
Pagurus spp.	9.4	9.99	0.0	0.00	11.8	6.06	8.2	7.05	7.4
Tectura scutum	2.8	3.90	1.2	1.10	8.0	4.00	2.2	2.17	3.6
Lottia limatula	0.8	0.84	2.0	2.83	3.0	2.74	5.8	8.64	2.9
Ocenebra spp.	1.8	1.79	0.6	0.89	1.0	1.73	1.4	2.19	1.2
Pollicipes polymerus	1.4	3.13	1.0	2.24	1.2	2.68	1.0	2.24	1.2
Lottia pelta	1.8	2.49	0.6	0.55	0.8	1.10	0.2	0.45	0.9
Pachygrapsus crassipes	0.4	0.55	0.0	0.00	1.4	1.14	0.2	0.45	0.5
Lottia digitalis	0.2	0.45	0.2	0.45	1.0	2.24	0.2	0.45	0.4
Cyanoplax spp.	0.0	0.00	0.0	0.00	0.6	0.89	0.2	0.45	0.2
Nuttallina californica	0.8	0.84	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Mopalia spp.	0.2	0.45	0.0	0.00	0.2	0.45	0.2	0.45	0.2
Leptasterias spp.	0.0	0.00	0.0	0.00	0.6	0.89	0.0	0.00	0.2
Nemertea unid.	0.0	0.00	0.0	0.00	0.4	0.55	0.0	0.00	< .1
Acanthina spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Fissurella volcano	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Epilucina californica	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Chthamalus fissus	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Littorina spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Phragmatopoma californica	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lottia asmi	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Crepidula spp.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Serpulidae unid.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Grapsidae (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Homolopoma./Lirularia spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	21.5	13.40	23.8	14.56	18.6	14.40	15.3	15.54	19.8
bare cobble	7.5	4.44	10.3	8.08	11.7	9.38	10.8	8.92	10.1
sand (shell gravel)	0.3	0.49	< .1	0.22	< .1	< .01	1.6	2.41	0.5

Horizontal Band Transects Station FC 1+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	17-Jan-00		16-May-00		14-Jul-00		11-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	31.1	9.43	11.8	8.29	13.6	6.66	22.8	13.65	19.8
Mazzaella flaccida	1.1	1.19	20.2	10.12	34.4	13.14	7.6	4.29	15.9
Egregia menziesii	5.6	5.88	7.0	8.00	20.8	28.47	8.8	11.00	10.5
Chondracanthus canaliculatus	3.5	2.73	13.8	8.40	13.6	8.72	6.8	7.17	9.4
Corallina vancouveriensis	12.1	9.76	10.6	8.55	4.1	6.78	8.8	8.64	8.9
Phyllospadix spp.	7.9	7.20	5.4	7.09	6.3	6.75	9.1	10.46	7.2
Porphyra spp.	<.1	0.22	13.5	20.49	12.6	26.47	0.6	1.53	6.7
Gastroclonium subarticulatum	4.0	3.50	4.5	4.23	6.9	7.89	10.4	12.35	6.4
coralline crust	10.0	6.30	4.3	5.94	2.5	2.20	8.2	7.06	6.3
Endocladia muricata	3.2	4.54	6.8	10.58	6.7	8.54	4.2	8.42	5.2
Gelidium coulteri	0.9	1.27	4.2	2.95	4.7	2.17	4.2	3.96	3.5
juv. articulated coralline algae	4.9	3.39	0.9	1.50	1.0	1.94	3.8	3.83	2.6
Calliarthron/Bossiella spp.-complex	3.5	4.02	3.2	3.28	2.9	4.10	0.8	1.53	2.6
Mastocarpus papillatus	0.8	0.85	5.8	5.31	1.5	1.59	1.5	2.53	2.4
Cryptopleura violacea	1.7	2.43	1.7	2.34	1.0	1.47	4.5	4.42	2.2
Mazzaella affinis	1.0	1.28	2.7	3.49	2.2	5.86	0.0	0.00	1.5
Ulva/Enteromorpha spp.	<.1	<.01	0.3	0.59	1.0	2.15	2.9	5.11	1.1
Mastocarpus jardinii	0.5	0.47	0.6	0.64	1.0	1.61	1.5	2.04	0.9
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	2.4	5.87	0.6
Prionitis spp.	0.6	0.95	0.4	1.10	0.1	0.44	0.9	1.94	0.5
Mazzaella heterocarpa	0.2	0.47	0.8	1.20	0.9	0.93	<.1	<.01	0.5
filamentous red algae-complex	0.0	0.00	0.8	1.98	<.1	0.22	0.7	1.76	0.4
Mazzaella leptorhynchos	0.0	0.00	0.6	1.12	<.1	0.22	<.1	<.01	0.2
Mazzaella lilacina	0.0	0.00	0.0	0.00	0.4	1.32	0.0	0.00	0.1
Gelidium pusillum	0.3	0.67	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.3	0.59	<.1	<.01	0.0	0.00	<.1
Osmundea spp.	0.0	0.00	<.1	0.22	<.1	<.01	<.1	0.22	<.1
Chondracanthus corymbiferus	<.1	<.01	<.1	<.01	0.1	0.44	0.0	0.00	<.1
Callithamnion spp./Pleonosporium spp.	<.1	<.01	<.1	0.22	<.1	<.01	0.0	0.00	<.1
Callophyllis spp.	0.0	0.00	<.1	<.01	<.1	0.22	0.0	0.00	<.1
Derbesia marina	0.0	0.00	<.1	0.22	0.0	0.00	0.0	0.00	<.1
Cladophora spp.	<.1	<.01	<.1	0.00	<.1	<.01	<.1	<.01	<.1
Melobesia mediocris	0.0	0.00	0.0	0.00	<.1	<.01	<.1	<.01	<.1
Callithamnion pikeanum	0.0	0.00	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Colpomenia spp.	0.0	0.00	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Plocamium violaceum	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Smithora naiadum	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Cryptosiphonia woodii	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Microcladia coulteri	0.0	0.00	0.0	0.00	<.1	<.01	0.0	0.00	<.1
Sarcodiotheca gaudichaudii	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Phaeostrophion irregulare	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Chrysophyta unid.	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Chondracanthus harveyanus/spinosus	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Invertebrates									
Macclintockia scabra	43.0	53.40	42.6	54.34	7.0	9.90	10.2	21.71	25.7
Tegula brunnea	19.8	12.99	3.6	4.34	11.6	15.47	10.4	6.69	11.4
Pagurus spp.	20.0	20.58	8.8	5.93	4.2	8.84	10.2	8.98	10.8
Strongylocentrotus purpuratus	11.2	10.59	8.8	8.61	4.4	7.80	8.2	7.26	8.2
Anthopleura elegantissima	5.6	2.30	11.4	8.85	8.0	8.57	4.4	4.04	7.4
Nuttallina californica	4.6	4.62	11.4	19.92	2.0	3.08	11.0	15.10	7.3
Tetraclita rubescens	8.4	9.21	9.0	11.70	2.4	3.29	1.2	2.17	5.3
Tectura scutum	9.6	7.83	4.6	2.88	2.4	2.88	2.0	2.74	4.7
Tegula funebralis	0.8	0.84	14.6	20.27	0.0	0.00	0.0	0.00	3.9
Pista spp.	4.2	6.75	1.1	1.60	<.1	<.01	3.8	5.41	2.3
Lottia limatula	3.4	2.41	2.6	3.78	1.2	1.79	1.0	1.22	2.1
Fissurella volcano	2.4	1.52	0.6	1.34	1.2	1.64	1.6	1.95	1.5
Pachygrapsus crassipes	2.6	2.51	1.4	1.34	0.8	1.10	0.8	0.84	1.4
Lottia pelta	2.4	5.37	1.8	1.79	0.6	1.34	0.4	0.89	1.3

(*continued*)

Horizontal Band Transects Station FC 1+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	17-Jan-00		16-May-00		14-Jul-00		11-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Leptasterias spp.	0.8	0.84	1.8	0.84	1.4	1.67	0.8	1.30	1.2
Ocenebra spp.	3.0	1.87	0.8	1.30	0.0	0.00	0.4	0.89	1.1
Serpulidae unid.	2.2	1.30	0.2	0.45	0.2	0.45	1.0	1.00	0.9
Cyanoplax spp.	0.0	0.00	0.8	1.30	2.4	4.83	0.0	0.00	0.8
Nemertea unid.	0.6	1.34	1.0	1.73	0.8	0.84	0.4	0.55	0.7
Phragmatopoma californica	1.5	2.66	1.0	1.52	< .1	< .01	< .1	< .01	0.6
Epiactis prolifera	1.0	1.00	0.6	0.89	0.6	0.89	0.2	0.45	0.6
Serpulorbis squamigerus	0.6	0.55	0.8	1.10	0.0	0.00	0.6	1.34	0.5
Discurria insessa	0.4	0.89	0.2	0.45	0.0	0.00	0.2	0.45	0.2
Lottia gigantea	0.0	0.00	0.0	0.00	0.0	0.00	0.8	1.30	0.2
Acmaea mitra	0.6	1.34	< .1	< .01	0.0	0.00	< .1	< .01	0.2
Mopalia spp.	0.0	0.00	0.2	0.45	0.4	0.89	0.0	0.00	0.2
Chthamalus fissus	0.4	0.93	< .1	< .01	< .1	< .01	< .1	< .01	0.1
Sipuncula unid.	0.0	0.00	0.4	0.89	< .1	< .01	< .1	< .01	0.1
Heptacarpus spp.	0.4	0.89	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tonicella lineata	0.0	0.00	< .1	< .01	0.0	0.00	0.2	0.45	< .1
Diodora spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Polynoidae	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Balanus spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Diaulula sandiegensis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Fusinus luteopictus	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Lepidozona spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Porifera unid. (encrusting)	0.1	0.31	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	< .01	0.0	0.00	< .1
tunicates, colonial/social unid.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Lacuna spp.	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Lissothuria nutriens	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Bryozoa, unid. (encrusting)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Alia spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Pisaster/Henricia (juv.)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Tectura paleacea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Homolopoma./Lirularia spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Substrate									
bare rock	17.8	9.41	10.3	6.09	19.7	14.00	11.3	8.63	14.8
sand (shell gravel)	0.3	0.59	1.8	5.02	0.6	0.89	0.5	1.54	0.8
bare cobble	1.3	2.36	0.2	0.66	< .1	< .01	0.7	1.46	0.5

Horizontal Band Transects Station FC 1+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	17-Jan-00		16-May-00		14-Jul-00		11-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	34.1	20.82	45.8	24.35	37.6	21.43	30.0	26.19	36.9
non-coralline crust	15.8	8.81	11.5	6.45	8.8	6.84	16.3	11.64	13.1
Mastocarpus papillatus	3.5	4.28	3.1	2.05	5.6	5.34	3.8	2.15	4.0
coralline crust	1.3	1.38	0.7	0.57	0.3	0.67	1.2	1.73	0.9
Calliarthron/Bossiella spp.-complex	0.6	1.98	1.3	3.72	0.8	2.42	0.3	1.10	0.7
Phyllospadix spp.	0.3	0.67	1.0	1.94	1.0	3.29	0.7	1.46	0.7
Pelvetia compressa	0.6	1.98	0.6	1.98	1.0	3.29	0.6	1.98	0.7
Gelidium coulteri	< .1	0.22	< .1	< .01	0.5	1.14	1.8	2.18	0.6
Mazzaella flaccida	< .1	< .01	< .1	0.22	0.4	1.10	1.8	2.80	0.6
Corallina vancouveriensis	0.6	1.30	0.3	0.59	< .1	< .01	0.5	1.31	0.3
Mastocarpus jardinii	0.0	0.00	0.0	0.00	0.0	0.00	1.3	4.17	0.3
juv. articulated coralline algae	0.2	0.47	< .1	< .01	0.3	1.10	< .1	0.22	0.2
Hesperophycus californicus	0.0	0.00	0.3	1.10	0.1	0.44	0.0	0.00	0.1
Mazzaella leptorhynchos	0.0	0.00	< .1	< .01	0.1	0.44	0.2	0.66	< .1
Mazzaella affinis	< .1	< .01	0.0	0.00	< .1	< .01	0.3	0.67	< .1
Porphyra spp.	0.0	0.00	< .1	0.22	0.2	0.66	0.0	0.00	< .1
Gelidium pusillum	< .1	< .01	< .1	< .01	< .1	< .01	0.1	0.44	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.22	< .1
Mazzaella heterocarpa	< .1	< .01	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Chondracanthus canaliculatus	< .1	< .01	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Cryptosiphonia woodii	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Fucus gardneri	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Prionitis spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	106.6	57.92	245.6	87.66	465.4	300.64	270.6	69.74	272.1
Anthopleura elegantissima	124.2	105.92	136.6	98.05	221.0	183.54	125.0	122.92	151.7
Pagurus spp.	13.2	8.17	33.0	29.26	5.0	3.94	56.4	35.22	26.9
Macclintockia scabra	13.2	12.32	19.4	20.06	21.0	23.18	10.6	8.41	16.1
Lottia limatula	3.2	1.10	5.6	4.39	3.2	3.27	2.8	2.59	3.7
Tectura scutum	4.4	3.05	2.2	1.79	1.4	2.19	6.2	6.53	3.6
Lottia pelta	1.4	1.52	2.0	0.71	0.0	0.00	1.8	3.49	1.3
Ocenebra spp.	1.6	2.61	1.0	0.71	0.0	0.00	2.0	1.58	1.2
Cyanoplax spp.	0.4	0.89	2.2	1.48	0.6	1.34	0.8	0.84	1.0
Acanthina spp.	0.4	0.89	1.6	1.67	0.2	0.45	1.4	0.89	0.9
Phragmatopoma californica	1.1	0.79	0.4	0.93	0.3	0.62	0.1	0.31	0.5
Pachygrapsus crassipes	1.2	0.84	0.2	0.45	0.4	0.55	0.0	0.00	0.5
Lottia digitalis	0.0	0.00	0.0	0.00	0.0	0.00	0.8	1.10	0.2
Strongylocentrotus purpuratus	0.0	0.00	0.4	0.89	0.4	0.89	0.0	0.00	0.2
Nuttallina californica	0.2	0.45	0.2	0.45	0.0	0.00	0.2	0.45	0.2
Hemigrapsus nudus	0.0	0.00	0.4	0.55	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.4	0.89	0.0	0.00	< .1
Serpulidae unid.	0.2	0.45	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Nemertea unid.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Fissurella volcano	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Mopalia spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Diaulula sandiegensis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	< .01	0.0	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Chthamalus fissus	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Ischnochitonidae	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Littorina spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Nitidiscala/Opalia spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Porifera unid. (encrusting)	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pugettia spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Grapsidae (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1

(*continued*)

Horizontal Band Transects Station FC 1+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	17-Jan-00		16-May-00		14-Jul-00		11-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Substrate									
bare rock	34.4	16.97	31.1	13.17	48.5	17.51	35.9	21.85	37.5
bare cobble	4.8	6.28	2.0	2.92	2.2	4.42	4.0	5.34	3.2
sand (shell gravel)	3.6	6.75	2.3	4.04	0.2	0.66	2.8	5.01	2.2

Horizontal Band Transects Station FC 2+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	17-Jan-00		17-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	25.3	18.32	15.6	9.27	12.6	8.50	30.8	19.89	21.1
Corallina vancouveriensis	14.2	12.38	19.0	9.88	14.2	12.43	8.8	9.23	14.0
Egregia menziesii	5.1	8.74	6.3	11.65	22.3	26.51	18.8	21.58	13.1
Phyllospadix spp.	9.9	20.44	4.9	13.30	10.4	25.72	8.2	21.63	8.4
Mazzaella flaccida	0.9	1.09	6.6	4.09	14.9	12.35	6.9	4.95	7.3
coralline crust	12.4	5.36	7.4	3.70	4.8	3.22	3.5	3.07	7.0
Gelidium coulteri	2.2	2.35	2.8	4.18	9.8	6.82	10.6	4.83	6.3
Calliarthron/Bossiella spp.-complex	6.7	7.81	5.8	7.33	2.7	4.31	5.9	7.34	5.3
Endocladia muricata	3.8	6.32	6.3	8.07	6.0	9.42	4.9	11.70	5.2
Mastocarpus papillatus	0.4	0.59	7.2	8.90	7.7	10.68	0.7	0.73	4.0
Cryptopleura violacea	0.8	0.79	0.4	0.94	4.5	4.40	7.0	8.30	3.2
Chondracanthus canaliculatus	0.7	0.80	2.0	3.39	4.3	7.03	3.2	4.50	2.6
Gastroclonium subarticulatum	1.1	1.97	1.4	2.04	1.0	1.83	3.7	4.62	1.8
juv. articulated coralline algae	1.6	0.98	3.4	2.39	0.3	0.67	1.1	2.02	1.6
Prionitis spp.	1.1	1.58	1.9	2.59	1.5	2.04	1.4	2.45	1.5
Mazzaella affinis	0.4	0.88	0.5	1.09	2.4	4.96	1.0	2.13	1.1
Mastocarpus jardinii	0.5	0.93	1.8	2.70	0.8	1.37	0.5	0.66	0.9
Porphyra spp.	< .1	< .01	0.9	1.97	1.5	2.24	< .1	< .01	0.6
Ulva/Enteromorpha spp.	< .1	< .01	< .1	< .01	0.6	0.72	1.8	2.93	0.6
Mazzaella heterocarpa	0.0	0.00	0.9	1.67	1.3	2.33	0.1	0.44	0.6
Mazzaella leptorhynchos	0.0	0.00	1.4	3.05	0.3	0.75	0.0	0.00	0.4
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.5	1.54	0.7	1.96	0.0	0.00	0.3
Corallina officinalis	0.0	0.00	0.0	0.00	0.8	1.33	0.2	0.34	0.2
Chrysophyta unid.	0.0	0.00	< .1	< .01	0.6	1.98	0.0	0.00	0.2
filamentous red algae-complex	0.0	0.00	0.0	0.00	0.5	1.54	0.0	0.00	0.1
Osmundea spp.	0.1	0.44	< .1	< .01	0.1	0.44	< .1	0.22	< .1
Cladophora spp.	< .1	< .01	< .1	0.22	0.1	0.29	< .1	0.22	< .1
Callithamnion spp./Pleonosporium spp.	0.1	0.29	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Farlowia/Pikea spp.-complex	< .1	0.22	0.0	0.00	0.1	0.44	0.0	0.00	< .1
Microcladia borealis	0.0	0.00	< .1	< .01	< .1	0.22	< .1	0.22	< .1
Sarcodiotheca gaudichaudii	0.0	0.00	0.1	0.44	0.0	0.00	0.0	0.00	< .1
Microcladia coulteri	0.0	0.00	0.0	0.00	< .1	0.22	< .1	< .01	< .1
Cryptosiphonia woodii	0.0	0.00	< .1	0.22	0.0	0.00	< .1	< .01	< .1
Smithora naiadum	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Melobesia mediocris	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Colpomenia spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Callithamnion pikeanum	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	74.2	44.66	91.0	77.95	39.0	80.52	53.8	61.23	64.5
Macclintockia scabra	53.2	97.47	45.4	67.61	32.4	45.92	60.6	117.43	47.9
Strongylocentrotus purpuratus	30.2	13.68	30.6	16.46	43.0	31.97	28.0	32.19	33.0
Anthopleura elegantissima	35.6	35.53	25.2	15.01	21.2	14.82	27.6	21.73	27.4
Pagurus spp.	24.0	19.71	14.6	9.96	39.2	33.54	11.6	9.45	22.4
Nuttallina californica	10.0	7.97	29.2	40.73	22.0	22.96	12.0	18.26	18.3
Tetraclita rubescens	6.4	7.89	10.4	20.57	15.2	20.09	1.2	2.68	8.3
Tegula brunnea	4.0	2.45	1.2	2.17	5.0	5.24	7.8	8.73	4.5
Lottia limatula	4.4	4.34	1.4	2.61	4.8	4.97	1.6	1.82	3.1
Leptasterias spp.	1.8	1.48	1.2	2.17	4.4	3.44	1.6	0.55	2.3
Lottia pelta	3.4	7.06	2.2	1.64	2.8	3.35	0.4	0.55	2.2
Fissurella volcano	2.8	1.10	1.4	1.67	3.0	4.58	1.6	1.52	2.2
Tectura scutum	0.8	1.79	3.0	3.16	1.6	1.14	3.2	2.17	2.2
Serpulorbis squamigerus	0.6	1.34	1.0	2.24	5.4	10.99	0.0	0.00	1.8
Epiactis prolifera	1.0	1.22	1.8	1.79	2.6	1.67	0.2	0.45	1.4
Nemertea unid.	0.0	0.00	1.6	1.82	3.6	4.93	0.2	0.45	1.4
Phragmatopoma californica	0.4	0.62	1.3	2.80	0.7	1.55	1.7	3.73	1.0
Pachygrapsus crassipes	0.2	0.45	1.0	0.71	1.8	1.30	0.2	0.45	0.8
Chthamalus fissus	< .1	< .01	0.7	1.55	< .1	0.00	2.5	5.59	0.8
Ocenebra spp.	0.6	0.55	2.2	1.79	0.2	0.45	0.0	0.00	0.8

(*continued*)

Horizontal Band Transects Station FC 2+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	17-Jan-00		17-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Serpulidae unid.	0.4	0.89	1.0	1.00	0.4	0.55	0.6	0.89	0.6
Acmaea mitra	< .1	< .01	< .1	< .01	0.2	0.45	0.2	0.45	0.1
Cyanoplax spp.	< .1	< .01	0.2	0.45	0.2	0.45	0.0	0.00	0.1
Tonicella lineata	0.2	0.45	0.2	0.45	0.0	0.00	0.0	0.00	0.1
Pugettia spp.	0.0	0.00	0.2	0.45	0.2	0.45	0.0	0.00	0.1
Pisaster ochraceus	0.2	0.45	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Pollicipes polymerus	0.0	0.00	0.2	0.45	< .1	< .01	< .1	< .01	< .1
Calliostoma ligatum	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Mopalia spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Nucella emarginata	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Lottia ochracea	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
tunicates, colonial/social unid.	< .1	< .01	0.0	0.00	< .1	< .01	0.1	0.31	< .1
Acmaeidae unid.	< .1	< .01	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	< .1	0.00	0.0	0.00	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Discurria insessa	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Porifera unid. (encrusting)	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Mytilus spp.	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Pista spp.	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Lottia asmi	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Bryozoa, unid. (encrusting)	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Crepidula spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Littorina spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Pseudomelatoma torosa	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Pisaster/Henricia (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Lacuna spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Amphissa spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Heptacarpus spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Lissothuria nutriens	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	22.0	20.11	16.1	17.37	15.3	15.09	14.2	14.92	16.9
sand (shell gravel)	2.2	3.36	4.2	4.59	2.0	3.28	2.0	2.95	2.6
bare cobble	1.4	1.39	1.1	1.97	1.5	1.84	0.4	0.59	1.1

Horizontal Band Transects Station FC 2+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	15-Feb-00		17-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	30.3	14.42	50.0	19.02	38.6	13.25	23.8	8.07	35.7
non-coralline crust	14.9	11.20	8.1	8.96	9.6	9.10	11.2	9.66	10.9
Mastocarpus papillatus	2.2	2.26	4.3	2.91	9.0	5.28	7.7	6.22	5.8
Pelvetia compressa	5.0	7.57	4.0	5.98	4.4	6.47	3.5	5.87	4.2
Hesperophycus californicus	0.3	0.49	0.6	0.79	1.6	2.62	0.0	0.00	0.6
Neoptilota densa	1.6	3.90	0.0	0.00	0.0	0.00	0.0	0.00	0.4
coralline crust	0.3	0.88	< .1	< .01	0.1	0.29	0.2	0.34	0.2
Fucus gardneri	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.93	0.1
Gelidium coulteri	< .1	< .01	0.0	0.00	< .1	< .01	0.4	0.75	0.1
Corallina vancouveriensis	< .1	< .01	< .1	0.22	0.3	0.59	0.0	0.00	< .1
Mazzaella flaccida	0.0	0.00	0.0	0.00	< .1	< .01	0.3	0.67	< .1
Cladophora spp.	< .1	< .01	< .1	0.22	0.2	0.66	< .1	< .01	< .1
Porphyra spp.	0.0	0.00	0.1	0.29	< .1	0.22	< .1	0.22	< .1
Mazzaella heterocarpa	< .1	< .01	0.0	0.00	< .1	0.22	0.1	0.29	< .1
Prionitis spp.	0.0	0.00	0.0	0.00	< .1	0.22	< .1	< .01	< .1
Chondracanthus canaliculatus	< .1	< .01	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Gelidium pusillum	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
juv. articulated coralline algae	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Mazzaella affinis	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Mazzaella leptorhynchos	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Phyllospadix spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Calliarthron/Bossiella spp.-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cryptosiphonia woodii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	149.8	144.35	95.6	40.15	186.4	67.76	98.0	46.61	132.5
Anthopleura elegantissima	44.4	58.84	48.8	33.77	79.0	46.17	70.8	46.96	60.8
Macclintockia scabra	28.4	21.20	11.0	13.23	14.4	7.73	36.2	17.71	22.5
Pagurus spp.	0.0	0.00	4.4	5.37	23.0	22.48	8.6	15.42	9.0
Lottia digitalis	22.8	42.61	0.6	1.34	< .1	< .01	0.2	0.45	5.9
Lottia limatula	2.8	2.28	0.8	1.10	6.0	9.72	10.0	3.32	4.9
Lottia pelta	3.6	5.50	4.8	3.11	4.0	3.87	5.6	4.04	4.5
Cyanoplax spp.	4.6	5.73	2.0	1.22	1.6	2.07	3.2	2.95	2.9
Tectura scutum	1.2	1.30	1.2	1.79	1.4	1.14	3.2	3.11	1.8
Pollicipes polymerus	0.0	0.00	0.0	0.00	1.4	3.13	3.2	7.16	1.2
Ocenebra spp.	0.6	0.89	0.6	1.34	2.0	1.22	1.0	1.41	1.1
Pachygrapsus crassipes	1.6	0.89	0.2	0.45	0.6	0.89	0.4	0.89	0.7
Acanthina spp.	0.6	0.55	0.6	0.89	0.4	0.55	0.4	0.55	0.5
Phragmatopoma californica	0.1	0.31	0.1	0.31	< .1	< .01	0.1	0.31	0.1
Mopalia spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.2	0.45	< .1
Nucella emarginata	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.2	0.45	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Strongylocentrotus purpuratus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Haliotis spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Chthamalus fissus	< .1	0.00	< .1	< .01	< .1	0.00	< .1	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Littorina spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Epiactis prolifera	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Crepidula spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Nitidiscala/Opalia spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Nereididae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Serpulidae unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	46.5	21.92	32.7	20.52	40.6	14.66	55.3	14.20	43.8
sand (shell gravel)	10.0	11.82	4.4	6.37	1.0	1.61	5.6	12.27	5.2
bare cobble	0.3	0.49	0.3	0.88	0.7	1.35	0.1	0.44	0.4

Horizontal Band Transects Station FC 3+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	17-Jan-00		18-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	37.1	11.25	22.0	6.25	16.5	9.36	28.3	14.32	26.0
Mazzaella flaccida	6.6	9.00	24.7	15.18	28.8	23.82	13.3	12.03	18.3
Phyllospadix spp.	8.6	17.11	8.1	15.61	4.3	6.91	12.0	22.28	8.2
Egregia menziesii	2.8	4.48	5.8	10.29	12.5	13.22	10.2	15.80	7.8
Calliarthron/Bossiella spp.-complex	4.1	6.13	6.7	10.47	7.0	10.40	7.2	11.57	6.2
coralline crust	7.9	4.33	5.6	2.74	4.4	2.74	5.3	3.41	5.8
Gastroclonium subarticulatum	5.5	7.86	2.3	3.34	4.0	5.66	8.0	10.88	4.9
Corallina vancouveriensis	6.3	5.99	5.1	4.71	4.4	4.68	4.0	3.51	4.9
Chondracanthus canaliculatus	2.2	2.40	4.4	3.27	5.2	3.31	7.3	6.06	4.8
Gelidium coulteri	1.3	1.53	4.2	1.64	7.0	4.66	5.6	4.49	4.5
Mastocarpus papillatus	0.6	1.16	8.3	6.24	6.0	6.49	1.5	2.39	4.1
Mastocarpus jardinii	2.8	3.14	3.1	4.13	4.2	4.13	2.9	3.99	3.2
Mazzaella affinis	1.3	1.60	2.0	2.75	2.4	3.48	3.1	7.32	2.2
juv. articulated coralline algae	2.7	4.13	1.9	1.63	2.2	2.36	1.5	1.81	2.1
Cryptopleura violacea	1.5	2.21	0.1	0.44	2.1	3.45	3.5	2.68	1.8
Ulva/Enteromorpha spp.	0.3	0.59	0.3	0.49	1.2	2.10	5.0	5.27	1.7
Endocladia muricata	1.2	1.82	1.7	3.04	2.2	4.12	1.4	3.21	1.6
Mazzaella leptorhynchos	< .1	0.22	1.5	2.91	1.7	3.24	0.8	2.01	1.0
Spongomorpha/Acrosiphonia-complex	0.0	0.00	2.0	5.46	2.0	4.67	0.0	0.00	1.0
Porphyra spp.	< .1	< .01	1.0	1.19	2.1	2.51	0.7	1.54	1.0
Mazzaella heterocarpa	< .1	< .01	0.3	0.59	3.1	4.08	< .1	0.22	0.9
filamentous red algae-complex	0.0	0.00	1.4	2.60	0.3	0.67	< .1	0.22	0.4
Prionitis spp.	0.1	0.29	0.2	0.66	0.6	1.30	0.6	1.08	0.4
Grateloupia doryphora	0.7	1.96	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Callithamnion pikeanum	0.0	0.00	0.3	0.67	0.3	0.36	0.0	0.00	0.1
Osmundea spp.	0.1	0.44	< .1	< .01	0.0	0.00	0.3	0.49	0.1
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.47	< .1
Gelidium pusillum	< .1	0.22	< .1	< .01	< .1	0.22	< .1	< .01	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	< .1	0.22	0.0	0.00	< .1	< .01	< .1
Mazzaella lilacina	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Halymenia/Schizymenia spp.-complex	0.0	0.00	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Melobesia mediocris	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Colpomenia spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Cryptosiphonia woodii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Smithora naiadum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Chondracanthus corymbiferus	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Callithamnion spp./Pleonosporium spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Chrysophyta unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Pelvetia compressa	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Cystoseira osmundacea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Laminariales	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Strongylocentrotus purpuratus	39.4	63.18	51.2	102.85	41.2	68.82	53.4	89.23	46.3
Pagurus spp.	39.6	12.10	23.4	16.36	35.8	53.27	7.2	4.66	26.5
Tegula funebralis	33.6	47.69	40.6	54.30	1.8	1.64	3.8	4.97	20.0
Macclintockia scabra	9.4	11.17	32.0	32.63	8.4	4.83	1.8	2.49	12.9
Anthopleura elegantissima	15.2	8.11	12.6	6.77	7.8	5.22	6.6	5.13	10.6
	11.4	14.84	8.6	7.77	1.0	1.73	9.8	8.96	7.7
Tetraclita rubescens	5.6	10.92	6.2	5.85	5.8	11.86	8.8	9.73	6.6
Lottia pelta	9.6	7.50	6.2	6.98	3.2	1.79	1.0	1.41	5.0
Tectura scutum	1.2	1.64	3.0	2.35	11.2	6.98	1.8	2.49	4.3
Lottia limatula	5.2	1.64	8.0	6.63	1.8	2.17	1.2	1.30	4.1
Serpulorbis squamigerus	3.4	3.85	5.6	11.44	4.0	7.38	2.2	3.19	3.8
Fissurella volcano	3.4	3.71	4.0	4.64	5.0	5.20	2.4	1.52	3.7
Nemertea unid.	0.2	0.45	4.6	3.65	4.2	3.70	0.8	0.84	2.5
Pista spp.	1.1	2.48	< .1	< .01	1.1	2.12	6.3	10.83	2.1
Nuttallina californica	2.2	2.86	2.0	3.08	1.4	2.07	0.6	0.89	1.6

(*continued*)

Horizontal Band Transects Station FC 3+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	17-Jan-00		18-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Phragmatopoma californica	1.9	2.71	<.1	0.00	2.6	3.82	1.0	2.17	1.4
Leptasterias spp.	0.2	0.45	1.2	1.30	1.6	1.67	1.0	1.22	1.0
Chthamalus fissus	0.3	0.62	<.1	0.00	<.1	0.00	2.5	3.42	0.7
Acmaea mitra	0.8	1.10	<.1	<.01	1.0	2.24	0.4	0.55	0.6
Ocenebra spp.	0.2	0.45	0.6	0.55	0.2	0.45	1.2	1.30	0.6
Serpulidae unid.	<.1	<.01	0.8	1.10	0.8	1.79	0.0	0.00	0.4
Pachygrapsus crassipes	0.0	0.00	0.6	0.89	1.0	1.22	0.0	0.00	0.4
Epiactis prolifera	0.2	0.45	0.2	0.45	0.0	0.00	0.6	1.34	0.3
Pugettia spp.	0.2	0.45	0.4	0.55	0.0	0.00	0.0	0.00	0.2
Acanthina spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.4	0.89	<.1
Crepidula spp.	<.1	<.01	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Calliostoma ligatum	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Cyanoplax spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	<.1
Diodora spp.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Alia spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Tonicella lineata	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Diaulula sandiegensis	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Mitra idae	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Ophiothrix spp.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	0.1	0.31	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.00	<.1	<.01	<.1	<.01	<.1
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Sipuncula unid.	0.0	0.00	<.1	0.00	<.1	<.01	0.0	0.00	<.1
Discurria insessa	<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.00	<.1
Lacuna spp.	0.0	0.00	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Lottia asmi	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Nereididae unid.	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Porifera unid. (encrusting)	0.0	0.00	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Bryozoa, unid. (encrusting)	<.1	<.01	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Littorina spp.	0.0	0.00	0.0	0.00	<.1	<.01	0.0	0.00	<.1
Sabellidae	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Platyhelminthes unid.	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Lissothuria nutriens	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Tectura paleacea	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Homolopoma/Lirularia spp.	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Substrate									
bare rock	14.9	8.22	16.7	13.55	13.1	10.92	5.8	3.31	12.6
sand (shell gravel)	3.1	5.62	2.2	2.38	1.4	3.45	3.2	5.89	2.5
bare cobble	1.3	2.51	0.8	1.22	<.1	0.22	0.4	1.10	0.6

Horizontal Band Transects Station FC 3+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	4-Feb-00		18-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	40.7	20.72	47.8	20.42	36.5	15.99	27.9	12.92	38.2
Mastocarpus papillatus	13.6	12.38	16.7	17.16	26.7	25.51	21.3	23.77	19.6
non-coralline crust	18.1	16.21	10.3	8.44	7.7	4.88	19.4	7.78	13.9
Mazzaella flaccida	1.6	2.25	0.4	0.49	1.1	1.47	4.9	5.06	2.0
Mastocarpus jardinii	< .1	0.22	< .1	0.22	0.1	0.44	6.9	11.86	1.8
coralline crust	1.7	2.76	1.4	1.82	0.7	0.80	2.1	2.47	1.5
Gelidium coulteri	0.4	0.75	0.1	0.29	0.6	0.79	2.7	5.74	1.0
Corallina vancouveriensis	0.7	1.18	1.7	4.56	< .1	0.22	0.8	1.79	0.8
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	2.5	6.04	0.6
Cladophora spp.	< .1	0.00	< .1	0.22	0.8	0.76	1.0	1.47	0.5
Mazzaella affinis	0.6	1.53	< .1	< .01	0.1	0.29	1.2	1.18	0.5
Calliarthron/Bossiella spp.-complex	0.0	0.00	< .1	< .01	1.7	4.19	0.2	0.66	0.5
Pelvetia compressa	0.6	1.98	< .1	< .01	0.3	0.67	0.4	0.67	0.3
Mazzaella leptorhynchos	< .1	< .01	< .1	< .01	0.3	1.10	1.0	1.36	0.3
Chondracanthus canaliculatus	< .1	< .01	< .1	< .01	< .1	< .01	1.1	1.64	0.3
Porphyra spp.	< .1	0.22	0.3	0.59	0.5	0.87	0.0	0.00	0.2
Gelidium pusillum	0.2	0.34	< .1	0.00	0.5	0.66	< .1	< .01	0.2
Mazzaella heterocarpa	0.3	0.67	0.0	0.00	0.3	0.49	< .1	0.22	0.2
Fucus gardneri	< .1	< .01	0.0	0.00	0.6	1.55	0.0	0.00	0.2
Hesperophycus californicus	0.2	0.47	0.2	0.66	0.0	0.00	0.1	0.44	0.1
Codium setchellii	0.0	0.00	0.0	0.00	0.0	0.00	0.4	1.32	0.1
Cryptosiphonia woodii	< .1	0.22	< .1	< .01	< .1	0.22	0.2	0.66	< .1
juv. articulated coralline algae	< .1	< .01	< .1	< .01	< .1	< .01	0.1	0.44	< .1
Gastroclonium subarticulatum	0.0	0.00	< .1	0.22	< .1	0.22	< .1	< .01	< .1
Prionitis spp.	0.0	0.00	< .1	0.22	< .1	0.22	0.0	0.00	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	< .1	0.22	< .1	< .01	< .1
Cryptopleura violacea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Callithamnion./Pleonosporium spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
filamentous red algae-complex	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Invertebrates									
Tegula funebralis	77.2	75.99	212.0	123.91	421.6	156.10	198.8	96.45	227.4
Macclintockia scabra	13.2	13.54	9.0	6.96	20.0	19.85	24.4	18.47	16.7
Pagurus spp.	27.2	18.74	8.4	3.78	8.0	6.16	22.8	12.91	16.6
Anthopleura elegantissima	9.8	6.98	10.4	7.47	15.2	24.14	24.6	30.10	15.0
Tectura scutum	1.0	1.22	2.0	4.47	2.0	2.74	1.6	3.58	1.7
Lottia limatula	1.2	2.17	1.2	0.84	1.0	1.22	2.0	2.35	1.4
Ocenebra spp.	0.2	0.45	1.0	1.41	< .1	< .01	2.8	2.17	1.0
Lottia pelta	0.8	0.84	2.2	1.64	0.2	0.45	0.8	0.84	1.0
Cyanoplax spp.	0.0	0.00	0.6	0.89	2.0	1.87	0.6	0.89	0.8
Pachygrapsus crassipes	0.2	0.45	0.4	0.55	1.0	1.22	0.4	0.89	0.5
Phragmatopoma californica	1.0	1.44	0.3	0.38	< .1	< .01	0.1	0.31	0.3
Nemertea unid.	0.2	0.45	0.0	0.00	0.4	0.55	0.2	0.45	0.2
Mopalia spp.	0.2	0.45	0.0	0.00	0.2	0.45	0.2	0.45	0.2
Nuttallina californica	0.4	0.55	0.0	0.00	0.0	0.00	0.2	0.45	0.2
Acanthina spp.	0.0	0.00	0.0	0.00	0.6	0.55	0.0	0.00	0.2
Strongylocentrotus purpuratus	0.2	0.45	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	0.2	0.45	< .1	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Chthamalus fissus	< .1	< .01	< .1	0.00	< .1	< .01	< .1	< .01	< .1
Littorina spp.	< .1	< .01	0.0	0.00	< .1	0.00	< .1	< .01	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Lacuna spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Serpulidae unid.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Haliclona spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Spirorbidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1

(*continued*)

Horizontal Band Transects Station FC 3+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	4-Feb-00		18-May-00		14-Jul-00		10-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Substrate									
bare rock	21.9	18.34	26.7	17.58	26.2	16.15	16.0	11.12	22.7
sand (shell gravel)	6.7	10.54	2.7	4.81	3.1	5.87	2.1	3.02	3.6
bare cobble	0.5	1.09	0.7	1.31	0.1	0.29	0.1	0.44	0.4

Horizontal Band Transects Station NDC 1+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	18-Jan-00		31-May-00		18-Jul-00		16-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	13.3	5.83	18.5	6.91	19.1	8.59	22.6	10.31	18.4
coralline crust	4.9	2.93	3.2	3.66	0.9	1.91	2.3	3.24	2.8
Corallina vancouveriensis	5.1	5.07	< .1	< .01	0.0	0.00	0.0	0.00	1.3
Mastocarpus papillatus	< .1	< .01	0.0	0.00	< .1	< .01	1.7	1.40	0.4
juv. articulated coralline algae	1.1	2.13	0.0	0.00	< .1	< .01	0.4	0.75	0.4
Gelidium coulteri	0.0	0.00	0.0	0.00	0.1	0.44	0.9	1.04	0.3
Prionitis spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	1.10	< .1
Mazzaella affinis	< .1	< .01	0.0	0.00	< .1	< .01	0.3	0.59	< .1
Calliarthron/Bossiella spp.-complex	0.2	0.66	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Chondracanthus canaliculatus	< .1	< .01	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Mazzaella leptorhynchos	0.0	0.00	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Callithamnion/Pleonosporium spp.	< .1	0.22	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Gelidium pusillum	0.0	0.00	0.0	0.00	< .1	< .01	< .1	0.00	< .1
Cladophora spp.	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Colpomenia spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gastroclonium subarticulatum	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mazzaella heterocarpa	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Endocladia muricata	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mastocarpus jardinii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sarcodiotheca gaudichaudii	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
filamentous red algae-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	103.4	98.02	244.6	47.91	212.8	125.97	303.4	124.73	216.1
Macclintockia scabra	176.2	80.79	162.2	76.19	290.4	144.39	206.0	56.76	208.7
Pagurus spp.	32.6	43.04	49.6	29.46	12.6	21.04	9.0	10.20	26.0
Strongylocentrotus purpuratus	11.0	19.07	49.6	86.67	6.6	6.77	4.0	2.92	17.8
Lottia limatula	10.6	2.79	18.4	9.40	21.4	15.92	17.2	8.87	16.9
Lottia pelta	26.8	21.08	18.6	10.62	3.0	1.22	14.0	12.00	15.6
Tetraclita rubescens	22.4	12.52	13.2	10.08	9.4	13.65	16.6	31.64	15.4
Lottia digitalis	24.2	25.24	14.8	13.70	11.2	8.11	10.2	7.73	15.1
Tectura scutum	8.8	4.60	0.8	1.79	14.2	16.80	23.8	7.46	11.9
Phragmatopoma californica	10.0	8.05	5.1	3.13	1.5	2.71	3.5	1.39	5.0
Anthopleura elegantissima	8.6	5.55	3.8	1.30	3.2	2.86	2.4	2.61	4.5
Serpulidae unid.	2.6	1.67	2.2	0.45	1.6	1.14	2.2	2.17	2.2
Tegula brunnea	2.6	5.81	0.0	0.00	1.4	3.13	2.0	4.47	1.5
Pachygrapsus crassipes	1.4	1.34	0.0	0.00	1.6	1.34	1.6	1.82	1.2
Nuttallina californica	1.0	1.00	1.2	1.64	1.0	1.22	0.6	1.34	1.0
Fissurella volcano	2.4	2.88	0.0	0.00	0.4	0.89	0.4	0.89	0.8
Cyanoplax spp.	1.4	2.07	0.4	0.55	0.2	0.45	1.0	1.41	0.8
Anthopleura xanthogrammica	0.4	0.55	0.2	0.45	0.8	0.45	1.2	0.45	0.7
Ocenebra spp.	0.8	0.84	0.4	0.55	0.6	1.34	0.0	0.00	0.5
Littorina spp.	0.0	0.00	0.0	0.00	1.6	3.58	< .1	< .01	0.4
Mopalia spp.	0.0	0.00	0.4	0.55	0.0	0.00	0.2	0.45	0.2
Chthamalus fissus	< .1	0.00	< .1	0.00	< .1	0.00	0.6	0.91	0.1
Acanthina spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Mytilus spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Lottia gigantea	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	58.0	10.81	46.9	24.69	58.8	16.88	40.8	14.25	51.1
bare cobble	12.5	5.13	20.2	12.63	18.0	10.76	28.1	11.82	19.7
sand (shell gravel)	2.8	3.74	7.6	6.47	2.4	2.70	4.4	4.02	4.3

Horizontal Band Transects Station NDC 1+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	3-Feb-00		31-May-00		18-Jul-00		16-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	29.9	20.04	22.8	9.50	25.3	11.82	28.4	12.53	26.6
Endocladia muricata	3.7	5.21	7.2	10.43	4.1	7.16	5.0	7.81	5.0
Mastocarpus papillatus	< .1	0.22	1.1	1.97	1.3	2.59	3.6	5.51	1.5
coralline crust	1.9	2.52	1.0	1.71	< .1	0.22	0.6	0.69	0.9
Mazzaella affinis	0.0	0.00	0.0	0.00	< .1	< .01	0.4	1.10	0.1
Mazzaella leptorhynchos	< .1	< .01	0.0	0.00	< .1	< .01	0.3	0.67	< .1
Corallina vancouveriensis	0.0	0.00	0.1	0.44	0.0	0.00	< .1	< .01	< .1
Gelidium coulteri	0.0	0.00	0.0	0.00	< .1	< .01	0.1	0.44	< .1
Gelidium pusillum	0.0	0.00	0.0	0.00	< .1	< .01	< .1	0.22	< .1
juv. articulated coralline algae	< .1	0.22	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Chondracanthus canaliculatus	< .1	< .01	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Mastocarpus jardinii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	141.2	41.74	214.2	39.03	347.8	164.39	277.6	31.29	245.2
Macclintockia scabra	25.4	27.48	110.6	87.96	271.0	195.35	213.0	65.68	155.0
Lottia digitalis	59.4	59.89	48.8	41.90	3.6	5.13	8.2	10.03	30.0
Anthopleura elegantissima	18.4	16.10	25.4	27.51	30.8	37.20	27.2	29.59	25.5
Lottia limatula	11.0	6.67	6.2	3.11	17.8	16.01	7.6	3.21	10.7
Pagurus spp.	7.4	11.13	11.0	16.42	0.4	0.55	6.0	4.18	6.2
Lottia pelta	1.0	0.71	5.2	1.64	3.0	2.45	1.4	2.61	2.7
Cyanoplax spp.	0.4	0.55	0.6	0.89	2.2	1.92	4.6	1.82	2.0
Tectura scutum	0.0	0.00	0.2	0.45	1.6	1.14	5.0	2.83	1.7
Acanthina spp.	0.6	0.55	1.4	1.95	1.0	1.22	0.4	0.55	0.9
Ocenebra spp.	1.6	1.82	0.2	0.45	0.8	0.84	0.6	0.89	0.8
Pachygrapsus crassipes	0.0	0.00	0.6	0.89	0.8	0.45	1.2	1.64	0.7
Mopalia spp.	0.2	0.45	1.0	1.00	0.2	0.45	0.2	0.45	0.4
Tegula brunnea	0.4	0.89	0.0	0.00	0.8	1.79	0.0	0.00	0.3
Fissurella volcano	0.4	0.55	0.2	0.45	0.0	0.00	0.4	0.89	0.3
Chthamalus fissus	< .1	0.00	< .1	0.00	1.0	2.17	< .1	0.00	0.2
Serpulidae unid.	0.4	0.89	0.4	0.55	0.0	0.00	0.0	0.00	0.2
Lottia asmi	0.2	0.45	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Mytilus californianus	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Nuttallina californica	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Asterina miniata	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Strongylocentrotus purpuratus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophiothrix spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Phragmatopoma californica	< .1	< .01	< .1	0.00	< .1	< .01	< .1	0.00	< .1
Littorina spp.	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	43.7	24.45	42.8	16.32	47.0	19.36	46.3	21.33	45.0
bare cobble	14.2	11.96	11.4	10.77	15.4	10.93	9.7	8.67	12.7
sand (shell gravel)	6.3	6.34	11.1	10.49	7.3	6.43	7.5	6.88	8.0

Horizontal Band Transects Station NDC 2+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	23.5	14.28	15.7	9.59	21.7	17.30	33.4	16.43	23.6
Phyllospadix spp.	17.4	21.04	13.7	18.17	16.9	20.94	24.1	30.86	18.0
filamentous red algae-complex	23.3	20.25	0.2	0.66	27.6	25.44	2.3	2.58	13.3
Gastroclonium subarticulatum	2.6	2.22	5.8	6.79	6.7	6.97	8.5	5.97	5.9
coralline crust	8.2	6.17	5.8	4.37	3.8	5.63	3.2	5.18	5.3
Bryopsis spp.	0.0	0.00	19.4	23.22	< .1	< .01	< .1	< .01	4.8
Prionitis spp.	2.8	4.54	2.5	5.77	1.6	3.51	2.8	5.02	2.4
Chondracanthus canaliculatus	1.0	1.14	0.9	1.09	1.9	3.12	3.7	3.89	1.9
Pterosiphonia dendroidea	0.0	0.00	< .1	< .01	< .1	0.22	7.0	10.69	1.8
Mazzaella affinis	0.3	0.49	1.8	1.61	3.1	4.11	1.0	0.82	1.6
juv. articulated coralline algae	0.8	1.01	3.7	7.54	0.2	0.66	0.3	0.49	1.2
Mastocarpus papillatus	0.3	0.88	1.2	1.54	2.7	4.63	0.3	0.75	1.1
Mazzaella leptorhynchos	0.8	1.66	2.8	3.89	0.3	0.88	0.2	0.34	1.0
Corallina vancouveriensis	2.2	3.84	1.6	5.05	< .1	< .01	0.1	0.29	1.0
Smithora naiadum	0.0	0.00	0.0	0.00	0.0	0.00	3.5	7.80	0.9
Cladophora spp.	< .1	< .01	< .1	0.22	< .1	< .01	3.2	3.66	0.8
Gelidium coulteri	0.2	0.66	0.6	0.64	1.3	2.35	1.2	0.98	0.8
Endocladia muricata	0.1	0.44	1.3	3.15	0.7	1.22	< .1	< .01	0.5
Ulva/Enteromorpha spp.	0.3	0.49	< .1	0.22	0.1	0.44	1.3	0.91	0.4
Halymenia/Schizymenia spp.-complex	0.2	0.66	0.6	1.16	0.8	1.95	< .1	0.22	0.4
Mazzaella heterocarpa	0.7	1.73	0.0	0.00	0.1	0.29	0.3	0.49	0.3
Calliarthron/Bossiella spp.-complex	0.8	1.79	0.1	0.44	< .1	0.22	< .1	< .01	0.3
Cryptopleura violacea	< .1	< .01	< .1	< .01	0.6	0.91	0.4	0.49	0.2
Grateloupia doryphora	0.0	0.00	0.2	0.47	0.0	0.00	< .1	0.22	< .1
Sargassum muticum	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.44	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	< .1	0.22	0.0	0.00	< .1	< .01	< .1
Chrysophyta unid.	0.0	0.00	< .1	< .01	< .1	< .01	< .1	0.22	< .1
Osmundea spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Melobesia mediocris	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Colpomenia spp.	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Gelidium pusillum	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Chondracanthus corymbiferus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gloiosiphonia californica	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Farlowia/Pikea spp.-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Macclintockia scabra	118.2	91.21	195.6	207.18	192.0	175.59	253.6	337.37	189.9
Tetraclita rubescens	59.8	123.70	38.2	66.01	101.6	166.81	80.8	153.95	70.1
Tegula funebralis	66.0	72.00	59.6	93.98	19.2	28.12	25.0	34.45	42.5
Lottia digitalis	80.0	117.85	32.0	71.55	30.0	67.08	3.0	6.71	36.3
Lottia pelta	11.8	14.18	26.2	30.14	33.6	59.02	9.4	8.96	20.3
Lottia limatula	6.2	4.60	14.2	10.13	44.8	23.85	4.4	3.97	17.4
Strongylocentrotus purpuratus	19.8	32.07	15.6	23.26	6.8	13.01	9.0	12.08	12.8
Fissurella volcano	30.8	40.61	3.4	4.67	8.6	9.18	4.2	3.19	11.8
Pagurus spp.	10.6	8.29	4.4	3.36	25.2	33.04	0.8	0.84	10.3
Anthopleura elegantissima	4.8	5.45	3.8	4.71	4.6	6.15	3.0	4.12	4.1
Tectura scutum	0.4	0.89	4.0	2.55	8.0	9.25	0.4	0.89	3.2
Chthamalus fissus	< .1	0.00	1.9	4.35	2.6	4.24	4.4	8.14	2.3
Nuttallina californica	2.0	3.94	1.2	1.64	4.4	9.84	0.6	1.34	2.1
Lottia gigantea	1.8	4.02	1.2	2.68	0.8	1.79	1.6	3.58	1.4
Cyanoplax spp.	0.8	1.10	1.8	2.49	1.8	1.10	0.8	1.10	1.3
Pachygrapsus crassipes	1.2	1.30	1.6	1.14	1.6	1.52	0.2	0.45	1.2
Tegula brunnea	4.0	8.94	0.0	0.00	0.0	0.00	0.0	0.00	1.0
Ocenebra spp.	0.4	0.55	1.0	1.73	0.6	0.55	0.4	0.89	0.6
Serpulidae unid.	1.2	2.68	0.0	0.00	0.4	0.55	0.0	0.00	0.4
Pista spp.	1.1	1.81	< .1	< .01	0.0	0.00	0.4	0.62	0.4
Acanthina spp.	0.0	0.00	0.6	0.89	0.0	0.00	0.2	0.45	0.2
Mytilus californianus	0.4	0.89	0.0	0.00	0.0	0.00	0.2	0.45	0.2

(*continued*)

Horizontal Band Transects Station NDC 2+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Pugettia spp.	0.2	0.45	0.2	0.45	0.2	0.45	0.0	0.00	0.2
Mopalia spp.	0.6	0.89	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Diopatra ornata	0.0	0.00	0.0	0.00	0.4	0.55	0.0	0.00	< .1
Haliotis spp.	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaea mitra	0.2	0.45	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ophiothrix spp.	0.0	0.00	0.2	0.45	< .1	< .01	0.0	0.00	< .1
Epiactis prolifera	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Phragmatopoma californica	0.1	0.31	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lacuna spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mytilus spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Heptacarpus spp.	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Littorina spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Nereididae unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
tunicates, colonial/social unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Ophiuroidea unid.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	26.7	19.04	30.5	21.26	19.5	16.06	13.5	6.86	22.5
bare cobble	4.1	4.11	3.5	3.89	6.3	6.20	6.5	6.17	5.1
sand (shell gravel)	3.8	3.63	3.5	4.40	4.4	5.21	5.4	9.81	4.3

Horizontal Band Transects Station NDC 2+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	3-Feb-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Endocladia muricata	5.2	6.82	13.3	15.94	9.9	13.19	13.2	16.05	10.4
non-coralline crust	0.8	0.76	1.9	1.49	2.1	2.47	2.6	4.74	1.9
coralline crust	1.1	1.74	1.6	1.91	0.6	0.83	1.0	0.94	1.1
Mastocarpus papillatus	0.1	0.44	0.7	1.13	0.3	0.36	0.9	1.99	0.5
juv. articulated coralline algae	< .1	< .01	0.7	1.96	0.2	0.66	0.2	0.47	0.3
Corallina vancouveriensis	0.3	0.88	0.3	1.10	0.0	0.00	< .1	0.22	0.2
Gelidium coulteri	< .1	< .01	< .1	0.22	0.3	0.75	0.1	0.44	0.1
Mazzaella affinis	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.29	< .1
Chondracanthus canaliculatus	0.0	0.00	0.0	0.00	< .1	0.22	< .1	< .01	< .1
filamentous red algae-complex	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Calliarthron/Bossiella spp.-complex	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Porphyra spp.	0.0	0.00	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	< .01	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	< .1	< .01	< .1	0.00	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gastroclonium subarticulatum	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Mazzaella leptorhynchos	0.0	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Prionitis spp.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Pterosiphonia dendroidea	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Macclintockia scabra	379.2	165.95	209.0	53.40	306.4	152.20	311.6	232.98	301.6
Tegula funebralis	214.4	156.16	126.0	32.07	235.0	127.14	47.2	41.66	155.7
Anthopleura elegantissima	65.8	73.35	59.0	63.86	50.2	53.36	52.8	64.81	57.0
Lottia limatula	29.0	27.64	9.0	6.08	28.2	19.98	30.6	22.02	24.2
Lottia digitalis	3.6	4.98	15.4	12.34	25.0	40.35	47.6	91.40	22.9
Tectura scutum	1.6	2.30	7.4	9.91	16.2	12.01	0.4	0.89	6.4
Pagurus spp.	8.4	15.18	1.8	2.49	11.0	5.34	2.0	3.08	5.8
Cyanoplax spp.	2.4	3.36	4.6	2.61	13.6	6.23	2.4	1.14	5.8
Lottia pelta	1.0	2.24	0.0	0.00	5.0	10.07	1.2	0.84	1.8
Pachygrapsus crassipes	0.4	0.89	0.8	1.10	2.8	1.64	0.0	0.00	1.0
Mytilus californianus	0.0	0.00	2.0	2.83	0.0	0.00	0.8	1.30	0.7
Chthamalus fissus	0.7	0.49	0.8	0.91	0.8	0.91	0.3	0.38	0.7
Acanthina spp.	0.2	0.45	0.6	0.89	1.0	1.73	0.4	0.55	0.6
Tetraclita rubescens	0.4	0.89	0.6	1.34	0.8	1.30	0.2	0.45	0.5
Nuttallina californica	0.6	1.34	0.6	1.34	0.0	0.00	0.6	1.34	0.5
Lottia gigantea	0.2	0.45	0.2	0.45	0.2	0.45	1.0	2.24	0.4
Ocenebra spp.	0.0	0.00	0.8	1.79	0.4	0.55	0.4	0.55	0.4
Tegula brunnea	0.0	0.00	0.0	0.00	1.2	2.68	0.0	0.00	0.3
Mopalia spp.	0.0	0.00	0.0	0.00	0.4	0.55	0.6	1.34	0.3
Strongylocentrotus purpuratus	0.4	0.89	0.0	0.00	0.4	0.89	0.2	0.45	0.3
Diopatra ornata	0.0	0.00	0.0	0.00	0.8	1.79	0.0	0.00	0.2
Fissurella volcano	0.4	0.89	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Phragmatopoma californica	< .1	< .01	0.1	0.31	0.1	0.31	< .1	< .01	< .1
Pisaster ochraceus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Littorina spp.	< .1	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Mytilus spp.	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Spirorbidae	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Crepidula spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Nereididae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	89.8	7.80	75.2	18.98	84.1	12.39	78.2	16.77	81.8
bare cobble	2.1	3.91	4.4	7.67	1.3	2.26	4.2	5.42	3.0
sand (shell gravel)	0.1	0.44	0.4	1.10	< .1	< .01	< .1	< .01	0.1

Horizontal Band Transects Station NDC 3+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	25.8	10.77	30.3	10.30	25.3	10.58	41.4	18.98	30.7
coralline crust	18.7	9.19	13.1	6.51	7.7	5.42	8.1	6.31	11.9
Corallina vancouveriensis	11.2	5.85	10.1	12.77	2.9	4.05	5.4	6.19	7.4
filamentous red algae-complex	1.9	3.77	2.4	4.70	7.8	13.63	2.6	3.48	3.7
juv. articulated coralline algae	3.3	2.83	3.1	1.83	1.9	1.85	0.7	0.87	2.3
Calliarthron/Bossiella spp.-complex	1.4	2.02	1.0	2.20	0.6	1.41	2.4	3.31	1.4
Gelidium coulteri	0.6	1.53	0.9	1.14	1.5	1.48	1.7	2.39	1.1
Prionitis spp.	0.3	0.67	<.1	0.22	0.5	0.87	2.8	5.85	0.9
Gastroclonium subarticulatum	0.1	0.44	0.3	0.67	0.9	2.15	2.0	6.13	0.8
Chrysophyta unid.	0.0	0.00	0.1	0.29	0.5	1.09	1.1	2.13	0.4
Endocladia muricata	0.0	0.00	0.0	0.00	1.3	3.95	0.0	0.00	0.3
Chondracanthus canaliculatus	0.3	0.49	0.2	0.47	0.3	0.67	0.1	0.44	0.3
Ulva/Enteromorpha spp.	<.1	<.01	<.1	<.01	<.1	<.01	0.6	0.83	0.2
Gelidium pusillum	0.0	0.00	0.0	0.00	<.1	<.01	0.3	0.67	<.1
Sarcodiotheca gaudichaudii	0.0	0.00	0.1	0.44	0.0	0.00	<.1	0.22	<.1
Endarachne/Petalonia-complex	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.29	<.1
Mazzaella leptorhynchos	0.0	0.00	0.0	0.00	0.1	0.44	0.0	0.00	<.1
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.29	<.1
Callitham. spp./Pleonosporium spp.	<.1	<.01	<.1	0.22	0.0	0.00	0.0	0.00	<.1
Mastocarpus papillatus	0.0	0.00	<.1	0.22	<.1	<.01	0.0	0.00	<.1
Pterosiphonia dendroidea	0.0	0.00	0.0	0.00	0.0	0.00	<.1	0.22	<.1
Cladophora spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Mazzaella affinis	<.1	<.01	0.0	0.00	<.1	<.01	<.1	<.01	<.1
Colpomenia spp.	<.1	<.01	0.0	0.00	<.1	<.01	<.1	<.01	<.1
Bryopsis spp.	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Codium setchellii	<.1	<.01	0.0	0.00	<.1	<.01	0.0	0.00	<.1
Grateloupia doryphora	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Cryptopleura violacea	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Porphyra spp.	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Invertebrates									
Macclintockia scabra	228.8	146.34	204.0	173.38	269.6	136.76	202.4	103.95	226.2
Tetraclita rubescens	222.0	169.11	159.6	141.89	129.0	120.59	43.4	53.78	138.5
Lottia pelta	20.4	15.18	24.8	16.33	208.0	138.52	31.8	29.52	71.3
Lottia limatula	23.4	39.07	5.0	1.87	70.6	35.10	18.4	14.48	29.4
Strongylocentrotus purpuratus	24.2	17.66	30.4	6.84	19.8	9.98	32.2	20.54	26.7
Lottia digitalis	0.0	0.00	5.4	12.07	0.0	0.00	71.8	108.98	19.3
Fissurella volcano	31.6	11.19	4.8	6.38	12.4	23.44	8.8	12.56	14.4
Tectura scutum	0.0	0.00	2.6	1.95	30.2	24.63	0.4	0.89	8.3
Tegula funebralis	0.2	0.45	18.6	28.06	0.8	1.30	0.2	0.45	5.0
Tegula brunnea	2.2	3.90	1.2	1.79	12.2	18.93	0.6	0.89	4.1
Anthopleura elegantissima	2.4	4.28	10.6	23.70	0.2	0.45	1.0	1.41	3.6
Nuttallina californica	3.0	3.16	3.6	6.07	5.2	8.90	0.4	0.89	3.1
Chthamalus fissus	<.1	0.00	2.4	5.28	0.4	0.62	8.5	12.18	2.8
Pachygrapsus crassipes	2.6	1.52	2.0	1.87	4.2	1.30	0.6	0.89	2.4
Pagurus spp.	3.2	5.22	5.4	8.05	0.2	0.45	0.4	0.55	2.3
Mytilus spp.	<.1	<.01	0.0	0.00	7.2	16.10	<.1	<.01	1.8
Serpulidae unid.	2.4	1.14	1.0	1.41	2.0	1.87	0.4	0.89	1.5
Cyanoplax spp.	0.8	1.79	<.1	<.01	3.0	4.24	1.8	3.03	1.4
Mytilus californianus	0.0	0.00	<.1	<.01	5.0	7.55	0.0	0.00	1.3
Mopalia spp.	1.4	1.14	1.6	1.67	1.0	1.41	0.4	0.55	1.1
Lottia gigantea	1.0	1.73	1.4	3.13	0.0	0.00	1.6	2.61	1.0
Phragmatopoma californica	1.9	3.20	0.1	0.31	1.0	1.44	<.1	0.00	0.8
Mytilus galloprovincialis	<.1	<.01	<.1	<.01	0.0	0.00	2.6	5.81	0.7
Ocenebra spp.	0.2	0.45	<.1	<.01	1.0	1.73	0.6	0.89	0.5
Acmaea mitra	0.4	0.89	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Nemertea unid.	0.0	0.00	0.4	0.89	0.0	0.00	0.0	0.00	<.1
Diodora spp.	0.0	0.00	0.2	0.45	0.2	0.45	0.0	0.00	<.1

(*continued*)

Horizontal Band Transects Station NDC 3+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Serpulorbis squamigerus	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Haliotis spp.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Tonicella lineata	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Dodecaceria fewkesi	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pista spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Pugettia spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Lissothuria nutriens	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	32.8	10.18	30.2	16.14	45.4	19.81	24.3	12.90	33.2
bare cobble	5.4	4.89	7.1	6.17	8.8	11.49	9.9	9.36	7.8
sand (shell gravel)	0.0	0.00	0.3	1.10	< .1	< .01	0.0	0.00	< .1

Horizontal Band Transects Station NDC 3+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	9.9	8.15	13.0	11.57	11.7	11.55	26.5	21.94	15.3
coralline crust	2.1	2.24	1.3	1.52	1.5	1.49	1.5	1.06	1.6
Endocladia muricata	0.7	1.31	1.7	2.56	1.3	1.72	2.6	6.46	1.6
Corallina vancouveriensis	1.1	1.36	0.3	1.10	0.0	0.00	0.4	0.67	0.5
Gelidium coulteri	< .1	< .01	0.0	0.00	0.4	1.32	1.3	2.08	0.4
Chrysophyta unid.	0.0	0.00	0.0	0.00	0.9	2.85	0.3	1.10	0.3
juv. articulated coralline algae	< .1	< .01	0.0	0.00	0.5	0.57	0.2	0.34	0.2
Porphyra spp.	0.0	0.00	0.2	0.34	0.5	0.66	0.0	0.00	0.2
Calliarthron/Bossiella spp.-complex	< .1	< .01	< .1	< .01	< .1	0.22	0.3	0.49	< .1
Mastocarpus papillatus	0.0	0.00	< .1	< .01	0.1	0.44	< .1	0.22	< .1
Mazzaella affinis	0.0	0.00	0.0	0.00	< .1	< .01	0.2	0.34	< .1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	0.2	0.66	0.0	0.00	< .1
filamentous red algae-complex	< .1	0.22	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.44	< .1
Prionitis spp.	< .1	0.22	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Codium fragile	< .1	0.22	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Gelidium pusillum	0.0	0.00	0.0	0.00	< .1	0.22	< .1	0.00	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Cladophora spp.	0.0	0.00	0.0	0.00	< .1	0.00	< .1	< .01	< .1
Cryptopleura violacea	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Mazzaella leptorhynchos	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Callithamnion./Pleonosporium spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Macclintockia scabra	324.6	78.91	229.8	83.66	571.6	286.36	216.4	37.17	335.6
Tegula funebralis	86.4	38.79	112.0	89.50	125.4	115.98	23.0	26.36	86.7
Lottia digitalis	25.2	23.62	15.0	7.91	19.8	27.50	74.4	47.25	33.6
Lottia limatula	45.6	43.51	2.8	3.35	40.4	29.42	23.2	21.51	28.0
Tectura scutum	1.2	2.68	6.4	6.19	37.0	52.59	4.2	4.60	12.2
Lottia pelta	8.0	8.46	23.8	22.79	7.0	9.70	4.2	5.85	10.8
Chthamalus fissus	4.4	6.16	7.6	7.95	2.1	2.25	16.0	16.69	7.5
Tetraclita rubescens	7.8	9.65	4.2	4.38	4.6	3.65	1.4	1.52	4.5
Lottia gigantea	6.2	7.60	3.0	4.24	1.4	2.19	5.4	9.10	4.0
Strongylocentrotus purpuratus	2.6	2.19	4.4	6.11	4.8	4.21	2.6	1.67	3.6
Pagurus spp.	3.2	7.16	5.4	5.03	0.2	0.45	4.0	7.31	3.2
Mytilus californianus	0.8	1.79	< .1	< .01	3.8	6.94	2.8	6.26	1.9
Fissurella volcano	4.8	5.89	0.0	0.00	1.2	2.17	1.4	3.13	1.9
Pachygrapsus crassipes	2.8	1.92	0.8	1.10	2.8	1.92	0.6	0.89	1.8
Cyanoplax spp.	0.2	0.45	0.2	0.45	3.2	1.30	0.8	1.30	1.1
Mopalia spp.	0.8	1.10	1.2	2.68	0.6	1.34	0.6	0.89	0.8
Phragmatopoma californica	0.7	0.98	0.3	0.62	1.1	1.60	0.3	0.62	0.6
Tegula brunnea	0.2	0.45	1.0	1.73	1.0	2.24	0.0	0.00	0.6
Nuttallina californica	1.4	2.61	0.0	0.00	0.0	0.00	0.0	0.00	0.4
Ocenebra spp.	0.0	0.00	0.2	0.45	0.6	0.89	0.6	0.89	0.4
Anthopleura elegantissima	0.6	0.55	0.2	0.45	0.2	0.45	0.2	0.45	0.3
Pollicipes polymerus	0.0	0.00	0.4	0.89	0.4	0.89	< .1	< .01	0.2
Serpulidae unid.	0.8	0.84	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Serpulorbis squamigerus	0.0	0.00	0.0	0.00	0.0	0.00	0.6	1.34	0.2
Acanthina spp.	0.0	0.00	0.0	0.00	0.4	0.89	0.0	0.00	< .1
Tonicella lineata	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Ophiothrix spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	< .01	< .1
Littorina spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lottia asmi	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Pelecypoda unid. boring	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Lissothuria nutriens	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mytilus spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1

(*continued*)

Horizontal Band Transects Station NDC 3+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	18-Jan-00		1-Jun-00		15-Jul-00		12-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Substrate									
bare rock	79.2	11.28	70.1	13.44	76.6	15.07	50.5	20.22	69.1
bare cobble	3.9	7.25	5.9	6.52	5.7	9.48	2.2	5.22	4.4
sand (shell gravel)	0.0	0.00	0.6	1.22	< .1	< .01	0.1	0.44	0.2

Horizontal Band Transects Station SDC 1+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		30-Jul-00		13-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	24.7	14.79	33.0	12.43	35.4	19.41	47.1	21.95	35.1
filamentous red algae-complex	8.5	8.28	17.1	7.55	29.5	13.91	7.4	4.70	15.6
coralline crust	8.8	7.36	6.0	8.08	0.8	0.89	8.1	5.48	5.9
Sargassum muticum	4.6	12.81	7.8	11.63	1.3	1.66	6.6	13.24	5.1
Calliarthron/Bossiella spp.-complex	2.2	3.54	15.1	9.57	0.8	0.91	1.3	1.89	4.9
Corallina vancouveriensis	5.7	4.01	< .1	< .01	< .1	0.22	2.3	2.62	2.0
Cryptopleura violacea	0.3	0.59	< .1	< .01	5.6	11.44	1.9	1.82	1.9
Ulva/Enteromorpha spp.	< .1	< .01	1.6	0.98	5.1	5.19	0.6	0.69	1.8
juv. articulated coralline algae	2.2	2.28	1.5	2.06	0.2	0.47	3.0	2.34	1.7
Prionitis spp.	< .1	0.22	0.7	1.39	1.0	1.54	0.9	1.14	0.7
Colpomenia spp.	< .1	< .01	1.5	2.00	< .1	< .01	< .1	< .01	0.4
Corallina officinalis	1.3	1.82	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.7	1.13	0.2	0.47	0.0	0.00	0.2
Farlowia/Pikea spp.-complex	< .1	0.22	0.3	1.10	0.4	1.10	< .1	0.22	0.2
Chrysophyta unid.	0.0	0.00	< .1	< .01	0.6	1.98	0.0	0.00	0.2
Gelidium coulteri	0.0	0.00	< .1	0.00	0.4	0.88	0.1	0.44	0.1
Chondracanthus canaliculatus	< .1	< .01	0.3	0.49	< .1	0.22	0.1	0.29	0.1
Mazzaella affinis	0.0	0.00	0.2	0.47	< .1	< .01	0.1	0.29	< .1
Mazzaella heterocarpa	0.0	0.00	< .1	< .01	0.3	0.67	0.0	0.00	< .1
Cryptosiphonia woodii	0.3	0.88	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pterosiphonia dendroidea	< .1	0.22	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Polyneura latissima	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Cladophora spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Gelidium pusillum	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Mastocarpus papillatus	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Grateloupia doryphora	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Macrocystis spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mazzaella leptorhynchos	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Endarachne/Petalonia-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tetraclita rubescens	134.8	79.11	114.0	62.46	152.0	68.07	140.8	190.66	135.4
Macclintockia scabra	53.8	47.27	61.4	26.25	111.2	81.97	126.6	107.29	88.3
Mytilus californianus	6.0	11.25	0.0	0.00	27.4	60.16	31.2	41.70	16.2
Fissurella volcano	30.6	15.40	11.0	9.27	15.4	9.02	2.2	2.17	14.8
Lottia pelta	15.4	16.59	10.2	3.35	10.2	4.87	15.6	11.80	12.9
Lottia limatula	6.4	4.39	9.6	8.91	32.0	13.44	3.2	4.55	12.8
Mytilus spp.	< .1	< .01	44.0	69.27	1.2	2.68	0.0	0.00	11.3
Pagurus spp.	30.6	27.78	4.4	4.28	2.6	3.97	5.0	4.36	10.7
Anthopleura elegantissima	5.4	2.51	3.4	1.52	8.2	7.12	11.8	15.94	7.2
Strongylocentrotus purpuratus	4.4	2.70	4.4	2.51	5.4	4.04	6.4	6.50	5.2
Lottia digitalis	13.2	5.02	0.0	0.00	0.0	0.00	0.0	0.00	3.3
Mytilus galloprovincialis	0.0	0.00	0.0	0.00	1.8	2.05	9.8	7.53	2.9
Ophiothrix spp.	< .1	< .01	5.2	7.16	0.8	1.30	0.0	0.00	1.5
Cyanoplax spp.	0.8	0.84	1.8	2.17	2.6	2.70	0.6	1.34	1.5
Tectura scutum	0.0	0.00	4.4	3.21	0.0	0.00	0.0	0.00	1.1
Pista spp.	2.5	2.63	< .1	< .01	1.3	2.80	0.3	0.62	1.0
Mopalia spp.	1.2	1.10	0.2	0.45	0.2	0.45	2.4	1.67	1.0
Lottia gigantea	0.8	1.10	0.2	0.45	1.4	3.13	0.8	0.84	0.8
Phragmatopoma californica	1.9	3.04	< .1	< .01	< .1	< .01	0.8	1.86	0.7
Balanus spp.	0.0	0.00	2.6	2.79	0.0	0.00	0.0	0.00	0.7
Serpulorbis squamigerus	1.0	0.71	0.6	1.34	0.0	0.00	0.8	1.10	0.6
Tegula funebralis	2.4	4.83	0.0	0.00	0.0	0.00	0.0	0.00	0.6
Ophiuroidea unid.	0.0	0.00	0.0	0.00	2.0	3.39	0.0	0.00	0.5
Pachygrapsus crassipes	0.4	0.89	1.0	0.71	0.4	0.89	0.0	0.00	0.5
Nuttallina californica	0.2	0.45	0.2	0.45	0.0	0.00	0.6	1.34	0.3
Serpulidae unid.	1.0	0.71	0.0	0.00	0.0	0.00	0.0	0.00	0.3

(*continued*)

Horizontal Band Transects Station SDC 1+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		30-Jul-00		13-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Chthamalus fissus	0.6	1.24	< .1	< .01	< .1	0.00	0.4	0.62	0.2
Hermissenda crassicornis	0.0	0.00	0.2	0.45	0.6	1.34	0.0	0.00	0.2
Nemertea unid.	0.0	0.00	0.0	0.00	0.8	1.79	0.0	0.00	0.2
Tegula brunnea	0.0	0.00	0.0	0.00	0.0	0.00	0.6	0.89	0.2
Pugettia spp.	0.0	0.00	0.6	0.89	0.0	0.00	0.0	0.00	0.2
Lamellariidae	0.0	0.00	0.4	0.89	0.0	0.00	0.0	0.00	< .1
Asterina miniata	0.0	0.00	< .1	< .01	0.2	0.45	0.0	0.00	< .1
Nereididae unid.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Cancer antennarius	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Chaetopteridae	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Lacuna spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Aplysia californica	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Littorina spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Pycnogonida unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Barleeia spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	35.0	12.29	21.7	5.38	21.9	9.29	19.7	11.31	24.6
bare cobble	5.8	6.31	2.5	2.91	3.7	4.08	6.6	6.42	4.6
sand (shell gravel)	3.5	4.38	2.0	2.13	1.2	1.27	1.5	2.07	2.0

Horizontal Band Transects Station SDC 1+.6m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		30-Jul-00		13-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	34.7	8.36	33.8	8.08	27.6	14.70	30.8	14.32	31.7
filamentous red algae-complex	1.4	1.27	12.1	10.61	12.5	9.27	2.4	1.97	7.1
coralline crust	4.3	3.25	3.3	3.79	1.0	1.54	5.0	3.90	3.4
Ulva/Enteromorpha spp.	<.1	<.01	6.0	3.29	6.7	4.66	0.3	0.37	3.3
Sargassum muticum	1.3	3.93	2.8	5.92	2.6	6.99	4.2	8.80	2.7
Gelidium coulteri	0.0	0.00	1.4	1.88	3.7	3.50	3.0	4.23	2.0
Corallina vancouveriensis	5.9	4.69	<.1	<.01	<.1	0.22	1.7	2.25	1.9
Calliarthron/Bossiella spp.-complex	<.1	<.01	3.8	4.04	0.7	1.04	1.5	2.42	1.5
Cryptopleura violacea	0.2	0.47	0.4	0.94	3.3	4.92	0.8	1.02	1.2
juv. articulated coralline algae	0.8	1.01	1.2	0.93	0.5	0.57	2.2	2.64	1.2
Prionitis spp.	<.1	<.01	0.4	0.67	0.8	1.06	1.3	1.96	0.6
Corallina officinalis	1.4	2.29	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Chondracanthus canaliculatus	<.1	<.01	0.3	0.49	0.1	0.29	0.4	1.10	0.2
Grateloupia doryphora	0.0	0.00	0.6	1.16	<.1	0.22	<.1	<.01	0.2
Mazzaella heterocarpa	0.0	0.00	0.1	0.44	0.6	0.91	<.1	<.01	0.2
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.3	0.88	0.3	0.88	0.0	0.00	0.2
Mazzaella leptorhynchos	0.0	0.00	0.3	1.10	<.1	<.01	0.0	0.00	<.1
Pterosiphonia dendroidea	0.0	0.00	<.1	<.01	0.0	0.00	0.3	0.88	<.1
Mastocarpus papillatus	<.1	<.01	0.0	0.00	0.2	0.47	0.0	0.00	<.1
Gastroclonium subarticulatum	0.0	0.00	<.1	0.22	0.0	0.00	0.1	0.44	<.1
Mazzaella affinis	0.0	0.00	0.1	0.29	<.1	<.01	<.1	<.01	<.1
Colpomenia spp.	0.0	0.00	0.1	0.44	<.1	<.01	<.1	<.01	<.1
Cladophora spp.	0.0	0.00	0.0	0.00	<.1	<.01	<.1	<.01	<.1
Gelidium pusillum	0.0	0.00	0.0	0.00	<.1	<.01	<.1	<.01	<.1
Chrysophyta unid.	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Invertebrates									
Tetraclita rubescens	221.2	185.81	169.6	149.90	203.2	105.65	216.4	145.75	202.6
Macclintockia scabra	58.0	21.44	131.6	70.71	198.8	123.69	233.0	124.02	155.4
Anthopleura elegantissima	33.6	19.40	38.0	47.70	37.0	19.84	39.6	26.37	37.1
Lottia pelta	14.8	7.40	15.4	8.68	11.8	5.45	32.2	13.07	18.6
Lottia limatula	6.6	3.44	4.6	1.52	31.2	13.70	3.8	1.79	11.6
Mytilus californianus	1.2	2.17	0.0	0.00	12.2	18.54	32.8	34.69	11.6
Fissurella volcano	19.0	9.70	11.0	5.70	7.4	6.43	2.8	2.49	10.1
Pagurus spp.	21.8	12.48	0.8	1.10	0.4	0.89	6.0	4.53	7.3
Mytilus spp.	<.1	<.01	22.6	26.99	<.1	<.01	0.0	0.00	5.7
Strongylocentrotus purpuratus	1.2	2.68	11.2	16.65	4.6	4.51	1.8	2.68	4.7
Lottia digitalis	14.6	8.17	1.4	3.13	0.0	0.00	0.0	0.00	4.0
Mytilus galloprovincialis	0.0	0.00	0.0	0.00	0.6	1.34	9.4	9.07	2.5
Lottia gigantean	1.0	1.22	0.4	0.55	2.0	1.87	1.8	2.49	1.3
Tectura scutum	0.4	0.89	4.2	1.48	0.6	1.34	0.0	0.00	1.3
Serpulorbis squamigerus	1.6	2.07	1.2	1.79	0.2	0.45	2.0	2.00	1.3
Cyanoplax spp.	0.4	0.55	0.6	0.89	3.0	1.87	0.8	0.84	1.2
Chthamalus fissus	0.3	0.62	0.6	0.76	0.6	1.24	2.9	2.52	1.1
Balanus spp.	0.0	0.00	1.6	3.58	2.4	5.37	0.0	0.00	1.0
Mopalia spp.	1.8	2.05	0.2	0.45	0.2	0.45	1.4	2.61	0.9
Tegula funebralis	3.2	5.07	0.0	0.00	0.0	0.00	0.0	0.00	0.8
Pista spp.	1.3	1.86	<.1	<.01	<.1	<.01	<.1	<.01	0.3
Pachygrapsus crassipes	0.4	0.55	0.2	0.45	0.4	0.55	0.0	0.00	0.3
Nuttallina californica	0.2	0.45	0.2	0.45	0.0	0.00	0.4	0.55	0.2
Phragmatopoma californica	0.3	0.62	<.1	0.00	<.1	<.01	0.3	0.62	0.1
Ophiothrix spp.	0.0	0.00	0.4	0.89	0.0	0.00	0.0	0.00	<.1
Idotea spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Pugettia spp.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Cancer spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Acmaeidae unid.	<.1	0.00	<.1	0.00	<.1	0.00	<.1	0.00	<.1
Spirorbidae	<.1	<.01	0.0	0.00	<.1	<.01	0.0	0.00	<.1
Lacuna spp.	0.0	0.00	<.1	<.01	<.1	<.01	0.0	0.00	<.1
Serpulidae unid.	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1

(*continued*)

Horizontal Band Transects Station SDC 1+.6m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		30-Jul-00		13-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Heptacarpus spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Sipuncula unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Nitidiscala/Opalia spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Ophiuroidea unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Chama spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Septifer bifurcatus	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	36.0	8.69	21.7	7.41	34.7	19.01	34.5	17.19	31.7
bare cobble	8.7	9.84	10.1	13.47	9.9	11.77	9.5	8.94	9.5
sand (shell gravel)	4.3	5.17	4.8	3.89	2.8	4.01	2.2	2.33	3.5

Horizontal Band Transects Station SDC 2+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	21-Jan-00		1-Jun-00		30-Jul-00		16-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	46.4	19.33	28.3	17.78	40.4	17.80	57.4	11.93	43.1
coralline crust	9.3	7.79	13.3	10.07	6.9	8.11	5.4	7.94	8.8
Gelidium coulteri	< .1	< .01	3.2	5.04	11.5	15.43	1.3	1.90	4.0
Prionitis spp.	0.7	1.60	2.9	5.51	6.6	11.01	4.6	5.74	3.7
Mastocarpus papillatus	< .1	< .01	1.5	2.92	2.6	3.57	1.3	1.89	1.3
Ulva/Enteromorpha spp.	0.0	0.00	1.3	2.42	3.1	5.37	< .1	0.22	1.1
Mazzaella affinis	0.0	0.00	1.7	4.13	2.2	3.80	< .1	< .01	1.0
Corallina vancouveriensis	0.7	1.09	1.1	2.00	1.4	2.54	0.6	1.06	1.0
Calliarthron/Bossiella spp.-complex	< .1	< .01	2.6	4.29	0.3	0.67	0.0	0.00	0.7
juv. articulated coralline algae	< .1	< .01	1.4	2.07	< .1	< .01	1.2	2.80	0.6
filamentous red algae-complex	0.0	0.00	0.8	1.98	0.7	1.31	1.1	3.51	0.6
Chondracanthus canaliculatus	< .1	< .01	1.9	3.76	0.5	1.04	< .1	< .01	0.6
Cryptopleura violacea	< .1	< .01	0.4	0.59	1.0	2.02	0.6	1.11	0.5
Mazzaella leptorhynchos	0.0	0.00	0.8	1.17	< .1	< .01	< .1	< .01	0.2
Mazzaella heterocarpa	0.0	0.00	0.7	1.73	0.1	0.44	< .1	< .01	0.2
Halymenia/Schizymenia spp.-complex	0.0	0.00	0.6	1.30	0.3	0.88	< .1	< .01	0.2
Gastroclonium subarticulatum	0.0	0.00	0.1	0.29	0.4	1.10	0.1	0.44	0.2
Chondria decipiens	< .1	< .01	< .1	< .01	0.3	0.75	0.1	0.44	0.1
Callophyllis spp.	0.0	0.00	0.5	1.54	0.0	0.00	0.0	0.00	0.1
Pterosiphonia dendroidea	0.0	0.00	0.2	0.47	0.0	0.00	0.2	0.47	0.1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	< .1	< .01	0.1	0.44	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Colpomenia spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Sargassum muticum	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gelidium robustum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Porphyra spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Chondracanthus corymbiferus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Laminariales	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Chrysophyta unid.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	233.0	101.34	269.4	87.14	178.0	91.05	368.0	176.27	262.1
Macclintockia scabra	32.8	34.82	64.2	54.89	82.8	74.17	73.4	75.91	63.3
Anthopleura elegantissima	36.8	12.81	50.4	26.83	89.2	104.71	50.6	27.84	56.8
Tetraclita rubescens	67.8	60.31	14.8	16.45	14.2	8.41	64.6	55.10	40.4
Pagurus spp.	3.0	3.39	4.2	6.14	26.6	38.95	1.2	1.30	8.8
Lottia limatula	5.6	6.43	11.6	5.08	11.2	7.98	4.0	2.65	8.1
Strongylocentrotus purpuratus	3.4	4.98	4.6	5.50	8.2	9.98	0.2	0.45	4.1
Lottia pelta	6.2	3.90	3.2	2.17	5.2	1.92	1.4	1.34	4.0
Tectura scutum	0.2	0.45	4.2	5.54	2.6	1.67	2.4	2.30	2.4
Mopalia spp.	1.4	1.52	2.2	1.10	2.2	1.30	1.0	0.71	1.7
Serpulorbis squamigerus	1.4	1.14	3.2	3.11	1.2	1.30	1.0	1.22	1.7
Cyanoplax spp.	0.2	0.45	2.0	1.41	1.4	1.67	1.4	1.67	1.3
Lottia digitalis	0.0	0.00	1.8	1.64	1.2	2.68	0.0	0.00	0.8
Mytilus californianus	1.0	2.24	0.6	1.34	0.2	0.45	0.2	0.45	0.5
Acanthina spp.	0.2	0.45	0.4	0.55	0.2	0.45	0.8	0.84	0.4
Mytilus galloprovincialis	0.0	0.00	1.6	2.07	0.0	0.00	0.0	0.00	0.4
Pachygrapsus crassipes	0.2	0.45	0.0	0.00	1.0	1.00	0.2	0.45	0.4
Cirratulidae/Terebellidae unid.	0.0	0.00	1.2	1.79	< .1	< .01	0.0	0.00	0.3
Diopatra ornata	0.0	0.00	0.6	1.34	0.0	0.00	0.0	0.00	0.2
Phragmatopoma californica	0.3	0.62	0.1	0.31	0.1	0.31	< .1	< .01	0.1
Chthamalus fissus	< .1	0.00	< .1	0.00	< .1	0.00	0.4	0.38	0.1
Anthopleura artemisia	0.0	0.00	0.2	0.45	0.0	0.00	0.2	0.45	< .1
Fissurella volcano	0.0	0.00	0.0	0.00	0.0	0.00	0.4	0.89	< .1
Ocenebra spp.	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tegula brunnea	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Nuttallina californica	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1

(*continued*)

Horizontal Band Transects Station SDC 2+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	21-Jan-00		1-Jun-00		30-Jul-00		16-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Asterina miniata	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Spirorbidae	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Pista spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Mytilus spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Acmaea mitra	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Littorina spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Octopus spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Pelecypoda unid. boring	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Serpulidae unid.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cancer spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	33.0	24.38	37.7	26.57	23.5	23.18	18.7	12.01	28.2
sand (shell gravel)	2.9	6.34	1.6	3.09	3.4	5.31	5.7	7.53	3.4
bare cobble	4.4	6.21	1.7	2.62	2.0	4.94	0.8	1.29	2.2

Horizontal Band Transects Station SDC 2+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	21-Jan-00		1-Jun-00		30-Jul-00		16-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	16.3	26.87	9.9	17.88	11.7	17.26	13.1	21.66	12.7
Prionitis spp.	0.2	0.47	1.2	2.74	1.1	1.86	0.4	0.67	0.7
Mastocarpus papillatus	< .1	0.22	0.7	1.39	0.6	0.97	0.1	0.29	0.4
Endocladia muricata	0.2	0.66	0.6	1.98	0.2	0.66	0.3	0.88	0.3
coralline crust	< .1	0.22	0.1	0.44	< .1	< .01	< .1	< .01	< .1
Gelidium coulteri	< .1	< .01	< .1	0.22	0.1	0.29	0.0	0.00	< .1
juv. articulated coralline algae	< .1	< .01	< .1	0.22	< .1	< .01	< .1	0.22	< .1
Grateloupia doryphora	0.0	0.00	0.1	0.29	0.0	0.00	0.0	0.00	< .1
Mazzaella leptorhynchos	< .1	< .01	< .1	0.22	< .1	< .01	< .1	< .01	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Gelidium pusillum	< .1	< .01	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Corallina vancouveriensis	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Cryptopleura violacea	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Calliarthron/Bossiella spp.-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
filamentous red algae-complex	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Invertebrates									
Anthopleura elegantissima	78.6	59.32	177.4	95.92	152.6	126.61	186.8	118.71	148.9
Tegula funebralis	47.0	63.11	186.2	131.60	141.4	83.73	172.0	139.61	136.7
Macclintockia scabra	22.8	25.92	45.6	29.36	59.8	47.33	68.4	55.25	49.2
Lottia limatula	8.4	5.68	13.6	9.79	4.6	4.62	14.2	6.87	10.2
Pagurus spp.	2.0	4.47	1.0	1.22	8.2	8.50	3.4	3.21	3.7
Lottia pelta	1.2	1.10	1.6	1.14	3.4	3.78	0.0	0.00	1.6
Lottia digitalis	1.8	3.03	0.2	0.45	3.4	3.36	0.0	0.00	1.4
Tectura scutum	0.0	0.00	1.6	1.52	2.0	1.87	1.2	2.68	1.2
Mytilus californianus	< .1	< .01	1.8	4.02	0.0	0.00	1.4	3.13	0.8
Cyanoplax spp.	0.2	0.45	1.8	1.30	0.6	0.89	0.2	0.45	0.7
Tetraclita rubescens	0.0	0.00	0.0	0.00	0.4	0.89	1.0	2.24	0.4
Chthamalus fissus	< .1	< .01	0.3	0.62	1.0	1.35	< .1	< .01	0.3
Mopalia spp.	0.0	0.00	0.0	0.00	0.4	0.55	0.6	0.89	0.3
Acanthina spp.	0.0	0.00	0.8	1.10	0.0	0.00	0.0	0.00	0.2
Pachygrapsus crassipes	0.2	0.45	0.4	0.89	0.0	0.00	0.2	0.45	0.2
Lottia gigantea	0.0	0.00	0.4	0.55	0.0	0.00	0.2	0.45	0.2
Ophiuroidea unid.	0.0	0.00	0.4	0.89	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Ocenebra spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Littorina spp.	< .1	< .01	< .1	0.00	< .1	< .01	< .1	0.00	< .1
Lottia asmi	0.0	0.00	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Mytilus spp.	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Phragmatopoma californica	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mytilus galloprovincialis	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Pollicipes polymerus	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Substrate									
bare rock	35.8	27.31	60.1	21.76	51.2	17.55	66.3	25.84	53.4
bare cobble	44.1	39.82	11.0	19.15	4.5	5.59	0.7	1.50	15.1
sand (shell gravel)	1.5	3.11	11.0	10.67	19.8	14.08	15.8	16.99	12.0

Horizontal Band Transects Station SDC 3+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	14-Feb-00		31-May-00		31-Jul-00		29-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	36.5	20.61	29.4	14.43	27.4	14.65	31.7	10.67	31.3
Mastocarpus papillatus	0.7	0.73	0.4	0.67	7.4	4.18	16.4	7.66	6.2
coralline crust	0.5	0.47	1.0	1.47	0.8	1.17	0.4	0.75	0.7
Gelidium coulteri	0.0	0.00	< .1	0.22	0.9	1.99	0.9	1.50	0.5
Endocladia muricata	0.2	0.47	0.6	0.85	0.2	0.47	0.3	0.67	0.3
Mazzaella leptorhynchos	< .1	< .01	0.0	0.00	0.8	0.95	0.1	0.44	0.2
Mazzaella affinis	< .1	< .01	0.0	0.00	0.3	0.37	0.5	1.54	0.2
Macrocystis spp.	0.0	0.00	0.3	1.10	0.0	0.00	0.0	0.00	< .1
Prionitis spp.	0.1	0.44	0.0	0.00	0.1	0.44	< .1	< .01	< .1
Mastocarpus jardinii	< .1	0.22	0.0	0.00	< .1	0.22	< .1	< .01	< .1
Chondracanthus canaliculatus	0.0	0.00	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Corallina vancouveriensis	< .1	0.22	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	0.0	0.00	< .1	< .01	< .1	0.00	< .1	< .01	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
juv. articulated coralline algae	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Gelidium spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mazzaella heterocarpa	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Calliarthron/Bossiella spp.-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Cryptopleura violacea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Invertebrates									
Tegula funebralis	107.0	81.14	265.0	109.81	446.4	329.04	174.6	79.50	248.3
Macclintockia scabra	41.6	35.16	125.0	81.16	219.0	273.57	96.8	105.12	120.6
Tetraclita rubescens	11.2	8.29	16.8	13.88	63.0	121.88	19.4	25.36	27.6
Pagurus spp.	42.4	34.31	6.0	3.16	7.0	3.08	31.4	9.40	21.7
Tectura scutum	1.6	1.67	27.4	38.63	29.0	9.57	9.8	5.22	17.0
Lottia pelta	1.4	1.34	49.8	100.79	6.8	1.92	3.6	3.78	15.4
Anthopleura elegantissima	13.4	23.97	15.6	28.31	13.4	25.52	15.8	30.88	14.6
Lottia limatula	4.4	1.67	18.6	26.04	10.8	8.17	6.6	11.50	10.1
Strongylocentrotus purpuratus	0.6	0.89	6.2	7.43	5.0	3.74	0.0	0.00	3.0
Lottia digitalis	0.0	0.00	0.0	0.00	4.2	9.39	5.0	11.18	2.3
Tegula brunnea	3.0	6.16	0.0	0.00	0.0	0.00	0.0	0.00	0.8
Chthamalus fissus	< .1	0.00	0.6	0.58	0.3	0.62	1.9	4.35	0.7
Mytilus californianus	2.6	2.61	0.0	0.00	0.0	0.00	0.0	0.00	0.7
Pachygrapsus crassipes	0.2	0.45	1.0	1.00	1.0	1.00	0.2	0.45	0.6
Cyanoplax spp.	0.0	0.00	0.8	0.84	0.6	0.55	0.0	0.00	0.4
Fissurella volcano	1.2	1.10	0.0	0.00	0.2	0.45	0.0	0.00	0.4
Ocenebra spp.	0.4	0.89	0.2	0.45	0.4	0.89	0.4	0.55	0.4
Acanthina spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.8	0.84	0.3
Serpulorbis squamigerus	0.0	0.00	0.2	0.45	0.2	0.45	0.2	0.45	0.2
Ophiothrix spp.	0.0	0.00	0.0	0.00	0.4	0.89	0.2	0.45	0.2
Phragmatopoma californica	0.1	0.31	0.1	0.31	0.1	0.31	< .1	< .01	0.1
Serpulidae unid.	0.0	0.00	0.2	0.45	0.2	0.45	< .1	< .01	0.1
Lottia asmi	< .1	< .01	0.2	0.45	< .1	< .01	0.0	0.00	< .1
Littorina spp.	0.0	0.00	0.2	0.45	< .1	< .01	< .1	< .01	< .1
Diopatra ornata	0.0	0.00	0.0	0.00	0.2	0.45	< .1	< .01	< .1
Acmaea mitra	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Crepidula spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Alia spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Substrate									
bare rock	29.9	21.61	35.3	15.55	26.7	11.13	23.0	12.54	28.7
bare cobble	24.2	14.75	30.1	10.38	32.9	8.75	19.0	12.72	26.6
sand (shell gravel)	9.0	4.52	3.7	2.87	6.0	4.86	8.8	3.88	6.9

Horizontal Band Transects Station SDC 3+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	14-Feb-00		31-May-00		31-Jul-00		29-Nov-00		
	Mean	Std. Dev.	Mean*	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	25.1	18.25	11.6	7.24	12.1	9.70	19.2	14.16	17.0
Mastocarpus papillatus	1.5	2.03	1.0	2.15	2.2	3.15	6.5	3.87	2.8
coralline crust	0.5	1.09	0.1	0.44	< .1	< .01	0.2	0.47	0.2
Prionitis spp.	0.1	0.44	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Endocladia muricata	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.22	< .1
Gelidium coulteri	< .1	< .01	0.0	0.00	< .1	< .01	< .1	0.22	< .1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Cladophora spp.	0.0	0.00	< .1	0.00	< .1	< .01	0.0	0.00	< .1
Mazzaella leptorhynchos	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Gelidium spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
juv. articulated coralline algae	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Corallina vancouveriensis	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mazzaella affinis	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	119.6	78.01	218.0	186.41	370.8	162.85	246.0	228.27	238.6
Macclintockia scabra	52.4	28.29	59.0	40.10	169.2	154.02	98.4	90.77	94.8
Anthopleura elegantissima	42.2	57.33	33.6	38.93	96.8	133.89	95.4	108.75	67.0
Pagurus spp.	5.6	2.61	3.0	3.54	4.0	4.24	30.0	13.73	10.7
Lottia limatula	3.0	2.24	5.8	6.18	13.4	11.74	2.0	2.00	6.1
Pollicipes polymerus	5.4	12.07	6.6	14.76	7.6	16.99	4.0	8.94	5.9
Tectura scutum	2.6	2.70	4.8	6.14	11.2	9.26	4.2	4.71	5.7
Mytilus californianus	3.2	3.77	5.6	8.71	3.2	7.16	3.0	6.71	3.8
Lottia pelta	0.0	0.00	3.6	4.34	3.0	1.41	0.6	0.89	1.8
Lottia digitalis	0.0	0.00	0.0	0.00	1.4	1.95	0.2	0.45	0.4
Pachygrapsus crassipes	0.0	0.00	0.4	0.55	0.8	0.84	0.2	0.45	0.4
Chthamalus fissus	0.3	0.62	0.3	0.62	0.4	0.62	0.4		0.3
Phragmatopoma californica	1.0	2.17	0.3	0.62	< .1	< .01	< .1	0.00	0.3
Acanthina spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.8	0.84	0.3
Ocenebra spp.	0.4	0.89	0.0	0.00	0.0	0.00	0.6	1.34	0.3
Cyanoplax spp.	0.0	0.00	0.2	0.45	0.6	0.55	0.0	0.00	0.2
Sipuncula unid.	0.0	0.00	0.6	1.34	0.0	0.00	0.0	0.00	0.2
Tetraclita rubescens	0.0	0.00	0.0	0.00	0.2	0.45	0.2	0.45	0.1
Mopalia spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.4	0.55	< .1
Tegula brunnea	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Strongylocentrotus purpuratus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Littorina spp.	< .1	< .01	0.0	0.00	< .1	< .01	< .1	0.00	< .1
Lottia asmi	< .1	< .01	0.0	0.00	< .1	0.00	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Nitidiscala/Opalia spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	43.1	32.67	38.8	30.50	44.4	25.53	39.1	30.76	41.4
bare cobble	16.3	16.64	38.4	19.62	33.2	20.77	24.0	18.09	28.0
sand (shell gravel)	12.4	9.09	8.3	6.01	7.3	5.49	11.1	7.86	9.8

Horizontal Band Transects Station SDP 1+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	40.9	25.12	23.8	21.60	36.0	22.96	37.6	28.76	34.6
coralline crust	11.3	5.57	11.0	6.33	7.7	6.06	9.4	8.74	9.9
Corallina vancouveriensis	5.7	4.95	5.2	5.39	0.8	1.20	4.0	2.40	3.9
juv. articulated coralline algae	2.2	2.03	7.7	5.90	1.8	1.61	1.9	1.42	3.4
Calliarthron/Bossiella spp.-complex	0.8	1.16	6.6	9.43	0.8	1.37	0.3	0.59	2.1
Gelidium coulteri	0.7	1.04	0.9	0.87	1.9	2.33	2.7	2.97	1.6
Mastocarpus jardinii	< .1	< .01	0.1	0.44	0.1	0.44	< .1	0.22	< .1
Endocladia muricata	< .1	< .01	0.2	0.34	< .1	< .01	< .1	< .01	< .1
Cryptopleura violacea	< .1	0.22	< .1	< .01	0.0	0.00	< .1	0.22	< .1
Prionitis spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.1	0.29	< .1
Mazzaella flaccida	0.0	0.00	< .1	0.22	< .1	0.22	0.0	0.00	< .1
Mastocarpus papillatus	0.0	0.00	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Callithamnion/Pleonosporium spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Porphyra spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Ulva/Enteromorpha spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
filamentous red algae-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Mytilus californianus	511.2	448.39	425.2	396.31	539.4	429.47	541.0	432.11	504.2
Macclintockia scabra	125.8	104.28	210.4	84.47	189.0	157.98	121.2	87.28	161.6
Tetraclita rubescens	87.4	39.33	196.2	119.83	198.4	119.40	131.0	85.11	153.3
Anthopleura elegantissima	75.2	52.01	114.0	115.70	134.2	113.26	123.4	62.70	111.7
Balanus spp.	0.0	0.00	0.0	0.00	302.6	443.92	6.0	10.84	77.2
Strongylocentrotus purpuratus	73.2	73.94	58.8	35.14	39.0	30.45	75.6	61.73	61.7
Lottia pelta	12.8	8.17	30.0	16.57	27.4	19.03	15.4	9.81	21.4
Lottia gigantea	23.6	17.30	18.4	11.55	12.6	8.35	16.0	12.45	17.7
Nuttallina californica	16.2	6.94	16.0	8.54	7.8	5.17	18.0	12.85	14.5
Fissurella volcano	15.6	7.30	7.2	5.67	4.4	2.07	1.8	1.79	7.3
Phragmatopoma californica	5.8	4.01	6.0	5.37	5.0	4.21	0.6	0.76	4.3
Cyanoplax spp.	2.6	2.88	4.6	4.04	0.6	0.89	1.0	1.41	2.2
Pollicipes polymerus	3.2	3.11	2.6	1.95	< .1	< .01	2.8	6.26	2.2
Nemertea unid.	2.0	2.35	6.6	2.88	< .1	< .01	0.0	0.00	2.2
Pachygrapsus crassipes	1.2	1.30	4.4	1.14	0.8	0.45	1.6	1.14	2.0
Tegula funebralis	0.6	0.55	2.4	4.83	1.0	1.41	2.2	3.03	1.6
Lottia limatula	2.8	3.35	3.4	2.30	0.0	0.00	0.0	0.00	1.6
Pagurus spp.	1.0	1.73	2.6	2.70	0.0	0.00	0.8	1.79	1.1
Anthopleura xanthogrammica	0.6	0.89	1.2	1.10	2.0	1.00	0.6	0.89	1.1
Tectura scutum	0.0	0.00	3.2	4.15	0.0	0.00	0.0	0.00	0.8
Lottia digitalis	2.6	3.71	0.0	0.00	0.0	0.00	0.0	0.00	0.7
Tegula brunnea	0.0	0.00	0.2	0.45	0.2	0.45	1.4	3.13	0.5
Nucella emarginata	0.6	0.89	0.2	0.45	0.2	0.45	0.2	0.45	0.3
Serpulidae unid.	0.0	0.00	0.4	0.55	0.2	0.45	< .1	< .01	0.2
Mopalia spp.	0.6	1.34	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Serpulorbis squamigerus	0.0	0.00	0.4	0.55	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Chthamalus fissus	< .1	0.00	< .1	0.00	< .1	0.00	0.3	0.62	< .1
Acmaea mitra	0.2	0.45	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Mytilus galloprovincialis	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Sipuncula unid.	0.0	0.00	< .1	0.00	0.0	0.00	< .1	< .01	< .1
Lottia asmi	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Dodecaceria fewkesi	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Littorina spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Porifera unid. (encrusting)	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1

(*continued*)

Horizontal Band Transects Station SDP 1+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Pelecypoda unid. boring	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Amphissa spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Substrate									
bare rock	12.2	12.06	12.2	7.29	18.1	8.22	11.8	8.88	13.6

Horizontal Band Transects Station SDP 2+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	24.4	12.29	23.8	14.50	26.0	14.15	26.9	12.88	25.3
Corallina vancouveriensis	18.0	12.31	19.6	11.73	15.9	14.17	22.2	7.52	18.9
Calliarthron/Bossiella spp.-complex	6.1	3.63	13.7	12.47	11.3	11.47	15.1	9.76	11.5
Mazzaella flaccida	0.1	0.44	5.6	6.51	6.9	8.81	3.0	4.29	3.9
Gelidium coulteri	0.2	0.47	3.6	3.55	2.7	2.82	3.5	4.83	2.5
Cryptopleura violacea	0.3	0.59	2.4	2.32	0.3	1.10	4.5	3.47	1.9
juv. articulated coralline algae	1.2	1.47	4.5	3.23	0.2	0.47	1.0	1.47	1.7
Prionitis spp.	0.8	1.26	1.4	2.27	1.7	2.82	2.7	1.84	1.6
non-coralline crust	1.6	3.00	1.3	1.34	0.8	1.12	2.6	1.85	1.6
Callitham. spp./Pleonosporium spp.	< .1	< .01	1.8	1.68	3.1	2.54	1.3	2.87	1.5
Chondracanthus canaliculatus	0.1	0.29	2.1	2.31	1.7	2.46	0.3	0.75	1.1
Egregia menziesii	0.0	0.00	0.6	1.12	0.5	1.14	2.4	4.12	0.9
Gastroclonium subarticulatum	< .1	< .01	0.7	0.87	0.5	0.81	1.3	2.14	0.6
Chrysophyta unid.	0.7	1.60	0.6	0.76	0.3	0.67	0.0	0.00	0.4
Bryopsis spp.	0.1	0.29	0.2	0.66	< .1	< .01	< .1	< .01	< .1
Mazzaella affinis	< .1	< .01	0.3	0.67	< .1	0.22	< .1	< .01	< .1
Microcladia borealis	0.0	0.00	0.3	0.67	< .1	< .01	0.0	0.00	< .1
Mastocarpus jardinii	0.0	0.00	0.0	0.00	< .1	0.22	0.1	0.44	< .1
Alaria marginata	0.0	0.00	0.0	0.00	0.2	0.66	0.0	0.00	< .1
Mastocarpus papillatus	0.0	0.00	0.1	0.44	< .1	< .01	0.0	0.00	< .1
Chondracanthus corymbiferus	0.0	0.00	< .1	< .01	< .1	< .01	< .1	0.22	< .1
Colpomenia spp.	< .1	< .01	< .1	0.22	< .1	< .01	0.0	0.00	< .1
Osmundea spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Callithamnion pikeanum	< .1	< .01	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Codium setchellii	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Mazzaella heterocarpa	0.0	0.00	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Ulva/Enteromorpha spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Laminariales	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
filamentous red algae-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Cystoseira osmundacea	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Nereocystis luetkeana	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Gelidium pusillum	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Gelidium robustum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Halymenia/Schizymenia spp.-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Strongylocentrotus purpuratus	229.8	161.88	183.8	140.51	183.6	110.29	337.8	161.10	233.8
Anthopleura elegantissima	40.2	58.19	94.6	121.96	81.2	89.06	136.0	114.68	88.0
Mytilus californianus	199.8	446.21	109.0	243.73	26.4	59.03	1.6	3.58	84.2
Tetraclita rubescens	49.8	30.88	65.6	88.73	19.6	37.91	25.0	54.79	40.0
Pollicipes polymerus	13.0	29.07	35.4	73.07	14.4	32.20	10.6	23.70	18.4
Lottia pelta	25.4	34.43	32.0	22.69	0.0	0.00	1.0	1.73	14.6
Macclintockia scabra	1.2	1.79	35.0	75.50	0.4	0.89	0.0	0.00	9.2
Pisaster ochraceus	8.6	5.86	5.8	4.32	10.8	7.19	2.8	1.48	7.0
Serpulorbis squamigerus	12.4	9.53	5.6	3.85	4.8	3.70	2.8	1.92	6.4
Serpulidae unid.	11.0	11.07	7.8	7.50	3.6	2.61	3.0	3.74	6.4
Fissurella volcano	16.4	16.47	5.8	4.44	2.6	0.55	0.2	0.45	6.3
Balanus spp.	< .1	< .01	0.0	0.00	4.8	10.73	8.4	15.18	3.3
Nemertea unid.	4.4	3.44	2.0	2.00	1.8	1.64	0.8	0.84	2.3
Nuttallina californica	6.6	10.04	1.2	1.64	0.0	0.00	1.2	1.79	2.3
Pachygrapsus crassipes	2.8	2.05	0.4	0.55	1.2	0.84	2.0	1.00	1.6
Tegula brunnea	0.0	0.00	0.2	0.45	0.4	0.89	4.0	7.38	1.2
Leptasterias spp.	0.6	0.89	1.6	1.14	1.2	0.84	1.0	1.73	1.1
Lottia limatula	3.2	7.16	0.8	1.79	0.0	0.00	0.0	0.00	1.0
Anthopleura xanthogrammica	1.0	2.24	0.2	0.45	0.8	1.79	0.8	1.10	0.7
Nucella emarginata	1.0	1.22	1.2	2.68	0.0	0.00	0.2	0.45	0.6
Tonicella lineata	0.0	0.00	0.8	1.30	0.6	0.89	0.4	0.55	0.5
Pododesmus cepio	1.0	1.73	0.0	0.00	0.2	0.45	0.2	0.45	0.4

(*continued*)

Horizontal Band Transects Station SDP 2+.9m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	19-Jan-00		2-Jun-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Nereididae unid.	0.2	0.45	0.4	0.55	0.2	0.45	0.4	0.55	0.3
Dodecaceria fewkesi	0.6	1.24	0.3	0.62	< .1	< .01	< .1	< .01	0.2
Acmaea mitra	0.8	1.30	< .1	< .01	< .1	< .01	< .1	< .01	0.2
Porifera unid. (encrusting)	< .1	< .01	0.1	0.31	0.1	0.31	< .1	< .01	< .1
Phragmatopoma californica	0.3	0.62	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Amphissa spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Epiactis prolifera	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Anthozoa unid.	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Calliostoma ligatum	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Cyanoplax spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Lottia gigantea	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mopalia spp.	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tegula funebralis	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Pisaster giganteus	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophiothrix spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	< .1
Calliostoma spp.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	< .1
Acmaeidae unid.	< .1	< .01	< .1	0.00	< .1	0.00	< .1	< .01	< .1
Sipuncula unid.	< .1	< .01	< .1	0.00	< .1	< .01	< .1	< .01	< .1
Pelecypoda unid. boring	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Spirorbidae	< .1	< .01	< .1	0.00	0.0	0.00	< .1	< .01	< .1
Corynactis californica	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Chthamalus fissus	< .1	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Salmacina tribranchiata	< .1	< .01	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
tunicates, colonial/social unid.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Mytilus spp.	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Conus californicus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Polynoidae	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Lacuna spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Substrate									
bare rock	23.6	8.56	10.9	13.11	12.1	16.25	4.9	3.04	12.9

Horizontal Band Transects Station SC 1+.3m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	20-Jan-00		19-May-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Mazzaella flaccida	11.7	12.09	46.4	20.37	41.8	21.44	28.0	19.19	32.0
Chondracanthus canaliculatus	26.0	12.87	36.2	23.03	26.2	15.53	21.0	15.64	27.3
non-coralline crust	16.9	9.48	9.1	6.60	12.7	11.37	13.2	8.66	13.0
coralline crust	12.5	7.78	7.3	6.30	8.9	6.24	8.8	6.47	9.4
Gastroclonium subarticulatum	7.0	6.78	4.3	5.65	6.0	8.39	14.7	10.44	8.0
Phyllospadix spp.	5.8	9.68	6.7	12.81	4.5	6.71	8.1	18.91	6.3
Mastocarpus papillatus	2.0	4.07	6.5	2.68	6.9	3.80	2.4	2.43	4.4
Mazzaella heterocarpa	0.2	0.34	3.1	2.39	5.3	3.13	1.8	1.77	2.6
Cryptopleura violacea	0.1	0.44	0.5	0.81	3.7	2.15	3.9	2.32	2.0
Mazzaella affinis	< .1	< .01	1.3	1.87	5.0	3.86	1.3	1.02	1.9
Mastocarpus jardinii	2.0	2.73	1.8	2.52	2.0	3.08	1.5	2.00	1.8
Ulva/Enteromorpha spp.	0.6	0.85	< .1	0.22	1.2	1.39	2.8	2.75	1.2
Corallina vancouveriensis	1.3	1.12	0.8	1.08	1.3	1.42	0.9	0.81	1.1
Endocladia muricata	0.7	1.04	1.5	2.26	1.1	1.77	0.4	0.67	0.9
Prionitis spp.	0.7	1.09	1.3	1.87	0.7	1.31	0.8	1.11	0.9
juv. articulated coralline algae	1.5	2.72	1.2	2.43	0.4	0.49	0.2	0.47	0.8
Porphyra spp.	< .1	< .01	0.4	0.67	2.2	4.20	< .1	0.22	0.7
Chondracanthus corymbiferus	0.8	1.49	0.6	1.12	0.3	0.36	0.6	0.83	0.6
Gelidium coulteri	0.1	0.29	0.3	1.10	1.1	1.36	0.5	0.74	0.5
Mazzaella lilacina	0.0	0.00	0.8	1.76	0.9	1.91	0.1	0.44	0.5
Calliarthron/Bossiella spp.-complex	0.5	0.87	0.4	1.10	0.3	0.49	0.3	1.10	0.4
Osmundea spp.	0.1	0.29	< .1	0.22	0.2	0.47	0.5	0.66	0.2
Gelidium pusillum	< .1	< .01	0.4	0.67	0.1	0.44	0.1	0.44	0.2
Callithamnion pikeanum	< .1	0.22	0.3	0.49	0.1	0.44	< .1	< .01	0.1
Smithora naiadum	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.09	0.1
filamentous red algae-complex	0.0	0.00	< .1	< .01	0.3	0.88	< .1	0.22	0.1
Mazzaella leptorhynchos	< .1	< .01	0.0	0.00	0.4	1.32	0.0	0.00	0.1
Sarcodiotheca gaudichaudii	< .1	< .01	< .1	< .01	< .1	0.22	0.3	0.36	< .1
Halymenia/Schizymenia spp.-complex	0.0	0.00	< .1	0.22	0.0	0.00	0.1	0.44	< .1
Microcladia coulteri	0.0	0.00	0.0	0.00	< .1	< .01	0.1	0.29	< .1
Callitham. spp./Pleonosporium spp.	< .1	0.22	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Laminaria setchellii	0.0	0.00	< .1	0.22	0.0	0.00	0.0	0.00	< .1
Microcladia borealis	0.0	0.00	0.0	0.00	< .1	0.22	0.0	0.00	< .1
Laminariales	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Corallina officinalis	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Melobesia mediocris	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Analipus japonicus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Nereocystis luetkeana	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Erythrophyllum delesserioides	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Polyneura latissima	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Pagurus spp.	40.4	24.62	9.4	11.19	48.6	68.32	5.8	6.38	26.1
Tetraclita rubescens	29.0	28.82	9.2	12.38	12.2	12.93	6.6	8.62	14.3
Macclintockia scabra	10.0	19.69	15.4	21.77	24.2	48.61	5.4	8.88	13.8
Tegula brunnea	10.6	8.62	8.4	6.02	10.2	6.94	4.4	5.86	8.4
Lottia pelta	3.8	4.82	9.8	6.98	8.6	3.21	2.0	1.22	6.1
Lottia limatula	10.6	14.96	5.2	3.63	4.8	3.49	0.6	0.89	5.3
Tectura scutum	1.4	3.13	6.8	7.33	6.2	6.14	1.0	1.41	3.9
Anthopleura elegantissima	2.6	2.07	1.8	1.30	2.0	1.58	2.6	2.41	2.3
Phragmatopoma californica	5.0	8.15	1.0	1.44	0.8	0.91	0.6	0.91	1.8
Fissurella volcano	2.2	2.17	2.0	2.83	1.0	1.73	0.4	0.55	1.4
Tegula funebralis	0.6	1.34	0.8	1.10	1.2	1.64	0.6	0.89	0.8
Nemertea unid.	0.2	0.45	0.4	0.55	0.8	1.10	1.2	2.68	0.7
Leptasterias spp.	0.0	0.00	0.4	0.89	1.2	2.17	1.0	1.41	0.7
Ocenebra spp.	0.4	0.89	0.4	0.55	1.0	1.00	0.8	0.45	0.7
Strongylocentrotus purpuratus	0.2	0.45	0.0	0.00	0.0	0.00	1.2	0.84	0.4

(*continued*)

Horizontal Band Transects Station SC 1+.3m Survey Means and Std. Deviations (continued)

Survey	120		121		122		123		
Date	20-Jan-00		19-May-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Pugettia spp.	0.0	0.00	0.0	0.00	1.2	1.64	0.2	0.45	0.4
Asterina miniata	0.6	0.55	0.4	0.55	0.2	0.45	0.0	0.00	0.3
Amphissa spp.	<.1	<.01	<.1	<.01	0.8	1.79	0.0	0.00	0.2
Tonicella lineata	0.4	0.89	0.2	0.45	<.1	<.01	0.2	0.45	0.2
tunicates, colonial/social unid.	<.1	0.00	0.3	0.62	0.1	0.31	0.3	0.62	0.2
Serpulidae unid.	0.4	0.89	0.2	0.45	0.0	0.00	0.0	0.00	0.2
Calliostoma ligatum	<.1	<.01	0.0	0.00	0.0	0.00	0.6	0.89	0.2
Lepidozona spp.	<.1	<.01	0.2	0.45	<.1	<.01	0.2	0.45	0.1
Mopalia spp.	<.1	<.01	0.0	0.00	0.4	0.55	0.0	0.00	0.1
Diodora spp.	0.0	0.00	0.4	0.55	0.0	0.00	0.0	0.00	<.1
Serpulorbis squamigerus	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Diopatra ornata	0.2	0.45	0.0	0.00	0.0	0.00	0.2	0.45	<.1
Pisaster ochraceus	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Acmaea mitra	<.1	<.01	0.0	0.00	0.2	0.45	<.1	<.01	<.1
Anthopleura xanthogrammica	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Nuttallina californica	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Pachygrapsus crassipes	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Pycnopodia helianthoides	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Tethya aurantia	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	<.1
Mitra idae	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	<.1
Mimulus foliatus	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.45	<.1
Pisaster/Henricia (juv.)	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Platyhelminthes unid.	0.0	0.00	0.0	0.00	0.2	0.45	0.0	0.00	<.1
Mytilus galloprovincialis	0.2	0.45	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Spirorbidae	<.1	0.00	0.1	0.31	<.1	<.01	<.1	<.01	<.1
Chthamalus fissus	<.1	<.01	0.0	0.00	<.1	<.01	0.1	0.31	<.1
Acmaeidae unid.	<.1	0.00	<.1	<.01	<.1	0.00	<.1	<.01	<.1
Bryozoa, unid. (encrusting)	<.1	0.00	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Porifera unid. (encrusting)	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Lacuna spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Ischnochitonidae	0.0	0.00	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Homolopoma/Lirularia spp.	<.1	<.01	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Cyanoplax spp.	<.1	<.01	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Lissothuria nutriens	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Crepidula spp.	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Lottia asmi	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Nereididae unid.	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Pista spp.	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Bryozoa, unid. (foliose)	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Tectura paleacea	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Substrate									
bare rock	12.0	6.47	8.9	6.90	8.3	6.84	12.9	9.72	10.5
bare cobble	6.0	4.76	3.3	3.27	2.8	2.49	5.5	6.16	4.4
sand (shell gravel)	4.4	3.99	2.4	2.82	5.4	5.05	3.2	3.09	3.9

Horizontal Band Transects Station SC 1+.9m Survey Means and Std. Deviations

Survey	120		121		122		123		
Date	20-Jan-00		19-May-00		17-Jul-00		15-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
non-coralline crust	24.2	19.47	17.3	16.50	16.9	17.71	18.3	21.35	19.1
Endocladia muricata	19.7	8.98	20.1	13.21	17.6	7.99	13.5	6.65	17.7
Pelvetia compressa	8.3	9.04	9.4	9.72	7.5	7.96	7.2	7.38	8.1
Mastocarpus papillatus	7.7	6.33	5.3	3.27	8.4	7.06	8.6	6.55	7.5
coralline crust	6.1	2.17	3.9	2.43	3.5	3.72	2.6	1.91	4.0
Mazzaella flaccida	0.7	1.13	1.3	1.30	1.6	1.54	2.8	2.36	1.6
Mastocarpus jardinii	1.1	1.47	0.9	1.35	2.0	2.73	0.7	1.22	1.2
Corallina vancouveriensis	0.8	1.95	0.8	1.49	0.9	1.97	0.7	1.31	0.8
Mazzaella heterocarpa	< .1	0.22	0.4	0.49	0.1	0.29	1.3	1.29	0.5
Mazzaella affinis	< .1	< .01	0.0	0.00	0.0	0.00	1.5	2.57	0.4
Chondracanthus canaliculatus	< .1	0.22	< .1	0.22	< .1	< .01	1.2	3.04	0.3
Gelidium pusillum	< .1	0.22	0.6	1.16	< .1	< .01	0.3	0.49	0.2
Hesperophycus californicus	0.3	1.10	0.0	0.00	0.2	0.66	0.0	0.00	0.1
Fucus gardneri	0.0	0.00	0.3	0.75	< .1	0.22	0.0	0.00	0.1
Gelidium coulteri	0.1	0.29	< .1	0.22	0.0	0.00	0.1	0.44	< .1
Porphyra spp.	< .1	< .01	0.2	0.34	< .1	0.22	< .1	< .01	< .1
Gastroclonium subarticulatum	< .1	0.22	< .1	< .01	< .1	0.22	0.1	0.44	< .1
Cryptopleura violacea	0.2	0.66	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Ulva/Enteromorpha spp.	0.0	0.00	< .1	< .01	< .1	< .01	0.1	0.29	< .1
juv. articulated coralline algae	< .1	< .01	< .1	< .01	< .1	< .01	< .1	0.22	< .1
Callithamnion pikeanum	0.0	0.00	< .1	< .01	< .1	0.22	0.0	0.00	< .1
Cumagloia andersonii	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.22	< .1
Cladophora spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Phyllospadix spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mazzaella leptorhynchos	< .1	< .01	0.0	0.00	0.0	0.00	< .1	< .01	< .1
filamentous red algae-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula funebralis	151.8	170.34	131.6	96.19	150.0	62.61	89.4	75.66	130.7
Macclintockia scabra	51.4	48.88	16.2	18.09	78.8	72.56	29.2	25.23	43.9
Pagurus spp.	19.6	21.85	3.2	4.55	31.0	30.78	11.6	10.26	16.4
Tectura scutum	7.0	7.87	3.4	2.19	15.2	3.11	6.2	4.32	8.0
Lottia pelta	8.2	7.82	6.4	4.98	3.0	3.32	3.2	2.86	5.2
Anthopleura elegantissima	5.2	5.54	4.2	4.09	4.8	3.42	3.8	4.32	4.5
Lottia limatula	4.2	5.17	6.0	4.24	5.0	2.00	1.4	1.14	4.2
Tetraclita rubescens	0.0	0.00	4.4	6.19	1.4	3.13	0.8	1.30	1.7
Ocenebra spp.	0.2	0.45	1.2	0.84	1.6	3.05	0.0	0.00	0.8
Chthamalus fissus	0.7	1.55	< .1	0.00	0.6	1.24	0.8	0.91	0.5
Anthopleura xanthogrammica	0.0	0.00	0.6	0.89	0.6	0.89	0.6	0.89	0.5
Pachygrapsus crassipes	0.2	0.45	0.4	0.89	0.4	0.89	0.2	0.45	0.3
Leptasterias spp.	0.2	0.45	0.0	0.00	0.6	0.89	0.2	0.45	0.3
Phragmatopoma californica	0.1	0.31	0.1	0.31	0.3	0.38	0.3	0.62	0.2
Acanthina spp.	0.0	0.00	0.2	0.45	0.2	0.45	0.0	0.00	< .1
Lottia digitalis	0.4	0.89	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mopalia spp.	0.4	0.55	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Hemigrapsus nudus	0.2	0.45	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Pisaster ochraceus	0.2	0.45	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Nuttallina californica	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Fusinus luteopictus	0.0	0.00	0.2	0.45	0.0	0.00	0.0	0.00	< .1
Acmaeidae unid.	< .1	0.00	< .1	0.00	< .1	0.00	< .1	< .01	< .1
Lottia asmi	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Littorina spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Crepidula spp.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Lacuna spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Cyanoplax spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Substrate									
bare rock	26.2	8.15	25.2	7.82	20.3	10.04	30.8	14.87	25.6
bare cobble	19.4	16.00	27.2	18.31	28.6	20.55	19.1	17.50	23.6
sand (shell gravel)	3.8	4.70	1.6	1.39	3.1	3.13	1.7	2.08	2.6

Intertidal Vertical Transect Results

Vertical Fish Transect Station NC-1V Survey Totals, Annual Means and Std. Deviations

Survey	80	81	82	83		
Date	16-Feb-00	10-May-00	31-Aug-00	11-Dec-00	Annual	Annual
	Total	Total	Total	Total	Mean	Std. Dev.
Xiphister mucosus	21	19	15	18	18.3	2.5
Gobiesox maeandricus	4	4	28	12	12.0	11.3
Xiphister atropurpureus	6	7	32	3	12.0	13.4
Pholididae/Stichaeidae unid.	1	23	10	6	10.0	9.4
Xererpes fucorum	0	5	3	0	2.0	2.5
Anoplarchus purpurescens	4	1	1	1	1.8	1.5
Xiphister spp.	0	0	0	6	1.5	3.0
Oligocottus snyderi	0	1	5	0	1.5	2.4
Cottidae unid.	1	1	0	0	0.5	0.6
Oligocottus spp.	0	0	0	1	0.3	0.5

Vertical Fish Transect Station FC-1V Survey Totals, Annual Means and Std. Deviations

Survey	80	81	82	83		
Date	15-Feb-00	9-May-00	18-Jul-00	12-Dec-00	Annual	Annual
	Total	Total	Total	Total	Mean	Std. Dev.
Xiphister mucosus	1	8	12	12	8.3	5.2
Cottidae unid.	11	0	1	5	4.3	5.0
Pholididae/Stichaeidae unid.	1	7	8	0	4.0	4.1
Gobiesox maeandricus	0	1	2	13	4.0	6.1
Anoplarchus purpurescens	0	2	0	5	1.8	2.4
Oligocottus snyderi	5	0	0	0	1.3	2.5
Cebidichthys violaceus	0	0	1	2	0.8	1.0
Xiphister atropurpureus	0	0	0	2	0.5	1.0

Vertical Fish Transect Station NDC-1V Survey Totals, Annual Means and Std. Deviations

Survey	80	81	82	83		
Date	17-Feb-00	8-May-00	15-Aug-00	9-Dec-00	Annual	Annual
	Total	Total	Total	Total	Mean	Std. Dev.
Xiphister mucosus	0	0	8	0	2.0	4.0
Pholididae/Stichaeidae unid.	0	4	3	0	1.8	2.1
Cebidichthys violaceus	0	0	7	0	1.8	3.5
Anoplarchus purpurescens	0	0	5	0	1.3	2.5
Oligocottus snyderi	1	0	0	0	0.3	0.5

Vertical Fish Transect Station SDC-2V Survey Totals, Annual Means and Std. Deviations

Survey	80	81	82	83		
Date	18-Feb-00	8-May-00	14-Aug-00	13-Dec-00	Annual	Annual
	Total	Total	Total	Total	Mean	Std. Dev.
Cebidichthys violaceus	1	1	1	7	2.5	3.0
Pholididae/Stichaeidae unid.	0	6	0	0	1.5	3.0
Scytalina cerdale	0	2	0	4	1.5	1.9
Xiphister mucosus	1	0	1	3	1.3	1.3
Xiphister atropurpureus	1	2	0	2	1.3	1.0
Anoplarchus purpurescens	1	0	0	1	0.5	0.6
Artedius spp.	0	0	2	0	0.5	1.0
Cottidae unid.	1	0	0	0	0.3	0.5

Vertical Fish Transect Station SC-1V Survey Totals, Annual Means and Std. Deviations

Survey	80	81	82	83		
Date	17-Feb-00	11-May-00	30-Aug-00	8-Dec-00	Annual	Annual
	Total	Total	Total	Total	Mean	Std. Dev.
Anoplarchus purpurescens	72	49	11	22	38.5	27.5
Pholididae/Stichaeidae unid.	12	37	39	22	27.5	12.8
Cebidichthys violaceus	47	29	32	1	27.3	19.2
Xiphister mucosus	11	26	17	5	14.8	9.0
Gobiesox maeandricus	14	14	9	17	13.5	3.3
Xiphister atropurpureus	11	3	33	2	12.3	14.4
Cottidae unid.	0	9	2	0	2.8	4.3
Oligocottus snyderi	2	1	6	1	2.5	2.4
Anoplarchus/Cebidichthys spp.	0	0	0	5	1.3	2.5
Xererpes fucorum	0	0	2	0	0.5	1.0
Typhlogobius californiensis	1	0	0	1	0.5	0.6
Gibbonsia spp.	0	0	0	1	0.3	0.5
Artedius spp.	0	0	0	1	0.3	0.5
Porichthys notatus	0	1	0	0	0.3	0.5
Oligocottus spp.	0	1	0	0	0.3	0.5

Subtidal Arc Quadrant Results

Subtidal Arc Quadrant Station FC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	22-May-00		7-Jul-00		13-Sep-00		6-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Laminaria setchellii	87.8	38.55	89.0	35.99	166.0	58.11	132.8	40.92	118.9
Pterygophora californica	37.0	25.26	24.8	16.21	20.8	14.73	43.8	5.56	31.6
Nereocystis luetkeana	15.5	14.82	17.5	16.36	16.3	12.39	3.5	2.38	13.2
Laminariales	1.3	2.50	12.3	19.41	0.0	0.00	20.5	11.56	8.5
Cystoseira osmundacea	1.8	0.96	0.3	0.50	0.5	0.58	1.5	0.58	1.0
Invertebrates									
Tegula brunnea	63.0	18.00	87.8	26.54	401.3	407.19	207.0	24.12	189.8
Acmaea mitra	4.5	1.73	6.0	2.45	10.5	5.74	12.0	8.83	8.3
Tonicella lineata	5.3	2.87	6.0	2.45	4.5	3.00	14.3	6.65	7.5
Pagurus spp.	6.0	2.45	6.0	4.32	7.5	3.00	3.8	1.71	5.8
Calliostoma ligatum	0.8	1.50	0.8	1.50	2.3	1.50	8.3	4.50	3.0
Asterina miniata	1.3	0.50	2.8	1.50	4.3	2.22	3.0	0.82	2.8
Leptasterias spp.	0.8	0.96	7.0	3.92	2.0	1.15	0.8	0.96	2.6
Lottia instabilis	0.3	0.50	0.0	0.00	0.0	0.00	8.0	4.32	2.1
Anthopleura elegantissima	2.8	1.26	0.8	0.96	1.3	0.50	2.0	0.82	1.7
Tegula montereyi	0.0	0.00	0.0	0.00	3.8	2.87	0.8	1.50	1.1
Cryptochiton stelleri	0.5	1.00	0.5	0.58	0.5	0.58	2.3	1.26	0.9
Discurria insessa	0.0	0.00	0.0	0.00	3.0	0.82	0.0	0.00	0.8
Hermissenda crassicornis	0.0	0.00	1.3	0.96	1.5	1.73	0.0	0.00	0.7
Diopatra ornata	0.8	0.96	0.3	0.50	0.5	0.58	1.3	1.26	0.7
Ophiothrix spp.	0.0	0.00	2.5	1.73	0.0	0.00	0.0	0.00	0.6
Lithopoma gibberosum	0.3	0.50	1.3	1.89	0.5	0.58	0.3	0.50	0.6
Mitra idae	0.0	0.00	0.5	1.00	1.3	0.96	0.5	0.58	0.6
Epiactis prolifera	0.0	0.00	2.0	1.15	0.0	0.00	0.0	0.00	0.5
Strongylocentrotus purpuratus	0.3	0.50	0.5	0.58	1.0	1.41	0.3	0.50	0.5
Doriopsilla albopunctata	0.0	0.00	0.3	0.50	0.5	0.58	1.3	1.26	0.5
Archidoris spp.	0.0	0.00	0.8	0.96	0.0	0.00	1.3	0.50	0.5
Loxorhynchus spp.	0.0	0.00	0.3	0.50	0.0	0.00	1.5	0.58	0.4
Fusinus luteopictus	0.0	0.00	0.0	0.00	1.5	1.29	0.3	0.50	0.4
Pisaster giganteus	0.3	0.50	0.0	0.00	0.0	0.00	1.5	1.29	0.4
Pugettia spp.	0.3	0.50	0.5	0.58	0.5	0.58	0.5	0.58	0.4
Serpulorbis squamigerus	0.3	0.50	1.0	0.82	0.0	0.00	0.0	0.00	0.3
Pycnopodia helianthoides	0.5	0.58	0.0	0.00	0.3	0.50	0.5	0.58	0.3
Tethya aurantia	0.0	0.00	0.0	0.00	0.5	0.58	0.8	0.96	0.3
Pseudomelatoma torosa	0.0	0.00	0.0	0.00	0.0	0.00	1.3	0.96	0.3
Anthopleura artemisia	0.8	0.96	0.0	0.00	0.0	0.00	0.3	0.50	0.3
Serpulidae unid.	0.0	0.00	0.0	0.00	0.0	0.00	1.0	1.41	0.3
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.8	0.96	0.2
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.0	0.00	0.8	0.96	0.2
Cryptolithodes sitchensis	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Halcampa decemtentacula	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Diaulula sandiegensis	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Phidiana hiltoni	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Haliotis spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1

Subtidal Arc Quadrant Station NDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		30-Jun-00		6-Sep-00		1-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Pterygophora californica	19.0	13.66	27.0	22.09	21.8	20.77	29.5	19.36	24.3
Nereocystis luetkeana	15.0	14.72	41.0	29.30	20.0	16.85	8.0	4.08	21.0
Laminaria setchellii	9.8	5.80	4.5	5.92	13.5	5.92	14.0	12.36	10.4
Laminariales	6.3	12.50	15.0	30.00	0.0	0.00	0.0	0.00	5.3
Cystoseira osmundacea	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Invertebrates									
Tegula brunnea	15.0	7.75	59.3	20.69	47.3	20.25	66.0	11.22	46.9
Asterina miniata	10.3	8.66	6.3	3.59	5.5	2.89	6.5	3.42	7.1
Pagurus spp.	2.3	1.26	3.8	4.50	10.8	5.12	10.8	9.95	6.9
Anthopleura elegantissima	7.8	3.95	7.5	5.74	4.8	3.40	6.0	2.16	6.5
Acmaea mitra	6.0	4.24	6.0	2.45	3.0	2.45	6.0	2.45	5.3
Tonicella lineata	3.0	3.46	0.8	1.50	4.5	1.73	6.0	2.45	3.6
Calliostoma ligatum	2.3	1.50	2.3	2.87	0.8	1.50	7.5	5.20	3.2
Diopatra ornata	2.3	0.50	1.3	2.50	2.5	2.89	5.8	3.77	2.9
Serpulorbis squamigerus	4.3	2.63	0.8	1.50	1.5	1.91	2.5	3.00	2.3
Pisaster giganteus	1.0	0.82	0.3	0.50	2.0	0.82	2.3	1.26	1.4
Pycnopodia helianthoides	0.0	0.00	0.3	0.50	1.0	0.82	1.8	1.50	0.8
Epiactis prolifera	0.0	0.00	0.0	0.00	0.0	0.00	2.3	2.63	0.6
Cryptochiton stelleri	1.3	1.26	0.0	0.00	0.0	0.00	1.0	0.82	0.6
Leptasterias spp.	0.0	0.00	1.0	0.82	0.3	0.50	0.5	0.58	0.4
Mitra idae	0.5	1.00	0.5	0.58	0.3	0.50	0.5	1.00	0.4
Lithopoma gibberosum	0.0	0.00	0.8	0.50	0.3	0.50	0.5	0.58	0.4
Tegula montereyi	0.8	1.50	0.0	0.00	0.0	0.00	0.8	1.50	0.4
Doriopsilla albopunctata	0.0	0.00	0.5	1.00	0.0	0.00	1.0	0.82	0.4
Anthopleura artemisia	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.50	0.3
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.96	0.3
Tethya aurantia	0.0	0.00	0.5	0.58	0.0	0.00	0.5	0.58	0.3
Eudistylia polymorpha	0.0	0.00	0.3	0.50	0.0	0.00	0.5	1.00	0.2
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Hermissenda crassicornis	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Urticina spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Henricia leviuscula	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Mimulus foliatus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Orthasterias koehleri	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Lepidozona spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Eupentacta quinquesemita	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1

Subtidal Arc Quadrant Station NDC 3-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	14-Apr-00		29-Jun-00		7-Sep-00		2-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Macrocystis spp.	26.5	34.63	5.8	2.22	9.5	3.87	4.8	0.96	11.6
Cystoseira osmundacea	19.8	13.94	7.3	1.71	11.0	8.04	5.0	4.69	10.8
Laminariales	3.5	4.43	0.0	0.00	0.0	0.00	0.0	0.00	0.9
Sargassum muticum	3.0	2.71	0.0	0.00	0.0	0.00	0.3	0.50	0.8
Invertebrates									
Strongylocentrotus purpuratus	99.8	70.15	35.3	16.05	35.3	18.66	28.8	11.24	49.8
Acmaea mitra	7.5	5.20	24.0	7.75	4.5	3.87	6.0	2.45	10.5
Anthopleura elegantissima	3.3	3.40	2.3	1.89	1.8	1.71	2.8	2.99	2.5
Tegula brunnea	0.0	0.00	2.3	2.87	0.8	1.50	0.0	0.00	0.8
Serpulorbis squamigerus	0.5	0.58	0.8	0.96	0.5	0.58	0.8	0.96	0.6
Fissurella volcano	0.3	0.50	2.0	1.41	0.0	0.00	0.0	0.00	0.6
Diopatra ornata	0.3	0.50	1.3	0.96	0.3	0.50	0.5	1.00	0.6
Diodora spp.	0.5	0.58	0.0	0.00	0.3	0.50	1.3	0.50	0.5
Ophiothrix spp.	0.0	0.00	0.0	0.00	1.8	2.36	0.0	0.00	0.4
Serpulidae unid.	0.8	0.96	0.0	0.00	0.5	1.00	0.0	0.00	0.3
Doriopsilla albopunctata	0.0	0.00	0.5	0.58	0.5	0.58	0.0	0.00	0.3
Tonicella lineata	0.0	0.00	0.0	0.00	0.0	0.00	0.8	1.50	0.2
Parastichopus spp.	0.3	0.50	0.3	0.50	0.0	0.00	0.3	0.50	0.2
Haliotis spp.	0.0	0.00	0.5	0.58	0.0	0.00	0.3	0.50	0.2
Anthopleura artemisia	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Pagurus spp.	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Asterina miniata	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Phidiana hiltoni	0.5	0.58	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Epiactis prolifera	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mopalia spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Cactosoma arenaria	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mitra idae	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Pelecypoda unid. boring	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pisaster giganteus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pugettia spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Ceratostoma foliatum	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Aplysia californica	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Megathura crenulata	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Archidoris spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1

Subtidal Arc Quadrant Station NDC 4-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		7-Jul-00		15-Sep-00		6-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Macrocystis spp.	5.8	0.96	5.5	1.73	6.5	1.29	4.0	2.83	5.4
Cystoseira osmundacea	8.3	5.91	5.3	4.92	3.3	2.87	2.8	2.06	4.9
Laminariales	8.5	9.26	0.0	0.00	0.0	0.00	0.0	0.00	2.1
Sargassum muticum	3.8	3.50	0.0	0.00	0.0	0.00	0.0	0.00	0.9
Laminaria setchellii	1.3	1.26	0.5	0.58	0.3	0.50	0.3	0.50	0.6
Pterygophora californica	0.8	0.96	1.0	1.15	0.0	0.00	0.0	0.00	0.4
Invertebrates									
Strongylocentrotus purpuratus	104.3	26.42	102.5	80.30	45.0	21.95	66.5	44.58	79.6
Tegula brunnea	0.0	0.00	0.8	1.50	48.8	42.87	58.5	33.09	27.0
Anthopleura elegantissima	9.5	4.65	6.5	2.89	4.5	1.73	4.8	2.75	6.3
Acmaea mitra	1.5	1.73	1.5	1.73	3.8	2.87	6.8	3.77	3.4
Doriopsilla albopunctata	1.0	0.00	2.0	0.82	1.0	0.82	2.0	1.15	1.5
Tethya aurantia	0.3	0.50	1.8	1.50	1.8	2.06	1.5	1.73	1.3
Serpulorbis squamigerus	0.8	0.50	1.5	1.29	0.5	0.58	2.0	1.63	1.2
Mitra idae	0.8	0.96	1.5	1.73	0.3	0.50	1.5	1.29	1.0
Parastichopus spp.	2.3	0.96	0.8	0.96	0.8	1.50	0.0	0.00	0.9
Diopatra ornata	0.5	0.58	0.8	0.96	0.5	0.58	1.8	1.26	0.9
Tonicella lineata	0.8	1.50	0.0	0.00	0.0	0.00	1.5	1.73	0.6
Archidoris spp.	0.0	0.00	0.3	0.50	1.5	1.73	0.5	0.58	0.6
Diodora spp.	0.0	0.00	0.3	0.50	1.3	1.26	0.5	0.58	0.5
Ophioplocus spp.	0.0	0.00	0.0	0.00	1.8	2.36	0.0	0.00	0.4
Pisaster giganteus	0.0	0.00	0.0	0.00	0.8	0.96	0.8	0.50	0.4
Megathura crenulata	1.0	0.82	0.3	0.50	0.0	0.00	0.3	0.50	0.4
Asterina miniata	0.0	0.00	0.5	0.58	0.5	0.58	0.3	0.50	0.3
Norrisia norrisi	0.8	0.96	0.0	0.00	0.0	0.00	0.5	0.58	0.3
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.96	0.3
Serpulidae unid.	0.5	0.58	0.5	0.58	0.0	0.00	0.0	0.00	0.3
Ceratostoma foliatum	0.0	0.00	0.5	1.00	0.0	0.00	0.5	1.00	0.3
Calliostoma ligatum	0.0	0.00	0.0	0.00	0.8	1.50	0.0	0.00	0.2
Epiactis prolifera	0.5	0.58	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Halcampa decemtentacula	0.0	0.00	0.0	0.00	0.5	0.58	0.0	0.00	0.1
Fissurella volcano	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Octopus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pagurus spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Phidiana hiltoni	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Placiphorella velata	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Eudistylia polymorpha	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pugettia spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Chromodoris macfarlandi	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Aplysia californica	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Geitodoris heathi	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pectinidae	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1

Subtidal Arc Quadrant Station SDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	13-Apr-00		5-Jul-00		8-Sep-00		3-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Cystoseira osmundacea	11.5	2.89	13.8	5.85	5.0	2.45	3.3	0.96	8.4
Macrocystis spp.	4.0	4.97	3.5	2.89	5.5	1.29	3.3	2.63	4.1
Sargassum muticum	1.5	0.58	4.5	3.11	0.0	0.00	0.0	0.00	1.5
Laminaria setchellii	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pterygophora californica	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Invertebrates									
Strongylocentrotus purpuratus	50.0	21.76	22.8	15.69	36.0	35.00	4.3	0.96	28.3
Tegula brunnea	0.0	0.00	1.5	1.73	32.3	27.97	20.3	8.26	13.5
Diopatra ornate	0.0	0.00	4.0	6.68	7.5	1.29	5.0	6.06	4.1
Acmaea mitra	0.0	0.00	0.0	0.00	10.5	6.24	4.5	1.73	3.8
Serpulorbis squamigerus	1.5	2.38	0.3	0.50	11.5	4.93	1.5	2.38	3.7
Pagurus spp.	0.0	0.00	0.5	0.58	6.5	2.38	1.3	2.50	2.1
Anthopleura elegantissima	0.5	0.58	1.3	0.96	3.8	2.22	1.0	1.15	1.6
Tonicella lineata	0.0	0.00	0.0	0.00	4.5	3.87	0.0	0.00	1.1
Mitra idae	0.0	0.00	1.0	0.82	2.3	0.96	1.0	1.41	1.1
Pisaster giganteus	0.5	0.58	0.5	0.58	2.0	0.82	0.5	0.58	0.9
Asterina miniata	1.0	1.15	0.5	1.00	0.5	0.58	0.5	0.58	0.6
Parastichopus spp.	0.5	0.58	0.0	0.00	1.0	2.00	0.3	0.50	0.4
Ophiothrix spp.	0.0	0.00	1.3	2.50	0.0	0.00	0.0	0.00	0.3
Anthopleura artemisia	0.0	0.00	0.5	0.58	0.0	0.00	0.5	1.00	0.3
Cactosoma arenaria	1.0	2.00	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Pisaster ochraceus	0.3	0.50	0.0	0.00	0.8	0.50	0.0	0.00	0.3
Pugettia spp.	0.0	0.00	0.3	0.50	0.3	0.50	0.5	0.58	0.3
Hermissenda crassicornis	0.0	0.00	0.0	0.00	0.8	0.96	0.0	0.00	0.2
Pycnopodia helianthoides	0.0	0.00	0.0	0.00	0.0	0.00	0.8	0.50	0.2
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Pododesmus cepio	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Doriopsilla albopunctata	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pisaster brevispinus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Mimulus foliates	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Norrisia norrisi	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Ophiactis simplex	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Archidoris spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1

Subtidal Arc Quadrant Station SDC 3-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	3-May-00		6-Jul-00		18-Sep-00		8-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Cystoseira osmundacea	2.8	2.99	1.3	0.50	3.3	2.50	2.8	1.71	2.5
Laminariales	1.3	1.50	3.0	4.76	2.0	2.31	0.0	0.00	1.6
Macrocystis spp.	1.0	0.82	2.5	1.29	1.5	1.00	0.0	0.00	1.3
Laminaria setchellii	0.5	0.58	0.0	0.00	0.0	0.00	1.3	1.89	0.4
Pterygophora californica	0.0	0.00	0.5	1.00	0.0	0.00	0.3	0.50	0.2
Invertebrates									
Strongylocentrotus purpuratus	61.0	19.30	6.5	2.38	15.3	5.74	13.5	9.29	24.1
Anthopleura elegantissima	15.0	2.94	11.8	7.50	12.8	3.77	22.3	6.70	15.4
Diopatra ornata	7.3	8.54	8.8	7.14	6.5	5.26	8.5	3.00	7.8
Tegula brunnea	0.0	0.00	1.5	1.73	3.0	3.46	17.3	28.50	5.4
Mitra idae	1.0	0.82	3.3	2.75	2.5	3.11	6.8	4.57	3.4
Asterina miniata	2.3	1.26	0.8	0.96	2.8	2.87	2.8	1.71	2.1
Pisaster giganteus	2.0	2.00	1.0	0.82	1.0	0.82	1.8	2.06	1.4
Acmaea mitra	1.5	3.00	0.0	0.00	2.3	2.87	0.8	1.50	1.1
Halcampa decemtentacula	0.0	0.00	0.0	0.00	4.3	1.26	0.0	0.00	1.1
Anthopleura artemisia	0.3	0.50	0.8	0.96	0.8	0.96	2.0	0.82	0.9
Leucilla nuttingi	0.0	0.00	0.0	0.00	3.3	4.27	0.0	0.00	0.8
Cryptochiton stelleri	0.8	0.96	0.5	0.58	0.3	0.50	1.0	0.00	0.6
Urticina spp.	0.0	0.00	0.3	0.50	0.3	0.50	1.0	0.82	0.4
Hermissenda crassicornis	0.0	0.00	1.5	1.91	0.0	0.00	0.0	0.00	0.4
Eudistylia polymorpha	0.3	0.50	0.5	1.00	0.8	0.50	0.0	0.00	0.4
Pycnopodia helianthoides	0.3	0.50	0.8	0.96	0.0	0.00	0.0	0.00	0.3
Parastichopus spp.	0.8	0.96	0.0	0.00	0.0	0.00	0.3	0.50	0.3
Pisaster brevispinus	0.3	0.50	0.3	0.50	0.3	0.50	0.3	0.50	0.3
Serpulidae unid.	0.0	0.00	1.0	1.41	0.0	0.00	0.0	0.00	0.3
Tegula montereyi	0.0	0.00	0.0	0.00	0.0	0.00	0.8	1.50	0.2
Ophioplocus spp.	0.0	0.00	0.3	0.50	0.5	1.00	0.0	0.00	0.2
Pugettia spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Scyra acutifrons	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Serpulorbis squamigerus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Sabellidae	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Pagurus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Leptasterias spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Doriopsilla albopunctata	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Phidiana hiltoni	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mimulus foliatus	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophiothrix spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Haliotis spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Archidoris spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pectinidae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1

Subtidal Arc Quadrant Station SC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	19-May-00		11-Jul-00		25-Sep-00		12-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Pterygophora californica	82.8	44.78	80.3	26.61	78.8	45.08	92.0	38.53	83.4
Laminariales	20.8	9.43	32.5	15.55	42.5	34.28	71.3	33.26	41.8
Laminaria setchellii	36.5	15.29	19.5	5.51	20.5	6.81	19.5	7.00	24.0
Nereocystis luetkeana	29.3	8.58	33.3	18.79	11.3	8.54	4.0	3.56	19.4
Cystoseira osmundacea	4.5	3.00	0.5	1.00	0.3	0.50	3.5	2.65	2.2
Egregia menziesii	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Tegula brunnea	69.8	27.86	56.3	19.19	57.0	7.75	57.8	26.65	60.2
Tonicella lineata	6.0	3.46	6.8	5.68	5.3	2.87	7.5	3.87	6.4
Pagurus spp.	5.5	2.08	6.8	2.06	8.0	4.32	5.3	2.06	6.4
Anthopleura elegantissima	5.5	2.65	3.5	2.08	4.8	2.22	6.8	2.22	5.1
Acmaea mitra	4.5	3.87	3.8	2.87	6.0	6.00	2.3	2.87	4.1
Asterina miniata	4.3	2.63	2.5	3.00	2.5	1.29	5.5	2.08	3.7
Diopatra ornata	4.0	6.73	1.8	2.36	6.0	4.32	2.5	2.08	3.6
Pycnopodia helianthoides	1.3	1.50	0.5	0.58	0.8	0.96	0.5	0.58	0.8
Lottia instabilis	0.0	0.00	2.8	2.22	0.0	0.00	0.0	0.00	0.7
Calliostoma ligatum	0.8	1.50	0.0	0.00	0.8	1.50	0.8	1.50	0.6
Pisaster giganteus	0.0	0.00	0.3	0.50	1.3	1.50	0.8	0.96	0.6
Anthopleura artemisia	0.3	0.50	0.8	0.50	0.5	0.58	0.5	0.58	0.5
Serpulorbis squamigerus	2.0	2.83	0.0	0.00	0.0	0.00	0.0	0.00	0.5
Mopalia spp.	0.5	0.58	0.8	0.96	0.3	0.50	0.0	0.00	0.4
Pista spp.	0.0	0.00	0.0	0.00	0.0	0.00	1.3	2.50	0.3
Leptasterias spp.	0.8	0.50	0.0	0.00	0.0	0.00	0.5	0.58	0.3
Cryptochiton stelleri	0.5	1.00	0.0	0.00	0.5	0.58	0.0	0.00	0.3
Urticina spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.3	0.50	0.1
Hermissenda crassicornis	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Doriopsilla albopunctata	0.0	0.00	0.3	0.50	0.3	0.50	0.0	0.00	0.1
Archidoris spp.	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Lithopoma gibberosum	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pugettia spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Orthasterias koehleri	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Hopkinsia rosacea	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1

Subtidal Arc Quadrant Station SC 2-6m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	12-May-00		10-Jul-00		21-Sep-00		7-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Pterygophora californica	19.0	13.66	27.0	22.09	21.8	20.77	29.5	19.36	24.3
Nereocystis luetkeana	15.0	14.72	41.0	29.30	20.0	16.85	8.0	4.08	21.0
Laminaria setchellii	9.8	5.80	4.5	5.92	13.5	5.92	14.0	12.36	10.4
Laminariales	6.3	12.50	15.0	30.00	0.0	0.00	0.0	0.00	5.3
Cystoseira osmundacea	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Invertebrates									
Tegula brunnea	15.0	7.75	59.3	20.69	47.3	20.25	66.0	11.22	46.9
Asterina miniata	10.3	8.66	6.3	3.59	5.5	2.89	6.5	3.42	7.1
Pagurus spp.	2.3	1.26	3.8	4.50	10.8	5.12	10.8	9.95	6.9
Anthopleura elegantissima	7.8	3.95	7.5	5.74	4.8	3.40	6.0	2.16	6.5
Acmaea mitra	6.0	4.24	6.0	2.45	3.0	2.45	6.0	2.45	5.3
Tonicella lineata	3.0	3.46	0.8	1.50	4.5	1.73	6.0	2.45	3.6
Calliostoma ligatum	2.3	1.50	2.3	2.87	0.8	1.50	7.5	5.20	3.2
Diopatra ornata	2.3	0.50	1.3	2.50	2.5	2.89	5.8	3.77	2.9
Serpulorbis squamigerus	4.3	2.63	0.8	1.50	1.5	1.91	2.5	3.00	2.3
Pisaster giganteus	1.0	0.82	0.3	0.50	2.0	0.82	2.3	1.26	1.4
Pycnopodia helianthoides	0.0	0.00	0.3	0.50	1.0	0.82	1.8	1.50	0.8
Epiactis prolifera	0.0	0.00	0.0	0.00	0.0	0.00	2.3	2.63	0.6
Cryptochiton stelleri	1.3	1.26	0.0	0.00	0.0	0.00	1.0	0.82	0.6
Leptasterias spp.	0.0	0.00	1.0	0.82	0.3	0.50	0.5	0.58	0.4
Mitra idae	0.5	1.00	0.5	0.58	0.3	0.50	0.5	1.00	0.4
Lithopoma gibberosum	0.0	0.00	0.8	0.50	0.3	0.50	0.5	0.58	0.4
Tegula montereyi	0.8	1.50	0.0	0.00	0.0	0.00	0.8	1.50	0.4
Doriopsilla albopunctata	0.0	0.00	0.5	1.00	0.0	0.00	1.0	0.82	0.4
Anthopleura artemisia	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.50	0.3
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.96	0.3
Tethya aurantia	0.0	0.00	0.5	0.58	0.0	0.00	0.5	0.58	0.3
Eudistylia polymorpha	0.0	0.00	0.3	0.50	0.0	0.00	0.5	1.00	0.2
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Hermissenda crassicornis	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Urticina spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Henricia leviuscula	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Mimulus foliatus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Orthasterias koehleri	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Lepidozona spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Eupentacta quinquesemita	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1

Subtidal Line Contact Results

Subtidal Line Contact Station FC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	22-May-00		7-Jul-00		13-Sep-00		6-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Calliarthron/Bossiella spp.-complex	52.0	8.79	57.5	14.18	55.0	8.41	51.0	10.00	53.9
coralline crust	64.5	28.35	32.0	7.48	53.5	9.29	40.5	9.98	47.6
Cryptopleura ruprechtiana	13.5	10.25	15.5	8.54	11.5	4.43	6.0	6.32	11.6
Chondracanthus corymbiferus	12.5	5.26	10.5	5.51	8.0	1.63	6.0	1.63	9.3
Prionitis spp.	7.5	7.19	9.0	6.83	6.0	0.00	10.5	3.79	8.3
Laminaria setchellii	5.0	5.29	4.0	2.83	13.5	5.51	7.5	5.97	7.5
Rhodymenia spp.	10.0	4.00	4.0	4.90	2.5	3.00	2.5	3.00	4.8
non-coralline crust	2.0	1.63	3.0	3.46	5.5	1.91	5.0	6.22	3.9
Desmarestia spp.	4.0	4.32	7.0	8.25	2.5	2.52	0.0	0.00	3.4
Neoptilota densa	1.5	1.91	3.5	1.91	1.5	1.00	0.5	1.00	1.8
Nereocystis luetkeana	1.0	2.00	2.5	2.52	1.5	1.91	1.0	1.15	1.5
Laminariales	5.0	6.22	< .1	< .01	0.0	0.00	0.0	0.00	1.3
Prionitis australis	0.5	1.00	0.5	1.00	3.5	1.00	0.0	0.00	1.1
Gelidium robustum	< .1	< .01	2.0	2.83	0.5	1.00	1.0	2.00	0.9
Halymenia/Schizymenia spp.-complex	3.5	4.12	0.0	0.00	< .1	< .01	0.0	0.00	0.9
Osmundea spp.	1.5	1.91	0.5	1.00	0.5	1.00	0.5	1.00	0.8
Pterygophora californica	2.0	4.00	0.5	1.00	< .1	< .01	< .1	0.00	0.6
Farlowia/Pikea spp.-complex	1.0	2.00	< .1	< .01	0.5	1.00	< .1	< .01	0.4
Cystoseira osmundacea	0.5	1.00	0.5	1.00	0.5	1.00	< .1	< .01	0.4
Callophyllis flabellulata	1.5	1.91	0.0	0.00	0.0	0.00	0.0	0.00	0.4
Ahnfeltiopsis linearis	0.0	0.00	0.0	0.00	1.0	1.15	0.5	1.00	0.4
Microcladia coulteri	1.0	1.15	< .1	0.00	< .1	0.00	< .1	< .01	0.3
Callophyllis spp.	0.5	1.00	0.5	1.00	< .1	< .01	0.0	0.00	0.3
Delesseriaceae (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	1.0	2.00	0.3
Callophyllis firma	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Scinaia confusa	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Porphyra spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Fauchea laciniata	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Substrate									
colonized rock	81.5	6.40	79.0	5.03	78.5	9.57	74.5	9.85	78.4
colonized cobble	13.5	9.71	5.0	3.46	21.0	8.72	4.0	2.83	10.9
bare cobble	4.0	3.65	15.0	6.63	0.5	1.00	15.0	6.83	8.6
bare rock	0.5	1.00	0.5	1.00	0.0	0.00	5.5	4.12	1.6
sand (shell gravel)	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1

Subtidal Line Contact Station NDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		30-Jun-00		6-Sep-00		1-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	79.5	6.61	79.0	6.00	67.5	6.40	32.5	8.54	64.6
Calliarthron/Bossiella spp.-complex	26.5	5.74	34.5	8.39	35.0	9.31	32.5	16.52	32.1
Farlowia/Pikea spp.-complex	12.5	4.12	14.0	4.90	9.5	3.42	15.0	5.03	12.8
Macrocystis spp.	5.0	5.29	5.0	3.46	4.5	6.40	14.5	9.15	7.3
Prionitis spp.	5.5	3.42	8.0	1.63	8.0	1.63	5.0	1.15	6.6
Gelidium robustum	5.0	4.16	5.0	3.46	6.0	1.63	4.0	3.65	5.0
Cryptopleura violacea	6.0	4.90	4.0	5.66	3.5	1.91	2.0	0.00	3.9
non-coralline crust	1.5	3.00	5.5	1.00	3.5	1.00	1.0	1.15	2.9
Chondracanthus corymbiferus	1.0	1.15	0.5	1.00	6.5	2.52	0.5	1.00	2.1
Pterosiphonia dendroidea	4.5	5.26	0.5	1.00	3.5	3.00	0.0	0.00	2.1
Cystoseira osmundacea	3.0	1.15	2.0	2.83	2.5	2.52	0.5	1.00	2.0
Desmarestia spp.	1.5	1.91	4.5	2.52	< .1	< .01	0.0	0.00	1.5
Sargassum muticum	2.5	1.91	1.0	1.15	0.5	1.00	1.0	2.00	1.3
Gloiosiphonia californica	5.0	4.76	< .1	< .01	0.0	0.00	0.0	0.00	1.3
Callophyllis spp.	1.5	1.91	2.0	1.63	0.5	1.00	0.0	0.00	1.0
Rhodymenia spp.	0.5	1.00	0.5	1.00	2.0	1.63	0.5	1.00	0.9
Chrysophyta unid.	0.0	0.00	0.5	1.00	0.0	0.00	1.5	3.00	0.5
filamentous red algae-complex	0.5	1.00	< .1	< .01	1.0	2.00	0.0	0.00	0.4
Acrosorium uncinatum	0.5	1.00	< .1	< .01	0.5	1.00	< .1	< .01	0.3
Prionitis australis	< .1	< .01	0.5	1.00	0.5	1.00	0.0	0.00	0.3
Antitham./Platythamnion spp.-complex	0.0	0.00	0.0	0.00	1.0	2.00	0.0	0.00	0.3
Laminariales	< .1	< .01	0.5	1.00	< .1	< .01	0.0	0.00	0.1
Callophyllis flabellulata	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Mazzaella rosea	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Nienburgia andersoniana	0.0	0.00	< .1	< .01	0.0	0.00	0.5	1.00	0.1
Halymenia/Schizymenia spp.-complex	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Ulva/Enteromorpha spp.	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Cladophora spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Corallina officinalis	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Spongomorpha/Acrosiphonia-complex	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Osmundea spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	3.5	1.91	2.0	2.83	7.5	5.26	8.0	4.62	5.3
Substrate									
colonized rock	58.5	11.12	51.0	34.81	46.0	34.06	60.0	22.86	53.9
colonized cobble	37.5	7.00	25.0	9.59	34.5	11.12	7.5	4.12	26.1
bare rock	0.0	0.00	0.5	1.00	15.0	26.15	12.0	14.70	6.9
bare cobble	0.5	1.00	0.0	0.00	0.0	0.00	20.5	9.15	5.3
sand (shell gravel)	3.5	4.73	3.0	3.83	4.5	5.26	0.0	0.00	2.8

Subtidal Line Contact Station NDC 3-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	14-Apr-00		29-Jun-00		7-Sep-00		2-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	53.0	12.81	87.0	7.75	53.5	7.00	33.5	9.71	56.8
Calliarthron/Bossiella spp.-complex	27.5	11.47	31.5	11.00	28.0	12.96	22.0	14.88	27.3
Farlowia/Pikea spp.-complex	33.5	6.81	12.5	1.00	15.0	2.00	7.0	3.46	17.0
Chrysophyta unid.	30.0	4.90	0.0	0.00	1.5	1.00	14.5	7.19	11.5
Macrocystis spp.	9.5	3.00	10.5	6.19	10.5	4.43	15.0	8.08	11.4
Gelidium robustum	8.5	5.26	9.5	6.61	10.5	5.26	10.0	4.90	9.6
Cryptopleura violacea	20.0	3.65	2.5	3.00	2.0	1.63	3.5	3.42	7.0
Prionitis spp.	5.5	3.00	6.5	3.42	4.5	3.00	6.0	2.31	5.6
Cystoseira osmundacea	5.5	1.00	5.0	3.46	3.0	2.58	1.5	1.00	3.8
Rhodymenia spp.	5.0	5.29	1.5	1.91	1.5	3.00	5.5	4.12	3.4
Chondracanthus corymbiferus	1.0	2.00	5.0	3.46	4.0	4.90	1.5	1.91	2.9
non-coralline crust	< .1	< .01	2.0	1.63	4.5	1.91	0.5	1.00	1.8
Callophyllis spp.	3.0	1.15	4.0	3.65	0.0	0.00	0.0	0.00	1.8
Corallina officinalis	3.5	4.73	0.0	0.00	2.5	3.00	0.5	1.00	1.6
Pterosiphonia dendroidea	2.5	2.52	3.0	2.58	0.0	0.00	0.5	1.00	1.5
Desmarestia spp.	< .1	< .01	2.0	2.31	3.0	2.58	0.0	0.00	1.3
Acrosorium uncinatum	4.0	3.65	0.0	0.00	< .1	< .01	0.5	1.00	1.1
Ahnfeltiopsis linearis	1.5	1.91	0.5	1.00	1.0	1.15	1.0	1.15	1.0
Gelidium spp.	0.0	0.00	3.0	6.00	0.0	0.00	0.0	0.00	0.8
Sargassum muticum	2.0	2.31	< .1	< .01	0.0	0.00	0.5	1.00	0.6
Nienburgia andersoniana	1.0	1.15	0.0	0.00	1.5	1.91	0.0	0.00	0.6
Chondracanthus harveyanus/spinosus	1.0	1.15	0.5	1.00	0.0	0.00	0.5	1.00	0.5
Prionitis australis	0.5	1.00	0.0	0.00	0.5	1.00	0.0	0.00	0.3
filamentous red algae-complex	< .1	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Mazzaella rosea	0.5	1.00	0.0	0.00	0.0	0.00	< .1	< .01	0.1
Callophyllis flabellulata	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Dictyota binghamiae	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Ulva/Enteromorpha spp.	< .1	0.00	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Halymenia/Schizymenia spp.-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cladophora spp.	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Colpomenia spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Gloiosiphonia californica	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Antitham./Platythamnion spp.-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Laminaria setchellii	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Gastroclonium subarticulatum	0.0	0.00	0.0	0.00	0.0	0.00	< .1	< .01	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Laminariales	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	0.0	0.00	0.0	0.00	3.0	2.00	2.5	1.91	1.4
tunicates, colonial/social unid.	0.0	0.00	0.0	0.00	0.5	1.00	0.0	0.00	0.1
Substrate									
colonized rock	86.0	4.90	83.0	17.40	76.0	11.20	56.5	14.55	75.4
colonized cobble	7.5	5.97	14.5	13.70	11.5	5.74	6.5	4.43	10.0
bare rock	0.0	0.00	0.0	0.00	5.5	9.71	25.0	14.83	7.6
bare cobble	0.0	0.00	0.0	0.00	4.5	2.52	12.0	7.12	4.1
sand (shell gravel)	6.5	4.73	2.5	3.79	2.5	3.79	0.0	0.00	2.9

Subtidal Line Contact Station NDC 4-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		7-Jul-00		15-Sep-00		6-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	45.5	8.06	68.0	10.46	34.0	4.32	19.5	9.57	41.8
Calliarthron/Bossiella spp.-complex	33.5	3.42	43.0	14.47	43.0	8.08	30.5	10.75	37.5
Farlowia/Pikea spp.-complex	20.5	6.81	11.0	3.46	15.0	3.46	18.5	7.19	16.3
Cryptopleura violacea	27.0	4.76	6.5	3.00	14.0	6.32	7.0	4.76	13.6
Macrocystis spp.	4.0	2.83	7.0	9.02	11.5	7.37	8.5	8.39	7.8
Desmarestia spp.	3.0	1.15	14.5	1.91	10.5	3.42	0.5	1.00	7.1
Chondracanthus corymbiferus	5.5	4.43	8.5	2.52	3.5	3.42	2.5	2.52	5.0
Prionitis spp.	4.5	4.43	5.5	1.91	6.5	4.43	3.0	2.58	4.9
Rhodymenia spp.	6.0	1.63	0.5	1.00	5.0	6.22	4.5	1.00	4.0
Chrysophyta unid.	8.5	6.81	0.0	0.00	0.5	1.00	2.5	5.00	2.9
Gelidium robustum	2.5	3.00	3.0	2.58	2.5	1.91	3.0	2.00	2.8
Callophyllis flabellulata	1.5	3.00	6.0	6.32	1.0	1.15	0.0	0.00	2.1
Cystoseira osmundacea	2.0	2.31	1.5	3.00	3.5	3.42	0.5	1.00	1.9
Callophyllis spp.	2.5	1.00	3.0	3.46	0.0	0.00	0.0	0.00	1.4
Acrosorium uncinatum	4.0	3.65	< .1	< .01	0.5	1.00	0.0	0.00	1.1
Pterosiphonia dendroidea	1.5	1.91	1.0	1.15	< .1	< .01	1.0	1.15	0.9
Ahnfeltiopsis linearis	1.0	1.15	1.5	1.91	0.5	1.00	0.0	0.00	0.8
Chondracanthus harveyanus/spinosus	3.0	3.46	0.0	0.00	0.0	0.00	< .1	< .01	0.8
filamentous red algae-complex	2.0	1.63	< .1	0.00	< .1	< .01	0.0	0.00	0.5
non-coralline crust	1.0	2.00	1.0	1.15	< .1	< .01	< .1	< .01	0.5
Prionitis australis	0.0	0.00	0.0	0.00	1.0	1.15	1.0	2.00	0.5
Nienburgia andersoniana	0.5	1.00	0.0	0.00	1.0	1.15	0.0	0.00	0.4
Opuntiella californica	< .1	< .01	1.0	2.00	< .1	< .01	0.0	0.00	0.3
Sargassum muticum	< .1	< .01	1.0	2.00	0.0	0.00	0.0	0.00	0.3
Cryptopleura ruprechtiana	0.0	0.00	0.5	1.00	0.0	0.00	< .1	< .01	0.1
Antitham./Platythamnion spp.-complex	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Corallina officinalis	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Laminaria setchellii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Gloiosiphonia californica	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Neoptilota densa	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Colpomenia spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Osmundea spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Bryopsis spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ulva/Enteromorpha spp.	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	16.5	12.79	3.5	3.42	17.5	2.52	37.5	18.43	18.8
Substrate									
colonized rock	78.0	7.12	87.5	7.55	83.5	10.12	80.0	8.16	82.3
sand (shell gravel)	15.0	10.13	5.0	3.46	8.0	6.32	3.0	3.46	7.8
colonized cobble	6.0	4.32	7.5	6.81	6.0	8.16	1.0	2.00	5.1
bare cobble	0.5	1.00	0.0	0.00	2.5	3.00	8.5	4.12	2.9
bare rock	0.5	1.00	0.0	0.00	0.0	0.00	7.0	6.83	1.9

Subtidal Line Contact Station SDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	13-Apr-00		5-Jul-00		8-Sep-00		3-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	4.5	1.91	26.0	11.78	53.0	11.37	34.5	2.52	29.5
Cryptopleura violacea	41.5	11.70	26.0	6.73	34.0	7.83	14.5	5.00	29.0
Prionitis spp.	18.0	2.83	13.0	6.22	13.5	5.51	13.5	5.97	14.5
Chrysophyta unid.	51.5	16.36	0.0	0.00	3.5	3.00	0.0	0.00	13.8
Calliarthron/Bossiella spp.-complex	9.5	5.26	12.0	3.65	25.0	10.13	8.0	4.32	13.6
Rhodymenia spp.	10.5	8.06	10.5	6.61	9.0	9.02	5.0	2.58	8.8
Cystoseira osmundacea	3.0	2.00	13.0	9.02	10.5	4.43	6.5	1.91	8.3
Desmarestia spp.	< .1	< .01	14.5	5.97	7.0	2.58	1.0	2.00	5.6
Acrosorium uncinatum	0.0	0.00	11.0	3.46	2.0	2.31	0.5	1.00	3.4
Ahnfeltiopsis linearis	3.5	1.91	5.0	4.76	3.0	4.76	2.0	0.00	3.4
Nienburgia andersoniana	0.0	0.00	3.0	1.15	6.5	3.00	2.5	2.52	3.0
Pterosiphonia dendroidea	0.0	0.00	5.5	3.00	0.0	0.00	2.5	1.00	2.0
Chondracanthus corymbiferus	1.0	1.15	3.5	3.42	2.5	2.52	0.5	1.00	1.9
Chondracanthus harveyanus/spinosus	6.0	5.66	1.0	1.15	< .1	< .01	< .1	< .01	1.8
Farlowia/Pikea spp.-complex	1.5	1.91	3.0	1.15	0.5	1.00	2.0	1.63	1.8
Macrocystis spp.	< .1	< .01	< .1	0.00	1.0	1.15	4.0	3.65	1.3
non-coralline crust	< .1	0.00	< .1	< .01	1.0	1.15	2.0	1.63	0.8
Gelidium spp.	0.0	0.00	1.5	1.91	< .1	< .01	0.5	1.00	0.5
Gelidium robustum	0.5	1.00	0.5	1.00	0.5	1.00	0.5	1.00	0.5
Cryptopleura ruprechtiana	0.0	0.00	0.5	1.00	1.0	1.15	0.0	0.00	0.4
Polyneura latissima	1.0	1.15	0.0	0.00	0.5	1.00	0.0	0.00	0.4
Dictyota binghamiae	1.0	2.00	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Sargassum muticum	< .1	< .01	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Callophyllis flabellulata	0.0	0.00	0.0	0.00	< .1	< .01	0.5	1.00	0.1
Laminaria setchellii	0.5	1.00	0.0	0.00	< .1	< .01	0.0	0.00	0.1
Prionitis australis	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Mazzaella rosea	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Mazzaella lilacina	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Phycodrys spp.	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
filamentous red algae-complex	< .1	< .01	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Halymenia/Schizymenia spp.-complex	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pterygophora californica	0.0	0.00	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Antitham./Platythamnion spp.-complex	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Osmundea spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Laminariales	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ulva/Enteromorpha spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	1.5	3.00	0.0	0.00	0.5	1.00	4.0	2.83	1.5
Substrate									
colonized rock	41.0	20.94	63.5	5.97	72.5	9.57	48.5	7.00	56.4
sand (shell gravel)	31.5	15.44	22.5	8.06	19.5	5.51	20.5	4.43	23.5
bare cobble	6.0	2.83	9.0	3.46	2.0	2.83	13.5	4.73	7.6
colonized cobble	21.0	7.02	0.5	1.00	3.5	3.00	3.0	1.15	7.0
bare rock	0.5	1.00	4.0	2.31	3.5	3.00	14.5	2.52	5.6

Subtidal Line Contact Station SDC 3-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	3-May-00		6-Jul-00		18-Sep-00		8-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	25.5	1.00	69.0	15.87	63.0	4.76	57.5	8.70	53.8
Calliarthron/Bossiella spp.-complex	26.5	9.85	43.5	10.50	37.0	8.41	21.5	3.42	32.1
Desmarestia spp.	5.5	8.54	63.5	5.00	19.0	11.37	1.0	1.15	22.3
Rhodymenia spp.	7.5	7.72	10.5	5.97	12.0	2.83	10.0	4.62	10.0
Chrysophyta unid.	37.5	4.43	0.0	0.00	<.1	0.00	0.0	0.00	9.4
Chondracanthus corymbiferus	3.5	3.42	8.5	3.00	7.5	4.43	8.0	1.63	6.9
Cryptopleura ruprechtiana	0.5	1.00	6.0	3.65	5.0	1.15	5.0	3.83	4.1
Macrocystis spp.	1.5	3.00	2.5	3.79	4.5	5.26	3.0	1.15	2.9
Prionitis spp.	4.0	2.83	0.5	1.00	4.5	5.74	<.1	<.01	2.3
Pterosiphonia dendroidea	0.5	1.00	<.1	<.01	0.5	1.00	7.5	4.43	2.1
Cryptopleura violacea	1.0	1.15	5.0	2.58	1.0	2.00	1.0	2.00	2.0
Cystoseira osmundacea	1.5	1.91	1.5	1.00	1.5	1.91	3.0	3.46	1.9
non-coralline crust	<.1	0.00	2.5	1.00	1.0	1.15	2.0	1.63	1.4
Farlowia/Pikea spp.-complex	0.5	1.00	0.5	1.00	0.5	1.00	4.0	1.63	1.4
Callophyllis spp.	0.5	1.00	4.5	1.00	0.5	1.00	<.1	<.01	1.4
Prionitis australis	<.1	<.01	0.0	0.00	1.5	1.91	3.5	1.00	1.3
Gelidium robustum	<.1	<.01	0.5	1.00	0.0	0.00	4.0	2.31	1.1
filamentous red algae-complex	0.5	1.00	0.5	1.00	0.5	1.00	1.0	1.15	0.6
Callophyllis flabellulata	0.5	1.00	<.1	<.01	1.5	1.91	0.0	0.00	0.5
Acrosorium uncinatum	2.0	1.63	0.0	0.00	0.0	0.00	0.0	0.00	0.5
Nienburgia andersoniana	0.0	0.00	1.0	2.00	0.5	1.00	0.0	0.00	0.4
Ahnfeltiopsis linearis	0.5	1.00	0.5	1.00	<.1	<.01	0.0	0.00	0.3
Laminaria setchellii	<.1	<.01	<.1	<.01	0.0	0.00	0.5	1.00	0.1
Sarcodiotheca gaudichaudii	0.5	1.00	<.1	<.01	<.1	<.01	0.0	0.00	0.1
Ahnfeltiopsis leptophylla	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Mazzaella lilacina	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Antitham./Platythamnion spp.-complex	0.0	0.00	<.1	0.00	0.0	0.00	<.1	<.01	<.1
Pterygophora californica	0.0	0.00	<.1	<.01	<.1	<.01	0.0	0.00	<.1
Corallina officinalis	0.0	0.00	<.1	<.01	<.1	<.01	0.0	0.00	<.1
Ulva/Enteromorpha spp.	0.0	0.00	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Microcladia coulteri	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Polyneura latissima	0.0	0.00	<.1	<.01	0.0	0.00	0.0	0.00	<.1
Rhodoptilum plumosum	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Fauchea laciniata	0.0	0.00	<.1	<.01	0.0	0.00	<.1	<.01	<.1
Colpomenia spp.	0.0	0.00	0.0	0.00	0.0	0.00	<.1	<.01	<.1
Laminariales	<.1	<.01	0.0	0.00	0.0	0.00	0.0	0.00	<.1
Invertebrates									
Diopatra ornata	0.0	0.00	0.0	0.00	1.0	1.15	0.0	0.00	0.3
Phragmatopoma californica	0.0	0.00	0.0	0.00	0.5	1.00	0.0	0.00	0.1
Substrate									
colonized rock	82.5	9.57	89.0	6.63	85.0	6.63	83.0	7.02	84.9
colonized cobble	4.0	2.83	4.5	4.43	4.5	2.52	12.5	5.26	6.4
sand (shell gravel)	5.5	1.91	2.5	2.52	5.0	5.03	3.5	1.00	4.1
bare cobble	6.5	4.43	3.0	2.58	5.5	4.43	0.5	1.00	3.9
bare rock	1.0	2.00	1.0	1.15	0.0	0.00	0.0	0.00	0.5

Subtidal Line Contact Station SC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	18-May-00		11-Jul-00		25-Sep-00		12-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	45.5	1.91	54	9.52	35.5	24.19	45.5	12.04	45.1
Rhodymenia spp.	19	7.57	18	2.83	12	3.65	17	2.00	16.5
Calliarthron/Bossiella spp.-complex	12.5	5.97	21.5	7.55	12	5.89	12	6.32	14.5
Cryptopleura ruprechtiana	10	8.16	12	9.93	12.5	5.74	11	6.22	11.4
Chondracanthus corymbiferus	11	10.13	12	6.73	11	3.83	11	5.29	11.3
Pterygophora californica	4.5	1.91	7.5	5.51	15	3.46	9.5	6.19	9.1
Desmarestia spp.	7	6.63	13	7.57	10.5	3.42	3	2.58	8.4
Laminaria setchellii	1	2.00	5	5.03	4	2.31	3.5	4.12	3.4
Gelidium robustum	1	1.15	2.5	3.00	4.5	1.91	3	2.58	2.8
Prionitis spp.	3	1.15	2	2.31	3	3.46	2	1.63	2.5
Nereocystis luetkeana	< .1	< .01	4.5	6.40	3.5	3.42	1	1.15	2.3
Mazzaella lilacina	2	4.00	3	1.15	4	5.66	0	0.00	2.3
Laminariales	1	2.00	6	4.90	0	0.00	< .1	< .01	1.8
Osmundea spp.	0.5	1.00	1	2.00	2.5	3.00	1.5	1.91	1.4
Prionitis australis	0	0.00	0	0.00	5	10.00	0	0.00	1.3
Callophyllis spp.	1	2.00	2.5	3.79	< .1	< .01	1	2.00	1.1
Polyneura latissima	3	2.58	0	0.00	0	0.00	0	0.00	0.8
Pterosiphonia dendroidea	0	0.00	3	6.00	0	0.00	< .1	< .01	0.8
Cystoseira osmundacea	1	2.00	< .1	< .01	< .1	< .01	1	2.00	0.5
Porphyra spp.	2	2.83	0	0.00	0	0.00	0	0.00	0.5
non-coralline crust	< .1	0.00	0.5	1.00	< .1	0.00	1	1.15	0.4
Macrocystis spp.	0	0.00	< .1	< .01	0	0.00	1.5	1.00	0.4
Halymenia/Schizymenia spp.-complex	1.5	1.91	0	0.00	0	0.00	0	0.00	0.4
Ulva/Enteromorpha spp.	1	1.15	< .1	< .01	< .1	0.00	< .1	0.00	0.3
Hymenena spp.	< .1	< .01	0	0.00	1	2.00	0	0.00	0.3
filamentous red algae-complex	0.5	1.00	0	0.00	0	0.00	< .1	< .01	0.1
Erythrophyllum delesserioides	0.5	1.00	0	0.00	0	0.00	0	0.00	0.1
Spongomorpha/Acrosiphonia-complex	0.5	1.00	0	0.00	0	0.00	0	0.00	0.1
Egregia menziesii	0.5	1.00	0	0.00	0	0.00	0	0.00	0.1
Farlowia/Pikea spp.-complex	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Microcladia coulteri	0	0.00	< .1	< .01	< .1	0.00	0	0.00	< .1
Neoptilota densa	0	0.00	0	0.00	< .1	< .01	< .1	< .01	< .1
Scinaia confusa	< .1	< .01	0	0.00	< .1	< .01	0	0.00	< .1
Mazzaella rosea	< .1	< .01	0	0.00	0	0.00	< .1	< .01	< .1
Gastroclonium subarticulatum	0	0.00	< .1	< .01	0	0.00	0	0.00	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	0	0.00	0	0.00	0	0.00	< .1
Phyllospadix spp.	0	0.00	0	0.00	0	0.00	< .1	< .01	< .1
Fauchea laciniata	0	0.00	0	0.00	0	0.00	< .1	< .01	< .1
Gelidium spp.	0	0.00	< .1	< .01	0	0.00	0	0.00	< .1
Delesseria decipiens	< .1	< .01	0	0.00	0	0.00	0	0.00	< .1
Chrysophyta unid.	< .1	< .01	0	0.00	0	0.00	0	0.00	< .1
Invertebrates									
Phragmatopoma californica	21.5	16.44	3	3.46	13.5	13.50	11	11.83	12.3
Balanus spp.	0	0.00	0	0.00	1	2.00	0	0.00	0.3
Substrate									
colonized rock	83.5	6.19	87.5	5.26	92.5	4.43	87	3.83	87.6
colonized cobble	3	2.00	3.5	3.42	5.5	5.74	9	2.58	5.3
sand (shell gravel)	6	4.32	2.5	1.00	1.5	1.91	3.5	1.91	3.4
bare rock	5.5	4.12	5	6.22	0	0.00	0	0.00	2.6
bare cobble	1.5	1.00	1.5	1.91	0.5	1.00	0.5	1.00	1

Subtidal Line Contact Station SC 2-6m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	12-May-00		10-Jul-00		21-Sep-00		7-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	54.0	11.43	72.0	5.89	27.5	11.47	61.5	5.26	53.8
Calliarthron/Bossiella spp.-complex	31.0	25.32	42.0	15.06	33.5	20.16	27.0	10.89	33.4
Cryptopleura ruprechtiana	31.5	23.74	35.5	12.26	27.5	13.40	16.5	6.61	27.8
Chondracanthus corymbiferus	19.0	10.39	21.0	4.76	13.0	6.00	15.5	7.72	17.1
Rhodymenia spp.	15.5	8.06	12.5	6.40	17.5	11.00	17.0	3.46	15.6
Desmarestia spp.	1.5	1.91	27.0	16.77	22.5	8.70	0.5	1.00	12.9
Nereocystis luetkeana	< .1	0.00	3.5	3.42	4.0	3.27	1.5	1.91	2.3
Callophyllis spp.	2.0	2.83	5.5	4.43	0.5	1.00	< .1	0.00	2.0
Polyneura latissima	7.5	11.12	< .1	< .01	0.0	0.00	0.0	0.00	1.9
Pterygophora californica	< .1	0.00	3.5	4.43	< .1	0.00	3.0	2.58	1.6
Mazzaella lilacina	0.5	1.00	2.5	1.91	1.5	3.00	1.0	1.15	1.4
Laminaria setchellii	< .1	0.00	2.5	1.00	2.5	3.79	< .1	0.00	1.3
Halymenia/Schizymenia spp.-complex	2.0	2.83	2.5	3.79	0.0	0.00	0.0	0.00	1.1
filamentous red algae-complex	3.0	4.76	< .1	< .01	0.0	0.00	0.0	0.00	0.8
non-coralline crust	1.0	2.00	1.0	2.00	< .1	< .01	0.5	1.00	0.6
Erythrophyllum delesserioides	0.5	1.00	2.0	2.31	0.0	0.00	0.0	0.00	0.6
Callophyllis flabellulata	< .1	< .01	1.5	1.91	0.0	0.00	0.0	0.00	0.4
Porphyra spp.	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Microcladia coulteri	< .1	< .01	< .1	0.00	0.0	0.00	0.0	0.00	< .1
Farlowia/Pikea spp.-complex	< .1	< .01	< .1	0.00	0.0	0.00	0.0	0.00	< .1
Neoptilota densa	0.0	0.00	< .1	< .01	< .1	< .01	0.0	0.00	< .1
Cystoseira osmundacea	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Prionitis spp.	< .1	< .01	< .1	< .01	0.0	0.00	< .1	< .01	< .1
Scinaia confusa	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Ulva/Enteromorpha spp.	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Rhodoptilum plumosum	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Mazzaella rosea	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Laminariales	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Opuntiella californica	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sarcodiotheca gaudichaudii	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Dictyota binghamiae	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Invertebrates									
Balanus spp.	0.0	0.00	0.0	0.00	14.0	4.90	1.5	1.91	3.9
Bryozoa, unid. (encrusting)	0.0	0.00	1.0	1.15	1.0	2.00	9.5	4.12	2.9
Porifera unid. (encrusting)	0.0	0.00	0.0	0.00	0.5	1.00	2.0	1.63	0.6
tunicates, colonial/social unid.	0.0	0.00	0.0	0.00	0.0	0.00	1.5	1.91	0.4
Substrate									
colonized rock	85.0	15.87	92.5	7.00	79.5	10.50	83.5	15.78	85.1
bare rock	4.5	4.43	1.0	1.15	14.0	5.89	2.0	4.00	5.4
colonized cobble	5.5	6.19	5.0	5.29	1n0	1.15	7.0	8.08	4.6
bare cobble	3.0	3.46	0.5	1.00	1.0	2.00	6.5	10.38	2.8
sand (shell gravel)	2.0	2.83	0.5	1.00	1.0	1.15	1.0	1.15	1.1

Subtidal Line Contact Station FC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	22-May-00		7-Jul-00		13-Sep-00		6-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
Calliarthron/Bossiella spp.-complex	52.0	8.79	57.5	14.18	55.0	8.41	51.0	10.00	53.9
coralline crust	64.5	28.35	32.0	7.48	53.5	9.29	40.5	9.98	47.6
Cryptopleura ruprechtiana	13.5	10.25	15.5	8.54	11.5	4.43	6.0	6.32	11.6
Chondracanthus corymbiferus	12.5	5.26	10.5	5.51	8.0	1.63	6.0	1.63	9.3
Prionitis spp.	7.5	7.19	9.0	6.83	6.0	0.00	10.5	3.79	8.3
Laminaria setchellii	5.0	5.29	4.0	2.83	13.5	5.51	7.5	5.97	7.5
Rhodymenia spp.	10.0	4.00	4.0	4.90	2.5	3.00	2.5	3.00	4.8
non-coralline crust	2.0	1.63	3.0	3.46	5.5	1.91	5.0	6.22	3.9
Desmarestia spp.	4.0	4.32	7.0	8.25	2.5	2.52	0.0	0.00	3.4
Neoptilota densa	1.5	1.91	3.5	1.91	1.5	1.00	0.5	1.00	1.8
Nereocystis luetkeana	1.0	2.00	2.5	2.52	1.5	1.91	1.0	1.15	1.5
Laminariales	5.0	6.22	< .1	< .01	0.0	0.00	0.0	0.00	1.3
Prionitis australis	0.5	1.00	0.5	1.00	3.5	1.00	0.0	0.00	1.1
Gelidium robustum	< .1	< .01	2.0	2.83	0.5	1.00	1.0	2.00	0.9
Halymenia/Schizymenia spp.-complex	3.5	4.12	0.0	0.00	< .1	< .01	0.0	0.00	0.9
Osmundea spp.	1.5	1.91	0.5	1.00	0.5	1.00	0.5	1.00	0.8
Pterygophora californica	2.0	4.00	0.5	1.00	< .1	< .01	< .1	0.00	0.6
Farlowia/Pikea spp.-complex	1.0	2.00	< .1	< .01	0.5	1.00	< .1	< .01	0.4
Cystoseira osmundacea	0.5	1.00	0.5	1.00	0.5	1.00	< .1	< .01	0.4
Callophyllis flabellulata	1.5	1.91	0.0	0.00	0.0	0.00	0.0	0.00	0.4
Ahnfeltiopsis linearis	0.0	0.00	0.0	0.00	1.0	1.15	0.5	1.00	0.4
Microcladia coulteri	1.0	1.15	< .1	0.00	< .1	0.00	< .1	< .01	0.3
Callophyllis spp.	0.5	1.00	0.5	1.00	< .1	< .01	0.0	0.00	0.3
Delesseriaceae (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	1.0	2.00	0.3
Callophyllis firma	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Ulva/Enteromorpha spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Scinaia confusa	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Corallina officinalis	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Porphyra spp.	0.0	0.00	< .1	< .01	0.0	0.00	0.0	0.00	< .1
Fauchea laciniata	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Invertebrates									
Phragmatopoma californica	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Substrate									
colonized rock	81.5	6.40	79.0	5.03	78.5	9.57	74.5	9.85	78.4
colonized cobble	13.5	9.71	5.0	3.46	21.0	8.72	4.0	2.83	10.9
bare cobble	4.0	3.65	15.0	6.63	0.5	1.00	15.0	6.83	8.6
bare rock	0.5	1.00	0.5	1.00	0.0	0.00	5.5	4.12	1.6
sand (shell gravel)	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1

Subtidal Fixed Quadrat Results

Subtidal Fixed Quadrat Station FC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	22-May-00		7-Jul-00		13-Sep-00		6-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Homolopoma luridum/Lirularia succincta	1.3	1.50	4.8	2.06	13.8	3.30	9.3	2.22	7.3
Tegula brunnea	3.5	2.65	2.8	4.19	8.0	2.16	8.5	5.07	5.7
Pelecypoda unid. boring	2.8	5.50	2.5	3.00	8.0	8.12	9.5	11.24	5.7
Phragmatopoma californica	9.3	7.85	0.0	0.00	1.0	1.15	9.3	18.50	4.9
tunicates, colonial/social unid.	1.3	1.26	3.8	3.30	2.3	0.96	1.0	0.82	2.1
Sipuncula unid.	1.0	2.00	1.0	2.00	2.3	3.20	3.0	5.35	1.8
Pagurus spp.	0.3	0.50	0.5	0.58	4.0	2.16	2.3	0.96	1.8
Porifera unid. (encrusting)	1.5	1.29	1.8	1.71	1.3	0.50	2.0	1.63	1.6
Leptasterias spp.	2.0	0.82	0.8	0.96	2.0	1.15	1.8	0.50	1.6
Strongylocentrotus purpuratus	2.3	2.22	2.0	2.16	2.0	2.16	0.3	0.50	1.6
Pugettia spp.	1.0	1.41	1.0	0.82	1.8	1.71	1.8	0.50	1.4
Bryozoa, unid. (encrusting)	1.5	1.00	0.5	0.58	1.3	0.50	1.8	0.96	1.3
Fusinus luteopictus	0.0	0.00	0.8	1.50	2.0	0.82	1.3	0.96	1.0
Fissurella volcano	1.8	2.22	0.8	0.50	0.3	0.50	0.5	1.00	0.8
Alia spp.	0.0	0.00	0.5	0.58	1.8	1.71	1.0	2.00	0.8
Amphissa spp.	0.0	0.00	0.5	1.00	2.5	2.38	0.3	0.50	0.8
Lissothuria nutriens	0.5	0.58	0.3	0.50	2.5	3.79	0.0	0.00	0.8
Serpulidae unid.	0.5	1.00	1.0	1.41	1.5	1.73	0.0	0.00	0.8
Ophiothrix spp.	2.0	2.31	0.8	0.96	0.0	0.00	0.0	0.00	0.7
Epiactis prolifera	0.5	1.00	1.0	0.82	0.3	0.50	0.3	0.50	0.5
Acmaea mitra	0.3	0.50	0.5	0.58	1.0	0.82	0.3	0.50	0.5
-	0.0	0.00	0.0	0.00	1.0	1.41	0.8	1.50	0.4
Spirorbidae	< .1	< .01	0.8	1.50	0.3	0.50	0.5	0.58	0.4
Anthozoa unid.	0.0	0.00	0.0	0.00	0.5	0.58	1.0	2.00	0.4
Tonicella lineata	0.3	0.50	0.5	0.58	0.3	0.50	0.5	0.58	0.4
tunicate, solitary unid.	0.5	1.00	0.0	0.00	0.5	1.00	0.3	0.50	0.3
Crepidula spp.	0.0	0.00	0.3	0.50	0.8	1.50	0.0	0.00	0.3
Haliotis spp.	0.3	0.50	0.3	0.50	0.3	0.50	0.3	0.50	0.3
Calliostoma ligatum	0.0	0.00	0.0	0.00	0.5	0.58	0.3	0.50	0.2
Hermissenda crassicornis	0.3	0.50	0.3	0.50	0.0	0.00	0.3	0.50	0.2
Doriopsilla albopunctata	0.3	0.50	0.3	0.50	0.3	0.50	0.0	0.00	0.2
Ocenebra spp.	0.0	0.00	0.3	0.50	0.3	0.50	0.3	0.50	0.2
Salmacina tribranchiata	0.0	0.00	0.0	0.00	0.5	1.00	0.3	0.50	0.2
Anthopleura elegantissima	0.3	0.50	0.0	0.00	0.0	0.00	0.3	0.50	0.1
Diodora spp.	0.5	0.58	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Lottia ochracea	0.0	0.00	0.3	0.50	0.0	0.00	0.3	0.50	0.1
Cancer spp.	0.0	0.00	0.0	0.00	0.5	0.58	0.0	0.00	0.1
Erato spp.	0.0	0.00	0.3	0.50	0.3	0.50	0.0	0.00	0.1
Serpulorbis squamigerus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Octopus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Tegula montereyi	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Diopatra ornata	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pista spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Henricia leviuscula	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Asterina miniata	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Eurystomella bilabiata	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Tethya aurantia	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mitra idae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Cryptochiton stelleri	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pisaster giganteus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Eudistylia polymorpha	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Cryptolithodes sitchensis	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Balanus/Tetraclita spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Cadlina spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Bryozoa, unid. (foliose)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1

Subtidal Fixed Quadrat Station NDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		30-Jun-00		6-Sep-00		1-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Phragmatopoma californica	10.5	12.56	76.0	61.48	50.8	48.66	139.0	110.91	69.1
Strongylocentrotus purpuratus	5.8	4.86	8.5	5.80	10.8	5.32	5.0	2.83	7.5
Pelecypoda unid. boring	5.0	4.76	3.5	4.36	0.8	0.96	5.8	7.04	3.8
Pista spp.	2.5	4.36	5.5	5.07	2.3	3.30	2.5	0.58	3.2
Ophiactis simplex	0.0	0.00	0.0	0.00	0.0	0.00	11.8	5.68	2.9
Acmaea mitra	1.8	2.87	2.3	2.06	0.8	1.50	1.0	1.15	1.4
Serpulidae unid.	0.8	1.50	0.8	0.96	1.3	1.50	3.0	3.56	1.4
Fissurella volcano	1.3	1.89	1.5	1.91	0.0	0.00	0.3	0.50	0.8
Epiactis prolifera	0.3	0.50	1.0	1.41	0.8	1.50	0.5	1.00	0.6
Tegula brunnea	0.0	0.00	0.3	0.50	0.0	0.00	2.0	4.00	0.6
Porifera unid. (encrusting)	0.8	0.96	0.3	0.50	0.5	1.00	0.3	0.50	0.4
Pagurus spp.	0.5	0.58	0.3	0.50	0.5	0.58	0.3	0.50	0.4
Balanus/Tetraclita spp.	0.0	0.00	1.5	3.00	0.0	0.00	0.0	0.00	0.4
Chaetopteridae	1.0	1.41	0.0	0.00	0.0	0.00	0.3	0.50	0.3
Anthozoa unid.	0.0	0.00	1.0	2.00	0.0	0.00	0.0	0.00	0.3
Serpulorbis squamigerus	0.5	0.58	0.3	0.50	0.0	0.00	0.3	0.50	0.3
Ophiothrix spp.	0.5	1.00	0.0	0.00	0.0	0.00	0.5	1.00	0.3
tunicates, colonial/social unid.	0.5	0.58	0.3	0.50	< .1	< .01	< .1	< .01	0.2
Pododesmus cepio	0.8	1.50	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Anthopleura elegantissima	0.0	0.00	0.3	0.50	0.0	0.00	0.3	0.50	0.1
Entoprocta unid.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	1.00	0.1
Lottia ochracea	0.3	0.50	0.0	0.00	0.0	0.00	0.3	0.50	0.1
Mitra idae	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Pugettia spp.	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Lissothuria nutriens	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Salmacina tribranchiata	0.0	0.00	0.3	0.50	< .1	< .01	0.0	0.00	< .1
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Mytilus californianus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Tonicella lineata	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Bittium spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophioplocus spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Doridacea unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Archidoris spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Spirorbidae	0.0	0.00	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Bryozoa, unid. (encrusting)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Leucosolenia spp.	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1

Subtidal Fixed Quadrat Station NDC 3-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	14-Apr-00		29-Jun-00		7-Sep-00		2-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Phragmatopoma californica	143.5	27.84	122.0	99.46	129.5	79.22	178.8	44.23	143.4
Ophiactis simplex	5.0	7.07	3.8	7.50	41.3	48.37	27.5	25.00	19.4
Balanus/Tetraclita spp.	0.0	0.00	14.3	18.19	1.0	1.41	2.0	1.41	4.3
Ophiothrix spp.	3.0	1.41	8.8	17.50	0.0	0.00	3.0	2.94	3.7
Strongylocentrotus purpuratus	6.3	3.20	2.0	2.16	1.5	2.38	2.3	2.06	3.0
Pelecypoda unid. boring	1.3	1.50	0.5	1.00	2.8	2.87	4.5	1.29	2.3
Epiactis prolifera	0.5	0.58	1.5	1.29	3.8	4.99	2.3	2.87	2.0
Serpulidae unid.	1.0	1.15	2.0	1.41	2.3	2.63	2.3	2.22	1.9
Lottia ochracea	1.8	1.50	1.3	0.96	0.8	1.50	0.5	1.00	1.1
Acmaea mitra	1.8	1.71	1.5	1.29	0.5	0.58	0.3	0.50	1.0
Anthopleura elegantissima	1.0	1.15	0.8	1.50	0.5	0.58	0.8	0.96	0.8
Serpulorbis squamigerus	0.8	0.96	0.5	0.58	0.5	0.58	1.0	0.82	0.7
Porifera unid. (encrusting)	< .1	< .01	0.3	0.50	0.5	0.58	1.8	0.96	0.6
tunicates, colonial/social unid.	< .1	< .01	< .1	< .01	0.8	0.96	1.3	0.96	0.5
Entoprocta unid.	0.0	0.00	0.0	0.00	0.3	0.50	1.5	3.00	0.4
Fissurella volcano	0.5	0.58	1.0	1.41	0.0	0.00	0.3	0.50	0.4
Pugettia spp.	0.0	0.00	0.5	0.58	0.8	0.50	0.5	0.58	0.4
Pista spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.8	0.96	0.3
Sipuncula unid.	0.0	0.00	0.0	0.00	1.0	1.15	0.0	0.00	0.3
Spirorbidae	< .1	< .01	< .1	0.00	0.5	0.58	0.3	0.50	0.2
Ischnochitonidae	0.0	0.00	0.0	0.00	0.8	0.96	0.0	0.00	0.2
Hydroida	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Tegula brunnea	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Mitra idae	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Bryozoa, unid. (encrusting)	< .1	0.00	< .1	< .01	0.3	0.50	< .1	< .01	< .1
Salmacina tribranchiata	0.0	0.00	< .1	< .01	0.3	0.50	0.0	0.00	< .1
Anthopleura artemisia	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Anthozoa unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Doriopsilla albopunctata	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Cancer spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Doridacea unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Lepidozona spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Haliotis spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Chaetopteridae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Leucosolenia spp.	0.0	0.00	0.0	0.00	< .1	0.00	0.0	0.00	< .1

Subtidal Fixed Quadrat Station NDC 4-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	1-May-00		7-Jul-00		15-Sep-00		6-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Phragmatopoma californica	232.8	157.21	41.5	25.67	155.0	142.20	330.8	120.72	190.0
Ophiactis simplex	5.0	4.08	9.3	6.50	21.3	20.97	13.8	6.29	12.3
Strongylocentrotus purpuratus	7.8	6.99	5.8	4.65	8.8	7.63	11.0	8.79	8.3
Acmaea mitra	2.0	1.41	5.0	0.82	2.8	2.87	1.0	1.41	2.7
Balanus/Tetraclita spp.	1.0	1.15	0.8	0.96	0.0	0.00	9.0	18.00	2.7
Serpulidae unid.	2.3	1.71	2.8	2.06	1.8	1.26	2.0	2.71	2.2
Pelecypoda unid. boring	0.0	0.00	2.3	3.86	0.5	1.00	3.3	6.50	1.5
Chaetopteridae	2.5	2.08	0.5	1.00	0.0	0.00	1.5	1.29	1.1
Pugettia spp.	0.3	0.50	0.5	0.58	1.5	1.00	1.3	1.26	0.9
Serpulorbis squamigerus	0.3	0.50	0.3	0.50	0.5	1.00	1.0	1.41	0.5
Pista spp.	0.5	0.58	0.0	0.00	0.0	0.00	1.3	1.26	0.4
Porifera unid. (encrusting)	< .1	< .01	0.5	0.58	0.5	0.58	0.5	0.58	0.4
Fissurella volcano	0.0	0.00	1.0	0.82	0.3	0.50	0.3	0.50	0.4
Ophiothrix spp.	0.5	1.00	0.5	0.58	0.0	0.00	0.5	0.58	0.4
Anthopleura elegantissima	0.3	0.50	0.3	0.50	0.0	0.00	0.5	0.58	0.3
Epiactis prolifera	0.3	0.50	0.3	0.50	0.0	0.00	0.5	1.00	0.3
Doriopsilla albopunctata	0.0	0.00	0.8	0.96	0.3	0.50	0.0	0.00	0.3
Tegula brunnea	0.0	0.00	0.0	0.00	0.0	0.00	0.8	1.50	0.2
Tonicella lineata	0.3	0.50	0.5	0.58	0.0	0.00	0.0	0.00	0.2
Lottia ochracea	0.8	0.96	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Mitra idae	0.3	0.50	0.3	0.50	0.0	0.00	0.3	0.50	0.2
Anthozoa unid.	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Bryozoa, unid. (erect)	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Eudistylia polymorpha	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Tricolia spp.	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Lissothuria nutriens	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Haliotis spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.3	0.50	0.1
Lebbeus lagunae	0.0	0.00	0.5	0.58	0.0	0.00	0.0	0.00	0.1
Geitodoris heathi	0.0	0.00	0.0	0.00	0.5	0.58	0.0	0.00	0.1
tunicates, colonial/social unid.	< .1	< .01	0.3	0.50	< .1	< .01	< .1	< .01	< .1
Bryozoa, unid. (encrusting)	0.3	0.50	0.0	0.00	< .1	< .01	< .1	< .01	< .1
Diodora spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Lithopoma gibberosum	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Hermissenda crassicornis	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Sabellidae	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Diopatra ornate	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
tunicate, solitary unid.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Leucilla nuttingi	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Pisaster giganteus	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Lophopanopeus spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Mytilidae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Aplysia californica	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Spirorbidae	0.0	0.00	< .1	0.00	< .1	0.00	< .1	0.00	< .1
Hydroida	< .1	< .01	< .1	< .01	0.0	0.00	0.0	0.00	< .1

Subtidal Fixed Quadrat Station SDC 2-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	13-Apr-00		5-Jul-00		8-Sep-00		3-Nov-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Phragmatopoma californica	10.0	7.87	37.5	11.56	30.5	11.62	33.0	16.79	27.8
Ophiactis simplex	0.0	0.00	13.8	6.29	11.3	10.31	38.8	35.68	15.9
Pelecypoda unid. boring	5.3	7.18	10.8	11.53	14.5	10.88	15.5	4.93	11.5
Ophiothrix spp.	2.3	1.50	7.0	7.44	3.3	3.30	4.3	2.75	4.2
Pista spp.	2.3	2.63	2.5	2.38	3.3	1.71	5.8	2.22	3.4
Chaetopteridae	2.0	1.41	2.5	3.79	4.5	2.38	4.8	4.43	3.4
Strongylocentrotus purpuratus	3.8	2.06	3.5	0.58	1.8	1.26	1.0	0.82	2.5
Sipuncula unid.	0.8	0.50	0.5	0.58	2.5	1.91	2.8	0.96	1.6
Serpulorbis squamigerus	1.5	3.00	1.0	2.00	1.3	2.50	1.5	3.00	1.3
Serpulidae unid.	1.5	1.00	0.0	0.00	1.0	1.15	2.3	2.06	1.2
Mitra idae	0.3	0.50	1.5	1.29	0.8	0.96	0.3	0.50	0.7
Balanus/Tetraclita spp.	0.0	0.00	0.0	0.00	0.8	0.96	1.0	2.00	0.4
Pugettia spp.	0.0	0.00	0.0	0.00	0.8	0.96	0.8	0.50	0.4
Fissurella volcano	0.8	0.96	0.3	0.50	0.3	0.50	0.0	0.00	0.3
Leptasterias spp.	1.3	0.96	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Porifera unid. (encrusting)	0.0	0.00	0.3	0.50	< .1	< .01	0.8	0.96	0.3
Acmaea mitra	0.0	0.00	1.0	1.41	0.0	0.00	0.0	0.00	0.3
Alia spp.	0.5	0.58	0.0	0.00	0.5	1.00	0.0	0.00	0.3
Mopalia spp.	0.3	0.50	0.5	0.58	0.0	0.00	0.3	0.50	0.3
Anthopleura elegantissima	0.3	0.50	0.3	0.50	0.3	0.50	0.0	0.00	0.2
Diopatra ornata	0.5	0.58	0.3	0.50	0.0	0.00	0.0	0.00	0.2
Acmaeidae unid.	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Pagurus spp.	0.0	0.00	0.3	0.50	0.3	0.50	0.0	0.00	0.1
Cancer spp.	0.0	0.00	0.0	0.00	0.5	1.00	0.0	0.00	0.1
Spirorbidae	< .1	0.00	< .1	< .01	< .1	0.00	0.3	0.50	< .1
Bryozoa, unid. (encrusting)	< .1	< .01	0.0	0.00	< .1	< .01	0.3	0.50	< .1
Diodora spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Tegula brunnea	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Sabellidae	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Asterina miniata	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Pisaster giganteus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Cucumaria spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Mimulus foliates	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Amphissa spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Flabellina trilineata	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Lepidozona spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Cirratulidae/Terebellidae unid.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
tunicates, colonial/social unid.	< .1	< .01	< .1	< .01	< .1	< .01	< .1	< .01	< .1
Hydroida	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1

Subtidal Fixed Quadrat Station SDC 3-4m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	3-May-00		6-Jul-00		18-Sep-00		8-Nov-00		
	Mean`	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Ophiactis simplex	2.0	1.41	0.0	0.00	36.3	26.89	35.0	19.58	18.3
Phragmatopoma californica	2.8	1.26	12.8	3.30	9.5	7.77	10.3	5.44	8.8
Balanophyllia elegans	8.0	4.24	6.3	4.50	7.0	4.97	11.0	6.83	8.1
Pelecypoda unid. boring	2.8	4.86	4.3	2.22	5.8	5.68	11.5	8.89	6.1
Strongylocentrotus purpuratus	6.5	5.45	5.8	3.77	4.3	2.36	4.8	2.06	5.3
Pista spp.	1.0	1.41	2.0	1.83	3.3	1.89	4.8	1.71	2.8
Chaetopteridae	0.0	0.00	3.5	1.73	3.3	1.89	4.0	1.41	2.7
Serpulidae unid.	0.3	0.50	1.8	2.36	2.0	2.31	2.3	0.96	1.6
Anthopleura elegantissima	1.3	0.50	1.5	1.73	1.3	0.96	1.3	0.50	1.3
Pugettia spp.	1.0	0.82	0.8	0.96	0.8	0.96	2.3	2.63	1.2
Tegula brunnea	0.5	0.58	0.5	1.00	0.3	0.50	1.5	2.38	0.7
Bryozoa, unid. (encrusting)	0.3	0.50	0.5	0.58	0.8	0.50	1.0	0.00	0.6
Ophiothrix spp.	0.3	0.50	0.0	0.00	0.8	1.50	1.5	1.29	0.6
Balanus spp.	0.0	0.00	0.0	0.00	0.0	0.00	2.3	0.96	0.6
Sabellidae	0.3	0.50	0.0	0.00	1.3	1.50	0.5	0.58	0.5
Diopatra ornata	0.3	0.50	0.8	1.50	0.0	0.00	0.8	0.96	0.4
Mitra idae	0.3	0.50	1.3	1.26	0.0	0.00	0.0	0.00	0.4
Acmaea mitra	0.0	0.00	0.8	0.96	0.0	0.00	0.5	0.58	0.3
Asterina miniata	0.8	0.96	0.3	0.50	0.3	0.50	0.0	0.00	0.3
Hymenamphiastra cyanocrypta	0.3	0.50	0.0	0.00	0.3	0.50	0.5	1.00	0.3
Anthozoa unid.	0.3	0.50	0.5	0.58	0.0	0.00	0.3	0.50	0.3
Serpulorbis squamigerus	0.5	1.00	0.0	0.00	0.5	1.00	0.0	0.00	0.3
Cucumaria spp.	0.3	0.50	0.8	0.96	0.0	0.00	0.0	0.00	0.3
Eudistylia polymorpha	0.0	0.00	0.0	0.00	0.5	1.00	0.5	1.00	0.3
Cirratulidae/Terebellidae unid.	0.0	0.00	0.0	0.00	0.0	0.00	1.0	0.82	0.3
Pagurus spp.	0.0	0.00	0.3	0.50	0.3	0.50	0.3	0.50	0.2
Porifera unid. (encrusting)	< .1	< .01	< .1	< .01	0.3	0.50	0.3	0.50	0.1
tunicates, colonial/social unid.	0.0	0.00	0.3	0.50	< .1	0.00	0.3	0.50	0.1
Anthopleura artemisia	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Amphissa spp.	0.3	0.50	0.0	0.00	0.3	0.50	0.0	0.00	0.1
Paracyathus stearnsii	0.0	0.00	0.3	0.50	0.0	0.00	0.3	0.50	0.1
Alia spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pododesmus cepio	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Hermissenda crassicornis	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
tunicate, solitary unid.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Pseudomelatoma torosa	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Placiphorella velata	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Isopoda unid.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Lacuna spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Cancer spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sipuncula unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Balanus/Tetraclita spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Archidoris spp.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	0.00	< .1	< .01	< .1	0.00	< .1
Bryozoa, unid. (foliose)	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1

Subtidal Fixed Quadrat Station SC 1-3m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	18-May-00		11-Jul-00		25-Sep-00		12-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Phragmatopoma californica	31.0	21.09	10.0	16.71	71.3	75.32	22.8	25.04	33.8
Dendropoma spp.	3.3	6.50	0.0	0.00	25.8	42.96	1.0	2.00	7.5
Balanus/Tetraclita spp.	11.5	23.00	1.3	1.89	11.5	16.01	5.0	10.00	7.3
Homolopoma luridum/Lirularia succincta	6.3	1.50	5.8	2.63	2.3	1.71	8.0	1.83	5.6
Tegula brunnea	7.3	3.30	5.0	2.71	0.5	1.00	8.3	4.99	5.3
Pagurus spp.	3.8	2.22	1.5	1.29	1.3	1.89	6.8	4.27	3.3
tunicates, colonial/social unid.	2.0	1.83	3.5	2.52	3.0	2.58	0.5	0.58	2.3
Leptasterias spp.	2.8	2.22	1.0	0.82	2.0	1.15	2.0	1.15	1.9
Bryozoa, unid. (encrusting)	1.8	1.50	0.0	0.00	3.5	2.08	1.3	0.50	1.6
Epiactis prolifera	1.8	0.50	1.3	2.50	0.3	0.50	1.0	1.15	1.1
Porifera unid. (encrusting)	0.5	0.58	0.3	0.50	2.5	3.11	0.8	0.50	1.0
Anthopleura elegantissima	1.5	1.00	1.3	0.96	0.3	0.50	0.8	0.96	0.9
Balanophyllia elegans	1.8	2.22	1.3	1.50	0.5	1.00	0.0	0.00	0.9
Amphissa spp.	2.3	0.96	0.5	1.00	0.3	0.50	0.0	0.00	0.8
Pista spp.	0.5	0.58	0.5	0.58	0.5	1.00	1.0	1.41	0.6
Salmacina tribranchiata	0.3	0.50	0.0	0.00	2.3	2.63	0.0	0.00	0.6
Pseudomelatoma torosa	0.8	0.96	0.5	0.58	0.8	0.96	0.0	0.00	0.5
Pugettia spp.	0.5	0.58	0.5	0.58	0.0	0.00	1.0	1.41	0.5
Tonicella lineata	0.8	0.50	0.0	0.00	0.8	1.50	0.3	0.50	0.4
Acmaea mitra	0.8	0.50	0.0	0.00	0.5	0.58	0.3	0.50	0.4
Strongylocentrotus purpuratus	0.0	0.00	0.0	0.00	1.5	2.38	0.0	0.00	0.4
tunicate, solitary unid.	1.0	1.41	0.0	0.00	0.0	0.00	0.3	0.50	0.3
Halcampa decemtentacula	0.3	0.50	0.3	0.50	0.0	0.00	0.8	1.50	0.3
Pelecypoda unid. boring	0.5	1.00	0.0	0.00	0.0	0.00	0.8	0.96	0.3
Eurystomella bilabiata	0.5	1.00	0.0	0.00	0.5	1.00	0.0	0.00	0.3
Fusinus luteopictus	0.0	0.00	0.3	0.50	0.3	0.50	0.5	0.58	0.3
Ocenebra spp.	0.3	0.50	0.3	0.50	0.5	0.58	0.0	0.00	0.3
Chaetopteridae	0.0	0.00	1.0	1.15	0.0	0.00	0.0	0.00	0.3
Calliostoma ligatum	0.0	0.00	0.0	0.00	0.0	0.00	0.8	0.96	0.2
Mopalia spp.	0.5	0.58	0.0	0.00	0.0	0.00	0.3	0.50	0.2
Lottia instabilis	0.5	0.58	0.0	0.00	0.0	0.00	0.3	0.50	0.2
Hermissenda crassicornis	0.0	0.00	0.5	0.58	0.0	0.00	0.3	0.50	0.2
Asterina miniata	0.3	0.50	0.3	0.50	0.0	0.00	0.3	0.50	0.2
Spirorbidae	< .1	< .01	0.3	0.50	0.3	0.50	< .1	< .01	0.1
Corynactis californica	0.0	0.00	0.0	0.00	0.5	1.00	0.0	0.00	0.1
Alia spp.	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Diopatra ornata	0.5	1.00	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Henricia leviuscula	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Pycnopodia helianthoides	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Doriopsilla albopunctata	0.0	0.00	0.0	0.00	0.3	0.50	0.3	0.50	0.1
Cryptochiton stelleri	0.3	0.50	0.0	0.00	0.0	0.00	0.3	0.50	0.1
Mimulus foliatus	0.3	0.50	0.3	0.50	0.0	0.00	0.0	0.00	0.1
Pisaster/Henricia (juv.)	0.0	0.00	0.3	0.50	0.3	0.50	0.0	0.00	0.1
Anthopleura artemisia	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Diodora spp.	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Serpulorbis squamigerus	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Lithopoma gibberosum	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Crepidula spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Lottia ochracea	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tegula montereyi	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Tegula pulligo	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Cactosoma arenaria	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Cancer productus	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Ischnochitonidae	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Cryptolithodes sitchensis	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Lacuna spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Serpulidae unid.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Asteroidea unid.	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Acanthodoris lutea	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Hydroida	0.0	0.00	0.0	0.00	< .1	< .01	0.0	0.00	< .1
Hymenamphiastra cyanocrypta	< .1	< .01	0.0	0.00	0.0	0.00	0.0	0.00	< .1

Subtidal Fixed Quadrat Station SC 2-6m Survey Means and Std. Deviations

Survey	108		109		110		111		
Date	12-May-00		10-Jul-00		21-Sep-00		7-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates									
Balanophyllia elegans	26.0	17.05	27.8	17.73	20.8	13.28	29.3	22.97	25.9
Corynactis californica	10.3	13.23	17.5	11.85	15.3	11.00	20.0	23.34	15.8
Tegula brunnea	5.5	3.11	5.0	0.82	4.0	1.15	6.8	4.86	5.3
Phragmatopoma californica	8.0	3.65	6.3	1.71	4.3	4.03	1.8	2.06	5.1
Homolopoma luridum/Lirularia succincta	4.8	2.75	3.8	2.63	4.3	1.71	6.0	3.56	4.7
Serpulorbis squamigerus	2.5	2.38	2.3	2.87	2.0	2.45	7.8	5.56	3.6
Bryozoa, unid. (encrusting)	2.5	1.73	2.0	1.41	1.8	0.50	5.8	3.10	3.0
Hymenamphiastra cyanocrypta	2.5	2.38	2.8	1.50	1.8	1.50	4.5	3.32	2.9
Chaetopteridae	2.8	4.86	2.8	2.50	4.0	2.16	0.0	0.00	2.4
Pagurus spp.	3.5	1.29	1.5	1.29	3.3	1.26	1.0	1.15	2.3
Epiactis prolifera	1.3	0.50	2.8	1.89	0.8	0.50	3.8	3.30	2.1
Pugettia spp.	0.5	0.58	1.8	1.26	1.0	1.41	4.8	3.86	2.0
Balanus spp.	0.3	0.50	0.0	0.00	0.0	0.00	7.0	6.68	1.8
Porifera unid. (encrusting)	1.5	1.00	0.5	0.58	2.0	1.41	2.5	0.58	1.6
Serpulidae unid.	5.0	2.58	0.3	0.50	0.5	0.58	0.8	0.96	1.6
Acmaea mitra	2.5	2.08	2.0	1.41	0.8	0.50	0.3	0.50	1.4
Dendropoma spp.	0.0	0.00	1.8	3.50	0.0	0.00	3.5	7.00	1.3
Calliostoma ligatum	0.8	0.96	1.3	0.50	0.8	0.96	2.3	2.22	1.3
Tonicella lineata	1.5	1.00	0.5	0.58	0.8	0.96	1.3	1.26	1.0
Bryozoa, unid. (erect)	< .1	< .01	0.3	0.50	1.0	0.82	2.5	2.08	0.9
tunicates, colonial/social unid.	1.5	1.29	< .1	< .01	1.8	0.50	0.3	0.50	0.9
tunicate, solitary unid.	0.0	0.00	1.3	0.96	1.0	0.82	0.8	0.96	0.8
Anthopleura elegantissima	1.3	1.50	0.3	0.50	0.3	0.50	0.8	1.50	0.6
Leptasterias spp.	0.5	0.58	1.3	0.96	0.3	0.50	0.5	0.58	0.6
Mitra idae	0.0	0.00	1.5	0.58	0.5	0.58	0.5	0.58	0.6
Doriopsilla albopunctata	0.8	0.96	0.8	0.50	0.3	0.50	0.5	0.58	0.6
Amphissa spp.	0.8	0.96	0.8	0.96	0.5	0.58	0.3	0.50	0.6
Pista spp.	0.0	0.00	1.0	2.00	0.8	0.50	0.3	0.50	0.5
Leucilla nuttingi	1.3	2.50	0.8	1.50	0.0	0.00	0.0	0.00	0.5
Ocenebra spp.	0.5	1.00	0.0	0.00	0.3	0.50	1.0	1.15	0.4
Hermissenda crassicornis	0.0	0.00	1.0	1.15	0.0	0.00	0.3	0.50	0.3
Sabellidae	0.3	0.50	0.8	1.50	0.0	0.00	0.3	0.50	0.3
Henricia leviuscula	0.3	0.50	0.3	0.50	0.3	0.50	0.5	0.58	0.3
Asterina miniata	0.5	0.58	0.3	0.50	0.3	0.50	0.3	0.50	0.3
Cucumaria spp.	0.8	1.50	0.0	0.00	0.3	0.50	0.3	0.50	0.3
Lithopoma gibberosum	0.0	0.00	0.8	0.96	0.3	0.50	0.0	0.00	0.3
Tethya aurantia	0.3	0.50	0.3	0.50	0.3	0.50	0.3	0.50	0.3
Bryozoa, unid. (foliose)	0.0	0.00	0.3	0.50	0.3	0.50	0.3	0.50	0.2
Lottia instabilis	0.0	0.00	0.5	1.00	0.3	0.50	0.0	0.00	0.2
Pycnopodia helianthoides	0.5	0.58	0.0	0.00	0.3	0.50	0.0	0.00	0.2
Pseudomelatoma torosa	0.3	0.50	0.3	0.50	0.3	0.50	0.0	0.00	0.2
Pelecypoda unid. boring	0.8	1.50	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Eudistylia polymorpha	0.0	0.00	0.0	0.00	0.3	0.50	0.5	1.00	0.2
Mimulus foliatus	0.0	0.00	0.0	0.00	0.0	0.00	0.8	0.50	0.2
Sipuncula unid.	0.0	0.00	0.5	1.00	0.3	0.50	0.0	0.00	0.2
Haliotis spp.	0.0	0.00	0.5	1.00	0.3	0.50	0.0	0.00	0.2
Alia spp.	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Crepidula spp.	0.0	0.00	0.0	0.00	0.5	1.00	0.0	0.00	0.1
Tegula pulligo	0.0	0.00	0.5	1.00	0.0	0.00	0.0	0.00	0.1
Pisaster ochraceus	0.0	0.00	0.0	0.00	0.3	0.50	0.3	0.50	0.1
Pisaster giganteus	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.58	0.1
Salmacina tribranchiata	0.0	0.00	0.0	0.00	< .1	< .01	0.3	0.50	< .1
Diodora spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Fissurella volcano	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Lottia ochracea	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Strongylocentrotus purpuratus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Loxorhynchus spp.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Fusinus luteopictus	0.3	0.50	0.0	0.00	0.0	0.00	0.0	0.00	< .1

(continued)

Subtidal Fixed Quadrat Station SC 2-6m Survey Means and Std. Deviations (continued)

Survey	108		109		110		111		
Date	12-May-00		10-Jul-00		21-Sep-00		7-Dec-00		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
Phidiana hiltoni	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Cryptochiton stelleri	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.50	< .1
Cryptolithodes sitchensis	0.0	0.00	0.0	0.00	0.3	0.50	0.0	0.00	< .1
Ophiothrix spp.	0.0	0.00	0.3	0.50	0.0	0.00	0.0	0.00	< .1
Spirorbidae	< .1	< .01	< .1	< .01	< .1	0.00	< .1	< .01	< .1

Subtidal Fish

Transect Results

Subtidal Fish Transects Field's Cove Area Survey Means and Std. Deviations

Survey	106		107		108		109		
Date	12-Jun-00		28-Aug-00		11-Oct-00		13-Jan-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Midwater Transect									
Oxyjulis californica	13.7	5.19	2.4	0.59	9.0	6.13	20.2	4.01	11.3
Sebastes chrysomelas/S. carnatus (yoy)	12.8	18.03	0.0	0.00	0.0	0.00	0.0	0.00	3.2
Oxyjulis californica (juv.)	0.0	0.00	4.0	4.48	7.3	1.77	0.8	1.18	3.0
Sebastes serranoides/S. flavidus (yoy)	1.8	1.06	4.0	3.77	0.2	0.24	0.0	0.00	1.5
Atherinopsis californiensis	0.0	0.00	0.0	0.00	3.5	2.83	0.0	0.00	0.9
Damalichthys vacca (=Rhacochilus)	0.8	0.24	0.2	0.00	0.0	0.00	1.3	1.77	0.6
Aulorhynchus flavidus	1.7	2.36	0.0	0.00	< .1	0.12	0.0	0.00	0.4
Phanerodon furcatus	1.4	2.00	0.0	0.00	0.0	0.00	0.0	0.00	0.4
Sebastes mystinus (yoy)	0.0	0.00	1.3	1.77	0.0	0.00	0.0	0.00	0.3
Brachyistius frenatus	0.3	0.47	0.4	0.35	0.2	0.24	0.2	0.24	0.3
Sebastes atrovirens	0.0	0.00	0.8	0.24	0.0	0.00	0.0	0.00	0.2
Aulorhynchus flavidus (juv.)	0.7	0.94	0.2	0.24	0.0	0.00	0.0	0.00	0.2
Damalichthys vacca (juv.)	0.7	0.94	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Embiotoca jacksoni	0.2	0.00	< .1	0.12	0.2	0.24	< .1	0.12	0.1
Sebastes atrovirens (yoy)	0.0	0.00	0.0	0.00	0.4	0.59	0.0	0.00	0.1
Embiotoca lateralis	< .1	0.12	0.2	0.00	0.0	0.00	0.2	0.24	0.1
Sebastes serranoides	0.0	0.00	0.2	0.24	< .1	0.12	0.0	0.00	< .1
Rhacochilus toxotes	0.0	0.00	< .1	0.12	0.0	0.00	< .1	0.12	< .1
Girella nigricans	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Embiotoca lateralis (juv.)	0.0	0.00	0.2	0.24	0.0	0.00	0.0	0.00	< .1
Sebastes paucispinis (juv.)	< .1	0.12	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Myliobatis californica	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Hypsurus caryi (juv.)	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophiodon elongatus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Paralabrax clathratus	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1

(*continued*)

Subtidal Fish Transects Field's Cove Area Survey Means and Std. Deviations (continued)

Survey	106		107		108		109		
Date	12-Jun-00		28-Aug-00		11-Oct-00		13-Jan-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Benthic Transects									
Oxyjulis californica	0.8	0.82	0.9	1.06	8.1	5.77	17.7	1.89	6.9
Oxylebius pictus	1.9	1.06	1.7	1.18	2.8	0.82	1.0	1.18	1.8
Embiotoca jacksoni	2.3	0.12	1.8	0.47	0.7	0.24	0.8	0.24	1.4
Oxyjulis californica (juv.)	0.8	0.12	< .1	0.12	3.9	2.71	0.6	0.82	1.3
Embiotoca lateralis	1.4	0.35	0.6	0.35	1.0	0.71	1.0	0.00	1.0
Sebastes serranoides/S. flavidus (yoy)	0.0	0.00	3.8	4.12	< .1	0.12	0.0	0.00	1.0
Aulorhynchus flavidus (juv.)	0.0	0.00	3.8	5.30	0.0	0.00	0.0	0.00	0.9
Sebastes chrysomelas	1.5	1.18	0.6	0.59	1.3	1.30	0.3	0.12	0.9
Damalichthys vacca (=Rhacochilus)	1.0	0.47	0.7	0.00	0.6	0.35	0.4	0.35	0.7
Sebastes spp. (juv.)	0.0	0.00	2.1	2.95	0.0	0.00	0.0	0.00	0.5
Hyperprosopon argenteum	0.0	0.00	0.0	0.00	2.1	2.95	0.0	0.00	0.5
Rhacochilus toxotes	0.9	0.82	0.3	0.12	0.2	0.24	0.2	0.24	0.4
Embiotoca jacksoni (juv.)	1.2	0.00	0.0	0.00	0.2	0.24	0.0	0.00	0.3
Damalichthys vacca (juv.)	0.7	0.47	0.3	0.24	0.2	0.24	0.0	0.00	0.3
Scorpaenichthys marmoratus	0.3	0.00	0.3	0.24	0.3	0.00	< .1	0.12	0.3
Gibbonsia spp.	0.0	0.00	0.4	0.59	0.3	0.00	< .1	0.12	0.2
Hypsurus caryi	0.8	0.82	< .1	0.12	0.0	0.00	0.0	0.00	0.2
Sebastes rastrelliger	0.3	0.12	0.0	0.00	0.3	0.35	0.2	0.24	0.2
Sebastes atrovirens	0.3	0.24	0.2	0.00	0.2	0.24	0.0	0.00	0.2
Embiotoca lateralis (juv.)	0.4	0.35	0.2	0.24	0.0	0.00	0.0	0.00	0.1
Sebastes mystinus	0.0	0.00	0.0	0.00	0.5	0.47	0.0	0.00	0.1
Artedius spp.	0.2	0.00	0.2	0.24	< .1	0.12	< .1	0.12	0.1
Cebidichthys violaceus	< .1	0.12	0.0	0.00	0.3	0.00	0.0	0.00	0.1
Sebastes carnatus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.47	< .1
Sebastes chrysomelas (juv.)	0.2	0.24	< .1	0.12	< .1	0.12	0.0	0.00	< .1
Brachyistius frenatus	0.2	0.24	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Sebastes serranoides	< .1	0.12	0.2	0.24	0.0	0.00	0.0	0.00	< .1
Cottidae unid. a	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Hexagrammos decagrammus	< .1	0.12	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Ophiodon elongatus	< .1	0.12	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Girella nigricans	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Triakis semifasciata	0.0	0.00	< .1	0.12	< .1	0.12	0.0	0.00	< .1
Atherinopsis californiensis	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Aulorhynchus flavidus	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Sebastes melanops	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sebastes mystinus (juv.)	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cephaloscyllium ventriosum	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Scorpaenichthys marmoratus (juv.)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Semicossyphus pulcher	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Sebastes chrysomelas/S. carnatus (yoy)	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Sebastes atrovirens (yoy)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1

Subtidal Fish Transects North Diablo Cove Area Survey Means and Std. Deviations

Survey	106		107		108		109		
Date	7-Jun-00		24-Aug-00		11-Oct-00		18-Jan-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Midwater Transect									
Atherinopsis californiensis	5.8	8.25	0.0	0.00	9.6	9.78	17.9	25.34	8.3
Oxyjulis californica	7.4	4.36	3.9	2.00	7.6	0.35	12.8	7.31	7.9
Oxyjulis californica (juv.)	2.2	3.06	0.2	0.24	17.2	22.86	5.5	3.06	6.3
Sebastes chrysomelas/S. carnatus (yoy)	11.4	12.85	0.0	0.00	0.0	0.00	0.0	0.00	2.9
Atractoscion nobilis (Sciaenidae)	0.0	0.00	< .1	0.12	0.0	0.00	9.2	12.96	2.3
Brachyistius frenatus	0.8	1.06	0.7	0.24	0.2	0.00	2.0	1.65	0.9
Atherinidae unid.	2.2	3.06	0.0	0.00	0.0	0.00	0.0	0.00	0.5
Sebastes serranoides/S. flavidus (yoy)	0.9	1.06	1.2	1.65	0.0	0.00	0.0	0.00	0.5
Roccus saxatilis	0.0	0.00	0.0	0.00	0.0	0.00	2.1	2.95	0.5
Paralabrax clathratus	0.7	0.24	0.2	0.00	0.3	0.00	0.6	0.35	0.4
Embiotoca jacksoni	< .1	0.12	0.0	0.00	0.4	0.12	1.2	0.71	0.4
Girella nigricans	< .1	0.12	0.0	0.00	0.2	0.00	0.9	1.06	0.3
Damalichthys vacca (=Rhacochilus)	0.4	0.35	0.0	0.00	0.2	0.24	0.4	0.12	0.3
Paralabrax clathratus (juv.)	0.7	0.94	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Trachurus symmetricus	0.7	0.94	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Sebastes atrovirens (yoy)	0.0	0.00	0.0	0.00	0.6	0.82	0.0	0.00	0.1
Triakis semifasciata	0.3	0.35	0.0	0.00	0.0	0.00	0.3	0.00	0.1
Brachyistius frenatus (juv.)	0.3	0.47	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Aulorhynchus flavidus (juv.)	0.2	0.24	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Rhacochilus toxotes	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Sebastes serranoides	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Embiotoca lateralis (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Hermosilla azurea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1

(*continued*)

Subtidal Fish Transects North Diablo Cove Area Survey Means and Std. Deviations (continued)

Survey	106		107		108		109		
Date	7-Jun-00		24-Aug-00		11-Oct-00		18-Jan-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Benthic Transects									
Oxyjulis californica	39.3	36.77	4.9	2.47	9.3	0.24	27.3	14.14	20.2
Oxyjulis californica (juv.)	1.8	2.47	1.3	1.77	21.3	29.82	19.2	16.50	10.9
Embiotoca jacksoni	7.8	6.13	7.1	1.53	6.9	0.59	9.2	2.59	7.8
Embiotoca jacksoni (juv.)	1.8	0.24	3.0	2.12	2.4	1.06	3.1	0.59	2.6
Coryphopterus nicholsi	1.4	0.35	2.9	1.30	2.3	0.59	3.5	0.71	2.5
Oxylebius pictus	1.1	0.12	2.6	0.82	2.5	0.24	3.8	0.00	2.5
Damalichthys vacca (=Rhacochilus)	6.3	4.95	0.8	0.59	0.9	0.12	1.8	0.24	2.5
Phanerodon furcatus	6.7	9.43	0.0	0.00	0.0	0.00	0.0	0.00	1.7
Girella nigricans	1.5	0.71	0.3	0.24	0.8	0.47	2.3	2.47	1.2
Embiotoca lateralis	1.2	0.47	0.3	0.12	1.3	1.18	1.9	1.06	1.2
Atractoscion nobilis (Sciaenidae)	< .1	0.12	0.0	0.00	0.0	0.00	4.6	6.48	1.2
Paralabrax clathratus	2.3	0.59	0.5	0.47	0.5	0.24	0.8	0.00	1.0
Damalichthys vacca (juv.)	2.2	2.12	0.7	0.00	0.6	0.35	0.0	0.00	0.9
Sebastes chrysomelas	1.3	0.12	0.2	0.00	0.8	0.12	0.5	0.00	0.7
Triakis semifasciata	1.3	0.82	0.0	0.00	< .1	0.12	0.8	0.47	0.5
Semicossyphus pulcher	0.9	0.82	0.2	0.24	0.3	0.12	0.7	0.47	0.5
Rhacochilus toxotes	0.9	0.35	0.0	0.00	0.3	0.35	0.3	0.47	0.4
Brachyistius frenatus	0.2	0.00	< .1	0.12	< .1	0.12	0.8	0.59	0.3
Sebastes atrovirens	0.3	0.35	0.0	0.00	0.0	0.00	0.4	0.59	0.2
Scorpaenichthys marmoratus	0.0	0.00	< .1	0.12	0.4	0.12	0.2	0.00	0.2
Myliobatis californica	< .1	0.12	< .1	0.12	0.5	0.71	0.0	0.00	0.2
Hypsurus caryi	0.6	0.82	0.0	0.00	0.0	0.00	0.0	0.00	0.1
Atherinopsis californiensis	0.0	0.00	0.0	0.00	0.6	0.82	0.0	0.00	0.1
Gibbonsia spp.	< .1	0.12	0.3	0.00	< .1	0.12	< .1	0.12	0.1
Embiotoca lateralis (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.71	0.1
Sebastes rastrelliger	0.0	0.00	0.2	0.00	< .1	0.12	< .1	0.12	< .1
Hexagrammos decagrammus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.12	< .1
Paralabrax clathratus (juv.)	0.0	0.00	0.0	0.00	0.3	0.12	0.0	0.00	< .1
Artedius spp.	0.0	0.00	0.0	0.00	0.3	0.35	0.0	0.00	< .1
Medialuna californiensis	0.0	0.00	0.0	0.00	0.3	0.12	0.0	0.00	< .1
Cottidae unid. a	0.0	0.00	< .1	0.12	0.0	0.00	< .1	0.12	< .1
Orthonopias triacis	< .1	0.12	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Semicossyphus pulcher (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Sebastes caurinus (yoy)	0.2	0.24	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sebastes atrovirens (yoy)	0.2	0.24	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sebastes serranoides	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Cebidichthys violaceus	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Heterostichus rostratus	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Urolophus halleri	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Sebastes chrysomelas/S. carnatus (yoy)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Hypsypops rubicundus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1

Subtidal Fish Transects South Diablo Cove Area Survey Means and Std. Deviations

Survey	106		107		108		109		
Date	10-Jun-00		27-Aug-00		12-Oct-00		10-Feb-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Midwater Transect									
Atherinidae unid.	0.0	0.00	21.7	30.64	3.8	5.42	0.0	0.00	6.4
Oxyjulis californica (juv.)	0.0	0.00	0.0	0.00	17.5	8.78	3.5	4.95	5.2
Oxyjulis californica	2.8	1.77	5.5	2.36	3.5	4.54	8.1	11.20	4.9
Atherinopsis californiensis	5.0	7.07	0.5	0.71	5.3	7.42	0.0	0.00	2.7
Damalichthys vacca (=Rhacochilus)	3.7	5.19	0.0	0.00	0.6	0.18	2.0	0.71	1.6
Sebastes chrysomelas/S. carnatus (yoy)	3.3	1.18	0.7	0.94	0.0	0.00	0.0	0.00	1.0
Aulorhynchus flavidus	0.0	0.00	1.0	1.41	0.0	0.00	< .1	0.12	0.3
Sebastes atrovirens (yoy)	0.0	0.00	0.6	0.82	0.4	0.12	0.0	0.00	0.3
Brachyistius frenatus	0.3	0.00	< .1	0.12	0.4	0.18	0.0	0.00	0.2
Sebastes serranoides/S. flavidus (yoy)	< .1	0.12	0.7	0.71	0.0	0.00	0.0	0.00	0.2
Embiotoca jacksoni	0.0	0.00	< .1	0.12	0.2	0.24	0.5	0.47	0.2
Embiotoca jacksoni (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	0.5	0.71	0.1
Paralabrax clathratus	0.0	0.00	< .1	0.12	0.2	0.24	0.3	0.12	0.1
Aulorhynchus flavidus (juv.)	0.0	0.00	0.0	0.00	0.5	0.71	0.0	0.00	0.1
Rhacochilus toxotes	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.24	< .1
Engraulis mordax	0.0	0.00	0.3	0.35	0.0	0.00	0.0	0.00	< .1
Damalichthys vacca (juv.)	0.2	0.24	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Girella nigricans	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Myliobatis californica	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Sebastes melanops (yoy)	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1

(*continued*)

Subtidal Fish Transects South Diablo Cove Area Survey Means and Std. Deviations (continued)

Survey	106		107		108		109		
Date	10-Jun-00		27-Aug-00		12-Oct-00		10-Feb-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Benthic Transects									
Aulorhynchus flavidus (juv.)	1.8	0.24	12.0	10.84	2.8	3.18	0.0	0.00	4.1
Citharichthys spp.	4.8	0.71	1.3	0.59	3.3	0.47	< .1	0.12	2.4
Oxyjulis californica	0.5	0.00	3.3	1.89	0.8	1.06	4.2	5.89	2.2
Damalichthys vacca (=Rhacochilus)	3.6	3.18	0.7	0.71	0.4	0.12	1.4	0.59	1.5
Oxylebius pictus	0.8	0.35	0.8	0.59	0.6	0.59	2.3	0.12	1.1
Embiotoca jacksoni	0.6	0.12	1.0	0.00	0.8	0.24	1.5	1.41	1.0
Aulorhynchus flavidus	0.0	0.00	0.8	1.18	1.7	2.36	0.0	0.00	0.6
Damalichthys vacca (juv.)	0.5	0.71	1.2	1.41	0.0	0.00	0.0	0.00	0.4
Ophiodon elongatus	0.3	0.00	0.4	0.12	0.0	0.00	0.5	0.47	0.3
Embiotoca lateralis	0.3	0.35	0.5	0.47	0.3	0.35	0.2	0.00	0.3
Oxyjulis californica (juv.)	< .1	0.12	0.0	0.00	0.3	0.24	0.8	1.06	0.3
Coryphopterus nicholsi	0.3	0.24	< .1	0.12	0.3	0.12	0.4	0.59	0.3
Sebastes chrysomelas	0.3	0.12	0.0	0.00	< .1	0.12	0.6	0.35	0.2
Hypsurus caryi	0.7	0.94	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Embiotoca jacksoni (juv.)	0.4	0.59	0.0	0.00	0.2	0.24	0.0	0.00	0.1
Sebastes serranoides/S. flavidus (yoy)	0.0	0.00	0.6	0.59	0.0	0.00	0.0	0.00	0.1
Scorpaenichthys marmoratus	0.3	0.35	0.0	0.00	< .1	0.12	0.3	0.12	0.1
Rhacochilus toxotes	0.3	0.12	< .1	0.12	0.0	0.00	0.2	0.00	0.1
Artedius spp.	0.3	0.47	0.0	0.00	0.2	0.00	0.0	0.00	0.1
Myliobatis californica	< .1	0.12	0.0	0.00	0.3	0.47	0.0	0.00	0.1
Gibbonsia spp.	0.0	0.00	0.0	0.00	0.3	0.47	0.0	0.00	< .1
Triakis semifasciata	< .1	0.12	< .1	0.12	< .1	0.12	< .1	0.12	< .1
Cottidae unid. a	< .1	0.12	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Paralabrax clathratus	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.12	< .1
Brachyistius frenatus	< .1	0.12	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Orthonopias triacis	< .1	0.12	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Embiotoca lateralis (juv.)	< .1	0.12	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Platyrhinoidis triseriata	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Sebastes serranoides	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Girella nigricans	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Pleuronichthys coenosus	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1
Heterostichus rostratus	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Embiotocidae unid. (juv.)	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Sebastes chrysomelas (juv.)	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Citharicthys spp. (juv)	0.0	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Sebastes atrovirens (yoy)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Hermosilla azurea	0.0	0.00	0.0	0.00	0.0	0.00	< .1	0.12	< .1

Subtidal Fish Transects Patton Cove Area Survey Means and Std. Deviations

Survey	106		107		108		109		
Date	7-Jun-00		30-Aug-00		18-Oct-00		15-Feb-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Midwater Transect									
Oxyjulis californica	12.7	1.65	4.8	5.30	7.6	5.77	60.0	0.47	21.3
Oxyjulis californica (juv.)	0.0	0.00	0.4	0.59	1.3	1.77	9.6	7.66	2.8
Aulorhynchus flavidus	1.3	1.89	0.0	0.00	6.8	9.55	< .1	0.12	2.0
Embiotoca jacksoni	< .1	0.12	0.0	0.00	0.0	0.00	2.1	2.47	0.5
Damalichthys vacca (=Rhacochilus)	0.0	0.00	0.3	0.12	< .1	0.12	1.0	1.18	0.3
Sebastes serranoides/S. flavidus (yoy)	0.2	0.24	0.9	0.35	0.2	0.24	0.0	0.00	0.3
Sebastes serranoides	0.0	0.00	0.7	0.71	0.2	0.24	0.3	0.35	0.3
Atherinopsis californiensis	0.0	0.00	0.0	0.00	1.0	1.41	0.0	0.00	0.3
Aulorhynchus flavidus (juv.)	0.9	1.30	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Embiotoca lateralis	0.2	0.24	< .1	0.12	< .1	0.12	0.4	0.12	0.2
Sebastes mystinus	0.2	0.24	0.3	0.47	< .1	0.12	0.0	0.00	0.1
Embiotoca lateralis (juv.)	0.0	0.00	0.3	0.35	0.2	0.24	0.0	0.00	0.1
Sebastes atrovirens	0.2	0.24	< .1	0.12	0.0	0.00	< .1	0.12	< .1
Sebastes chrysomelas/S. carnatus (yoy)	0.3	0.35	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Atherinidae unid.	0.0	0.00	0.0	0.00	0.0	0.00	0.3	0.35	< .1
Rhacochilus toxotes	< .1	0.12	0.0	0.00	< .1	0.12	< .1	0.12	< .1
Brachyistius frenatus	0.0	0.00	0.0	0.00	< .1	0.12	0.2	0.24	< .1
Sebastes mystinus (juv.)	< .1	0.12	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Sebastes atrovirens (yoy)	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Sebastes serranoides/S. flavidus (juv.)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1
Sebastes rastrelliger	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1

(*continued*)

Subtidal Fish Transects Patton Cove Area Survey Means and Std. Deviations (continued)

Survey	106		107		108		109		
Date	7-Jun-00		30-Aug-00		18-Oct-00		15-Feb-01		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Benthic Transects									
Oxyjulis californica	2.5	0.00	8.7	9.66	7.8	4.36	17.5	24.75	9.1
Oxylebius pictus	2.9	0.12	3.2	1.89	3.8	0.82	1.6	0.35	2.9
Embiotoca lateralis	1.0	0.00	1.9	1.06	2.8	0.35	2.9	0.59	2.1
Sebastes chrysomelas	2.4	0.12	0.8	0.12	1.7	0.47	1.1	0.12	1.5
Sebastes serranoides/S. flavidus (yoy)	1.2	0.71	3.1	4.12	0.0	0.00	0.0	0.00	1.1
Damalichthys vacca (=Rhacochilus)	0.4	0.12	1.3	0.12	0.3	0.47	1.2	0.47	0.8
Embiotoca jacksoni	< .1	0.12	0.7	0.00	0.9	0.12	1.1	0.35	0.7
Embiotoca lateralis (juv.)	0.4	0.12	0.9	0.59	1.1	0.35	0.3	0.00	0.7
Sebastes mystinus (juv.)	1.5	1.65	0.4	0.59	< .1	0.12	0.2	0.24	0.5
Coryphopterus nicholsi	0.5	0.00	0.3	0.00	< .1	0.12	0.8	0.82	0.4
Sebastes mystinus	< .1	0.12	0.7	0.94	0.8	0.35	< .1	0.12	0.4
Hexagrammos decagrammus	< .1	0.12	0.3	0.12	0.5	0.24	0.5	0.24	0.3
Sebastes atrovirens	0.3	0.24	0.2	0.24	0.3	0.24	0.5	0.71	0.3
Sebastes melanops (yoy)	1.2	1.65	0.0	0.00	0.0	0.00	0.0	0.00	0.3
Ophiodon elongatus	0.2	0.00	< .1	0.12	0.0	0.00	0.8	0.47	0.3
Damalichthys vacca (juv.)	0.0	0.00	0.4	0.59	0.5	0.24	0.0	0.00	0.2
Aulorhynchus flavidus (juv.)	0.9	1.06	0.0	0.00	0.0	0.00	0.0	0.00	0.2
Scorpaenichthys marmoratus	0.2	0.24	0.2	0.24	< .1	0.12	0.5	0.00	0.2
Orthonopias triacis	0.5	0.24	0.2	0.24	< .1	0.12	< .1	0.12	0.2
Embiotoca jacksoni (juv.)	0.3	0.12	0.0	0.00	0.3	0.24	0.3	0.35	0.2
Gibbonsia spp.	0.2	0.00	0.6	0.59	0.0	0.00	0.0	0.00	0.2
Rhacochilus toxotes	< .1	0.12	0.0	0.00	0.4	0.59	< .1	0.12	0.1
Cephaloscyllium ventriosum	< .1	0.12	0.5	0.47	0.0	0.00	0.0	0.00	0.1
Sebastes serranoides	< .1	0.12	0.3	0.35	< .1	0.12	0.2	0.24	0.1
Artedius spp.	< .1	0.12	0.3	0.12	0.0	0.00	0.3	0.35	0.1
Oxyjulis californica (juv.)	0.0	0.00	0.0	0.00	0.5	0.71	0.0	0.00	0.1
Aulorhynchus flavidus	< .1	0.12	0.0	0.00	0.3	0.47	0.0	0.00	0.1
Sebastes rastrelliger	0.2	0.24	0.0	0.00	< .1	0.12	0.2	0.24	0.1
Cottidae unid. a	0.0	0.00	0.2	0.24	0.0	0.00	0.2	0.00	< .1
Sebastes chrysomelas (juv.)	0.2	0.24	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Cebidichthys violaceus	0.2	0.00	< .1	0.12	0.0	0.00	0.0	0.00	< .1
Heterostichus rostratus	0.0	0.00	0.3	0.35	0.0	0.00	0.0	0.00	< .1
Sebastes chrysomelas/S. carnatus (yoy)	0.0	0.00	0.3	0.35	0.0	0.00	0.0	0.00	< .1
Hypsurus caryi	0.0	0.00	0.0	0.00	0.2	0.00	0.0	0.00	< .1
Sebastes spp. (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Girella nigricans	0.2	0.00	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Ophiodon elongatus (juv.)	0.0	0.00	0.0	0.00	0.2	0.24	0.0	0.00	< .1
Oxylebius pictus (juv.)	0.0	0.00	0.0	0.00	0.0	0.00	0.2	0.24	< .1
Sebastes melanops	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Sebastes carnatus	< .1	0.12	0.0	0.00	0.0	0.00	0.0	0.00	< .1
Scorpaenichthys marmoratus (juv.)	0.0	0.00	0.0	0.00	< .1	0.12	0.0	0.00	< .1