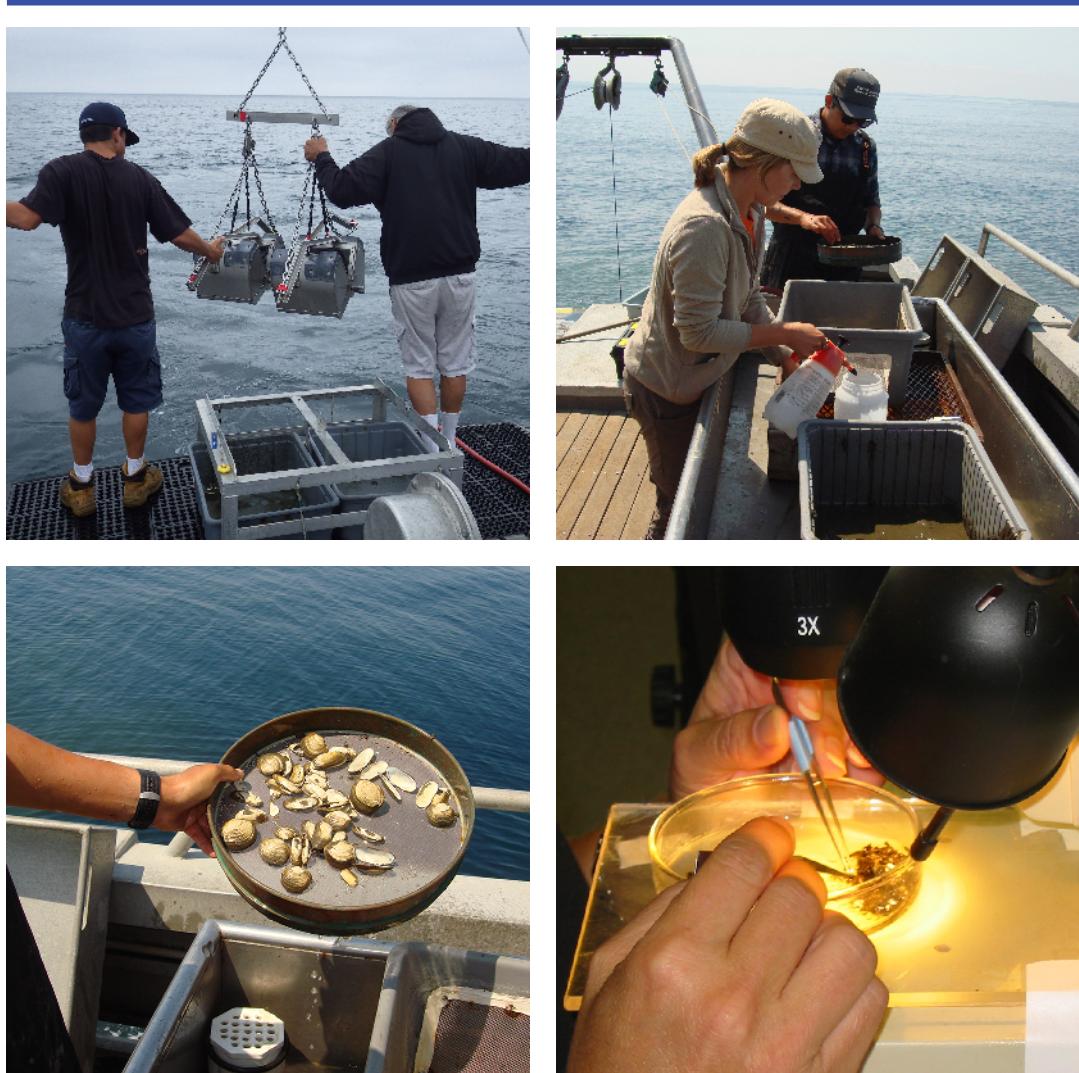




Southern California Bight
Regional Monitoring Program
Volume VI

Benthic Infauna



Southern California Bight
2013 Regional Monitoring
Program
Volume VI

SCCWRP Technical Report 971

**Southern California Bight
2013 Regional Monitoring Program:
Volume VI. Benthic Infauna**

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FOREWORD

The Southern California Bight (SCB) is a 100,000-square-mile body of water and submerged continental shelf and slope that extends from Point Conception, California, in the north to Cabo Colnett, Baja California, Mexico in the south. This area is a unique and important ecological and economic resource in southern California that includes diverse habitats for a broad range of marine life including more than 3,000 species of invertebrates, 500 species of fish, and many marine mammals and birds.

The coastal region along the SCB is one of the most densely populated coastlines in the U.S. and the world. The activities of this dense human population stress the coastal marine environment by introducing pollutants from point and non-point sources, modifying natural habitats and increasing extraction of natural resources.

Millions of dollars are spent annually to monitor coastal environmental quality in the SCB. These localized monitoring programs provide important site-specific information about the impacts of individual waste discharges, but do not assess the condition of the SCB as a whole. The assessment of environmental quality on a more regional scale provides a context for localized monitoring that helps environmental regulators and resource managers understand the relative influence of local and regional factors on the coastal ecosystem.

The 2013 SCB Regional Monitoring Program (Bight'13) is the continuation of an ongoing effort that provides an integrated assessment of the SCB through cooperative region-scale monitoring. The 2013 survey represents the joint effort of more than 100 organizations. The Bight'13 survey is organized into five technical components: (1) Contaminant Impact Assessment, (2) Shoreline Microbiology, (3) Water Quality, (4) Debris, and (5) Rocky Reefs. This report presents the results of the benthic macrofauna study of Bight'13, which is a part of the Contaminant Impact Assessment (CIA) component. Other CIA components include sediment toxicity, sediment chemistry, demersal fish and megabenthic invertebrates, and contaminant bioaccumulation in seabird eggs. Copies of this and other Bight'13 guidance manuals, data, and reports are available for download at www.sccwrp.org/Documents/BightDocuments.aspx.

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This report is the product of the dedication and hard work of many individuals who share a common goal of improving our understanding of the environmental quality of the Southern California Bight. The authors thank all of those who contributed to this report. While space limitations do not allow us to acknowledge all contributors by name, we are grateful to the following people and agencies whose efforts were crucial to our success. The members of the 2013 Southern California Bight Regional Monitoring Program Steering Committee provided the impetus, vision, and resources that guided and fueled our efforts. The Bight '13 Contaminant Impact and Assessment Planning Committee coordinated our efforts with other disciplines; their critical and timely reviews improved this document.

The field teams collected our samples with efficiency and care. The captains, crew and scientists on the Hey Jude (Aquatic Bioassay and Consulting Laboratories), La Mer and Marine Surveyor (City of Los Angeles), Monitor III (City of San Diego), M/V Nerissa (Orange County Sanitation District), R/V Ocean Sentinel (Sanitation Districts of Los Angeles County), Oceanus (City of San Diego), Pon Tiki (MBC Applied Environmental Sciences), R/V Scorpaena (MBC Applied Environmental Sciences), and R/V Yellowfin (Aquatic Bioassay and Consulting Laboratories) were responsible for field collection and sample processing. They contributed to our success in no small measure. The Southern California Association of Marine Invertebrate Taxonomists (SCAMIT) provides a mechanism for standardizing the names of organisms in southern California and promotes communication among taxonomists and was an integral part of this effort.

We appreciate the efforts and expertise of the taxonomists who produced the primary data on which this report was built. Brendan (Chip) Barrett, Kelvin Barwick, Katie Beauchamp, Don Cadien, Andy Davenport, David Drumm, Angela Eagleston, Wendy Enright, Bill Furlong, Robert Gamber, Robin Gartman, Nick Haring, Leslie Harris, Matt Hill, Kathy Langan, Megan Lilly, Larry Lovell, Ricardo Martinez-Lara, Chase McDonald, Dean Pasko, Terra Petry, Tony Phillips, Bill Power, Veronica Rodriguez-Villanueva, Ken Sakamoto, Fred Stern, Danny Tang, Laura Terriquez, and Ron Velarde identified and counted every one of the individuals used in this study. Special thanks are due Larry Lovell and Chase McDonald for coordinating the QA/QC efforts. Additionally, Regina Wetzer from the Natural History Museum of Los Angeles County needs to be mentioned for coordinating the acquisition and archiving of the voucher collections and QA/QC samples, ensuring their preservation and availability to future generations of scientists.

We are grateful to Becky Schaffner and Betty Fetscher for supporting the sampling design, Abel Santana for making the maps, Larry Cooper for assisting with the internet data submission system, Scott Martindale for layout and editing. Shelly Walther conducted all of the SIMPER multivariate analyses. The efforts of these individuals made many complicated tasks seem easy.

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EXECUTIVE SUMMARY

One of the central tenets of benthic ecology is that changes in macrobenthic (i.e., those animals that live in and on the bottom of the ocean) community structure can be used to infer the overall health and condition of the location where the organisms are collected. Macrobenthic community structure is a good indicator of ecosystem condition and health because these animals are directly associated with the sediment where most toxics accumulate, they have limited mobility to escape stressors, and they display a wide range of physiological responses and tolerances to different types of stressors. In addition to their use as ecosystem condition indicators, macrobenthic community composition also provides direct measures of Estuarine Habitat, Marine Habitat, and Shellfish Harvesting beneficial uses, as well as indirect or partial measures of a variety of other beneficial uses.

This report presents the results and interpretation of the macrobenthic infaunal component of the 2013 Southern California Bight Regional Monitoring Program's Contaminant Impact Assessment element. The objectives of this study were to measure the extent and magnitude of macrobenthic community composition across the Southern California Bight and to characterize the trends in that condition over the last 15 years (1998-2013).

Samples of benthic macrofauna were successfully collected at 361 sites across the Southern California Bight, ranging from Point Conception in the north to the US-Mexico border in the south using a random tessellation stratified design. Samples were allocated across 12 different strata; 4 in enclosed embayments, 4 on the continental shelf, 2 on the continental slope, and 2 that span both the shelf and the slope. Approximately a third of those sites were revisits of sites that had previously been sampled in 2008 and 2003 or 1998. Samples were collected with a 0.1-m² Van Veen grab, sieved on a 1-mm screen, and then preserved for identification. Specimens from each sample were sorted from the detritus and identified to the lowest possible taxonomic level, typically species.

All data passed Quality Assurance/Quality Control Data Quality Objectives set for sorting accuracy (95%), taxonomic identification accuracy (90 %), taxonomic discrimination (90%), and counting accuracy (90%). Sorting accuracy was 97.7% across all samples, with a minimum amount of corrective actions needed. The taxonomy labs averaged 97.7% accuracy of identification, 91.6% accuracy in taxonomic discrimination, and 95.3% accuracy in counting.

Macrobenthic community composition was assessed for the continental shelf portions of the Southern California Bight (6-200m deep) and embayments with salinity greater than 27 psu (practical salinity units). These areas represent approximately 37% of the total area of the Southern California Bight. The Benthic Response Index (BRI) (Smith et al. 2001) was used to assess samples from the continental shelf and the California Sediment Quality Objectives Benthic Line of Evidence (SQO BLOE) (Ranasinghe et al. 2009; Bay et al. 2014) framework was used for samples from embayments. Each of these indices had four condition categories, but for simpler interpretation this gradient in condition was condensed into two categories: good condition (reference + low disturbance conditions) and poor condition (moderate disturbance + high disturbance conditions)

Benthic macrofaunal composition indicated that the vast majority of the Southern California Bight was doing well in 2013. More than 98% of the assessable portions of the region were in good condition (77.9% reference condition + 20.6% low disturbance condition) and less than 2% were in poor condition. However, macrobenthic community conditions were not uniform across the regions. The embayment strata were in relatively poorer condition compared to the rest of the region with over 16% of the embayment area in moderate (14%) or high disturbance (2.3%). In contrast, the continental shelf strata were in relatively better condition with 1.2% in moderate disturbance condition, and no portions of the strata were in the high disturbance condition.

While the vast majority of the Bight macrobenthic community composition was in good condition in 2013, the patterns in condition scores and composition suggested changes in the macrobenthos compared to previous surveys. Though still characterized as being in good condition overall, the multi-survey temporal trend illustrated a decrease in the amount of reference condition area paired with an increase in the amounts of low disturbance area. Analysis of the subset of sites that were revisited during multiple surveys showed a similar pattern, indicating that 63% of the region had a stable trend in condition scores from 1998 – 2013, but 32% of the area showed a declining trend over the same period and 5% showed an improving trend in condition score. Both the multi-survey and site-revisit approaches to characterizing temporal trends indicated that the most notable reductions were located in the Channel Islands stratum. In contrast, the estuaries stratum had the largest relative proportion of area improving in condition over time. Unfortunately we lack a robust causal framework to identify the potential local or regional causes driving these subtle changes in the macrobenthic communities of the region.

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I. INTRODUCTION

Benthic macrofauna are useful indicators of the condition of marine and estuarine habitat because the community composition changes in a relatively predictable fashion when disturbed (e.g., Pearson and Rosenberg 1978; Rhodes et al. 1978; Gray et al. 2002). This predictability is because most benthic macrofaunal communities include a taxonomically diverse mixture of organisms spanning multiple phyla, with which comes a wide range of physiological responses to stress. Benthic macrofauna also serve as good integrators of their local environmental conditions, as they live directly in the sediment where many toxins accumulate, they have limited mobility to escape stress, and many species live for multiple years.

Because of these traits, benthic macrofauna are one of the most commonly used elements of bioassessment programs in the coastal ocean and estuaries across the US (e.g., Dauer et al. 2012; USEPA 2012; Llansó et al. 2015; Schiff et al. 2016) and the world (e.g., Van Hoey 2010). Despite their utility as indicators, changes in macrobenthic community structure in response to stress can be complex and difficult to communicate to non-specialists. One of the most common approaches to synthesize this complex information is the creation of biotic indices that distill complex community information into a relatively simple scale of condition that can easily be understood by resource managers and environmental policy makers (e.g., Karr 1991; Diaz et al. 2004; O'Brien et al. 2016).

The use of benthic macrofauna in the regional monitoring programs of Southern California's coastal oceans has become more robust since the early regional surveys prior to 1990 (Setty et al. 2010). The present survey (Bight '13) marks the fifth monitoring survey of the Southern California Bight, beginning with a pilot study in 1994 (Bergen et al. 1998, 2000) and expanding in spatial and technical scope in each subsequent survey from 1998 (Ranasinghe et al. 2003), to 2003 (Ranasinghe et al. 2007), to 2008 (Ranasinghe et al. 2012, Schiff et al. 2016). The modern Southern California Bight regional surveys have been designed not only to characterize biological assemblages and to quantify regional reference condition, but also to assess the spatial extent and magnitude of impact to benthic habitats. This design provides an opportunity to evaluate cumulative effects from multiple point source and non-point source discharges. In addition, regional monitoring surveys have improved benthic macrofaunal condition assessments by creating taxonomic standardization across the region (Ranasinghe et al. 2003b, Southern California Association of Marine Invertebrate Taxonomists 2013), developing assessment tools (Smith et al. 2001, Ranasinghe et al. 2009), and evaluating new habitats (Ranasinghe et al. 2007, Ranasinghe et al. 2012).

The objectives of the Southern California Bight 2013 Regional Macrofaunal Community Monitoring are to:

- Present a characterization of the macrobenthic communities found in the different soft-sediment habitats of the Southern California Bight
- Provide spatial estimates of habitat condition for the continental shelf and embayments of the Southern California Bight in 2013 based upon macrobenthic community composition

- Present the temporal trend in condition across the continental shelf and embayment of the Southern California Bight from 1998 to 2013.

The report is organized into 8 chapters and 4 appendices. Chapter 2 describes the study design and the field, laboratory, and data analysis methods. Chapter 3 presents the quality assurance procedures that ensured comparability of data produced by participating organizations and the results of quality control audits measuring their success. Chapter 4 presents the results of the macrobenthic community characterization and habitat condition assessment analyses. The results are discussed in Chapter 5. Chapters 6 and 7 present the conclusions and recommendations, respectively. Chapter 8 lists the literature cited.

Appendix A presents an example of the match/not-match spreadsheet used in comparing initial and re-identification data for taxonomic identification and enumeration QA/QC evaluation.

Appendix B contains summaries of the taxa collected in each stratum (total abundance, relative abundance, frequency of occurrence). Appendix C contains details of the areal extent estimates of the different condition categories in each strata, as well as extent estimates of the trend characterizations from the revisit sites. Appendix D contains graphs of the temporal trend in condition at each of the revisit sites and an investigation of the revisit trend analytical approach. Appendix E presents a comparison of benthic community condition scores and categories between the inner shelf, mid-shelf, and outer-shelf of the Bight Program in 2013 to macrobenthic community monitoring data from the 5 large POTWs in the region.

II. METHODS

Study Design

The survey area for the 2013 Southern California Bight Regional Monitoring Program (Bight'13) spanned from Point Conception, CA in the north to the US-Mexico border in the south and from the mainland coastal embayments west to the Channel Islands (Figure 1). The soft sediment portions of this region with salinities greater than 27 psu and less than 1,000m deep were divided into twelve strata based upon known biogeographic breaks in community composition (e.g., estuaries or deep continental shelf) or area of different regulatory/management interest (e.g., ports or marine protected areas) (Table 1). For the 2013 survey, two new strata were added to the program: submarine canyons and marine protected areas (MPA).

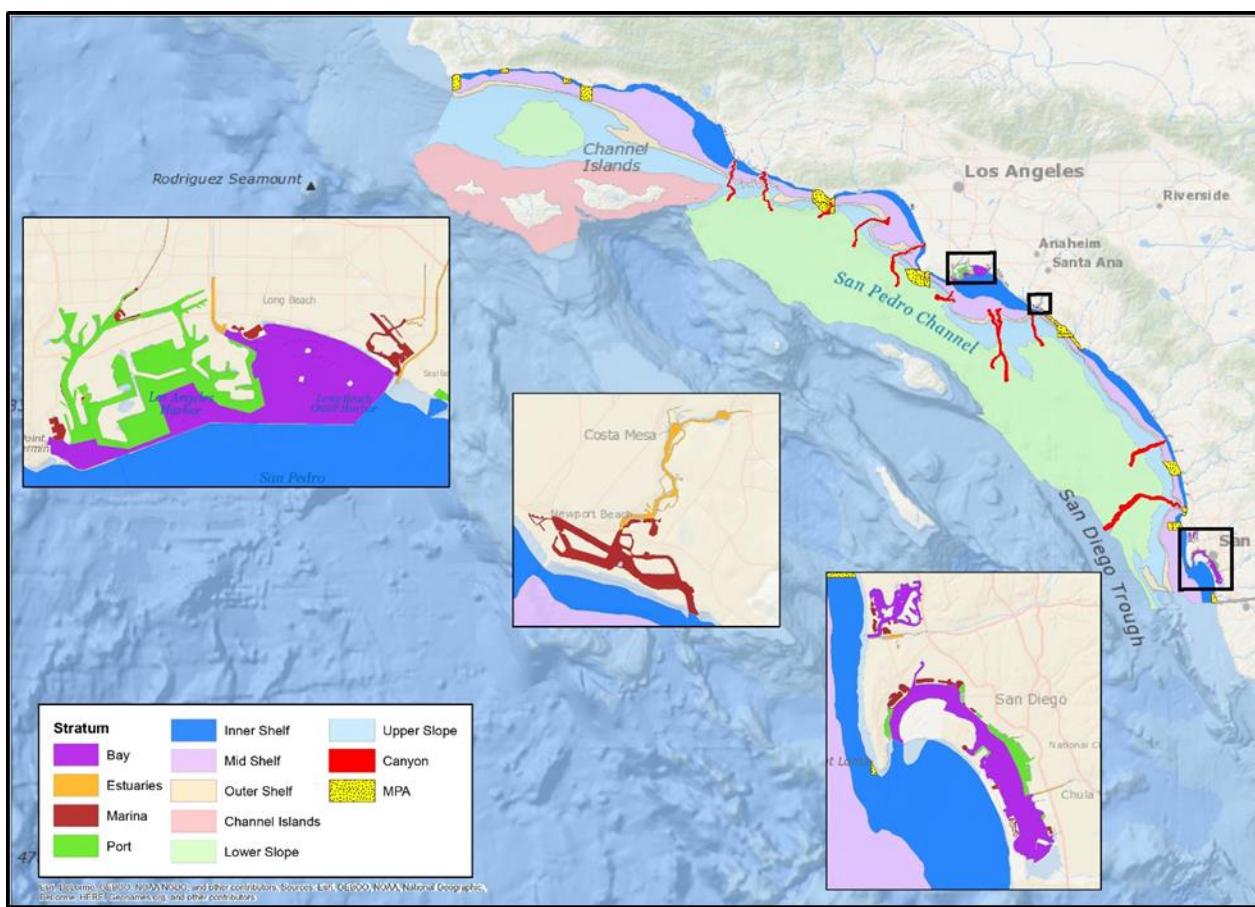


Figure 1. A map of the Southern California Bight delineating the 12 sample strata used in the survey. Insets show the details of: A) Ports of Long Beach/Los Angeles and San Pedro Bay, B) Newport Bay, and C) San Diego Bay

Table 1. Sample strata for the 2013 survey including total area of each stratum, the percent that stratum represents of the whole region, the number of probabilistic benthic stations assigned within each stratum, and the range of depth at which those stations were located. § indicates strata for which no condition assessment tool was available for some or all of these stations

Habitat	Stratum	Area (km ²)	% Area of Region	Number of Stations	Depth Range (m)
Estuaries	Estuaries	10.2	0.1	41	1 - 20
	Marina	15.5	0.1	34	2 - 20
Bays	Port	25.7	0.2	30	1 - 46
	Bay	71.1	0.5	31	3 - 25
Continental Shelf	Inner Shelf	1,046.7	6.7	31	5 - 29
	Mid Shelf	1,828.3	11.7	30	20 - 93
	Outer Shelf	517.1	3.3	29	125 - 205
	Channel Islands	2,084.8	13.3	15	21 - 124
Continental Slope	Upper Slope [§]	2,753.7	17.6	40	227 - 499
	Lower Slope [§]	7,417.8	43.8	21	525 - 942
Multiple	MPA ^{§,1}	299.6	1.9	28	23 - 820
	Canyon Bottom [§]	140.0	0.9	30	63 - 839

1 - Some MPA stations can be collapsed into the various shelf strata for assessment: 6 into Inner Shelf, 13 into the Mid shelf, and 2 into the Outer shelf

Across these twelve strata, 361 sites were allocated via a stratified, random tessellated design (e.g., Stevens and Olsen 2003, 2004; Olsen and Peck 2008). The random allocation process allows for an even distribution of sites among strata and the assignment of area weights for each site. The area weights can then be used for calculating unbiased areal assessments of condition in the survey area (Bergen 1996, Stevens 1997).

Among the 361 probabilistic sites assigned in the survey, 155 of those were revisit sites that had previously been sampled as part of the Southern California Bight Regional Monitoring Program in 2008 and either 2003 or 1998 (Table 2). Revisit sites provide an opportunity to assess the temporal trend in habitat condition independent of the spatial variation inherent in using data from multiple random surveys for temporal trends analysis (Urquhart and Kincaid 1999; Larsen et al. 2001).

Table 2. Probabilistic revisit stations within each stratum of the 2013 survey. § indicates strata for which no condition assessment tool was available for some or all of these stations.

Habitat	Stratum	Number of Revisit Stations
Estuaries	Estuaries	15
	Marina	19
Bays	Port	15
	Bay	16
Continental Shelf	Inner Shelf	15
	Mid Shelf	15
	Outer Shelf	15
	Channel Islands	15
Continental Slope	Upper Slope [§]	16
	Lower Slope [§]	14
Multiple	MPA [§]	0
	Canyon Bottom [§]	0

Sample Processing

Sediment samples for benthic macrofauna analysis were collected from July 3rd to September 24th, 2013. Benthic samples from each site were collected and processed following the Southern California Bight Regional Monitoring Survey Field Operations Manual (B'13 Field Sampling and Logistics Committee 2013) and Macrobenthic Sample Analysis Laboratory Manual (B'13 Benthic Committee 2013). In short, sediments were collected with a 0.1-m² Van Veen grab and sieved on a 1-mm screen. Material retained on the screen was placed in a chemical relaxant solution and then fixed with 10% buffered formalin. Samples were rinsed and transferred from formalin to 70% ethanol 2-5 days after collection. Samples were subsequently distributed among twelve laboratories for sorting, identification, and enumeration of the fauna. QA/QC protocols and data quality objectives for sample sorting, identification, and enumeration are detailed in the Macrobenthic Sample Analysis Laboratory Manual (B'13 Benthic Committee 2013) and in the QA/QC chapter below.

Data Analysis

Macrobenthic community composition among the different strata was evaluated using non-metric Multi-Dimensional Scaling (nMDS) ordination of Bray-Curtis similarity values (\log_{10} (abundance)) of all sites. After the ordination, natural environmental factors (% sand, water depth, latitude, and longitude) and species abundance were correlated to the ordination plot pattern to provide insight into any distribution patterns of samples observed in the ordination (e.g., Gibson et al. 2013). Taxa contributions to the mean Bray-Curtis dissimilarity between sample groupings illustrated in the nMDS were measured using similarity percentage (SIMPER) analysis (Clarke 1993; Warton et al. 2012). Community analyses were done with the metaMDS (similarity and ordination) and envFit (species and environmental factor correlations) programs

within the R Vegan package (Oksanen 2016 [R version 3.2.5]) or Primer v6 (SIMPER analysis) (Clarke and Gorely 2006).

Habitat condition based upon macrobenthic community composition was assessed using the Southern California Benthic Response Index (BRI) (Smith et al. 2001) or the California Sediment Quality Objectives Benthic Line of Evidence tool (SQO BLOE) (Ranasinghe et al. 2009; Bay et al. 2014), depending upon the applicable habitat. The BRI is an abundance-weighted tolerance value index that, within the Southern California Bight Monitoring Program, is applied to samples collected from the continental shelf of the Southern California Bight in 6 – 200m of water (e.g., Ranasinghe et al. 2003; Ranasinghe et al. 2007; Ranasinghe et al. 2012). The index scores a sample from 0-100 (good to bad condition), which can then be separated into four condition categories (Table 3). Following Smith et al. (2001), the four condition categories can be defined as: *Reference* – the condition at which natural benthic assemblages occur; *Low Disturbance* – marginal deviation, wherein there are changes in the relative abundance of taxa, but not yet species replacement; *Moderate Disturbance* – loss of biodiversity wherein 25% of the taxa in the reference condition would not be expected to occur; *High Disturbance* – loss in community function and defaunation wherein expected major taxonomic groups are absent.

Table 3 .Definition of condition categories used in the assessment framework for offshore and embayment habitats used from the 2013 survey

Summary Benthic Condition Level	Benthic Condition Level for this Report	BRI Condition Category	SQO BLOE Condition Category
Good	Reference	Reference	Reference
	Low Disturbance	Marginal Deviation	Low Disturbance
Poor	Moderate Disturbance	Biodiversity Loss	Moderate Disturbance
	High Disturbance	Community Function Loss or Defaunation	High Disturbance

The SQO BLOE is a combination of four indices: two multi-metric indices (Index of Biotic Integrity [IBI] and Relative Benthic Index [RBI]), a BRI abundance weighted tolerance index, and an Observed:Expected (O:E) index. The SQO BLOE is applicable to the soft, unvegetated sediments of Southern California Embayments with overlying waters of 27 psu or greater (Ranasinghe et al. 2009; Bay et al. 2014). The four SQO BLOE are scored and integrated into four condition categories functionally equivalent to those of the Smith et al. (2001) BRI (Ranasinghe et al. 2012) (Table 3). Following Ranasinghe et al. (2009), the four condition categories can be defined as: *Reference* – a community that would occur at a reference site; *Low Disturbance* – a community that exhibits some indication of stress, but might be within the measurement variability of reference condition; *Moderate Disturbance* – a community that exhibits clear evidence of physical, chemical, natural, or anthropogenic stress; *High Disturbance* – a community exhibiting a high magnitude of stress.

The goal of this report, and the Bight Monitoring Program in general, was to assess condition at a regional-scale. To that end, the condition results have been framed as proportions of the

region's area instead of proportions of individual sites. The areal extent of habitat condition expressed as the proportional amount of each condition category within a stratum was calculated using the area weights assigned to each site. As the area weights were calculated within a stratified probabilistic sampling design, percent area estimates can be calculated without bias from the different sizes of the sample strata. Furthermore, samples can be aggregated within or across different strata. Estimates were calculated using the Horvitz-Thompson ratio estimator (Horvitz and Thompson 1952) in lieu of a stratified mean because an unknown fraction of each stratum cannot be sampled (e.g., hard bottom). Confidence intervals (95%) for the estimates were calculated using a local neighborhood estimator that takes into account the spatial proximity of samples to each other when calculating the population variance (e.g., Diaz-Ramos et al. 1996). All calculations were made with the cat.estimate function of the R spSurvey package (Kincaid 2015 [R version 3.2.5]).

Table 4. Number of probabilistic stations sampled within each stratum during each Southern California Bight Survey from 1998-2013. § indicates strata for which no condition assessment tool was available for some or all of these stations.

Habitat	Stratum	1998	2003	2008	2013
Estuaries	Estuaries	0	39	64	41
	Marina	40	32	44	34
Bays	Port	39	9	46	30
	Bay	34	18	38	31
Continental Shelf	Inner Shelf	64	45	31	31
	Mid Shelf	85	73	32	30
	Outer Shelf	0	24	28	29
	Channel Islands	51	32	30	15
Continental Slope	Upper Slope [§]	0	8	34	41
	Lower Slope [§]	0	0	35	21
Multiple	MPA [§]	0	0	0	28
	Canyon Bottom [§]	0	0	0	30

Temporal trends in habitat condition of the assessable portions of the Southern California Bight were calculated with two complementary techniques: a multi-survey approach and a revisit-site approach. The multi-survey approach is a higher-level approach to temporal analysis that focused on the proportional change in each of the condition categories across the whole of the survey area through time. This analysis entailed a visual inspection of the areal extent estimates of each condition category (+/- the local neighborhood based confidence intervals) within each stratum from 1998 – 2013. Trends were characterized by survey-to-survey increases or decreases in a given condition class. This approach provided a greater density of points (Table 4) and greater confidence about the applicability of the trend across the whole stratum. However, because a large number of these sites were randomly selected within the stratum for each survey the observed differences represented a mix of both spatial and temporal variability.

The revisit sites approach complemented the multi-survey approach by providing a more granular measure of condition change by focusing solely on the temporal variance. This approach measured the trend in BRI scores¹ at 122 of the 155 revisit sites (there was no assessment tool for the 30 continental slope stations), which were sampled three times: in 2013, 2008, and either 2003 or 1998. Simple linear regression was used to model the trend in BRI scores along the (typically) three data points for each site (Appendix D). All linear regressions were done with Proc reg in SAS v9.4. The slope and 95% confidence intervals (CI) of the trend line at each site was obtained from the linear regression model and used to characterize the trend at that site (e.g., Llansó et al. 2015) using the following guidelines.

- If slope + 95% CI < 0, then the trend was characterized as **improving**
- If slope + 95% CI ≥ 0 , then the trend was characterized as **stable**
- If slope – 95% CI ≤ 0 , then the trend was characterized as **stable**
- If slope – 95% CI > 0, then the trend was characterized as **declining**

As each site had an area weight, the percent area with improving, declining, or stable trends was estimated using the cat.estimate function in the R spSurvey package as noted above (Kincaid 2015 [R version 3.2.5]). This approach had a relatively low data density per stratum (Table 2), but because the station location was held constant, most of the change in BRI score was attributable to temporal variance (Urquhart and Kincaid 1999; Olsen et al 1999).

¹ Smith et al. (2001) BRI for continental shelf sites or Ranasinghe et al. (2009) SQO BLOE BRI for embayment sites

III. QUALITY ASSURANCE AND QUALITY CONTROL

The field and laboratory analysis of benthic samples for Bight'13 involved three processes: sample washing and preservation, sample sorting, and organism identification and enumeration. Quality assurance in the form of procedures and standardized reporting requirements are provided in this document for the latter two processes. Empirical quality control measurements were implemented at stages for which Data Quality Objectives (DQOs) had been established during the design of the survey (i.e., sample sorting, taxonomic identification and enumeration). The quality control practices were designed to ensure high quality data to inform subsequent analyses (e.g., condition assessment, community characterization) and ensure comparability of data produced by different benthic laboratories and even different surveys. The following sections provided summaries of the DQO for each task, a description of the QA/QC exercise, and the results of the different labs participating in this survey. Full details of the QA/QC exercises, example forms, etc. can be found in the Bight'13 Macrofauna Sample Analysis Laboratory Manual (Bight'13 Benthic Committee 2013).

Sample Sorting

The objective of the sorting procedure was to remove the organisms from the associated sediment and detritus of a sample. For the 2013 survey, a DQO of 95% sorting efficiency (i.e., a minimum of 95% of the total number of organisms in a sample had to be removed) was established. A minimum of 10% of all material in Bight'13 samples was re-sorted to monitor sorter performance and to determine efficiency. Sorting efficiency was assessed following the aliquot method, wherein a representative aliquot of at least 10% of the sample volume of every sample processed was re-sorted by an experienced sorter different than the original sorter.

Sorting efficiency was calculated as follows:

$$\%Efficiency = 100 * \{ \#original / [\#original + (\#resort / aliquot fraction)] \}$$

Sorting efficiencies below 95% required continuous monitoring (i.e., 100% re-sorting) of that sorter until efficiency was improved. Organisms found in the re-sort were included in sample identification and enumeration. Average efficiency across all samples was 97.7%, meeting the DQO (Table 5).

Table 5. Summary of sorting QA/QC results, including both probabilistic and non-probabilistic sites. Average sorting accuracy is presented for each participating lab and across the dataset as a whole.

Lab	# Samples	Method	Efficiency %
A	52	1, 3	98.9
B	21	1, 3	96.4
C	84	2,	99.5
D	31	2, 3	100
E	13	3	97.3
F	113	1, 3	97.1
G	58	2	99.5
H	26	1, 3	92.8
TOTALS	398	Dataset Mean = 97.7	

Sorting QC Methods:

1 – 10% aliquot recheck

2 – 20% aliquot recheck

3 – 100% recheck of sample

Identification and Enumeration

The objective of the identification and enumeration procedures was to accurately identify and count each organism in the sample. For the 2013 survey three QA/QC measures related to identification and enumeration – each with a DQO of 90% - were used to evaluate performance, accuracy in identification, precision in taxonomic discrimination, and accuracy in counting. A minimum of 10% of each identification laboratory's samples were re-identified by a QC laboratory to assess the quality of the identification and enumeration process. Samples for re-identification were randomly selected apriori from each lab's assigned set of samples by the Bight'13 Benthic Committee Chairperson and provided to the QC laboratories after the initial identification. The taxonomists conducting the re-identification did not have access to the original results.

Upon completion of the re-analysis, the results were submitted to SCCWRP and a match/not match comparison of primary and secondary results was produced for the reconciliation process. The original taxonomists and the re-identification taxonomists for a given sample then met to reconcile any differences between the original data and those from the QC reanalysis. Once differences in identification and enumeration were reconciled, the number and types of discrepancies/errors (Table 6) were recorded on the Bight'13 Reconciliation Spreadsheet (Appendix A). These results were then used to calculate the % error of the original laboratory's analysis.

$$\text{Identification Accuracy} = [1 - (\# \text{ Individuals Mis-ID'd} / \# \text{ Individuals Resolved})] *100$$

$$Taxa Discriminated = \{ 1 - [|(\# Taxa Resolved - \# Taxa Original)| / \# Taxa Resolved] \} *100$$

$$Count Accuracy = \{ 1 - [|(\# Individuals Original - \#Individuals Resolved)| / \# Individuals Resolved] \} *100$$

Table 6. Potential taxonomic identification & enumeration errors the QA/QC process is designed to detect and the prescribed remedial actions. The True Errors are those directly measured by the three taxonomic QA/QC equations. A TRC (Taxonomic Request for Change) is an update of taxonomic information in the species look up list to match the most currently accepted naming standard.

Resolution codes:	Error type	Action
1 = Primary taxonomist misidentification	True	TRC, Training
2 = QC taxonomist misidentification	True	Training
3 = Primary taxonomist miscount	True	TRC, Review best practices
4 = QC taxonomist miscount	True	Review best practices
7 = Primary naming convention discrepancy	True	TRC, Review best practices
8 = QC naming convention discrepancy	True	Review best practices
5 = Primary taxonomist data entry error	Random	TRC, Review best practices
6 = QC taxonomist data entry error	Random	Review best practices
11 = organism added from another vial	Random	Review best practices
12=specimen lost	Random	Review best practices
13= specimen vouchered	Non-Error	Data tracking
14= specimen damaged during primary ID, not identifiable by QC taxonomist	Non-Error	No Action

Across all of the samples, the average accuracy in identification was 97.7%, average precision in taxonomic discrimination was 91.6%, and average accuracy of counting was 95.3% (Table 7); all of which passed the 90% DQO. Table 8 presents a summary of the number and types of taxonomic errors identified during the QA/QC process. Across the dataset, most of the errors

(~60%) were either misidentifications (102) or miscounts (91) – both true errors – or lost individuals (93) – a random error.

Table 7. Taxonomic QA/QC results for the random 10% of samples selected from each lab participating in 2013 survey. Each lab's mean values, as well as the mean for the entire dataset are presented for each QC measure

Lab	Accuracy of Identification	Precision of Discrimination	Accuracy of Count
A	99.8	98.9	98.9
B	98.6	83.9	86.6
C	99.3	95.0	97.1
D	96.0	96.3	98.5
E	100.0	94.7	97.8
F	93.6	72.4	95.2
G	97.7	95.7	98.7
H	96.5	95.6	89.3
Dataset Mean	97.7	91.6	95.3

Table 8. Summary of different errors noted in the taxonomic QA/QC re-identification process

Category	Error type	Definition/Description	Discrepancy Code	Taxonomic Labs								Dataset Total	
				A	B	C	D	E	F	G	H		
Misidentification	True	By primary taxonomist	1	15	2	26	18	0	14	2	25	102 19.2%	
Miscounts	True	By primary taxonomist	3	13	9	11	28	1	19	3	7	91 17.1%	
Data Entry	Random	By either taxonomist or keypunch operator	5	13	3	8	16	1	11	0	10	62 11.7%	
Name usage	True	Naming convention difference	7	6	3	14	21	0	2	0	3	49 9.2%	
Level of Expertise	Non-error	Variation in level of expertise	9	6	2	29	4	3	15	4	14	77 14.5%	
Processing	Random	Specimen from another vial, missort	11	1	6	6	9	0	2	0	2	26 4.9%	
Processing	Random	Presumed lost	12	23	2	16	17	1	18	3	13	93 17.5%	
Processing	Non-error	Unreported voucher specimen	13	16	3	3	1	0	1	0	1	25 4.7%	
Processing	Non-error	Specimen damaged during ID, un-ID'able by QC	14	0	1	3	2	0	0	0	1	7 1.3%	
				Total	93	31	116	116	6	82	12	76	532 100%

Taxonomic comparability – After the sample-by-sample QA/QC reconciliation among the primary and re-identification taxonomists and any true errors were fixed, all of the taxonomists convened for a synoptic data review. The goal of this exercise was to ensure comparability of taxa among the different laboratories that did the identifications. When taxon names were compared across all of the different laboratories, some taxa were either synonymized under one agreed upon name or the level of identification was backed off to a higher, more inclusive level (e.g., species to genus, or genus to family) (Table 9).

Table 9. Summary of taxonomic changes made during the synoptic data review to ensure consistency in taxonomic treatment among the different laboratories

GROUP	NAME ADOPTED AFTER SYNOPTIC DATA REVIEW	LEVEL	NUMBER OF TAXA COMBINED
Phylum Annelida			
Family Cirratulidae	<i>Aphelochaeta</i> sp LA1	Species	2
Phylum Mollusca			
Order Chaetodermatida	Chaetodermatida	Order	4
Order Sorbeoconcha	<i>Lirobittium</i> spp	Genus	3
Order "Lower Heterobranchia"	<i>Turbanilla</i> spp	Genus	2
Class Scaphopoda	Scaphopoda	Class	2
Phylum Nemertea			
Order Heteronemertea	Heteronemertea	Order	5
Order Hoplonemertea	Hoplonemertea	Order	5

To ensure comparability of this survey to other surveys, voucher collections from each lab were created. The voucher collections contain specimen lots of one or more individuals of each reported taxon. The voucher specimens are understood to be representative of the taxon as defined within the Bight'13 survey. After the completion of analyses and publication of reports, vouchers will be transmitted to the Natural History Museum of Los Angeles County (NHM). The vouchers will be placed into the NHM invertebrate collection and specimens can be borrowed for further analysis following the standard protocols of the museum. Vouchers of tentatively identified taxa that are not resolved at the time of publication of this report will also be transferred to the NHM. Further research on these taxa can be conducted through the NHM by visiting scientists.

QA/QC Discussion

The challenge of producing and verifying an accurate and internally consistent description of the species composition of benthic macrofaunal communities over a wide range of habitats and depths was considerable. The necessity of relying on a large number of taxonomists added to the complexity of the task. However, measures to coordinate and standardize taxonomic practices effectively met these challenges.

In this survey, we provided species-level identifications for 82.9% of the specimens that were collected, a negligible decrease of only 0.4% from the 2008 survey. A total of 1,766 taxa were reported, which was 32 more than the 2008 survey. The primary reason for this high level of consistency among surveys was that Southern California Association of Marine Invertebrate Taxonomists (SCAMIT) has continued to use taxonomic problems discovered in the Bight surveys to focus its activities in the period between surveys. Keys and other identification aids were produced for many problem taxa from previous regional surveys, facilitating consistent treatment in the present survey.

While all of the DQOs were met across the dataset, a small number of samples failed to meet the objectives for sorting or precision in taxa discrimination, albeit by only small margins. These failures resulted from the lack of experienced sorters and identification discrepancies made in samples with low abundance and diversity, such as those from very shallow estuarine habitats and deep slope and basin habitats. Just a few errors in samples with few individuals have a big impact on quality assurance and quality control measures. However, the ability of most labs to reach the established DQOs across the width and breadth of their samples indicated very high performance in the bulk of the data and should impart similarly high confidence in the quality of the data for all subsequent analyses.

IV. RESULTS

Community Composition

The nMDS ordination illustrates that all of the samples cluster into three, relatively contained groups (stress = 0.18): embayment, off shore, or deep water assemblages (Figure 2). A visual inspection of Figure 2 shows that the embayment cluster was comprised of samples from the estuaries, marina, port, and bay strata. The estuaries were somewhat separated from the other types of embayments, but are still part of the larger embayment assemblage group. The offshore assemblage cluster was comprised of samples from the inner shelf, mid shelf, outer shelf, Channel Islands, and MPA strata. As indicated by the clustering and overplotting in Figure 2, the macrobenthic fauna of offshore community samples were very similar to each other and displayed a gradient into the deep water assemblage samples. The third group, a deep water assemblage, was comprised of samples from submarine canyons, upper slope, and lower slope strata, as well as a few MPA samples from deeper than 500m. As illustrated by the broad dispersal of points across the ordination in Figure 2, these samples showed the greatest amount of taxonomic heterogeneity of the different habitats sampled in the survey; they were not particularly similar to each other, but they were quite dissimilar to all of the other samples.

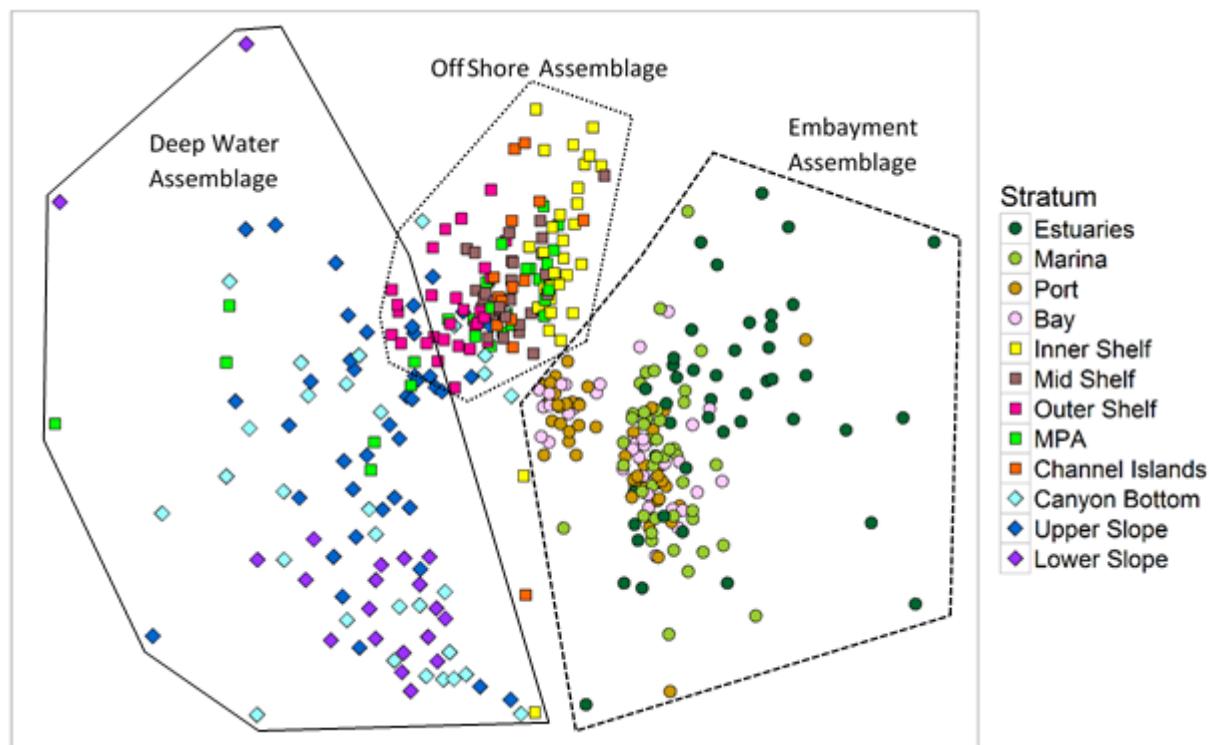


Figure 2. Two-dimensional nMDS ordination illustrating benthic infaunal community similarity of samples from the 12 different sampling strata. The three different assemblages are denoted with polygons (note, polygons are only a hand-drawn visual aid and not statistically meaningful). Strata can be identified by the color noted in the legend.

Sediment grain size composition (% sand) ($r^2 = 0.13$) and water depth ($r^2 = 0.11$) were the two most important environmental variables contributing to the separation of samples in the nMDS ordination (Figure 3). Latitude and longitude had no meaningful ($r^2 < 0.01$) relationships to the sample distribution in the nMDS ordination.

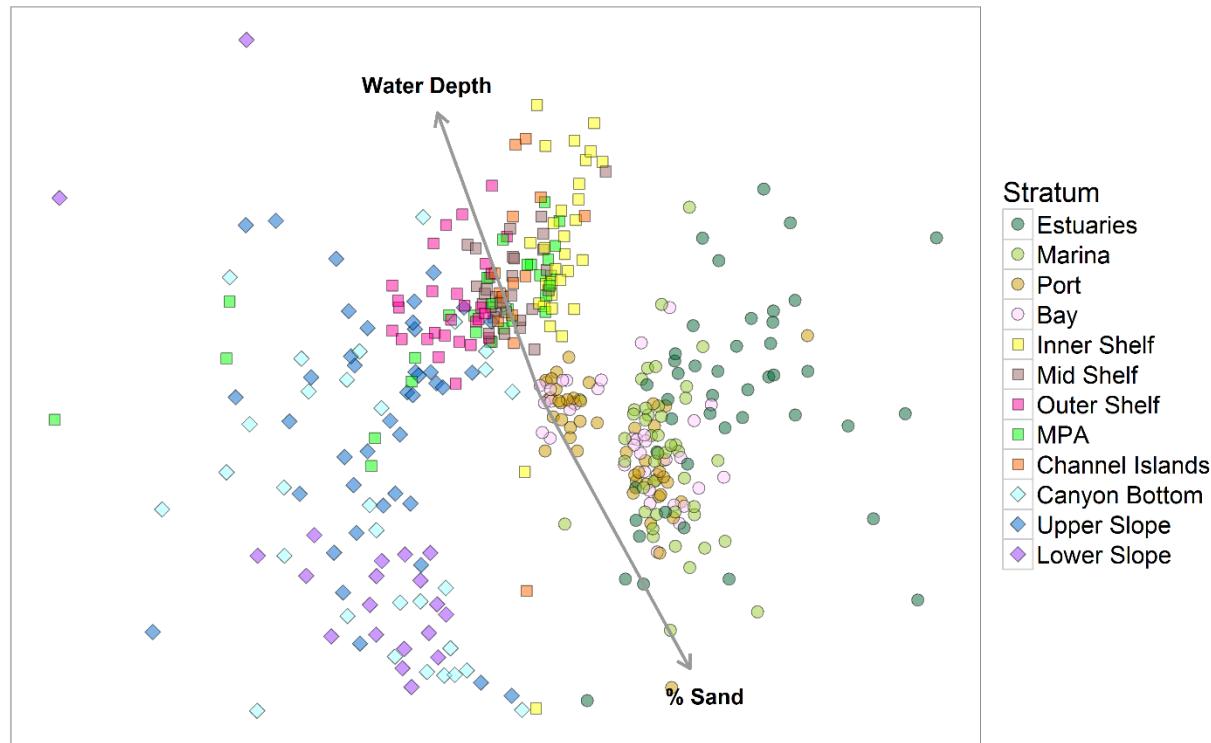


Figure 3. Two-dimensional nMDS ordination of Bight 13 macrobenthic samples from Figure 2 with environmental vectors overlaid. The length of the vectors is proportional to the strength of their correlation to the ordination pattern.

There were 48 different taxa that had comparatively strong ($r^2 > 0.04$) explanatory power for the patterns in the 2-d ordination of the samples collected in the survey (Table 10). These taxa could be grouped into those that clearly distinguished the embayment assemblage and those that identified with the offshore or deep water assemblages (Figure 4). This clear separation was logical given the distinct differences in salinity and water depth between the embayment strata and other strata sampled in the survey. The distinction between those taxa associated with the deep water and offshore assemblages was less distinct than that with the embayments. This pattern was likely reflective of the more subtle changes in depth and temperature along the continental shelf-slope continuum.

Table 10. Taxa with strongest explanatory value ($r^2 > 0.04$) in the 2-dimensional nMDS ordination shown in Figures 2-4. Taxa are ranked based upon the magnitude of their correlation to the ordination. The labels of the taxa vectors in Figure 4 correspond to the Vector IDs in this table. The assemblage association indicates the direction of that taxon's vector to the assemblages defined in Figure 2

Taxon	Vector ID	Assemblage Association
<i>Scoletoma</i> sp	1	Embayment
<i>Theora lubrica</i>	2	Embayment
<i>Leitoscoloplos pugettensis</i>	3	Embayment
<i>Euchone limnicola</i>	4	Embayment
<i>Scoletoma</i> sp C	5	Embayment
<i>Scleroplax granulata</i>	6	Embayment
<i>Neotrypaea gigas</i>	7	Embayment
<i>Heterophoxus cf ellisi</i>	8	Embayment
<i>Pseudopolydora paucibranchiata</i>	9	Embayment
<i>Lyonsia californica</i>	10	Embayment
<i>Scoletoma</i> sp A	11	Embayment
<i>Amphideutopus oculatus</i>	12	Embayment
<i>Sternaspis affinis</i>	13	Deep Water/Offshore
<i>Tagelus affinis</i>	14	Embayment
<i>Prionospio (Prionospio) heterobranchia</i>	15	Embayment
<i>Scoletoma</i> sp B	16	Embayment
<i>Cossura</i> sp A	17	Embayment
<i>Pinnotheridae</i>	18	Embayment
<i>Ampelisca agassizi</i>	19	Offshore
<i>Asthenothaerus diegensis</i>	20	Embayment
<i>Spiochaetopterus costarum</i> Cmplx	21	Offshore
<i>Phoronida</i>	22	Embayment
<i>Ampelisca brevisimulata</i>	23	Deep Water/Offshore
<i>Rhepoxynius stenodes</i>	24	Deep Water/Offshore
<i>Prionospio (Minuspio) multibranchiata</i>	25	Embayment
<i>Typosyllis heterochaeta</i>	26	Offshore
<i>Solen rostriformis</i>	27	Embayment
<i>Diplocirrus</i> sp SD1	28	Embayment
<i>Kurtzina beta</i>	29	Offshore
<i>Rhepoxynius menziesi</i>	30	Deep Water/Offshore
<i>Pholoe glabra</i>	31	Offshore

Table 10. (continued)

Taxon	Vector ID	Assemblage Association
Amphiuridae	32	Offshore
<i>Aphelochaeta williamsae</i>	33	Offshore
<i>Scoloplos armiger</i> Cmplx	34	Deep Water/Offshore
<i>Aruga oculata</i>	35	Deep Water/Offshore
<i>Heteroserolis carinata</i>	36	Embayment
<i>Rudilemboides stenopropodus</i>	37	Embayment
<i>Spiophanes norrisi</i>	38	Offshore
<i>Synidotea magnifica</i>	39	Offshore
<i>Ampelisca</i> sp	40	Offshore
<i>Phyllodoce hartmanae</i>	41	Offshore
<i>Megalomma pigmentum</i>	42	Embayment
Ophiuroidea	43	Deep Water/Offshore
<i>Protomediea articulata</i> Cmplx	44	Deep Water/Offshore
<i>Pinnixa franciscana</i>	45	Embayment
<i>Prionospio (Prionospio) dubia</i>	46	Offshore
<i>Marphysa disjuncta</i>	47	Embayment
<i>Ennucula tenuis</i>	48	Deep Water

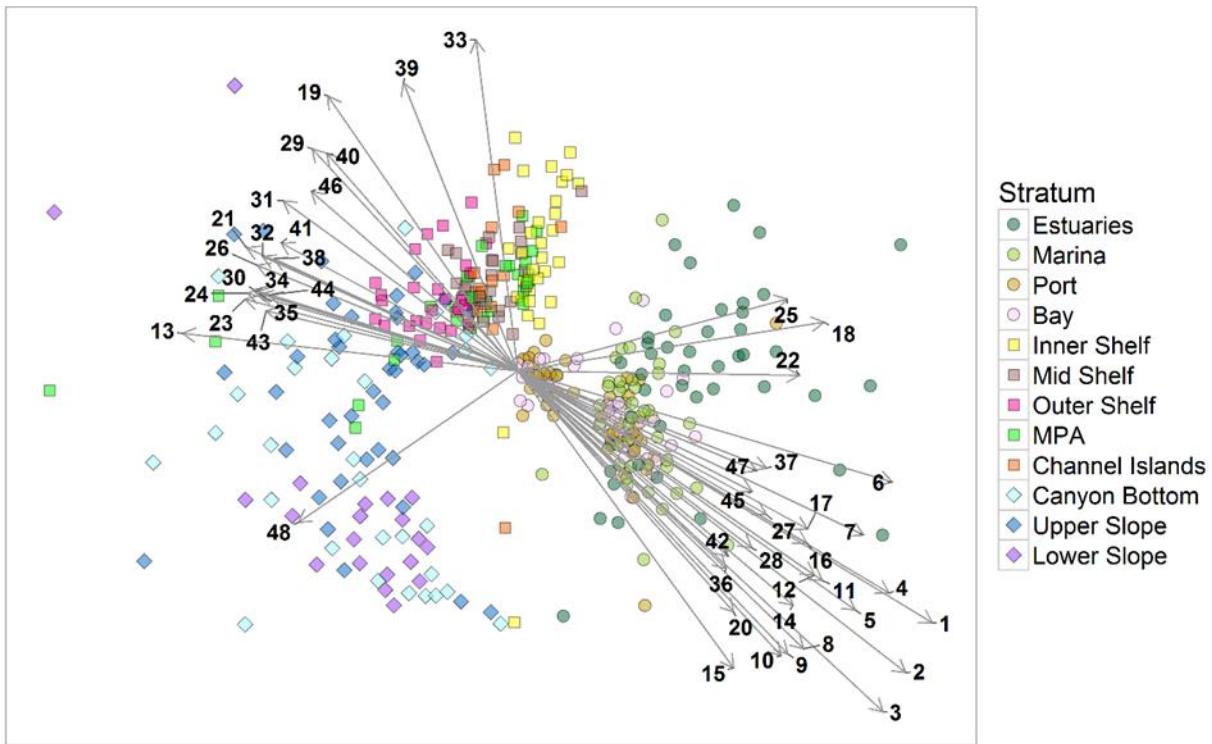


Figure 4. Two-dimensional nMDS ordination of Bight 13 macrobenthic samples from Figure 2 with taxa vectors overlaid. Vector numbers correspond to taxa in Table 10. The length of the vectors is proportional to the strength of the correlation of their abundance to the ordination pattern

When grouping samples based upon their distribution within the three assemblages depicted in Figure 2, the average Bray-Curtis similarity was 0.173 among the embayment samples, 0.188 among the offshore samples, and 0.08 among the deep water samples. Sixteen different taxa contributed 60% of similarity within the embayment assemblage (Table 11). The orbiniid polychaete *Leitoscoloplos pugettensis*, the bivalve *Theora lubrica*, and capitellid polychaetes from the genus *Mediomastus* were identified the taxa most associated with the embayment samples, with each taxon contributing >6% to the similarity values among the samples. In contrast, samples from the offshore group had 41 different taxa that represented 60% of the within group similarity, reflecting the greater species richness traditionally observed in the continental shelf of the region compared to the embayments or deep water habitats (see below; Ranasinghe et al. 2012). No one taxon accounted for more than 4.75% of the within-group similarity (Table 12). Twenty-seven taxa contributed to 60% of the similarity within the deep water samples (Table 13). No one taxon contributed more than 4.4 % to the within group similarity of the deep water samples. The full output of the SIMPER analysis can be found in Appendix G.

Table 11. Similarity percentages for those taxa that contribute the most (i.e., top 60%) to the uniqueness and within-group similarity of the samples from the embayment group depicted in Figure 2. Average within-group Bray-Curtis similarity was 0.173

Taxon	% Contribution to Similarity	% Cumulative Contribution
<i>Leitoscoloplos pugettensis</i>	8.86	8.86
<i>Theora lubrica</i>	6.84	15.70
<i>Mediomastus</i> sp	6.66	22.37
<i>Scoletoma</i> sp C	5.79	28.16
<i>Scoletoma</i> sp	5.51	33.67
<i>Pseudopolydora paucibranchiata</i>	3.43	37.10
<i>Cossura</i> sp A	3.23	40.33
<i>Euchone limnicola</i>	3.15	43.48
<i>Tagelus affinis</i>	2.76	46.24
Oligochaeta	2.60	48.85
<i>Musculista senhousia</i>	2.50	51.34
<i>Exogone lourei</i>	2.29	53.63
<i>Prionospio (Prionospio) heterobranchia</i>	2.26	55.89
<i>Amphideutopus oculatus</i>	2.11	57.99
<i>Grandidierella japonica</i>	1.88	59.87
<i>Lyonsia californica</i>	1.77	61.64

Table 12. Similarity percentages for those taxa that contribute the most (i.e., top 60%) to the uniqueness and within-group similarity of the samples from the offshore group depicted in Figure 2. Average within-group Bray-Curtis similarity was 0.186.

Taxon	% Contribution to Similarity	% Cumulative Contribution
<i>Spiochaetopterus costarum</i> Cmplx	4.75	4.75
<i>Mediomastus</i> sp	4.37	9.12
<i>Paraprionospio alata</i>	3.58	12.69
<i>Spiophanes duplex</i>	2.94	15.64
<i>Prionospio (Prionospio) jubata</i>	2.28	17.92
<i>Amphiuridae</i>	2.25	20.17
<i>Chloeia pinnata</i>	2.10	22.28
<i>Maldanidae</i>	1.82	24.09
<i>Amphiodia urtica</i>	1.77	25.87
<i>Amphiodia</i> sp	1.74	27.61
<i>Scoletoma tetraura</i> Cmplx	1.71	29.32
<i>Nephtys ferruginea</i>	1.48	30.81
<i>Euclymeninae</i> sp A	1.48	32.28
<i>Tellina carpenteri</i>	1.33	33.62
<i>Monticellina cryptica</i>	1.29	34.91
<i>Petaloclymene pacifica</i>	1.24	36.15
<i>Glycera nana</i>	1.24	37.39
<i>Pholoe glabra</i>	1.22	38.61
<i>Spiophanes norrisi</i>	1.22	39.83
<i>Glycinde armigera</i>	1.21	41.04
<i>Sthenelanella uniformis</i>	1.20	42.24
<i>Sternaspis affinis</i>	1.17	43.41
<i>Pectinaria californiensis</i>	1.07	44.47
<i>Spiophanes berkeleyorum</i>	1.06	45.53
<i>Leptochelia dubia</i> Cmplx	1.00	46.53
<i>Aphelochaeta monilaris</i>	0.99	47.52
<i>Aphelochaeta glandaria</i> Cmplx	0.99	48.51
<i>Ampelisca brevisimulata</i>	0.95	49.46
<i>Euphilomedes carcharodonta</i>	0.94	50.40
<i>Spiophanes kimballi</i>	0.92	51.32
<i>Kurtiella tumida</i>	0.90	52.22
<i>Lineidae</i>	0.89	53.11
<i>Lumbrineris cruzensis</i>	0.87	53.97
<i>Axinopsida serricata</i>	0.82	54.79
<i>Tellina modesta</i>	0.80	55.59
<i>Ampelisca careyi</i>	0.80	56.39
<i>Monticellina siblina</i>	0.76	57.15
<i>Photis</i> sp	0.75	57.90
<i>Parvilucina tenuisculpta</i>	0.75	58.64
<i>Rhepoxynius bicuspidatus</i>	0.73	59.37
<i>Nereis</i> sp A	0.69	60.07

Table 13. Similarity percentages for those taxa that contribute the most (i.e., top 60%) to the uniqueness and within-group similarity of the samples from the deep water group depicted in Figure 2. Average within-group Bray-Curtis similarity was 0.08.

Taxon	% Contribution to Similarity	% Cumulative Contribution
<i>Prionospio (Prionospio) ehlersi</i>	4.32	4.32
<i>Maldane sarsi</i>	4.29	8.61
<i>Paraprionospio alata</i>	4.16	12.77
<i>Chloea pinnata</i>	4.14	16.91
<i>Byblis barbarensis</i>	3.84	20.75
<i>Falcidens hartmanae</i>	3.20	23.94
Ophiuroidea	3.05	27.00
Maldanidae	2.80	29.80
<i>Limifossor fratula</i>	2.79	32.59
<i>Macoma carlottensis</i>	2.58	35.17
<i>Eclysippe trilobata</i>	2.47	37.65
<i>Glycinde armigera</i>	2.20	39.85
<i>Ampelisca unsocalae</i>	2.15	42.00
<i>Heteromastus filobranchus</i>	1.88	43.88
<i>Onuphis iridescent</i>	1.72	45.60
<i>Aphelochaeta monilaris</i>	1.71	47.30
<i>Phyllochaetopterus limicolus</i>	1.64	48.95
Lineidae	1.54	50.48
<i>Glycera nana</i>	1.52	52.00
<i>Fauveliopsis glabra</i>	1.40	53.40
<i>Monticellina cryptica</i>	1.31	54.72
<i>Leitoscoloplos</i> sp A	1.28	56.00
<i>Harpiniopsis epistomata</i>	1.23	57.22
<i>Tritella tenuissima</i>	1.20	58.42
<i>Bipalponephthys cornuta</i>	1.16	59.58
Ampharetidae	1.14	60.72

The embayment strata, marina, port, and bay samples had relatively similar species diversity, richness, and evenness, while estuaries samples had lower values for all three community metrics (Table 14). Though these univariate community metrics were relatively similar among the marina, port, and bay samples, the community composition data served to highlight the differences in taxonomic composition of the different strata born out in the multivariate analyses described above. A full list of all taxa, their abundance, and frequency of occurrence within each stratum are presented in Appendix B. The most abundant and frequently observed fauna from estuaries samples were typical, estuarine endemic taxa found in polyhaline/high mesohaline environments: the aorid amphipod *Grandidieralla japonica*, oligochaetes, the syllid polychaete *Exogone lourei*, capitellid polychaetes from the *Capitella capitata* Cmplx, and the spionid

polychaete *Streblospio benedicti* (Appendix B1). Marina samples were dominated by the spionid polychaete *Pseudopolydora paucibranchiata*, *L. pugettensis*, and the kamakid amphipod *Amphideutopus oculatus* (Appendix B2). The composition of port samples was similar to those of marinas (e.g., *P. paucibranchiata* was the most abundant organism), but with the polychaetes of the genera *Cossura* and *Scoletoma*, as well as *T. lubrica* also being among the most abundant and frequently observed taxa (Appendix B3). The most abundant and frequently observed taxa in the bay samples were the sabellid polychaete *Megalomma pigmentum*, as well as *A. oculatus* and *L. pugettensis*. Unlike the other embayment strata, the two most abundant taxa in the bay samples – the ophiuroid *Amphipholis squamata* and oligochaetes – were found in less than a third of the samples, indicating a patchy, high-density distribution.

Table 14. Mean (min - max) abundance, species richness, diversity, and evenness for all samples (probabilistic and non-probabilistic) for each stratum from the Bight '13 survey. Strata are grouped by their primary assemblage association noted in the nMDS ordination.

Assemblage	Stratum	Abundance	Shannon-Weiner Diversity (H')	Pielou's Evenness (J')	Species Richness (S)
Embayments	Estuaries	516.2 (4-3,305)	1.9 (0.1-3.1)	0.6 (0.1-1)	24.6 (3-80)
	Marina	549.9 (14-5,150)	2.4 (1.2-3.2)	0.7 (0.5-0.9)	35.7 (4-94)
	Port	306.6 (6-1,182)	2.8 (1-4.1)	0.8 (0.3-1)	43.8 (4-97)
	Bay	416.1 (44-3,111)	2.9 (2.1-3.9)	0.8 (0.6-0.9)	43.8 (14-67)
Off-Shore	Inner Shelf	419.7 (90-2,191)	3.5 (2.5-4.3)	0.8 (0.6-0.9)	79.7 (27-164)
	Mid Shelf	491.2 (142-2,718)	3.6 (2.1-4.1)	0.8 (0.4-0.9)	89.6 (45-171)
	Outer Shelf	288.6 (51-1,492)	3.4 (2.3-4.1)	0.8 (0.7-1)	66.2 (24-129)
	Channel Islands	801 (446-1,659)	3.8 (2.8-4.1)	0.8 (0.7-0.9)	117.7 (65-159)
	MPA	367.9 (16-1,047)	3.4 (0.8-4.4)	0.8 (0.6-0.9)	80.9 (4-161)
Deep Water	Canyon Bottom	150.7 (20-819)	2.4 (0.4-3.8)	0.8 (0.2-1)	27.1 (5-84)
	Upper Slope	96.4 (12-470)	2.7 (0.6-3.9)	0.8 (0.3-1)	29.8 (6-107)
	Lower Slope	40.8 (0-145)	2.5 (0-3.2)	0.9 (0-1)	19.6 (0-33)

Samples from the offshore strata had greater species richness and diversity than other strata from the survey (Table 11). Species diversity and evenness were relatively similar among the samples from the offshore strata. Species richness, however, varied among the strata, with the Channel Islands samples having the highest average species richness (117.7) while the outer shelf samples had the lowest (66.2). The MPA, inner, mid, and outer shelf samples all had relatively similar dominant taxa, characteristic of the coastal ocean: the spionid polychaetes *Spiophanes norrisi* and *S. duplex*, chaetopterid polychaetes in the *Spiochaetopterus costarum* Cmplx, tellinid bivalves *Tellina modesta* and *T. carpenteri*, capitellid polychaetes of the genus *Mediomastus*, and the ostracod *Euphilomedes carcharodonta* (Appendices B5-8). As Figure 2 would suggest, the samples from the Channel Islands stratum shared many of the same dominant taxa as those from the other offshore strata. The most abundant and frequently observed additions to those

taxa typical in the other offshore strata were amphipods of the genus *Photis* and the ostracod *E. producta* (Appendix B9).

Species diversity and evenness of the deep water strata samples were similar to samples from the embayments (Table 11). The species richness values were lower than all the other strata, with the lower slope samples having the lowest richness (19.6) of any strata. Samples from the canyon stratum were dominated by ampeliscid amphipods, the amphinomid polychaete *Chloeia pinnata*, the pectinariid polychaete *Pectinaria californiensis*, and capitellid polychaetes of the genus *Mediomastus* (Appendix B10). Samples from the upper slope stratum were characterized by many of the same taxa as the canyon samples (e.g., *C. pinnata* and *Mediomastus*), but with the tellinid bivalves *Macoma carlottensis* and *T. carpenteri* and the spionid polychaete *Paraprionospio alata* frequently being observed and in relatively large numbers (Appendix B11). Samples from the lower slope stratum were relatively depauperate, with few taxa occurring in more than any ten samples. The most abundant taxa in these samples were ophiuroids, the ampharetid polychaete *Eclysippe trilobata*, and the fauveliopsid polychaete *Fauveliopsis glabra*. Among all three deep water strata, the ampeliscid amphipod *Byblis barbarensis* was found in relatively high abundances –accounting for 3- 15% of the total abundance in a stratum, but typically in a few samples, indicating dense patches among deep water habitats (Appendices B11 and B12).

Condition assessment in 2013

More than 98% of the assessable portions of the region were in good condition (77.9% reference condition + 20.6% low disturbance condition) and less than 2% were in poor condition (Figure 5). Of the five offshore strata, only the mid-shelf had any area in poor condition (3.6%); all of which was in the moderate disturbance condition category (Figure 6). No sites were in the high disturbance category in any offshore stratum. Within the good condition category, the five offshore strata had varying levels of condition within the reference and low disturbance categories. Outer shelf, mid-shelf, and MPA strata had a greater proportion of their relative area in reference condition (85, 89, and 85% of area in reference condition, respectively). In contrast, the inner shelf and Channel Islands had proportionately less area in reference condition (69 and 73% of area, respectively), with concomitant increases in low disturbance condition (31 and 27% of area, respectively). Full details of the condition extent estimates for all of the assessable strata can be found in Appendix C. Sample-wise BRI scores for all offshore samples can be found in Appendix F.

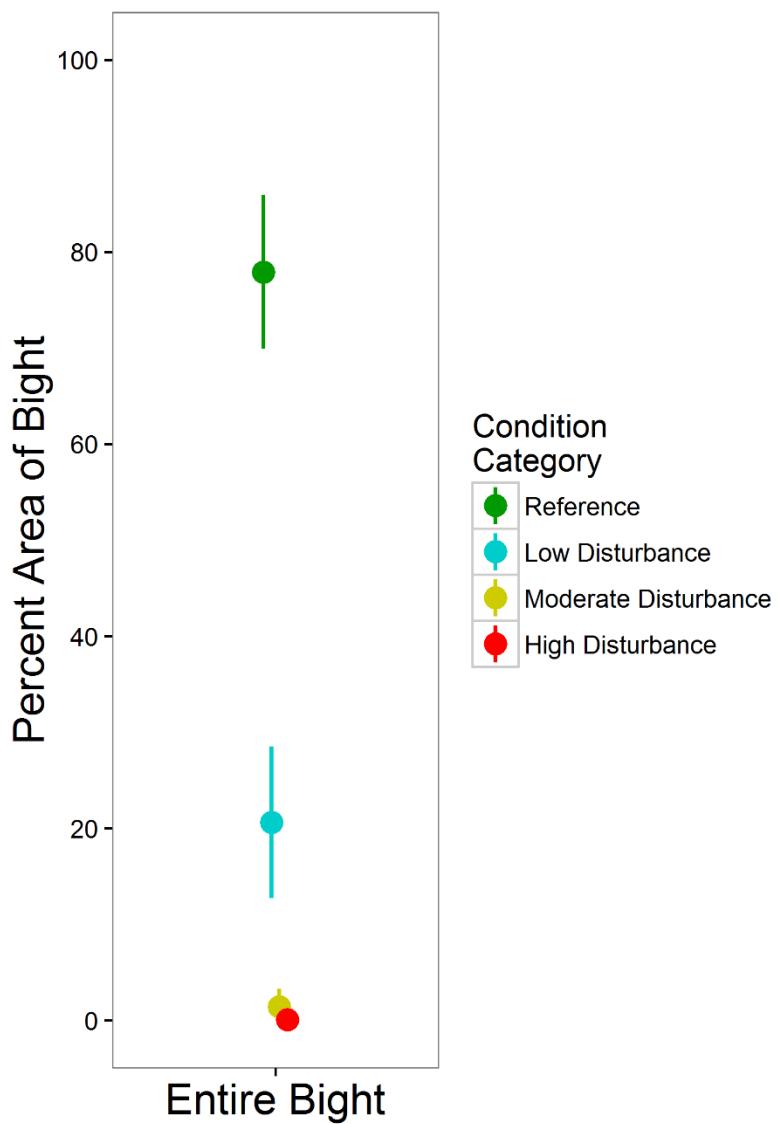


Figure 5. Percent area estimates (w/ 95% confidence intervals) of the assessable portions of the Southern California Bight in each of the four condition categories. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

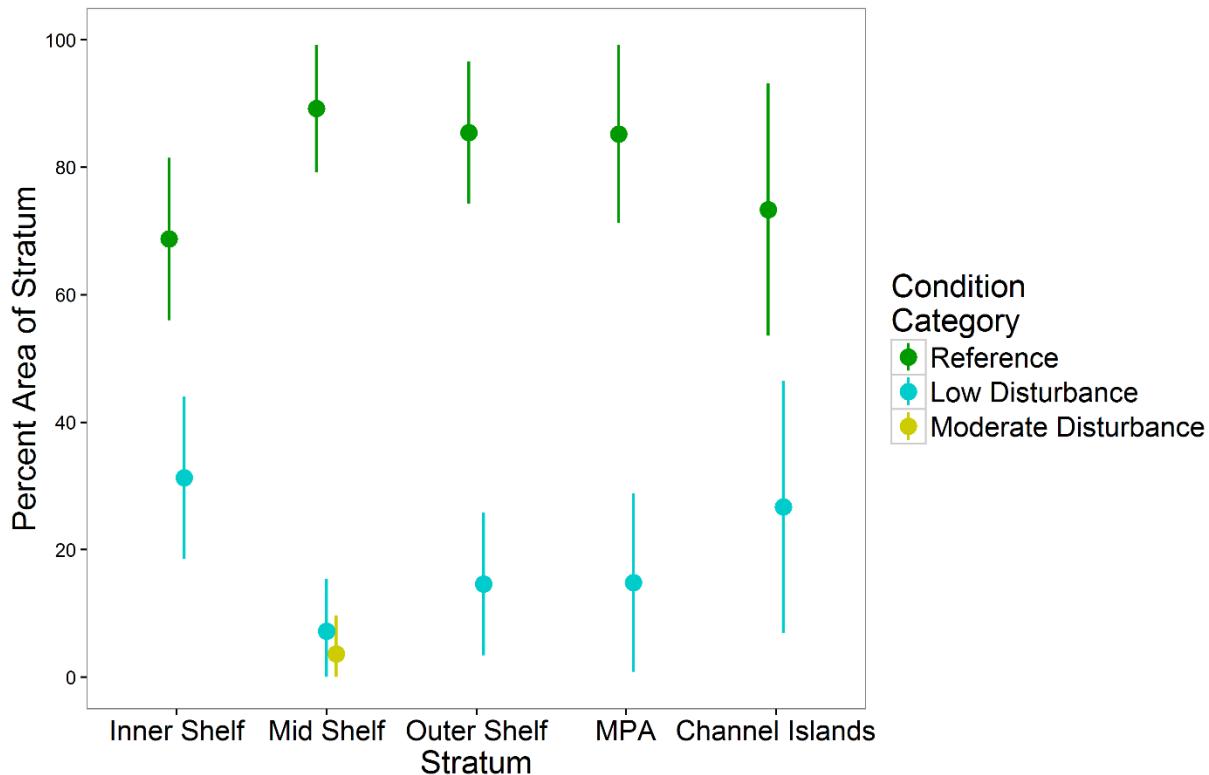


Figure 6. Percent area estimates w/ 95% confidence intervals) of the five offshore strata in each of the four condition categories. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals. Note no area was in the high disturbance category.

The embayment strata had a greater relative extent of area in poor condition (16.3%) compared to the offshore strata (1.2%) (Figure 7). While the majority of the area in the embayment strata was in the low disturbance category (64%), 2.3% of the embayment area was highly disturbed. When comparing different embayment strata (Figure 8), bay and port strata were in relatively better condition than the estuaries and marina strata. Most of the area in bay and port strata was in good condition (18-24% reference and 68-75% low disturbance condition) with relatively little area in poor condition (6-7% moderate disturbance and 0-1% high disturbance). In contrast, the estuaries and marina strata had a smaller extent of area in good condition (6.4-6.8% reference and 39-45% low disturbance condition) and a greater extent of area in poor condition (35-44% moderate disturbance and 4-19% high disturbance).

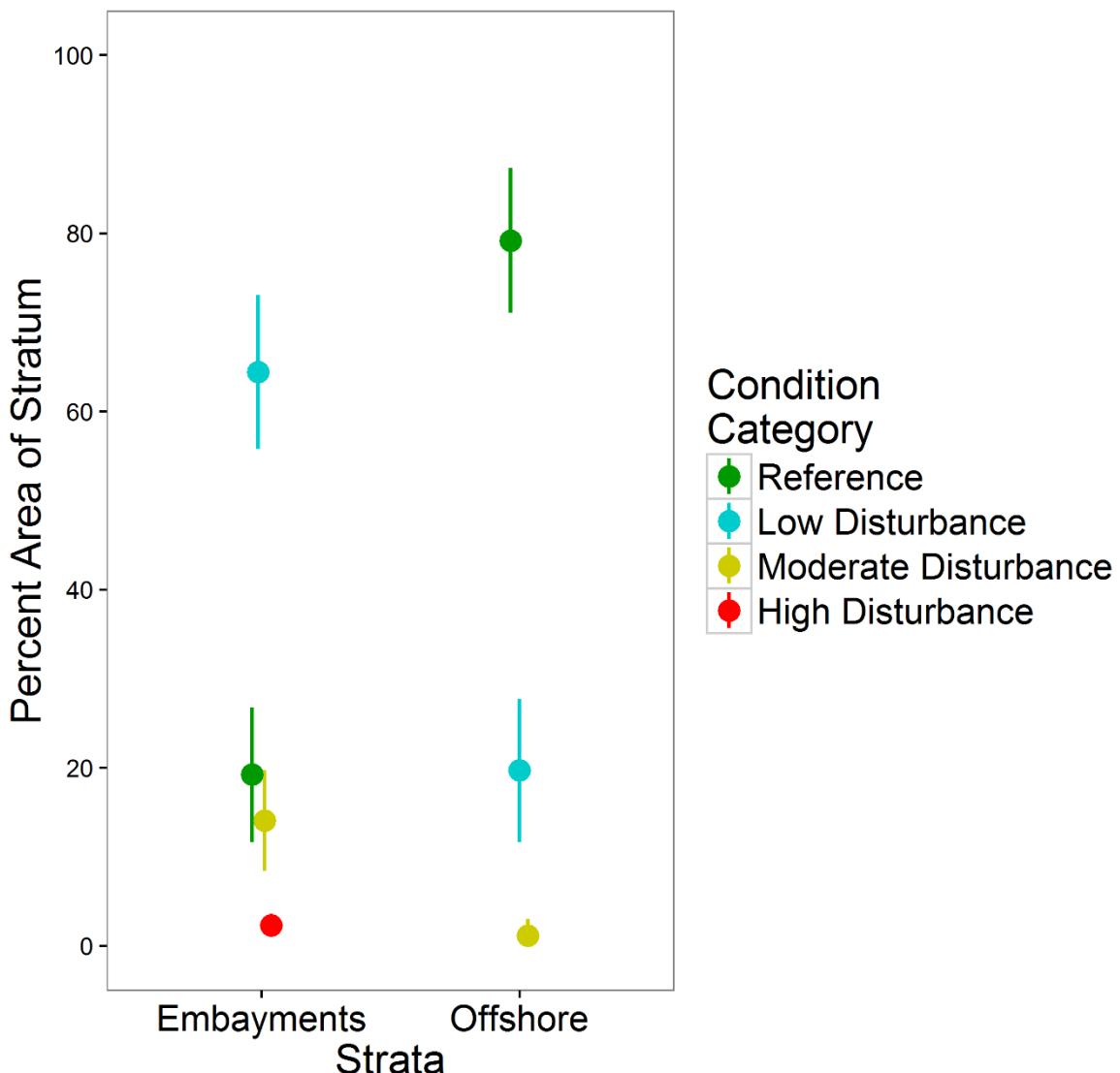


Figure 7. Percent area estimates (w/ 95% confidence intervals) of the combined embayment and offshore strata in each of the four condition categories. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

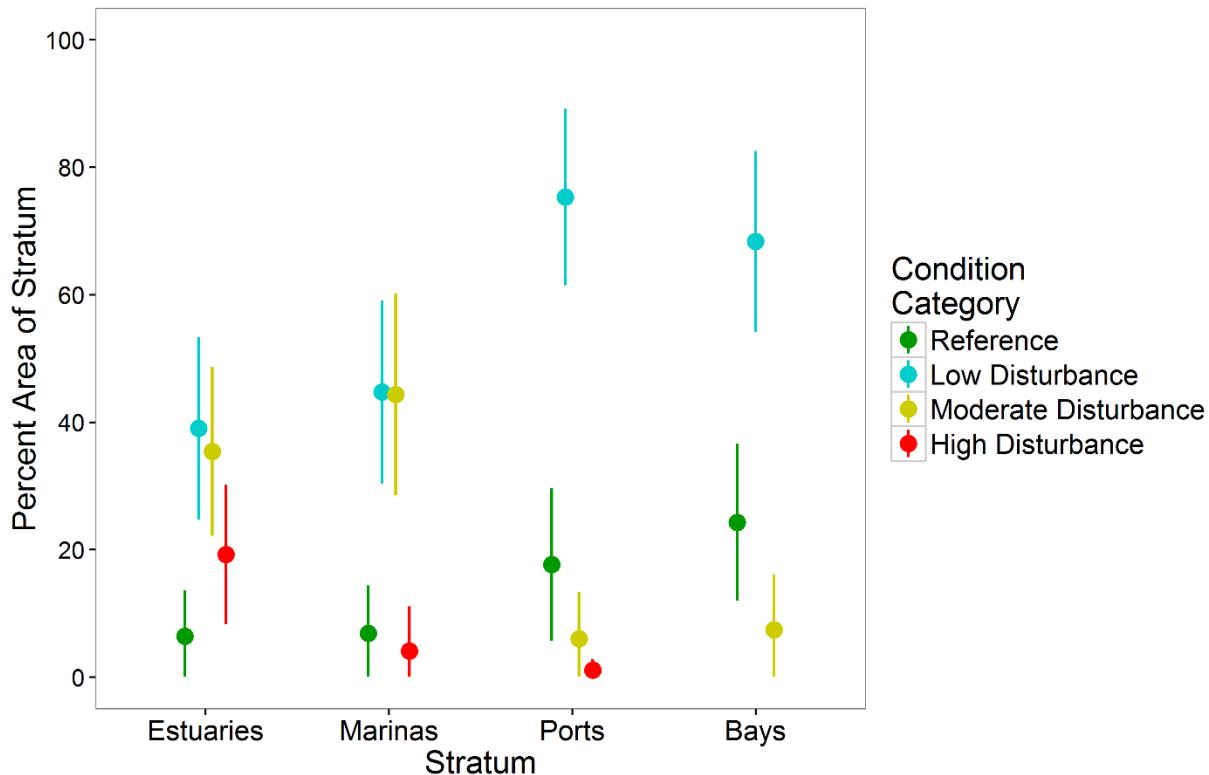


Figure 8. Percent area estimates (w/ 95% confidence intervals) of the four embayment strata in each of the four condition categories. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

Multi-survey temporal trend

Comparison of survey data from 1998-2013 show a relatively stable trend in the proportion of the Southern California Bight in each of the four condition categories from 1998 through 2008, but there was a noticeable change in the amount of reference to low disturbance condition areas in 2013 (Figure 9). From 1998 to 2008, nearly 90% of the assessable area was in reference condition and approximately 9% in low disturbance condition. However, in the 2013 survey there was a decrease in the amount of reference condition area to 78%, paired with an increase in the amount of low disturbance condition area to 21%. It is the cumulative area in reference and low disturbance that constitutes good condition. So, despite the relative change from reference to low disturbance in 2013, the areal extent of good condition has remained stable – around 99% of the total assessable area – between 1998 and 2013. Likewise, the cumulative amount of moderate and high disturbance condition area bight-wide has remained stable at $\leq 2\%$ from 1998 to 2013. Full details of the multi-survey areal extent estimates of habitat condition within each stratum can be found in Appendix C2.

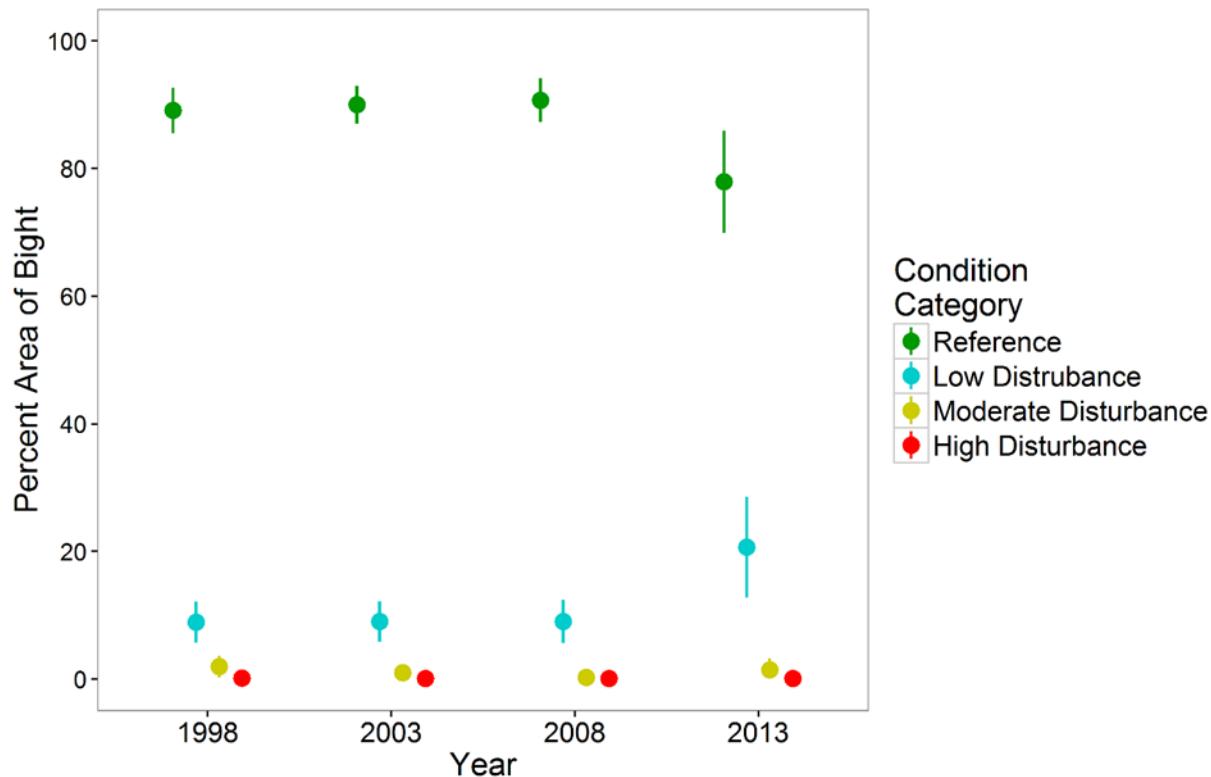


Figure 9. Percent area estimates (w/ 95% confidence intervals) for the entire Southern California Bight in each of four condition categories from the four regional surveys. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

When considering the individual offshore strata, the multi-survey trend was not uniform (Figure 10). Aside from small changes in 2003, the proportions of condition categories were relatively stable in the inner shelf stratum between 1998 and 2013. The mid shelf and outer shelf strata displayed a nominal change in condition (i.e., reduction in reference condition area paired with an increase in low disturbance area) from 2008 to 2013. The Channel Islands stratum, however, showed the largest change in condition between 2013 and previous surveys. From 1998 to 2008, nearly 100% of the area was in reference condition. In 2013 however, there was a 26.7% decrease in the amount of area in reference condition accompanied by an increase in low disturbance condition.

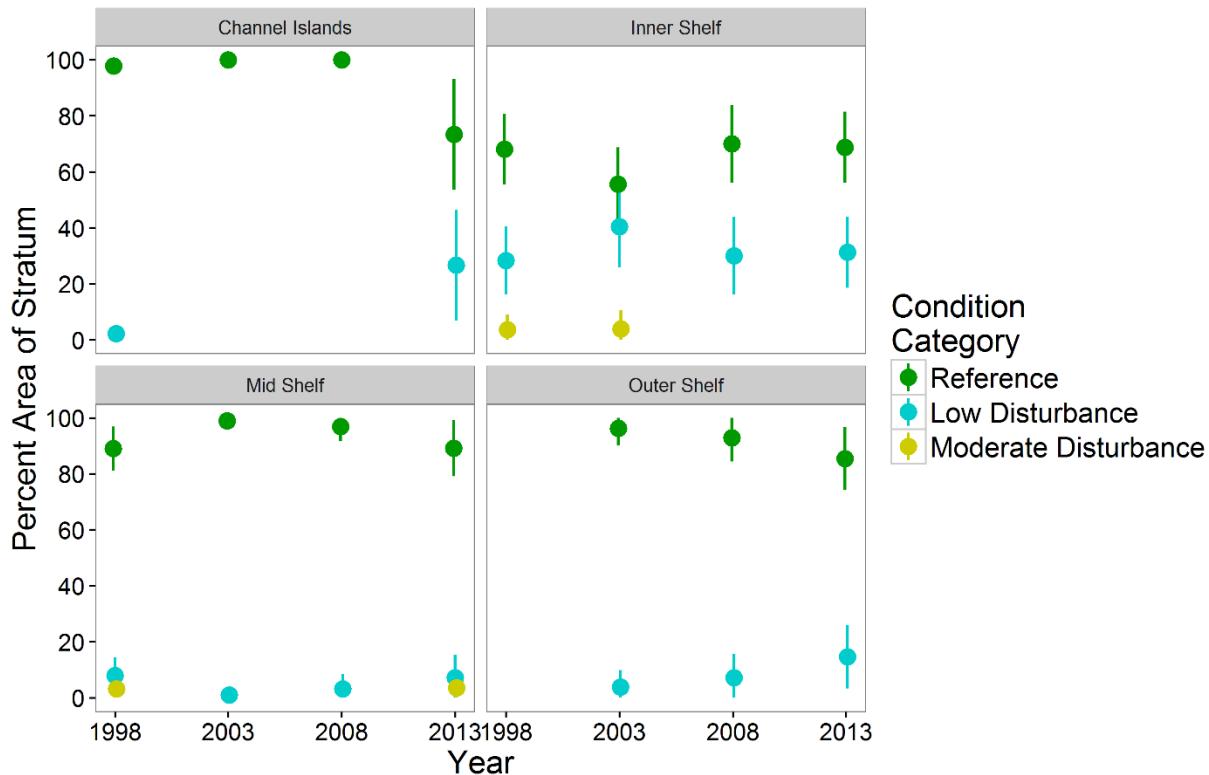


Figure 10. Percent area estimates (w/ 95% confidence intervals) in each of four condition categories for the four offshore strata sampled in the four regional surveys. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals. Note that no outer shelf samples were collected in 1998. Note no area in these strata was in the high disturbance category.

There was less consistency in the multi-survey trends in condition among the four embayment strata (Figure 11). The proportion of good to poor area was relatively stable in the port and estuaries strata, but the trend in marina and bay strata indicated an increase in the amount of area in poor condition from 1998 to 2013. The changes in the proportion of the four condition classes echoed the pattern of the good/poor classification. The proportion of condition categories was relatively stable across the surveys in the estuaries and port strata except for an increase in high disturbance condition area in the estuaries stratum from 2003 to 2008. There has been an ongoing trend in declining condition in the bay stratum since 2003, where the percent of area in reference condition has been steadily declining and the area in low disturbance condition has been increasing. Similarly, the percent of the marina stratum in reference condition has been declining since 2003, but the attendant increases have occurred in the amounts of both low disturbance and moderate disturbance condition.

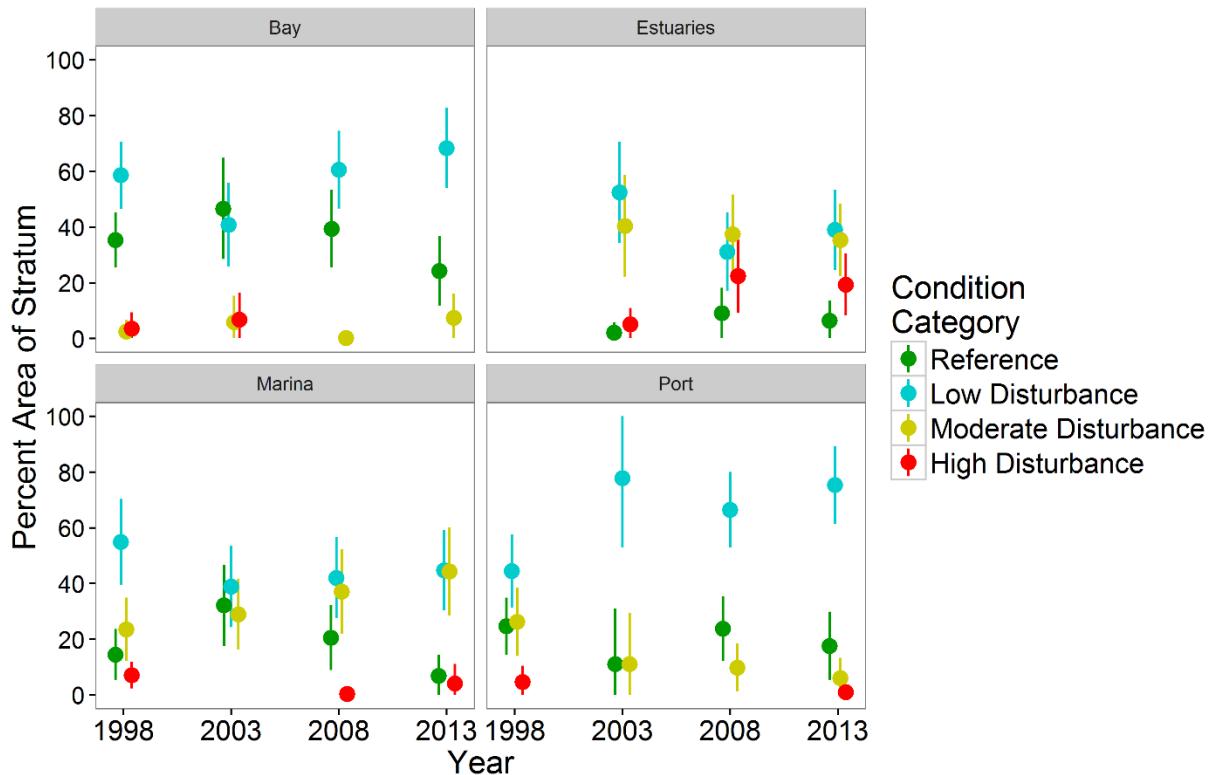


Figure 11. Percent area estimates (w/ 95% confidence intervals) in each of four condition categories for the four embayment strata sampled in the four regional surveys. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals. Note that no estuaries samples were collected in 1998.

Site revisit temporal trends

Based upon sites revisited from 1998 through 2013, 5% of the assessable portions of the Southern California Bight showed a trend towards improving condition (i.e., better BRI scores), 62.9% had a stable trend, and 32.2% had a trend of declining condition (Figure 12; Appendix C). Compared to the other offshore strata, the Channel Islands had the greatest amount of area (40%) in a declining trend and 0% in improving condition (Figure 13). Most of the area in the outer shelf and mid-shelf strata had a stable (57 - 67%) or declining (20 - 36%) trend in condition, with only 7 to 13% in a trend of improving condition (Figure 13). Conversely, 16.3 % of the area on inner shelf had an improving trend in condition, 83.7% was stable, and no portion of the stratum showed a declining trend in condition. None of the changes in condition scored within the offshore strata crossed the condition threshold from good to poor or poor to good (Appendix D).

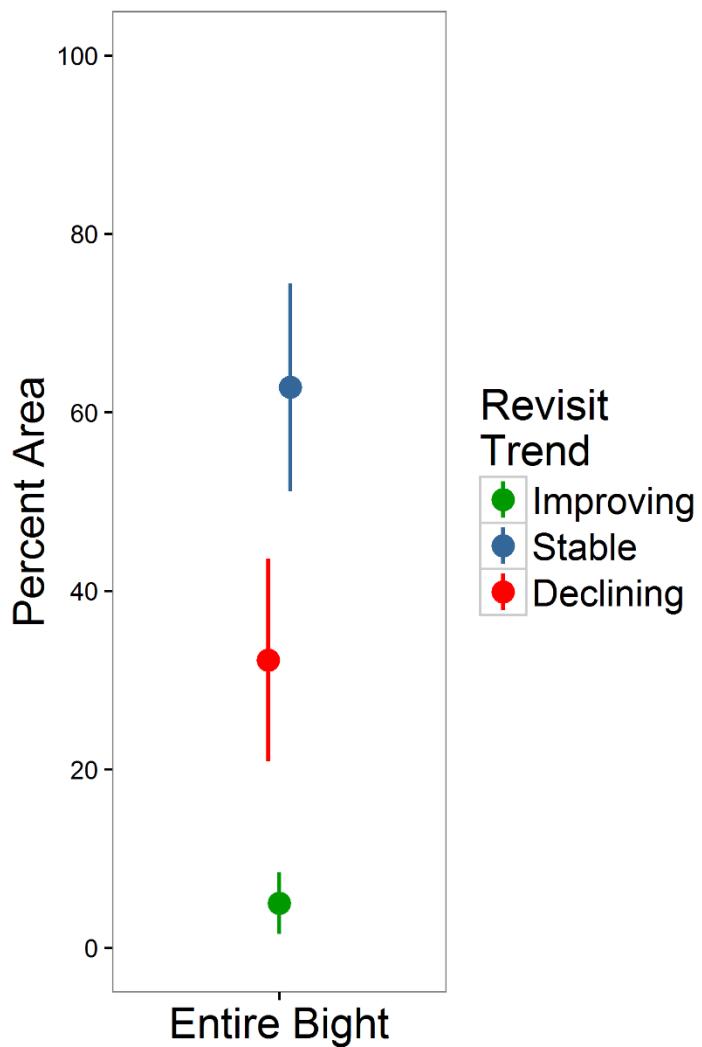


Figure 12. Percent area estimates (w/ 95% confidence intervals) of the assessable portions of the Southern California Bight with an improving, stable, or declining trend in condition score derived from revisited sites sampled from 1998 to 2013. The dots depict the local neighborhood-based confidence intervals.

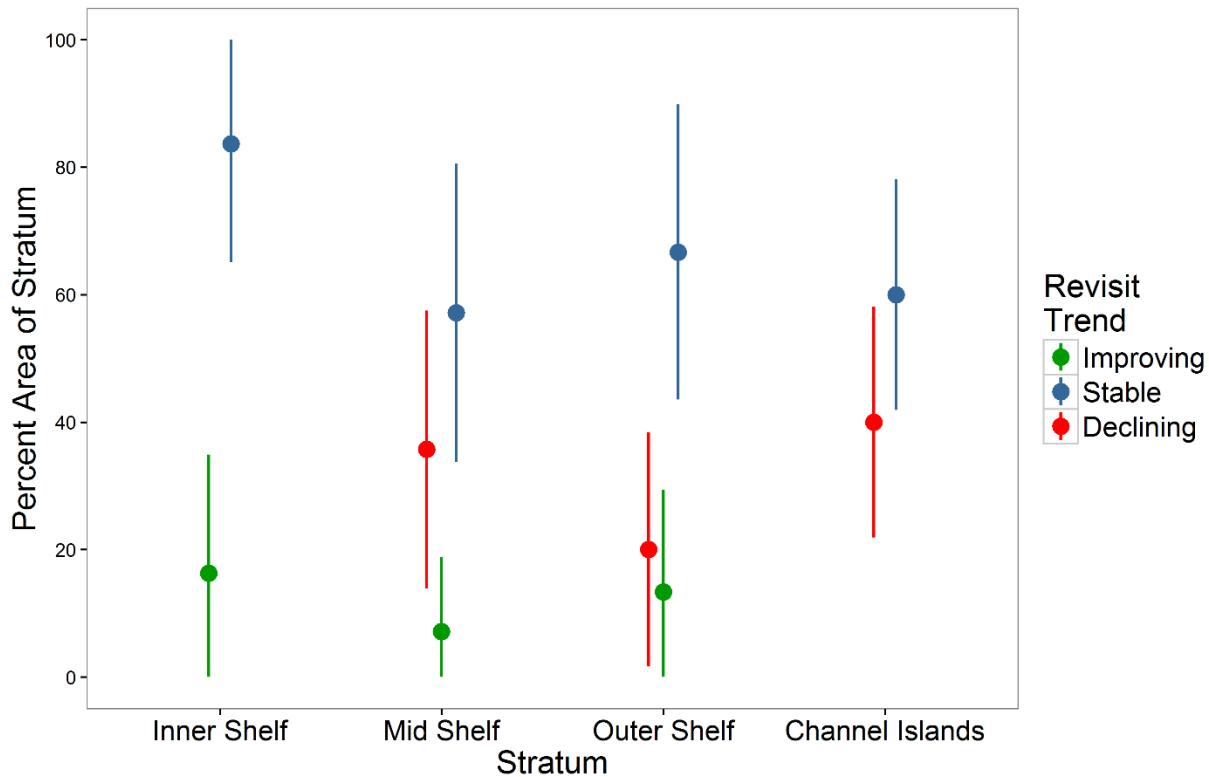


Figure 13. Percent area estimates (w/ 95% confidence intervals) of the four offshore strata with an improving, stable, or declining trend in condition score derived from revisited sites sampled from 1998 to 2013. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

Among the embayment strata, estuaries had the greatest amount of area that showed an improving trend in condition scores (24.2%), with a relatively small area showing a declining (3.9%) trend in condition scores (Figure 14). The marina stratum, in contrast, had the largest amount of area that showed a declining trend in condition score (32.9 %), with 53.9% showing a stable trend and 13.2% showing an improving trend. The port and bay strata had equivalent amounts of area (63 - 66%) showing a stable trend in condition score and 11-21% of their area in declining condition score. A number of the increasing trends in condition score within the embayment strata represented a change from poor to good condition (Appendix D). Similarly, some of the declining trends represented a change from good to poor condition. Full details of the temporal trend areal extent estimates using the revisit sites can be found in Appendix C3

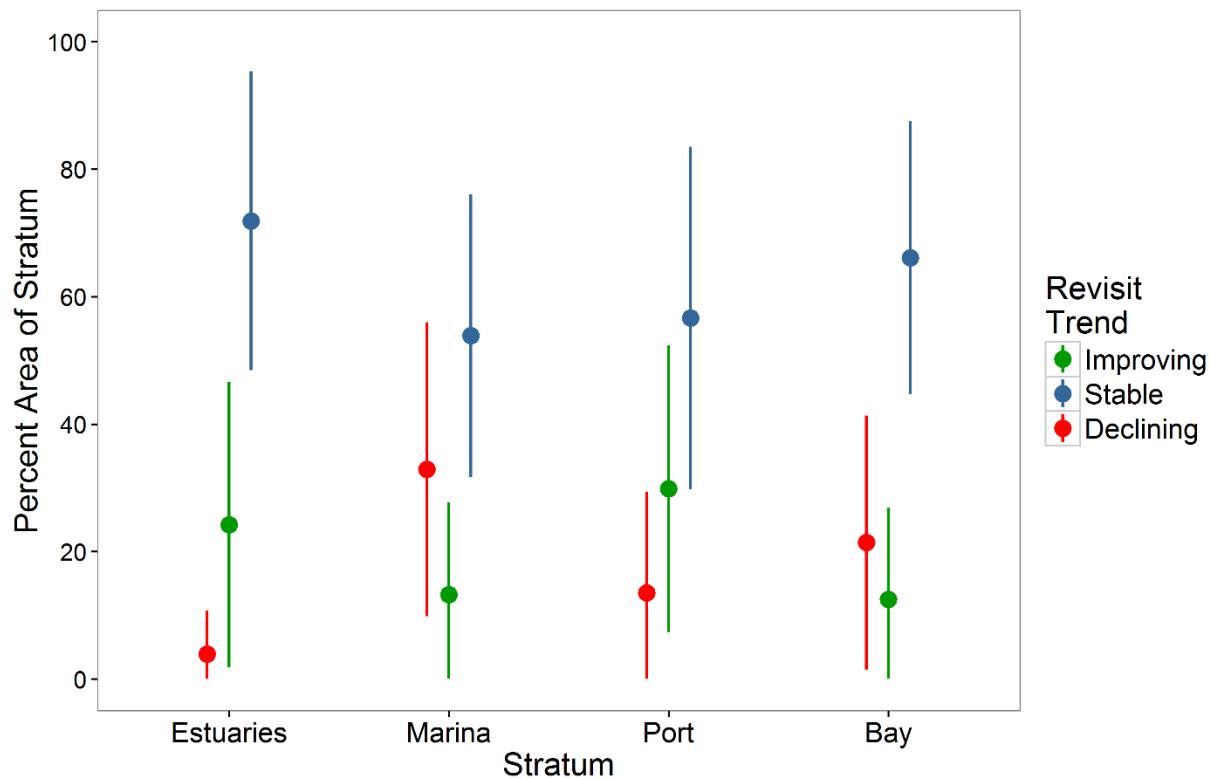


Figure 14. Percent area estimates (w/ 95% confidence intervals) of the four embayment strata with an improving, stable, or declining trend in condition score derived from revisited sites sampled from 1998 to 2013. The dots depict the estimate and the whiskers depict the local neighborhood-based confidence intervals.

V. DISCUSSION

Interpreted from the perspective of macrobenthic community composition, the assessable portions of the Southern California Bight were doing well in 2013. More than 98% of the assessable portions of the region were in good condition (77.9 % reference condition + 20.6% low disturbance condition) and less than 2% were in poor condition. However, conditions were not uniform across the region. As was observed in previous Bight surveys (Ranasinghe et al. 2007, Ranasinghe et al. 2012), the benthic habitat of the offshore strata (inner shelf, mid shelf, outer shelf, and Channel Islands) was in better condition than that in the embayment strata (estuaries, marinas, ports, and bays). The offshore strata were largely all in reference condition, with a relatively small area in low disturbance condition. The exception to this general pattern were the Channel Islands and inner shelf strata, which had proportionally smaller amounts of reference condition habitat than the other offshore strata and more than 20% of their area in low disturbance condition. In contrast to the offshore strata, the embayment strata were largely comprised of areas with low to moderate levels of disturbance and relatively small areas with reference conditions; of the embayment strata, the estuaries and marina strata were in the worst condition.

Though the assessable portions of the Southern California Bight were in good condition in 2013, there was evidence that conditions were different than observed during previous surveys. The notable reduction in the extent of reference condition habitat paired with an increase in the amount of low disturbance condition habitat suggested that, as a whole, conditions may have declined in 2013. These subtle temporal changes were not uniform across the region and upon closer inspection, the bight-wide pattern appears to have been most influenced by those in the Channel Islands, mid shelf, and marina strata. Specifically, these three strata showed marked reductions in the amounts of reference condition area compared to previous surveys.

The broader categorical trend towards poorer condition in 2013 was mirrored in the trends among the revisited sites. This new (to the SCB Monitoring Program), more sensitive analysis – looking for changes in the continuous macrobenthic-based assessment tool scores versus change in condition categories – indicated that more than 30% of the assessable portions of the region were in declining condition from 1998 – 2013 and that the Channel Islands stratum exhibited the largest change, with nearly 40 % of the area showing a declining trend in condition with no amount of improving conditions. In contrast to many of the other strata, most of the area in the estuaries stratum had a trend towards improving habitat condition. As the multi-survey condition trends showed little change in condition category across the stratum, the improving condition scores suggested that conditions have been improving over time, but have simply not yet reached the point of crossing the next category thresholds. If the trends in the estuaries strata continue in the same direction and magnitude, it may be reasonable to expect changes in condition category in future surveys.

For the most part, the spatial pattern of condition that was observed in Bight'13 – poorer condition in the estuaries and marinas moving towards better conditions in the offshore strata – was similar to observations from previous surveys (Ranasinghe et al. 2007; Ranasinghe et al. 2012). The general pattern that emerges is that more enclosed waterbodies, which are also more

intimately associated with anthropogenic activities, are in poorer condition than more open waterbodies further removed from anthropogenic activities, such as bays and the continental shelf. This pattern is not unique to Southern California and has been similarly observed in other systems (Holland et al. 2004; Llansó et al. 2015). Unfortunately, beyond the broad catch-all of “proximity to anthropogenic activities”, we cannot confidently identify the reasons for any instances of disturbed benthic communities observed across the region. In embayments, the CA SQO framework was designed to assess the impact of toxic compounds in the sediment on the benthic fauna, but it was not intended to assess the impacts from eutrophication, poor water quality (e.g., dissolved oxygen, salinity fluctuation), physical disturbance, or climate change. Much of the data produced by the Southern California Bight Monitoring Program could be used to begin identifying the pressures on the benthic fauna in different parts of the region. However, we lack a fully realized causal assessment framework (e.g., Suter et al. 2010; Norris et al. 2012) that can be applied in marine and estuarine settings (Newman et al. 2007; Davis and Kidd 2012). More detailed, site-specific studies are needed to identify the specific causes of impacted macrobenthic communities observed in Bight ’13.

Where the results from this survey did diverge from the inshore-offshore patterns of condition seen in previous surveys, was the change in conditions within the Channel Islands stratum. Though still in largely good condition, the 2013 survey results showed a shift from the reference condition category to the low disturbance condition category within the broader category of good. The trend at revisit sites within the stratum indicates that the conditions have been slowly declining since 2003, but the scores were still within the reference condition category. Only in 2013 did the trend in scores at some of the sites broach the threshold from reference to low disturbance. The cause of these changes were less obvious than in the embayment strata. The Channel Islands stratum is not as close to centers of human population as most parts of the embayment strata are (<http://california.us.censusviewer.com/client>), so a clear explanation for the downturn in both condition categories and condition scores within the stratum was not apparent. Understanding these subtle, yet consistent changes over the last 15 years should be considered for additional study to confirm if the trend in assessment scores is ongoing and if the sources of the change can be identified.

It is important to remember that, of the more than 16,000 km² surveyed by the Southern California Bight Regional Monitoring program, we can only assess the condition of approximately 37% of that area using the BRI and SQO BLOE indices. The macrobenthic-based assessment tools that have been validated for use in this region are limited by design or standard practice to waters 6 – 200m deep in continental shelf habitats and embayment waters greater than 27 psu. Though we may not be able to assess the condition of the remaining 63% of the Southern California Bight’s soft bottom habitat, Bight’13 and previous surveys have been able to collect and characterize the macrobenthic infauna that live in the canyons (2013 only) and continental slope habitats (2003 to 2013). These data, as well as the sediment chemistry and toxicity data collected by the Bight Regional Monitoring Program could be used to develop new assessment frameworks and macrobenthic-based indices. Such tools would provide insight into the condition of a much larger portion of the region than we are currently capable of.

With the completion of the 2013 survey, we now have an unprecedented spatial and temporal sampling of macrobenthic communities of the Southern California Bight. As an example, this work represents the first regional-scale, systematic survey of the region's submarine canyons since Hartman (1963). The community analyses show three relatively distinct assemblages of benthic macrofauna across the Southern California Bight. As would be expected (e.g., Holland 1985; Snelgrove et al. 1994; Gogina et al. 2010; Ranasinghe et al. 2010), water depth and sediment grain size are the primary environmental forcing factors influencing community structure among the different habitats of the region. Unfortunately, even a cursory inspection of the community characterization data from the survey quickly reveals that some of the most abundant and frequently observed taxa across many different strata – oligochaetes and amphipods of the genus *Photis* – are poorly understood taxonomically and were not identified to the species level. These taxa are challenging to identify and require a high degree of specialization, but leaving them at this less precise taxonomic level obscures potentially important, species-specific distributional information that may allow for better characterization and assessment of the region's benthic communities and habitats. As such, a detailed investigation of these and other problematic, yet potentially important taxa, should be incorporated in future surveys, as has been recommended in previous surveys (e.g., Ranasinghe et al. 2007; Ranasinghe et al. 2012).

The 2013 Bight survey is the fourth, full iteration of the program, which provided us with a powerful analytical framework to measure changes in condition of the region and its different habitats through time. Given the nested design of the survey where a subset of revisit sites were woven among “new” randomly selected sites, two complementary approaches to measuring temporal trends could be applied. The multi-survey analysis provides a higher level assessment (i.e., looking at condition categories) that is easier to quickly communicate, but is a less sensitive, less precise approach to measuring temporal trends as it does not have a way to separate spatial variability from temporal variability (Urquhart and Kincaid 1999). In contrast, the site revisit approach reduces the spatial variability by using the different surveys as temporal replicates for a series of fixed sites. Furthermore, by looking at the change in condition index scores instead of categories, more nuanced changes in condition may be detected.

Tempering the potential benefits of this new approach to analyzing temporal trends, was a trepidation about using only 3 data points across 15 years to model the trend. However, a simulation analysis using annual monitoring data collected during the same 15 year period by the large POTWs in the region (Appendix D9) illustrated that the trends characterized by assessments every 5 years were similar (65% identical classification) and concordant (i.e., no instances of contrasting classifications) to those from annual data. As such, this first attempt at analyzing the revisit sites appears to be a reasonable approach that will become more powerful with additional measurements from subsequent surveys.

The Channel Islands and estuaries strata presented a good example of the benefits of looking at the trend in scores instead of categories. The previous surveys, which only looked at change in condition category, indicated that there were no changes in condition within either stratum. However, in the present study where we looked at the change in scores, it became apparent that

conditions were steadily getting worse in the Channel Islands stratum (detailed above), while at the opposite end of the condition spectrum the estuaries stratum was improving. If only the condition category trends were looked at in the estuaries stratum – relatively stable, with a preponderance of moderate and high disturbance areas – the trend of improving condition scores through time would be missed. The changes “within category” indicate that at least some aspects of current management strategy of the region’s estuaries were leading to improvement in conditions. This trend should serve to buoy those continued efforts towards improving the condition of these water bodies and possibly identify what actions are most effective. Looking at changes in condition scores at revisit sites may serve as “early warning” / “early success” indicators of condition trends that may better inform adaptive management strategies but would be obscured by only looking at categorical changes between surveys. However, we can only calculate trends in revisit assessment tool scores across three surveys, which limits the power of trend detection. This power will increase as more surveys are conducted.

VI. CONCLUSIONS

- **Macrobenthic community composition indicates the Southern California Bight was largely in good condition during 2013**

Approximately 98.5% of the assessable portions of the region (i.e., continental shelf and embayment soft bottom habitat) were in good condition (78% reference and 20% low disturbance) and less than 2% in poor condition (moderate or high disturbance).

- **Not all habitats were in equally good condition**

The offshore strata were predominantly in reference condition, with some low disturbance areas. The embayment strata, in contrast, were composed of predominantly low and moderate disturbance areas with small amounts of reference and highly disturbed areas. Of the embayment strata, estuaries and marinas – the more enclosed strata – were in notably poor condition, with more than 50% of their area in moderate-to-highly disturbed condition.

- **Though still in good condition, there are indications that macrofaunal community of the Southern California Bight may be changing**

The amount of area in good condition regionally has remained high since 1998, roughly 98% of the entire Southern California Bight. However, categorical changes within the good condition have shifted from reference to low disturbance, particularly in marina, mid-continental shelf, and the Channel Islands strata. A second type of trends analysis, where the same site is revisited across multiple surveys, confirms the same pattern; more than 32% of the Bight had declining trend in condition scores from 1998 to 2013, and that the Channel Islands and marina strata had largest proportions of area with declining condition scores. In contrast, the revisit site analysis did indicate that more than 24% of the estuaries stratum had a trend towards improving condition.

VII. RECOMMENDATIONS

- **Develop condition assessment framework for deep water and low salinity habitats**

Within the Bight Monitoring Program, macrobenthic infauna are collected and characterized all across the region from nearly 1000m deep to the shallow coastal lagoons. However, the area for which there are calibrated and validated macrobenthic-based assessment tools only comprises 37% of the total area that is sampled. The largest areas where condition cannot be assessed are the deep water (i.e., > 200m deep) habitats of the outer shelf and continental slope. Bight'13 marks the third survey where macrobenthic and environmental data have been intensively collected from the deep water habitats. These data could be used to develop an assessment framework for deep water habitats, greatly expanding statements about the condition of the region's coastal ocean habitats. In contrast, low salinity (<27 psu) estuarine and lagoonal are ecologically important habitats with a high potential stressor exposure that have rarely been sampled as part of the Bight Program. Like the deep ocean, these areas have historically not been assed due to a lack of validated benthic assessment tools. However, these low salinity habitats should be included in future surveys as assessment tools such as the Multivariate AZTI Marine Biotic Index (M-AMBI) have been recently been adapted for the waters of Southern California.

- **Improve taxonomic infrastructure**

Create a taxonomic name change database – All of the macrobenthic-based condition assessment tools used in this study are taxonomically-based indices that rely on species names to function. However, as the science of taxonomy and natural history continues to evolve, so do the names of the macrobenthic fauna. In order to match new macrobenthic data to pre-existing assessment tools, *ad hoc* name conversions are made independently by different researchers each time they conduct an assessment. This process is time-consuming and can potentially introduce small errors in consistency between different projects and agencies. The Bight surveys in conjunction with SCAMIT would provide the logical venue and expertise for the creation of a database tool that can be accessed by all participating taxonomic labs in the region and is kept up to date annually with taxonomic name changes as they arise in the literature.

Facilitate special studies of problematic taxa – The science of taxonomy is continuously evolving. However, some of the most abundant fauna in the 2013 survey cannot be readily identified to the species level (e.g., oligochaeta, *Photis* sp, *Leptochelia dubia* Cmplx) due to lack of peer-reviewed local taxonomic keys and species descriptions. Special studies of similarly problematic taxa have been conducted as parts of previous Bight surveys and have led to improved precision in, and uniform application of, identifications across the region. Continuing such studies using traditional morphology and emerging molecular techniques has the potential to increase the knowledge of the region's macrofauna and increase the precision of the attendant benthic ecology studies.

- **Continue site revisits to assess temporal changes in condition**

Bight'13 is the second survey where a subset of sites was revisited; producing a data set of spatially weighted, temporal replicates stretching back 15 years. This analytical framework reduces the spatial variability associated with comparing strata-wide categorical measures of condition through time and allows for a more focused analysis of only the temporal variability at these sites. Furthermore, it allows for the more nuanced comparison of index scores, which can show changes not only between condition categories, but within them. This type of trend analysis may provide site-specific, “early warning” insight into changes in condition that would be missed using the traditional multi-survey approach to trends analysis. Continuing to revisit sites, or even expanding the scope of revisits within subsequent surveys, would increase the amount of data and subsequently increase the precision of temporal trend analysis within the Southern California Bight.

- **Develop a causal assessment framework for different Southern California Bight habitats**

We have statistically rigorous condition assessment frameworks for embayment and continental shelf habitats. However, when severely impacted conditions are detected (e.g., embayment strata), or departures from reference conditions over time are observed (e.g., the Channel Islands, mid shelf, and marina strata), the Bight Regional Monitoring Program is not designed to determine the cause(s) of the alterations to community composition. Developing a causal assessment framework will assist ecosystem managers in understanding why sites are in poor condition so they can take appropriate action. At a minimum, the causal assessment framework should be able to distinguish between oceanic-scale (e.g., ENSO-PDO, climate change, ocean acidification) and local-scale (e.g., eutrophication, contaminants, physical disturbance) impacts.

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APPENDIX A

Table A1. Part 1 (original ID information) of an example match/not-match worksheet used in the identification and enumeration QA/QC process

SITE	ORIGINAL SPECIES	ORIGINAL ABUNDANCE	ORIGINAL VOUCHER
Site A	<i>Eclysippe trilobata</i>	33	10
Site A			
Site A	<i>Paralysippe annectens</i>	16	8
Site A	<i>Enteropneusta</i>	7	
Site A			
Site A			
Site A	<i>Dodecamastus mariaensis</i>	1	1
Site A	<i>Maldane californiensis</i>	1	1
Site A	<i>Glycera branchiopoda</i>	1	1
Site A	<i>Lumbrineridae</i>	1	
Site A	<i>Glyphanostomum pallescens</i>	3	3
Site A	<i>Aphelochaeta</i> sp LA3	5	5
Site A	<i>Pista wui</i>	1	1
Site A	<i>Tritella tenuissima</i>	2	
Site A	<i>Brisaster</i> sp	1	
Site A	<i>Adontorhina lynnae</i>	6	6
Site A	<i>Chaetodermidae</i> sp LA1	1	1
Site A	<i>Falcidens hartmanae</i>	1	1
Site A	<i>Gastropteron pacificum</i>	1	1
Site A	<i>Cerebratulus marginatus</i>	1	1
TOTALS	17 TAXA	82	

Table A2 Part 2 (Re-ID information) of an example match/not-match worksheet used in the identification and enumeration QA/QC process

SITE	QC SPECIES	QC ABUNDANCE	Match / Not Match	Type	Lines Involved in Resolve	Discrep Class	Resolve code	Taxa change (Add / Remove)	Abund changes (+/-)	Completed by QC officer		
										Taxa Changed (Note with X)	# INDs mis-ID'd (counts change)	# INDs mis-counted
Site A	<i>Eclysippe trilobata</i>	22	Not Match	Count	5	L	12					
Site A	<i>Mooresamytha bioculata</i>	11	Not Match	ID	6,7	E,J,P	4,5,10					
Site A			Not Match	ID	6,7	E,J,P	4,5,10		2			
Site A	<i>Enteropneusta</i>	2	Not Match	Count	8, 9, 10	J	9		-5			
Site A	<i>Saccoglossus</i> sp	1	Not Match	ID	8, 9, 10	J	9	ADD	1			
Site A	<i>Stereobalanus</i> sp	4	Not Match	ID	8, 9, 10	J	9	ADD	4			
Site A			Match									
Site A			Match									
Site A			Match									
Site A	<i>Lumbrineridae</i>	1	Match									
Site A			Match									
Site A			Match									
Site A			Match									
Site A	<i>Tritella tenuissima</i>	2	Match									
Site A	<i>Brisaster</i> sp	1	Match									
Site A			Match									
Site A			Match									
Site A			Match									
Site A			Match									
TOTALS								2	2	0	0	0

Table A3 Part 3 (Resolved ID information) of an example match/not-match worksheet used in the identification and enumeration QA/QC process

SITE	RESOLVED SPECIES	RESOLVED	Resolution Comments
Site A	<i>Eclysippe trilobata</i>	33	
Site A			
Site A	<i>Paralysippe annectens</i>	18	primary data entry error
Site A	<i>Enteropneusta</i>	2	
Site A	<i>Saccoglossus</i> sp	1	
Site A	<i>Stereobalanus</i> sp	4	
Site A	<i>Dodecamastus mariaensis</i>	1	
Site A	<i>Maldane californiensis</i>	1	
Site A	<i>Glycera branchiopoda</i>	1	
Site A	<i>Lumbrineridae</i>	1	
Site A	<i>Glyphanostomum pallescens</i>	3	
Site A	<i>Aphelochaeta</i> sp LA3	5	
Site A	<i>Pista wui</i>	1	
Site A	<i>Tritella tenuissima</i>	2	
Site A	<i>Brisaster</i> sp	1	
Site A	<i>Adontorhina lynnae</i>	6	
Site A	<i>Chaetodermidae</i> sp LA1	1	
Site A	<i>Falcidens hartmanae</i>	1	
Site A	<i>Gastropteron pacificum</i>	1	
Site A	<i>Cerebratulus marginatus</i>	1	
TOTALS	19 TAXA	84	

APPENDIX B

Table B1. Macrobenthic community summary for the Estuaries stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Grandidierella japonica</i>	ARTHROPODA	Malacostraca	Aoridae	2,744	11.79	59.1
Oligochaeta	ANNELIDA	Oligochaeta		2,100	9.02	47.7
<i>Exogone ligurei</i>	ANNELIDA	Polychaeta	Syllidae	1,806	7.76	31.8
<i>Monocorophium acherusicum</i>	ARTHROPODA	Malacostraca	Corophiidae	1,310	5.63	18.2
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	1,038	4.46	43.2
<i>Streblospio benedicti</i>	ANNELIDA	Polychaeta	Spionidae	1,006	4.32	38.6
<i>Fabricinuda limnicola</i>	ANNELIDA	Polychaeta	Fabriiidiae	856	3.68	9.1
Spirorbinae	Annelida	Polychaeta	Serpulidae	504	2.17	6.8
<i>Paracerceis sculpta</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	415	1.78	11.4
<i>Actiniaria</i> sp 1	CNIDARIA	Anthozoa		413	1.77	13.6
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	353	1.52	9.1
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	353	1.52	45.5
<i>Bulla gouldiana</i>	MOLLUSCA	Gastropoda	Bullidae	349	1.50	29.5
<i>Neanthes acuminata</i> Cmplx	ANNELIDA	Polychaeta	Nereididae	343	1.47	38.6
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	339	1.46	43.2
<i>Monocorophium insidiosum</i>	ARTHROPODA	Malacostraca	Corophiidae	313	1.35	13.6
<i>Pseudopolydora paucibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	308	1.32	31.8
<i>Musculista senhousia</i>	MOLLUSCA	Bivalvia	Mytilidae	302	1.30	36.4
<i>Barleeia subtenuis</i>	MOLLUSCA	Gastropoda	Barleeiidae	300	1.29	4.5
<i>Haminoea vesicula</i>	MOLLUSCA	Gastropoda	Haminoeidae	288	1.24	18.2
<i>Acteocina carinata</i>	MOLLUSCA	Gastropoda	Cylichnidae	281	1.21	40.9
<i>Scoloplos acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	276	1.19	13.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Theora lubrica</i>	MOLLUSCA	Bivalvia	Semelidae	271	1.16	22.7
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	242	1.04	15.9
<i>Phoronis</i> sp	PHORONA		Phoronidae	240	1.03	38.6
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	227	0.98	18.2
<i>Monocorophium</i> sp	ARTHROPODA	Malacostraca	Corophiidae	225	0.97	18.2
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheiliidae	224	0.96	27.3
<i>Polydora nuchalis</i>	ANNELIDA	Polychaeta	Spionidae	216	0.93	15.9
<i>Euchone limnicola</i>	ANNELIDA	Polychaeta	Sabellidae	202	0.87	15.9
<i>Tagelus affinis</i>	MOLLUSCA	Bivalvia	Solecurtidae	201	0.86	45.5
<i>Pseudofabriciola californica</i>	ANNELIDA	Polychaeta	Fabriciidae	169	0.73	9.1
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	160	0.69	34.1
<i>Mayerella acanthopoda</i>	ARTHROPODA	Malacostraca	Caprellidae	150	0.64	34.1
<i>Laevicardium substriatum</i>	MOLLUSCA	Bivalvia	Cardiidae	149	0.64	34.1
<i>Scoletoma</i> sp C	ANNELIDA	Polychaeta	Lumbrineridae	148	0.64	34.1
Ophiuridae	ECHINODERMATA	Ophiuroidea	Ophiuridae	145	0.62	2.3
<i>Protohyale</i> sp	ARTHROPODA	Malacostraca	Hyalidae	142	0.61	13.6
<i>Zeuxo normani</i>	ARTHROPODA	Malacostraca	Tanaidae	130	0.56	15.9
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	116	0.50	22.7
<i>Edwardsia californica</i>	CNIDARIA	Anthozoa	Edwardsiidae	105	0.45	11.4
<i>Barleeia haliotiphila</i>	MOLLUSCA	Gastropoda	Barleeiidae	101	0.43	18.2
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	101	0.43	9.1
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	101	0.43	2.3
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	94	0.40	15.9
<i>Podocerus cristatus</i>	ARTHROPODA	Malacostraca	Podoceridae	93	0.40	9.1
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	91	0.39	15.9
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	90	0.39	15.9
<i>Scyphoprocus oculatus</i>	ANNELIDA	Polychaeta	Capitellidae	89	0.38	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Elasmopus bampo</i>	ARTHROPODA	Malacostraca	Maeridae	87	0.37	9.1
<i>Paranthura japonica</i> Cmplx	Arthropoda	Malacostraca	Paranthuridae	84	0.36	11.4
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	82	0.35	34.1
<i>Phtisica marina</i>	Arthropoda	Malacostraca	Caprellidae	82	0.35	2.3
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	80	0.34	4.5
<i>Tryonia imitator</i>	MOLLUSCA	Gastropoda	Hydrobiidae	76	0.33	11.4
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	73	0.31	13.6
<i>Goniada littorea</i>	ANNELIDA	Polychaeta	Goniadidae	71	0.31	18.2
Serpulidae	ANNELIDA	Polychaeta	Serpulidae	70	0.30	2.3
<i>Leukoma staminea</i>	MOLLUSCA	Bivalvia	Veneridae	70	0.30	13.6
<i>Diplocirrus</i> sp SD1	ANNELIDA	Polychaeta	Flabelligeridae	69	0.30	9.1
<i>Podocerus fulanus</i>	ARTHROPODA	Malacostraca	Podoceridae	67	0.29	15.9
<i>Prionospio (Prionospio) heterobranchia</i>	ANNELIDA	Polychaeta	Spionidae	62	0.27	38.6
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	58	0.25	6.8
<i>Notomastus tenuis</i>	ANNELIDA	Polychaeta	Capitellidae	56	0.24	20.5
Podocopida	ARTHROPODA	Ostracoda		53	0.23	4.5
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	48	0.21	20.5
<i>Tellina meropsis</i>	MOLLUSCA	Bivalvia	Tellinidae	45	0.19	9.1
<i>Exogone</i> sp A	ANNELIDA	Polychaeta	Syllidae	42	0.18	6.8
Actiniaria	CNIDARIA	Anthozoa		42	0.18	20.5
Lineidae	NEMERTEA	Anopla	Lineidae	40	0.17	34.1
<i>Crepidatella lingulata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	40	0.17	9.1
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	39	0.17	18.2
<i>Molgula</i> sp SD1	CHORDATA	Asciidiacea	Molgulidae	39	0.17	2.3
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	35	0.15	6.8
<i>Barleeia</i> sp	MOLLUSCA	Gastropoda	Barleeiidae	35	0.15	2.3
<i>Alia carinata</i>	MOLLUSCA	Gastropoda	Columbellidae	34	0.15	4.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Acteocina inculta</i>	MOLLUSCA	Gastropoda	Cylichnidae	32	0.14	9.1
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	31	0.13	36.4
<i>Notomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	30	0.13	2.3
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	29	0.12	15.9
<i>Venerupis philippinarum</i>	MOLLUSCA	Bivalvia	Veneridae	29	0.12	15.9
<i>Nasageneia quinsana</i>	ARTHROPODA	Malacostraca	Eusiridae	29	0.12	6.8
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	29	0.12	2.3
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	29	0.12	15.9
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	29	0.12	2.3
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	28	0.12	18.2
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	28	0.12	27.3
<i>Zygonemertes virescens</i>	NEMERTEA	Enopla	Amphiporidae	28	0.12	11.4
<i>Cryptomya californica</i>	MOLLUSCA	Bivalvia	Myidae	28	0.12	9.1
<i>Heteronemertea</i>	NEMERTEA	Anopla		27	0.12	13.6
<i>Sphaeromatidae</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	25	0.11	6.8
<i>Sphaeromatidae</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	25	0.11	6.8
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	25	0.11	13.6
<i>Brachyura</i>	ARTHROPODA	Malacostraca		25	0.11	13.6
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	24	0.10	20.5
<i>Piromis capulata</i>	ANNELIDA	Polychaeta	Flabelligeridae	21	0.09	9.1
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	19	0.08	6.8
<i>Lumbrineris latreilli</i>	ANNELIDA	Polychaeta	Lumbrineridae	19	0.08	4.5
<i>Tagelus</i> sp	MOLLUSCA	Bivalvia	Solecurtidae	19	0.08	11.4
<i>Paramicrodeutopus schmitti</i>	ARTHROPODA	Malacostraca	Aoridae	18	0.08	6.8
<i>Gammaridea</i>	ARTHROPODA	Malacostraca		18	0.08	9.1
<i>Amphipholis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	17	0.07	2.3
<i>Eochelidium</i> sp A	ARTHROPODA	Malacostraca	Oedicerotidae	17	0.07	13.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	16	0.07	18.2
Edwardsiidae	CNIDARIA	Anthozoa	Edwardsiidae	15	0.06	11.4
<i>Doto</i> sp	MOLLUSCA	Gastropoda	Dotoidae	15	0.06	2.3
Palaeonemertea	NEMERTEA	Anopla		15	0.06	13.6
<i>Scoletoma</i> sp A	ANNELIDA	Polychaeta	Lumbrineridae	15	0.06	4.5
<i>Protodorvillea gracilis</i>	ANNELIDA	Polychaeta	Dorvilleidae	14	0.06	2.3
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	12	0.05	4.5
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	12	0.05	6.8
<i>Euclymeninæ</i> sp A	ANNELIDA	Polychaeta	Maldanidae	12	0.05	4.5
<i>Ampithoe</i> sp	ARTHROPODA	Malacostraca	Ampithoidae	12	0.05	2.3
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	11	0.05	9.1
<i>Nebalia pugettensis</i> Cmplx	ARTHROPODA	Malacostraca	Nebaliidae	10	0.04	9.1
<i>Arcularia tiarula</i>	MOLLUSCA	Gastropoda	Nassariidae	10	0.04	11.4
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	10	0.04	15.9
<i>Anoplodactylus erectus</i>	ARTHROPODA	Pycnogonida	Phoxichilidiidae	10	0.04	13.6
<i>Polydora cornuta</i>	ANNELIDA	Polychaeta	Spionidae	10	0.04	6.8
<i>Scolelepis (Parascolelepis) texana</i>	ANNELIDA	Polychaeta	Spionidae	10	0.04	13.6
Aoridae	ARTHROPODA	Malacostraca	Aoridae	9	0.04	2.3
<i>Hemipodia borealis</i>	ANNELIDA	Polychaeta	Glyceridae	9	0.04	13.6
<i>Cauilleriella lajolla</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.04	2.3
<i>Hartmanodes</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	9	0.04	4.5
<i>Pontogeneia rostrata</i>	ARTHROPODA	Malacostraca	Eusiridae	8	0.03	2.3
<i>Siriella pacifica</i>	ARTHROPODA	Malacostraca	Mysidae	8	0.03	2.3
<i>Psammotreta obesa</i>	MOLLUSCA	Bivalvia	Tellinidae	8	0.03	13.6
<i>Notomastus lineatus</i>	ANNELIDA	Polychaeta	Capitellidae	8	0.03	2.3
<i>Acteocina culicella</i>	MOLLUSCA	Gastropoda	Cylichnidae	8	0.03	4.5
<i>Acuminodeutopus heteruropus</i>	ARTHROPODA	Malacostraca	Unciolidae	8	0.03	9.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Maera similis</i>	ARTHROPODA	Malacostraca	Melitidae	8	0.03	2.3
<i>Excirolana chiltoni</i>	ARTHROPODA	Malacostraca	Cirolanidae	8	0.03	6.8
<i>Boccardiella hamata</i>	ANNELIDA	Polychaeta	Spionidae	7	0.03	6.8
<i>Stylochus exiguum</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	7	0.03	9.1
<i>Tagelus californianus</i>	MOLLUSCA	Bivalvia	Solecurtidae	7	0.03	4.5
<i>Bemlos concavus</i>	ARTHROPODA	Malacostraca	Aoridae	7	0.03	2.3
<i>Astyris aurantiaca</i>	MOLLUSCA	Gastropoda	Columbellidae	7	0.03	6.8
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	7	0.03	2.3
<i>Pachygrapsus crassipes</i>	ARTHROPODA	Malacostraca	Grapsidae	7	0.03	4.5
<i>Macoma nasuta</i>	MOLLUSCA	Bivalvia	Tellinidae	6	0.03	11.4
<i>Malacoplax californiensis</i>	ARTHROPODA	Malacostraca	Panopeidae	6	0.03	6.8
<i>Eulithidium pulloides</i>	MOLLUSCA	Gastropoda	Phasianellidae	6	0.03	2.3
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	6	0.03	6.8
<i>Microcosmus squamiger</i>	CHORDATA	Asciidiacea	Pyuridae	6	0.03	2.3
<i>Ampithoe valida</i>	ARTHROPODA	Malacostraca	Ampithoidae	6	0.03	2.3
<i>Streblosoma sp</i>	ANNELIDA	Polychaeta	Terebellidae	6	0.03	2.3
<i>Cerithidea californica</i>	MOLLUSCA	Gastropoda	Potamididae	6	0.03	6.8
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	6	0.03	4.5
<i>Argopecten ventricosus</i>	MOLLUSCA	Bivalvia	Pectinidae	6	0.03	6.8
<i>Scleroplapx granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	6	0.03	4.5
<i>Nuttallia nuttallii</i>	MOLLUSCA	Bivalvia	Psammobiidae	6	0.03	4.5
<i>Bemlos sp</i>	ARTHROPODA	Malacostraca	Aoridae	5	0.02	2.3
<i>Tubulanus sp SD1</i>	NEMERTEA	Anopla	Tubulanidae	5	0.02	9.1
<i>Ampithoe lacertosa</i>	ARTHROPODA	Malacostraca	Ampithoidae	5	0.02	2.3
<i>Ambidexter panamensis</i>	ARTHROPODA	Malacostraca	Processidae	5	0.02	6.8
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephytidae	5	0.02	6.8
<i>Scoletoma sp B</i>	ANNELIDA	Polychaeta	Lumbrineridae	5	0.02	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Diptera	ARTHROPODA			5	0.02	2.3
<i>Granulina margaritula</i>	MOLLUSCA	Gastropoda	Cysticidae	5	0.02	2.3
Mactridae	MOLLUSCA	Bivalvia	Mactridae	5	0.02	2.3
<i>Postasterope barnesi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	5	0.02	4.5
Cancridae	ARTHROPODA	Malacostraca	Cancridae	5	0.02	4.5
<i>Parasabella</i> sp	ANNELIDA	Polychaeta	Sabellidae	4	0.02	2.3
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	4	0.02	6.8
<i>Crepidula onyx</i>	MOLLUSCA	Gastropoda	Calyptaeidae	4	0.02	2.3
<i>Spiochaetopterus costarum</i>						
Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	4	0.02	6.8
<i>Scolanthus scamiti</i>	CNIDARIA	Anthozoa	Edwardsiidae	4	0.02	4.5
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	4	0.02	4.5
<i>Aphelochaeta</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	4	0.02	2.3
Veneridae	MOLLUSCA	Bivalvia	Veneridae	4	0.02	4.5
<i>Alienacanthomysis macropsis</i>	ARTHROPODA	Malacostraca	Mysidae	4	0.02	2.3
<i>Heteromysis odontops</i>	ARTHROPODA	Malacostraca	Mysidae	4	0.02	6.8
<i>Caprella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	4	0.02	6.8
<i>Cirriformia</i> sp	ANNELIDA	Polychaeta	Cirratulidae	4	0.02	2.3
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	4	0.02	6.8
<i>Hartmanodes hartmae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.02	6.8
Panopeidae	ARTHROPODA	Malacostraca	Panopeidae	4	0.02	4.5
<i>Ianiropsis analoga</i>	ARTHROPODA	Malacostraca	Janiridae	4	0.02	2.3
<i>Brania heterocirra</i>	ANNELIDA	Polychaeta	Syllidae	4	0.02	4.5
<i>Notomastus magnus</i>	ANNELIDA	Polychaeta	Capitellidae	3	0.01	4.5
<i>Myrianida pachycera</i>	ANNELIDA	Polychaeta	Syllidae	3	0.01	2.3
Epialtidae	ARTHROPODA	Malacostraca	Epialtidae	3	0.01	2.3
<i>Spio filicornis</i>	ANNELIDA	Polychaeta	Spionidae	3	0.01	2.3
<i>Pagurus</i> sp	ARTHROPODA	Malacostraca	Paguridae	3	0.01	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	3	0.01	4.5
<i>Cryptonemertes actinophila</i>	NEMERTEA	Enopla	Emplectonematidae	3	0.01	2.3
<i>Pyromaia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	3	0.01	2.3
<i>Corymorphida palma</i>	CNIDARIA	Hydrozoa	Corymorphidae	3	0.01	2.3
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	3	0.01	4.5
<i>Schmittius politus</i>	ARTHROPODA	Malacostraca	Squillidae	3	0.01	6.8
Corophioidea	ARTHROPODA	Malacostraca		3	0.01	4.5
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.01	4.5
<i>Calyptroea fastigiata</i>	MOLLUSCA	Gastropoda	Calyptrotaeidae	3	0.01	2.3
<i>Apionsoma misakianum</i>	SIPUNCULA	Phascolosomatidea	Phascolosomatidae	3	0.01	4.5
<i>Alpheus californiensis</i>	ARTHROPODA	Malacostraca	Alpheidae	3	0.01	4.5
Hoploneurtea	NEMERTEA	Enopla		3	0.01	4.5
<i>Koinostylochus burchami</i>	PLATYHELMINTHES	Turbellaria	Callioplanidae	3	0.01	4.5
<i>Polydora pygidialis</i>	ANNELIDA	Polychaeta	Spionidae	3	0.01	2.3
Tanaidae	ARTHROPODA	Malacostraca	Tanaidae	3	0.01	2.3
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.01	6.8
<i>Halosydna johnsoni</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.01	4.5
<i>Gari fucata</i>	MOLLUSCA	Bivalvia	Psammobiidae	3	0.01	2.3
<i>Brania californiensis</i>	ANNELIDA	Polychaeta	Syllidae	3	0.01	2.3
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	2	0.01	2.3
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	2	0.01	2.3
<i>Paradialychnone ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	4.5
<i>Thracia trapezoides</i>	MOLLUSCA	Bivalvia	Thraciidae	2	0.01	4.5
<i>Parapriionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	4.5
<i>Parviplana hymani</i>	PLATYHELMINTHES	Turbellaria	Leptoplanidae	2	0.01	4.5
<i>Phoronopsis</i> sp	PHORONA		Phoronidae	2	0.01	2.3
<i>Phyllocoete hartmanae</i>	ANNELIDA	Polychaeta	Phyllocoetidae	2	0.01	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	2	0.01	4.5
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	2.3
Polycladida	PLATYHELMINTHES	Turbellaria		2	0.01	4.5
<i>Solen rostriformis</i>	MOLLUSCA	Bivalvia	Solenidae	2	0.01	2.3
<i>Pseudotanais makrothrix</i>	ARTHROPODA	Malacostraca	Pseudotanaidae	2	0.01	4.5
<i>Rudilemboides</i> sp A	ARTHROPODA	Malacostraca	Unciolidae	2	0.01	2.3
<i>Syllis gracilis</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	2	0.01	4.5
<i>Chione californiensis</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.01	2.3
<i>Ampithoe longimana</i>	ARTHROPODA	Malacostraca	Ampithoidae	2	0.01	2.3
<i>Deltamysis holmquistae</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	4.5
<i>Conus californicus</i>	MOLLUSCA	Gastropoda	Conidae	2	0.01	2.3
<i>Magelona pitelkai</i>	ANNELIDA	Polychaeta	Magelonidae	2	0.01	2.3
Gastropoda	MOLLUSCA	Gastropoda		2	0.01	4.5
<i>Dialychnone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	2.3
<i>Macoma indentata</i>	MOLLUSCA	Bivalvia	Tellinidae	2	0.01	2.3
<i>Corymorphia bigelowi</i>	CNIDARIA	Hydrozoa	Corymorphidae	2	0.01	4.5
<i>Lirobittium</i> sp	MOLLUSCA	Gastropoda	Cerithiidae	2	0.01	2.3
<i>Baseodiscus delineata</i>	NEMERTEA	Anopla	Valenciniidae	2	0.01	2.3
<i>Eupolymnia heterobranchia</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.01	2.3
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		2	0.01	2.3
<i>Caecum californicum</i>	MOLLUSCA	Gastropoda	Caecidae	2	0.01	4.5
Calyptaeidae	MOLLUSCA	Gastropoda	Calyptaeidae	2	0.01	2.3
<i>Geukensia demissa</i>	MOLLUSCA	Bivalvia	Mytilidae	2	0.01	2.3
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	2.3
Enopla	NEMERTEA	Enopla		2	0.01	2.3
<i>Eteone pilotus</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	2.3
<i>Marphysa</i> sp B	ANNELIDA	Polychaeta	Eunicidae	2	0.01	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.01	4.5
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.01	2.3
<i>Eteone dilatae</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	2.3
<i>Enteropneusta</i>	CHORDATA	Enteropneusta		2	0.01	4.5
<i>Naineris uncinata</i>	ANNELIDA	Polychaeta	Orbiniidae	2	0.01	2.3
<i>Naineris dendritica</i>	ANNELIDA	Polychaeta	Orbiniidae	2	0.01	2.3
Flabelligeridae	ANNELIDA	Polychaeta	Flabelligeridae	2	0.01	4.5
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	2.3
<i>Amphiodia psara</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.01	2.3
<i>Epitonium sawinae</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.00	2.3
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	1	0.00	2.3
<i>Carinomella lactea</i>	NEMERTEA	Anopla	Tubulanidae	1	0.00	2.3
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	1	0.00	2.3
Ceriantharia	CNIDARIA	Anthozoa		1	0.00	2.3
<i>Chaetozone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Dipolydora</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Cirriformia spirabrancha</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.00	2.3
Tanaidacea	ARTHROPODA	Malacostraca		1	0.00	2.3
<i>Corymorphida</i> sp	CNIDARIA	Hydrozoa	Corymorphidae	1	0.00	2.3
<i>Sphenia fragilis</i>	MOLLUSCA	Bivalvia	Myidae	1	0.00	2.3
<i>Aoroides exilis</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.00	2.3
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	1	0.00	2.3
<i>Zeuxo</i> sp	ARTHROPODA	Malacostraca	Tanaidae	1	0.00	2.3
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.00	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Zaolitus actius</i>	CNIDARIA	Anthozoa	Isanthidae	1	0.00	2.3
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.00	2.3
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.00	2.3
<i>Volvarina taeniolata</i>	MOLLUSCA	Gastropoda	Marginellidae	1	0.00	2.3
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.00	2.3
<i>Uromunna ubiquita</i>	ARTHROPODA	Malacostraca	Munnidae	1	0.00	2.3
<i>Tubulanus sp A</i>	NEMERTEA	Anopla	Tubulanidae	1	0.00	2.3
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	1	0.00	2.3
Ampithoidae	ARTHROPODA	Malacostraca	Ampithoidae	1	0.00	2.3
Bivalvia	MOLLUSCA	Bivalvia		1	0.00	2.3
<i>Timarete luxuriosa</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Styela plicata</i>	CHORDATA	Asciidae	Styelidae	1	0.00	2.3
<i>Aoroides spinosa</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.00	2.3
<i>Tetrastemma sexlineatum</i>	NEMERTEA	Enopla	Tetrastemmatidae	1	0.00	2.3
Tergipedidae	MOLLUSCA	Gastropoda	Tergipedidae	1	0.00	2.3
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.00	2.3
<i>Aphelochaeta sp HYP10</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Apopriionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.00	2.3
<i>Bipalponeptyhs cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.00	2.3
<i>Scoletoma erecta</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.00	2.3
<i>Synidotea harfordi</i>	ARTHROPODA	Malacostraca	Idoteidae	1	0.00	2.3
Syllidae	ANNELIDA	Polychaeta	Syllidae	1	0.00	2.3
Capitellidae	ANNELIDA	Polychaeta	Capitellidae	1	0.00	2.3
<i>Trophoniella harrisae</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.00	2.3
Paraonidae	ANNELIDA	Polychaeta	Paraonidae	1	0.00	2.3
<i>Lepidopa californica</i>	ARTHROPODA	Malacostraca	Albuneidae	1	0.00	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Liljeborgia geminata</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.00	2.3
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.00	2.3
<i>Lophopanopeus frontalis</i>	ARTHROPODA	Malacostraca	Panopeidae	1	0.00	2.3
<i>Lottia depicta</i>	MOLLUSCA	Gastropoda	Lottiidae	1	0.00	2.3
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.00	2.3
<i>Macoma secta</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.00	2.3
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	1	0.00	2.3
<i>Malacoceros indicus</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Pherusa negligens</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.00	2.3
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.00	2.3
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	1	0.00	2.3
Scaphopoda	MOLLUSCA	Scaphopoda		1	0.00	2.3
Modiolinae	MOLLUSCA	Bivalvia	Mytilidae	1	0.00	2.3
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	1	0.00	2.3
<i>Molgula manhattensis</i>	CHORDATA	Asciacea	Molgulidae	1	0.00	2.3
<i>Paranemertes</i> sp B	NEMERTEA	Enopla	Emplectonematidae	1	0.00	2.3
<i>Molgula</i> sp	CHORDATA	Asciacea	Molgulidae	1	0.00	2.3
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	1	0.00	2.3
<i>Neanthes</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.00	2.3
<i>Neoleprea californica</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.00	2.3
<i>Nephtys simoni</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.00	2.3
Nereididae	ANNELIDA	Polychaeta	Nereididae	1	0.00	2.3
<i>Nicolea</i> sp A	ANNELIDA	Polychaeta	Terebellidae	1	0.00	2.3
<i>Orbinia johnsoni</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.00	2.3
<i>Nutricola tantilla</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.00	2.3
<i>Ophelia assimilis</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.00	2.3
Oedicerotidae	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.00	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.00	2.3
Psammobiidae	MOLLUSCA	Bivalvia	Psammobiidae	1	0.00	2.3
<i>Scolelepis (Scolelepis) squamata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Epitonium</i> sp	MOLLUSCA	Gastropoda	Epitoniidae	1	0.00	2.3
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	1	0.00	2.3
Majoidea	ARTHROPODA	Malacostraca		1	0.00	2.3
<i>Saxidomus nuttalli</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.00	2.3
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	1	0.00	2.3
<i>Exogone</i> sp	ANNELIDA	Polychaeta	Syllidae	1	0.00	2.3
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	1	0.00	2.3
<i>Rhynchospio arenincola</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Rhepoxyntius</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.00	2.3
<i>Rhachotropis</i> sp	ARTHROPODA	Malacostraca	Eusiridae	1	0.00	2.3
<i>Flosmaris grandis</i>	CNIDARIA	Anthozoa	Isopheliidae	1	0.00	2.3
Pyramidellidae	MOLLUSCA	Gastropoda	Pyramidellidae	1	0.00	2.3
<i>Podocerus</i> sp	ARTHROPODA	Malacostraca	Podoceridae	1	0.00	2.3
<i>Hippolyte californiensis</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.00	2.3
<i>Scolelepis</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Lacuna unifasciata</i>	MOLLUSCA	Gastropoda	Littorinidae	1	0.00	2.3
<i>Polydora cirrosa</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.00	2.3
<i>Hourstonius vilordes</i>	ARTHROPODA	Malacostraca	Amphilochidae	1	0.00	2.3
<i>Garnotia</i> sp	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.00	2.3
<i>Polyopthalmus pictus</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.00	2.3
<i>Gibberosus devaneyi</i>	ARTHROPODA	Malacostraca	Megalopidae	1	0.00	2.3
<i>Heterophoxus cf ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.00	2.3
<i>Potamethus</i> sp A	ANNELIDA	Polychaeta	Sabellidae	1	0.00	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Haminoea</i> sp	MOLLUSCA	Gastropoda	Haminoeidae	1	0.00	2.3
<i>Gnorimosphaeroma oregonense</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	1	0.00	2.3
<i>Glycera robusta</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.00	2.3
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3
Hippolytidae	ARTHROPODA	Malacostraca	Hippolytidae	1	0.00	2.3
<i>Microspio pigmentata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.00	2.3

Table B2. Macrobenthic community summary for the Marina stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pseudopolydora paucibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	1,825	7.54	79.5
<i>Nutricola tantilla</i>	MOLLUSCA	Bivalvia	Veneridae	1,325	5.48	9.1
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	1,280	5.29	84.1
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheiliidae	1,169	4.83	25.0
Oligochaeta	ANNELIDA	Oligochaeta		1,058	4.37	47.7
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	1,049	4.34	52.3
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	1,046	4.32	52.3
<i>Zeuxo normani</i>	ARTHROPODA	Malacostraca	Tanaidae	917	3.79	29.5
<i>Euchone limnicola</i>	ANNELIDA	Polychaeta	Sabellidae	853	3.53	65.9
<i>Brania californiensis</i>	ANNELIDA	Polychaeta	Syllidae	793	3.28	9.1
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	689	2.85	72.7
<i>Scoletoma</i> sp C	ANNELIDA	Polychaeta	Lumbrineridae	678	2.80	75.0
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	667	2.76	65.9
<i>Grandidierella japonica</i>	ARTHROPODA	Malacostraca	Aoridae	581	2.40	52.3
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	534	2.21	25.0
<i>Prionospio (Prionospio) heterobranchia</i>	ANNELIDA	Polychaeta	Spionidae	505	2.09	68.2
<i>Notomastus tenuis</i>	ANNELIDA	Polychaeta	Capitellidae	468	1.93	11.4
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	426	1.76	59.1
<i>Musculista senhousia</i>	MOLLUSCA	Bivalvia	Mytilidae	373	1.54	43.2
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	364	1.50	65.9
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	297	1.23	31.8
<i>Heterophoxus cf ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	266	1.10	38.6
Tanaidacea	ARTHROPODA	Malacostraca		247	1.02	2.3
<i>Edwardsia californica</i>	CNIDARIA	Anthozoa	Edwardsiidae	241	1.00	18.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	221	0.91	31.8
<i>Protohyale</i> sp	ARTHROPODA	Malacostraca	Hyalidae	221	0.91	9.1
<i>Mayerella acanthopoda</i>	ARTHROPODA	Malacostraca	Caprellidae	216	0.89	56.8
<i>Fabricinuda limnicola</i>	ANNELIDA	Polychaeta	Fabriiidiae	191	0.79	13.6
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyoniidae	176	0.73	52.3
<i>Paramicrodeutopus schmitti</i>	ARTHROPODA	Malacostraca	Aoridae	172	0.71	11.4
<i>Theora lubrica</i>	MOLLUSCA	Bivalvia	Semelidae	168	0.69	61.4
<i>Tagelus affinis</i>	MOLLUSCA	Bivalvia	Solecurtidiae	149	0.62	54.5
<i>Protolaeospira eximia</i>	ANNELIDA	Polychaeta	Serpulidae	142	0.59	2.3
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	141	0.58	18.2
<i>Paradexamine</i> sp SD1	ARTHROPODA	Malacostraca	Dexaminidae	138	0.57	11.4
<i>Phoronis</i> sp	PHORONA		Phoronidae	132	0.55	36.4
<i>Paracerceis sculpta</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	118	0.49	11.4
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	107	0.44	31.8
<i>Diplocirrus</i> sp SD1	ANNELIDA	Polychaeta	Flabelligeridae	101	0.42	27.3
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	99	0.41	40.9
<i>Podocerus fulanus</i>	ARTHROPODA	Malacostraca	Podoceridae	98	0.41	18.2
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	93	0.38	43.2
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	90	0.37	36.4
<i>Typosyllis nipponica</i>	ANNELIDA	Polychaeta	Syllidae	84	0.35	29.5
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	83	0.34	25.0
Bivalvia	MOLLUSCA	Bivalvia		80	0.33	13.6
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	77	0.32	11.4
<i>Foxiphalus golfensis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	75	0.31	2.3
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraciidae	74	0.31	20.5
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	72	0.30	2.3
<i>Nasageneia quinsana</i>	ARTHROPODA	Malacostraca	Eusiridae	71	0.29	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Phoronida	PHORONA			70	0.29	11.4
<i>Monticellina</i> sp 1	ANNELIDA	Polychaeta	Cirratulidae	65	0.27	15.9
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	63	0.26	25.0
<i>Sinocorophium heteroceratum</i>	ARTHROPODA	Malacostraca	Corophiidae	62	0.26	6.8
Serpulidae	ANNELIDA	Polychaeta	Serpulidae	58	0.24	4.5
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	54	0.22	13.6
<i>Bulla gouldiana</i>	MOLLUSCA	Gastropoda	Bullidae	53	0.22	25.0
<i>Harmothoe imbricata</i> Cmplx	ANNELIDA	Polychaeta	Polynoidae	53	0.22	18.2
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	52	0.21	9.1
<i>Haminoea vesicula</i>	MOLLUSCA	Gastropoda	Haminoeidae	52	0.21	25.0
<i>Caecum californicum</i>	MOLLUSCA	Gastropoda	Caecidae	51	0.21	9.1
<i>Pseudofabriciola californica</i>	ANNELIDA	Polychaeta	Fabriciidae	51	0.21	6.8
<i>Laevicardium substriatum</i>	MOLLUSCA	Bivalvia	Cardiidae	50	0.21	20.5
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	50	0.21	22.7
<i>Caprella simia</i>	ARTHROPODA	Malacostraca	Caprellidae	50	0.21	9.1
<i>Scoletoma</i> sp A	ANNELIDA	Polychaeta	Lumbrineridae	46	0.19	29.5
<i>Goniada littorea</i>	ANNELIDA	Polychaeta	Goniadidae	46	0.19	6.8
<i>Barleeia haliotiphila</i>	MOLLUSCA	Gastropoda	Barleeiidae	45	0.19	6.8
<i>Barleeia subtenuis</i>	MOLLUSCA	Gastropoda	Barleeiidae	45	0.19	6.8
<i>Acteocina carinata</i>	MOLLUSCA	Gastropoda	Cylichnidae	43	0.18	25.0
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	40	0.17	20.5
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	40	0.17	25.0
<i>Nebalia pugettensis</i> Cmplx	ARTHROPODA	Malacostraca	Nebaliidae	37	0.15	11.4
<i>Aphelochaeta</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	37	0.15	6.8
<i>Exogone</i> sp	ANNELIDA	Polychaeta	Syllidae	34	0.14	4.5
<i>Scoletoma</i> sp B	ANNELIDA	Polychaeta	Lumbrineridae	33	0.14	27.3
<i>Neanthes acuminata</i> Cmplx	ANNELIDA	Polychaeta	Nereididae	33	0.14	13.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Exogone</i> sp A	ANNELIDA	Polychaeta	Syllidae	32	0.13	11.4
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	32	0.13	6.8
<i>Caprellidae</i>	ARTHROPODA	Malacostraca	Caprellidae	30	0.12	11.4
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	30	0.12	4.5
<i>Macoma nasuta</i>	MOLLUSCA	Bivalvia	Tellinidae	29	0.12	25.0
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	28	0.12	15.9
<i>Caprella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	28	0.12	6.8
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	27	0.11	13.6
<i>Granulina margaritula</i>	MOLLUSCA	Gastropoda	Cysticidae	27	0.11	2.3
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	25	0.10	11.4
<i>Postasterope barnesi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	25	0.10	9.1
<i>Scolelepis (Parascolelepis) texana</i>	ANNELIDA	Polychaeta	Spionidae	25	0.10	13.6
<i>Phtisica marina</i>	Arthropoda	Malacostraca	Caprellidae	24	0.10	9.1
<i>Monocorophium acherusicum</i>	ARTHROPODA	Malacostraca	Corophiidae	24	0.10	15.9
<i>Metasynchis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	23	0.10	18.2
<i>Zygonemertes virescens</i>	NEMERTEA	Enopla	Amphiporidae	23	0.10	2.3
<i>Tryonia imitator</i>	MOLLUSCA	Gastropoda	Hydrobiidae	23	0.10	2.3
<i>Eochelidium</i> sp A	ARTHROPODA	Malacostraca	Oedicerotidae	22	0.09	13.6
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	22	0.09	25.0
<i>Paranthura japonica</i> Cmplx	Arthropoda	Malacostraca	Paranthuridae	22	0.09	13.6
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	22	0.09	6.8
<i>Lottia depicta</i>	MOLLUSCA	Gastropoda	Lottiidae	22	0.09	6.8
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	21	0.09	15.9
<i>Alpheus californiensis</i>	ARTHROPODA	Malacostraca	Alpheidae	21	0.09	29.5
<i>Anoplodactylus erectus</i>	ARTHROPODA	Pycnogonida	Phoxichilidiidae	19	0.08	20.5
<i>Piromis capulata</i>	ANNELIDA	Polychaeta	Flabelligeridae	19	0.08	11.4
<i>Sphaeromatidae</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	19	0.08	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	19	0.08	2.3
<i>Molgula</i> sp SD1	CHORDATA	Asciidiacea	Molgulidae	18	0.07	4.5
<i>Scoletoma erecta</i>	ANNELIDA	Polychaeta	Lumbrineridae	18	0.07	13.6
<i>Heteroserolis carinata</i>	ARTHROPODA	Malacostraca	Serolidae	17	0.07	11.4
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	17	0.07	22.7
<i>Scoloplos acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	17	0.07	2.3
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	16	0.07	11.4
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephytidae	16	0.07	15.9
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	15	0.06	27.3
<i>Notomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	15	0.06	2.3
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	15	0.06	4.5
<i>Monocorophium insidiosum</i>	ARTHROPODA	Malacostraca	Corophiidae	15	0.06	9.1
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	14	0.06	20.5
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	14	0.06	13.6
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	14	0.06	11.4
<i>Aoroides secundus</i>	ARTHROPODA	Malacostraca	Aoridae	14	0.06	2.3
<i>Malacoplax californiensis</i>	ARTHROPODA	Malacostraca	Panopeidae	14	0.06	6.8
<i>Tagelus</i> sp	MOLLUSCA	Bivalvia	Solecurtidae	14	0.06	4.5
<i>Ianiropsis analoga</i>	ARTHROPODA	Malacostraca	Janiridae	14	0.06	4.5
Edwardsiidae	CNIDARIA	Anthozoa	Edwardsiidae	14	0.06	11.4
Lineidae	NEMERTEA	Anopla	Lineidae	12	0.05	15.9
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	12	0.05	2.3
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	12	0.05	11.4
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	12	0.05	2.3
Heteronemertea	NEMERTEA	Anopla		12	0.05	13.6
<i>Mactrotoma californica</i>	MOLLUSCA	Bivalvia	Mactridae	12	0.05	9.1
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	11	0.05	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Erichsonella crenulata</i>	ARTHROPODA	Malacostraca	Idoteidae	11	0.05	6.8
<i>Monocorophium</i> sp	ARTHROPODA	Malacostraca	Corophiidae	11	0.05	9.1
Tanaidae	ARTHROPODA	Malacostraca	Tanaidae	11	0.05	4.5
<i>Ampithoe</i> sp	ARTHROPODA	Malacostraca	Ampithoidae	10	0.04	9.1
<i>Diplodonta sericata</i>	MOLLUSCA	Bivalvia	Ungulinidae	10	0.04	2.3
<i>Cumingia californica</i>	MOLLUSCA	Bivalvia	Semelidae	10	0.04	6.8
<i>Leukoma staminea</i>	MOLLUSCA	Bivalvia	Veneridae	10	0.04	9.1
<i>Crepidula onyx</i>	MOLLUSCA	Gastropoda	Calyptaeidae	10	0.04	2.3
<i>Hippolyte californiensis</i>	ARTHROPODA	Malacostraca	Hippolytidae	10	0.04	6.8
<i>Rhynchospio arenincola</i>	ANNELIDA	Polychaeta	Spionidae	9	0.04	9.1
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	9	0.04	18.2
<i>Notomastus magnus</i>	ANNELIDA	Polychaeta	Capitellidae	9	0.04	13.6
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	9	0.04	2.3
Actiniaria	CNIDARIA	Anthozoa		9	0.04	6.8
<i>Saxidomus nuttalli</i>	MOLLUSCA	Bivalvia	Veneridae	9	0.04	11.4
<i>Hartmanodes hartmanae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	8	0.03	11.4
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	8	0.03	6.8
<i>Acuminodeutopus heteruropus</i>	ARTHROPODA	Malacostraca	Unciolidae	8	0.03	9.1
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	8	0.03	6.8
<i>Tetraستemma albidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	8	0.03	4.5
<i>Aplysiopsis enteromorphae</i>	MOLLUSCA	Gastropoda	Hermaeidae	8	0.03	2.3
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	7	0.03	9.1
<i>Solen rostriformis</i>	MOLLUSCA	Bivalvia	Solenidae	7	0.03	13.6
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.03	6.8
Mytilidae	MOLLUSCA	Bivalvia	Mytilidae	7	0.03	4.5
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	7	0.03	6.8
<i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	7	0.03	11.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	7	0.03	9.1
<i>Heteromysis odontops</i>	ARTHROPODA	Malacostraca	Mysidae	7	0.03	13.6
<i>Crepidatella lingulata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	7	0.03	4.5
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	7	0.03	15.9
<i>Scyphoprocus oculatus</i>	ANNELIDA	Polychaeta	Capitellidae	6	0.02	6.8
<i>Cryptomya californica</i>	MOLLUSCA	Bivalvia	Myidae	6	0.02	11.4
<i>Baseodiscus delineata</i>	NEMERTEA	Anopla	Valenciniidae	6	0.02	2.3
<i>Apionsoma misakianum</i>	SIPUNCULA	Phascolosomatidea	Phascolosomatidae	6	0.02	6.8
<i>Actiniaria</i> sp 1	CNIDARIA	Anthozoa		6	0.02	6.8
<i>Corymorpha palma</i>	CNIDARIA	Hydrozoa	Corymorphidae	6	0.02	6.8
<i>Chaetozone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	6	0.02	4.5
<i>Erato columbella</i>	MOLLUSCA	Gastropoda	Triviidae	6	0.02	2.3
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	6	0.02	9.1
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	6	0.02	6.8
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	6	0.02	2.3
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	6	0.02	9.1
<i>Pherusa negligens</i>	ANNELIDA	Polychaeta	Flabelligeridae	6	0.02	6.8
Aoridae	ARTHROPODA	Malacostraca	Aoridae	5	0.02	4.5
<i>Eugyra arenosa californica</i>	CHORDATA	Asciidiacea	Molgulidae	5	0.02	2.3
<i>Apoprionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	5	0.02	6.8
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	5	0.02	2.3
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	5	0.02	2.3
<i>Deltamysis holmquistae</i>	ARTHROPODA	Malacostraca	Mysidae	5	0.02	4.5
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	5	0.02	6.8
<i>Aristobranchus ornatus</i>	ANNELIDA	Polychaeta	Aristobranchidae	5	0.02	2.3
<i>Schmittius politus</i>	ARTHROPODA	Malacostraca	Squillidae	5	0.02	9.1
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	5	0.02	9.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Hippomedon zetesimus</i>	ARTHROPODA	Malacostraca	Lysianassidae	5	0.02	9.1
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	5	0.02	4.5
<i>Anoropallene palpida</i>	ARTHROPODA	Pycnogonida	Callipallenidae	5	0.02	2.3
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.02	9.1
<i>Diopatra ornata</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.02	2.3
<i>Microspio pigmentata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.02	9.1
<i>Nereis latescens</i>	ANNELIDA	Polychaeta	Nereididae	4	0.02	2.3
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.02	4.5
<i>Cyathura munda</i>	ARTHROPODA	Malacostraca	Anthuridae	4	0.02	2.3
<i>Brania</i> sp	ANNELIDA	Polychaeta	Syllidae	4	0.02	4.5
<i>Platynereis bicanaliculata</i>	ANNELIDA	Polychaeta	Nereididae	4	0.02	6.8
<i>Polydora cornuta</i>	ANNELIDA	Polychaeta	Spionidae	4	0.02	9.1
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.02	9.1
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	4	0.02	6.8
<i>Cirratulidae</i>	ANNELIDA	Polychaeta	Cirratulidae	4	0.02	6.8
<i>Stylochus exiguum</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	4	0.02	6.8
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.02	4.5
<i>Psammotreta obesa</i>	MOLLUSCA	Bivalvia	Tellinidae	4	0.02	9.1
<i>Eteone brigittae</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.02	6.8
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.02	9.1
<i>Amphiodia</i> sp DC1	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.02	2.3
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.02	4.5
<i>Kurtiella coani</i>	MOLLUSCA	Bivalvia	Lasaeidae	4	0.02	2.3
<i>Sipuncula</i>	SIPUNCULA			4	0.02	4.5
<i>Scolanthus scamiti</i>	CNIDARIA	Anthozoa	Edwardsiidae	4	0.02	6.8
<i>Ampithoe longimana</i>	ARTHROPODA	Malacostraca	Ampithoidae	4	0.02	4.5
<i>Ophryotrocha</i> sp	ANNELIDA	Polychaeta	Dorvilleidae	4	0.02	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Betaeus ensenadensis</i>	ARTHROPODA	Malacostraca	Alpheidae	4	0.02	6.8
<i>Hartmanodes</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.02	9.1
<i>Alia carinata</i>	MOLLUSCA	Gastropoda	Columbellidae	4	0.02	2.3
<i>Anotomastus gordioides</i>	ANNELIDA	Polychaeta	Capitellidae	3	0.01	4.5
<i>Carinomella lactea</i>	NEMERTEA	Anopla	Tubulanidae	3	0.01	4.5
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	3	0.01	6.8
<i>Hiatella arctica</i>	MOLLUSCA	Bivalvia	Hiatellidae	3	0.01	4.5
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	3	0.01	2.3
<i>Platymera gaudichaudii</i>	ARTHROPODA	Malacostraca	Calappidae	3	0.01	4.5
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	3	0.01	4.5
<i>Anemonactis</i> sp A	CNIDARIA	Anthozoa	Haloclavidae	3	0.01	4.5
<i>Ampithoe plumulosa</i>	ARTHROPODA	Malacostraca	Ampithoidae	3	0.01	4.5
<i>Alpheus</i> sp	ARTHROPODA	Malacostraca	Alpheidae	3	0.01	6.8
<i>Columbellidae</i>	MOLLUSCA	Gastropoda	Columbellidae	3	0.01	2.3
<i>Grapsoidea</i>	ARTHROPODA	Malacostraca		3	0.01	2.3
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	3	0.01	2.3
<i>Bemlos macromanus</i>	ARTHROPODA	Malacostraca	Aoridae	3	0.01	2.3
<i>Ascidiae</i>	CHORDATA	Asciidiacea		3	0.01	6.8
<i>Tubulanus</i> sp SD1	NEMERTEA	Anopla	Tubulanidae	3	0.01	6.8
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	3	0.01	4.5
<i>Tubulanidae</i>	NEMERTEA	Anopla	Tubulanidae	3	0.01	6.8
<i>Spirorbinae</i>	Annelida	Polychaeta	Serpulidae	3	0.01	4.5
<i>Amphiuridae</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	3	0.01	4.5
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	3	0.01	4.5
<i>Venerupis philippinarum</i>	MOLLUSCA	Bivalvia	Veneridae	3	0.01	4.5
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	3	0.01	6.8
<i>Tubulanidae</i>	NEMERTEA	Anopla	Tubulanidae	3	0.01	6.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Neaeromya compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.01	2.3
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	3	0.01	2.3
<i>Streblospio benedicti</i>	ANNELIDA	Polychaeta	Spionidae	3	0.01	4.5
<i>Acteocina culcitella</i>	MOLLUSCA	Gastropoda	Cylichnidae	3	0.01	4.5
<i>Thelepus hamatus</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.01	2.3
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	2.3
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	2	0.01	4.5
<i>Palaeonemertea</i>	NEMERTEA	Anopla		2	0.01	4.5
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	2	0.01	4.5
<i>Heptacarpus paludicola</i>	ARTHROPODA	Malacostraca	Hippolytidae	2	0.01	2.3
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.01	4.5
<i>Eranno</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	2	0.01	2.3
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	2	0.01	4.5
<i>Mytilus</i> sp	MOLLUSCA	Bivalvia	Mytilidae	2	0.01	4.5
<i>Eualus lineatus</i>	ARTHROPODA	Malacostraca	Hippolytidae	2	0.01	2.3
<i>Halcampus decenttentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	2	0.01	4.5
<i>Phoxocephalidae</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.01	2.3
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	2	0.01	2.3
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	2	0.01	4.5
<i>Veneridae</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.01	2.3
<i>Okenia angelensis</i>	MOLLUSCA	Gastropoda	Goniodorididae	2	0.01	2.3
<i>Acteocina harpa</i>	MOLLUSCA	Gastropoda	Cylichnidae	2	0.01	2.3
<i>Lophopanopeus bellus</i>	ARTHROPODA	Malacostraca	Panopeidae	2	0.01	4.5
<i>Listriella</i> sp	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.01	2.3
<i>Boccardiella hamata</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	2.3
<i>Scleroplax granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	2	0.01	4.5
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	2	0.01	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Listriella eriopis</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.01	2.3
<i>Bemlos</i> sp	ARTHROPODA	Malacostraca	Aoridae	2	0.01	2.3
<i>Scolelepis</i> sp	ANNELIDA	Polychaeta	Spionidae	2	0.01	2.3
<i>Arcteobia</i> cf <i>anticostiensis</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.01	2.3
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	2.3
<i>Rutiderma judayi</i>	ARTHROPODA	Ostracoda	Rutidermatidae	2	0.01	4.5
Anopla	NEMERTEA	Anopla		2	0.01	4.5
<i>Listriella melanica</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.01	4.5
<i>Acteocina</i> sp	MOLLUSCA	Gastropoda	Cylichnidae	2	0.01	4.5
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	4.5
<i>Siriella pacifica</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	4.5
<i>Alia tuberosa</i>	MOLLUSCA	Gastropoda	Columbellidae	2	0.01	2.3
<i>Alienacanthomysis macropsis</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	2.3
<i>Ambidexter panamensis</i>	ARTHROPODA	Malacostraca	Processidae	2	0.01	4.5
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	2	0.01	4.5
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.01	4.5
<i>Paradialychine ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	4.5
<i>Aoroides</i> sp	ARTHROPODA	Malacostraca	Aoridae	2	0.01	2.3
<i>Pseudotanais makrothrix</i>	ARTHROPODA	Malacostraca	Pseudotanaidae	2	0.01	2.3
<i>Chione californiensis</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.01	4.5
<i>Polycirrus</i> sp OC1	ANNELIDA	Polychaeta	Terebellidae	2	0.01	2.3
<i>Maera jerrica</i>	ARTHROPODA	Malacostraca	Melitidae	2	0.01	2.3
<i>Tellina meropsis</i>	MOLLUSCA	Bivalvia	Tellinidae	2	0.01	4.5
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	2	0.01	4.5
<i>Tellina idae</i>	MOLLUSCA	Bivalvia	Tellinidae	2	0.01	2.3
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	2	0.01	2.3
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	2	0.01	4.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	2	0.01	2.3
<i>Pyromia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	2	0.01	2.3
Calyptaeidae	MOLLUSCA	Gastropoda	Calyptaeidae	2	0.01	4.5
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	2	0.01	4.5
Corophioidea	ARTHROPODA	Malacostraca		2	0.01	2.3
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	2	0.01	4.5
Polycladida	PLATYHELMINTHES	Turbellaria		1	0.004	2.3
Thraciidae	MOLLUSCA	Bivalvia	Thraciidae	1	0.004	2.3
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	1	0.004	2.3
<i>Podocerus</i> sp	ARTHROPODA	Malacostraca	Podoceridae	1	0.004	2.3
<i>Zaolatus actius</i>	CNIDARIA	Anthozoa	Isanthidae	1	0.004	2.3
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.004	2.3
<i>Zeuxo</i> sp	ARTHROPODA	Malacostraca	Tanaidae	1	0.004	2.3
<i>Solen</i> sp	MOLLUSCA	Bivalvia	Solenidae	1	0.004	2.3
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	1	0.004	2.3
Xanthoidea	ARTHROPODA	Malacostraca		1	0.004	2.3
<i>Pareurythoe californica</i>	ANNELIDA	Polychaeta	Amphinomidae	1	0.004	2.3
<i>Uromunna ubiquita</i>	ARTHROPODA	Malacostraca	Munnidae	1	0.004	2.3
<i>Serpula columbiana</i>	ANNELIDA	Polychaeta	Serpulidae	1	0.004	2.3
<i>Petricola carditoides</i>	MOLLUSCA	Bivalvia	Petricolidae	1	0.004	2.3
<i>Timarete luxuriosa</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.004	2.3
<i>Philine bakeri</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.004	2.3
Spionidae	ANNELIDA	Polychaeta	Spionidae	1	0.004	2.3
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.004	2.3
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.004	2.3
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.004	2.3
<i>Upogebia lepta</i>	ARTHROPODA	Malacostraca	Upogebiidae	1	0.004	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Tubulanus</i> sp A	NEMERTEA	Anopla	Tubulanidae	1	0.004	2.3
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.004	2.3
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	1	0.004	2.3
<i>Anomia peruviana</i>	MOLLUSCA	Bivalvia	Anomiidae	1	0.004	2.3
<i>Chaetozone hedgpethi</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.004	2.3
<i>Ceriantharia</i>	CNIDARIA	Anthozoa		1	0.004	2.3
<i>Cephalaspidea</i>	MOLLUSCA	Gastropoda		1	0.004	2.3
<i>Caridea</i>	ARTHROPODA	Malacostraca		1	0.004	2.3
<i>Caprella verrucosa</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.004	2.3
<i>Cancridae</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.004	2.3
<i>Campylaspis rufa</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.004	2.3
<i>Califanthura squamosissima</i>	ARTHROPODA	Malacostraca	Paranthuridae	1	0.004	2.3
<i>Branchiomma</i> sp 1	Annelida	Polychaeta	Sabellidae	1	0.004	2.3
<i>Astyris aurantiaca</i>	MOLLUSCA	Gastropoda	Columbellidae	1	0.004	2.3
<i>Mysidae</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.004	2.3
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	1	0.004	2.3
<i>Arcteobia</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.004	2.3
<i>Conus californicus</i>	MOLLUSCA	Gastropoda	Conidae	1	0.004	2.3
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.004	2.3
<i>Amphiodia</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.004	2.3
<i>Amphiodia psara</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.004	2.3
<i>Ampharete</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.004	2.3
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	1	0.004	2.3
<i>Lacuna unifasciata</i>	MOLLUSCA	Gastropoda	Littorinidae	1	0.004	2.3
<i>Leptochiton</i> sp	MOLLUSCA	Polyplacophora	Leptochitonidae	1	0.004	2.3
<i>Liljeborgia geminata</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.004	2.3
<i>Lirularia parcipicta</i>	MOLLUSCA	Gastropoda	Trochidae	1	0.004	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lucinisca nuttalli</i>	MOLLUSCA	Bivalvia	Lucinidae	1	0.004	2.3
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.004	2.3
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.004	2.3
<i>Lumbrineris limicola</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.004	2.3
<i>Argopecten ventricosus</i>	MOLLUSCA	Bivalvia	Pectinidae	1	0.004	2.3
<i>Eusyllinae</i>	ANNELIDA	Polychaeta	Syllidae	1	0.004	2.3
Ischyroceridae	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.004	2.3
<i>Ianiropsis tridens</i>	ARTHROPODA	Malacostraca	Janiridae	1	0.004	2.3
<i>Hydroides elegans</i>	ANNELIDA	Polychaeta	Serpulidae	1	0.004	2.3
<i>Hourstonius vilordes</i>	ARTHROPODA	Malacostraca	Amphilochidae	1	0.004	2.3
Hoplonephentea	NEMERTEA	Enopla		1	0.004	2.3
<i>Hemigrapsus oregonensis</i>	ARTHROPODA	Malacostraca	Varunidae	1	0.004	2.3
<i>Harmothoe hirsuta</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.004	2.3
<i>Harmothoe fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.004	2.3
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	1	0.004	2.3
<i>Glycinde</i> sp	ANNELIDA	Polychaeta	Goniadidae	1	0.004	2.3
<i>Glycinde picta</i>	ANNELIDA	Polychaeta	Goniadidae	1	0.004	2.3
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.004	2.3
<i>Cirrophorus furcatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.004	2.3
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	1	0.004	2.3
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	1	0.004	2.3
Copepoda	ARTHROPODA	Maxillopoda		1	0.004	2.3
Cysticidae	MOLLUSCA	Gastropoda	Cysticidae	1	0.004	2.3
Decapoda	ARTHROPODA	Malacostraca		1	0.004	2.3
<i>Diplodonta orbella</i>	MOLLUSCA	Bivalvia	Ungulinidae	1	0.004	2.3
<i>Gammaropsis</i> sp	ARTHROPODA	Malacostraca	Photidae	1	0.004	2.3
<i>Drilonereis falcata</i>	ANNELIDA	Polychaeta	Oenonidae	1	0.004	2.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Foxiphalus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.004	2.3
<i>Edwardsia</i> sp	CNIDARIA	Anthozoa	Edwardsiidae	1	0.004	2.3
<i>Eteone aestuarina</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.004	2.3
<i>Eulalia californiensis</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.004	2.3
Eulimidae	MOLLUSCA	Gastropoda	Eulimidae	1	0.004	2.3
Eusiridae	ARTHROPODA	Malacostraca	Eusiridae	1	0.004	2.3
Collembola	Arthropoda	Collembola		1	0.004	2.3
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	1	0.004	2.3
<i>Metacarcinus anthonyi</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.004	2.3
Panopeidae	ARTHROPODA	Malacostraca	Panopeidae	1	0.004	2.3
Myodocopida	ARTHROPODA	Ostracoda		1	0.004	2.3
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	1	0.004	2.3
<i>Palaemon macrodactylus</i>	ARTHROPODA	Malacostraca	Palaemonidae	1	0.004	2.3
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	1	0.004	2.3
<i>Paleanotus bellis</i>	ANNELIDA	Polychaeta	Chrysopetalidae	1	0.004	2.3
<i>Mysidopsis californica</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.004	2.3
Majoidea	ARTHROPODA	Malacostraca		1	0.004	2.3
<i>Molgula manhattensis</i>	CHORDATA	Asciidiacea	Molgulidae	1	0.004	2.3
<i>Macoma indentata</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.004	2.3
<i>Notomastus lineatus</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.004	2.3
Modiolinae	MOLLUSCA	Bivalvia	Mytilidae	1	0.004	2.3
<i>Mactromeris catilliformis</i>	MOLLUSCA	Bivalvia	Mactridae	1	0.004	2.3

Table B3. Macrobenthic community summary for the Port stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pseudopolydora paucibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	1,318	9.55	42.2
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	923	6.69	62.2
<i>Theora lubrica</i>	MOLLUSCA	Bivalvia	Semelidae	903	6.55	91.1
<i>Musculista senhousia</i>	MOLLUSCA	Bivalvia	Mytilidae	768	5.57	42.2
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	516	3.74	80.0
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	453	3.28	82.2
<i>Fabricinuda limnicola</i>	ANNELIDA	Polychaeta	Fabriiidiae	404	2.93	24.4
<i>Scoletoma</i> sp C	ANNELIDA	Polychaeta	Lumbrineridae	380	2.75	53.3
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	361	2.62	80.0
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	322	2.33	48.9
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	275	1.99	37.8
Oligochaeta	ANNELIDA	Oligochaeta		257	1.86	42.2
<i>Euchone limnicola</i>	ANNELIDA	Polychaeta	Sabellidae	254	1.84	55.6
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	241	1.75	46.7
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	177	1.28	46.7
<i>Diplocirrus</i> sp SD1	ANNELIDA	Polychaeta	Flabelligeridae	169	1.23	44.4
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	142	1.03	42.2
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	140	1.01	6.7
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	135	0.98	40.0
Pinotheridae	ARTHROPODA	Malacostraca	Pinotheridae	127	0.92	44.4
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	125	0.91	40.0
<i>Edwardsia californica</i>	CNIDARIA	Anthozoa	Edwardsiidae	123	0.89	22.2
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	116	0.84	64.4
<i>Prionospio (Prionospio) heterobranchia</i>	ANNELIDA	Polychaeta	Spionidae	115	0.83	37.8
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	113	0.82	51.1
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	105	0.76	35.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	101	0.73	40.0
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	92	0.67	51.1
<i>Phoronis</i> sp	PHORONA		Phoronidae	91	0.66	42.2
<i>Acteocina carinata</i>	MOLLUSCA	Gastropoda	Cylichnidae	90	0.65	8.9
<i>Bipalponeptyhs cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	90	0.65	22.2
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	88	0.64	33.3
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	86	0.62	51.1
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	83	0.60	37.8
<i>Scleroplax granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	76	0.55	37.8
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	76	0.55	13.3
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	75	0.54	40.0
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	72	0.52	37.8
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	68	0.49	31.1
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	63	0.46	31.1
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	62	0.45	51.1
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	61	0.44	51.1
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	59	0.43	26.7
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	59	0.43	33.3
<i>Periploma discus</i>	MOLLUSCA	Bivalvia	Periplomatidae	58	0.42	35.6
<i>Prionospio (Minusprio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	57	0.41	11.1
<i>Eochelidium</i> sp A	ARTHROPODA	Malacostraca	Oedicerotidae	54	0.39	20.0
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	54	0.39	31.1
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	53	0.38	28.9
<i>Grandidierella japonica</i>	ARTHROPODA	Malacostraca	Aoridae	52	0.38	13.3
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	52	0.38	24.4
<i>Scoletoma</i> sp A	ANNELIDA	Polychaeta	Lumbrineridae	52	0.38	33.3
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	50	0.36	17.8
<i>Podocerus fulanus</i>	ARTHROPODA	Malacostraca	Podoceridae	50	0.36	6.7
<i>Marphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	47	0.34	22.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Scoletoma</i> sp B	ANNELIDA	Polychaeta	Lumbrineridae	47	0.34	33.3
<i>Scoloplos acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	47	0.34	13.3
<i>Barleeia haliotiphila</i>	MOLLUSCA	Gastropoda	Barleeiidae	46	0.33	4.4
<i>Tagelus affinis</i>	MOLLUSCA	Bivalvia	Solecurtidae	46	0.33	26.7
<i>Exogone</i> sp A	ANNELIDA	Polychaeta	Syllidae	45	0.33	2.2
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	45	0.33	24.4
<i>Edwardsiidae</i>	CNIDARIA	Anthozoa	Edwardsiidae	45	0.33	8.9
<i>Mayerella acanthopoda</i>	ARTHROPODA	Malacostraca	Caprellidae	41	0.30	20.0
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	40	0.29	55.6
<i>Heterophoxus cf ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	40	0.29	33.3
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	40	0.29	22.2
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	40	0.29	31.1
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	38	0.28	13.3
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinotheridae	38	0.28	20.0
<i>Sinocorophium alienense</i>	ARTHROPODA	Malacostraca	Corophiidae	36	0.26	4.4
<i>Prionospio (Minuspis) multibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	34	0.25	31.1
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	34	0.25	26.7
<i>Tellina meropsis</i>	MOLLUSCA	Bivalvia	Tellinidae	33	0.24	20.0
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	31	0.22	15.6
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	30	0.22	40.0
<i>Betaeus ensenadensis</i>	ARTHROPODA	Malacostraca	Alpheidae	30	0.22	6.7
<i>Neanthes acuminata</i> Cmplx	ANNELIDA	Polychaeta	Nereididae	28	0.20	20.0
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	28	0.20	13.3
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	27	0.20	28.9
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	27	0.20	2.2
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	25	0.18	24.4
<i>Cyathodonta pedroana</i>	MOLLUSCA	Bivalvia	Thraciidae	25	0.18	20.0
Nereididae	ANNELIDA	Polychaeta	Nereididae	25	0.18	2.2
Lineidae	NEMERTEA	Anopla	Lineidae	24	0.17	24.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ostrea lurida</i>	MOLLUSCA	Bivalvia	Ostreidae	24	0.17	6.7
<i>Sabellidae</i>	ANNELIDA	Polychaeta	Sabellidae	24	0.17	13.3
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	23	0.17	20.0
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	23	0.17	26.7
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	23	0.17	6.7
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	22	0.16	6.7
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	22	0.16	15.6
<i>Schmittius politus</i>	ARTHROPODA	Malacostraca	Squillidae	21	0.15	24.4
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	21	0.15	22.2
<i>Crucibulum spinosum</i>	MOLLUSCA	Gastropoda	Calyptraeidae	21	0.15	8.9
<i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	21	0.15	20.0
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	21	0.15	20.0
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	21	0.15	17.8
<i>Streblospio benedicti</i>	ANNELIDA	Polychaeta	Spionidae	20	0.14	2.2
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	20	0.14	2.2
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	19	0.14	26.7
<i>Chaetozone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	19	0.14	15.6
<i>Calyptraeidae</i>	MOLLUSCA	Gastropoda	Calyptraeidae	18	0.13	15.6
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	18	0.13	6.7
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	17	0.12	22.2
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	17	0.12	17.8
<i>Sinocorophium heteroceratum</i>	ARTHROPODA	Malacostraca	Corophiidae	17	0.12	6.7
<i>Branchiomma</i> sp 1	Annelida	Polychaeta	Sabellidae	17	0.12	2.2
<i>Metasychis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	17	0.12	15.6
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	17	0.12	15.6
<i>Serpula columbiana</i>	ANNELIDA	Polychaeta	Serpulidae	17	0.12	2.2
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	16	0.12	17.8
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	16	0.12	17.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	16	0.12	20.0
Bivalvia	MOLLUSCA	Bivalvia		16	0.12	11.1
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	15	0.11	13.3
<i>Heptacarpus stimpsoni</i>	ARTHROPODA	Malacostraca	Hippolytidae	15	0.11	13.3
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadilidae	14	0.10	13.3
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	14	0.10	15.6
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	14	0.10	24.4
<i>Alpheus californiensis</i>	ARTHROPODA	Malacostraca	Alpheidae	14	0.10	20.0
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	14	0.10	15.6
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	13	0.09	17.8
<i>Cryptomya californica</i>	MOLLUSCA	Bivalvia	Myidae	13	0.09	15.6
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	13	0.09	11.1
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	13	0.09	11.1
<i>Macoma nasuta</i>	MOLLUSCA	Bivalvia	Tellinidae	12	0.09	17.8
<i>Mysidopsis californica</i>	ARTHROPODA	Malacostraca	Mysidae	12	0.09	8.9
<i>Laevicardium substriatum</i>	MOLLUSCA	Bivalvia	Cardiidae	12	0.09	13.3
<i>Phtisica marina</i>	Arthropoda	Malacostraca	Caprellidae	12	0.09	13.3
<i>Polyandrocarpa zorritensis</i>	CHORDATA	Asciidiacea	Styelidae	12	0.09	2.2
<i>Nicolea</i> sp A	ANNELIDA	Polychaeta	Terebellidae	12	0.09	2.2
<i>Ambidexter panamensis</i>	ARTHROPODA	Malacostraca	Processidae	11	0.08	13.3
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	11	0.08	6.7
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraeciidae	11	0.08	17.8
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	11	0.08	15.6
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	11	0.08	11.1
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	11	0.08	13.3
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	10	0.07	4.4
<i>Amphiporus cruentatus</i>	NEMERTEA	Enopla	Amphiporidae	10	0.07	2.2
<i>Scoletoma erecta</i>	ANNELIDA	Polychaeta	Lumbrineridae	10	0.07	15.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	10	0.07	6.7
Phoronida	PHORONA			10	0.07	11.1
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	10	0.07	20.0
<i>Paraonides platybranchia</i>	ANNELIDA	Polychaeta	Paraonidae	10	0.07	2.2
Actiniaria	CNIDARIA	Anthozoa		9	0.07	4.4
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	9	0.07	8.9
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	9	0.07	15.6
<i>Anoplodactylus erectus</i>	ARTHROPODA	Pycnogonida	Phoxichilidiidae	9	0.07	11.1
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	9	0.07	17.8
<i>Lophopanopeus bellus</i>	ARTHROPODA	Malacostraca	Panopeidae	9	0.07	2.2
<i>Sthenelais tertiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	9	0.07	4.4
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	9	0.07	6.7
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	9	0.07	13.3
<i>Megabalanus californicus</i>	ARTHROPODA	Maxillopoda	Balanidae	9	0.07	2.2
<i>Tubulanus</i> sp A	NEMERTEA	Anopla	Tubulanidae	9	0.07	15.6
<i>Anoplodactylus viridintestinalis</i>	ARTHROPODA	Pycnogonida	Phoxichilidiidae	9	0.07	2.2
Asciidae	CHORDATA	Asciidae		8	0.06	2.2
Palaeonemertea	NEMERTEA	Anopla		8	0.06	11.1
<i>Listriella melanica</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	8	0.06	13.3
<i>Solen rostriformis</i>	MOLLUSCA	Bivalvia	Solenidae	8	0.06	11.1
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	8	0.06	4.4
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	8	0.06	4.4
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	8	0.06	4.4
<i>Harmothoe imbricata</i> Cmplx	ANNELIDA	Polychaeta	Polynoidae	8	0.06	8.9
<i>Hartmanodes hartmanae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	8	0.06	17.8
<i>Cirriformia</i> sp	ANNELIDA	Polychaeta	Cirratulidae	8	0.06	4.4
<i>Heteroserolis carinata</i>	ARTHROPODA	Malacostraca	Serolidae	8	0.06	13.3
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	8	0.06	8.9
<i>Crangon alaskensis</i>	ARTHROPODA	Malacostraca	Crangonidae	8	0.06	11.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Scolanthus scamiti</i>	CNIDARIA	Anthozoa	Edwardsiidae	8	0.06	11.1
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	8	0.06	2.2
<i>Podarkeopsis</i> sp A	ANNELIDA	Polychaeta	Hesionidae	7	0.05	13.3
<i>Majoidea</i>	ARTHROPODA	Malacostraca		7	0.05	8.9
<i>Amphiodia psara</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	7	0.05	2.2
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	7	0.05	13.3
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	7	0.05	13.3
<i>Phoronopsis</i> sp	PHORONA		Phoronidae	7	0.05	4.4
<i>Molgulidae</i>	CHORDATA	Asciidiacea	Molgulidae	7	0.05	4.4
<i>Rhamphidonta retifera</i>	MOLLUSCA	Bivalvia	Lasaeidae	7	0.05	11.1
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.05	11.1
<i>Scyphoprocus oculatus</i>	ANNELIDA	Polychaeta	Capitellidae	7	0.05	6.7
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	8.9
<i>Chaetozone lunula</i>	ANNELIDA	Polychaeta	Cirratulidae	6	0.04	2.2
<i>Caprella simia</i>	ARTHROPODA	Malacostraca	Caprellidae	6	0.04	6.7
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.04	6.7
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	6	0.04	11.1
<i>Rudilemboides</i> sp A	ARTHROPODA	Malacostraca	Unciolidae	6	0.04	2.2
<i>Corymorphidae</i>	CNIDARIA	Hydrozoa	Corymorphidae	6	0.04	6.7
<i>Corymorphidae</i>	CNIDARIA	Hydrozoa	Corymorphidae	6	0.04	6.7
<i>Paramicrodeutopus schmitti</i>	ARTHROPODA	Malacostraca	Aoridae	6	0.04	4.4
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	6	0.04	6.7
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	6	0.04	11.1
<i>Streblosoma</i> sp	ANNELIDA	Polychaeta	Terebellidae	5	0.04	6.7
<i>Arcteobia cf anticostiensis</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.04	8.9
<i>Mesocrangon munitella</i>	ARTHROPODA	Malacostraca	Crangonidae	5	0.04	8.9
<i>Hippolyte californiensis</i>	ARTHROPODA	Malacostraca	Hippolytidae	5	0.04	2.2
<i>Hartmanodes</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	5	0.04	8.9
<i>Betaeus</i> sp	ARTHROPODA	Malacostraca	Alpheidae	5	0.04	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Tubulanus</i> sp SD1	NEMERTEA	Anopla	Tubulanidae	5	0.04	11.1
<i>Caprella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	5	0.04	6.7
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	5	0.04	8.9
<i>Leptopecten latiauratus</i>	MOLLUSCA	Bivalvia	Pectinidae	5	0.04	2.2
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	5	0.04	11.1
<i>Psammotreta obesa</i>	MOLLUSCA	Bivalvia	Tellinidae	5	0.04	6.7
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.04	8.9
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	5	0.04	8.9
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	5	0.04	6.7
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	5	0.04	6.7
<i>Pyromia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	5	0.04	6.7
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	5	0.04	6.7
Hippolytidae	ARTHROPODA	Malacostraca	Hippolytidae	5	0.04	11.1
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	5	0.04	2.2
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	5	0.04	11.1
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	5	0.04	2.2
<i>Ericerodes hemphillii</i>	ARTHROPODA	Malacostraca	Inachidae	5	0.04	6.7
<i>Acanthoptilum</i> sp	CNIDARIA	Anthozoa	Virgulariidae	4	0.03	6.7
<i>Protolaeospira eximia</i>	ANNELIDA	Polychaeta	Serpulidae	4	0.03	4.4
<i>Listriella eriopisa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	4	0.03	6.7
Mactridae	MOLLUSCA	Bivalvia	Mactridae	4	0.03	2.2
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	4	0.03	8.9
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	4	0.03	6.7
<i>Procephalothrix</i> sp	NEMERTEA	Anopla	Cephalothricidae	4	0.03	2.2
<i>Halosydna johnsoni</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.03	2.2
<i>Arcularia tiarula</i>	MOLLUSCA	Gastropoda	Nassariidae	4	0.03	6.7
<i>Typosyllis nipponica</i>	ANNELIDA	Polychaeta	Syllidae	4	0.03	6.7
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	4	0.03	2.2
<i>Pherusa negligens</i>	ANNELIDA	Polychaeta	Flabelligeridae	4	0.03	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.03	6.7
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	4	0.03	6.7
<i>Malacoplax californiensis</i>	ARTHROPODA	Malacostraca	Panopeidae	4	0.03	6.7
<i>Heteronemertea</i>	NEMERTEA	Anopla		4	0.03	8.9
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	4	0.03	8.9
<i>Ophioactis simplex</i>	ECHINODERMATA	Ophiuroidea	Ophioactidae	4	0.03	6.7
<i>Microspio pigmentata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	4.4
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	4	0.03	8.9
<i>Cirratulus</i> sp	ANNELIDA	Polychaeta	Cirratulidae	4	0.03	2.2
<i>Naineris dendritica</i>	ANNELIDA	Polychaeta	Orbiniidae	4	0.03	6.7
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	4	0.03	6.7
<i>Lumbrineris</i> sp E	ANNELIDA	Polychaeta	Lumbrineridae	4	0.03	6.7
<i>Heptacarpus palpator</i>	ARTHROPODA	Malacostraca	Hippolytidae	4	0.03	2.2
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	3	0.02	4.4
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	3	0.02	6.7
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	3	0.02	4.4
<i>Bulla gouldiana</i>	MOLLUSCA	Gastropoda	Bullidae	3	0.02	4.4
<i>Parandalia fauveli</i>	ANNELIDA	Polychaeta	Pilargidae	3	0.02	6.7
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	3	0.02	4.4
<i>Cancridae</i>	ARTHROPODA	Malacostraca	Cancridae	3	0.02	4.4
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	3	0.02	4.4
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.02	6.7
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.02	6.7
<i>Harmothoe hirsuta</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	4.4
<i>Harmothoe fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	6.7
<i>Conus californicus</i>	MOLLUSCA	Gastropoda	Conidae	3	0.02	4.4
<i>Eusarsiella thominx</i>	ARTHROPODA	Ostracoda	Sarsiellidae	3	0.02	4.4
<i>Ceriantharia</i>	CNIDARIA	Anthozoa		3	0.02	6.7
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.02	4.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	3	0.02	6.7
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	6.7
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	6.7
<i>Heteromysis odontops</i>	ARTHROPODA	Malacostraca	Mysidae	3	0.02	6.7
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.02	4.4
<i>Nephtys simoni</i>	ANNELIDA	Polychaeta	Nephytidae	3	0.02	2.2
<i>Ampithoe longimana</i>	ARTHROPODA	Malacostraca	Ampithoidae	3	0.02	2.2
<i>Nephasoma</i> SD2	Sipuncula	Sipunculidea	Golfingiidae	3	0.02	2.2
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	3	0.02	4.4
<i>Saxidomus nuttalli</i>	MOLLUSCA	Bivalvia	Veneridae	3	0.02	6.7
<i>Monocorophium acherusicum</i>	ARTHROPODA	Malacostraca	Corophiidae	3	0.02	4.4
<i>Mesokalliapseudes crassus</i>	ARTHROPODA	Malacostraca	Kalliapseudidae	3	0.02	4.4
<i>Pseudotanais makrothrix</i>	ARTHROPODA	Malacostraca	Pseudotanaidae	3	0.02	4.4
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	4.4
<i>Protohyale</i> sp	ARTHROPODA	Malacostraca	Hyalidae	3	0.02	4.4
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	3	0.02	2.2
Serpulidae	ANNELIDA	Polychaeta	Serpulidae	3	0.02	4.4
<i>Astyris aurantiaca</i>	MOLLUSCA	Gastropoda	Columbellidae	3	0.02	2.2
<i>Pachycerianthus</i> sp	CNIDARIA	Anthozoa	Cerianthidae	3	0.02	6.7
<i>Piromis capulata</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.02	4.4
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	3	0.02	6.7
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.01	2.2
<i>Paracaprella cf alata</i>	Arthropoda	Malacostraca	Caprellidae	2	0.01	2.2
<i>Branchiosyllis exilis</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	2	0.01	4.4
Crangonidae	ARTHROPODA	Malacostraca	Crangonidae	2	0.01	2.2
<i>Scolelepis (Parascolelepis) texana</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	4.4
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	2	0.01	2.2
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	2	0.01	4.4
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	2	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	2	0.01	2.2
<i>Lucinisca nuttalli</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.01	2.2
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	2	0.01	4.4
<i>Spiophanes maculata</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	4.4
<i>Dipolydora bidentata</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	4.4
<i>Gnathiidae</i>	ARTHROPODA	Malacostraca	Gnathiidae	2	0.01	4.4
<i>Levinsenia</i> sp B	ANNELIDA	Polychaeta	Paraonidae	2	0.01	2.2
<i>Pacifacanthomysis nephrophthalma</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	2.2
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.01	4.4
<i>Drilonereis falcata</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.01	2.2
<i>Leucothoe nagatai</i>	ARTHROPODA	Malacostraca	Leucothoidae	2	0.01	2.2
<i>Brania medioidentata</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	2.2
<i>Eumida tubiformis</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	2.2
<i>Apoprionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	2.2
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	2	0.01	4.4
<i>Hesperoneoe</i> sp	ANNELIDA	Polychaeta	Polynoidae	2	0.01	2.2
<i>Caesia fossatus</i>	MOLLUSCA	Gastropoda	Nassariidae	2	0.01	4.4
<i>Goniada littorea</i>	ANNELIDA	Polychaeta	Goniadidae	2	0.01	4.4
<i>Tagelus</i> sp	MOLLUSCA	Bivalvia	Solecurtidae	2	0.01	4.4
<i>Polydora cirrosa</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	2.2
<i>Chaetozone spinosa</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	2.2
<i>Arcteobia</i> sp LA1	ANNELIDA	Polychaeta	Polynoidae	2	0.01	4.4
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.01	4.4
<i>Prosthiostomum latocelis</i>	PLATYHELMINTHES	Turbellaria	Prosthiostomidae	2	0.01	2.2
<i>Diopatra ornata</i>	ANNELIDA	Polychaeta	Onuphidae	2	0.01	2.2
<i>Platymera gaudichaudii</i>	ARTHROPODA	Malacostraca	Calappidae	2	0.01	2.2
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	2	0.01	4.4
<i>Enteropneusta</i>	CHORDATA	Enteropneusta		2	0.01	4.4
<i>Petricola carditoides</i>	MOLLUSCA	Bivalvia	Petricolidae	2	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Hemigrapsus</i> sp	ARTHROPODA	Malacostraca	Varunidae	1	0.01	2.2
<i>Goniada acicula</i>	ANNELIDA	Polychaeta	Goniadidae	1	0.01	2.2
<i>Pseudopotamilla</i> sp	ANNELIDA	Polychaeta	Sabellidae	1	0.01	2.2
<i>Thracia trapezoides</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	2.2
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Protocirrineris</i> sp	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	2.2
Eunicidae	ANNELIDA	Polychaeta	Eunicidae	1	0.01	2.2
<i>Pista moorei</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	2.2
<i>Leitoscoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	2.2
<i>Mactrotoma californica</i>	MOLLUSCA	Bivalvia	Mactridae	1	0.01	2.2
<i>Platyodon cancellatus</i>	MOLLUSCA	Bivalvia	Myidae	1	0.01	2.2
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	2.2
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	2.2
Flabellinidae	MOLLUSCA	Gastropoda	Flabellinidae	1	0.01	2.2
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	1	0.01	2.2
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.01	2.2
<i>Poecilochaetus</i> sp	ANNELIDA	Polychaeta	Poecilochaetidae	1	0.01	2.2
<i>Gari fucata</i>	MOLLUSCA	Bivalvia	Psammobiidae	1	0.01	2.2
<i>Pseudomma berkeleyi</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	2.2
<i>Glossaulax reclusianus</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	2.2
<i>Tubulanidae</i> sp C	NEMERTEA	Anopla	Tubulanidae	1	0.01	2.2
<i>Podarkeopsis</i> sp	ANNELIDA	Polychaeta	Hesionidae	1	0.01	2.2
<i>Stylatula elongata</i>	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	2.2
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	1	0.01	2.2
Veneridae	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.2
Virgulariidae	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	2.2
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	1	0.01	2.2
<i>Polydora</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	1	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Gyptis</i> sp	ANNELIDA	Polychaeta	Hesionidae	1	0.01	2.2
<i>Polydora nuchalis</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Spiophanes kimballi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Stylatula</i> sp DC1	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	2.2
<i>Stylochus exiguum</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	1	0.01	2.2
<i>Syllidae</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	2.2
Xanthoidea	ARTHROPODA	Malacostraca		1	0.01	2.2
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.2
<i>Polydora</i> cf <i>hoplura</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Tellina</i> sp	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.2
<i>Zeuxo normani</i>	ARTHROPODA	Malacostraca	Tanaidae	1	0.01	2.2
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	1	0.01	2.2
<i>Lacuna unifasciata</i>	MOLLUSCA	Gastropoda	Littorinidae	1	0.01	2.2
<i>Saxicavella nybakkeni</i>	MOLLUSCA	Bivalvia	Hiatellidae	1	0.01	2.2
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.01	2.2
<i>Polycirrus</i> sp OC1	ANNELIDA	Polychaeta	Terebellidae	1	0.01	2.2
Scaphopoda	MOLLUSCA	Scaphopoda		1	0.01	2.2
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	1	0.01	2.2
<i>Scolanthus triangulus</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	2.2
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.01	2.2
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.2
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Haliopasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	1	0.01	2.2
<i>Haminoea vesicula</i>	MOLLUSCA	Gastropoda	Haminoeidae	1	0.01	2.2
<i>Trachycardium quadragenarium</i>	MOLLUSCA	Bivalvia	Cardiidae	1	0.01	2.2
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	2.2
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	2.2
<i>Vargula tsujii</i>	ARTHROPODA	Ostracoda	Cypridinidae	1	0.01	2.2
<i>Rutiderma judayi</i>	ARTHROPODA	Ostracoda	Rutidermatidae	1	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Iselica ovoidea</i>	MOLLUSCA	Gastropoda	Amathinidae	1	0.01	2.2
<i>Aricidea</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
Brachyura	ARTHROPODA	Malacostraca		1	0.01	2.2
<i>Ancistrosyllis hamata</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	2.2
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	2.2
Aoridae	ARTHROPODA	Malacostraca	Aoridae	1	0.01	2.2
<i>Oxydromus pugettensis</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	2.2
<i>Apionsoma misakianum</i>	SIPUNCULA	Phascolosomatidea	Phascolosomatidae	1	0.01	2.2
<i>Corymorphpa palma</i>	CNIDARIA	Hydrozoa	Corymorphidae	1	0.01	2.2
<i>Arabella</i> sp	ANNELIDA	Polychaeta	Oenonidae	1	0.01	2.2
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	1	0.01	2.2
<i>Aricidea (Acmira) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
Orbiniidae	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	2.2
<i>Aricidea (Aricidea) wassi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
Onuphidae	ANNELIDA	Polychaeta	Onuphidae	1	0.01	2.2
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	2.2
Balanidae	ARTHROPODA	Maxillopoda	Balanidae	1	0.01	2.2
<i>Baseodiscus delineata</i>	NEMERTEA	Anopla	Valenciniidae	1	0.01	2.2
<i>Bemlos</i> sp	ARTHROPODA	Malacostraca	Aoridae	1	0.01	2.2
Panopeidae	ARTHROPODA	Malacostraca	Panopeidae	1	0.01	2.2
<i>Paradialychone harrisae</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	2.2
<i>Paradialychone paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	2.2
<i>Boccardiella</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Boreosignum</i> sp A	ARTHROPODA	Malacostraca	Paramunnidae	1	0.01	2.2
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	2.2
<i>Aricidea (Acmira) horikoshii</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
<i>Nebalia pugettensis</i> Cmplx	ARTHROPODA	Malacostraca	Nebaliidae	1	0.01	2.2
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	1	0.01	2.2
<i>Malacoceros indicus</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	2.2
<i>Mactromeris</i> sp	MOLLUSCA	Bivalvia	Mactridae	1	0.01	2.2
<i>Marphysa angelensis</i>	ANNELIDA	Polychaeta	Eunicidae	1	0.01	2.2
<i>Megalomma</i> sp	ANNELIDA	Polychaeta	Sabellidae	1	0.01	2.2
<i>Molgula</i> sp SD1	CHORDATA	Asciidiacea	Molgulidae	1	0.01	2.2
<i>Monocorophium</i> sp	ARTHROPODA	Malacostraca	Corophiidae	1	0.01	2.2
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	1	0.01	2.2
<i>Mytilidae</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	2.2
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	2.2
<i>Neaeromya compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	2.2
<i>Arachnanthus</i> sp A	CNIDARIA	Anthozoa	Cerianthidae	1	0.01	2.2
<i>Neomysis kadiakensis</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	2.2
<i>Achelia echinata</i>	Arthropoda	Pycnogonida	Ammotheidae	1	0.01	2.2
<i>Acuminodeutopus heteruropus</i>	ARTHROPODA	Malacostraca	Unciolidae	1	0.01	2.2
<i>Alpheus</i> sp	ARTHROPODA	Malacostraca	Alpheidae	1	0.01	2.2
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	2.2
<i>Ammothea hilgendorfi</i>	ARTHROPODA	Pycnogonida	Ammotheidae	1	0.01	2.2
<i>Notomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	1	0.01	2.2
<i>Nutricola tantilla</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.2
<i>Nymphon heterodenticulatum</i>	ARTHROPODA	Pycnogonida	Nymphonidae	1	0.01	2.2
<i>Ocinebrina</i> sp	MOLLUSCA	Gastropoda	Muricidae	1	0.01	2.2
<i>Naushonia macginitieei</i>	ARTHROPODA	Malacostraca	Laomediidae	1	0.01	2.2
<i>Levinsenia</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
<i>Phyllodoce pettiboneae</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	2.2
<i>Dipolydora</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Diastylopsis tenuis</i>	ARTHROPODA	Malacostraca	Diastyliidae	1	0.01	2.2
<i>Califanthora squamosissima</i>	ARTHROPODA	Malacostraca	Paranthuridae	1	0.01	2.2
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	2.2
<i>Leukoma staminea</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cryptonemertes actinophila</i>	NEMERTEA	Enopla	Emplectonematidae	1	0.01	2.2
<i>Crepidatella lingulata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	2.2
<i>Crepidula onyx</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	2.2
<i>Elasmopus bampo</i>	ARTHROPODA	Malacostraca	Maeridae	1	0.01	2.2
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	2.2
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	2.2
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.2
<i>Corymorphia bigelowi</i>	CNIDARIA	Hydrozoa	Corymorphidae	1	0.01	2.2
<i>Ericthonius</i> sp SD1	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.01	2.2
<i>Eteone brigitteae</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	2.2
<i>Erileptus spinosus</i>	ARTHROPODA	Malacostraca	Inachidae	1	0.01	2.2
<i>Calocarides quinqueseriatus</i>	ARTHROPODA	Malacostraca	Axiidae	1	0.01	2.2
<i>Listriella diffusa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	2.2
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	1	0.01	2.2
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.01	2.2
<i>Epitonium sawinae</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	2.2
Chaetodermatida	MOLLUSCA	Caudofoveata		1	0.01	2.2
<i>Epigamia-Myrianida</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	1	0.01	2.2
<i>Chionista fluctifraga</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.2
<i>Liljeborgia geminata</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	2.2

Table B4. Macrobenthic community summary for the Bay stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1,254	8.14	21.6
Oligochaeta	ANNELIDA	Oligochaeta		720	4.68	29.7
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	702	4.56	54.1
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	595	3.86	54.1
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	586	3.81	40.5
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	486	3.16	81.1
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	433	2.81	86.5
<i>Theora lubrica</i>	MOLLUSCA	Bivalvia	Semelidae	427	2.77	81.1
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	412	2.68	78.4
<i>Barleeia haliotiphila</i>	MOLLUSCA	Gastropoda	Barleeiidae	402	2.61	8.1
<i>Fabricinuda limnicola</i>	ANNELIDA	Polychaeta	Fabriciidae	362	2.35	29.7
Nereididae	ANNELIDA	Polychaeta	Nereididae	334	2.17	10.8
<i>Sinocorophium heteroceratum</i>	ARTHROPODA	Malacostraca	Corophiidae	320	2.08	5.4
<i>Scoletoma</i> sp C	ANNELIDA	Polychaeta	Lumbrineridae	314	2.04	59.5
<i>Paracerceis sculpta</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	313	2.03	5.4
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	260	1.69	27.0
<i>Musculista senhousia</i>	MOLLUSCA	Bivalvia	Mytilidae	248	1.61	48.6
<i>Tagelus affinis</i>	MOLLUSCA	Bivalvia	Solecurtidae	234	1.52	62.2
<i>Pseudopolydora paucibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	234	1.52	35.1
<i>Actiniaria</i> sp 1	CNIDARIA	Anthozoa		230	1.49	10.8
<i>Diplocirrus</i> sp SD1	ANNELIDA	Polychaeta	Flabelligeridae	211	1.37	40.5
<i>Neanthes acuminata</i> Cmplx	ANNELIDA	Polychaeta	Nereididae	211	1.37	13.5
<i>Scoletoma</i> sp A	ANNELIDA	Polychaeta	Lumbrineridae	209	1.36	62.2
<i>Euchone limnicola</i>	ANNELIDA	Polychaeta	Sabellidae	202	1.31	48.6
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraciidae	162	1.05	37.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	153	0.99	48.6
<i>Edwardsia californica</i>	CNIDARIA	Anthozoa	Edwardsiidae	133	0.86	29.7
<i>Pherusa negligens</i>	ANNELIDA	Polychaeta	Flabelligeridae	132	0.86	16.2
<i>Cossura sp</i>	ANNELIDA	Polychaeta	Cossuridae	132	0.86	21.6
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	129	0.84	51.4
<i>Leptosynapta sp</i>	ECHINODERMATA	Holothuroidea	Synaptidae	124	0.81	27.0
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	122	0.79	48.6
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	108	0.70	27.0
<i>Scleroplax granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	104	0.68	40.5
<i>Leptochelia dubia Cmplx</i>	ARTHROPODA	Malacostraca	Leptocheiliidae	101	0.66	16.2
<i>Phoronis sp</i>	PHORONA		Phoronidae	100	0.65	40.5
<i>Scoletoma sp B</i>	ANNELIDA	Polychaeta	Lumbrineridae	100	0.65	51.4
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	98	0.64	40.5
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	98	0.64	8.1
<i>Dendraster terminalis</i>	ECHINODERMATA	Echinoidea	Dendrasteridae	96	0.62	2.7
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	93	0.60	32.4
<i>Solen rostriformis</i>	MOLLUSCA	Bivalvia	Solenidae	82	0.53	40.5
<i>Mayerella acanthopoda</i>	ARTHROPODA	Malacostraca	Caprellidae	81	0.53	13.5
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	81	0.53	29.7
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	80	0.52	5.4
<i>Acteocina carinata</i>	MOLLUSCA	Gastropoda	Cylichnidae	77	0.50	37.8
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	77	0.50	40.5
Actiniaria	CNIDARIA	Anthozoa		76	0.49	24.3
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	75	0.49	35.1
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	75	0.49	37.8
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	64	0.42	24.3
<i>Tellina meropsis</i>	MOLLUSCA	Bivalvia	Tellinidae	62	0.40	35.1
<i>Euclymeninae sp A</i>	ANNELIDA	Polychaeta	Maldanidae	61	0.40	32.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Prionospio (Prionospio) heterobranchia</i>	ANNELIDA	Polychaeta	Spionidae	58	0.38	37.8
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	57	0.37	5.4
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	57	0.37	5.4
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	55	0.36	29.7
<i>Erithonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	55	0.36	13.5
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	53	0.34	37.8
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	53	0.34	37.8
<i>Heterophoxus cf ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	52	0.34	29.7
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	48	0.31	24.3
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	47	0.31	43.2
Phoronida	PHORONA			45	0.29	27.0
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	43	0.28	37.8
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	43	0.28	40.5
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	42	0.27	35.1
<i>Monocorophium acherusicum</i>	ARTHROPODA	Malacostraca	Corophiidae	42	0.27	16.2
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	42	0.27	56.8
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	40	0.26	21.6
<i>Grandidierella japonica</i>	ARTHROPODA	Malacostraca	Aoridae	40	0.26	5.4
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	38	0.25	27.0
<i>Actiniaria</i> sp DC1	CNIDARIA	Anthozoa		37	0.24	2.7
<i>Harmothoe imbricata</i> Cmplx	ANNELIDA	Polychaeta	Polynoidae	37	0.24	2.7
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	36	0.23	43.2
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	36	0.23	18.9
<i>Acanthoptilum</i> sp	CNIDARIA	Anthozoa	Virgulariidae	31	0.20	8.1
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	30	0.19	27.0
Pinnotheridae	ARTHROPODA	Malacostraca	Pinnotheridae	30	0.19	10.8
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	29	0.19	27.0
<i>Lumbrineris</i> sp E	ANNELIDA	Polychaeta	Lumbrineridae	28	0.18	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	28	0.18	10.8
<i>Prionospio (Minuspio) multibranchiata</i>	ANNELIDA	Polychaeta	Spionidae	27	0.18	10.8
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	26	0.17	21.6
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	24	0.16	27.0
<i>Podocerus fulanus</i>	ARTHROPODA	Malacostraca	Podoceridae	23	0.15	8.1
<i>Paranthura japonica Cmplx</i>	Arthropoda	Malacostraca	Paranthuridae	23	0.15	8.1
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinnotheridae	21	0.14	27.0
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	21	0.14	21.6
<i>Astyris aurantiaca</i>	MOLLUSCA	Gastropoda	Columbellidae	21	0.14	5.4
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	21	0.14	27.0
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	20	0.13	21.6
<i>Periploma discus</i>	MOLLUSCA	Bivalvia	Periplomatidae	20	0.13	27.0
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emblectonematidae	19	0.12	32.4
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	19	0.12	24.3
<i>Postasterope barnesi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	19	0.12	8.1
<i>Acuminodeutopus heteruropus</i>	ARTHROPODA	Malacostraca	Unciolidae	19	0.12	5.4
<i>Brania</i> sp	ANNELIDA	Polychaeta	Syllidae	18	0.12	10.8
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	18	0.12	16.2
<i>Baseodiscus delineata</i>	NEMERTEA	Anopla	Valenciniidae	17	0.11	5.4
<i>Sabellidae</i>	ANNELIDA	Polychaeta	Sabellidae	17	0.11	10.8
<i>Amphiuridae</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	16	0.10	16.2
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	16	0.10	13.5
<i>Scolanthus scamiti</i>	CNIDARIA	Anthozoa	Edwardsiidae	16	0.10	10.8
<i>Spiochaetopterus costarum Cmplx</i>	ANNELIDA	Polychaeta	Chaetopteridae	16	0.10	21.6
<i>Scoloplos acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	16	0.10	2.7
<i>Schmittius politus</i>	ARTHROPODA	Malacostraca	Squillidae	15	0.10	24.3
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	15	0.10	24.3
<i>Alienacanthomysis macropsis</i>	ARTHROPODA	Malacostraca	Mysidae	15	0.10	8.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	14	0.09	18.9
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	14	0.09	21.6
<i>Cryptomya californica</i>	MOLLUSCA	Bivalvia	Myidae	14	0.09	18.9
<i>Monticellina siblini</i>	ANNELIDA	Polychaeta	Cirratulidae	14	0.09	13.5
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	13	0.08	2.7
<i>Chaetozone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	13	0.08	10.8
<i>Hartmanodes hartmae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	13	0.08	16.2
<i>Stylatula elongata</i>	CNIDARIA	Anthozoa	Virgulariidae	13	0.08	5.4
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	13	0.08	16.2
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	13	0.08	16.2
<i>Protohyale</i> sp	ARTHROPODA	Malacostraca	Hyalidae	13	0.08	5.4
<i>Anoplodactylus erectus</i>	ARTHROPODA	Pycnogonida	Phoxichilidiidae	13	0.08	18.9
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	13	0.08	24.3
<i>Elasmopus bampo</i>	ARTHROPODA	Malacostraca	Maeridae	12	0.08	5.4
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	12	0.08	16.2
<i>Pyromaiia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	12	0.08	8.1
<i>Notomastus tenuis</i>	ANNELIDA	Polychaeta	Capitellidae	12	0.08	2.7
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	12	0.08	13.5
<i>Eochelidium</i> sp A	ARTHROPODA	Malacostraca	Oedicerotidae	12	0.08	5.4
<i>Podocopida</i>	ARTHROPODA	Ostracoda		12	0.08	2.7
<i>Lineidae</i>	NEMERTEA	Anopla	Lineidae	11	0.07	13.5
<i>Aricidea (Acmira) horikoshii</i>	ANNELIDA	Polychaeta	Paraonidae	11	0.07	13.5
<i>Marphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	11	0.07	16.2
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadilidae	11	0.07	18.9
<i>Listriella melanica</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	11	0.07	13.5
<i>Mactrotoma californica</i>	MOLLUSCA	Bivalvia	Mactridae	11	0.07	10.8
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	11	0.07	10.8
<i>Paramicrodeutopus schmitti</i>	ARTHROPODA	Malacostraca	Aoridae	11	0.07	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	11	0.07	21.6
<i>Tubulanus</i> sp A	NEMERTEA	Anopla	Tubulanidae	10	0.06	16.2
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	10	0.06	21.6
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	10	0.06	18.9
<i>Acteocina culcitella</i>	MOLLUSCA	Gastropoda	Cylchnidae	10	0.06	2.7
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	9	0.06	10.8
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	9	0.06	13.5
<i>Arcularia tiarula</i>	MOLLUSCA	Gastropoda	Nassariidae	9	0.06	21.6
<i>Heteroserolis carinata</i>	ARTHROPODA	Malacostraca	Serolidae	9	0.06	8.1
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	9	0.06	13.5
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	9	0.06	18.9
<i>Nutricola tantilla</i>	MOLLUSCA	Bivalvia	Veneridae	8	0.05	2.7
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	8	0.05	13.5
<i>Metasychis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	8	0.05	13.5
<i>Apopriionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	8	0.05	16.2
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	8	0.05	13.5
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	8	0.05	21.6
<i>Caprella simia</i>	ARTHROPODA	Malacostraca	Caprellidae	8	0.05	2.7
<i>Acteocina</i> sp	MOLLUSCA	Gastropoda	Cylchnidae	8	0.05	13.5
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	8	0.05	5.4
<i>Mesokallia</i> pseudes crassus	ARTHROPODA	Malacostraca	Kalliapseudidae	8	0.05	5.4
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	8	0.05	8.1
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	8	0.05	18.9
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	7	0.05	8.1
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.05	13.5
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	7	0.05	8.1
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	7	0.05	13.5
Majoidea	ARTHROPODA	Malacostraca		7	0.05	8.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	7	0.05	10.8
<i>Typosyllis nipponica</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	5.4
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	7	0.05	10.8
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	6	0.04	8.1
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	6	0.04	5.4
<i>Pseudopotamilla</i> sp 1	ANNELIDA	Polychaeta	Sabellidae	6	0.04	2.7
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	6	0.04	10.8
<i>Bemlos macromanus</i>	ARTHROPODA	Malacostraca	Aoridae	6	0.04	2.7
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	6	0.04	10.8
<i>Vargula tsujii</i>	ARTHROPODA	Ostracoda	Cypridinidae	6	0.04	13.5
Heteronemertea	NEMERTEA	Anopla		6	0.04	10.8
<i>Betaeus ensenadensis</i>	ARTHROPODA	Malacostraca	Alpheidae	6	0.04	5.4
<i>Bulla gouldiana</i>	MOLLUSCA	Gastropoda	Bullidae	6	0.04	8.1
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	6	0.04	13.5
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	6	0.04	2.7
<i>Epigamia-Myrianida</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	6	0.04	5.4
<i>Zeuxo normani</i>	ARTHROPODA	Malacostraca	Tanaidae	6	0.04	2.7
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	6	0.04	10.8
<i>Rhamphidonta retifera</i>	MOLLUSCA	Bivalvia	Lasaeidae	5	0.03	8.1
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	5	0.03	10.8
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	5	0.03	13.5
<i>Aricidea (Acmira) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	5	0.03	10.8
<i>Metamysidopsis elongata</i>	ARTHROPODA	Malacostraca	Mysidae	5	0.03	5.4
<i>Callianax baetica</i>	MOLLUSCA	Gastropoda	Olivellidae	5	0.03	5.4
<i>Goniada littorea</i>	ANNELIDA	Polychaeta	Goniadidae	5	0.03	10.8
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	5	0.03	2.7
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	5	0.03	8.1
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.03	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nasageneia quinsana</i>	ARTHROPODA	Malacostraca	Eusiridae	5	0.03	2.7
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	5	0.03	8.1
<i>Eteone brigitteae</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.03	10.8
<i>Erichsonella crenulata</i>	ARTHROPODA	Malacostraca	Idoteidae	5	0.03	2.7
<i>Podarkeopsis</i> sp A	ANNELIDA	Polychaeta	Hesionidae	4	0.03	2.7
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	4	0.03	10.8
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.03	8.1
<i>Cyathodonta pedroana</i>	MOLLUSCA	Bivalvia	Thraciidae	4	0.03	10.8
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	4	0.03	8.1
<i>Tubulanus</i> sp SD1	NEMERTEA	Anopla	Tubulanidae	4	0.03	5.4
<i>Macoma nasuta</i>	MOLLUSCA	Bivalvia	Tellinidae	4	0.03	5.4
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	4	0.03	10.8
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	4	0.03	5.4
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	4	0.03	8.1
<i>Columbellidae</i>	MOLLUSCA	Gastropoda	Columbellidae	4	0.03	2.7
<i>Palaeonemertea</i>	NEMERTEA	Anopla		4	0.03	10.8
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	4	0.03	2.7
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	4	0.03	8.1
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	4	0.03	5.4
<i>Tanaidacea</i>	ARTHROPODA	Malacostraca		4	0.03	2.7
<i>Stylatula</i> sp A	CNIDARIA	Anthozoa	Virgulariidae	4	0.03	2.7
<i>Streblosoma</i> sp	ANNELIDA	Polychaeta	Terebellidae	4	0.03	8.1
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.03	8.1
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	10.8
<i>Mysidopsis intii</i>	ARTHROPODA	Malacostraca	Mysidae	3	0.02	8.1
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	5.4
<i>Dialychnone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	3	0.02	5.4
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	3	0.02	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Vitrinella oldroydi</i>	MOLLUSCA	Gastropoda	Tornidae	3	0.02	5.4
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.02	5.4
Spionidae	ANNELIDA	Polychaeta	Spionidae	3	0.02	8.1
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	3	0.02	8.1
<i>Alpheus californiensis</i>	ARTHROPODA	Malacostraca	Alpheidae	3	0.02	8.1
<i>Caprella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	3	0.02	2.7
Cancridae	ARTHROPODA	Malacostraca	Cancridae	3	0.02	5.4
<i>Haminoea vesicula</i>	MOLLUSCA	Gastropoda	Haminoidae	3	0.02	8.1
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	8.1
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	3	0.02	5.4
<i>Neaeromya compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.02	2.7
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.02	8.1
<i>Levinsenia multibranchiata</i>	ANNELIDA	Polychaeta	Paraonidae	3	0.02	2.7
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	3	0.02	8.1
<i>Ianiropsis tridens</i>	ARTHROPODA	Malacostraca	Janiridae	3	0.02	2.7
<i>Paradexamine</i> sp SD1	ARTHROPODA	Malacostraca	Dexaminidae	3	0.02	5.4
<i>Leucothoe nagatai</i>	ARTHROPODA	Malacostraca	Leucothoidae	3	0.02	2.7
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.02	8.1
<i>Lottia depicta</i>	MOLLUSCA	Gastropoda	Lottiidae	3	0.02	5.4
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	3	0.02	2.7
<i>Polycirrus</i> sp I	ANNELIDA	Polychaeta	Terebellidae	3	0.02	2.7
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	3	0.02	5.4
<i>Hippolyte californiensis</i>	ARTHROPODA	Malacostraca	Hippolytidae	3	0.02	2.7
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	3	0.02	5.4
<i>Harmothoe fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	8.1
Mactridae	MOLLUSCA	Bivalvia	Mactridae	3	0.02	5.4
<i>Exogone</i> sp A	ANNELIDA	Polychaeta	Syllidae	3	0.02	2.7
<i>Hartmanodes</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	3	0.02	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Crepidula</i> sp	MOLLUSCA	Gastropoda	Calyptidae	3	0.02	5.4
<i>Bittiolum fastigiatum</i>	Mollusca	Gastropoda	Cerithiidae	2	0.01	2.7
<i>Kurtziella plumbea</i>	MOLLUSCA	Gastropoda	Mangeliidae	2	0.01	5.4
<i>Bispira</i> sp	ANNELIDA	Polychaeta	Sabellidae	2	0.01	2.7
Edwardsiidae	CNIDARIA	Anthozoa	Edwardsiidae	2	0.01	5.4
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	2	0.01	5.4
<i>Arachnanthus</i> sp A	CNIDARIA	Anthozoa	Cerianthidae	2	0.01	5.4
<i>Callithaca tenerima</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.01	5.4
<i>Aphelochaeta</i> sp HYP2	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	5.4
<i>Styela plicata</i>	CHORDATA	Asciacea	Styelidae	2	0.01	2.7
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		2	0.01	5.4
<i>Gonopanope nitida</i>	Arthropoda	Malacostraca	Xanthidae	2	0.01	5.4
<i>Heteromysis odontops</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	5.4
<i>Syllis gracilis</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	2	0.01	5.4
<i>Photis</i> sp OC1	ARTHROPODA	Malacostraca	Photidae	2	0.01	5.4
<i>Malacoplax californiensis</i>	ARTHROPODA	Malacostraca	Panopeidae	2	0.01	5.4
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllocoptidae	2	0.01	5.4
<i>Phyllochaetopterus prolificus</i>	ANNELIDA	Polychaeta	Chaetopteridae	2	0.01	5.4
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	2	0.01	5.4
Harpacticoida	ARTHROPODA	Maxillopoda		2	0.01	5.4
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	5.4
<i>Lucinisa nuttalli</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.01	5.4
Virgulariidae	CNIDARIA	Anthozoa	Virgulariidae	2	0.01	2.7
<i>Monocorophium</i> sp	ARTHROPODA	Malacostraca	Corophiidae	2	0.01	5.4
<i>Uristes entalladurus</i>	ARTHROPODA	Malacostraca	Uristidae	2	0.01	2.7
Brachyura	ARTHROPODA	Malacostraca		2	0.01	5.4
<i>Listriella eriopis</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.01	5.4
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	2	0.01	5.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Listriella diffusa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.01	2.7
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	2	0.01	5.4
<i>Leptopecten latiauratus</i>	MOLLUSCA	Bivalvia	Pectinidae	2	0.01	5.4
<i>Halcampa decemtentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	2	0.01	5.4
<i>Gyptis brunnea</i>	ANNELIDA	Polychaeta	Hesionidae	2	0.01	5.4
<i>Laevicardium substriatum</i>	MOLLUSCA	Bivalvia	Cardiidae	2	0.01	2.7
<i>Virgularia agassizii</i>	CNIDARIA	Anthozoa	Virgulariidae	2	0.01	5.4
<i>Ampithoe longimana</i>	ARTHROPODA	Malacostraca	Ampithoidae	2	0.01	2.7
<i>Monocorophium uenoi</i>	ARTHROPODA	Malacostraca	Corophiidae	2	0.01	2.7
<i>Onuphis</i> sp A	ANNELIDA	Polychaeta	Onuphidae	2	0.01	2.7
<i>Parasabella</i> sp 1	ANNELIDA	Polychaeta	Sabellidae	2	0.01	2.7
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	2	0.01	5.4
<i>Scyphoprocus oculatus</i>	ANNELIDA	Polychaeta	Capitellidae	2	0.01	2.7
Petricolidae	MOLLUSCA	Bivalvia	Petricolidae	2	0.01	5.4
<i>Scolelepis (Parascolelepis) texana</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	2.7
Glycera sp	ANNELIDA	Polychaeta	Glyceridae	2	0.01	5.4
<i>Goniada acicula</i>	ANNELIDA	Polychaeta	Goniadidae	2	0.01	2.7
<i>Saxicavella nybakkeni</i>	MOLLUSCA	Bivalvia	Hiatellidae	2	0.01	5.4
<i>Ambidexter panamensis</i>	ARTHROPODA	Malacostraca	Processidae	2	0.01	5.4
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephtyidae	2	0.01	5.4
<i>Notopoma</i> sp A	ARTHROPODA	Malacostraca	Ischyroceridae	2	0.01	5.4
<i>Eugyra arenosa californica</i>	CHORDATA	Asciidiacea	Molgulidae	2	0.01	2.7
<i>Ampithoe</i> sp	ARTHROPODA	Malacostraca	Ampithoidae	2	0.01	2.7
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	2	0.01	5.4
<i>Poecilochaetus</i> sp	ANNELIDA	Polychaeta	Poecilochaetidae	2	0.01	5.4
Gammaridea	ARTHROPODA	Malacostraca		2	0.01	2.7
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	2.7
<i>Malmgreniella</i> sp SD2	ANNELIDA	Polychaeta	Polynoidae	1	0.01	2.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Ceriantharia	CNIDARIA	Anthozoa		1	0.01	2.7
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	2.7
<i>Rhepoxyntius menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	2.7
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	2.7
<i>Mediomastus acutus</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.01	2.7
<i>Saxidomus nuttalli</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.7
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	2.7
<i>Alpheus</i> sp	ARTHROPODA	Malacostraca	Alpheidae	1	0.01	2.7
<i>Edwardsia</i> sp	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	2.7
Molgulidae	CHORDATA	Asciidiacea	Molgulidae	1	0.01	2.7
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	2.7
Caridea	ARTHROPODA	Malacostraca		1	0.01	2.7
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	1	0.01	2.7
<i>Carazziella</i> sp A	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	2.7
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	1	0.01	2.7
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.01	2.7
<i>Heptacarpus stimpsoni</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	2.7
<i>Emprostopharynx gracilis</i>	PLATYHELMINTHES	Turbellaria	Stylochoplaniidae	1	0.01	2.7
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	1	0.01	2.7
<i>Crangon</i> sp	ARTHROPODA	Malacostraca	Crangonidae	1	0.01	2.7
<i>Dorvillea (Dorvillea)</i> sp	ANNELIDA	Polychaeta	Dorvilleidae	1	0.01	2.7
<i>Hoploneumertea</i> sp MB1	NEMERTEA	Enopla		1	0.01	2.7
<i>Hydrodoides</i> sp	ANNELIDA	Polychaeta	Serpulidae	1	0.01	2.7
<i>Ensis myrae</i>	MOLLUSCA	Bivalvia	Pharidae	1	0.01	2.7
<i>Polydora narica</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7
<i>Laonice</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7
<i>Leucilla nuttingi</i>	CALCAREA	Calcarea	Amphoriscidae	1	0.01	2.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	2.7
<i>Chione californiensis</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.7
<i>Leukoma staminea</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.7
<i>Dipolydora</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7
Corophioidea	ARTHROPODA	Malacostraca		1	0.01	2.7
Opisthobranchia	MOLLUSCA	Gastropoda		1	0.01	2.7
<i>Ophiothrix spiculata</i>	ECHINODERMATA	Ophiuroidea	Ophiotrichidae	1	0.01	2.7
<i>Listriella</i> sp	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	2.7
<i>Pinnixa longipes</i>	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.01	2.7
<i>Aegires albopunctatus</i>	MOLLUSCA	Gastropoda	Aegiretidae	1	0.01	2.7
<i>Gari fucata</i>	MOLLUSCA	Bivalvia	Psammobiidae	1	0.01	2.7
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	2.7
Gastropoda	MOLLUSCA	Gastropoda		1	0.01	2.7
<i>Parviplana hymani</i>	PLATYHELMINTHES	Turbellaria	Leptoplanidae	1	0.01	2.7
<i>Macoma indentata</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.7
Veneridae	MOLLUSCA	Bivalvia	Veneridae	1	0.01	2.7
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	1	0.01	2.7
<i>Corymorpha</i> sp	CNIDARIA	Hydrozoa	Corymorphidae	1	0.01	2.7
<i>Phoronopsis</i> sp	PHORONA		Phoronidae	1	0.01	2.7
<i>Eohaustorius barnardi</i>	ARTHROPODA	Malacostraca	Haustoriidae	1	0.01	2.7
Styelidae	CHORDATA	Asciidiacea	Styelidae	1	0.01	2.7
<i>Stylochus exiguum</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	1	0.01	2.7
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.01	2.7
<i>Scoletoma erecta</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	2.7
Photidae	ARTHROPODA	Malacostraca	Photidae	1	0.01	2.7
Mysidae	ARTHROPODA	Malacostraca	Mysidae	1	0.01	2.7
Thraciidae	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	2.7
<i>Streblosoma</i> sp SF1	ANNELIDA	Polychaeta	Terebellidae	1	0.01	2.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Podocerus</i> sp	ARTHROPODA	Malacostraca	Podoceridae	1	0.01	2.7
<i>Tellinidae</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.7
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	2.7
<i>Tellina</i> sp	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.7
<i>Siliqua lucida</i>	MOLLUSCA	Bivalvia	Pharidae	1	0.01	2.7
<i>Aoroides exilis</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	2.7
<i>Syllidae</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	2.7
<i>Tubulanidae</i> sp D	NEMERTEA	Anopla	Tubulanidae	1	0.01	2.7
<i>Podocerus cristatus</i>	ARTHROPODA	Malacostraca	Podoceridae	1	0.01	2.7
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	2.7
<i>Gnathiidae</i>	ARTHROPODA	Malacostraca	Gnathiidae	1	0.01	2.7
<i>Spio maculata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7
<i>Ancistrosyllis hamata</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	2.7
<i>Caprellidae</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	2.7
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	1	0.01	2.7
<i>Poecilochaetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilochaetidae	1	0.01	2.7
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	2.7
<i>Ampithoe plumulosa</i>	ARTHROPODA	Malacostraca	Ampithoidae	1	0.01	2.7
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	1	0.01	2.7
<i>Mytilus</i> sp	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	2.7
<i>Platynereis bicanalculata</i>	ANNELIDA	Polychaeta	Nereididae	1	0.01	2.7
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	2.7
<i>Mysidopsis californica</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	2.7
<i>Cumingia californica</i>	MOLLUSCA	Bivalvia	Semelidae	1	0.01	2.7
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	2.7

Table B5. Macrobenthic community summary for the Inner Shelf stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	656	5.04	52.5
<i>Spiochaetopterus costarum</i>	ANNELIDA	Polychaeta	Chaetopteridae	421	3.24	33.7
Cmplx	ANNELIDA	Bivalvia	Tellinidae	368	2.83	29.4
<i>Tellina modesta</i>	MOLLUSCA	Polychaeta	Capitellidae	344	2.64	27.5
<i>Mediomastus</i> sp	ANNELIDA	Ostracoda	Philomedidae	330	2.54	26.4
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Gastropoda	Caecidae	324	2.49	25.9
<i>Micranellum crebricinctum</i>	MOLLUSCA	Polychaeta	Cirratulidae	213	1.64	17.0
<i>Monticellina siblini</i>	ANNELIDA	Malacostraca	Ampeliscidae	204	1.57	16.3
<i>Ampelisca agassizi</i>	ARTHROPODA	Polychaeta	Spionidae	197	1.51	15.8
<i>Rhepoxygnus abronius</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	187	1.44	15.0
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	183	1.41	14.6
<i>Dialychnone veleronis</i>	ANNELIDA	Polychaeta	Sabellidae	165	1.27	13.2
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	163	1.25	13.0
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	159	1.22	12.7
<i>Parapriionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	141	1.08	11.3
<i>Typosyllis</i> sp	ANNELIDA	Polychaeta	Syllidae	140	1.08	11.2
<i>Questa caudicirra</i>	ANNELIDA	Polychaeta	Orbiniidae	137	1.05	11.0
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	136	1.05	10.9
<i>Caecianiroopsis</i> sp LA1	ARTHROPODA	Malacostraca	Janiridae	135	1.04	10.8
<i>Diastylopsis tenuis</i>	ARTHROPODA	Malacostraca	Diastylidae	125	0.96	10.0
Oligochaeta	ANNELIDA	Oligochaeta		123	0.95	9.8
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	118	0.91	9.4
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	117	0.90	9.4
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	108	0.83	8.6
<i>Lumbrineris</i> sp E	ANNELIDA	Polychaeta	Lumbrineridae	107	0.82	8.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Rhepoxygnus menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	107	0.82	8.6
<i>Halistylus pupoideus</i>	MOLLUSCA	Gastropoda	Trochidae	106	0.81	8.5
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	105	0.81	8.4
<i>Rhepoxygnus stenodes</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	104	0.80	8.3
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	98	0.75	7.8
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	95	0.73	7.6
<i>Caprella mendax</i>	ARTHROPODA	Malacostraca	Caprellidae	94	0.72	7.5
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	93	0.71	7.4
<i>Platynereis bicanaliculata</i>	ANNELIDA	Polychaeta	Nereididae	89	0.68	7.1
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	87	0.67	7.0
<i>Foxiphalus obtusidens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	84	0.65	6.7
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	83	0.64	6.6
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	80	0.61	6.4
<i>Phoronis</i> sp	PHORONA		Phoronidae	79	0.61	6.3
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	76	0.58	6.1
<i>Glottidia albida</i>	BRACHIOPODA	Inarticulata	Lingulidae	74	0.57	5.9
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	74	0.57	5.9
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	71	0.55	5.7
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	69	0.53	5.5
<i>Owenia johnsoni</i>	ANNELIDA	Polychaeta	Oweniidae	68	0.52	5.4
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	68	0.52	5.4
<i>Leptochelia</i> sp DC1	ARTHROPODA	Malacostraca	Leptocheliidae	67	0.51	5.4
<i>Magelona sacculata</i>	ANNELIDA	Polychaeta	Magelonidae	66	0.51	5.3
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	66	0.51	5.3
<i>Goniada littorea</i>	ANNELIDA	Polychaeta	Goniadidae	63	0.48	5.0
Balanidae	ARTHROPODA	Maxillopoda	Balanidae	63	0.48	5.0
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	62	0.48	5.0
<i>Mooreonuphis</i> sp LA1	ANNELIDA	Polychaeta	Onuphidae	62	0.48	5.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Polydora cirrosa</i>	ANNELIDA	Polychaeta	Spionidae	61	0.47	4.9
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	61	0.47	4.9
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadilidae	60	0.46	4.8
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	56	0.43	4.5
<i>Onuphis</i> sp A	ANNELIDA	Polychaeta	Onuphidae	54	0.42	4.3
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	53	0.41	4.2
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	52	0.40	4.2
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	52	0.40	4.2
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	51	0.39	4.1
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	51	0.39	4.1
<i>Apopriionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	50	0.38	4.0
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	46	0.35	3.7
<i>Paradoneis lyra</i>	ANNELIDA	Polychaeta	Paraonidae	44	0.34	3.5
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	42	0.32	3.4
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	42	0.32	3.4
<i>Sigalion spinosus</i>	ANNELIDA	Polychaeta	Sigalionidae	42	0.32	3.4
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	41	0.32	3.3
<i>Prionospio (Minusprio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	41	0.32	3.3
<i>Mooreonuphis nebulosa</i>	ANNELIDA	Polychaeta	Onuphidae	41	0.32	3.3
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	40	0.31	3.2
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	39	0.30	3.1
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	38	0.29	3.0
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	37	0.28	3.0
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	37	0.28	3.0
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	36	0.28	2.9
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	36	0.28	2.9
<i>Pareurythoe californica</i>	ANNELIDA	Polychaeta	Amphinomidae	35	0.27	2.8
<i>Scoloplos armiger</i> Cmplx	ANNELIDA	Polychaeta	Orbiniidae	34	0.26	2.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	34	0.26	2.7
<i>Dialychnone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	34	0.26	2.7
<i>Branchiostoma californiense</i>	CHORDATA		Branchiostomatidae	33	0.25	2.6
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	33	0.25	2.6
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	32	0.25	2.6
<i>Photis bifurcata</i>	ARTHROPODA	Malacostraca	Photidae	32	0.25	2.6
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	32	0.25	2.6
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	31	0.24	2.5
<i>Aricidea (Acmira) cerrutii</i>	ANNELIDA	Polychaeta	Paraonidae	31	0.24	2.5
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	31	0.24	2.5
Golfingiidae	SIPUNCULA	Sipunculidea	Golfingiidae	30	0.23	2.4
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	30	0.23	2.4
<i>Aricidea (Acmira) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	29	0.22	2.3
Lineidae	NEMERTEA	Anopla	Lineidae	29	0.22	2.3
<i>Aoroides inermis</i>	ARTHROPODA	Malacostraca	Aoridae	29	0.22	2.3
Palaeonemertea	NEMERTEA	Anopla		29	0.22	2.3
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	28	0.22	2.2
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	28	0.22	2.2
<i>Metasychis dispartidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	27	0.21	2.2
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	27	0.21	2.2
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	27	0.21	2.2
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	27	0.21	2.2
Modiolinae	MOLLUSCA	Bivalvia	Mytilidae	26	0.20	2.1
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	25	0.19	2.0
<i>Alia tuberosa</i>	MOLLUSCA	Gastropoda	Columbellidae	25	0.19	2.0
<i>Photis</i> sp OC1	ARTHROPODA	Malacostraca	Photidae	25	0.19	2.0
<i>Magelon Hartmanae</i>	ANNELIDA	Polychaeta	Magelonidae	24	0.18	1.9
Hoploneuramertea	NEMERTEA	Enopla		24	0.18	1.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Chaetzone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	24	0.18	1.9
<i>Nereis latescens</i>	ANNELIDA	Polychaeta	Nereididae	24	0.18	1.9
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	24	0.18	1.9
<i>Caesia perpinguis</i>	MOLLUSCA	Gastropoda	Nassariidae	23	0.18	1.8
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	23	0.18	1.8
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	23	0.18	1.8
<i>Gibberosus myersi</i>	ARTHROPODA	Malacostraca	Megalopidae	22	0.17	1.8
<i>Chaetzone columbiana</i>	ANNELIDA	Polychaeta	Cirratulidae	22	0.17	1.8
<i>Protodorvillea gracilis</i>	ANNELIDA	Polychaeta	Dorvilleidae	22	0.17	1.8
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	22	0.17	1.8
<i>Modiolus sacculifer</i>	MOLLUSCA	Bivalvia	Mytilidae	22	0.17	1.8
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	22	0.17	1.8
<i>Dendraster</i> sp	ECHINODERMATA	Echinoidea	Dendrasteridae	22	0.17	1.8
<i>Arabella</i> sp	ANNELIDA	Polychaeta	Oenonidae	21	0.16	1.7
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	21	0.16	1.7
<i>Diopatra ornata</i>	ANNELIDA	Polychaeta	Onuphidae	21	0.16	1.7
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	21	0.16	1.7
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	21	0.16	1.7
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Embletonematidae	21	0.16	1.7
<i>Eohaustorius barnardi</i>	ARTHROPODA	Malacostraca	Haustoriidae	20	0.15	1.6
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	20	0.15	1.6
<i>Crenella decussata</i>	MOLLUSCA	Bivalvia	Mytilidae	20	0.15	1.6
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	20	0.15	1.6
<i>Megabalanus californicus</i>	ARTHROPODA	Maxillopoda	Balanidae	20	0.15	1.6
Actiniaria	CNIDARIA	Anthozoa		20	0.15	1.6
Cancridae	ARTHROPODA	Malacostraca	Cancridae	20	0.15	1.6
<i>Palaeonemertea</i> sp SD2	NEMERTEA	Anopla		20	0.15	1.6
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	19	0.15	1.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Paleanotus bellis</i>	ANNELIDA	Polychaeta	Chrysopetalidae	19	0.15	1.5
<i>Thelepus setosus</i>	ANNELIDA	Polychaeta	Terebellidae	19	0.15	1.5
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	19	0.15	1.5
<i>Tiburonella viscana</i>	ARTHROPODA	Malacostraca	Platyischnopidae	19	0.15	1.5
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	19	0.15	1.5
<i>Caecianiopsis sp LA2</i>	ARTHROPODA	Malacostraca	Janiridae	19	0.15	1.5
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	19	0.15	1.5
<i>Asteropella slatteryi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	19	0.15	1.5
Harpacticoida	ARTHROPODA	Maxillopoda		19	0.15	1.5
<i>Hemilamprops californicus</i>	ARTHROPODA	Malacostraca	Lampropidae	18	0.14	1.4
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	18	0.14	1.4
Enteropneusta	CHORDATA	Enteropneusta		18	0.14	1.4
<i>Metamysidopsis elongata</i>	ARTHROPODA	Malacostraca	Mysidae	18	0.14	1.4
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	17	0.13	1.4
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	17	0.13	1.4
Aoridae	ARTHROPODA	Malacostraca	Aoridae	17	0.13	1.4
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	17	0.13	1.4
<i>Amphioplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	17	0.13	1.4
<i>Urticina</i> sp A	CNIDARIA	Anthozoa	Actiniidae	17	0.13	1.4
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	17	0.13	1.4
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephtyidae	17	0.13	1.4
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	17	0.13	1.4
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	17	0.13	1.4
<i>Gammaropsis thompsoni</i>	ARTHROPODA	Malacostraca	Photidae	16	0.12	1.3
<i>Tubulanus</i> sp A	NEMERTEA	Anopla	Tubulanidae	16	0.12	1.3
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	16	0.12	1.3
<i>Poecilocheetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilocheatidae	16	0.12	1.3
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	16	0.12	1.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nebalia daytoni</i>	ARTHROPODA	Malacostraca	Nebaliidae	15	0.12	1.2
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	15	0.12	1.2
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	15	0.12	1.2
<i>Rhepoxygnus variatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	15	0.12	1.2
<i>Ampelisca lobata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	15	0.12	1.2
<i>Rhepoxygnus lucubrans</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	14	0.11	1.1
<i>Conus californicus</i>	MOLLUSCA	Gastropoda	Conidae	14	0.11	1.1
<i>Chaetozone lunula</i>	ANNELIDA	Polychaeta	Cirratulidae	14	0.11	1.1
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	14	0.11	1.1
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	14	0.11	1.1
<i>Hartmanodes hartmanae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	14	0.11	1.1
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	14	0.11	1.1
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		14	0.11	1.1
<i>Hesionura coineaui difficilis</i>	ANNELIDA	Polychaeta	Phyllodocidae	14	0.11	1.1
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	14	0.11	1.1
<i>Paraconcavus pacificus</i>	ARTHROPODA	Maxillopoda	Balanidae	14	0.11	1.1
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	14	0.11	1.1
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	14	0.11	1.1
<i>Foxiphalus golfensis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	14	0.11	1.1
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	14	0.11	1.1
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	14	0.11	1.1
<i>Exogone dwisula</i>	ANNELIDA	Polychaeta	Syllidae	13	0.10	1.0
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	13	0.10	1.0
<i>Chaetozone</i> sp SD3	ANNELIDA	Polychaeta	Cirratulidae	13	0.10	1.0
<i>Notopoma</i> sp A	ARTHROPODA	Malacostraca	Ischyroceridae	13	0.10	1.0
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	13	0.10	1.0
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	12	0.09	1.0
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	12	0.09	1.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	12	0.09	1.0
<i>Ampithoe</i> sp	ARTHROPODA	Malacostraca	Ampithoidae	12	0.09	1.0
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	12	0.09	1.0
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	12	0.09	1.0
<i>Syllides</i> sp DC1	ANNELIDA	Polychaeta	Syllidae	12	0.09	1.0
<i>Sthenelais tertiaiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	12	0.09	1.0
<i>Paradialychnone paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	12	0.09	1.0
<i>Arcteobia cf anticostiensis</i>	ANNELIDA	Polychaeta	Polynoidae	12	0.09	1.0
<i>Gammaropsis</i> sp	ARTHROPODA	Malacostraca	Photidae	12	0.09	1.0
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	12	0.09	1.0
<i>Leptopecten latiauratus</i>	MOLLUSCA	Bivalvia	Pectinidae	12	0.09	1.0
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	12	0.09	1.0
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	11	0.08	0.9
<i>Macoma nasuta</i>	MOLLUSCA	Bivalvia	Tellinidae	11	0.08	0.9
<i>Chaetopteridae</i>	ANNELIDA	Polychaeta	Chaetopteridae	11	0.08	0.9
<i>Zaolutes actius</i>	CNIDARIA	Anthozoa	Isanthidae	11	0.08	0.9
<i>Pisione</i> sp	ANNELIDA	Polychaeta	Pisionidae	11	0.08	0.9
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	11	0.08	0.9
<i>Ensis myrae</i>	MOLLUSCA	Bivalvia	Pharidae	11	0.08	0.9
<i>Mooreonuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	11	0.08	0.9
<i>Tetrastemma nigrifrons</i>	NEMERTEA	Enopla	Tetrastemmatidae	11	0.08	0.9
<i>Ampelisciphotos podophthalma</i>	ARTHROPODA	Malacostraca	Photidae	11	0.08	0.9
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	11	0.08	0.9
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	11	0.08	0.9
<i>Aruga oculata</i>	ARTHROPODA	Malacostraca	Lysianassidae	10	0.08	0.8
<i>Astropecten californicus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	10	0.08	0.8
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	10	0.08	0.8
<i>Polycirrus</i> sp OC1	ANNELIDA	Polychaeta	Terebellidae	10	0.08	0.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	10	0.08	0.8
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	10	0.08	0.8
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	10	0.08	0.8
<i>Pectinaria granulata</i>	ANNELIDA	Polychaeta	Pectinariidae	10	0.08	0.8
<i>Periploma discus</i>	MOLLUSCA	Bivalvia	Periplomatidae	10	0.08	0.8
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	10	0.08	0.8
<i>Sige</i> sp A	ANNELIDA	Polychaeta	Phyllodocidae	10	0.08	0.8
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	10	0.08	0.8
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	10	0.08	0.8
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	9	0.07	0.7
<i>Paramicrodeutopus schmitti</i>	ARTHROPODA	Malacostraca	Aoridae	9	0.07	0.7
<i>Parexogone brunnea</i>	ANNELIDA	Polychaeta	Syllidae	9	0.07	0.7
<i>Acteocina culcitella</i>	MOLLUSCA	Gastropoda	Cylichnidae	9	0.07	0.7
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	9	0.07	0.7
<i>Alienacanthomysis macropsis</i>	ARTHROPODA	Malacostraca	Mysidae	9	0.07	0.7
<i>Calyptaeidae</i>	MOLLUSCA	Gastropoda	Calyptaeidae	9	0.07	0.7
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	9	0.07	0.7
<i>Siliqua lucida</i>	MOLLUSCA	Bivalvia	Pharidae	9	0.07	0.7
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	9	0.07	0.7
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	9	0.07	0.7
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	9	0.07	0.7
<i>Cirratulidae</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.07	0.7
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	9	0.07	0.7
<i>Aricidea (Acmira) horikoshii</i>	ANNELIDA	Polychaeta	Paraonidae	9	0.07	0.7
<i>Astroidea</i>	ECHINODERMATA	Astroidea		8	0.06	0.6
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	8	0.06	0.6
<i>Listriella melanica</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	8	0.06	0.6
<i>Saccocirrus</i> sp	ANNELIDA	Polychaeta	Saccocirridae	8	0.06	0.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	8	0.06	0.6
<i>Podocopida</i>	ARTHROPODA	Ostracoda		8	0.06	0.6
<i>Parandalia fauveli</i>	ANNELIDA	Polychaeta	Pilargidae	8	0.06	0.6
<i>Onuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	8	0.06	0.6
<i>Ogyrides</i> sp A	ARTHROPODA	Malacostraca	Ogyrididae	8	0.06	0.6
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	8	0.06	0.6
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	8	0.06	0.6
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	8	0.06	0.6
<i>Ophiuroconis bispinosa</i>	ECHINODERMATA	Ophiuroidea	Ophiodermatidae	8	0.06	0.6
<i>Leuroleberis sharpei</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	8	0.06	0.6
<i>Latulambrus occidentalis</i>	ARTHROPODA	Malacostraca	Parthenopidae	8	0.06	0.6
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	8	0.06	0.6
<i>Glossaulax reclusianus</i>	MOLLUSCA	Gastropoda	Naticidae	8	0.06	0.6
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	8	0.06	0.6
Echinoidea	ECHINODERMATA	Echinoidea		8	0.06	0.6
<i>Eumida longicornuta</i>	ANNELIDA	Polychaeta	Phyllodocidae	8	0.06	0.6
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	8	0.06	0.6
<i>Typosyllis farallonensis</i>	ANNELIDA	Polychaeta	Syllidae	8	0.06	0.6
Veneridae	MOLLUSCA	Bivalvia	Veneridae	8	0.06	0.6
<i>Tetrastemma albidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	8	0.06	0.6
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.05	0.6
<i>Notocirrus californiensis</i>	ANNELIDA	Polychaeta	Oenonidae	7	0.05	0.6
<i>Turbanilla</i> sp A	MOLLUSCA	Gastropoda	Pyramidellidae	7	0.05	0.6
<i>Brania heterocirra</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	0.6
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	7	0.05	0.6
<i>Rhepoxyinius heterocuspis</i> datus	ARTHROPODA	Malacostraca	Phoxocephalidae	7	0.05	0.6
Phoxocephalidae	ARTHROPODA	Malacostraca	Phoxocephalidae	7	0.05	0.6
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	7	0.05	0.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Ceriantharia	CNIDARIA	Anthozoa		7	0.05	0.6
<i>Periploma</i> sp	MOLLUSCA	Bivalvia	Periplomatidae	7	0.05	0.6
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	7	0.05	0.6
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	0.6
<i>Chaetozone</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	7	0.05	0.6
<i>Oxydromus pugettensis</i>	ANNELIDA	Polychaeta	Hesionidae	7	0.05	0.6
<i>Cnemidocarpa rhizophorae</i>	CHORDATA	Asciidiacea	Styelidae	7	0.05	0.6
<i>Ischyrocerus pelagops</i>	ARTHROPODA	Malacostraca	Ischyroceridae	7	0.05	0.6
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	7	0.05	0.6
<i>Eusyllis transecta</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	0.6
<i>Edotia sublittoralis</i>	ARTHROPODA	Malacostraca	Idoteidae	7	0.05	0.6
<i>Sthenelais verruculosa</i>	ANNELIDA	Polychaeta	Sigalionidae	7	0.05	0.6
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	7	0.05	0.6
<i>Hippomedon zetesimus</i>	ARTHROPODA	Malacostraca	Lysianassidae	7	0.05	0.6
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	7	0.05	0.6
<i>Arachnanthus</i> sp A	CNIDARIA	Anthozoa	Cerianthidae	7	0.05	0.6
<i>Brania brevipharyngea</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	0.6
<i>Kurtziella plumbea</i>	MOLLUSCA	Gastropoda	Mangeliidae	7	0.05	0.6
<i>Lamprops quadruplicatus</i>	ARTHROPODA	Malacostraca	Lampropidae	7	0.05	0.6
<i>Lucinisca nuttalli</i>	MOLLUSCA	Bivalvia	Lucinidae	7	0.05	0.6
<i>Ophiothrix spiculata</i>	ECHINODERMATA	Ophiuroidea	Ophiotrichidae	6	0.05	0.5
<i>Crepidula glottidiarum</i>	MOLLUSCA	Gastropoda	Calyptaeidae	6	0.05	0.5
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	6	0.05	0.5
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	6	0.05	0.5
<i>Tubulanidae</i> sp B	NEMERTEA	Anopla	Tubulanidae	6	0.05	0.5
Majoidea	ARTHROPODA	Malacostraca		6	0.05	0.5
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	6	0.05	0.5
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	6	0.05	0.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Microjassa boreopacifica</i>	ARTHROPODA	Malacostraca	Ischyroceridae	6	0.05	0.5
<i>Axiothella</i> sp	ANNELIDA	Polychaeta	Maldanidae	6	0.05	0.5
<i>Marphysa</i> sp	ANNELIDA	Polychaeta	Eunicidae	6	0.05	0.5
<i>Americhelidium</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	6	0.05	0.5
<i>Micropodarke dubia</i>	ANNELIDA	Polychaeta	Hesionidae	6	0.05	0.5
<i>Bipalponephrys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	6	0.05	0.5
<i>Parexogone breviseta</i>	ANNELIDA	Polychaeta	Syllidae	6	0.05	0.5
<i>Sabellidae</i>	ANNELIDA	Polychaeta	Sabellidae	6	0.05	0.5
<i>Rhynchospio arenincola</i>	ANNELIDA	Polychaeta	Spionidae	6	0.05	0.5
<i>Spionidae</i>	ANNELIDA	Polychaeta	Spionidae	6	0.05	0.5
<i>Byblis millsi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.05	0.5
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	6	0.05	0.5
<i>Protomediea articulata</i> Cmplx	ARTHROPODA	Malacostraca	Corophiidae	6	0.05	0.5
<i>Apionsoma misakianum</i>	SIPUNCULA	Phascolosomatidea	Phascolosomatidae	6	0.05	0.5
<i>Tiron biocellata</i>	ARTHROPODA	Malacostraca	Synopiidae	6	0.05	0.5
<i>Sthenelais berkeleyi</i>	ANNELIDA	Polychaeta	Sigalionidae	6	0.05	0.5
<i>Aricidea (Aricidea) wassi</i>	ANNELIDA	Polychaeta	Paraonidae	6	0.05	0.5
<i>Tellina idae</i>	MOLLUSCA	Bivalvia	Tellinidae	6	0.05	0.5
<i>Aoroides</i> sp	ARTHROPODA	Malacostraca	Aoridae	6	0.05	0.5
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	5	0.04	0.4
<i>Rhepoxynius tridentatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	5	0.04	0.4
<i>Crepidula</i> sp	MOLLUSCA	Gastropoda	Calyptaeidae	5	0.04	0.4
<i>Lumbrinerides</i> sp SD1	Annelida	Polychaeta	Lumbrineridae	5	0.04	0.4
<i>Artacamella hancocki</i>	ANNELIDA	Polychaeta	Trichobranchidae	5	0.04	0.4
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	5	0.04	0.4
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	5	0.04	0.4
<i>Scoletoma</i> sp A	ANNELIDA	Polychaeta	Lumbrineridae	5	0.04	0.4
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	5	0.04	0.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Hornellia occidentalis</i>	ARTHROPODA	Malacostraca	Cheirocratidae	5	0.04	0.4
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	5	0.04	0.4
<i>Capitella capitata Cmplx</i>	ANNELIDA	Polychaeta	Capitellidae	5	0.04	0.4
<i>Halcampus decemtentaculatus</i>	CNIDARIA	Anthozoa	Halcampidae	5	0.04	0.4
<i>Gnathopleustes pugettensis</i>	ARTHROPODA	Malacostraca	Pleustidae	5	0.04	0.4
<i>Scintillona bellerophon</i>	MOLLUSCA	Bivalvia	Galeommatidae	5	0.04	0.4
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	5	0.04	0.4
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	5	0.04	0.4
<i>Astropecten</i> sp	ECHINODERMATA	Asteroidea	Astropectinidae	5	0.04	0.4
Onuphidae	ANNELIDA	Polychaeta	Onuphidae	5	0.04	0.4
<i>Phyllodoce medipapillata</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.04	0.4
Petricolidae	MOLLUSCA	Bivalvia	Petricolidae	5	0.04	0.4
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	5	0.04	0.4
Mitra idae	MOLLUSCA	Gastropoda	Mitridae	5	0.04	0.4
Corophioidea	ARTHROPODA	Malacostraca		5	0.04	0.4
<i>Metacarcinus gracilis</i>	ARTHROPODA	Malacostraca	Cancridae	5	0.04	0.4
<i>Chiridota</i> sp	ECHINODERMATA	Holothuroidea	Chiridotidae	5	0.04	0.4
Epialtidae	ARTHROPODA	Malacostraca	Epialtidae	5	0.04	0.4
<i>Stylochus exiguum</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	4	0.03	0.3
<i>Eurydice caudata</i>	ARTHROPODA	Malacostraca	Cirolanidae	4	0.03	0.3
<i>Streblosoma</i> sp	ANNELIDA	Polychaeta	Terebellidae	4	0.03	0.3
<i>Onuphis eremita parva</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.03	0.3
<i>Eumida</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	4	0.03	0.3
<i>Vitreolina columbiana</i>	MOLLUSCA	Gastropoda	Eulimidae	4	0.03	0.3
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	4	0.03	0.3
<i>Eulalia levicornuta Cmplx</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.03	0.3
<i>Eteone pigmentata</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.03	0.3
<i>Garnotia naticarum</i>	MOLLUSCA	Gastropoda	Calyptaeidae	4	0.03	0.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Philinoglossa</i> sp A	MOLLUSCA	Gastropoda	Philinoglossidae	4	0.03	0.3
<i>Photis lacia</i>	ARTHROPODA	Malacostraca	Photidae	4	0.03	0.3
<i>Magelona</i> sp	ANNELIDA	Polychaeta	Magelonidae	4	0.03	0.3
<i>Lacuna unifasciata</i>	MOLLUSCA	Gastropoda	Littorinidae	4	0.03	0.3
<i>Lanice conchilega</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.03	0.3
<i>Laticorophium baconi</i>	ARTHROPODA	Malacostraca	Corophiidae	4	0.03	0.3
<i>Listriella eriopisa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	4	0.03	0.3
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	4	0.03	0.3
<i>Polydora</i> sp	ANNELIDA	Polychaeta	Spionidae	4	0.03	0.3
Nemertea	NEMERTEA			4	0.03	0.3
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	4	0.03	0.3
<i>Myriochele striolata</i>	ANNELIDA	Polychaeta	Oweniidae	4	0.03	0.3
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.03	0.3
<i>Renilla koellikeri</i>	CNIDARIA	Anthozoa	Renillidae	4	0.03	0.3
Mytilidae	MOLLUSCA	Bivalvia	Mytilidae	4	0.03	0.3
Autolytinae	ANNELIDA	Polychaeta	Syllidae	4	0.03	0.3
<i>Aonides</i> sp SD1	ANNELIDA	Polychaeta	Spionidae	4	0.03	0.3
<i>Aoroides exilis</i>	ARTHROPODA	Malacostraca	Aoridae	4	0.03	0.3
<i>Anchicolarus occidentalis</i>	ARTHROPODA	Malacostraca	Diastylidae	4	0.03	0.3
<i>Araphura breviaria</i>	ARTHROPODA	Malacostraca	Tanaellidae	4	0.03	0.3
<i>Edwardsia</i> sp	CNIDARIA	Anthozoa	Edwardsiidae	4	0.03	0.3
<i>Americhelidium</i> sp SD4	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.03	0.3
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	4	0.03	0.3
Bivalvia	MOLLUSCA	Bivalvia		4	0.03	0.3
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	3	0.02	0.2
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	3	0.02	0.2
<i>Cyathodonta pedroana</i>	MOLLUSCA	Bivalvia	Thraciidae	3	0.02	0.2
Leptoplanidae	PLATYHELMINTHES	Turbellaria	Leptoplanidae	3	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	3	0.02	0.2
<i>Joeropsis dubia</i>	ARTHROPODA	Malacostraca	Joeropsididae	3	0.02	0.2
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	3	0.02	0.2
<i>Alia carinata</i>	MOLLUSCA	Gastropoda	Columbellidae	3	0.02	0.2
<i>Arcteobia</i> sp LA1	ANNELIDA	Polychaeta	Polynoidae	3	0.02	0.2
Leptoplanidae	PLATYHELMINTHES	Turbellaria	Leptoplanidae	3	0.02	0.2
<i>Lepidopa californica</i>	ARTHROPODA	Malacostraca	Albuneidae	3	0.02	0.2
<i>Randallia ornata</i>	ARTHROPODA	Malacostraca	Leucosiidae	3	0.02	0.2
<i>Rhepoxynius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.02	0.2
<i>Rhepoxynius</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.02	0.2
Hippolytidae	ARTHROPODA	Malacostraca	Hippolytidae	3	0.02	0.2
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.02	0.2
Heteronemertea	NEMERTEA	Anopla		3	0.02	0.2
<i>Hemipodia borealis</i>	ANNELIDA	Polychaeta	Glyceridae	3	0.02	0.2
<i>Harmothoe fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	0.2
<i>Hamatoscalpellum californicum</i>	ARTHROPODA	Maxillopoda	Scalpellidae	3	0.02	0.2
<i>Prototrygaeus jordanae</i>	ARTHROPODA	Pycnogonida	Ammotheidae	3	0.02	0.2
<i>Ampithoe ramondi</i>	ARTHROPODA	Malacostraca	Ampithoidae	3	0.02	0.2
<i>Uromunna ubiquita</i>	ARTHROPODA	Malacostraca	Munnidae	3	0.02	0.2
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	3	0.02	0.2
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.02	0.2
<i>Parougia caeca</i>	ANNELIDA	Polychaeta	Dorvilleidae	3	0.02	0.2
Brachyura	ARTHROPODA	Malacostraca		3	0.02	0.2
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	3	0.02	0.2
<i>Batea transversa</i>	ARTHROPODA	Malacostraca	Bateidae	3	0.02	0.2
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	3	0.02	0.2
<i>Paracaprella cf alata</i>	Arthropoda	Malacostraca	Caprellidae	3	0.02	0.2
<i>Sthenelais fusca</i>	ANNELIDA	Polychaeta	Sigalionidae	3	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Pinnotheridae	ARTHROPODA	Malacostraca	Pinnotheridae	3	0.02	0.2
<i>Pherusa</i> sp SD2	ANNELIDA	Polychaeta	Flabelligeridae	3	0.02	0.2
<i>Romaleon jordani</i>	ARTHROPODA	Malacostraca	Cancridae	3	0.02	0.2
<i>Nereiphylla ferruginea</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	3	0.02	0.2
Nereididae	ANNELIDA	Polychaeta	Nereididae	3	0.02	0.2
<i>Nephtys</i> sp	ANNELIDA	Polychaeta	Nephtyidae	3	0.02	0.2
<i>Tellina nuculoides</i>	MOLLUSCA	Bivalvia	Tellinidae	3	0.02	0.2
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	3	0.02	0.2
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	3	0.02	0.2
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	3	0.02	0.2
<i>Blepharipoda occidentalis</i>	ARTHROPODA	Malacostraca	Blepharipodidae	3	0.02	0.2
<i>Magelona pitelkai</i>	ANNELIDA	Polychaeta	Magelonidae	3	0.02	0.2
<i>Pinnixa longipes</i>	ARTHROPODA	Malacostraca	Pinnotheridae	3	0.02	0.2
<i>Petricola carditoides</i>	MOLLUSCA	Bivalvia	Petricolidae	3	0.02	0.2
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	3	0.02	0.2
<i>Schistocomus</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	0.2
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	3	0.02	0.2
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	3	0.02	0.2
<i>Glycera oxycephala</i>	ANNELIDA	Polychaeta	Glyceridae	3	0.02	0.2
<i>Edotia</i> sp B	ARTHROPODA	Malacostraca	Idoteidae	3	0.02	0.2
<i>Eusarsiella thominx</i>	ARTHROPODA	Ostracoda	Sarsiellidae	3	0.02	0.2
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	3	0.02	0.2
<i>Scoloplos acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	3	0.02	0.2
<i>Apistobranchus ornatus</i>	ANNELIDA	Polychaeta	Apistobranchidae	3	0.02	0.2
<i>Epitonium hindsii</i>	MOLLUSCA	Gastropoda	Epitoniidae	3	0.02	0.2
<i>Foxiphalus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.02	0.2
<i>Sipunculus nudus</i>	SIPUNCULA	Sipunculidea	Sipunculidae	2	0.02	0.2
Naticidae	MOLLUSCA	Gastropoda	Naticidae	2	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Eulima raymondi</i>	MOLLUSCA	Gastropoda	Eulimidae	2	0.02	0.2
Sipunculidae	SIPUNCULA	Sipunculidea	Sipunculidae	2	0.02	0.2
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	2	0.02	0.2
<i>Clymenella complanata</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.02	0.2
Enopla	NEMERTEA	Enopla		2	0.02	0.2
<i>Tellina meropsis</i>	MOLLUSCA	Bivalvia	Tellinidae	2	0.02	0.2
<i>Nebalia pugettensis</i> Cmplx	ARTHROPODA	Malacostraca	Nebaliidae	2	0.02	0.2
<i>Callianax baetica</i>	MOLLUSCA	Gastropoda	Olivellidae	2	0.02	0.2
<i>Eulithidium pulloides</i>	MOLLUSCA	Gastropoda	Phasianellidae	2	0.02	0.2
<i>Anotomastus gordioides</i>	ANNELIDA	Polychaeta	Capitellidae	2	0.02	0.2
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	2	0.02	0.2
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.02	0.2
<i>Megalomma</i> sp	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Mesolamprops bispinosus</i>	ARTHROPODA	Malacostraca	Lampropidae	2	0.02	0.2
<i>Corymorphpha</i> sp	CNIDARIA	Hydrozoa	Corymorphidae	2	0.02	0.2
<i>Stylatula</i> sp	CNIDARIA	Anthozoa	Virgulariidae	2	0.02	0.2
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	2	0.02	0.2
Columbellidae	MOLLUSCA	Gastropoda	Columbellidae	2	0.02	0.2
Nassariidae	MOLLUSCA	Gastropoda	Nassariidae	2	0.02	0.2
<i>Rudilemboides</i> sp	ARTHROPODA	Malacostraca	Unciolidae	2	0.02	0.2
<i>Syllides reishi</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	0.2
<i>Ampharete</i> sp	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	0.2
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	2	0.02	0.2
<i>Cirriformia</i> sp SD2	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	0.2
<i>Phyllochaetopterus prolifica</i>	ANNELIDA	Polychaeta	Chaetopteridae	2	0.02	0.2
<i>Corymorphpha bigelowi</i>	CNIDARIA	Hydrozoa	Corymorphidae	2	0.02	0.2
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	2	0.02	0.2
<i>Phimochirus californiensis</i>	ARTHROPODA	Malacostraca	Paguridae	2	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Paradialychine bimaculata</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Paradialychine ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Paradialychine eiffelturris</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	2	0.02	0.2
Paguridae	ARTHROPODA	Malacostraca	Paguridae	2	0.02	0.2
<i>Trachycardium quadragenarium</i>	MOLLUSCA	Bivalvia	Cardiidae	2	0.02	0.2
<i>Pacifacanthomysis nephrophthalma</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.02	0.2
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	2	0.02	0.2
<i>Epitonium sawinae</i>	MOLLUSCA	Gastropoda	Epitoniidae	2	0.02	0.2
<i>Tritella laevis</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.02	0.2
<i>Arcteobia</i> sp	ANNELIDA	Polychaeta	Polynoidae	2	0.02	0.2
<i>Brania californiensis</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	0.2
<i>Astropecten armatus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	2	0.02	0.2
<i>Sphaerosyllis ranunculus</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	0.2
<i>Chaetozone spinosa</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	0.2
<i>Nuculana</i> sp	MOLLUSCA	Bivalvia	Nuculanidae	2	0.02	0.2
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	2	0.02	0.2
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinnotheridae	2	0.02	0.2
Chitonida	MOLLUSCA	Polyplacophora		2	0.02	0.2
<i>Calyptraea fastigiata</i>	MOLLUSCA	Gastropoda	Calyptraeidae	2	0.02	0.2
<i>Euchone hancocki</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	2	0.02	0.2
<i>Notomastus magnus</i>	ANNELIDA	Polychaeta	Capitellidae	2	0.02	0.2
<i>Ophiura luetkenii</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	2	0.02	0.2
<i>Solemya perverncosa</i>	MOLLUSCA	Bivalvia	Solemyidae	2	0.02	0.2
<i>Paradialychine harrisae</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	0.2
<i>Amphiodia psara</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.02	0.2
<i>Periploma planiusculum</i>	MOLLUSCA	Bivalvia	Periplomatidae	2	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Asabellides lineata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	0.2
<i>Lumbrineris latreilli</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.02	0.2
<i>Lysippe sp B</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	0.2
<i>Listriella sp</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.02	0.2
<i>Lysippe sp</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	0.2
<i>Heterospio catalinensis</i>	ANNELIDA	Polychaeta	Longosomatidae	2	0.02	0.2
<i>Polyopthalmus pictus</i>	ANNELIDA	Polychaeta	Opheliidae	2	0.02	0.2
<i>Leukoma staminea</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.02	0.2
Facelinidae	MOLLUSCA	Gastropoda	Facelinidae	2	0.02	0.2
<i>Drilonereis mexicana</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.02	0.2
<i>Aphelochaeta sp</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	0.2
<i>Lytechinus pictus</i>	ECHINODERMATA	Echinoidea	Toxopneustidae	2	0.02	0.2
<i>Scleroplax granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	2	0.02	0.2
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	2	0.02	0.2
<i>Lumbrinerides platypygos</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.02	0.2
<i>Fartulum occidentale</i>	MOLLUSCA	Gastropoda	Caecidae	2	0.02	0.2
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.02	0.2
<i>Polydora narica</i>	ANNELIDA	Polychaeta	Spionidae	2	0.02	0.2
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	0.2
<i>Isocheles pilosus</i>	ARTHROPODA	Malacostraca	Diogenidae	2	0.02	0.2
<i>Gyptis sp</i>	ANNELIDA	Polychaeta	Hesionidae	2	0.02	0.2
<i>Pyromia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	2	0.02	0.2
Dendrochirotida	ECHINODERMATA	Holothuroidea		2	0.02	0.2
<i>Schistocomus sp DC1</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	0.2
<i>Caprella sp</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.02	0.2
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraciidae	2	0.02	0.2
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.02	0.2
<i>Rimakoroga rima</i>	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	0.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Dendraster terminalis</i>	ECHINODERMATA	Echinoidea	Dendrasteridae	2	0.02	0.2
<i>Halosydnia brevisetosa</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	0.2
<i>Eusyllis blomstrandii</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	2	0.02	0.2
<i>Lasaeidae</i>	MOLLUSCA	Bivalvia	Lasaeidae	2	0.02	0.2
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	2	0.02	0.2
<i>Thracia</i> sp	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	0.1
<i>Rhamphidonta retifera</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	0.1
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Amphioplus</i> sp	ECHINODERMATA	Ophiuroidae	Amphiuridae	1	0.01	0.1
<i>Scaphopoda</i>	MOLLUSCA	Scaphopoda		1	0.01	0.1
<i>Pseudopotamilla</i> sp	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Tetrastemma candidum</i>	NEMERTEA	Enopla	Tetrastematidae	1	0.01	0.1
<i>Solenoidea</i>	MOLLUSCA	Bivalvia		1	0.01	0.1
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.01	0.1
<i>Parexogone molesta</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
<i>Chaetozone hedgpethi</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Tritella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	0.1
<i>Tritella pilimana</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	0.1
<i>Rudilemboides</i> sp A	ARTHROPODA	Malacostraca	Unciolidae	1	0.01	0.1
<i>Romaleon branneri</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.01	0.1
<i>Paraonidae</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	0.1
<i>Travisia gigas</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	0.1
<i>Parasabella fullo</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Rutiderma lomae</i>	ARTHROPODA	Ostracoda	Rutidermatidae	1	0.01	0.1
<i>Rhamphobrachium longisetosum</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	0.1
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Thraciidae</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	0.1
<i>Travisia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aphelochaeta</i> sp HYP2	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Bullomorpha</i> sp A	MOLLUSCA	Gastropoda		1	0.01	0.1
<i>Parvaplustrum</i> sp B	MOLLUSCA	Gastropoda	Aplustridae	1	0.01	0.1
<i>Potamethus</i> sp A	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Terebra hemphilli</i>	MOLLUSCA	Gastropoda	Terebridae	1	0.01	0.1
Pectinoidea	MOLLUSCA	Bivalvia		1	0.01	0.1
Spatangoida	ECHINODERMATA	Echinoidea		1	0.01	0.1
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
Anthozoa #49	CNIDARIA	Anthozoa		1	0.01	0.1
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.01	0.1
<i>Simomactra falcata</i>	MOLLUSCA	Bivalvia	Mactridae	1	0.01	0.1
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	0.1
Capitellidae	ANNELIDA	Polychaeta	Capitellidae	1	0.01	0.1
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
<i>Poecilochaetus</i> sp	ANNELIDA	Polychaeta	Poecilochaetidae	1	0.01	0.1
<i>Scolelepis (Scolelepis)</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	0.1
<i>Opisthodonta</i> sp 2	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
<i>Polydora cornuta</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	0.1
<i>Podarkeopsis</i> sp A	ANNELIDA	Polychaeta	Hesionidae	1	0.01	0.1
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	0.1
<i>Pleusyntes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	1	0.01	0.1
<i>Pista elongata</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	0.1
<i>Phylo felix</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	0.1
<i>Pilargis berkeleyae</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	0.1
<i>Stylatula elongata</i>	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	0.1
<i>Sigambra setosa</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	0.1
<i>Semele venusta</i>	MOLLUSCA	Bivalvia	Semelidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cancer productus</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.01	0.1
Phyllodocidae	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
Phoronida	PHORONA			1	0.01	0.1
Chaetodermatida	MOLLUSCA	Caudofoveata		1	0.01	0.1
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.01	0.1
Caridea	ARTHROPODA	Malacostraca		1	0.01	0.1
<i>Procephalothrix</i> sp	NEMERTEA	Anopla	Cephalothricidae	1	0.01	0.1
<i>Prachynella</i> sp	ARTHROPODA	Malacostraca	Pachynidae	1	0.01	0.1
<i>Syllis gracilis</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	1	0.01	0.1
<i>Streptodonta</i> sp 1	Annelida	Polychaeta	Syllidae	1	0.01	0.1
<i>Polycirrus</i> sp I	ANNELIDA	Polychaeta	Terebellidae	1	0.01	0.1
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	1	0.01	0.1
<i>Solen</i> sp	MOLLUSCA	Bivalvia	Solenidae	1	0.01	0.1
<i>Aoroides intermedia</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	0.1
<i>Sthenelais</i> sp	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	0.1
<i>Aricidea (Allia) antennata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	0.1
<i>Tellina</i> sp	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	0.1
Cephalaspidea	MOLLUSCA	Gastropoda		1	0.01	0.1
<i>Photis</i> sp C	ARTHROPODA	Malacostraca	Photidae	1	0.01	0.1
<i>Scolelepis (Scolelepis) occidentalis</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	0.1
<i>Photis viuda</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	0.1
<i>Amphiporus californicus</i>	NEMERTEA	Enopla	Amphiporidae	1	0.01	0.1
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	0.1
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Leptochiton nexus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	1	0.01	0.1
Cylindroleberididae	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	0.1
<i>Dasybranchus</i> sp	ANNELIDA	Polychaeta	Capitellidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Decapoda	ARTHROPODA	Malacostraca		1	0.01	0.1
<i>Dialychnone trilineata</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Leukoma</i> sp	MOLLUSCA	Bivalvia	Veneridae	1	0.01	0.1
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	0.1
<i>Cyclaspis</i> sp A	ARTHROPODA	Malacostraca	Bodotriidae	1	0.01	0.1
<i>Incisocalliope newportensis</i>	ARTHROPODA	Malacostraca	Pleustidae	1	0.01	0.1
<i>Idarcturus hedgpethi</i>	ARTHROPODA	Malacostraca	Arcturidae	1	0.01	0.1
<i>Hyalella azteca</i>	ARTHROPODA	Malacostraca	Hyalellidae	1	0.01	0.1
<i>Diopatra splendidissima</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	0.1
<i>Hoplonephertea</i> sp C	NEMERTEA	Enopla		1	0.01	0.1
<i>Dipolydora bidentata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	0.1
<i>Hippomedon</i> sp A	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	0.1
<i>Diastylis californica</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	0.1
<i>Acanthodoris brunnea</i>	MOLLUSCA	Gastropoda	Onchidorididae	1	0.01	0.1
Oweniidae	ANNELIDA	Polychaeta	Oweniidae	1	0.01	0.1
<i>Malmgreniella bansei</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Majoxiphalus major</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	0.1
Crangonidae	ARTHROPODA	Malacostraca	Crangonidae	1	0.01	0.1
Mactridae	MOLLUSCA	Bivalvia	Mactridae	1	0.01	0.1
<i>Crassispira semiinflata</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.01	0.1
<i>Leptostylis calva</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	0.1
<i>Acanthodoris</i> sp DC1	MOLLUSCA	Gastropoda	Onchidorididae	1	0.01	0.1
<i>Halosydna latior</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Lumbrineris lingulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	0.1
<i>Cryptocelis occidentalis</i>	PLATYHELMINTHES	Turbellaria	Cryptocelidae	1	0.01	0.1
<i>Cryptonemertes actinophila</i>	NEMERTEA	Enopla	Emplectonematidae	1	0.01	0.1
<i>Lovenia cordiformis</i>	ECHINODERMATA	Echinoidea	Loveniidae	1	0.01	0.1
<i>Loimia</i> sp A	ANNELIDA	Polychaeta	Terebellidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cyclaspis nubila</i>	ARTHROPODA	Malacostraca	Bodotriidae	1	0.01	0.1
<i>Listriella diffusa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	0.1
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	0.1
<i>Euchone arenae</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	1	0.01	0.1
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	1	0.01	0.1
<i>Eulithidium</i> sp	MOLLUSCA	Gastropoda	Phasianellidae	1	0.01	0.1
Eulimidae	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	0.1
<i>Eulalia quadrioculata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
<i>Eulalia californiensis</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
Hesionidae	ANNELIDA	Polychaeta	Hesionidae	1	0.01	0.1
<i>Euchone limnicola</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Eusyllis</i> sp	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
<i>Eualus</i> sp	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	0.1
<i>Eualus lineatus</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	0.1
<i>Eobrolgus chumashi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	0.1
<i>Eteone aestuarina</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
<i>Ericerodes hemphillii</i>	ARTHROPODA	Malacostraca	Inachidae	1	0.01	0.1
<i>Epitonium</i> sp	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	0.1
<i>Epitonium bellastriatum</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	0.1
<i>Eudistylia vancouveri</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Garnotia</i> sp	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	0.1
<i>Malmgreniella liei</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Halosydnia johnsoni</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Dodecaseta oraria</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.01	0.1
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	1	0.01	0.1
<i>Golfingia margaritacea</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.01	0.1
<i>Drilonereis longa</i>	ANNELIDA	Polychaeta	Oenonidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Gastropterion pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	1	0.01	0.1
Eusiridae	ARTHROPODA	Malacostraca	Eusiridae	1	0.01	0.1
<i>Garosyrrhoea bigarra</i>	ARTHROPODA	Malacostraca	Synopiidae	1	0.01	0.1
Eusyllinae	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
Gammaridea	ARTHROPODA	Malacostraca		1	0.01	0.1
<i>Galathowenia oculata</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	0.1
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	1	0.01	0.1
<i>Exacanthomysis davisii</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	0.1
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	0.1
<i>Heptacarpus stimpsoni</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	0.1
Gastropoda	MOLLUSCA	Gastropoda		1	0.01	0.1
<i>Chaetozone</i> sp SD7	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	0.1
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.01	0.1
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	0.1
<i>Nothria occidentalis</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	0.1
<i>Nutricola</i> sp	MOLLUSCA	Bivalvia	Veneridae	1	0.01	0.1
<i>Chloea pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	1	0.01	0.1
<i>Oerstedia dorsalis</i> Cmplx	NEMERTEA	Enopla	Prosorhochmidiae	1	0.01	0.1
<i>Onuphis elegans</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	0.1
<i>Chauliopleona dentata</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	1	0.01	0.1
<i>Ophelia pulchella</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	0.1
<i>Ophiodermella inermis</i>	MOLLUSCA	Gastropoda	Borsoniidae	1	0.01	0.1
<i>Amphicteis</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	0.1
<i>Nephtys simoni</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.01	0.1
<i>Owenia</i> sp	ANNELIDA	Polychaeta	Oweniidae	1	0.01	0.1
<i>Ampharete acutifrons</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	0.1
<i>Pachycerianthus</i> sp	CNIDARIA	Anthozoa	Cerianthidae	1	0.01	0.1
<i>Zeuxo paranormani</i>	ARTHROPODA	Malacostraca	Tanaidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Yoldia cooperii</i>	MOLLUSCA	Bivalvia	Yoldiidae	1	0.01	0.1
<i>Pachynus barnardi</i>	ARTHROPODA	Malacostraca	Pachynidae	1	0.01	0.1
<i>Volvulella</i> sp	MOLLUSCA	Gastropoda	Retusidae	1	0.01	0.1
<i>Epigamia-Myrianida</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
Virgulariidae	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	0.1
<i>Mysidopsis intii</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	0.1
<i>Vargula tsujii</i>	ARTHROPODA	Ostracoda	Cypridinidae	1	0.01	0.1
<i>Typosyllis</i> sp SD2	ANNELIDA	Polychaeta	Syllidae	1	0.01	0.1
<i>Paranaitis polynoides</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	0.1
Ophiuroidea	ECHINODERMATA	Ophiuroidea		1	0.01	0.1
<i>Metatiron tropakis</i>	ARTHROPODA	Malacostraca	Synopiidae	1	0.01	0.1
<i>Crangon</i> sp	ARTHROPODA	Malacostraca	Crangonidae	1	0.01	0.1
<i>Malmgreniella nigralba</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	0.1
<i>Alvania compacta</i>	MOLLUSCA	Gastropoda	Rissoidae	1	0.01	0.1
<i>Marphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	1	0.01	0.1
<i>Megalomma splendida</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	0.1
<i>Melanella rosa</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	0.1
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	0.1
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	0.1
<i>Neosabellaria cementarium</i>	ANNELIDA	Polychaeta	Sabellariidae	1	0.01	0.1
<i>Clytia</i> sp	CNIDARIA	Hydrozoa	Campanulariidae	1	0.01	0.1
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	0.1
<i>Modiolatus neglectus</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	0.1
<i>Molgula</i> sp	CHORDATA	Asciidiacea	Molgulidae	1	0.01	0.1
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	0.1
<i>Naineris uncinata</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	0.1
<i>Ampelisca indentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	0.1
<i>Neaeromya rugifera</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	0.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Naineris dendritica</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	0.1
<i>Melphisana bola</i> Cmplx	ARTHROPODA	Malacostraca	Melphidippidae	1	0.01	0.1
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.01	0.1
<i>Nemocardium centifilosum</i>	MOLLUSCA	Bivalvia	Cardiidae	1	0.01	0.1
<i>Neoischyrocerus claustris</i>	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.01	0.1
<i>Clymenura columbiana</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	0.1
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	0.1
Myodocopida	ARTHROPODA	Ostracoda		1	0.01	0.1

Table B6. Macrobenthic community summary for the Mid Shelf stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	2,107	14.30	46.7
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	739	5.01	90.0
<i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	625	4.24	93.3
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	474	3.22	40.0
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	452	3.07	86.7
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	425	2.88	76.7
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	288	1.95	90.0
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	269	1.83	90.0
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	253	1.72	66.7
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	247	1.68	80.0
<i>Chloeia pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	218	1.48	56.7
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	166	1.13	50.0
<i>Phoronis</i> sp	PHORONA		Phoronidae	165	1.12	53.3
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	135	0.92	86.7
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	134	0.91	43.3
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	132	0.90	73.3
<i>Pseudofabriciola californica</i>	ANNELIDA	Polychaeta	Fabriciidae	131	0.89	6.7
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	124	0.84	53.3
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	120	0.81	60.0
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	119	0.81	56.7
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	117	0.79	56.7
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	117	0.79	63.3
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	116	0.79	63.3
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	113	0.77	56.7
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	111	0.75	46.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	108	0.73	73.3
<i>Rhepoxyntius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	105	0.71	60.0
<i>Travisia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	99	0.67	53.3
<i>Maldanidae</i>	ANNELIDA	Polychaeta	Maldanidae	97	0.66	73.3
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	97	0.66	26.7
<i>Ampelisca agassizi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	94	0.64	26.7
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	92	0.62	80.0
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	89	0.60	60.0
<i>Nuculana</i> sp A	MOLLUSCA	Bivalvia	Nuculanidae	88	0.60	56.7
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	85	0.58	23.3
<i>Euchone incolor</i>	ANNELIDA	Polychaeta	Sabellidae	84	0.57	13.3
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	78	0.53	73.3
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	77	0.52	33.3
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	72	0.49	80.0
<i>Dialychnone veleronis</i>	ANNELIDA	Polychaeta	Sabellidae	71	0.48	20.0
<i>Byblis millsi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	64	0.43	56.7
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	63	0.43	10.0
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	63	0.43	60.0
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	63	0.43	63.3
<i>Asteroidea</i>	ECHINODERMATA	Asteroidea		62	0.42	43.3
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	62	0.42	73.3
<i>Spiophanes kimbballi</i>	ANNELIDA	Polychaeta	Spionidae	58	0.39	30.0
<i>Glottidia albida</i>	BRACHIOPODA	Inarticulata	Lingulidae	55	0.37	43.3
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	53	0.36	16.7
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	52	0.35	26.7
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	51	0.35	56.7
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	50	0.34	33.3
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	50	0.34	50.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	48	0.33	30.0
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	46	0.31	23.3
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadilidae	46	0.31	50.0
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	46	0.31	23.3
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	46	0.31	50.0
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	45	0.31	33.3
<i>Scoloplos armiger</i> Cmplx	ANNELIDA	Polychaeta	Orbiniidae	44	0.30	36.7
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	43	0.29	13.3
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	42	0.29	26.7
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	41	0.28	50.0
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	41	0.28	63.3
Lineidae	NEMERTEA	Anopla	Lineidae	40	0.27	50.0
<i>Protomediea articulata</i> Cmplx	ARTHROPODA	Malacostraca	Corophiidae	40	0.27	53.3
<i>Ruffojassa angularis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	40	0.27	3.3
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	39	0.26	16.7
<i>Ampelisciphotos podophthalma</i>	ARTHROPODA	Malacostraca	Photidae	38	0.26	13.3
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	36	0.24	50.0
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	35	0.24	30.0
<i>Mooreonuphis nebulosa</i>	ANNELIDA	Polychaeta	Onuphidae	35	0.24	20.0
<i>Chaetozone columbiana</i>	ANNELIDA	Polychaeta	Cirratulidae	35	0.24	20.0
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	34	0.23	40.0
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	34	0.23	33.3
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	34	0.23	40.0
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	33	0.22	60.0
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	33	0.22	23.3
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	33	0.22	33.3
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	32	0.22	33.3
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephtyidae	32	0.22	60.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	32	0.22	20.0
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	32	0.22	36.7
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	31	0.21	33.3
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	31	0.21	40.0
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	31	0.21	50.0
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	31	0.21	36.7
<i>Arachnanthus sp A</i>	CNIDARIA	Anthozoa	Cerianthidae	30	0.20	40.0
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	29	0.20	56.7
<i>Eyakia robusta</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	28	0.19	30.0
<i>Leptosynapta sp</i>	ECHINODERMATA	Holothuroidea	Synaptidae	28	0.19	36.7
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	27	0.18	20.0
<i>Foxiphalus golfensis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	27	0.18	23.3
<i>Foxiphalus obtusidens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	27	0.18	23.3
<i>Pista sp</i>	ANNELIDA	Polychaeta	Terebellidae	27	0.18	10.0
<i>Aglaophamus verrilli</i>	ANNELIDA	Polychaeta	Nephtyidae	26	0.18	33.3
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	26	0.18	16.7
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	26	0.18	46.7
<i>Aricidea (Allia) sp A</i>	ANNELIDA	Polychaeta	Paraonidae	26	0.18	16.7
<i>Notomastus latericeus</i>	ANNELIDA	Polychaeta	Capitellidae	26	0.18	3.3
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	25	0.17	26.7
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	25	0.17	26.7
<i>Lumbrineris sp</i>	ANNELIDA	Polychaeta	Lumbrineridae	25	0.17	13.3
<i>Monticellina tessellata</i>	ANNELIDA	Polychaeta	Cirratulidae	25	0.17	36.7
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	25	0.17	10.0
<i>Heteronemertea sp SD2</i>	NEMERTEA	Anopla		25	0.17	23.3
<i>Exogone dwisula</i>	ANNELIDA	Polychaeta	Syllidae	24	0.16	16.7
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	24	0.16	36.7
<i>Malmgreniella sp A</i>	ANNELIDA	Polychaeta	Polynoidae	24	0.16	36.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aruga oculata</i>	ARTHROPODA	Malacostraca	Lysianassidae	23	0.16	30.0
<i>Ampelisca indentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	23	0.16	16.7
<i>Aricidea (Acmira) simplex</i>	ANNELIDA	Polychaeta	Paraonidae	23	0.16	26.7
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	23	0.16	23.3
<i>Rhepoxynius menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	23	0.16	16.7
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	23	0.16	33.3
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	23	0.16	33.3
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	22	0.15	6.7
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	22	0.15	16.7
<i>Monticellina siblinia</i>	ANNELIDA	Polychaeta	Cirratulidae	22	0.15	30.0
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	22	0.15	33.3
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	22	0.15	43.3
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	22	0.15	30.0
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	21	0.14	46.7
<i>Pentactinia californica</i>	CNIDARIA	Anthozoa	Halcampoididae	21	0.14	3.3
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	21	0.14	6.7
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	21	0.14	46.7
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	21	0.14	33.3
<i>Ceriantharia</i>	CNIDARIA	Anthozoa		21	0.14	40.0
<i>Aoroides columbiae</i>	ARTHROPODA	Malacostraca	Aoridae	20	0.14	3.3
<i>Ophiura luetkenii</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	20	0.14	16.7
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	20	0.14	30.0
<i>Sthenelais tertiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	20	0.14	46.7
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	19	0.13	30.0
<i>Aricidea (Acmira) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	18	0.12	20.0
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	18	0.12	30.0
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	18	0.12	16.7
<i>Carazziella</i> sp A	ANNELIDA	Polychaeta	Spionidae	18	0.12	23.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	18	0.12	26.7
<i>Paradialychnone ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	18	0.12	23.3
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadilidae	18	0.12	20.0
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	18	0.12	36.7
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	18	0.12	30.0
<i>Proclea</i> sp A	ANNELIDA	Polychaeta	Terebellidae	18	0.12	16.7
<i>Clymenura gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	18	0.12	23.3
<i>Photis lacia</i>	ARTHROPODA	Malacostraca	Photidae	18	0.12	13.3
<i>Rhepoxygnus stenodes</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	18	0.12	16.7
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	18	0.12	33.3
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	18	0.12	16.7
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	18	0.12	40.0
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	17	0.12	46.7
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	17	0.12	33.3
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	17	0.12	36.7
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	17	0.12	26.7
Oligochaeta	ANNELIDA	Oligochaeta		17	0.12	10.0
<i>Aphelochaeta phillipsi</i>	ANNELIDA	Polychaeta	Cirratulidae	16	0.11	3.3
<i>Polydora cornuta</i>	ANNELIDA	Polychaeta	Spionidae	16	0.11	3.3
<i>Hesperonoe laevis</i>	ANNELIDA	Polychaeta	Polynoidae	16	0.11	16.7
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	16	0.11	30.0
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	15	0.10	20.0
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	15	0.10	20.0
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	15	0.10	3.3
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	15	0.10	30.0
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	15	0.10	23.3
Palaeonemertea	NEMERTEA	Anopla		15	0.10	23.3
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	15	0.10	10.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Aoridae	ARTHROPODA	Malacostraca	Aoridae	14	0.10	10.0
<i>Carinomella lactea</i>	NEMERTEA	Anopla	Tubulanidae	14	0.10	6.7
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	14	0.10	13.3
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	14	0.10	23.3
<i>Astropecten</i> sp	ECHINODERMATA	Asteroidea	Astropectinidae	14	0.10	10.0
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	14	0.10	3.3
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	14	0.10	23.3
<i>Chiridota</i> sp	ECHINODERMATA	Holothuroidea	Chiridotidae	14	0.10	20.0
Ophiuroidea	ECHINODERMATA	Ophiuroidea		14	0.10	13.3
<i>Paradoneis</i> sp SD1	ANNELIDA	Polychaeta	Paraonidae	14	0.10	10.0
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	14	0.10	23.3
<i>Urothoe elegans</i> Cmplx	ARTHROPODA	Malacostraca	Urothoidae	14	0.10	6.7
<i>Sabellides manriquei</i>	ANNELIDA	Polychaeta	Ampharetidae	14	0.10	6.7
<i>Ampelisca cf brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	13	0.09	30.0
<i>Photis parvidons</i>	ARTHROPODA	Malacostraca	Photidae	13	0.09	6.7
<i>Pinnixa occidentalis</i> Cmplx	ARTHROPODA	Malacostraca	Pinnotheridae	13	0.09	23.3
<i>Dialychnone trilineata</i>	ANNELIDA	Polychaeta	Sabellidae	13	0.09	16.7
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	13	0.09	13.3
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	12	0.08	26.7
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	12	0.08	23.3
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	12	0.08	20.0
<i>Gammaropsis</i> sp	ARTHROPODA	Malacostraca	Photidae	12	0.08	6.7
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	12	0.08	13.3
Echinoidea	ECHINODERMATA	Echinoidea		12	0.08	23.3
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	12	0.08	26.7
<i>Amphioplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	11	0.07	6.7
<i>Americhelidium</i> sp SD4	ARTHROPODA	Malacostraca	Oedicerotidae	11	0.07	6.7
<i>Artacamella hancocki</i>	ANNELIDA	Polychaeta	Trichobranchidae	11	0.07	16.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	11	0.07	20.0
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	11	0.07	23.3
<i>Gammaropsis thompsoni</i>	ARTHROPODA	Malacostraca	Photidae	11	0.07	6.7
<i>Eclysippe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	11	0.07	26.7
<i>Solemya pervernicolor</i>	MOLLUSCA	Bivalvia	Solemyidae	11	0.07	10.0
<i>Enteropneusta</i>	CHORDATA	Enteropneusta		11	0.07	20.0
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	11	0.07	20.0
<i>Magelona hartmanae</i>	ANNELIDA	Polychaeta	Magelonidae	11	0.07	10.0
<i>Synidotea magnifica</i>	ARTHROPODA	Malacostraca	Idoteidae	11	0.07	10.0
<i>Dialychnone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	11	0.07	10.0
<i>Brania heterocirra</i>	ANNELIDA	Polychaeta	Syllidae	10	0.07	3.3
<i>Agnezia septentrionalis</i>	CHORDATA	Asciidiacea	Agneziidae	10	0.07	10.0
<i>Bathymedon pumilus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	10	0.07	23.3
<i>Sthenelais</i> sp	ANNELIDA	Polychaeta	Sigalionidae	10	0.07	20.0
<i>Jasmineira</i> sp B	ANNELIDA	Polychaeta	Sabellidae	10	0.07	6.7
<i>Thelepus setosus</i>	ANNELIDA	Polychaeta	Terebellidae	10	0.07	6.7
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	10	0.07	23.3
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	10	0.07	10.0
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	10	0.07	13.3
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	10	0.07	16.7
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	10	0.07	16.7
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	10	0.07	23.3
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	10	0.07	20.0
<i>Phascolion</i> sp A	SIPUNCULA	Sipunculidea	Phascolionidae	10	0.07	30.0
<i>Aoroides</i> sp A	ARTHROPODA	Malacostraca	Aoridae	9	0.06	13.3
<i>Aphelochaeta</i> sp HYP5	ANNELIDA	Polychaeta	Cirratulidae	9	0.06	10.0
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	9	0.06	20.0
<i>Araphura breviaria</i>	ARTHROPODA	Malacostraca	Tanaellidae	9	0.06	16.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	9	0.06	10.0
<i>Scolanthus triangulus</i>	CNIDARIA	Anthozoa	Edwardsiidae	9	0.06	13.3
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	9	0.06	20.0
<i>Saxicavella nybakkeni</i>	MOLLUSCA	Bivalvia	Hiatellidae	9	0.06	10.0
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	9	0.06	10.0
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	9	0.06	23.3
<i>Polycirrus</i> sp A	ANNELIDA	Polychaeta	Terebellidae	9	0.06	23.3
<i>Monoculodes emarginatus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	9	0.06	16.7
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	9	0.06	30.0
<i>Ophiuroconis bispinosa</i>	ECHINODERMATA	Ophiuroidea	Ophiodermatidae	9	0.06	13.3
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	8	0.05	13.3
<i>Aricidea (Allia) antennata</i>	ANNELIDA	Polychaeta	Paraonidae	8	0.05	13.3
<i>Ampharete</i> sp	ANNELIDA	Polychaeta	Ampharetidae	8	0.05	20.0
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	8	0.05	16.7
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	8	0.05	13.3
<i>Onuphidae</i>	ANNELIDA	Polychaeta	Onuphidae	8	0.05	16.7
<i>Eulalia californiensis</i>	ANNELIDA	Polychaeta	Phyllodocidae	8	0.05	13.3
<i>Poecilochaetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilochaetidae	8	0.05	13.3
<i>Phyllochaetopterus prolifica</i>	ANNELIDA	Polychaeta	Chaetopteridae	8	0.05	13.3
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	8	0.05	20.0
<i>Mesolamprops bispinosus</i>	ARTHROPODA	Malacostraca	Lampropidae	8	0.05	20.0
<i>Onuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	8	0.05	6.7
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	8	0.05	10.0
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	8	0.05	20.0
<i>Nemocardium centifilosum</i>	MOLLUSCA	Bivalvia	Cardiidae	8	0.05	23.3
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	8	0.05	13.3
<i>Lyonsiidae</i>	MOLLUSCA	Bivalvia	Lyonsiidae	8	0.05	13.3
<i>Levinsenia</i> sp B	ANNELIDA	Polychaeta	Paraonidae	8	0.05	13.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Asabellides lineata</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.05	16.7
<i>Aricidea (Aricidea) wassi</i>	ANNELIDA	Polychaeta	Paraonidae	7	0.05	13.3
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.05	10.0
Bivalvia	MOLLUSCA	Bivalvia		7	0.05	16.7
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	7	0.05	13.3
<i>Chauliopleona dentata</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	7	0.05	13.3
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	7	0.05	16.7
<i>Sigalion spinosus</i>	ANNELIDA	Polychaeta	Sigalionidae	7	0.05	16.7
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	7	0.05	13.3
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	7	0.05	16.7
<i>Phisidia sanctaemariae</i>	ANNELIDA	Polychaeta	Terebellidae	7	0.05	16.7
<i>Parexogone molesta</i>	ANNELIDA	Polychaeta	Syllidae	7	0.05	10.0
<i>Onuphis</i> sp A	ANNELIDA	Polychaeta	Onuphidae	7	0.05	13.3
<i>Nicippe tumida</i>	ARTHROPODA	Malacostraca	Pardaliscidae	7	0.05	20.0
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	7	0.05	23.3
<i>Photis bifurcata</i>	ARTHROPODA	Malacostraca	Photidae	7	0.05	13.3
<i>Platynereis bicanaliculata</i>	ANNELIDA	Polychaeta	Nereididae	7	0.05	6.7
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	7	0.05	16.7
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	7	0.05	10.0
<i>Alia tuberosa</i>	MOLLUSCA	Gastropoda	Columbellidae	6	0.04	10.0
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	6	0.04	10.0
<i>Ampelisca lobata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.04	3.3
<i>Polydora narica</i>	ANNELIDA	Polychaeta	Spionidae	6	0.04	3.3
<i>Eulalia levicornuta</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	6	0.04	20.0
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	6	0.04	16.7
<i>Leuroleberis sharpei</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	6	0.04	6.7
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	6	0.04	10.0
<i>Lumbrineris latreilli</i>	ANNELIDA	Polychaeta	Lumbrineridae	6	0.04	13.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Deflexilodes norvegicus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	6	0.04	13.3
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	6	0.04	16.7
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	6	0.04	13.3
<i>Paradialychnone harrisae</i>	ANNELIDA	Polychaeta	Sabellidae	6	0.04	10.0
<i>Paleanotus bellis</i>	ANNELIDA	Polychaeta	Chrysopetalidae	6	0.04	6.7
<i>Lirobittium sp</i>	MOLLUSCA	Gastropoda	Cerithiidae	6	0.04	13.3
<i>Drilonereis sp</i>	ANNELIDA	Polychaeta	Oenonidae	6	0.04	16.7
<i>Orchomene anaquelus</i>	ARTHROPODA	Malacostraca	Lysianassidae	6	0.04	3.3
<i>Glycera oxycephala</i>	ANNELIDA	Polychaeta	Glyceridae	6	0.04	3.3
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	5	0.03	10.0
<i>Anoplodactylus erectus</i>	ARTHROPODA	Pycnogonida	Phoxichiliidae	5	0.03	10.0
Autolytinae	ANNELIDA	Polychaeta	Syllidae	5	0.03	6.7
<i>Rhachotropis sp A</i>	ARTHROPODA	Malacostraca	Eusiridae	5	0.03	13.3
<i>Lepidozona scrobiculata</i>	MOLLUSCA	Polyplacophora	Ischnochitonidae	5	0.03	6.7
<i>Spiophanes sp</i>	ANNELIDA	Polychaeta	Spionidae	5	0.03	10.0
<i>Pseudochitinopoma occidentalis</i>	ANNELIDA	Polychaeta	Serpulidae	5	0.03	3.3
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	5	0.03	16.7
<i>Chaetozone sp SD7</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.03	3.3
<i>Metasynchis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	5	0.03	16.7
<i>Pholoe sp B</i>	ANNELIDA	Polychaeta	Pholoidae	5	0.03	3.3
Decapoda	ARTHROPODA	Malacostraca		5	0.03	13.3
<i>Kurtzia arteaga</i>	MOLLUSCA	Gastropoda	Mangeliidae	5	0.03	13.3
<i>Crepidula sp</i>	MOLLUSCA	Gastropoda	Calyptaeidae	5	0.03	3.3
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinnotheridae	5	0.03	6.7
Sipuncula	SIPUNCULA			5	0.03	6.7
<i>Kurtziella plumbea</i>	MOLLUSCA	Gastropoda	Mangeliidae	5	0.03	3.3
<i>Spio filicornis</i>	ANNELIDA	Polychaeta	Spionidae	5	0.03	10.0
<i>Solen sp</i>	MOLLUSCA	Bivalvia	Solenidae	5	0.03	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ischyrocerus anguipes</i>	ARTHROPODA	Malacostraca	Ischyroceridae	5	0.03	6.7
<i>Enopla</i>	NEMERTEA	Enopla		5	0.03	6.7
<i>Procampylaspis caenosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	5	0.03	13.3
<i>Eumida longicornuta</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.03	3.3
<i>Eunicidae</i>	ANNELIDA	Polychaeta	Eunicidae	5	0.03	6.7
<i>Tubulanus sp A</i>	NEMERTEA	Anopla	Tubulanidae	5	0.03	13.3
<i>Goniada brunnea</i>	ANNELIDA	Polychaeta	Goniadidae	5	0.03	16.7
<i>Capitella capitata Cmplx</i>	ANNELIDA	Polychaeta	Capitellidae	4	0.03	6.7
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.03	13.3
<i>Calyptreidae</i>	MOLLUSCA	Gastropoda	Calyptreidae	4	0.03	3.3
<i>Arcteobia cf anticostiensis</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.03	3.3
<i>Caprella mendax</i>	ARTHROPODA	Malacostraca	Caprellidae	4	0.03	6.7
<i>Aoroides sp</i>	ARTHROPODA	Malacostraca	Aoridae	4	0.03	3.3
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	4	0.03	10.0
<i>Heteronemertea</i>	NEMERTEA	Anopla		4	0.03	10.0
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	4	0.03	6.7
<i>Stylatula elongata</i>	CNIDARIA	Anthozoa	Virgulariidae	4	0.03	10.0
<i>Tetrastemma albidum</i>	NEMERTEA	Enopla	Tetrastematidae	4	0.03	6.7
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.03	3.3
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	4	0.03	10.0
<i>Eranno lagunae</i>	ANNELIDA	Polychaeta	Lumbrineridae	4	0.03	10.0
<i>Neotrypaea gigas</i>	ARTHROPODA	Malacostraca	Callianassidae	4	0.03	6.7
<i>Diastylis californica</i>	ARTHROPODA	Malacostraca	Diastylidae	4	0.03	13.3
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	4	0.03	10.0
<i>Sabellidae</i>	ANNELIDA	Polychaeta	Sabellidae	4	0.03	6.7
<i>Idarcturus allelomorphus</i>	ARTHROPODA	Malacostraca	Arcturidae	4	0.03	3.3
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.03	10.0
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.03	10.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	13.3
<i>Marpphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	4	0.03	10.0
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.03	10.0
<i>Galathowenia oculata</i>	ANNELIDA	Polychaeta	Oweniidae	4	0.03	3.3
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.03	13.3
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	4	0.03	6.7
<i>Sabellaria gracilis</i>	ANNELIDA	Polychaeta	Sabellariidae	4	0.03	3.3
<i>Ophelina acuminata</i>	ANNELIDA	Polychaeta	Opheliidae	4	0.03	13.3
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	4	0.03	6.7
<i>Dipolydora</i> sp	ANNELIDA	Polychaeta	Spionidae	4	0.03	10.0
<i>Aricidea (Allia) hartleyi</i>	ANNELIDA	Polychaeta	Paraonidae	3	0.02	10.0
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	3	0.02	10.0
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	3	0.02	10.0
<i>Ampharete acutifrons</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	6.7
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	3	0.02	10.0
<i>Anonyx lilljeborgi</i>	ARTHROPODA	Malacostraca	Uristidae	3	0.02	10.0
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	3	0.02	6.7
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	3	0.02	3.3
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	3	0.02	10.0
<i>Acteocina cerealis</i>	MOLLUSCA	Gastropoda	Cylichnidae	3	0.02	10.0
<i>Argopecten ventricosus</i>	MOLLUSCA	Bivalvia	Pectinidae	3	0.02	3.3
<i>Amage anops</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	6.7
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	3	0.02	10.0
<i>Hippomedon columbianus</i>	ARTHROPODA	Malacostraca	Lysianassidae	3	0.02	6.7
<i>Neosabellaria cementarium</i>	ANNELIDA	Polychaeta	Sabellariidae	3	0.02	6.7
<i>Crassispira semiinflata</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	3	0.02	10.0
<i>Phoronopsis</i> sp	PHORONA		Phoronidae	3	0.02	6.7
<i>Volvella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	3	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nuculana hamata</i>	MOLLUSCA	Bivalvia	Nuculanidae	3	0.02	3.3
<i>Rhepoxynius lucubrans</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.02	3.3
<i>Edwardsiidae</i>	CNIDARIA	Anthozoa	Edwardsiidae	3	0.02	10.0
<i>Parandalia fauveli</i>	ANNELIDA	Polychaeta	Pilargidae	3	0.02	6.7
<i>Lophopanopeus bellus</i>	ARTHROPODA	Malacostraca	Panopeidae	3	0.02	6.7
<i>Owenia johnsoni</i>	ANNELIDA	Polychaeta	Oweniidae	3	0.02	10.0
<i>Paradialychine paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	3	0.02	3.3
<i>Drilonereis mexicana</i>	ANNELIDA	Polychaeta	Oenonidae	3	0.02	3.3
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	3	0.02	6.7
<i>Cirratulus multioculatus</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.02	3.3
<i>Trophoniella harrisae</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.02	10.0
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	3	0.02	6.7
<i>Eulalia quadrioculata</i>	ANNELIDA	Polychaeta	Phyllodocidae	3	0.02	3.3
<i>Halicoedes synopiae</i>	ARTHROPODA	Malacostraca	Pardaliscidae	3	0.02	10.0
<i>Gammaropsis ociosa</i>	ARTHROPODA	Malacostraca	Photidae	3	0.02	3.3
<i>Protomystides sp</i>	ANNELIDA	Polychaeta	Phyllodocidae	3	0.02	3.3
<i>Tritella pilimana</i>	ARTHROPODA	Malacostraca	Caprellidae	3	0.02	6.7
Scaphopoda	MOLLUSCA	Scaphopoda		3	0.02	10.0
<i>Eusyllis transecta</i>	ANNELIDA	Polychaeta	Syllidae	3	0.02	3.3
<i>Scleroplax granulata</i>	ARTHROPODA	Malacostraca	Pinnotheridae	3	0.02	6.7
<i>Poecilochaetus sp</i>	ANNELIDA	Polychaeta	Poecilochaetidae	3	0.02	10.0
<i>Latulambrus occidentalis</i>	ARTHROPODA	Malacostraca	Parthenopidae	3	0.02	10.0
Chaetodermatida	MOLLUSCA	Caudofoveata		3	0.02	10.0
<i>Euchone arenae</i>	ANNELIDA	Polychaeta	Sabellidae	3	0.02	6.7
<i>Hemilamprops californicus</i>	ARTHROPODA	Malacostraca	Lampropidae	3	0.02	3.3
<i>Virgularia agassizii</i>	CNIDARIA	Anthozoa	Virgulariidae	3	0.02	10.0
<i>Polycirrus sp OC1</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.02	3.3
<i>Cardiomya pectinata</i>	MOLLUSCA	Bivalvia	Cuspidariidae	2	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Astropecten californicus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	2	0.01	6.7
<i>Astropecten armatus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	2	0.01	6.7
<i>Armina californica</i>	MOLLUSCA	Gastropoda	Arminidae	2	0.01	3.3
<i>Aricidea (Acmira) lopezi</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.01	6.7
<i>Caesia perpinguis</i>	MOLLUSCA	Gastropoda	Nassariidae	2	0.01	6.7
<i>Campylaspis canaliculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	2	0.01	6.7
<i>Acoetes pacifica</i>	ANNELIDA	Polychaeta	Acoetidae	2	0.01	6.7
<i>Acteocina sp</i>	MOLLUSCA	Gastropoda	Cyllichnidae	2	0.01	3.3
Actiniaria	CNIDARIA	Anthozoa		2	0.01	3.3
Cancridae	ARTHROPODA	Malacostraca	Cancridae	2	0.01	6.7
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.01	3.3
<i>Amygdalum pallidulum</i>	MOLLUSCA	Bivalvia	Mytilidae	2	0.01	6.7
<i>Leptochiton rugatus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	2	0.01	3.3
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	2	0.01	6.7
<i>Mesocrangon munitella</i>	ARTHROPODA	Malacostraca	Crangonidae	2	0.01	3.3
<i>Leptosty whole calva</i>	ARTHROPODA	Malacostraca	Diastylidae	2	0.01	3.3
<i>Opisa tridentata</i>	ARTHROPODA	Malacostraca	Opisidae	2	0.01	6.7
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.01	3.3
<i>Malmgreniella sp SD2</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.01	6.7
<i>Levinsenia sp SD1</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.01	3.3
<i>Chaetozone armata</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	3.3
<i>Rhepoxyntius daboius</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.01	6.7
<i>Marphysa sp</i>	ANNELIDA	Polychaeta	Eunicidae	2	0.01	3.3
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	2	0.01	6.7
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	2	0.01	3.3
<i>Nebalia pugettensis Cmplx</i>	ARTHROPODA	Malacostraca	Nebaliidae	2	0.01	3.3
<i>Chevalia inaequalis</i>	ARTHROPODA	Malacostraca	Chevaliidiae	2	0.01	3.3
<i>Sige sp A</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Molgula regularis</i>	CHORDATA	Asciidiacea	Molgulidae	2	0.01	6.7
<i>Magelona sacculata</i>	ANNELIDA	Polychaeta	Magelonidae	2	0.01	3.3
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.01	6.7
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	2	0.01	3.3
<i>Onuphis geophiliformis</i>	ANNELIDA	Polychaeta	Onuphidae	2	0.01	6.7
<i>Oxydromus pugettensis</i>	ANNELIDA	Polychaeta	Hesionidae	2	0.01	3.3
<i>Notocirrus californiensis</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.01	6.7
Mytilidae	MOLLUSCA	Bivalvia	Mytilidae	2	0.01	3.3
Nudibranchia	MOLLUSCA	Gastropoda		2	0.01	6.7
<i>Lytechinus pictus</i>	ECHINODERMATA	Echinoidea	Toxopneustidae	2	0.01	6.7
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	3.3
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	3.3
<i>Magelona</i> sp	ANNELIDA	Polychaeta	Magelonidae	2	0.01	3.3
<i>Euchone hancocki</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	3.3
<i>Syllides mikeli</i>	ANNELIDA	Polychaeta	Syllidae	2	0.01	6.7
<i>Virgularia</i> sp	CNIDARIA	Anthozoa	Virgulariidae	2	0.01	6.7
<i>Tetrastemma nigrifrons</i>	NEMERTEA	Enopla	Tetrastemmatidae	2	0.01	3.3
<i>Eteone pigmentata</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	3.3
Phoronida	PHORONA			2	0.01	6.7
<i>Terebellides</i> sp	ANNELIDA	Polychaeta	Trichobranchidae	2	0.01	6.7
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.01	6.7
<i>Phaenoplana longipenis</i>	PLATYHELMINTHES	Turbellaria	Stylochoplaniidae	2	0.01	3.3
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	2	0.01	6.7
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	2	0.01	3.3
<i>Euchone</i> sp	ANNELIDA	Polychaeta	Sabellidae	2	0.01	3.3
<i>Phyllodoce pettiboneae</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.01	6.7
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.01	6.7
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Terebellidae</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.01	6.7
<i>Pacifacanthomysis nephrophthalma</i>	ARTHROPODA	Malacostraca	Mysidae	2	0.01	6.7
<i>Pleusymtes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	2	0.01	3.3
<i>Turbonilla sp A</i>	MOLLUSCA	Gastropoda	Pyramidellidae	2	0.01	6.7
<i>Halcampa decemtentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	2	0.01	6.7
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	2	0.01	3.3
<i>Randallia ornata</i>	ARTHROPODA	Malacostraca	Leucosiidae	2	0.01	6.7
Paguridae	ARTHROPODA	Malacostraca	Paguridae	2	0.01	3.3
<i>Pseudopotamilla sp</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	3.3
<i>Dipolydora barbilla</i>	ANNELIDA	Polychaeta	Spionidae	2	0.01	6.7
<i>Drilonereis nuda</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.01	6.7
<i>Protocirrineris sp B</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.01	6.7
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		2	0.01	6.7
<i>Photis macrotica</i>	ARTHROPODA	Malacostraca	Photidae	2	0.01	3.3
Hoplonephertea	NEMERTEA	Enopla		2	0.01	3.3
<i>Pectinaria granulata</i>	ANNELIDA	Polychaeta	Pectinariidae	2	0.01	3.3
<i>Hippomedon zetesimus</i>	ARTHROPODA	Malacostraca	Lysianassidae	2	0.01	6.7
<i>Periploma discus</i>	MOLLUSCA	Bivalvia	Periplomatidae	2	0.01	6.7
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	2	0.01	6.7
<i>Periploma sp</i>	MOLLUSCA	Bivalvia	Periplomatidae	2	0.01	3.3
<i>Potamethus sp A</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.01	3.3
Balanidae	ARTHROPODA	Maxillopoda	Balanidae	1	0.01	3.3
<i>Bemlos sp</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	3.3
<i>Byblis sp</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	3.3
<i>Berthella californica</i>	MOLLUSCA	Gastropoda	Pleurobranchidae	1	0.01	3.3
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.3
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	3.3
<i>Callianax baetica</i>	MOLLUSCA	Gastropoda	Olivellidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.3
<i>Asthenothaerus diegensis</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.3
Anopla	NEMERTEA	Anopla		1	0.01	3.3
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	3.3
<i>Acanthodoris brunnea</i>	MOLLUSCA	Gastropoda	Onchidorididae	1	0.01	3.3
<i>Acidostoma hancocki</i>	ARTHROPODA	Malacostraca	Acidostomatidae	1	0.01	3.3
<i>Akanthophoreus cf gracilis</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	1	0.01	3.3
<i>Alpheus clamator</i>	ARTHROPODA	Malacostraca	Alpheidae	1	0.01	3.3
<i>Alvania rosana</i>	MOLLUSCA	Gastropoda	Rissoidae	1	0.01	3.3
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.3
<i>Ampelisca milleri</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	3.3
<i>Ampharetidae</i> sp SD1	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.3
Arcturidae	ARTHROPODA	Malacostraca	Arcturidae	1	0.01	3.3
Anomura	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Aricidea (Aricidea) pseudoarticulata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Aoroides inermis</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	3.3
<i>Aphelochaeta</i> sp HYP8	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Aphelochaeta</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Apistobranchus ornatus</i>	ANNELIDA	Polychaeta	Apistobranchidae	1	0.01	3.3
<i>Apopriionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.3
<i>Araphura</i> sp SD1	ARTHROPODA	Malacostraca	Tanaellidae	1	0.01	3.3
<i>Calocarides spinulicauda</i>	ARTHROPODA	Malacostraca	Axiidae	1	0.01	3.3
<i>Aricidea (Acmira) assimilis</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Aricidea (Acmira) horikoshii</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Amphipolis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.3
Caridea	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Cancellaria cooperii</i>	MOLLUSCA	Gastropoda	Cancellariidae	1	0.01	3.3
Capitellidae	ANNELIDA	Polychaeta	Capitellidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Caulleriella pacifica</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Caulleriella</i> sp	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Caprella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.3
<i>Tritella laevis</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.3
<i>Travisia</i> sp	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.3
<i>Travisia pupa</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.3
<i>Tubulanidae</i> sp B	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.3
Goniadidae	ANNELIDA	Polychaeta	Goniadidae	1	0.01	3.3
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	1	0.01	3.3
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.3
Gastropoda	MOLLUSCA	Gastropoda		1	0.01	3.3
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.01	3.3
<i>Rhepoxynius</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.3
<i>Zaolitus actius</i>	CNIDARIA	Anthozoa	Isanthidae	1	0.01	3.3
<i>Rhepoxynius variatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.3
<i>Urechis caupo</i>	ECHIURA	Echiuridea	Urechidae	1	0.01	3.3
<i>Glossaulax reclusianus</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	3.3
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.01	3.3
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.01	3.3
<i>Levinsenia multibranchiata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Glycera robusta</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.3
Echiuroinea	ECHIURA	Echiuridea		1	0.01	3.3
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.3
<i>Yoldia seminuda</i>	MOLLUSCA	Bivalvia	Yoldiidae	1	0.01	3.3
<i>Sthenelais verruculosa</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	3.3
<i>Tetrastemma candidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	1	0.01	3.3
<i>Solecurtus guaymasensis</i>	MOLLUSCA	Bivalvia	Solecurtidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Styela</i> sp	CHORDATA	Asciidiacea	Styelidae	1	0.01	3.3
<i>Lanassa venusta</i> <i>venusta</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.3
<i>Lamprops</i> sp D	ARTHROPODA	Malacostraca	Lampropidae	1	0.01	3.3
<i>Leucon</i> <i>subnasica</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.01	3.3
Synaptidae	ECHINODERMATA	Holothuroidea	Synaptidae	1	0.01	3.3
<i>Stibarobdella</i> sp	Annelida	Clitellata	Piscicolidae	1	0.01	3.3
<i>Hippomedon</i> sp A	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.3
<i>Hornellia</i> <i>occidentalis</i>	ARTHROPODA	Malacostraca	Cheirocratidae	1	0.01	3.3
<i>Sthenelais</i> <i>berkeleyi</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	3.3
<i>Kurtiella</i> <i>grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	3.3
<i>Idotea</i> sp	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Kurtiella</i> <i>compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	3.3
<i>Kelletia</i> <i>kelletii</i>	MOLLUSCA	Gastropoda	Buccinidae	1	0.01	3.3
<i>Sphaerodoropsis</i> <i>biserialis</i>	ANNELIDA	Polychaeta	Sphaerodoridae	1	0.01	3.3
<i>Leitoscoloplos</i> <i>pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.3
<i>Tiron</i> <i>biocellata</i>	ARTHROPODA	Malacostraca	Synopiidae	1	0.01	3.3
Thracioidea	MOLLUSCA	Bivalvia		1	0.01	3.3
<i>Thracia</i> <i>trapezoides</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.3
<i>Hamatoscalpellum</i> <i>californicum</i>	ARTHROPODA	Maxillopoda	Scalpellidae	1	0.01	3.3
<i>Lepidozona</i> <i>radians</i>	MOLLUSCA	Polyplacophora	Ischnochitonidae	1	0.01	3.3
<i>Scolanthus</i> <i>scamiti</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.3
<i>Solariella</i> <i>peramabilis</i>	MOLLUSCA	Gastropoda	Solariellidae	1	0.01	3.3
<i>Scolelepis</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.3
<i>Trachycardium</i> <i>quadragenarium</i>	MOLLUSCA	Bivalvia	Cardiidae	1	0.01	3.3
<i>Scoloplos</i> <i>acmeceps</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.3
<i>Harmothoe</i> <i>fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.3
<i>Scoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.3
<i>Tellina</i> <i>cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Tanaidacea	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Sinum scopulosum</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	3.3
<i>Lepidonotus spiculus</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.3
<i>Pentamera lissoplaca</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	3.3
Eulimidae	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.3
Phyllodocidae	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.3
<i>Phyllocoete medipapillata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.3
<i>Crepidula glottidiarum</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	3.3
<i>Samytha californiensis</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.3
<i>Phyllocoete cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.3
<i>Eulima raymondi</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.3
<i>Photis</i> sp C	ARTHROPODA	Malacostraca	Photidae	1	0.01	3.3
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	1	0.01	3.3
<i>Eualus lineatus</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	3.3
<i>Philine</i> sp	MOLLUSCA	Gastropoda	Philinidae	1	0.01	3.3
<i>Crepidatella orbiculata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	3.3
<i>Petricola carditoides</i>	MOLLUSCA	Bivalvia	Petricolidae	1	0.01	3.3
<i>Dendronotus</i> sp	MOLLUSCA	Gastropoda	Dendronotidae	1	0.01	3.3
<i>Peachia quinquecapitata</i>	CNIDARIA	Anthozoa	Haloclavidae	1	0.01	3.3
<i>Parougia caeca</i>	ANNELIDA	Polychaeta	Dorvilleidae	1	0.01	3.3
<i>Erioleptus spinosus</i>	ARTHROPODA	Malacostraca	Inachidae	1	0.01	3.3
<i>Parexogone breviseta</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
Paraonidae	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.3
<i>Paradoneis spinifera</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Epitonium hindsii</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	3.3
<i>Paradoneis</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Paradoneis lyra</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Eusyllis blomstrandii</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Paradialychnone eiffelturris</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.3
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.01	3.3
<i>Pseudocnus lubricus</i>	ECHINODERMATA	Holothuroidea	Cucumariidae	1	0.01	3.3
<i>Eusyllis habei</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Deilocerus planus</i>	ARTHROPODA	Malacostraca	Cyclodoridae	1	0.01	3.3
<i>Euspira draconis</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	3.3
<i>Exogone</i> sp A	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Flabelligera</i> sp SD1	Annelida	Polychaeta	Flabelligeridae	1	0.01	3.3
<i>Eupolymnia heterobranchia</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.3
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	1	0.01	3.3
<i>Galathowenia piltzi</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.3
<i>Galathowenia pygidialis</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.3
<i>Gammaropsis barnardi</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	3.3
<i>Rhamphobrachium longisetosum</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.3
<i>Pilargis berkeleyae</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	3.3
<i>Pseudomelatoma penicillata</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.01	3.3
<i>Pandora filosa</i>	MOLLUSCA	Bivalvia	Pandoridae	1	0.01	3.3
<i>Proceraea</i> sp	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Prachynella lodo</i>	ARTHROPODA	Malacostraca	Pachynidae	1	0.01	3.3
<i>Postasterope</i> sp	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	3.3
<i>Postasterope barnesi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	3.3
<i>Polycirrus</i> sp I	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.3
<i>Euphilomedes longiseta</i>	ARTHROPODA	Ostracoda	Philomedidae	1	0.01	3.3
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.3
<i>Cyclocardia</i> sp	MOLLUSCA	Bivalvia	Carditidae	1	0.01	3.3
<i>Dendrochirotida</i>	ECHINODERMATA	Holothuroidea		1	0.01	3.3
<i>Pista moorei</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Eunice</i> sp	ANNELIDA	Polychaeta	Eunicidae	1	0.01	3.3
<i>Pinnotheridae</i>	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.01	3.3
<i>Pyromiaia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	1	0.01	3.3
<i>Melinna</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.3
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	3.3
<i>Drilonereis falcata</i>	ANNELIDA	Polychaeta	Oenonidae	1	0.01	3.3
<i>Epigamia-Myrianida Cmplx</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.3
<i>Mooresamytha bioculata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.3
<i>Mooreonuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.3
<i>Dougaloplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.3
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Molgulidae</i>	CHORDATA	Asciidiacea	Molgulidae	1	0.01	3.3
<i>Modiolatus neglectus</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	3.3
<i>Micropodarke dubia</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	3.3
<i>Myriowenia californiensis</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.3
<i>Melphisana bola</i> Cmplx	ARTHROPODA	Malacostraca	Melphidippidae	1	0.01	3.3
<i>Myriochele striolata</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.3
<i>Melanella rosa</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.3
<i>Megasurcula</i> sp	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.01	3.3
<i>Malmgreniella liei</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.3
<i>Majoidea</i>	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Magelona</i> sp A	ANNELIDA	Polychaeta	Magelonidae	1	0.01	3.3
<i>Maera jerrica</i>	ARTHROPODA	Malacostraca	Melitidae	1	0.01	3.3
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	3.3
<i>Lysianassoidea</i>	ARTHROPODA	Malacostraca		1	0.01	3.3
<i>Lumbrinerides platypygos</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	3.3
<i>Loy thompsoni</i>	MOLLUSCA	Gastropoda	Onchidorididae	1	0.01	3.3
<i>Listriella</i> sp	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	3.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Chaetozone</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.3
<i>Notomastus tenuis</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.01	3.3
<i>Clymenura columbiana</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.3
<i>Orchomenella</i> sp	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.3
Ophiuridae	ECHINODERMATA	Ophiuroidea	Ophiuridae	1	0.01	3.3
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.3
<i>Onuphis elegans</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.3
<i>Diopatra ornata</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.3
<i>Cirrophorus furcatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.3
<i>Ephesiella brevicapitis</i>	ANNELIDA	Polychaeta	Sphaerodoridae	1	0.01	3.3
<i>Ensis myrae</i>	MOLLUSCA	Bivalvia	Pharidae	1	0.01	3.3
<i>Okenia</i> sp A	MOLLUSCA	Gastropoda	Goniodorididae	1	0.01	3.3
<i>Nutricola ovalis</i>	MOLLUSCA	Bivalvia	Veneridae	1	0.01	3.3
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.3
<i>Nucula exigua</i>	MOLLUSCA	Bivalvia	Nuculidae	1	0.01	3.3
Mysidae	ARTHROPODA	Malacostraca	Mysidae	1	0.01	3.3
<i>Drilonereis filum</i>	ANNELIDA	Polychaeta	Oenonidae	1	0.01	3.3
<i>Nebalia daytoni</i>	ARTHROPODA	Malacostraca	Nebaliidae	1	0.01	3.3
<i>Nellobia eusoma</i>	ECHIURA	Echiuridea	Bonelliidae	1	0.01	3.3
Nemertea	NEMERTEA			1	0.01	3.3
<i>Neotrypaea californiensis</i>	ARTHROPODA	Malacostraca	Callianassidae	1	0.01	3.3
<i>Nephasoma diaphanes</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.01	3.3
<i>Nereiphylla ferruginea</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.3
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.01	3.3
<i>Edwardsia</i> sp.	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.3

Appendix B7. Macrofaunal community summary for the Outer Shelf stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	618	7.38	37.9
<i>Chloeia pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	463	5.53	72.4
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	455	5.44	82.8
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	295	3.52	51.7
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	228	2.72	62.1
<i>Gammaropsis ociosa</i>	ARTHROPODA	Malacostraca	Photidae	175	2.09	24.1
<i>Spiophanes kimbballi</i>	ANNELIDA	Polychaeta	Spionidae	158	1.89	79.3
<i>Photis lacia</i>	ARTHROPODA	Malacostraca	Photidae	144	1.72	20.7
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	137	1.64	89.7
<i>Spiochaetopterus costarum</i>						
Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	131	1.57	58.6
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	130	1.55	48.3
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		128	1.53	72.4
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	105	1.25	44.8
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	100	1.19	17.2
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thysiridae	98	1.17	75.9
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	95	1.14	65.5
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	93	1.11	65.5
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	91	1.09	37.9
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	90	1.08	55.2
<i>Aoroides</i> sp A	ARTHROPODA	Malacostraca	Aoridae	90	1.08	17.2
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	89	1.06	62.1
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	87	1.04	37.9
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	86	1.03	69.0
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephtyidae	80	0.96	82.8
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	78	0.93	58.6
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	75	0.90	48.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	75	0.90	44.8
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	66	0.79	44.8
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	64	0.76	41.4
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	59	0.70	13.8
<i>Gammaropsis</i> sp	ARTHROPODA	Malacostraca	Photidae	58	0.69	3.4
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	57	0.68	48.3
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	56	0.67	55.2
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	56	0.67	55.2
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	54	0.65	41.4
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	48	0.57	41.4
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	48	0.57	41.4
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	45	0.54	72.4
<i>Protomediea articulata</i> Cmplx	ARTHROPODA	Malacostraca	Corophiidae	45	0.54	44.8
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	42	0.50	37.9
<i>Rhepoxyinius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	42	0.50	48.3
<i>Byblis millsii</i>	ARTHROPODA	Malacostraca	Ampeliscidae	41	0.49	24.1
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	41	0.49	55.2
<i>Ampelisca romigi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	41	0.49	17.2
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	40	0.48	27.6
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	39	0.47	44.8
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadiliidae	38	0.45	37.9
<i>Hesperoneae laevis</i>	ANNELIDA	Polychaeta	Polynoidae	38	0.45	6.9
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	37	0.44	17.2
<i>Mooreonuphis segmentispadix</i>	ANNELIDA	Polychaeta	Onuphidae	35	0.42	17.2
<i>Nuculana</i> sp A	MOLLUSCA	Bivalvia	Nuculanidae	33	0.39	37.9
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	32	0.38	27.6
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	32	0.38	24.1
<i>Rhabdus rectius</i>	MOLLUSCA	Scaphopoda	Rhabdidae	32	0.38	44.8
<i>Maera jerrica</i>	ARTHROPODA	Malacostraca	Melitidae	32	0.38	6.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	32	0.38	48.3
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	31	0.37	41.4
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	31	0.37	20.7
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	31	0.37	34.5
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	30	0.36	37.9
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	30	0.36	34.5
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	29	0.35	37.9
<i>Orchomenella decipiens</i>	ARTHROPODA	Malacostraca	Lysianassidae	29	0.35	44.8
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	29	0.35	24.1
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	28	0.33	51.7
<i>Travisia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	27	0.32	27.6
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	27	0.32	48.3
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	26	0.31	17.2
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	26	0.31	24.1
<i>Phascolion</i> sp A	SIPUNCULA	Sipunculidea	Phascolionidae	26	0.31	37.9
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	25	0.30	27.6
<i>Photis macrotica</i>	ARTHROPODA	Malacostraca	Photidae	25	0.30	6.9
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	25	0.30	41.4
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	25	0.30	20.7
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	24	0.29	37.9
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	24	0.29	51.7
<i>Dougaloplus amphacanthus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	24	0.29	24.1
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	24	0.29	44.8
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	24	0.29	20.7
<i>Brisaster</i> sp	ECHINODERMATA	Echinoidea	Schizasteridae	24	0.29	34.5
<i>Melinna heterodonta</i>	ANNELIDA	Polychaeta	Ampharetidae	24	0.29	17.2
<i>Amphipholis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	23	0.27	10.3
<i>Orchomenella pacifica</i>	ARTHROPODA	Malacostraca	Lysianassidae	23	0.27	17.2
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	22	0.26	31.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	22	0.26	51.7
<i>Malmgreniella scriptoria</i>	ANNELIDA	Polychaeta	Polynoidae	21	0.25	34.5
<i>Monoculodes emarginatus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	21	0.25	20.7
<i>Photis parvidons</i>	ARTHROPODA	Malacostraca	Photidae	21	0.25	20.7
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	21	0.25	24.1
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	20	0.24	31.0
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	20	0.24	31.0
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	19	0.23	24.1
<i>Yoldia seminuda</i>	MOLLUSCA	Bivalvia	Yoldiidae	19	0.23	31.0
<i>Scleroconcha trituberculata</i>	ARTHROPODA	Ostracoda	Philomedidae	19	0.23	24.1
Photidae	ARTHROPODA	Malacostraca	Photidae	19	0.23	3.4
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	18	0.22	34.5
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	17	0.20	24.1
<i>Aphelochaeta sp HYP5</i>	ANNELIDA	Polychaeta	Cirratulidae	17	0.20	27.6
<i>Goniada brunnea</i>	ANNELIDA	Polychaeta	Goniadidae	16	0.19	31.0
Lineidae	NEMERTEA	Anopla	Lineidae	16	0.19	44.8
<i>Ericthonius rubricornis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	16	0.19	10.3
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	15	0.18	20.7
Aoridae	ARTHROPODA	Malacostraca	Aoridae	15	0.18	10.3
<i>Aoroides</i> sp	ARTHROPODA	Malacostraca	Aoridae	15	0.18	3.4
<i>Alvania rosana</i>	MOLLUSCA	Gastropoda	Rissoidae	15	0.18	17.2
<i>Phisidia sanctaemariae</i>	ANNELIDA	Polychaeta	Terebellidae	14	0.17	24.1
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	14	0.17	20.7
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	14	0.17	20.7
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	13	0.16	31.0
<i>Tanaella propinquus</i>	ARTHROPODA	Malacostraca	Tanaellidae	13	0.16	17.2
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	13	0.16	24.1
<i>Aphelochaeta phillipsi</i>	ANNELIDA	Polychaeta	Cirratulidae	13	0.16	10.3
<i>Pleusymtes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	13	0.16	6.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	13	0.16	34.5
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	12	0.14	20.7
<i>Nicippe tumida</i>	ARTHROPODA	Malacostraca	Pandaliscidae	12	0.14	24.1
<i>Micranellum crebricinctum</i>	MOLLUSCA	Gastropoda	Caecidae	12	0.14	6.9
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	12	0.14	27.6
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	12	0.14	17.2
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	11	0.13	17.2
<i>Gammaropsis martesia</i>	ARTHROPODA	Malacostraca	Photidae	11	0.13	6.9
<i>Ophiura luetkenii</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	11	0.13	13.8
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	11	0.13	20.7
<i>Aphelochaeta</i> sp HYP8	ANNELIDA	Polychaeta	Cirratulidae	11	0.13	13.8
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	11	0.13	20.7
<i>Caprella mendax</i>	ARTHROPODA	Malacostraca	Caprellidae	10	0.12	10.3
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	10	0.12	20.7
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	10	0.12	20.7
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Embletonematidae	10	0.12	20.7
<i>Caecognathia sanctaerucis</i>	ARTHROPODA	Malacostraca	Gnathiidae	10	0.12	3.4
<i>Lamprops</i> sp D	ARTHROPODA	Malacostraca	Lampropidae	10	0.12	6.9
<i>Eudorellopsis longirostris</i>	ARTHROPODA	Malacostraca	Leuconidae	10	0.12	10.3
<i>Propebela turricula</i>	MOLLUSCA	Gastropoda	Mangeliidae	10	0.12	13.8
<i>Munnogonium tillerae</i>	ARTHROPODA	Malacostraca	Paramunnidae	10	0.12	13.8
<i>Lirobittium</i> sp	MOLLUSCA	Gastropoda	Cerithiidae	9	0.11	6.9
<i>Leptochiton rugatus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	9	0.11	6.9
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.11	20.7
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	9	0.11	6.9
<i>Bemlos audbetti</i>	ARTHROPODA	Malacostraca	Aoridae	9	0.11	6.9
<i>Brisaster latifrons</i>	ECHINODERMATA	Echinoidea	Schizasteridae	9	0.11	31.0
<i>Guernea redundans</i>	ARTHROPODA	Malacostraca	Dexaminiidae	9	0.11	3.4
<i>Chaetozone lunula</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.11	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Jasmineira</i> sp B	ANNELIDA	Polychaeta	Sabellidae	9	0.11	27.6
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	9	0.11	3.4
<i>Phoronis</i> sp	PHORONA		Phoronidae	9	0.11	13.8
<i>Polycirrus</i> sp A	ANNELIDA	Polychaeta	Terebellidae	9	0.11	20.7
Ophiuroidaea	ECHINODERMATA	Ophiuroidaea		9	0.11	13.8
<i>Limifossor fratula</i>	MOLLUSCA	Caudofoveata	Limifossoridae	8	0.10	20.7
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	8	0.10	10.3
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	8	0.10	24.1
<i>Prionospio (Minusprio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	8	0.10	17.2
<i>Waldo</i> sp A	MOLLUSCA	Bivalvia	Galeommatidae	8	0.10	13.8
<i>Metasynchis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	8	0.10	20.7
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	8	0.10	6.9
<i>Hippomedon columbianus</i>	ARTHROPODA	Malacostraca	Lysianassidae	8	0.10	17.2
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	8	0.10	20.7
<i>Ampelisca agassizi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	8	0.10	13.8
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	8	0.10	20.7
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	8	0.10	20.7
<i>Heteromastus filobranchus</i>	ANNELIDA	Polychaeta	Capitellidae	8	0.10	3.4
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	8	0.10	10.3
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	8	0.10	20.7
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	7	0.08	13.8
<i>Hinea insculpta</i>	MOLLUSCA	Gastropoda	Nassariidae	7	0.08	17.2
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	7	0.08	10.3
<i>Photis bifurcata</i>	ARTHROPODA	Malacostraca	Photidae	7	0.08	6.9
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	7	0.08	3.4
Scaphopoda	MOLLUSCA	Scaphopoda		7	0.08	13.8
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	7	0.08	10.3
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.08	10.3
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.08	6.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Brissopsis pacifica</i>	ECHINODERMATA	Echinoidea	Brissidae	7	0.08	24.1
<i>Nutricola ovalis</i>	MOLLUSCA	Bivalvia	Veneridae	7	0.08	6.9
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.08	10.3
<i>Araphura breviaria</i>	ARTHROPODA	Malacostraca	Tanaellidae	7	0.08	6.9
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	7	0.08	24.1
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	7	0.08	10.3
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	6	0.07	13.8
<i>Aglaophamus verrilli</i>	ANNELIDA	Polychaeta	Nephtyidae	6	0.07	13.8
<i>Poecilochaetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilochaetidae	6	0.07	13.8
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	6	0.07	20.7
<i>Foxiphalus golfensis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	6	0.07	6.9
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	6	0.07	17.2
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	6	0.07	17.2
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	6	0.07	13.8
<i>Palaeonemertea</i>	NEMERTEA	Anopla		6	0.07	13.8
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	6	0.07	17.2
<i>Campylaspis hartae</i>	ARTHROPODA	Malacostraca	Nannastacidae	6	0.07	13.8
<i>Ampelisca unsocalae</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.07	6.9
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	6	0.07	17.2
<i>Amphissa bicolor</i>	MOLLUSCA	Gastropoda	Columbellidae	6	0.07	6.9
<i>Amphiura</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	6	0.07	10.3
<i>Anonyx lilljeborgi</i>	ARTHROPODA	Malacostraca	Uristidae	6	0.07	10.3
<i>Monticellina</i> sp HYP3	ANNELIDA	Polychaeta	Cirratulidae	6	0.07	10.3
<i>Monticellina tesselata</i>	ANNELIDA	Polychaeta	Cirratulidae	6	0.07	17.2
<i>Akanthophoreus phillipsi</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	6	0.07	6.9
<i>Mooreonuphis nebulosa</i>	ANNELIDA	Polychaeta	Onuphidae	6	0.07	13.8
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	6	0.07	17.2
<i>Asteroidea</i>	ECHINODERMATA	Asteroidea		6	0.07	10.3
<i>Nellobia eusoma</i>	ECHIURA	Echiuridea	Bonelliidae	6	0.07	10.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	6	0.07	6.9
<i>Mooreonuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	6	0.07	13.8
<i>Magelona</i> sp B	ANNELIDA	Polychaeta	Magelonidae	6	0.07	6.9
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	6	0.07	20.7
<i>Paraphoxus</i> sp 1	ARTHROPODA	Malacostraca	Phoxocephalidae	6	0.07	3.4
<i>Aphelochaeta</i> sp DC1	ANNELIDA	Polychaeta	Cirratulidae	5	0.06	3.4
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	5	0.06	13.8
<i>Aricidea (Acmira) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	5	0.06	13.8
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	5	0.06	13.8
Bivalvia	MOLLUSCA	Bivalvia		5	0.06	13.8
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	5	0.06	13.8
<i>Bruzelia tuberculata</i>	ARTHROPODA	Malacostraca	Synopiidae	5	0.06	10.3
Oligochaeta	ANNELIDA	Oligochaeta		5	0.06	6.9
Phoxocephalidae	ARTHROPODA	Malacostraca	Phoxocephalidae	5	0.06	3.4
<i>Hippomedon</i> sp A	ARTHROPODA	Malacostraca	Lysianassidae	5	0.06	13.8
Ceriantharia	CNIDARIA	Anthozoa		5	0.06	13.8
<i>Joeropsis concava</i>	ARTHROPODA	Malacostraca	Joeropsididae	5	0.06	3.4
<i>Scoloplos armiger</i> Cmplx	ANNELIDA	Polychaeta	Orbiniidae	5	0.06	10.3
<i>Chaetozone</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	5	0.06	3.4
<i>Cirrophorus branchiatus</i>	ANNELIDA	Polychaeta	Paraonidae	5	0.06	13.8
<i>Maldane californiensis</i>	ANNELIDA	Polychaeta	Maldanidae	5	0.06	3.4
<i>Crenella decussata</i>	MOLLUSCA	Bivalvia	Mytilidae	5	0.06	6.9
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	5	0.06	10.3
<i>Acteocina cerealis</i>	MOLLUSCA	Gastropoda	Cylichnidae	5	0.06	10.3
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	5	0.06	3.4
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	5	0.06	17.2
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	5	0.06	13.8
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	5	0.06	13.8
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	5	0.06	13.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ophiura</i> sp	ECHINODERMATA	Ophiuroidea	Ophiuridae	5	0.06	6.9
<i>Harpiniopsis fulgens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	5	0.06	13.8
<i>Havelockia benti</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	5	0.06	6.9
<i>Amygdalum pallidulum</i>	MOLLUSCA	Bivalvia	Mytilidae	5	0.06	17.2
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	4	0.05	3.4
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	4	0.05	10.3
<i>Chaetopteridae</i>	ANNELIDA	Polychaeta	Chaetopteridae	4	0.05	6.9
<i>Amage anops</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.05	10.3
<i>Diastylis pellucida</i>	ARTHROPODA	Malacostraca	Diastylidae	4	0.05	6.9
<i>Chauliopleona dentata</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	4	0.05	10.3
<i>Samytha californiensis</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.05	13.8
<i>Acila castrensis</i>	MOLLUSCA	Bivalvia	Nuculidae	4	0.05	10.3
<i>Cumacea</i>	ARTHROPODA	Malacostraca		4	0.05	10.3
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.05	3.4
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	4	0.05	10.3
<i>Lanassa venusta venusta</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.05	10.3
<i>Lanice conchilega</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.05	10.3
<i>Sthenelais tertiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	4	0.05	10.3
<i>Onuphis geophiliformis</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.05	6.9
<i>Onuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	4	0.05	6.9
<i>Amphioplus strongyloplax</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.05	6.9
<i>Aphelochaeta</i> sp DC2	ANNELIDA	Polychaeta	Cirratulidae	4	0.05	13.8
<i>Notoproctus pacificus</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.05	6.9
<i>Lepidepecreum gurjanovae</i>	ARTHROPODA	Malacostraca	Lysianassidae	4	0.05	10.3
<i>Sipuncula</i>	SIPUNCULA			4	0.05	6.9
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	4	0.05	10.3
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	4	0.05	6.9
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	4	0.05	13.8
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	4	0.05	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Brisaster townsendi</i>	ECHINODERMATA	Echinoidea	Schizasteridae	4	0.05	6.9
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.05	6.9
<i>Maera similis</i>	ARTHROPODA	Malacostraca	Melitidae	4	0.05	3.4
<i>Onuphis elegans</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.05	3.4
<i>Carazziella</i> sp A	ANNELIDA	Polychaeta	Spionidae	4	0.05	3.4
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	4	0.05	13.8
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.05	13.8
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		4	0.05	6.9
<i>Edwardsia</i> sp	CNIDARIA	Anthozoa	Edwardsiidae	4	0.05	6.9
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	4	0.05	6.9
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	4	0.05	13.8
<i>Procampylaspis caenosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	4	0.05	10.3
Podocopida	ARTHROPODA	Ostracoda		4	0.05	6.9
<i>Glycera oxycephala</i>	ANNELIDA	Polychaeta	Glyceridae	4	0.05	3.4
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	4	0.05	6.9
<i>Eyakia robusta</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.05	6.9
<i>Prachynella lodo</i>	ARTHROPODA	Malacostraca	Pachynidae	4	0.05	10.3
<i>Galathowenia piltzi</i>	ANNELIDA	Polychaeta	Oweniidae	3	0.04	6.9
<i>Cephalophoxoides homilis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.04	6.9
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.04	6.9
Spionidae	ANNELIDA	Polychaeta	Spionidae	3	0.04	10.3
<i>Campylaspis rubromaculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	3	0.04	10.3
<i>Tanaopsis cadieni</i>	ARTHROPODA	Malacostraca		3	0.04	6.9
<i>Ilyarachna acarina</i>	ARTHROPODA	Malacostraca	Munnopsidae	3	0.04	3.4
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.04	6.9
<i>Nothria occidentalis</i>	ANNELIDA	Polychaeta	Onuphidae	3	0.04	3.4
<i>Pentamera rigida</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	3	0.04	6.9
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	3	0.04	3.4
<i>Metopa dawsoni</i>	ARTHROPODA	Malacostraca	Stenothoidae	3	0.04	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Gastropoda	MOLLUSCA	Gastropoda		3	0.04	10.3
<i>Eusarsiella thominx</i>	ARTHROPODA	Ostracoda	Sarsiellidae	3	0.04	6.9
<i>Tellina</i> sp	MOLLUSCA	Bivalvia	Tellinidae	3	0.04	6.9
<i>Levinsenia</i> sp B	ANNELIDA	Polychaeta	Paraonidae	3	0.04	3.4
<i>Acoetes pacifica</i>	ANNELIDA	Polychaeta	Acoetidae	3	0.04	6.9
<i>Heteromastus filiformis</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	3	0.04	6.9
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.04	3.4
<i>Listriolobus</i> sp	ECHIURA	Echiuridea	Thalassematidae	3	0.04	3.4
<i>Akanthophoreus cf gracilis</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	3	0.04	3.4
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	3	0.04	10.3
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	3	0.04	6.9
<i>Terebellides</i> sp	ANNELIDA	Polychaeta	Trichobranchidae	3	0.04	10.3
<i>Turbanilla</i> sp A	MOLLUSCA	Gastropoda	Pyramidellidae	3	0.04	6.9
<i>Aoroides inermis</i>	ARTHROPODA	Malacostraca	Aoridae	3	0.04	3.4
Ophiuridae	ECHINODERMATA	Ophiuroidea	Ophiuridae	3	0.04	3.4
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	3	0.04	6.9
<i>Trophoniella harrisae</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.04	6.9
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	3	0.04	6.9
<i>Malmgreniella</i> sp SD2	ANNELIDA	Polychaeta	Polynoidae	3	0.04	6.9
<i>Balcis micans</i>	MOLLUSCA	Gastropoda	Eulimidae	3	0.04	10.3
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	3	0.04	6.9
<i>Chaetoderma nanulum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	3	0.04	6.9
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	3	0.04	3.4
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.04	6.9
<i>Euchone</i> sp A	ANNELIDA	Polychaeta	Sabellidae	3	0.04	6.9
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	3	0.04	6.9
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.04	10.3
<i>Clymenura columbiana</i>	ANNELIDA	Polychaeta	Maldanidae	3	0.04	6.9
<i>Cyllichna diegensis</i>	MOLLUSCA	Gastropoda	Cyllichnidae	3	0.04	10.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.04	10.3
<i>Cyclocardia</i> sp	MOLLUSCA	Bivalvia	Carditidae	2	0.02	3.4
<i>Antiplanes thalea</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	2	0.02	6.9
<i>Antiplanes catalinae</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	2	0.02	6.9
<i>Eclyssipe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	3.4
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	2	0.02	6.9
<i>Heterophoxus conlaniae</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	3.4
<i>Cyclocardia ventricosa</i>	MOLLUSCA	Bivalvia	Carditidae	2	0.02	6.9
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.02	3.4
<i>Travisia pupa</i>	ANNELIDA	Polychaeta	Opheliidae	2	0.02	6.9
Echinoidea	ECHINODERMATA	Echinoidea		2	0.02	6.9
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	2	0.02	6.9
Decapoda	ARTHROPODA	Malacostraca		2	0.02	6.9
<i>Proclea</i> sp A	ANNELIDA	Polychaeta	Terebellidae	2	0.02	6.9
<i>Oenopota</i> sp 1	Mollusca	Gastropoda	Mangeliidae	2	0.02	3.4
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	2	0.02	6.9
<i>Pentamera pseudocalcigera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.02	6.9
<i>Sigalion spinosus</i>	ANNELIDA	Polychaeta	Sigalionidae	2	0.02	6.9
<i>Mooresomytha bioculata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.9
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	2	0.02	6.9
<i>Cirratulus</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	3.4
<i>Araphura cuspirostris</i>	ARTHROPODA	Malacostraca	Tanaellidae	2	0.02	3.4
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	2	0.02	3.4
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	2	0.02	3.4
<i>Lineus</i> sp	NEMERTEA	Anopla	Lineidae	2	0.02	3.4
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	2	0.02	6.9
<i>Acidostoma hancocki</i>	ARTHROPODA	Malacostraca	Acidostomatidae	2	0.02	6.9
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	6.9
<i>Dorvillea (Schistomeringsos)</i> sp	ANNELIDA	Polychaeta	Dorvilleidae	2	0.02	6.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Admete gracilior</i>	MOLLUSCA	Gastropoda	Cancellariidae	2	0.02	6.9
<i>Diplehnia caeca</i>	PLATYHELMINTHES	Turbellaria	Plehniiidae	2	0.02	3.4
<i>Urothoe elegans</i> Cmplx	ARTHROPODA	Malacostraca	Urothoidae	2	0.02	3.4
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	6.9
<i>Rudilemboides</i> sp A	ARTHROPODA	Malacostraca	Unciolidae	2	0.02	3.4
<i>Dactylopleustes</i> sp A	ARTHROPODA	Malacostraca	Pleustidae	2	0.02	3.4
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	3.4
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	2	0.02	6.9
<i>Dentalium vallicolens</i>	MOLLUSCA	Scaphopoda	Dentaliidae	2	0.02	3.4
Paguridae	ARTHROPODA	Malacostraca	Paguridae	2	0.02	3.4
Dendrochirotida	ECHINODERMATA	Holothuroidea		2	0.02	3.4
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	2	0.02	6.9
<i>Ampharete acutifrons</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.9
<i>Ampharete</i> sp	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.9
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	2	0.02	6.9
<i>Leucon falcicosta</i>	ARTHROPODA	Malacostraca	Leuconidae	2	0.02	6.9
<i>Rutiderma lomae</i>	ARTHROPODA	Ostracoda	Rutidermatidae	2	0.02	6.9
<i>Kurtzia arteaga</i>	MOLLUSCA	Gastropoda	Mangeliidae	2	0.02	6.9
<i>Listriella albina</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	2	0.02	6.9
<i>Eranno lagunae</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.02	6.9
<i>Siphonolabrum californiensis</i>	ARTHROPODA	Malacostraca	Anarthuridae	2	0.02	6.9
<i>Nemocardium centifolosum</i>	MOLLUSCA	Bivalvia	Cardiidae	2	0.02	6.9
Hoplonemetea	NEMERTEA	Enopla		2	0.02	6.9
<i>Huxleyia munita</i>	MOLLUSCA	Bivalvia	Nucinellidae	2	0.02	3.4
<i>Prionospio (Prionospio) ehlersi</i>	ANNELIDA	Polychaeta	Spionidae	2	0.02	6.9
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	2	0.02	3.4
<i>Eulalia</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	3.4
<i>Laonice</i> sp	ANNELIDA	Polychaeta	Spionidae	2	0.02	6.9
<i>Sthenelais fusca</i>	ANNELIDA	Polychaeta	Sigalionidae	2	0.02	6.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Caprellidae	ARTHROPODA	Malacostraca	Caprellidae	2	0.02	6.9
Munnopsidae	ARTHROPODA	Malacostraca	Munnopsidae	2	0.02	3.4
Capitellidae	ANNELIDA	Polychaeta	Capitellidae	2	0.02	6.9
<i>Naineris uncinata</i>	ANNELIDA	Polychaeta	Orbiniidae	2	0.02	3.4
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	2	0.02	6.9
<i>Caecognathia</i> sp	ARTHROPODA	Malacostraca	Gnathiidae	2	0.02	3.4
<i>Sosane occidentalis</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.9
<i>Eumida tubiformis</i>	ANNELIDA	Polychaeta	Phyllogocidae	2	0.02	3.4
<i>Monoculodes glyconicus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.02	6.9
<i>Bathymedon roquedo</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.02	6.9
Tanaidacea	ARTHROPODA	Malacostraca		2	0.02	6.9
<i>Subadyte mexicana</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	6.9
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	2	0.02	6.9
<i>Cardiomya planetica</i>	MOLLUSCA	Bivalvia	Cuspidariidae	2	0.02	6.9
<i>Strongylocentrotus fragilis</i>	ECHINODERMATA	Echinoidea	Strongylocentrotidae	2	0.02	6.9
<i>Chiridota</i> sp	ECHINODERMATA	Holothuroidea	Chiridotidae	2	0.02	3.4
<i>Artacamella hancocki</i>	ANNELIDA	Polychaeta	Trichobranchidae	2	0.02	6.9
Veneridae	MOLLUSCA	Bivalvia	Veneridae	1	0.01	3.4
<i>Solariella peramabilis</i>	MOLLUSCA	Gastropoda	Solariellidae	1	0.01	3.4
<i>Virgularia agassizii</i>	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	3.4
<i>Virgularia</i> sp	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	3.4
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.4
<i>Pinnixa occidentalis</i> Cmplx	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.01	3.4
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.01	3.4
<i>Sigambra setosa</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	3.4
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.4
<i>Pseudatherospi fauchaldi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4
<i>Rhachotropis barnardi</i>	ARTHROPODA	Malacostraca	Eusiridae	1	0.01	3.4
<i>Prionospio (Prionospio)</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Rocinela angustata</i>	ARTHROPODA	Malacostraca	Aegidae	1	0.01	3.4
<i>Bradabyssa</i> sp SD1				1	0.01	3.4
<i>Typosyllis</i> sp SD5	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.4
<i>Sige</i> sp B	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.4
<i>Phyllodoce cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.4
<i>Phyllochaetopterus prolificus</i>	ANNELIDA	Polychaeta	Chaetopteridae	1	0.01	3.4
<i>Scionella japonica</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Synidotea</i> sp	ARTHROPODA	Malacostraca	Idoteidae	1	0.01	3.4
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	1	0.01	3.4
<i>Polycirrus</i> sp OC1	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Synidotea magnifica</i>	ARTHROPODA	Malacostraca	Idoteidae	1	0.01	3.4
<i>Syllides mikeli</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.4
<i>Polycirrus</i> sp I	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Phascolion</i> sp	SIPUNCULA	Sipunculidea	Phascolionidae	1	0.01	3.4
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4
<i>Rhepoxyntius menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.4
<i>Streblosoma</i> sp	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Sthenelais</i> sp	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	3.4
<i>Philine</i> sp	MOLLUSCA	Gastropoda	Philinidae	1	0.01	3.4
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Scolanthus triangulus</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.4
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.01	3.4
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.01	3.4
<i>Polyopthalmus pictus</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.4
<i>Pardalisca tenuipes</i>	ARTHROPODA	Malacostraca	Pardaliscidae	1	0.01	3.4
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.4
<i>Podocerus cristatus</i>	ARTHROPODA	Malacostraca	Podoceridae	1	0.01	3.4
<i>Travisia</i> sp	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4
<i>Tubulanidae</i> sp D	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.4
<i>Poecilochaetus</i> sp	ANNELIDA	Polychaeta	Poecilochaetidae	1	0.01	3.4
<i>Pista</i> sp E	Annelida	Polychaeta	Terebellidae	1	0.01	3.4
<i>Rutiderma judayi</i>	ARTHROPODA	Ostracoda	Rutidermatidae	1	0.01	3.4
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4
<i>Terebellides</i> sp Type D	ANNELIDA	Polychaeta	Trichobranchidae	1	0.01	3.4
<i>Eteone pigmentata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.4
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	1	0.01	3.4
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.4
<i>Dyopedos monacanthus</i>	ARTHROPODA	Malacostraca	Dulichiidae	1	0.01	3.4
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.4
<i>Enallopaguropsis guatemocci</i>	ARTHROPODA	Malacostraca	Paguridae	1	0.01	3.4
<i>Epitonium sawiniae</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	3.4
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.4
<i>Eteone brigitteae</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.4
<i>Diastylis sentosa</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	3.4
<i>Euchone velifera</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.4
<i>Microjassa bousfieldi</i>	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.01	3.4
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	1	0.01	3.4
<i>Eusyllis blomstrandii</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.4
<i>Eusyllis</i> sp SD2	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.4
<i>Gadila tolmiei</i>	MOLLUSCA	Scaphopoda	Gadilidae	1	0.01	3.4
<i>Monoculodes</i> sp	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.4
<i>Clymenura gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.4
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	3.4
<i>Chaetoderma elegans</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	1	0.01	3.4
Chaetodermatida	MOLLUSCA	Caudofoveata		1	0.01	3.4
<i>Chaetozone acuta</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Chaetozone columbiana</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.4
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.4
<i>Dougaloplus</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.4
<i>Mopalia</i> sp	MOLLUSCA	Polyplacophora	Mopaliidae	1	0.01	3.4
<i>Mesolamprops bispinosus</i>	ARTHROPODA	Malacostraca	Lampropidae	1	0.01	3.4
<i>Crockerella evadne</i>	MOLLUSCA	Gastropoda	Clathurellidae	1	0.01	3.4
<i>Mooreonuphis exigua</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.4
<i>Cyllichna</i> sp	MOLLUSCA	Gastropoda	Cylichnidae	1	0.01	3.4
<i>Deflexilodes norvegicus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.4
<i>Deilocerus decorus</i>	ARTHROPODA	Malacostraca	Cyclodorippidae	1	0.01	3.4
<i>Diasterope pilosa</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	3.4
<i>Chaetozone</i> sp SD7	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.4
<i>Lepidasthenia</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Malmgreniella nigralba</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Hippomedon zetesimus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.4
<i>Janiralata</i> sp	ARTHROPODA	Malacostraca	Janiridae	1	0.01	3.4
<i>Malmgreniella liei</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	3.4
<i>Malacoceros indicus</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.4
<i>Gammaropsis barnardi</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	3.4
<i>Lepidasthenia longicirrata</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Henricia</i> sp	ECHINODERMATA	Astroidea	Echinasteridae	1	0.01	3.4
<i>Lepidozona radians</i>	MOLLUSCA	Polyplacophora	Ischnochitonidae	1	0.01	3.4
<i>Leptostylistis abditus</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	3.4
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	1	0.01	3.4
<i>Leuconidae</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.01	3.4
<i>Listriella eriopisa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	3.4
<i>Listriella</i> sp	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	3.4
<i>Leitoscoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Golfingiidae	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.01	3.4
<i>Glycera branchiopoda</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.4
<i>Mesochaetopterus</i> sp	ANNELIDA	Polychaeta	Chaetopteridae	1	0.01	3.4
<i>Gammaropsis thompsoni</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	3.4
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.4
<i>Parapagurodes makarovi</i>	ARTHROPODA	Malacostraca	Paguridae	1	0.01	3.4
<i>Glycera</i> sp LA1	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.4
<i>Heteromastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	1	0.01	3.4
<i>Gnathia trilobata</i>	ARTHROPODA	Malacostraca	Gnathiidae	1	0.01	3.4
<i>Marphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	1	0.01	3.4
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.4
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	1	0.01	3.4
<i>Megalomma splendida</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.4
<i>Halcampa decemtentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	1	0.01	3.4
<i>Halicoides synopiae</i>	ARTHROPODA	Malacostraca	Pardaliscidae	1	0.01	3.4
<i>Harmothoe fragilis</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.4
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.4
<i>Melinna</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.4
<i>Oenopota</i> sp DC1	MOLLUSCA	Gastropoda	Mangeliidae	1	0.01	3.4
<i>Bemlos</i> sp	ARTHROPODA	Malacostraca	Aoridae	1	0.01	3.4
<i>Bemlos concavus</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	3.4
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.01	3.4
<i>Axiothella</i> sp	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.4
<i>Aricidea (Aricidea) wassi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4
<i>Cardiomya pectinata</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.01	3.4
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4
<i>Aricidea (Allia) hartleyi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4
<i>Aricidea (Acmina) simplex</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4
<i>Aricidea (Acmina) rubra</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aricidea (Acmina) lopezi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.4
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.01	3.4
Oedicerotidae	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.4
<i>Astropecten californicus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	1	0.01	3.4
Onuphidae	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.4
<i>Antalis pretiosa</i>	MOLLUSCA	Scaphopoda	Dentaliidae	1	0.01	3.4
<i>Anarthon</i> sp SD1	ARTHROPODA	Ostracoda	Philomedidae	1	0.01	3.4
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.4
<i>Amphioplus</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.4
<i>Ophelina acuminata</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.4
<i>Amphicteis mucronata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.4
<i>Ampelisca milleri</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	3.4
<i>Melphisana bola</i> Cmplx	ARTHROPODA	Malacostraca	Melphidippidae	1	0.01	3.4
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.4
Paramunnidae	ARTHROPODA	Malacostraca	Paramunnidae	1	0.01	3.4
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.4
<i>Nuculana</i> sp	MOLLUSCA	Bivalvia	Nuculanidae	1	0.01	3.4
<i>Campylaspis rufa</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	3.4
<i>Campylaspis blakei</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	3.4
<i>Callipallene pacifica</i>	ARTHROPODA	Pycnogonida	Callipallenidae	1	0.01	3.4
<i>Bullomorpha</i> sp A	MOLLUSCA	Gastropoda		1	0.01	3.4
<i>Campylaspis</i> sp A	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	3.4
<i>Naineris</i> sp	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.4
<i>Nephtys punctata</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.01	3.4

Table B8. Macrobenthic community summary for the MPA stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Monticellina sibrina</i>	ANNELIDA	Polychaeta	Cirratulidae	387	3.76	42.9
<i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	329	3.19	71.4
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	323	3.14	35.7
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	301	2.92	28.6
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	284	2.76	60.7
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	262	2.54	42.9
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	261	2.53	64.3
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	248	2.41	46.4
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	196	1.90	64.3
<i>Glottidia albida</i>	BRACIOPODA	Inarticulata	Lingulidae	140	1.36	46.4
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	139	1.35	57.1
<i>Maldanidae</i>	ANNELIDA	Polychaeta	Maldanidae	131	1.27	53.6
<i>Spiophanes kimballi</i>	ANNELIDA	Polychaeta	Spionidae	114	1.11	28.6
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	111	1.08	67.9
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	111	1.08	50.0
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	104	1.01	35.7
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	98	0.95	32.1
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllocoelidae	97	0.94	42.9
<i>Owenia johnsoni</i>	ANNELIDA	Polychaeta	Oweniidae	94	0.91	3.6
<i>Chloeia pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	91	0.88	39.3
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	90	0.87	60.7
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	88	0.85	25.0
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	87	0.84	57.1
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	84	0.82	57.1
<i>Rhepoxygnus bicuspispidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	81	0.79	35.7
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	78	0.76	50.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	76	0.74	28.6
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	74	0.72	50.0
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	74	0.72	46.4
<i>Dialychnone veleronis</i>	ANNELIDA	Polychaeta	Sabellidae	74	0.72	28.6
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	71	0.69	53.6
<i>Phoronis</i> sp	PHORONA		Phoronidae	71	0.69	35.7
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	68	0.66	57.1
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	68	0.66	57.1
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	65	0.63	25.0
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	65	0.63	64.3
<i>Ampelisca agassizi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	65	0.63	42.9
<i>Byblis millsi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	62	0.60	46.4
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	61	0.59	46.4
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	60	0.58	42.9
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	58	0.56	32.1
<i>Rhepoxygnus stenodes</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	57	0.55	35.7
<i>Prionospio (Minusprio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	53	0.51	21.4
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	52	0.50	25.0
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	51	0.50	32.1
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	51	0.50	46.4
<i>Dipolydora barbilla</i>	ANNELIDA	Polychaeta	Spionidae	47	0.46	7.1
<i>Rhepoxygnus variatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	47	0.46	10.7
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	46	0.45	32.1
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	45	0.44	42.9
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	43	0.42	35.7
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	43	0.42	42.9
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	42	0.41	17.9
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	42	0.41	42.9
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	42	0.41	50.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	42	0.41	50.0
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	40	0.39	46.4
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	39	0.38	7.1
<i>Diopatra</i> sp	ANNELIDA	Polychaeta	Onuphidae	38	0.37	25.0
<i>Streblosoma crassibranchia</i>	ANNELIDA	Polychaeta	Terebellidae	37	0.36	7.1
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	37	0.36	17.9
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	37	0.36	50.0
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	37	0.36	10.7
<i>Protomediea articulata</i> Cmplx	ARTHROPODA	Malacostraca	Corophiidae	36	0.35	32.1
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	36	0.35	50.0
<i>Foxiphalus obtusidens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	35	0.34	28.6
<i>Rhepoxynius menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	35	0.34	28.6
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	34	0.33	14.3
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	34	0.33	25.0
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadilidae	34	0.33	21.4
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	34	0.33	17.9
<i>Ampelisciphotos podophthalma</i>	ARTHROPODA	Malacostraca	Photidae	33	0.32	10.7
Ceriantharia	CNIDARIA	Anthozoa		33	0.32	32.1
Lineidae	NEMERTEA	Anopla	Lineidae	33	0.32	35.7
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	32	0.31	42.9
<i>Foxiphalus golfensis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	32	0.31	28.6
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephytidae	32	0.31	53.6
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	32	0.31	17.9
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	31	0.30	35.7
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	31	0.30	21.4
<i>Magelona berkeleyi</i>	ANNELIDA	Polychaeta	Magelonidae	31	0.30	25.0
<i>Travisia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	31	0.30	21.4
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	30	0.29	60.7
<i>Alvania rosana</i>	MOLLUSCA	Gastropoda	Rissoidae	30	0.29	10.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aricidea (Acmina) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	30	0.29	32.1
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	29	0.28	42.9
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	28	0.27	46.4
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	27	0.26	10.7
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	27	0.26	32.1
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	27	0.26	7.1
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	27	0.26	42.9
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	26	0.25	39.3
<i>Amphioplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	24	0.23	14.3
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	24	0.23	17.9
<i>Photis parvidons</i>	ARTHROPODA	Malacostraca	Photidae	24	0.23	14.3
<i>Melinna heterodonta</i>	ANNELIDA	Polychaeta	Ampharetidae	24	0.23	14.3
<i>Arachnanthus</i> sp A	CNIDARIA	Anthozoa	Cerianthidae	24	0.23	42.9
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	24	0.23	28.6
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	23	0.22	25.0
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	23	0.22	25.0
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	22	0.21	14.3
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	22	0.21	25.0
Oligochaeta	ANNELIDA	Oligochaeta		22	0.21	14.3
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	22	0.21	28.6
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephytidae	22	0.21	35.7
<i>Neotrypaea</i> sp	ARTHROPODA	Malacostraca	Callianassidae	22	0.21	17.9
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	22	0.21	14.3
<i>Polycirrus</i> sp A	ANNELIDA	Polychaeta	Terebellidae	21	0.20	14.3
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	21	0.20	21.4
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	21	0.20	28.6
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	21	0.20	25.0
<i>Paradialychnone paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	21	0.20	10.7
<i>Photis lacia</i>	ARTHROPODA	Malacostraca	Photidae	20	0.19	14.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	20	0.19	17.9
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	20	0.19	39.3
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	20	0.19	28.6
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Embletonematidae	20	0.19	46.4
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	20	0.19	28.6
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	20	0.19	10.7
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadilidae	19	0.18	32.1
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	19	0.18	17.9
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	19	0.18	28.6
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	19	0.18	17.9
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	19	0.18	21.4
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	19	0.18	32.1
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	18	0.17	21.4
<i>Edwardsia juliae</i>	CNIDARIA	Anthozoa	Edwardsiidae	18	0.17	3.6
<i>Mooreonuphis nebulosa</i>	ANNELIDA	Polychaeta	Onuphidae	18	0.17	21.4
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	18	0.17	17.9
<i>Astropecten</i> sp	ECHINODERMATA	Asteroidea	Astropectinidae	18	0.17	14.3
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	18	0.17	25.0
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	18	0.17	32.1
<i>Rhepoxynius lucubrans</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	17	0.17	3.6
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	17	0.17	35.7
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	17	0.17	32.1
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	17	0.17	17.9
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	17	0.17	25.0
<i>Hamatoscalpellum californicum</i>	ARTHROPODA	Maxillopoda	Scalpellidae	17	0.17	10.7
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	16	0.16	21.4
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	16	0.16	28.6
Asteroidea	ECHINODERMATA	Asteroidea		16	0.16	25.0
<i>Nuculana taphria</i>	MOLLUSCA	Bivalvia	Nuculanidae	16	0.16	35.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aruga oculata</i>	ARTHROPODA	Malacostraca	Lysianassidae	16	0.16	32.1
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	16	0.16	28.6
<i>Nuculana sp A</i>	MOLLUSCA	Bivalvia	Nuculanidae	16	0.16	25.0
<i>Heteronemertea sp SD2</i>	NEMERTEA	Anopla		16	0.16	17.9
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	16	0.16	25.0
<i>Rhabdus rectius</i>	MOLLUSCA	Scaphopoda	Rhabdidae	16	0.16	10.7
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	15	0.15	25.0
<i>Sigalion spinosus</i>	ANNELIDA	Polychaeta	Sigalionidae	15	0.15	21.4
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	15	0.15	17.9
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	15	0.15	21.4
<i>Pachycerianthus sp</i>	CNIDARIA	Anthozoa	Cerianthidae	15	0.15	3.6
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	15	0.15	17.9
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	15	0.15	17.9
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	15	0.15	21.4
<i>Idarcturus allelomorphus</i>	ARTHROPODA	Malacostraca	Arcturidae	14	0.14	10.7
<i>Chaetozone lunula</i>	ANNELIDA	Polychaeta	Cirratulidae	14	0.14	7.1
<i>Alia tuberosa</i>	MOLLUSCA	Gastropoda	Columbellidae	14	0.14	7.1
<i>Sthenelais sp</i>	ANNELIDA	Polychaeta	Sigalionidae	14	0.14	14.3
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	13	0.13	28.6
<i>Malmgreniella macginitieei</i>	ANNELIDA	Polychaeta	Polynoidae	13	0.13	10.7
<i>Sthenelais tertiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	13	0.13	28.6
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	13	0.13	25.0
<i>Monticellina tesselata</i>	ANNELIDA	Polychaeta	Cirratulidae	13	0.13	17.9
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	13	0.13	17.9
<i>Heterophoxus sp</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	13	0.13	28.6
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	13	0.13	32.1
<i>Enteropneusta</i>	CHORDATA	Enteropneusta		12	0.12	21.4
<i>Glycera oxycephala</i>	ANNELIDA	Polychaeta	Glyceridae	12	0.12	7.1
<i>Mesolamprops bispinosus</i>	ARTHROPODA	Malacostraca	Lampropidae	12	0.12	17.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	12	0.12	10.7
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	12	0.12	21.4
<i>Notoproctus pacificus</i>	ANNELIDA	Polychaeta	Maldanidae	12	0.12	7.1
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	12	0.12	10.7
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	12	0.12	14.3
<i>Goniada brunnea</i>	ANNELIDA	Polychaeta	Goniadidae	12	0.12	17.9
<i>Poecilochaetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilochaetidae	12	0.12	17.9
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	11	0.11	25.0
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	11	0.11	25.0
<i>Magelona sacculata</i>	ANNELIDA	Polychaeta	Magelonidae	11	0.11	10.7
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	11	0.11	21.4
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	11	0.11	32.1
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	11	0.11	21.4
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	11	0.11	3.6
<i>Paralysippe annectens</i>	ANNELIDA	Polychaeta	Ampharetidae	11	0.11	7.1
<i>Harpiniopsis epistomata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	10	0.10	7.1
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	10	0.10	14.3
<i>Paradialychine ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	10	0.10	10.7
<i>Ampelisca unsocalae</i>	ARTHROPODA	Malacostraca	Ampeliscidae	10	0.10	7.1
<i>Aglaophamus verrilli</i>	ANNELIDA	Polychaeta	Nephtyidae	10	0.10	21.4
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	10	0.10	25.0
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	10	0.10	25.0
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	10	0.10	25.0
<i>Onuphis</i> sp A	ANNELIDA	Polychaeta	Onuphidae	10	0.10	17.9
<i>Ophiura luetkenii</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	10	0.10	21.4
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	10	0.10	25.0
<i>Metasynchis dispartidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	10	0.10	17.9
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	10	0.10	14.3
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	9	0.09	14.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	9	0.09	10.7
<i>Turbonilla sp A</i>	MOLLUSCA	Gastropoda	Pyramidellidae	9	0.09	14.3
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	9	0.09	7.1
<i>Ophiuroconis bispinosa</i>	ECHINODERMATA	Ophiuroidea	Ophiodermatidae	9	0.09	17.9
<i>Gammaropsis thompsoni</i>	ARTHROPODA	Malacostraca	Photidae	9	0.09	10.7
<i>Tetrastemma albidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	9	0.09	3.6
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	9	0.09	14.3
<i>Kurtzia arteaga</i>	MOLLUSCA	Gastropoda	Mangeliidae	9	0.09	7.1
<i>Magelona hartmanae</i>	ANNELIDA	Polychaeta	Magelonidae	9	0.09	10.7
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	9	0.09	25.0
<i>Chaetozone columbiiana</i>	ANNELIDA	Polychaeta	Cirratulidae	8	0.08	14.3
<i>Synidotea magnifica</i>	ARTHROPODA	Malacostraca	Idoteidae	8	0.08	14.3
<i>Chaetoderma nanulum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	8	0.08	7.1
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	8	0.08	21.4
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	8	0.08	17.9
<i>Aricidea (Acmina) horikoshii</i>	ANNELIDA	Polychaeta	Paraonidae	8	0.08	14.3
<i>Marphysa sp</i>	ANNELIDA	Polychaeta	Eunicidae	8	0.08	7.1
<i>Magelona sp B</i>	ANNELIDA	Polychaeta	Magelonidae	8	0.08	7.1
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	8	0.08	7.1
<i>Cyclocardia ventricosa</i>	MOLLUSCA	Bivalvia	Carditidae	8	0.08	10.7
Phoronida	PHORONA			8	0.08	7.1
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	8	0.08	3.6
<i>Platynereis bicanaliculata</i>	ANNELIDA	Polychaeta	Nereididae	8	0.08	10.7
<i>Lumbrineris japonica</i>	ANNELIDA	Polychaeta	Lumbrineridae	8	0.08	10.7
<i>Pinnixa occidentalis Cmplx</i>	ARTHROPODA	Malacostraca	Pinnotheridae	8	0.08	17.9
<i>Tubulanus sp A</i>	NEMERTEA	Anopla	Tubulanidae	8	0.08	21.4
<i>Astyris permodesta</i>	MOLLUSCA	Gastropoda	Columbellidae	7	0.07	10.7
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.07	14.3
<i>Amage anops</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.07	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Diastylis californica</i>	ARTHROPODA	Malacostraca	Diastylidae	7	0.07	17.9
<i>Astropecten californicus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	7	0.07	14.3
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	7	0.07	10.7
<i>Scoloplos armiger</i> Cmplx	ANNELIDA	Polychaeta	Orbiniidae	7	0.07	14.3
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	7	0.07	21.4
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.07	17.9
<i>Cirratulidae</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.07	10.7
<i>Chiridota</i> sp	ECHINODERMATA	Holothuroidea	Chiridotidae	7	0.07	14.3
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	7	0.07	17.9
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	7	0.07	17.9
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	7	0.07	25.0
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	7	0.07	14.3
<i>Asabellides lineata</i>	ANNELIDA	Polychaeta	Ampharetidae	7	0.07	7.1
<i>Aricidea (Aricidea) wassi</i>	ANNELIDA	Polychaeta	Paraonidae	7	0.07	7.1
<i>Asteropella slatteryi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	7	0.07	14.3
<i>Palaeonemertea</i>	NEMERTEA	Anopla		7	0.07	7.1
<i>Aoroides inermis</i>	ARTHROPODA	Malacostraca	Aoridae	7	0.07	7.1
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	7	0.07	10.7
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.07	10.7
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	7	0.07	21.4
<i>Arcteobia cf anticostiensis</i>	ANNELIDA	Polychaeta	Polynoidae	6	0.06	14.3
<i>Solemya pervernicolor</i>	MOLLUSCA	Bivalvia	Solemyidae	6	0.06	10.7
<i>Streblosoma</i> sp	ANNELIDA	Polychaeta	Terebellidae	6	0.06	7.1
<i>Hartmanodes hartmanae</i>	ARTHROPODA	Malacostraca	Oedicerotidae	6	0.06	17.9
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	6	0.06	10.7
<i>Apopriionospio pygmaea</i>	ANNELIDA	Polychaeta	Spionidae	6	0.06	10.7
<i>Aricidea (Acmina) sp LA1</i>	ANNELIDA	Polychaeta	Paraonidae	6	0.06	10.7
<i>Sige</i> sp A	ANNELIDA	Polychaeta	Phyllodocidae	6	0.06	14.3
<i>Periploma discus</i>	MOLLUSCA	Bivalvia	Periplomatidae	6	0.06	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amphioplus strongyloplax</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	6	0.06	3.6
<i>Ampharete</i> sp	ANNELIDA	Polychaeta	Ampharetidae	6	0.06	10.7
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	6	0.06	14.3
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	6	0.06	14.3
<i>Ampelisca milleri</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.06	10.7
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	6	0.06	17.9
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	6	0.06	14.3
Ophiuroidea	ECHINODERMATA	Ophiuroidea		6	0.06	14.3
<i>Photis</i> sp OC1	ARTHROPODA	Malacostraca	Photidae	6	0.06	14.3
<i>Photis viuda</i>	ARTHROPODA	Malacostraca	Photidae	6	0.06	3.6
<i>Aphelochaeta</i> sp HYP5	ANNELIDA	Polychaeta	Cirratulidae	6	0.06	10.7
<i>Limifossor fratula</i>	MOLLUSCA	Caudofoveata	Limifossoridae	6	0.06	14.3
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	6	0.06	10.7
<i>Aricidea (Acmina) simplex</i>	ANNELIDA	Polychaeta	Paraonidae	5	0.05	14.3
<i>Hesperonoe laevis</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.05	14.3
<i>Chaetozone corona</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.05	10.7
<i>Dialychnone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	5	0.05	14.3
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		5	0.05	7.1
<i>Ampelisca indentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	5	0.05	14.3
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	5	0.05	14.3
<i>Calyptaeidae</i>	MOLLUSCA	Gastropoda	Calyptaeidae	5	0.05	7.1
<i>Diopatra tridentata</i>	ANNELIDA	Polychaeta	Onuphidae	5	0.05	14.3
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	5	0.05	10.7
<i>Gnathiidae</i>	ARTHROPODA	Malacostraca	Gnathiidae	5	0.05	7.1
<i>Carazziella</i> sp A	ANNELIDA	Polychaeta	Spionidae	5	0.05	10.7
<i>Ensis myrae</i>	MOLLUSCA	Bivalvia	Pharidae	5	0.05	17.9
<i>Eteone pigmentata</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.05	7.1
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	5	0.05	10.7
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	5	0.05	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Diastylopsis tenuis</i>	ARTHROPODA	Malacostraca	Diastylidae	5	0.05	3.6
<i>Trophoniella harrisae</i>	ANNELIDA	Polychaeta	Flabelligeridae	5	0.05	3.6
<i>Nicippe tumida</i>	ARTHROPODA	Malacostraca	Pardaliscidae	5	0.05	10.7
<i>Parandalia fauvelli</i>	ANNELIDA	Polychaeta	Pilargidae	5	0.05	17.9
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	5	0.05	17.9
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	5	0.05	17.9
<i>Nebalia pugettensis</i> Cmplx	ARTHROPODA	Malacostraca	Nebaliidae	5	0.05	10.7
<i>Streblosoma</i> sp B	ANNELIDA	Polychaeta	Terebellidae	5	0.05	10.7
<i>Procampylaspis caenosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	5	0.05	17.9
Scaphopoda	MOLLUSCA	Scaphopoda		5	0.05	10.7
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	5	0.05	7.1
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.05	3.6
<i>Protocirrineris</i> sp B	ANNELIDA	Polychaeta	Cirratulidae	5	0.05	3.6
<i>Monoculodes emarginatus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	5	0.05	7.1
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	5	0.05	10.7
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.05	10.7
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	4	0.04	7.1
<i>Phascolion</i> sp A	SIPUNCULA	Sipunculidea	Phascolionidae	4	0.04	10.7
<i>Poecilochaetus martini</i>	ANNELIDA	Polychaeta	Poecilochaetidae	4	0.04	14.3
<i>Levinsenia</i> sp B	ANNELIDA	Polychaeta	Paraonidae	4	0.04	10.7
<i>Eusyllis habei</i>	ANNELIDA	Polychaeta	Syllidae	4	0.04	3.6
<i>Eranno lagunae</i>	ANNELIDA	Polychaeta	Lumbrineridae	4	0.04	10.7
<i>Solen</i> sp	MOLLUSCA	Bivalvia	Solenidae	4	0.04	3.6
Bivalvia	MOLLUSCA	Bivalvia		4	0.04	14.3
<i>Dipolydora</i> sp	ANNELIDA	Polychaeta	Spionidae	4	0.04	7.1
<i>Dougaloplus amphacanthus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.04	7.1
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.04	14.3
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	4	0.04	7.1
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	4	0.04	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Araphura breviaria</i>	ARTHROPODA	Malacostraca	Tanaellidae	4	0.04	7.1
<i>Phyllodoce pettiboneae</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.04	10.7
<i>Magelona</i> sp	ANNELIDA	Polychaeta	Magelonidae	4	0.04	7.1
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	4	0.04	14.3
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	4	0.04	14.3
<i>Crepidula glottidiarum</i>	MOLLUSCA	Gastropoda	Calyptreidae	4	0.04	7.1
<i>Listriella eriopisa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	4	0.04	7.1
<i>Lirobittium</i> sp	MOLLUSCA	Gastropoda	Cerithiidae	4	0.04	10.7
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	4	0.04	3.6
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.04	10.7
<i>Neastacilla californica</i>	ARTHROPODA	Malacostraca	Arcturidae	4	0.04	7.1
<i>Ampelisca cf brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	4	0.04	10.7
<i>Havelockia bentii</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	4	0.04	3.6
<i>Ampharete acutifrons</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.04	10.7
<i>Heteromastus filobranchus</i>	ANNELIDA	Polychaeta	Capitellidae	4	0.04	7.1
<i>Pleusymtes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	4	0.04	7.1
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	4	0.04	10.7
<i>Orthopagurus minimus</i>	ARTHROPODA	Malacostraca	Paguridae	4	0.04	3.6
<i>Amphicteis mucronata</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.04	3.6
<i>Americhelidium</i> sp SD4	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.04	7.1
Hoplonemetea	NEMERTEA	Enopla		4	0.04	14.3
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	4	0.04	7.1
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	4	0.04	10.7
<i>Paradoneis</i> sp SD1	ANNELIDA	Polychaeta	Paraonidae	4	0.04	7.1
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	4	0.04	10.7
<i>Paradialychone harrisae</i>	ANNELIDA	Polychaeta	Sabellidae	4	0.04	3.6
<i>Parapagurodes makarovi</i>	ARTHROPODA	Malacostraca	Paguridae	4	0.04	3.6
<i>Prionospio (Prionospio) ehlersi</i>	ANNELIDA	Polychaeta	Spionidae	4	0.04	10.7
<i>Glossaulax reclusianus</i>	MOLLUSCA	Gastropoda	Naticidae	4	0.04	10.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cyathura munda</i>	ARTHROPODA	Malacostraca	Anthuridae	3	0.03	3.6
<i>Lyonsia californica</i>	MOLLUSCA	Bivalvia	Lyonsiidae	3	0.03	10.7
<i>Sabellides manriquei</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.03	7.1
Heteronemertea	NEMERTEA	Anopla		3	0.03	10.7
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	3	0.03	7.1
<i>Spio filicornis</i>	ANNELIDA	Polychaeta	Spionidae	3	0.03	10.7
<i>Scoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	3	0.03	3.6
<i>Crepidatella orbiculata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	3	0.03	3.6
<i>Sosane occidentalis</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.03	3.6
Nemertea	NEMERTEA			3	0.03	3.6
<i>Dipolydora bidentata</i>	ANNELIDA	Polychaeta	Spionidae	3	0.03	3.6
<i>Edotia</i> sp B	ARTHROPODA	Malacostraca	Idoteidae	3	0.03	3.6
<i>Paguristes turgidus</i>	ARTHROPODA	Malacostraca	Diogenidae	3	0.03	10.7
<i>Poecilochaetus</i> sp	ANNELIDA	Polychaeta	Poecilochaetidae	3	0.03	7.1
<i>Listriella melanica</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	3	0.03	10.7
<i>Pinnixa schmitti</i>	ARTHROPODA	Malacostraca	Pinnotheridae	3	0.03	3.6
<i>Bathymedon roquedo</i>	ARTHROPODA	Malacostraca	Oedicerotidae	3	0.03	3.6
<i>Diastylis pellucida</i>	ARTHROPODA	Malacostraca	Diastylidae	3	0.03	3.6
<i>Siphonolabrum californiensis</i>	ARTHROPODA	Malacostraca	Anarhruridae	3	0.03	7.1
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	3	0.03	7.1
Anopla	NEMERTEA	Anopla		3	0.03	10.7
<i>Thracia</i> sp	MOLLUSCA	Bivalvia	Thraciidae	3	0.03	10.7
<i>Gammaropsis ociosa</i>	ARTHROPODA	Malacostraca	Photidae	3	0.03	7.1
<i>Nuculana conceptionis</i>	MOLLUSCA	Bivalvia	Nuculanidae	3	0.03	10.7
<i>Agnezia septentrionalis</i>	CHORDATA	Asciidiacea	Agneziidae	3	0.03	3.6
<i>Notomastus latericeus</i>	ANNELIDA	Polychaeta	Capitellidae	3	0.03	3.6
<i>Mesochaetopterus</i> sp	ANNELIDA	Polychaeta	Chaetopteridae	3	0.03	3.6
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.03	3.6
<i>Pyromiaia tuberculata</i>	ARTHROPODA	Malacostraca	Inachoididae	3	0.03	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Samytha californiensis</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.03	7.1
<i>Tellina cadieni</i>	MOLLUSCA	Bivalvia	Tellinidae	3	0.03	3.6
<i>Crenella decussata</i>	MOLLUSCA	Bivalvia	Mytilidae	3	0.03	3.6
<i>Campylaspis canaliculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	3	0.03	10.7
<i>Hemilamprops californicus</i>	ARTHROPODA	Malacostraca	Lampropidae	3	0.03	10.7
<i>Kurtiella grippi</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.03	10.7
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	3	0.03	10.7
<i>Acteocina cerealis</i>	MOLLUSCA	Gastropoda	Cylichnidae	3	0.03	3.6
<i>Eulalia levicornuta Cmplx</i>	ANNELIDA	Polychaeta	Phyllodocidae	3	0.03	3.6
<i>Malmgreniella scriptoria</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.03	7.1
<i>Eudorellopsis longirostris</i>	ARTHROPODA	Malacostraca	Leuconidae	3	0.03	3.6
<i>Orchomenella decipiens</i>	ARTHROPODA	Malacostraca	Lysianassidae	3	0.03	7.1
<i>Acidostoma hancocki</i>	ARTHROPODA	Malacostraca	Acidostomatidae	3	0.03	7.1
<i>Kellia suborbicularis</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.03	3.6
Chaetodermatida	MOLLUSCA	Caudofoveata		3	0.03	7.1
<i>Corymorphpha bigelowi</i>	CNIDARIA	Hydrozoa	Corymorphidae	3	0.03	3.6
<i>Deflexilodes norvegicus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	3	0.03	3.6
<i>Epitonium sawinae</i>	MOLLUSCA	Gastropoda	Epitoniidae	3	0.03	7.1
<i>Turbellaria</i> sp A	PLATYHELMINTHES	Turbellaria		3	0.03	3.6
<i>Monticellina</i> sp HYP3	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	3.6
<i>Monticellina</i> sp 1	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	3.6
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	2	0.02	7.1
<i>Caryocorbula porcella</i>	MOLLUSCA	Bivalvia	Corbulidae	2	0.02	7.1
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	7.1
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	2	0.02	7.1
Modiolinae	MOLLUSCA	Bivalvia	Mytilidae	2	0.02	3.6
<i>Prionospio</i> sp	ANNELIDA	Polychaeta	Spionidae	2	0.02	7.1
<i>Microjassa</i> sp	ARTHROPODA	Malacostraca	Ischyroceridae	2	0.02	3.6
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	2	0.02	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nutricola ovalis</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.02	3.6
<i>Neoleprea spiralis</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.02	3.6
<i>Aphroditia japonica</i>	ANNELIDA	Polychaeta	Aphroditidae	2	0.02	3.6
<i>Notocirrus californiensis</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.02	7.1
<i>Notomastus sp</i>	ANNELIDA	Polychaeta	Capitellidae	2	0.02	7.1
Aoridae	ARTHROPODA	Malacostraca	Aoridae	2	0.02	3.6
Actiniaria	CNIDARIA	Anthozoa		2	0.02	3.6
<i>Paraxanthias taylori</i>	ARTHROPODA	Malacostraca	Xanthidae	2	0.02	3.6
<i>Nereiphylla ferruginea</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	7.1
<i>Oerstedia dorsalis</i> Cmplx	NEMERTEA	Enopla	Prosorhochmidae	2	0.02	3.6
<i>Amakusanthura californiensis</i>	ARTHROPODA	Malacostraca	Anthuridae	2	0.02	3.6
Ophiacanthidae	ECHINODERMATA	Ophiuroidea	Ophiacanthidae	2	0.02	3.6
Paraonidae	ANNELIDA	Polychaeta	Paraonidae	2	0.02	7.1
<i>Ampharetidae</i> sp SD1	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	3.6
<i>Ampelisca romigi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	2	0.02	3.6
<i>Parexogone breviseta</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	7.1
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	2	0.02	7.1
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	2	0.02	7.1
Brachyura	ARTHROPODA	Malacostraca		2	0.02	7.1
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephytidae	2	0.02	3.6
<i>Bathymedon pumilus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.02	7.1
Pinnotheridae	ARTHROPODA	Malacostraca	Pinnotheridae	2	0.02	3.6
<i>Apistobranchus ornatus</i>	ANNELIDA	Polychaeta	Apistobranchidae	2	0.02	3.6
<i>Photis bifurcata</i>	ARTHROPODA	Malacostraca	Photidae	2	0.02	3.6
<i>Brissopsis pacifica</i>	ECHINODERMATA	Echinoidea	Brissidae	2	0.02	7.1
<i>Acanthoptilum</i> sp	CNIDARIA	Anthozoa	Virgulariidae	2	0.02	7.1
<i>Aricidea (Allia)</i> antennata	ANNELIDA	Polychaeta	Paraonidae	2	0.02	3.6
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	7.1
<i>Neosabellaria cementarium</i>	ANNELIDA	Polychaeta	Sabellariidae	2	0.02	7.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nephasoma</i> SD2	Sipuncula	Sipunculidea	Golfingiidae	2	0.02	3.6
<i>Araphura</i> sp SD1	ARTHROPODA	Malacostraca	Tanaellidae	2	0.02	3.6
<i>Nemocardium centifilosum</i>	MOLLUSCA	Bivalvia	Cardiidae	2	0.02	7.1
<i>Chaetozone</i> sp SD1	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	3.6
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	2	0.02	7.1
<i>Semiodera inflata</i>	ANNELIDA	Polychaeta	Flabelligeridae	2	0.02	3.6
<i>Stenothoides bicoma</i>	ARTHROPODA	Malacostraca	Stenothoidae	2	0.02	3.6
<i>Dodecamastus mariaensis</i>	ANNELIDA	Polychaeta	Capitellidae	2	0.02	3.6
<i>Levinsenia multibranchiata</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.02	7.1
<i>Drilonereis mexicana</i>	ANNELIDA	Polychaeta	Oenonidae	2	0.02	3.6
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.02	3.6
<i>Leitoscoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	2	0.02	3.6
Echinoidea	ECHINODERMATA	Echinoidea		2	0.02	7.1
<i>Eclysippe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	3.6
<i>Sinum scopolosum</i>	MOLLUSCA	Gastropoda	Naticidae	2	0.02	7.1
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	2	0.02	3.6
<i>Lepidasthenia berkeleyae</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	7.1
<i>Magelona</i> sp A	ANNELIDA	Polychaeta	Magelonidae	2	0.02	3.6
<i>Eulima raymondi</i>	MOLLUSCA	Gastropoda	Eulimidae	2	0.02	3.6
<i>Eyakia robusta</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	7.1
<i>Tellina</i> sp	MOLLUSCA	Bivalvia	Tellinidae	2	0.02	7.1
<i>Tanaella propinquus</i>	ARTHROPODA	Malacostraca	Tanaellidae	2	0.02	3.6
<i>Stylochus exiguis</i>	PLATYHELMINTHES	Turbellaria	Stylochidae	2	0.02	3.6
<i>Sthenelais fusca</i>	ANNELIDA	Polychaeta	Sigalionidae	2	0.02	3.6
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.02	3.6
<i>Eumida longicornuta</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	7.1
<i>Loimia</i> sp A	ANNELIDA	Polychaeta	Terebellidae	2	0.02	7.1
<i>Leptopecten latiauratus</i>	MOLLUSCA	Bivalvia	Pectinidae	2	0.02	7.1
<i>Eulalia californiensis</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lepidepecreum serratulum</i>	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	3.6
<i>Rutiderma rostratum</i>	ARTHROPODA	Ostracoda	Rutidermatidae	2	0.02	7.1
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	2	0.02	3.6
<i>Tritella pilimana</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.02	3.6
<i>Tenonia priops</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	7.1
<i>Heterophoxus conlanae</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	3.6
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	2	0.02	3.6
<i>Podocerus cristatus</i>	ARTHROPODA	Malacostraca	Podoceridae	2	0.02	3.6
<i>Scolanthus triangulus</i>	CNIDARIA	Anthozoa	Edwardsiidae	2	0.02	3.6
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	2	0.02	7.1
<i>Harpiiniopsis fulgens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	3.6
<i>Kurtiella coani</i>	MOLLUSCA	Bivalvia	Lasaeidae	2	0.02	7.1
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	2	0.02	7.1
<i>Romaleon jordani</i>	ARTHROPODA	Malacostraca	Cancridae	2	0.02	3.6
<i>Rhepoxyinius fatigans</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	3.6
Dendrochirotida	ECHINODERMATA	Holothuroidea		2	0.02	3.6
Hirudinea	ANNELIDA	Hirudinea		2	0.02	3.6
<i>Hippomedon columbianus</i>	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	3.6
<i>Deilocerus decorus</i>	ARTHROPODA	Malacostraca	Cyclodorippidae	2	0.02	3.6
<i>Chaetozone sp SD3</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	7.1
<i>Rhachotropis sp A</i>	ARTHROPODA	Malacostraca	Eusiridae	2	0.02	7.1
Decapoda	ARTHROPODA	Malacostraca		2	0.02	3.6
<i>Paradoneis</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Paradoneis spinifera</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.01	3.6
<i>Vitreolina</i> sp	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.6
<i>Pentamera pseudopopulifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	3.6
<i>Phaenoplana longipenis</i>	PLATYHELMINTHES	Turbellaria	Stylochoplaniidae	1	0.01	3.6
<i>Hippomedon</i> sp	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Thracia trapezoides</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.6
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Travisia gigas</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.6
<i>Tritella tenuissima</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.6
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.6
<i>Tritella</i> sp	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.6
<i>Americhelidium</i> sp	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	3.6
<i>Tubulanidae</i> sp A	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.6
<i>Tubulanidae</i> sp C	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.6
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.6
<i>Paranaitis polynoides</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.6
<i>Travisia pupa</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.6
<i>Terebellides</i> sp	ANNELIDA	Polychaeta	Trichobranchidae	1	0.01	3.6
<i>Upogebia leptá</i>	ARTHROPODA	Malacostraca	Upogebiidae	1	0.01	3.6
Thraciidae	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.6
<i>Ampelisca brachycladus</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	3.6
<i>Alienacanthomysis macropsis</i>	ARTHROPODA	Malacostraca	Mysidae	1	0.01	3.6
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	3.6
<i>Akanthophoreus phillipsi</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	1	0.01	3.6
Virgulariidae	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	3.6
<i>Thracia curta</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.6
<i>Typosyllis farallonensis</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.6
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.6
<i>Spiophanes wigleyi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.6
<i>Pleurobranchaea californica</i>	MOLLUSCA	Gastropoda	Pleurobranchidae	1	0.01	3.6
<i>Saxicavella nybakkeni</i>	MOLLUSCA	Bivalvia	Hiatellidae	1	0.01	3.6
<i>Pliocardia stearnsii</i>	Mollusca	Bivalvia	Vesicomyidae	1	0.01	3.6
Podocopida	ARTHROPODA	Ostracoda		1	0.01	3.6
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Polycirrus californicus</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Polycirrus sp I</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Pista moorei</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Polycirrus sp OC1</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Piromis capulata</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	3.6
<i>Sabellaria gracilis</i>	ANNELIDA	Polychaeta	Sabellariidae	1	0.01	3.6
<i>Paraconcovus pacificus</i>	ARTHROPODA	Maxillopoda	Balanidae	1	0.01	3.6
<i>Rutiderma lomae</i>	ARTHROPODA	Ostracoda	Rutidermatidae	1	0.01	3.6
<i>Rudilemboides stenopropodus</i>	ARTHROPODA	Malacostraca	Unciolidae	1	0.01	3.6
<i>Potamethus sp A</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.6
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.6
<i>Rhamphobrachium longisetosum</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.6
<i>Rhachotropis barnardi</i>	ARTHROPODA	Malacostraca	Eusiridae	1	0.01	3.6
<i>Pseudomelatoma sp OC1</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.01	3.6
<i>Sacella penderi</i>	MOLLUSCA	Bivalvia	Nuculanidae	1	0.01	3.6
<i>Phyllodoce cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.6
<i>Strongylocentrotus fragilis</i>	ECHINODERMATA	Echinoidea	Strongylocentrotidae	1	0.01	3.6
<i>Acteocina harpa</i>	MOLLUSCA	Gastropoda	Cylichnidae	1	0.01	3.6
<i>Acotylea</i>	PLATYHELMINTHES	Turbellaria		1	0.01	3.6
<i>Acoetes pacifica</i>	ANNELIDA	Polychaeta	Acoetidae	1	0.01	3.6
<i>Acila castrensis</i>	MOLLUSCA	Bivalvia	Nuculidae	1	0.01	3.6
<i>Sthenelais berkeleyi</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	3.6
<i>Spionidae</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.6
<i>Sphaeromatidae</i>	ARTHROPODA	Malacostraca	Sphaeromatidae	1	0.01	3.6
<i>Pista sp E</i>	Annelida	Polychaeta	Terebellidae	1	0.01	3.6
<i>Phyllochaetopterus prolifica</i>	ANNELIDA	Polychaeta	Chaetopteridae	1	0.01	3.6
<i>Aeolidia papillosa</i>	MOLLUSCA	Gastropoda	Aeolidiidae	1	0.01	3.6
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	3.6
<i>Sipuncula</i>	SIPUNCULA			1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Phyllodoce medipapillata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.6
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	3.6
<i>Siliqua lucida</i>	MOLLUSCA	Bivalvia	Pharidae	1	0.01	3.6
<i>Pilargis</i> sp B	ANNELIDA	Polychaeta	Pilargidae	1	0.01	3.6
<i>Pinnixa franciscana</i>	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.01	3.6
Sigalionidae	ANNELIDA	Polychaeta	Sigalionidae	1	0.01	3.6
<i>Scolelepis</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.6
Sphaeromatidae	ARTHROPODA	Malacostraca	Sphaeromatidae	1	0.01	3.6
<i>Eucranta anoculata</i>	Annelida	Polychaeta	Polynoidae	1	0.01	3.6
<i>Dougaloplus</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.6
<i>Drilonereis</i> sp LA1	ANNELIDA	Polychaeta	Oenonidae	1	0.01	3.6
<i>Edwardsia californica</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.6
<i>Luidia foliolata</i>	ECHINODERMATA	Asteroidea	Luidiidae	1	0.01	3.6
<i>Edwardsia profunda</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.6
Lyonsiidae	MOLLUSCA	Bivalvia	Lyonsiidae	1	0.01	3.6
Edwardsiidae	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.6
Lysianassoidea	ARTHROPODA	Malacostraca		1	0.01	3.6
Enopla	NEMERTEA	Enopla		1	0.01	3.6
<i>Enopla</i> sp A	NEMERTEA	Enopla		1	0.01	3.6
<i>Loy thompsoni</i>	MOLLUSCA	Gastropoda	Onchidorididae	1	0.01	3.6
<i>Ephesiella brevicapitis</i>	ANNELIDA	Polychaeta	Sphaerodoridae	1	0.01	3.6
<i>Epitonium bellastriatum</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	3.6
<i>Eranno</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	3.6
<i>Cirrophorus branchiatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Edwardsia</i> sp	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	3.6
<i>Cyathodonta pedroana</i>	MOLLUSCA	Bivalvia	Thraciidae	1	0.01	3.6
<i>Cirrophorus furcatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Clymenella complanata</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.6
<i>Clymenura gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Melanella rosa</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.6
<i>Megalomma splendida</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	3.6
Conoidea	MOLLUSCA	Gastropoda		1	0.01	3.6
<i>Lumbrineris latreilli</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.01	3.6
<i>Malmgreniella nigralba</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.6
<i>Lineus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	3.6
<i>Malmgreniella bansei</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.6
Cylindroleberididae	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	3.6
<i>Malacoceros indicus</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	3.6
Demospongiae	SILICEA	Demospongiae		1	0.01	3.6
<i>Dendraster</i> sp	ECHINODERMATA	Echinoidea	Dendrasteridae	1	0.01	3.6
<i>Dendronotus</i> sp	MOLLUSCA	Gastropoda	Dendronotidae	1	0.01	3.6
<i>Lysippe</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	3.6
<i>Crepidula</i> sp	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	3.6
<i>Hemicyclops thysanotus</i>	ARTHROPODA	Maxillopoda	Clausidiidae	1	0.01	3.6
<i>Listriella</i> sp	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.01	3.6
<i>Kylix halocydne</i>	MOLLUSCA	Gastropoda	Drillidae	1	0.01	3.6
Goniadidae	ANNELIDA	Polychaeta	Goniadidae	1	0.01	3.6
<i>Guernea redundans</i>	ARTHROPODA	Malacostraca	Dexaminidae	1	0.01	3.6
<i>Kurtziella plumbea</i>	MOLLUSCA	Gastropoda	Mangeliidae	1	0.01	3.6
<i>Halcampus decemtentaculatus</i>	CNIDARIA	Anthozoa	Halcampidae	1	0.01	3.6
<i>Laticorophium baconi</i>	ARTHROPODA	Malacostraca	Corophiidae	1	0.01	3.6
<i>Harmothoe</i> sp LA1	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.6
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.6
<i>Joeropsis dubia</i>	ARTHROPODA	Malacostraca	Joeropsididae	1	0.01	3.6
<i>Hyalinoecia juvenalis</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.6
<i>Hyalella azteca</i>	ARTHROPODA	Malacostraca	Hyalellidae	1	0.01	3.6
<i>Hinea insculpta</i>	MOLLUSCA	Gastropoda	Nassariidae	1	0.01	3.6
Hippolytidae	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Panopeidae	ARTHROPODA	Malacostraca	Panopeidae	1	0.01	3.6
<i>Podarkeopsis perkinsi</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	3.6
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	1	0.01	3.6
<i>Lepidepecreum gurjanovae</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.6
<i>Eunoe</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.01	3.6
<i>Lineus rubescens</i>	NEMERTEA	Anopla	Lineidae	1	0.01	3.6
<i>Eusarsiella thominx</i>	ARTHROPODA	Ostracoda	Sarsiellidae	1	0.01	3.6
<i>Euspira draconis</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	3.6
<i>Eusyllis transecta</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.6
<i>Exogone dwisula</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.6
<i>Lanassa gracilis</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Foxiphalus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.6
Gammaridea	ARTHROPODA	Malacostraca		1	0.01	3.6
Gastropoda	MOLLUSCA	Gastropoda		1	0.01	3.6
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	1	0.01	3.6
<i>Gibberosus myersi</i>	ARTHROPODA	Malacostraca	Megaluropidae	1	0.01	3.6
<i>Leitoscoloplos</i> sp A	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	3.6
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	3.6
<i>Latulambrus occidentalis</i>	ARTHROPODA	Malacostraca	Parthenopidae	1	0.01	3.6
<i>Leptostylis</i> sp	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	3.6
<i>Nephtys</i> sp	ANNELIDA	Polychaeta	Nephytidae	1	0.01	3.6
<i>Artacama coniferi</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	3.6
<i>Aoroides spinosa</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	3.6
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Aphelochaeta</i> sp OC1	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Nicomache lumbicalis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.01	3.6
<i>Nuculana hamata</i>	MOLLUSCA	Bivalvia	Nuculanidae	1	0.01	3.6
<i>Araphura cuspirostris</i>	ARTHROPODA	Malacostraca	Tanaellidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amygdalum pallidulum</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	3.6
<i>Arhynchite californicus</i>	ECHIURA	Echiuridea	Thalassematidae	1	0.01	3.6
<i>Neotrypaea californiensis</i>	ARTHROPODA	Malacostraca	Callianassidae	1	0.01	3.6
<i>Aricidea (Acmira) lopezi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Aricidea (Acmira) rubra</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Aricidea (Allia) hartleyi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Aricidea (Aricidea) pseudoarticulata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	3.6
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.6
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.01	3.6
<i>Opisa tridentata</i>	ARTHROPODA	Malacostraca	Opisidae	1	0.01	3.6
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	1	0.01	3.6
<i>Gari fucata</i>	MOLLUSCA	Bivalvia	Psammobiidae	1	0.01	3.6
<i>Metacarcinus gracilis</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.01	3.6
<i>Pagurus beringanus</i>	ARTHROPODA	Malacostraca	Paguridae	1	0.01	3.6
<i>Paguroidea</i> <i>Pacifacanthomysis nephrophthalma</i>	ARTHROPODA	Malacostraca		1	0.01	3.6
<i>Anonyx lilljeborgi</i>	ARTHROPODA	Malacostraca	Uristidae	1	0.01	3.6
<i>Orchomene anaquelus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.6
<i>Ancistrosyllis hamata</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.01	3.6
<i>Ophiura sarsi</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	1	0.01	3.6
<i>Ophiopterus papillosa</i>	ECHINODERMATA	Ophiuroidea	Ophiocomidae	1	0.01	3.6
<i>Ophiodermella inermis</i>	MOLLUSCA	Gastropoda	Borsoniidae	1	0.01	3.6
<i>Amphioplus</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	3.6
<i>Ophelina acuminata</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	3.6
<i>Onuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.6
<i>Pagurus hartae</i>	ARTHROPODA	Malacostraca	Paguridae	1	0.01	3.6
<i>Oxydromus pugettensis</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	3.6
<i>Cardiomya pectinata</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.01	3.6
<i>Chauliopleona dentata</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Metopa dawsoni</i>	ARTHROPODA	Malacostraca	Stenothoidae	1	0.01	3.6
<i>Chaetozone sp SD2</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	3.6
<i>Cancridae</i>	ARTHROPODA	Malacostraca	Cancridae	1	0.01	3.6
<i>Capitella capitata Cmplx</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.01	3.6
<i>Mooreonuphis sp</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.01	3.6
<i>Caprella mendax</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.6
<i>Myodocopida</i>	ARTHROPODA	Ostracoda		1	0.01	3.6
<i>Carinomella lactea</i>	NEMERTEA	Anopla	Tubulanidae	1	0.01	3.6
<i>Cephalophoxoides homilis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.6
<i>Modiolatus neglectus</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.01	3.6
<i>Mitra idae</i>	MOLLUSCA	Gastropoda	Mitridae	1	0.01	3.6
<i>Chaetozone commonalis</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Micropodarke dubia</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.01	3.6
<i>Chaetozone gracilis</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	3.6
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	3.6
<i>Balcis micans</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	3.6
<i>Nellobia eusoma</i>	ECHIURA	Echiuridea	Bonelliidae	1	0.01	3.6
<i>Nebalia daytoni</i>	ARTHROPODA	Malacostraca	Nebaliidae	1	0.01	3.6
<i>Astropecten armatus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	1	0.01	3.6
<i>Naticidae</i>	MOLLUSCA	Gastropoda	Naticidae	1	0.01	3.6
<i>Nassariidae</i>	MOLLUSCA	Gastropoda	Nassariidae	1	0.01	3.6
<i>Autolytinae</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	3.6
<i>Myriowenia californiensis</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.6
<i>Campylaspis sp A</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	3.6
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	3.6
<i>Nudibranchia</i>	MOLLUSCA	Gastropoda		1	0.01	3.6
<i>Myriochele sp</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.01	3.6
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.01	3.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Brisaster townsendi</i>	ECHINODERMATA	Echinoidea	Schizasteridae	1	0.01	3.6
<i>Brissopsis sp LA1</i>	ECHINODERMATA	Echinoidea	Brissidae	1	0.01	3.6
<i>Byblis barbarensis</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	3.6
Mysidae	ARTHROPODA	Malacostraca	Mysidae	1	0.01	3.6

Table B9. Macrofaunal community summary for the channel islands stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	652	5.43	86.7
<i>Photis lacia</i>	ARTHROPODA	Malacostraca	Photidae	454	3.78	60.0
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	443	3.69	66.7
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	344	2.86	80.0
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	312	2.60	73.3
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	309	2.57	73.3
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	236	1.96	53.3
<i>Chloea pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	230	1.91	86.7
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	206	1.71	73.3
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	203	1.69	73.3
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	188	1.56	60.0
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	172	1.43	80.0
<i>Paradialychnone harrisae</i> <i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Sabellidae	163	1.36	26.7
<i>Leptochelia dubia</i> Cmplx	ARTHROPODA	Malacostraca	Leptocheliidae	158	1.32	73.3
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	145	1.21	40.0
<i>Spiophanes kimballi</i>	ANNELIDA	Polychaeta	Spionidae	133	1.11	46.7
<i>Ampelisca romigi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	133	1.11	26.7
<i>Aphelochaeta</i> sp HYP8	ANNELIDA	Polychaeta	Cirratulidae	124	1.03	6.7
<i>Tellina modesta</i>	MOLLUSCA	Bivalvia	Tellinidae	123	1.02	6.7
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	114	0.95	80.0
<i>Aoroides</i> sp	ARTHROPODA	Malacostraca	Aoridae	106	0.88	33.3
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	105	0.87	46.7
<i>Spiophanes norrisi</i>	ANNELIDA	Polychaeta	Spionidae	104	0.87	53.3
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	102	0.85	46.7
<i>Aoroides</i> sp A	ARTHROPODA	Malacostraca	Aoridae	101	0.84	53.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Micranellum crebricinctum</i>	MOLLUSCA	Gastropoda	Caecidae	98	0.82	26.7
<i>Amphipholis pugetana</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	95	0.79	20.0
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	92	0.77	80.0
<i>Pisone sp</i>	ANNELIDA	Polychaeta	Pisionidae	92	0.77	6.7
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	85	0.71	60.0
<i>Gammaropsis thompsoni</i>	ARTHROPODA	Malacostraca	Photidae	83	0.69	33.3
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	83	0.69	33.3
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	78	0.65	33.3
<i>Micropodarke dubia</i>	ANNELIDA	Polychaeta	Hesionidae	70	0.58	33.3
Oligochaeta	ANNELIDA	Oligochaeta		68	0.57	20.0
<i>Rhepoxynius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	68	0.57	40.0
<i>Cossura sp A</i>	ANNELIDA	Polychaeta	Cossuridae	66	0.55	33.3
<i>Byblis millsii</i>	ARTHROPODA	Malacostraca	Ampeliscidae	64	0.53	60.0
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	63	0.52	40.0
<i>Owenia collaris</i>	ANNELIDA	Polychaeta	Oweniidae	61	0.51	40.0
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephytidae	61	0.51	60.0
<i>Pholoe sp B</i>	ANNELIDA	Polychaeta	Pholoidae	58	0.48	26.7
<i>Sphaerosyllis sp DC1</i>	ANNELIDA	Polychaeta	Syllidae	56	0.47	6.7
<i>Metatiron tropakis</i>	ARTHROPODA	Malacostraca	Synopiidae	55	0.46	20.0
<i>Amphiodia sp</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	54	0.45	60.0
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	51	0.42	20.0
<i>Heteronemertea sp SD2</i>	NEMERTEA	Anopla		51	0.42	66.7
<i>Aphelochaeta sp</i>	ANNELIDA	Polychaeta	Cirratulidae	51	0.42	40.0
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	51	0.42	46.7
<i>Aonides sp SD1</i>	ANNELIDA	Polychaeta	Spionidae	50	0.42	6.7
<i>Urothoe elegans Cmplx</i>	ARTHROPODA	Malacostraca	Urothoidae	49	0.41	33.3
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	47	0.39	60.0
<i>Alia tuberosa</i>	MOLLUSCA	Gastropoda	Columbellidae	46	0.38	13.3
<i>Photis brevipes</i>	ARTHROPODA	Malacostraca	Photidae	45	0.37	40.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	45	0.37	46.7
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	44	0.37	80.0
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	43	0.36	53.3
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	42	0.35	40.0
<i>Gammaropsis ociosa</i>	ARTHROPODA	Malacostraca	Photidae	40	0.33	26.7
<i>Maldanidae</i>	ANNELIDA	Polychaeta	Maldanidae	40	0.33	46.7
<i>Mooreonuphis</i> sp SD1	ANNELIDA	Polychaeta	Onuphidae	40	0.33	6.7
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	39	0.32	46.7
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	39	0.32	53.3
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	37	0.31	53.3
<i>Paradialychnone ecaudata</i>	ANNELIDA	Polychaeta	Sabellidae	36	0.30	33.3
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	36	0.30	40.0
<i>Halicoedes synopiae</i>	ARTHROPODA	Malacostraca	Pandaliscidae	36	0.30	40.0
<i>Guernea redundans</i>	ARTHROPODA	Malacostraca	Dexaminidae	36	0.30	26.7
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	36	0.30	60.0
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	35	0.29	20.0
<i>Alvania rosana</i>	MOLLUSCA	Gastropoda	Rissoidae	34	0.28	53.3
<i>Phascolion</i> sp A	SIPUNCULA	Sipunculidea	Phascolionidae	33	0.27	73.3
<i>Rhepoxynius menziesi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	32	0.27	6.7
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	32	0.27	60.0
<i>Chaetopterus variopedatus</i>	ANNELIDA	Polychaeta	Chaetopteridae	32	0.27	13.3
Cmplx	ANNELIDA	Polychaeta	Cossuridae	32	0.27	20.0
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	32	0.27	73.3
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	32	0.27	26.7
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	32	0.27	26.7
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	31	0.26	53.3
<i>Eusyllis</i> sp SD2	ANNELIDA	Polychaeta	Syllidae	31	0.26	6.7
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	30	0.25	66.7
<i>Deilocerus decorus</i>	ARTHROPODA	Malacostraca	Cyclodorippidae	30	0.25	33.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lirobittium</i> sp	MOLLUSCA	Gastropoda	Cerithiidae	30	0.25	33.3
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	30	0.25	46.7
<i>Aricidea (Acmira) cerrutii</i>	ANNELIDA	Polychaeta	Paraonidae	29	0.24	13.3
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	29	0.24	40.0
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	29	0.24	53.3
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	29	0.24	40.0
<i>Photis macrotica</i>	ARTHROPODA	Malacostraca	Photidae	29	0.24	13.3
<i>Rutiderma lomae</i>	ARTHROPODA	Ostracoda	Rutidermatidae	29	0.24	46.7
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	29	0.24	26.7
<i>Photis</i> sp DC1	ARTHROPODA	Malacostraca	Photidae	28	0.23	26.7
<i>Arachnanthus</i> sp A	CNIDARIA	Anthozoa	Cerianthidae	27	0.22	53.3
<i>Polycirrus</i> sp	ANNELIDA	Polychaeta	Terebellidae	27	0.22	46.7
<i>Pseudofabriciola californica</i>	ANNELIDA	Polychaeta	Fabriciidae	27	0.22	6.7
<i>Photis macinerneyi</i>	ARTHROPODA	Malacostraca	Photidae	26	0.22	6.7
<i>Glottidia albida</i>	BRACHIOPODA	Inarticulata	Lingulidae	26	0.22	26.7
<i>Protodorvillea gracilis</i>	ANNELIDA	Polychaeta	Dorvilleidae	26	0.22	26.7
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	26	0.22	46.7
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	26	0.22	66.7
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	25	0.21	40.0
Lineidae	NEMERTEA	Anopla	Lineidae	25	0.21	60.0
Ceriantharia	CNIDARIA	Anthozoa		25	0.21	53.3
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	25	0.21	60.0
<i>Chauliopleona dentata</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	25	0.21	26.7
<i>Photis linearmanus</i>	ARTHROPODA	Malacostraca	Photidae	25	0.21	20.0
<i>Euchone</i> sp B	ANNELIDA	Polychaeta	Sabellidae	25	0.21	6.7
<i>Opisthodata</i> sp 2	ANNELIDA	Polychaeta	Syllidae	24	0.20	20.0
<i>Idarcturus hedgpethi</i>	ARTHROPODA	Malacostraca	Arcturidae	24	0.20	20.0
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	24	0.20	40.0
<i>Proclea</i> sp A	ANNELIDA	Polychaeta	Terebellidae	24	0.20	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Platynereis bicanaliculata</i>	ANNELIDA	Polychaeta	Nereididae	23	0.19	13.3
<i>Pagurus sp 4</i>	ARTHROPODA	Malacostraca	Paguridae	23	0.19	20.0
<i>Monticellina tesselata</i>	ANNELIDA	Polychaeta	Cirratulidae	23	0.19	66.7
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	22	0.18	53.3
<i>Opisthodonta mitchelli</i>	ANNELIDA	Polychaeta	Syllidae	21	0.17	13.3
<i>Phoronis sp</i>	PHORONA		Phoronidae	21	0.17	40.0
<i>Levinsenia sp B</i>	ANNELIDA	Polychaeta	Paraonidae	21	0.17	46.7
<i>Polycirrus sp A</i>	ANNELIDA	Polychaeta	Terebellidae	21	0.17	40.0
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	21	0.17	66.7
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	20	0.17	26.7
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	20	0.17	26.7
<i>Lytechinus pictus</i>	ECHINODERMATA	Echinoidea	Toxopneustidae	19	0.16	20.0
<i>Hoploneurtea</i>	NEMERTEA	Enopla		19	0.16	40.0
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	19	0.16	60.0
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	19	0.16	20.0
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	19	0.16	53.3
<i>Scoletoma sp</i>	ANNELIDA	Polychaeta	Lumbrineridae	19	0.16	20.0
<i>Terebellides sp Type D</i>	ANNELIDA	Polychaeta	Trichobranchidae	19	0.16	40.0
<i>Phyllochaetopterus prolifica</i>	ANNELIDA	Polychaeta	Chaetopteridae	19	0.16	26.7
<i>Anthozoa #49</i>	CNIDARIA	Anthozoa		19	0.16	6.7
<i>Nuculana hamata</i>	MOLLUSCA	Bivalvia	Nuculanidae	18	0.15	53.3
<i>Maera jerrica</i>	ARTHROPODA	Malacostraca	Melitidae	18	0.15	20.0
<i>Dipolydora sp</i>	ANNELIDA	Polychaeta	Spionidae	18	0.15	13.3
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	18	0.15	33.3
<i>Cossura sp</i>	ANNELIDA	Polychaeta	Cossuridae	18	0.15	13.3
<i>Foxiphalus obtusidens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	17	0.14	26.7
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	17	0.14	53.3
<i>Aphelochaeta sp HYP5</i>	ANNELIDA	Polychaeta	Cirratulidae	17	0.14	20.0
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	16	0.13	33.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	16	0.13	20.0
<i>Astyris aurantiaca</i>	MOLLUSCA	Gastropoda	Columbellidae	16	0.13	13.3
<i>Nuculana sp A</i>	MOLLUSCA	Bivalvia	Nuculanidae	16	0.13	40.0
<i>Nutricola ovalis</i>	MOLLUSCA	Bivalvia	Veneridae	16	0.13	20.0
<i>Cossura pygodactylata</i>	ANNELIDA	Polychaeta	Cossuridae	15	0.12	6.7
<i>Aoroides intermedia</i>	ARTHROPODA	Malacostraca	Aoridae	15	0.12	6.7
<i>Tanaella propinquus</i>	ARTHROPODA	Malacostraca	Tanaellidae	15	0.12	33.3
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	15	0.12	46.7
<i>Pleusyntes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	15	0.12	20.0
<i>Terebellides sp</i>	ANNELIDA	Polychaeta	Trichobranchidae	15	0.12	20.0
<i>Branchiomaldane sp A</i>	Annelida	Polychaeta	Arenicolidae	15	0.12	6.7
<i>Hamatocalpum californicum</i>	ARTHROPODA	Maxillopoda	Scalpellidae	14	0.12	33.3
<i>Euchone incolor</i>	ANNELIDA	Polychaeta	Sabellidae	14	0.12	20.0
<i>Aricidea (Acmina) lopezi</i>	ANNELIDA	Polychaeta	Paraonidae	14	0.12	20.0
<i>Pagurus harta</i>	ARTHROPODA	Malacostraca	Paguridae	14	0.12	20.0
<i>Ampelisca cristata cristata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	14	0.12	13.3
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	14	0.12	46.7
<i>Aricidea (Acmina) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	14	0.12	20.0
<i>Rudilemboides sp A</i>	ARTHROPODA	Malacostraca	Unciolidae	14	0.12	13.3
<i>Cyclocardia bailyi</i>	ARTHROPODA	Malacostraca	Bodotriidae	14	0.12	20.0
<i>Amphiura sp</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	14	0.12	40.0
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	14	0.12	40.0
<i>Photis parvidons</i>	ARTHROPODA	Malacostraca	Photidae	14	0.12	13.3
<i>Aglaophamus verrilli</i>	ANNELIDA	Polychaeta	Nephtyidae	13	0.11	33.3
<i>Hiatella arctica</i>	MOLLUSCA	Bivalvia	Hiatellidae	13	0.11	26.7
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	13	0.11	40.0
<i>Phyllodoce pettiboneae</i>	ANNELIDA	Polychaeta	Phyllodocidae	13	0.11	13.3
<i>Erioleptus spinosus</i>	ARTHROPODA	Malacostraca	Inachidae	13	0.11	26.7
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	13	0.11	66.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Hesionura coineaui difficilis</i>	ANNELIDA	Polychaeta	Phyllodocidae	13	0.11	6.7
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	12	0.10	40.0
<i>Ophiura luetkenii</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	12	0.10	26.7
<i>Ampelisca indentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	12	0.10	20.0
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	12	0.10	20.0
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	12	0.10	33.3
<i>Artacamella hancocki</i>	ANNELIDA	Polychaeta	Trichobranchidae	12	0.10	33.3
Paguroidea	ARTHROPODA	Malacostraca		12	0.10	26.7
<i>Amphipholis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	12	0.10	33.3
<i>Chaetozone columbiana</i>	ANNELIDA	Polychaeta	Cirratulidae	12	0.10	26.7
<i>Ericthonius rubricornis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	12	0.10	20.0
<i>Philomedes</i> sp A	ARTHROPODA	Ostracoda	Philomedidae	11	0.09	6.7
<i>Asabellides lineata</i>	ANNELIDA	Polychaeta	Ampharetidae	11	0.09	33.3
<i>Araphura</i> sp SD1	ARTHROPODA	Malacostraca	Tanaellidae	11	0.09	33.3
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	11	0.09	46.7
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	11	0.09	20.0
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	11	0.09	26.7
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	11	0.09	40.0
<i>Podarkeopsis</i> sp F	ANNELIDA	Polychaeta	Hesionidae	11	0.09	13.3
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadilidae	11	0.09	33.3
Enteropneusta	CHORDATA	Enteropneusta		11	0.09	20.0
<i>Pholoe</i> sp A	ANNELIDA	Polychaeta	Pholoidae	11	0.09	13.3
<i>Leptochiton rugatus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	11	0.09	6.7
<i>Levinsenia</i> sp DC1	ANNELIDA	Polychaeta	Paraonidae	11	0.09	13.3
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	10	0.08	26.7
<i>Hesiospina</i> sp DC1	Annelida	Polychaeta	Hesionidae	10	0.08	6.7
<i>Scoletoma</i> sp C	ANNELIDA	Polychaeta	Lumbrineridae	10	0.08	6.7
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	10	0.08	26.7
<i>Scolanthus triangulus</i>	CNIDARIA	Anthozoa	Edwardsiidae	10	0.08	40.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	10	0.08	40.0
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	10	0.08	6.7
<i>Eusyllis habei</i>	ANNELIDA	Polychaeta	Syllidae	10	0.08	33.3
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	10	0.08	13.3
<i>Drilonereis sp</i>	ANNELIDA	Polychaeta	Oenonidae	10	0.08	26.7
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	10	0.08	33.3
Aoridae	ARTHROPODA	Malacostraca	Aoridae	10	0.08	13.3
<i>Chiridota sp</i>	ECHINODERMATA	Holothuroidea	Chiridotidae	9	0.07	26.7
Dendrochirotida	ECHINODERMATA	Holothuroidea		9	0.07	13.3
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	9	0.07	33.3
<i>Americhelidium sp SD4</i>	ARTHROPODA	Malacostraca	Oedicerotidae	9	0.07	26.7
Asteroidea	ECHINODERMATA	Asteroidea		9	0.07	26.7
<i>Gammaropsis sp</i>	ARTHROPODA	Malacostraca	Photidae	9	0.07	6.7
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.07	33.3
<i>Photis sp C</i>	ARTHROPODA	Malacostraca	Photidae	9	0.07	26.7
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	9	0.07	33.3
<i>Philomedidae sp SD1</i>	ARTHROPODA	Ostracoda	Philomedidae	9	0.07	6.7
<i>Orchomenella pacifica</i>	ARTHROPODA	Malacostraca	Lysianassidae	9	0.07	13.3
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	9	0.07	46.7
<i>Odostomia sp</i>	MOLLUSCA	Gastropoda	Pyramidellidae	9	0.07	33.3
<i>Odontosyllis phosphorea</i>	ANNELIDA	Polychaeta	Syllidae	9	0.07	26.7
<i>Mooreonuphis nebulosa</i>	ANNELIDA	Polychaeta	Onuphidae	9	0.07	26.7
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	9	0.07	46.7
<i>Phyllodoce medipapillata</i>	ANNELIDA	Polychaeta	Phyllodocidae	9	0.07	20.0
<i>Euchone hancocki</i>	ANNELIDA	Polychaeta	Sabellidae	8	0.07	6.7
<i>Araphura breviaria</i>	ARTHROPODA	Malacostraca	Tanaellidae	8	0.07	33.3
<i>Zoanthidea sp B</i>	Cnidaria	Anthozoa		8	0.07	6.7
Palaeonemertea	NEMERTEA	Anopla		8	0.07	33.3
<i>Eulalia levicornuta</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	8	0.07	33.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	8	0.07	33.3
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	8	0.07	26.7
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		8	0.07	13.3
<i>Myriowenia californiensis</i>	ANNELIDA	Polychaeta	Oweniidae	8	0.07	13.3
<i>Huxleyia munita</i>	MOLLUSCA	Bivalvia	Nucinellidae	8	0.07	13.3
<i>Entodesma brevifrons</i>	MOLLUSCA	Bivalvia	Lyonsiidae	8	0.07	33.3
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephytidae	8	0.07	20.0
<i>Octobranchus</i> sp A	ANNELIDA	Polychaeta	Trichobranchidae	8	0.07	6.7
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	8	0.07	20.0
<i>Notoproctus pacificus</i>	ANNELIDA	Polychaeta	Maldanidae	8	0.07	13.3
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	7	0.06	26.7
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.06	33.3
<i>Mesolamprops bispinosus</i>	ARTHROPODA	Malacostraca	Lampropidae	7	0.06	13.3
<i>Ampelisca milleri</i>	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.06	33.3
<i>Dougaloplus amphacanthus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	7	0.06	40.0
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	7	0.06	20.0
<i>Amygdalum pallidulum</i>	MOLLUSCA	Bivalvia	Mytilidae	7	0.06	20.0
<i>Scoloplos armiger</i> Cmplx	ANNELIDA	Polychaeta	Orbiniidae	7	0.06	26.7
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	7	0.06	13.3
<i>Mooreonuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	7	0.06	6.7
<i>Sthenelais tertiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	7	0.06	20.0
<i>Chaetozone armata</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.06	13.3
<i>Eudorellopsis longirostris</i>	ARTHROPODA	Malacostraca	Leuconidae	7	0.06	20.0
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	7	0.06	33.3
<i>Typhlotanais williamsi</i>	ARTHROPODA	Malacostraca	Nototanaidae	7	0.06	20.0
<i>Ampelisca</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	7	0.06	13.3
<i>Idarcturus allelomorphus</i>	ARTHROPODA	Malacostraca	Arcturidae	7	0.06	13.3
<i>Ampelisca agassizi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.05	13.3
<i>Parexogone breviseta</i>	ANNELIDA	Polychaeta	Syllidae	6	0.05	20.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aricidea (Acmina) simplex</i>	ANNELIDA	Polychaeta	Paraonidae	6	0.05	26.7
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	6	0.05	20.0
<i>Euchone arenae</i>	ANNELIDA	Polychaeta	Sabellidae	6	0.05	26.7
Ophiuroidea	ECHINODERMATA	Ophiuroidea		6	0.05	20.0
<i>Americhelidium rectipalmum</i>	ARTHROPODA	Malacostraca	Oedicerotidae	6	0.05	20.0
<i>Tiron biocellata</i>	ARTHROPODA	Malacostraca	Synopiidae	6	0.05	20.0
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	6	0.05	13.3
Cancridae	ARTHROPODA	Malacostraca	Cancridae	6	0.05	6.7
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	6	0.05	20.0
<i>Mooreonuphis stigmatis</i>	ANNELIDA	Polychaeta	Onuphidae	6	0.05	13.3
<i>Munnogonium tillerae</i>	ARTHROPODA	Malacostraca	Paramunnidae	6	0.05	26.7
<i>Caecianiopsis</i> sp	ARTHROPODA	Malacostraca	Janiridae	6	0.05	6.7
<i>Ampharete labrops</i>	ANNELIDA	Polychaeta	Ampharetidae	6	0.05	6.7
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	6	0.05	26.7
Majoidea	ARTHROPODA	Malacostraca		6	0.05	20.0
<i>Asabellides</i> sp DC1	ANNELIDA	Polychaeta	Ampharetidae	6	0.05	26.7
<i>Turbellaria</i> sp C	PLATYHELMINTHES	Turbellaria		6	0.05	6.7
<i>Malmgreniella</i> sp A	ANNELIDA	Polychaeta	Polynoidae	6	0.05	13.3
<i>Kurtzia arteaga</i>	MOLLUSCA	Gastropoda	Mangeliidae	6	0.05	20.0
<i>Aphelochaeta phillipsi</i>	ANNELIDA	Polychaeta	Cirratulidae	6	0.05	13.3
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	6	0.05	33.3
<i>Zeuxo normani</i>	ARTHROPODA	Malacostraca	Tanaidae	6	0.05	6.7
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	6	0.05	20.0
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.05	26.7
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	5	0.04	26.7
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	5	0.04	6.7
<i>Nemocardium centifilosum</i>	MOLLUSCA	Bivalvia	Cardiidae	5	0.04	26.7
<i>Dipolydora barbilla</i>	ANNELIDA	Polychaeta	Spionidae	5	0.04	20.0
Modiolinae	MOLLUSCA	Bivalvia	Mytilidae	5	0.04	20.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Enallopaguropsis guatemoci</i>	ARTHROPODA	Malacostraca	Paguridae	5	0.04	20.0
<i>Leuroleberis sharpei</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	5	0.04	6.7
<i>Dorvillea (Schistomerings) sp</i>	ANNELIDA	Polychaeta	Dorvilleidae	5	0.04	6.7
<i>Dipolydora socialis</i>	ANNELIDA	Polychaeta	Spionidae	5	0.04	26.7
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	5	0.04	13.3
<i>Bemlos sp</i>	ARTHROPODA	Malacostraca	Aoridae	5	0.04	6.7
<i>Heterophoxus sp</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	5	0.04	20.0
<i>Hemipodia borealis</i>	ANNELIDA	Polychaeta	Glyceridae	5	0.04	13.3
<i>Caecianiopsis sp LA2</i>	ARTHROPODA	Malacostraca	Janiridae	5	0.04	6.7
<i>Sthenelais berkeleyi</i>	ANNELIDA	Polychaeta	Sigalionidae	5	0.04	13.3
<i>Hartmanodes sp SD1</i>	ARTHROPODA	Malacostraca	Oedicerotidae	5	0.04	13.3
<i>Poecilochaetus johnsoni</i>	ANNELIDA	Polychaeta	Poecilochaetidae	5	0.04	26.7
<i>Halosydnia johnsoni</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.04	6.7
<i>Plakosyllis sp</i>	ANNELIDA	Polychaeta	Syllidae	5	0.04	6.7
<i>Plakosyllis americana</i>	Annelida	Polychaeta	Syllidae	5	0.04	6.7
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	5	0.04	20.0
<i>Tubulanus sp A</i>	NEMERTEA	Anopla	Tubulanidae	5	0.04	20.0
<i>Nutricola cymata</i>	MOLLUSCA	Bivalvia	Veneridae	5	0.04	20.0
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.04	26.7
<i>Eulalia californiensis</i>	ANNELIDA	Polychaeta	Phyllodocidae	5	0.04	20.0
Phoronida	PHORONA			5	0.04	20.0
<i>Typhlotanais crassus</i>	ARTHROPODA	Malacostraca	Nototanaidae	5	0.04	6.7
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	5	0.04	20.0
<i>Asclerocheilus kudenovi</i>	ANNELIDA	Polychaeta	Scalibregmatidae	5	0.04	26.7
<i>Gadila aberrans</i>	MOLLUSCA	Scaphopoda	Gadiliidae	5	0.04	26.7
<i>Pista elongata</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.04	13.3
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	5	0.04	13.3
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	5	0.04	6.7
<i>Astropecten californicus</i>	ECHINODERMATA	Asteroidea	Astropectinidae	4	0.03	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Armandia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	4	0.03	13.3
Bivalvia	MOLLUSCA	Bivalvia		4	0.03	20.0
<i>Aricidea (Allia) antennata</i>	ANNELIDA	Polychaeta	Paraonidae	4	0.03	13.3
<i>Cancer productus</i>	ARTHROPODA	Malacostraca	Cancridae	4	0.03	6.7
<i>Caprella mendax</i>	ARTHROPODA	Malacostraca	Caprellidae	4	0.03	13.3
<i>Macrochaeta sp 1</i>	ANNELIDA	Polychaeta	Acrocirridae	4	0.03	13.3
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	4	0.03	20.0
<i>Vargula tsujii</i>	ARTHROPODA	Ostracoda	Cypridinidae	4	0.03	6.7
<i>Rhepoxynius lucubrans</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.03	13.3
<i>Sigalion spinosus</i>	ANNELIDA	Polychaeta	Sigalionidae	4	0.03	20.0
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	4	0.03	6.7
<i>Spio sp D</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	13.3
<i>Procampylaspis caenosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	4	0.03	20.0
<i>Prionospio (Prionospio) sp</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	6.7
<i>Polycirrus sp OC1</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.03	13.3
<i>Tanaopsis cadieni</i>	ARTHROPODA	Malacostraca		4	0.03	26.7
<i>Tetrastemma albidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	4	0.03	20.0
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	4	0.03	13.3
<i>Ophiuroconis bispinosa</i>	ECHINODERMATA	Ophiuroidea	Ophiodermatidae	4	0.03	26.7
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.03	13.3
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.03	13.3
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	4	0.03	20.0
<i>Xenoleberis californica</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	4	0.03	20.0
<i>Zygeupolia rubens</i>	NEMERTEA	Anopla	Valenciniidae	4	0.03	20.0
<i>Phoronis sp SD1</i>	PHORONA		Phoroniidae	4	0.03	13.3
<i>Phaenoplana longipenis</i>	PLATYHELMINTHES	Turbellaria	Stylochoplanidae	4	0.03	6.7
<i>Orthopagurus minimus</i>	ARTHROPODA	Malacostraca	Paguridae	4	0.03	6.7
<i>Opisthodonta sp SD2</i>	ANNELIDA	Polychaeta	Syllidae	4	0.03	13.3
Onuphidae	ANNELIDA	Polychaeta	Onuphidae	4	0.03	13.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Actiniaria	CNIDARIA	Anthozoa		4	0.03	26.7
<i>Americhelidium</i> sp SD1	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.03	13.3
<i>Neosabellaria cementarium</i>	ANNELIDA	Polychaeta	Sabellariidae	4	0.03	6.7
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	4	0.03	13.3
Heteronemertea	NEMERTEA	Anopla		4	0.03	26.7
<i>Hemilamprops californicus</i>	ARTHROPODA	Malacostraca	Lampropidae	4	0.03	13.3
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	4	0.03	20.0
<i>Cyclocardia ventricosa</i>	MOLLUSCA	Bivalvia	Carditidae	4	0.03	6.7
<i>Deflexilodes norvegicus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.03	20.0
<i>Dialychone trilineata</i>	ANNELIDA	Polychaeta	Sabellidae	4	0.03	20.0
Echinoidea	ECHINODERMATA	Echinoidea		4	0.03	20.0
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	4	0.03	26.7
<i>Jasmineira</i> sp B	ANNELIDA	Polychaeta	Sabellidae	4	0.03	20.0
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	4	0.03	13.3
Leptoplanidae	PLATYHELMINTHES	Turbellaria	Leptoplanidae	4	0.03	6.7
Leptoplanidae	PLATYHELMINTHES	Turbellaria	Leptoplanidae	4	0.03	6.7
<i>Lacydonia</i> sp DC1	Annelida	Polychaeta	Lacydoniidae	4	0.03	6.7
<i>Laticorophium baconi</i>	ARTHROPODA	Malacostraca	Corophiidae	4	0.03	13.3
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.03	20.0
<i>Amakusanthura californiensis</i>	ARTHROPODA	Malacostraca	Anthuridae	4	0.03	13.3
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	3	0.02	20.0
<i>Phisidia sanctaemariae</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.02	13.3
Ampharetidae sp DC2	Annelida	Polychaeta	Ampharetidae	3	0.02	6.7
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	3	0.02	13.3
<i>Amphicteis glabra</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	6.7
<i>Dialychone albocincta</i>	ANNELIDA	Polychaeta	Sabellidae	3	0.02	20.0
Hirudinea	ANNELIDA	Hirudinea		3	0.02	6.7
<i>Piromis capulata</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.02	20.0
<i>Tritella pilimana</i>	ARTHROPODA	Malacostraca	Caprellidae	3	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	3	0.02	20.0
<i>Eusyllis blomstrandii</i> Cmplx	ANNELIDA	Polychaeta	Syllidae	3	0.02	6.7
Anarthruridae	ARTHROPODA	Malacostraca	Anarthruridae	3	0.02	20.0
Anarthruridae	ARTHROPODA	Malacostraca	Anarthruridae	3	0.02	20.0
<i>Anemonactis</i> sp A	CNIDARIA	Anthozoa	Haloclavidae	3	0.02	13.3
<i>Synaptotanais notabilis</i>	ARTHROPODA	Malacostraca	Tanaidae	3	0.02	6.7
<i>Anthoptilum grandiflorum</i>	CNIDARIA	Anthozoa	Anthoptilidae	3	0.02	20.0
<i>Pinnixa occidentalis</i> Cmplx	ARTHROPODA	Malacostraca	Pinnotheridae	3	0.02	13.3
<i>Havelockia benti</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	3	0.02	20.0
<i>Eusarsiella thominx</i>	ARTHROPODA	Ostracoda	Sarsiellidae	3	0.02	6.7
<i>Pettiboneia sanmatiensis</i>	ANNELIDA	Polychaeta	Dorvilleidae	3	0.02	6.7
Owenia sp	ANNELIDA	Polychaeta	Oweniidae	3	0.02	13.3
<i>Leptognathia breviremis</i>	ARTHROPODA	Malacostraca	Leptognathiidae	3	0.02	13.3
<i>Leptopecten latiauratus</i>	MOLLUSCA	Bivalvia	Pectinidae	3	0.02	6.7
<i>Onuphis</i> sp A	ANNELIDA	Polychaeta	Onuphidae	3	0.02	6.7
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	3	0.02	13.3
<i>Turbanilla</i> sp A	MOLLUSCA	Gastropoda	Pyramidellidae	3	0.02	20.0
Gammaridea	ARTHROPODA	Malacostraca		3	0.02	13.3
<i>Tetrastemma candidum</i>	NEMERTEA	Enopla	Tetrastemmatidae	3	0.02	13.3
<i>Epitonium hindsii</i>	MOLLUSCA	Gastropoda	Epitoniidae	3	0.02	6.7
<i>Dipolydora caulleryi</i>	ANNELIDA	Polychaeta	Spionidae	3	0.02	6.7
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.02	13.3
<i>Amphideutopus oculatus</i>	ARTHROPODA	Malacostraca	Kamakidae	3	0.02	6.7
<i>Hesperonoe laevis</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	13.3
<i>Heteropodarke heteromorpha</i>	ANNELIDA	Polychaeta	Hesionidae	3	0.02	6.7
<i>Nephtys simoni</i>	ANNELIDA	Polychaeta	Nephtyidae	3	0.02	13.3
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	3	0.02	6.7
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	3	0.02	6.7
<i>Lanassa venusta</i> venusta	ANNELIDA	Polychaeta	Terebellidae	3	0.02	20.0

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pista moorei</i>	ANNELIDA	Polychaeta	Terebellidae	3	0.02	6.7
<i>Aruga oculata</i>	ARTHROPODA	Malacostraca	Lysianassidae	3	0.02	13.3
<i>Protomediea articulata Cmplx</i>	ARTHROPODA	Malacostraca	Corophiidae	3	0.02	13.3
<i>Sipunculidae</i>	SIPUNCULA	Sipunculidea	Sipunculidae	3	0.02	13.3
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.02	6.7
<i>Callianax baetica</i>	MOLLUSCA	Gastropoda	Olivellidae	3	0.02	6.7
<i>Scleroconcha trituberculata</i>	ARTHROPODA	Ostracoda	Philomedidae	3	0.02	13.3
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	3	0.02	6.7
<i>Mangelia hexagona</i>	MOLLUSCA	Gastropoda	Mangeliidae	3	0.02	20.0
<i>Balcis micans</i>	MOLLUSCA	Gastropoda	Eulimidae	3	0.02	13.3
<i>Bathyleberis cf garthi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	3	0.02	13.3
<i>Bathyleberis garthi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	3	0.02	13.3
<i>Saccocirrus sp</i>	ANNELIDA	Polychaeta	Saccocirridae	3	0.02	6.7
<i>Saccella penderi</i>	MOLLUSCA	Bivalvia	Nuculanidae	3	0.02	6.7
<i>Cirrophorus furcatus</i>	ANNELIDA	Polychaeta	Paraonidae	3	0.02	13.3
<i>Lysippe sp A</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.02	13.3
<i>Clavopora occidentalis</i>	ECTOPROCTA	Gymnolaemata	Clavoporidae	3	0.02	13.3
<i>Brania sp 4</i>	Annelida	Polychaeta	Syllidae	3	0.02	6.7
<i>Rhabdocoela sp A</i>	PLATYHELMINTHES	Turbellaria		3	0.02	6.7
<i>Sigambra sp DC1</i>	ANNELIDA	Polychaeta	Pilargidae	2	0.02	6.7
<i>Lumbrinerides platypygos</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.02	13.3
<i>Campylaspis hartae</i>	ARTHROPODA	Malacostraca	Nannastacidae	2	0.02	13.3
<i>Thelepus sp C</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.02	13.3
<i>Kurtiella mortoni</i>	MOLLUSCA	Bivalvia	Lasaeidae	2	0.02	6.7
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	2	0.02	13.3
<i>Tubulanus cingulatus</i>	NEMERTEA	Anopla	Tubulanidae	2	0.02	13.3
<i>Hinea insculpta</i>	MOLLUSCA	Gastropoda	Nassariidae	2	0.02	6.7
<i>Brania sp SD2</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	6.7
<i>Acteocina cerealis</i>	MOLLUSCA	Gastropoda	Cylichnidae	2	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Nereis latescens</i>	ANNELIDA	Polychaeta	Nereididae	2	0.02	6.7
<i>Caecianiopsis sp LA1</i>	ARTHROPODA	Malacostraca	Janiridae	2	0.02	6.7
<i>Chaetozone sp SD7</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	6.7
<i>Glyphocuma sp A</i>	ARTHROPODA	Malacostraca	Bodotriidae	2	0.02	13.3
<i>Oerstedia dorsalis</i> Cmplx	NEMERTEA	Enopla	Prosorhochmidiae	2	0.02	13.3
<i>Lucinisca nuttalli</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.02	6.7
<i>Euchone</i> sp A	ANNELIDA	Polychaeta	Sabellidae	2	0.02	6.7
<i>Nereididae</i>	ANNELIDA	Polychaeta	Nereididae	2	0.02	13.3
<i>Trophoniella</i> sp DC1	ANNELIDA	Polychaeta	Flabelligeridae	2	0.02	6.7
<i>Akanthophoreus phillipsi</i>	ARTHROPODA	Malacostraca	Akanthophoreidae	2	0.02	13.3
<i>Ephesiella brevicapitis</i>	ANNELIDA	Polychaeta	Sphaerodoridae	2	0.02	6.7
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	2	0.02	6.7
<i>Rhepoxyinius heterocuspis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	6.7
<i>Pentamera lissoplaca</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	2	0.02	6.7
<i>Caulieriella pacifica</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	13.3
<i>Yoldia seminuda</i>	MOLLUSCA	Bivalvia	Yoldiidae	2	0.02	13.3
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	2	0.02	13.3
<i>Eyakia</i> sp 2	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.02	6.7
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	2	0.02	13.3
<i>Euphysa</i> sp A	CNIDARIA	Hydrozoa	Corymorphidae	2	0.02	6.7
<i>Eunicidae</i>	ANNELIDA	Polychaeta	Eunicidae	2	0.02	6.7
<i>Pholoe</i> sp	ANNELIDA	Polychaeta	Pholoidae	2	0.02	6.7
<i>Eurydice caudata</i>	ARTHROPODA	Malacostraca	Cirolanidae	2	0.02	6.7
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	2	0.02	13.3
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	13.3
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	13.3
<i>Pinnixa forficulimanus</i>	ARTHROPODA	Malacostraca	Pinnotheridae	2	0.02	6.7
<i>Philomedidae</i> sp DC1	ARTHROPODA	Ostracoda	Philomedidae	2	0.02	6.7
<i>Leptochiton nexus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	2	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Ophiura</i> sp	ECHINODERMATA	Ophiuroidea	Ophiuridae	2	0.02	13.3
<i>Lumbrinerides</i> sp SD1	Annelida	Polychaeta	Lumbrineridae	2	0.02	6.7
<i>Edotia sublittoralis</i>	ARTHROPODA	Malacostraca	Idoteidae	2	0.02	6.7
<i>Opisa tridentata</i>	ARTHROPODA	Malacostraca	Opisidae	2	0.02	13.3
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.02	6.7
<i>Turritella cooperi</i>	MOLLUSCA	Gastropoda	Turritellidae	2	0.02	13.3
<i>Parexogone molesta</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	6.7
<i>Orchomenella decipiens</i>	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	13.3
<i>Caryocorbula porcella</i>	MOLLUSCA	Bivalvia	Corbulidae	2	0.02	13.3
<i>Pterocirrus</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	6.7
<i>Paradialychine paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.02	6.7
<i>Paraehlersia articulata</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	13.3
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.7
<i>Paranaitis polynoides</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	13.3
<i>Eteone pigmentata</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.02	6.7
Gastropoda	MOLLUSCA	Gastropoda		2	0.02	13.3
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	2	0.02	6.7
<i>Aricidea (Acmira) assimilis</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.02	13.3
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	13.3
<i>Corymorpha</i> sp	CNIDARIA	Hydrozoa	Corymorphidae	2	0.02	6.7
<i>Malmgreniella</i> sp SD2	ANNELIDA	Polychaeta	Polynoidae	2	0.02	6.7
<i>Solen sicarius</i>	MOLLUSCA	Bivalvia	Solenidae	2	0.02	6.7
<i>Monticellina</i> sp 1	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	6.7
<i>Praxillura maculata</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.02	6.7
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	2	0.02	13.3
Cucumariidae	ECHINODERMATA	Holothuroidea	Cucumariidae	2	0.02	6.7
Anopla	NEMERTEA	Anopla		2	0.02	6.7
<i>Hippomedon</i> sp	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	6.7
<i>Lugia</i> sp DC1	Annelida	Polychaeta	Phyllodocidae	2	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Sipuncula</i> sp SD1	SIPUNCULA			2	0.02	13.3
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	2	0.02	6.7
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	2	0.02	6.7
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.02	13.3
<i>Syllides minutus</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	6.7
<i>Molpadiia intermedia</i>	ECHINODERMATA	Holothuroidea	Molpadiidae	2	0.02	6.7
<i>Microjassa boreopacifica</i>	ARTHROPODA	Malacostraca	Ischyroceridae	2	0.02	6.7
<i>Hippomedon</i> sp A	ARTHROPODA	Malacostraca	Lysianassidae	2	0.02	13.3
<i>Syllides mikeli</i>	ANNELIDA	Polychaeta	Syllidae	2	0.02	13.3
<i>Molgula pugetensis</i>	CHORDATA	Asciidiacea	Molgulidae	2	0.02	13.3
<i>Subadyte mexicana</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	13.3
<i>Streptodonta</i> sp 1	Annelida	Polychaeta	Syllidae	2	0.02	6.7
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	13.3
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.7
<i>Leucon subnasica</i>	ARTHROPODA	Malacostraca	Leuconidae	2	0.02	6.7
<i>Dougaloplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.02	6.7
<i>Nebalia daytoni</i>	ARTHROPODA	Malacostraca	Nebaliidae	2	0.02	6.7
<i>Tetrastemma nigrifrons</i>	NEMERTEA	Enopla	Tetrastemmatidae	2	0.02	13.3
Brachyura	ARTHROPODA	Malacostraca		2	0.02	13.3
Ampharete acutifrons	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	13.3
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	2	0.02	13.3
<i>Siphonolabrum californiensis</i>	ARTHROPODA	Malacostraca	Anarthuridae	2	0.02	13.3
Pleustidae	ARTHROPODA	Malacostraca	Pleustidae	2	0.02	13.3
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.7
<i>Bipalponeptyhs cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	2	0.02	13.3
Ampharetidae sp SD1	ANNELIDA	Polychaeta	Ampharetidae	2	0.02	6.7
<i>Compsomyax subdiaphana</i>	MOLLUSCA	Bivalvia	Veneridae	2	0.02	13.3
<i>Lepidasthenia longicirrata</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.02	13.3
<i>Myriochele striolata</i>	ANNELIDA	Polychaeta	Oweniidae	2	0.02	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Amphissa bicolor</i>	MOLLUSCA	Gastropoda	Columbellidae	2	0.02	6.7
<i>Myrianida</i> sp A	ANNELIDA	Polychaeta	Syllidae	2	0.02	13.3
<i>Sphaerodorum</i> sp 1	ANNELIDA	Polychaeta	Sphaerodoridae	2	0.02	6.7
<i>Woodbridgea williamsi</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.01	6.7
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.01	6.7
<i>Pylopagurus holmesi</i>	ARTHROPODA	Malacostraca	Paguridae	1	0.01	6.7
<i>Sphaerosyllis bilineata</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
Hippolytidae	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	6.7
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	6.7
<i>Harbansus</i> sp SD1	ARTHROPODA	Ostracoda	Philomedidae	1	0.01	6.7
<i>Sosane occidentalis</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	6.7
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	6.7
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.01	6.7
<i>Heterospio catalinensis</i>	ANNELIDA	Polychaeta	Longosomatidae	1	0.01	6.7
<i>Spirontocaris snyderi</i>	ARTHROPODA	Malacostraca	Hippolytidae	1	0.01	6.7
<i>Phylo felix</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	6.7
<i>Sphaerosyllis californiensis</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
Lasaeidae	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	6.7
<i>Sphaerosyllis</i> sp	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
Pinotheridae	ARTHROPODA	Malacostraca	Pinotheridae	1	0.01	6.7
<i>Pinnixa tubicola</i>	ARTHROPODA	Malacostraca	Pinotheridae	1	0.01	6.7
<i>Procephalothrix</i> sp	NEMERTEA	Anopla	Cephalothricidae	1	0.01	6.7
<i>Trophoniella harrisae</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	6.7
<i>Lacuna unifasciata</i>	MOLLUSCA	Gastropoda	Littorinidae	1	0.01	6.7
<i>Joeropsis concava</i>	ARTHROPODA	Malacostraca	Joeropsididae	1	0.01	6.7
<i>Glycera robusta</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.01	6.7
<i>Propebela</i> sp DC1	ANNELIDA	Polychaeta	Terebellidae	1	0.01	6.7
<i>Pleurogonium californiense</i>	ARTHROPODA	Malacostraca	Paramunnidae	1	0.01	6.7
<i>Proceraea okadai</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	6.7
<i>Pseudocnus lubricus</i>	ECHINODERMATA	Holothuroidea	Cucumariidae	1	0.01	6.7
<i>Trigonulina novemcostatus</i>	MOLLUSCA	Bivalvia	Verticordiidae	1	0.01	6.7
Halcampidae	CNIDARIA	Anthozoa	Halcampidae	1	0.01	6.7
<i>Halcampa decenttentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	1	0.01	6.7
<i>Goniada brunnea</i>	ANNELIDA	Polychaeta	Goniadidae	1	0.01	6.7
<i>Sige</i> sp A	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	6.7
<i>Thelepus hamatus</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.01	6.7
<i>Hippomedon zetesimus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	6.7
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	1	0.01	6.7
<i>Vitreolina columbiana</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	6.7
Virgulariidae	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	6.7
<i>Samytha californiensis</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	6.7
<i>Gammaropsis martesia</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	6.7
<i>Typosyllis</i> sp SD5	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
<i>Protocirrineris</i> sp B	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	6.7
<i>Typosyllis farallonensis</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
<i>Vitreolina macra</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	6.7
<i>Travisia brevis</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.01	6.7
<i>Syllides reishi</i>	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
<i>Syllides</i> sp DC1	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
Podocopida	ARTHROPODA	Ostracoda		1	0.01	6.7
<i>Halistylus pupoideus</i>	MOLLUSCA	Gastropoda	Trochidae	1	0.01	6.7
<i>Podocerus cristatus</i>	ARTHROPODA	Malacostraca	Podoceridae	1	0.01	6.7
<i>Typosyllis</i> sp	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
<i>Monoculodes emarginatus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.01	6.7
<i>Crepidatella orbiculata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.01	6.7
<i>Megalomma pigmentum</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	6.7
<i>Crockerella eriphyle</i>	MOLLUSCA	Gastropoda	Clathurellidae	1	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Arcturidae	ARTHROPODA	Malacostraca	Arcturidae	1	0.01	6.7
<i>Megalomma splendida</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.01	6.7
<i>Aphrodita</i> sp	ANNELIDA	Polychaeta	Aphroditidae	1	0.01	6.7
Cumacea	ARTHROPODA	Malacostraca		1	0.01	6.7
<i>Microjassa litotes</i>	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.01	6.7
<i>Microspio pigmentata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	6.7
<i>Cumella californica</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	6.7
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	6.7
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	1	0.01	6.7
<i>Levinsenia multibranchiata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
<i>Aoroides inermis</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.01	6.7
<i>Aricidea (Acmira)</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
<i>Cyclocardia</i> sp	MOLLUSCA	Bivalvia	Carditidae	1	0.01	6.7
<i>Antalis pretiosa</i>	MOLLUSCA	Scaphopoda	Dentaliidae	1	0.01	6.7
<i>Anotomastus gordioides</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.01	6.7
<i>Anonyx lilljeborgi</i>	ARTHROPODA	Malacostraca	Uristidae	1	0.01	6.7
<i>Anobothrus</i> sp DC1	ANNELIDA	Polychaeta	Ampharetidae	1	0.01	6.7
Cylindroleberididae	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	6.7
<i>Limnactiniidae</i> sp A	CNIDARIA	Anthozoa	Limnactiniidae	1	0.01	6.7
<i>Delectopecten vancouverensis</i>	MOLLUSCA	Bivalvia	Pectinidae	1	0.01	6.7
<i>Amphioplus strongyloplax</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.01	6.7
<i>Levinsenia</i> sp DC2	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
Nassariidae	MOLLUSCA	Gastropoda	Nassariidae	1	0.01	6.7
<i>Diastylis californica</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	6.7
<i>Molgula regularis</i>	CHORDATA	Asciidiacea	Molgulidae	1	0.01	6.7
<i>Cirrophorus branchiatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
<i>Chaetozone acuta</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	6.7
<i>Chaetoderma marinelli</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	1	0.01	6.7
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Chaetozone</i> sp SD2	ANNELIDA	Polychaeta	Cirratulidae	1	0.01	6.7
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.01	6.7
<i>Caryocorbula luteola</i>	MOLLUSCA	Bivalvia	Corbulidae	1	0.01	6.7
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	1	0.01	6.7
<i>Carazziella</i> sp A	ANNELIDA	Polychaeta	Spionidae	1	0.01	6.7
Caprellidae	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	6.7
<i>Caprella californica</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.01	6.7
<i>Campylaspis rufa</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	6.7
<i>Campylaspis rubromaculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.01	6.7
<i>Mangeliidae</i> sp DC2	MOLLUSCA	Gastropoda	Mangeliidae	1	0.01	6.7
<i>Macrochaeta</i> sp A	ANNELIDA	Polychaeta	Acrocirridae	1	0.01	6.7
Crangonidae	ARTHROPODA	Malacostraca	Crangonidae	1	0.01	6.7
<i>Magelona hartmanae</i>	ANNELIDA	Polychaeta	Magelonidae	1	0.01	6.7
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	6.7
<i>Clymenella</i> sp SD1	ANNELIDA	Polychaeta	Maldanidae	1	0.01	6.7
<i>Malacobertos indicus</i>	ANNELIDA	Polychaeta	Spionidae	1	0.01	6.7
Balanidae	ARTHROPODA	Maxillopoda	Balanidae	1	0.01	6.7
<i>Conus californicus</i>	MOLLUSCA	Gastropoda	Conidae	1	0.01	6.7
<i>Asteropella slatteryi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	6.7
Asteriidae	ECHINODERMATA	Asteroidea	Asteriidae	1	0.01	6.7
<i>Aruga holmesi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	6.7
<i>Mangeliidae</i> sp DC1	MOLLUSCA	Gastropoda	Mangeliidae	1	0.01	6.7
<i>Aricidea</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
<i>Lophopanopeus</i> sp	ARTHROPODA	Malacostraca	Panopeidae	1	0.01	6.7
<i>Melphisana bola</i> Cmplx	ARTHROPODA	Malacostraca	Melphidippidae	1	0.01	6.7
<i>Calyptraea fastigiata</i>	MOLLUSCA	Gastropoda	Calyptraeidae	1	0.01	6.7
<i>Parasterope hulingsi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.01	6.7
<i>Photis</i> sp OC2	ARTHROPODA	Malacostraca	Photidae	1	0.01	6.7
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Epitonium sawinae</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	6.7
<i>Philine</i> sp A	MOLLUSCA	Gastropoda	Philinidae	1	0.01	6.7
<i>Paleanotus bellis</i>	ANNELIDA	Polychaeta	Chrysopetalidae	1	0.01	6.7
<i>Lepidopleurina</i>	MOLLUSCA	Polyplacophora		1	0.01	6.7
<i>Epitonium</i> sp	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	6.7
<i>Notomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	1	0.01	6.7
<i>Odontosyllis</i> sp SD2	ANNELIDA	Polychaeta	Syllidae	1	0.01	6.7
<i>Pherusa papillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.01	6.7
<i>Pachynus barnardi</i>	ARTHROPODA	Malacostraca	Pachynidae	1	0.01	6.7
<i>Neaeromya compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.01	6.7
<i>Photis bifurcata</i>	ARTHROPODA	Malacostraca	Photidae	1	0.01	6.7
<i>Orchomene anaquelus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	6.7
<i>Oxyurostylis pacifica</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.01	6.7
<i>Phyllodoce hartmanae</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	6.7
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.01	6.7
<i>Phyllodoce cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	6.7
<i>Paguristes ulreyi</i>	ARTHROPODA	Malacostraca	Diogenidae	1	0.01	6.7
<i>Arabella</i> sp	ANNELIDA	Polychaeta	Oenonidae	1	0.01	6.7
<i>Ampelisca cristata microdentata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	6.7
Paraonidae	ANNELIDA	Polychaeta	Paraonidae	1	0.01	6.7
<i>Ampelisca</i> cf <i>brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.01	6.7
<i>Leucon falcicosta</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.01	6.7
<i>Paranaitis</i> sp SD1	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	6.7
Edwardsiidae	CNIDARIA	Anthozoa	Edwardsiidae	1	0.01	6.7
<i>Leucilla nuttingi</i>	CALCAREA	Calcarea	Amphoriscidae	1	0.01	6.7
<i>Nuculana</i> sp	MOLLUSCA	Bivalvia	Nuculanidae	1	0.01	6.7
<i>Nereiphylla ferruginea</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	1	0.01	6.7
<i>Euchone</i> sp	ANNELIDA	Polychaeta	Sabellidae	1	0.01	6.7
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	1	0.01	6.7

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Epitonium berryi</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.01	6.7
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.01	6.7
<i>Acteocina harpa</i>	MOLLUSCA	Gastropoda	Cylichnidae	1	0.01	6.7
<i>Acanthoptilum</i> sp	CNIDARIA	Anthozoa	Virgulariidae	1	0.01	6.7
Eulimidae	MOLLUSCA	Gastropoda	Eulimidae	1	0.01	6.7
<i>Aberranta</i> sp SD2	ANNELIDA	Polychaeta	Aberrantidae	1	0.01	6.7
<i>Lepidepecreum gurjanovae</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.01	6.7
<i>Nephtys</i> sp	ANNELIDA	Polychaeta	Nephtyidae	1	0.01	6.7

Table B10. Macrofauna community summary for the Canyon stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Ampeliscidae	ARTHROPODA	Malacostraca	Ampeliscidae	715	15.31	16.1
<i>Byblis barbarensis</i>	ARTHROPODA	Malacostraca	Ampeliscidae	695	14.88	32.3
<i>Chloea pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	259	5.54	29.0
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	151	3.23	19.4
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	138	2.95	19.4
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	95	2.03	16.1
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	69	1.48	29.0
<i>Spiochaetopterus costarum</i>						
Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	60	1.28	19.4
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	57	1.22	25.8
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	55	1.18	22.6
<i>Dacrydium pacificum</i>	MOLLUSCA	Bivalvia	Mytilidae	52	1.11	6.5
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	50	1.07	9.7
<i>Heteromastus filobranchus</i>	ANNELIDA	Polychaeta	Capitellidae	46	0.98	25.8
<i>Eclysippe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	46	0.98	19.4
<i>Spiophanes kimbballi</i>	ANNELIDA	Polychaeta	Spionidae	45	0.96	12.9
<i>Aphelochaeta</i> sp HYP8	ANNELIDA	Polychaeta	Cirratulidae	44	0.94	6.5
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		43	0.92	6.5
<i>Diastylis pellucida</i>	ARTHROPODA	Malacostraca	Diastylidae	40	0.86	16.1
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	38	0.81	16.1
<i>Nuculana</i> sp A	MOLLUSCA	Bivalvia	Nuculanidae	38	0.81	12.9
<i>Neilonella ritteri</i>	MOLLUSCA	Bivalvia	Neilonellidae	37	0.79	12.9
<i>Ampelisca unsocalae</i>	ARTHROPODA	Malacostraca	Ampeliscidae	37	0.79	29.0
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	35	0.75	6.5
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	31	0.66	19.4
<i>Paralysippe annexens</i>	ANNELIDA	Polychaeta	Ampharetidae	30	0.64	12.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	27	0.58	19.4
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	26	0.56	9.7
<i>Prionospio (Prionospio) ehlersi</i>	ANNELIDA	Polychaeta	Spionidae	26	0.56	32.3
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	24	0.51	19.4
<i>Maldane californiensis</i>	ANNELIDA	Polychaeta	Maldanidae	24	0.51	19.4
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	23	0.49	25.8
<i>Melinna heterodonta</i>	ANNELIDA	Polychaeta	Ampharetidae	23	0.49	16.1
<i>Valettiopsis</i> sp DC1	ARTHROPODA	Malacostraca	Valettiopsidae	22	0.47	3.2
<i>Enteropneusta</i>	CHORDATA	Enteropneusta		21	0.45	16.1
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	20	0.43	19.4
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	20	0.43	12.9
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	20	0.43	12.9
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	20	0.43	9.7
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	20	0.43	6.5
<i>Yoldiella nana</i>	MOLLUSCA	Bivalvia	Yoldiidae	20	0.43	9.7
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	19	0.41	6.5
<i>Harpiniopsis epistomata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	19	0.41	22.6
<i>Limifossor fratula</i>	MOLLUSCA	Caudofoveata	Limifossoridae	19	0.41	25.8
<i>Mendicula ferruginosa</i>	Mollusca	Bivalvia	Thyasiridae	18	0.39	16.1
<i>Ampharetidae</i>	ANNELIDA	Polychaeta	Ampharetidae	18	0.39	19.4
<i>Ampharetidae</i>	ANNELIDA	Polychaeta	Ampharetidae	18	0.39	19.4
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	18	0.39	19.4
<i>Diastylis</i> sp DC1	ARTHROPODA	Malacostraca	Diastylidae	18	0.39	3.2
<i>Solemya pervernucosa</i>	MOLLUSCA	Bivalvia	Solemyidae	18	0.39	6.5
<i>Maldanidae</i>	ANNELIDA	Polychaeta	Maldanidae	18	0.39	25.8
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	17	0.36	6.5
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephtyidae	17	0.36	16.1
<i>Fauveliopsis glabra</i>	ANNELIDA	Polychaeta	Fauveliopsidae	17	0.36	12.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	16	0.34	9.7
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	16	0.34	19.4
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	16	0.34	19.4
<i>Astyris permodesta</i>	MOLLUSCA	Gastropoda	Columbellidae	16	0.34	16.1
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	16	0.34	12.9
<i>Foxiphalus similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	15	0.32	3.2
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	15	0.32	9.7
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	15	0.32	6.5
<i>Stereobalanus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	15	0.32	16.1
<i>Lucinoma aequizonatum</i>	MOLLUSCA	Bivalvia	Lucinidae	15	0.32	6.5
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	14	0.30	9.7
<i>Listriella albina</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	13	0.28	12.9
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	13	0.28	3.2
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	13	0.28	3.2
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	13	0.28	22.6
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	12	0.26	6.5
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	12	0.26	6.5
<i>Amphissa bicolor</i>	MOLLUSCA	Gastropoda	Columbellidae	12	0.26	12.9
Lineidae	NEMERTEA	Anopla	Lineidae	12	0.26	29.0
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	11	0.24	12.9
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	11	0.24	19.4
Chaetodermatida	MOLLUSCA	Caudofoveata		11	0.24	25.8
<i>Rhabdus rectius</i>	MOLLUSCA	Scaphopoda	Rhabdidae	11	0.24	16.1
<i>Falcidens hartmanae</i>	MOLLUSCA	Caudofoveata	Falcidentidae	10	0.21	19.4
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	10	0.21	9.7
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	10	0.21	3.2
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	10	0.21	6.5
<i>Aphelochaeta</i> sp HYP5	ANNELIDA	Polychaeta	Cirratulidae	10	0.21	6.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	10	0.21	9.7
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	10	0.21	6.5
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.19	9.7
<i>Adontorhina lynnae</i>	MOLLUSCA	Bivalvia	Thyasiridae	9	0.19	6.5
<i>Cephalophoxoides horilis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	9	0.19	9.7
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	9	0.19	9.7
<i>Leiochrides hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	9	0.19	12.9
<i>Tubulanus</i> sp A	NEMERTEA	Anopla	Tubulanidae	9	0.19	3.2
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	9	0.19	6.5
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	9	0.19	3.2
<i>Macoma yoldiformis</i>	MOLLUSCA	Bivalvia	Tellinidae	9	0.19	6.5
Oligochaeta	ANNELIDA	Oligochaeta		9	0.19	12.9
<i>Heteromastus filiformis</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	9	0.19	6.5
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	9	0.19	6.5
<i>Leitoscoloplos</i> sp A	ANNELIDA	Polychaeta	Orbiniidae	8	0.17	22.6
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	8	0.17	6.5
<i>Aphelochaeta phillipsi</i>	ANNELIDA	Polychaeta	Cirratulidae	8	0.17	6.5
Ophiuroidea	ECHINODERMATA	Ophiuroidea		8	0.17	12.9
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	7	0.15	9.7
<i>Aphelochaeta</i> sp LA3	ANNELIDA	Polychaeta	Cirratulidae	7	0.15	6.5
<i>Aricidea (Acmina)</i> sp LA1	ANNELIDA	Polychaeta	Paraonidae	7	0.15	3.2
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	7	0.15	9.7
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	7	0.15	12.9
<i>Aphelochaeta petersenae</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.15	6.5
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	7	0.15	12.9
<i>Dodecamastus mariaensis</i>	ANNELIDA	Polychaeta	Capitellidae	7	0.15	16.1
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	7	0.15	9.7
<i>Tritella tenuissima</i>	ARTHROPODA	Malacostraca	Caprellidae	7	0.15	16.1

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pherusa</i> sp SD2	ANNELIDA	Polychaeta	Flabelligeridae	7	0.15	12.9
<i>Capitella capitata</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	6	0.13	9.7
<i>Capitellidae</i>	ANNELIDA	Polychaeta	Capitellidae	6	0.13	9.7
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	6	0.13	6.5
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	6	0.13	9.7
<i>Nereis</i> sp A	ANNELIDA	Polychaeta	Nereididae	6	0.13	9.7
Scaphopoda	MOLLUSCA	Scaphopoda		6	0.13	19.4
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	6	0.13	9.7
<i>Scoletoma</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	6	0.13	6.5
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	6	0.13	16.1
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	6	0.13	12.9
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	6	0.13	9.7
<i>Marphysa disjuncta</i>	ANNELIDA	Polychaeta	Eunicidae	6	0.13	3.2
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	6	0.13	9.7
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	5	0.11	9.7
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.11	12.9
<i>Aphelochaeta</i> sp SD18 (B13-1)	ANNELIDA	Polychaeta	Cirratulidae	5	0.11	6.5
<i>Calyptogena</i> sp	MOLLUSCA	Bivalvia	Vesicomyidae	5	0.11	6.5
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	5	0.11	12.9
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	5	0.11	9.7
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	5	0.11	9.7
Phoronida	PHORONA			5	0.11	3.2
<i>Leucon declivis</i>	ARTHROPODA	Malacostraca	Leuconidae	5	0.11	12.9
<i>Malmgreniella</i> sp	ANNELIDA	Polychaeta	Polynoidae	5	0.11	6.5
<i>Byblis millsii</i>	ARTHROPODA	Malacostraca	Ampeliscidae	5	0.11	3.2
<i>Leitoscoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	5	0.11	6.5
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.11	6.5
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	5	0.11	12.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Sternaspis williamsae</i>	ANNELIDA	Polychaeta	Sternaspidae	5	0.11	12.9
<i>Periploma rosewateri</i>	MOLLUSCA	Bivalvia	Periplomatidae	5	0.11	9.7
<i>Listriella goleta</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	5	0.11	3.2
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	5	0.11	12.9
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	5	0.11	9.7
<i>Gymnonereis crosslandi</i>	ANNELIDA	Polychaeta	Nereididae	4	0.09	6.5
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	4	0.09	6.5
<i>Ampelisca romigi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	4	0.09	6.5
<i>Brisaster</i> sp	ECHINODERMATA	Echinoidea	Schizasteridae	4	0.09	9.7
<i>Scalibregma californicum</i>	ANNELIDA	Polychaeta	Scalibregmatidae	4	0.09	6.5
<i>Sonatsa carinata</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.09	6.5
<i>Sabellidae</i>	ANNELIDA	Polychaeta	Sabellidae	4	0.09	6.5
<i>Glycera branchiopoda</i>	ANNELIDA	Polychaeta	Glyceridae	4	0.09	9.7
<i>Listriolobus hexamyotus</i>	ECHIURA	Echiuridea	Thalassematidae	4	0.09	9.7
<i>Yoldia seminuda</i>	MOLLUSCA	Bivalvia	Yoldiidae	4	0.09	6.5
<i>Aricidea (Acmira) rubra</i>	ANNELIDA	Polychaeta	Paraonidae	4	0.09	9.7
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.09	3.2
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	4	0.09	12.9
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	4	0.09	6.5
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	4	0.09	3.2
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	4	0.09	6.5
<i>Polynoidae</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.09	12.9
<i>Bivalvia</i>	MOLLUSCA	Bivalvia		4	0.09	9.7
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	4	0.09	6.5
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	4	0.09	6.5
<i>Monticellina tesselata</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.06	6.5
<i>Mooreasambytha bioculata</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.06	6.5
<i>Monticellina</i> sp HYP3	ANNELIDA	Polychaeta	Cirratulidae	3	0.06	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		3	0.06	6.5
<i>Spiophanes wigleyi</i>	ANNELIDA	Polychaeta	Spionidae	3	0.06	9.7
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	3	0.06	6.5
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.06	3.2
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	3	0.06	3.2
<i>Palaeonemertea</i>	NEMERTEA	Anopla		3	0.06	9.7
<i>Kurtiella tumida</i>	MOLLUSCA	Bivalvia	Lasaeidae	3	0.06	9.7
<i>Drilonereis</i> sp	ANNELIDA	Polychaeta	Oenonidae	3	0.06	6.5
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	3	0.06	9.7
<i>Postasterope barnesi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	3	0.06	3.2
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	3	0.06	3.2
<i>Leucon bishopi</i>	ARTHROPODA	Malacostraca	Leuconidae	3	0.06	6.5
<i>Leucon falcicosta</i>	ARTHROPODA	Malacostraca	Leuconidae	3	0.06	3.2
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	3	0.06	6.5
<i>Lirobittium calenum</i>	MOLLUSCA	Gastropoda	Cerithiidae	3	0.06	3.2
<i>Lirobittium</i> sp	MOLLUSCA	Gastropoda	Cerithiidae	3	0.06	6.5
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	3	0.06	6.5
<i>Glyphanostomum pallescens</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.06	3.2
<i>Brissopsis</i> sp LA1	ECHINODERMATA	Echinoidea	Brissidae	3	0.06	9.7
<i>Brisaster townsendi</i>	ECHINODERMATA	Echinoidea	Schizasteridae	3	0.06	6.5
<i>Cyclocardia gouldii</i>	MOLLUSCA	Bivalvia	Carditidae	3	0.06	3.2
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	3	0.06	9.7
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.06	6.5
<i>Aricidea (Allia) antennata</i>	ANNELIDA	Polychaeta	Paraonidae	3	0.06	6.5
<i>Terebellides</i> sp	ANNELIDA	Polychaeta	Trichobranchidae	3	0.06	6.5
<i>Chaetozone commonalis</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.06	3.2
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	3	0.06	9.7
<i>Nicippe tumida</i>	ARTHROPODA	Malacostraca	Pandaliscidae	3	0.06	6.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	3	0.06	6.5
<i>Strongylocentrotus fragilis</i>	ECHINODERMATA	Echinoidea	Strongylocentrotidae	3	0.06	6.5
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	2	0.04	3.2
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	2	0.04	6.5
<i>Kurtzia arteaga</i>	MOLLUSCA	Gastropoda	Mangeliidae	2	0.04	3.2
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.04	3.2
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	2	0.04	6.5
<i>Ypsilothuria bitentaculata</i>	Echinodermata	Holothuroidea	Ypsilothuriidae	2	0.04	3.2
<i>Maldane</i> sp	ANNELIDA	Polychaeta	Maldanidae	2	0.04	3.2
<i>Amblyops</i> sp	ARTHROPODA	Malacostraca	Mysidae	2	0.04	3.2
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.04	6.5
<i>Eulalia levicornuta</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	2	0.04	3.2
<i>Spathoderma californicum</i>	MOLLUSCA	Caudofoveata	Prochaetodermatidae	2	0.04	6.5
<i>Aglaophamus erectans</i>	ANNELIDA	Polychaeta	Nephtyidae	2	0.04	6.5
<i>Prionospio (Minusprio)</i> sp A	ANNELIDA	Polychaeta	Spionidae	2	0.04	6.5
<i>Chaetozone hartmanae</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.04	3.2
<i>Tubulanidae</i> sp B	NEMERTEA	Anopla	Tubulanidae	2	0.04	3.2
<i>Phyllodoce</i> sp	ANNELIDA	Polychaeta	Phyllodocidae	2	0.04	6.5
<i>Ophiura</i> sp	ECHINODERMATA	Ophiuroidea	Ophiuridae	2	0.04	3.2
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	2	0.04	6.5
<i>Califia calida</i>	ANNELIDA	Polychaeta	Orbiniidae	2	0.04	6.5
<i>Chaetoderma nanulum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	2	0.04	3.2
<i>Eurycope californiensis</i>	ARTHROPODA	Malacostraca	Munnopsidae	2	0.04	3.2
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Embletonematidae	2	0.04	6.5
<i>Fauveliopsis</i> sp	ANNELIDA	Polychaeta	Fauveliopsidae	2	0.04	3.2
<i>Podarkeopsis perkinsi</i>	ANNELIDA	Polychaeta	Hesionidae	2	0.04	6.5
<i>Levinsenia multibranchiata</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.04	6.5
<i>Pandora bilirata</i>	MOLLUSCA	Bivalvia	Pandoridae	2	0.04	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Spatangus californicus</i>	ECHINODERMATA	Echinoidea	Spatangidae	2	0.04	3.2
<i>Calocarides quinqueseriatus</i>	ARTHROPODA	Malacostraca	Axiidae	2	0.04	6.5
<i>Dentalium vallicolens</i>	MOLLUSCA	Scaphopoda	Dentaliidae	2	0.04	3.2
Decapoda	ARTHROPODA	Malacostraca		2	0.04	3.2
<i>Nuculana conceptionis</i>	MOLLUSCA	Bivalvia	Nuculanidae	2	0.04	3.2
<i>Hesperonoe laevis</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.04	6.5
<i>Aphelochaeta</i> sp DC1	ANNELIDA	Polychaeta	Cirratulidae	2	0.04	3.2
<i>Ancistrosyllis groenlandica</i>	ANNELIDA	Polychaeta	Pilargidae	2	0.04	6.5
Spatangoidea	ECHINODERMATA	Echinoidea		2	0.04	6.5
<i>Heteromastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	2	0.04	6.5
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	2	0.04	6.5
<i>Harpiniopsis fulgens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.04	3.2
<i>Subadyte mexicana</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.04	6.5
<i>Artacamella hancocki</i>	ANNELIDA	Polychaeta	Trichobranchidae	2	0.04	6.5
<i>Nephtys caecoides</i>	ANNELIDA	Polychaeta	Nephtyidae	2	0.04	6.5
Mysidae	ARTHROPODA	Malacostraca	Mysidae	2	0.04	6.5
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	2	0.04	6.5
Nuculanida	MOLLUSCA	Bivalvia		2	0.04	6.5
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	2	0.04	3.2
<i>Cadulus californicus</i>	MOLLUSCA	Scaphopoda	Gadilidae	2	0.04	3.2
Echinoidea	ECHINODERMATA	Echinoidea		2	0.04	6.5
<i>Bathymedon flebilis</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.04	6.5
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	2	0.04	6.5
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	2	0.04	6.5
<i>Amphiura</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.04	6.5
<i>Melinna</i> sp	ANNELIDA	Polychaeta	Ampharetidae	2	0.04	3.2
<i>Phyllodoce cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.02	3.2
<i>Philine polystrigma</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pista</i> sp	ANNELIDA	Polychaeta	Terebellidae	1	0.02	3.2
<i>Paraphoxus</i> sp 1	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Phyllochaetopterus</i> sp	ANNELIDA	Polychaeta	Chaetopteridae	1	0.02	3.2
<i>Philine auriformis</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.02	3.2
<i>Phyllodoce longipes</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.02	3.2
<i>Pardalisicella symmetrica</i>	ARTHROPODA	Malacostraca	Pardaliscidae	1	0.02	3.2
<i>Pinnixa</i> sp	ARTHROPODA	Malacostraca	Pinnotheridae	1	0.02	3.2
<i>Phoronis</i> sp	PHORONA		Phoronidae	1	0.02	3.2
<i>Edwardsiidae</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.02	3.2
<i>Paraonidae</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.02	3.2
<i>Phyllochaetopterus prolificus</i>	ANNELIDA	Polychaeta	Chaetopteridae	1	0.02	3.2
<i>Pennatulacea</i> sp A	Cnidaria	Anthozoa		1	0.02	3.2
<i>Thyasiridae</i>	MOLLUSCA	Bivalvia	Thyasiridae	1	0.02	3.2
<i>Gammaridea</i>	ARTHROPODA	Malacostraca		1	0.02	3.2
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	1	0.02	3.2
<i>Eucranta anomolata</i>	Annelida	Polychaeta	Polynoidae	1	0.02	3.2
<i>Syllides mikeli</i>	ANNELIDA	Polychaeta	Syllidae	1	0.02	3.2
<i>Tanaella propinquus</i>	ARTHROPODA	Malacostraca	Tanaellidae	1	0.02	3.2
<i>Tanaidacea</i>	ARTHROPODA	Malacostraca		1	0.02	3.2
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.02	3.2
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.02	3.2
<i>Epitonium hindsii</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.02	3.2
<i>Thyasiridae</i>	MOLLUSCA	Bivalvia	Thyasiridae	1	0.02	3.2
<i>Spathoderma</i> sp A	MOLLUSCA	Caudofoveata	Prochaetodermatidae	1	0.02	3.2
<i>Thyasiridae</i> sp SD1	MOLLUSCA	Bivalvia	Thyasiridae	1	0.02	3.2
<i>Trochochaeta franciscanum</i>	ANNELIDA	Polychaeta	Trochochaetidae	1	0.02	3.2
<i>Eulimidae</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.02	3.2
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Turbonilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	1	0.02	3.2
<i>Valettiopsis dentatus</i>	ARTHROPODA	Malacostraca	Valettiopsidae	1	0.02	3.2
<i>Virgularia</i> sp	CNIDARIA	Anthozoa	Virgulariidae	1	0.02	3.2
<i>Yoldiella</i> sp	MOLLUSCA	Bivalvia	Yoldiidae	1	0.02	3.2
Yoldiidae	MOLLUSCA	Bivalvia	Yoldiidae	1	0.02	3.2
<i>Tetrastemma nigrifrons</i>	NEMERTEA	Enopla	Tetrastemmatidae	1	0.02	3.2
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	1	0.02	3.2
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.02	3.2
<i>Podarkeopsis</i> sp	ANNELIDA	Polychaeta	Hesionidae	1	0.02	3.2
<i>Polycirrus</i> sp A	ANNELIDA	Polychaeta	Terebellidae	1	0.02	3.2
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadilidae	1	0.02	3.2
<i>Potamethus</i> sp A	ANNELIDA	Polychaeta	Sabellidae	1	0.02	3.2
<i>Eurydice caudata</i>	ARTHROPODA	Malacostraca	Cirolanidae	1	0.02	3.2
<i>Protis pacifica</i>	Annelida	Polychaeta	Serpulidae	1	0.02	3.2
<i>Pseudharpinia excavata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Rhachotropis distincta</i>	ARTHROPODA	Malacostraca	Eusiridae	1	0.02	3.2
<i>Ericthonius brasiliensis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	1	0.02	3.2
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.02	3.2
Spionidae	ANNELIDA	Polychaeta	Spionidae	1	0.02	3.2
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	1	0.02	3.2
<i>Parvaplustrum</i> sp A	MOLLUSCA	Gastropoda	Aplustridae	1	0.02	3.2
<i>Eranno</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	1	0.02	3.2
<i>Sigambra</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	1	0.02	3.2
<i>Sige</i> sp A	ANNELIDA	Polychaeta	Phyllodocidae	1	0.02	3.2
<i>Siphonosoma ingens</i>	SIPUNCULA	Sipunculidea	Sipunculidae	1	0.02	3.2
<i>Solamen columbianum</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.02	3.2
<i>Solariella peramabilis</i>	MOLLUSCA	Gastropoda	Solariellidae	1	0.02	3.2
<i>Pleurobranchaea californica</i>	MOLLUSCA	Gastropoda	Pleurobranchidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Rhepoxyinius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
<i>Amphioplus</i> sp A	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.02	3.2
<i>Harmothoe</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.02	3.2
<i>Asteroidea</i>	ECHINODERMATA	Asteroidea		1	0.02	3.2
<i>Asellota</i>	ARTHROPODA	Malacostraca		1	0.02	3.2
<i>Aricidea (Allia)</i> sp DC1	ANNELIDA	Polychaeta	Paraonidae	1	0.02	3.2
<i>Cyclocardia</i> sp	MOLLUSCA	Bivalvia	Carditidae	1	0.02	3.2
<i>Aricidea (Allia) hartleyi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.02	3.2
<i>Aricidea (Acmira)</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.02	3.2
<i>Arhynchite californicus</i>	ECHIURA	Echiuridea	Thalassematidae	1	0.02	3.2
<i>Balcis micans</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.02	3.2
<i>Apistobranchus ornatus</i>	ANNELIDA	Polychaeta	Apistobranchidae	1	0.02	3.2
<i>Bathybembix bairdii</i>	Mollusca	Gastropoda	Calliotropidae	1	0.02	3.2
<i>Aphelochaeta</i> sp SD5	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
<i>Dactylopleustes</i> sp A	ARTHROPODA	Malacostraca	Pleustidae	1	0.02	3.2
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
<i>Harpiniopsis</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Hesionidae</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.02	3.2
<i>Foxiphalus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Dialychnone</i> sp SD1	ANNELIDA	Polychaeta	Sabellidae	1	0.02	3.2
<i>Amphitrite robusta</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.02	3.2
<i>Amphipholis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.02	3.2
<i>Amphioplus strongyloplax</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.02	3.2
<i>Araphura cuspirostris</i>	ARTHROPODA	Malacostraca	Tanaellidae	1	0.02	3.2
<i>Glycera</i> sp	ANNELIDA	Polychaeta	Glyceridae	1	0.02	3.2
<i>Sternaspis maior</i>	Annelida	Polychaeta	Sternaspidae	1	0.02	3.2
<i>Orchomenella decipiens</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cossura rostrata</i>	ANNELIDA	Polychaeta	Cossuridae	1	0.02	3.2
<i>Cooperella subdiaphana</i>	MOLLUSCA	Bivalvia	Petricolidae	1	0.02	3.2
Gastropoda	MOLLUSCA	Gastropoda		1	0.02	3.2
<i>Cirratulus multioculatus</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.02	3.2
<i>Chaetozone sp C</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
Chaetopteridae	ANNELIDA	Polychaeta	Chaetopteridae	1	0.02	3.2
<i>Chaetoderma sp A</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	1	0.02	3.2
<i>Halcampa decenttentaculata</i>	CNIDARIA	Anthozoa	Halcampidae	1	0.02	3.2
<i>Chaetoderma marinelli</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	1	0.02	3.2
<i>Campylaspis rubromaculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.02	3.2
<i>Cardiomya planetica</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.02	3.2
<i>Campylaspis canaliculata</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.02	3.2
<i>Campylaspis blakei</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.02	3.2
<i>Calocarides sp</i>	ARTHROPODA	Malacostraca	Axiidae	1	0.02	3.2
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	1	0.02	3.2
<i>Bullomorpha sp A</i>	MOLLUSCA	Gastropoda		1	0.02	3.2
<i>Brissopsis pacifica</i>	ECHINODERMATA	Echinoidea	Brissidae	1	0.02	3.2
<i>Bathymedon pumilus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.02	3.2
<i>Bathymedon covilhani</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.02	3.2
<i>Bathyleberis sp</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.02	3.2
<i>Glycera macrobranchia</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.02	3.2
<i>Nuculana sp</i>	MOLLUSCA	Bivalvia	Nuculanidae	1	0.02	3.2
<i>Magelona sacculata</i>	ANNELIDA	Polychaeta	Magelonidae	1	0.02	3.2
<i>Magelona sp B</i>	ANNELIDA	Polychaeta	Magelonidae	1	0.02	3.2
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.02	3.2
<i>Malmgreniella scriptoria</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.02	3.2
<i>Malmgreniella sp A</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Megalomma splendida</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.02	3.2
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	1	0.02	3.2
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	1	0.02	3.2
<i>Nephasoma diaphanes</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.02	3.2
<i>Eusyllinae</i>	ANNELIDA	Polychaeta	Syllidae	1	0.02	3.2
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	1	0.02	3.2
<i>Notocirrus californiensis</i>	ANNELIDA	Polychaeta	Oenonidae	1	0.02	3.2
<i>Monoculodes latissimanus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.02	3.2
<i>Edotia sublittoralis</i>	ARTHROPODA	Malacostraca	Idoteidae	1	0.02	3.2
<i>Oediceropsis elsula</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.02	3.2
Oedicerotidae	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.02	3.2
<i>Edwardsia profunda</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.02	3.2
<i>Onuphis multiannulata</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.02	3.2
<i>Ophelina pallida</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.02	3.2
<i>Edwardsia</i> sp DC1	CNIDARIA	Anthozoa	Edwardsiidae	1	0.02	3.2
<i>Ophiosphalma jolliense</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	1	0.02	3.2
<i>Dialychine trilineata</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.02	3.2
<i>Carinoma mutabilis</i>	NEMERTEA	Anopla	Carinomidae	1	0.02	3.2
<i>Ninoe tridentata</i>	ANNELIDA	Polychaeta	Lumbrineridae	1	0.02	3.2
<i>Aglaophamus paucilamellata</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.02	3.2
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.02	3.2
<i>Heterophoxus</i> sp	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.02	3.2
<i>Hippomedon columbianus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.02	3.2
<i>Ampharete finmarchica</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.02	3.2
<i>Jasmineira</i> sp B	ANNELIDA	Polychaeta	Sabellidae	1	0.02	3.2
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.02	3.2
Myodocopida	ARTHROPODA	Ostracoda		1	0.02	3.2
<i>Alvania rosana</i>	MOLLUSCA	Gastropoda	Rissoidae	1	0.02	3.2

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lytechinus pictus</i>	ECHINODERMATA	Echinoidea	Toxopneustidae	1	0.02	3.2
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	1	0.02	3.2
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.02	3.2
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	1	0.02	3.2
Lasaeidae	MOLLUSCA	Bivalvia	Lasaeidae	1	0.02	3.2
<i>Lepidasthenia berkeleyae</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.02	3.2
Flabelligeridae	ANNELIDA	Polychaeta	Flabelligeridae	1	0.02	3.2
<i>Amaeana occidentalis</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.02	3.2
<i>Lebbeus</i> sp	ARTHROPODA	Malacostraca	Hippolytidae	1	0.02	3.2
<i>Leucon</i> sp J	ARTHROPODA	Malacostraca	Leuconidae	1	0.02	3.2
<i>Luzonia chilensis</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.02	3.2
<i>Leucon</i> sp	ARTHROPODA	Malacostraca	Leuconidae	1	0.02	3.2
<i>Levinsenia oculata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.02	3.2
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.02	3.2
<i>Leitoscoloplos pugettensis</i>	ANNELIDA	Polychaeta	Orbiniidae	1	0.02	3.2
<i>Diaphana californica</i>	MOLLUSCA	Gastropoda	Diaphanidae	1	0.02	3.2

Table B11. Macrobenthic community summary for the Upper Slope stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Chloea pinnata</i>	ANNELIDA	Polychaeta	Amphinomidae	261	6.61	48.8
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	259	6.56	26.8
<i>Byblis barbarensis</i>	ARTHROPODA	Malacostraca	Ampeliscidae	198	5.01	7.3
<i>Macoma carlottensis</i>	MOLLUSCA	Bivalvia	Tellinidae	158	4.00	36.6
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	138	3.49	29.3
<i>Paraprionospio alata</i>	ANNELIDA	Polychaeta	Spionidae	116	2.94	58.5
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	103	2.61	43.9
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	82	2.08	41.5
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		82	2.08	36.6
<i>Spiophanes kimballi</i>	ANNELIDA	Polychaeta	Spionidae	63	1.59	19.5
<i>Maldanidae</i>	ANNELIDA	Polychaeta	Maldanidae	58	1.47	26.8
<i>Yoldiella nana</i>	MOLLUSCA	Bivalvia	Yoldiidae	57	1.44	14.6
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	53	1.34	19.5
<i>Amphissa bicolor</i>	MOLLUSCA	Gastropoda	Columbellidae	50	1.27	22.0
<i>Cadulus californicus</i>	MOLLUSCA	Scaphopoda	Gadilidae	49	1.24	26.8
<i>Onuphis iridescent</i>	ANNELIDA	Polychaeta	Onuphidae	49	1.24	43.9
<i>Eclysippe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	48	1.21	24.4
<i>Melinna heterodonta</i>	ANNELIDA	Polychaeta	Ampharetidae	45	1.14	26.8
<i>Prionospio (Prionospio) ehlersi</i>	ANNELIDA	Polychaeta	Spionidae	37	0.94	46.3
<i>Nuculana conceptionis</i>	MOLLUSCA	Bivalvia	Nuculanidae	37	0.94	22.0
<i>Spiochaetopterus costarum</i> Cmplx	ANNELIDA	Polychaeta	Chaetopteridae	34	0.86	9.8
<i>Pectinaria californiensis</i>	ANNELIDA	Polychaeta	Pectinariidae	33	0.84	34.1
<i>Diastylis pellucida</i>	ARTHROPODA	Malacostraca	Diastylidae	31	0.78	26.8
<i>Limifossor fratula</i>	MOLLUSCA	Caudofoveata	Limifossoridae	30	0.76	34.1
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	26	0.66	41.5
<i>Ampelisca unsocalae</i>	ARTHROPODA	Malacostraca	Ampeliscidae	26	0.66	19.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Petaloclymene pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	25	0.63	9.8
<i>Saxicavella pacifica</i>	MOLLUSCA	Bivalvia	Hiatellidae	24	0.61	12.2
<i>Lumbrineris cruzensis</i>	ANNELIDA	Polychaeta	Lumbrineridae	24	0.61	19.5
<i>Scoletoma tetraura</i> Cmplx	ANNELIDA	Polychaeta	Lumbrineridae	24	0.61	24.4
<i>Caecognathia crenulatifrons</i>	ARTHROPODA	Malacostraca	Gnathiidae	24	0.61	12.2
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	24	0.61	24.4
Ophiuroidea	ECHINODERMATA	Ophiuroidea		23	0.58	31.7
<i>Chaetoderma nanulum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	22	0.56	22.0
<i>Protomediea articulata</i> Cmplx	ARTHROPODA	Malacostraca	Corophiidae	21	0.53	9.8
<i>Leitoscoloplos</i> sp A	ANNELIDA	Polychaeta	Orbiniidae	21	0.53	24.4
<i>Parvilucina tenuisculpta</i>	MOLLUSCA	Bivalvia	Lucinidae	21	0.53	31.7
<i>Heteromastus filobranchus</i>	ANNELIDA	Polychaeta	Capitellidae	21	0.53	14.6
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	20	0.51	29.3
<i>Rhabdus rectius</i>	MOLLUSCA	Scaphopoda	Rhabdidae	20	0.51	22.0
<i>Astyris permodesta</i>	MOLLUSCA	Gastropoda	Columbellidae	19	0.48	2.4
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	19	0.48	7.3
<i>Eunice americana</i>	ANNELIDA	Polychaeta	Eunicidae	19	0.48	19.5
<i>Cyclocardia ventricosa</i>	MOLLUSCA	Bivalvia	Carditidae	19	0.48	17.1
<i>Fauveliopsis glabra</i>	ANNELIDA	Polychaeta	Fauveliopsidae	19	0.48	12.2
<i>Bipalponeptyhs cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	19	0.48	26.8
<i>Leitoscoloplos</i> sp	ANNELIDA	Polychaeta	Orbiniidae	19	0.48	24.4
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	19	0.48	43.9
<i>Falcidens hartmanae</i>	MOLLUSCA	Caudofoveata	Falcidentidae	18	0.46	17.1
<i>Phoronis</i> sp	PHORONA		Phoronidae	18	0.46	12.2
<i>Dacrydium pacificum</i>	MOLLUSCA	Bivalvia	Mytilidae	18	0.46	7.3
<i>Axinopsida serricata</i>	MOLLUSCA	Bivalvia	Thyasiridae	18	0.46	17.1
<i>Brisaster townsendi</i>	ECHINODERMATA	Echinoidea	Schizasteridae	18	0.46	19.5
<i>Pista wui</i>	ANNELIDA	Polychaeta	Terebellidae	17	0.43	17.1
<i>Lumbrineris</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	17	0.43	19.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	16	0.40	4.9
<i>Nephtys ferruginea</i>	ANNELIDA	Polychaeta	Nephytidae	16	0.40	24.4
<i>Cirrophorus branchiatus</i>	ANNELIDA	Polychaeta	Paraonidae	15	0.38	22.0
<i>Decamastus gracilis</i>	ANNELIDA	Polychaeta	Capitellidae	15	0.38	12.2
<i>Paraphoxus</i> sp 1	ARTHROPODA	Malacostraca	Phoxocephalidae	15	0.38	7.3
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	14	0.35	7.3
<i>Neilonella ritteri</i>	MOLLUSCA	Bivalvia	Neilonellidae	14	0.35	4.9
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	14	0.35	26.8
<i>Terebellides californica</i>	ANNELIDA	Polychaeta	Trichobranchidae	14	0.35	19.5
<i>Orchomenella decipiens</i>	ARTHROPODA	Malacostraca	Lysianassidae	14	0.35	4.9
<i>Amphiodia urtica</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	13	0.33	7.3
<i>Prionospio (Minuspio) lighti</i>	ANNELIDA	Polychaeta	Spionidae	13	0.33	12.2
<i>Photis parvidons</i>	ARTHROPODA	Malacostraca	Photidae	13	0.33	7.3
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	13	0.33	17.1
<i>Rhepoxyinius bicuspidatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	12	0.30	4.9
Lineidae	NEMERTEA	Anopla	Lineidae	12	0.30	24.4
<i>Notoproctus pacificus</i>	ANNELIDA	Polychaeta	Maldanidae	12	0.30	2.4
<i>Brisaster</i> sp	ECHINODERMATA	Echinoidea	Schizasteridae	12	0.30	17.1
Spatangoida	ECHINODERMATA	Echinoidea		12	0.30	19.5
<i>Chaetoderma pacificum</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	11	0.28	22.0
<i>Euphilomedes carcharodonta</i>	ARTHROPODA	Ostracoda	Philomedidae	11	0.28	2.4
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	11	0.28	17.1
<i>Aristias</i> sp DC1	ARTHROPODA			11	0.28	4.9
<i>Thyasira flexuosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	11	0.28	14.6
<i>Ampelisca brevisimulata</i>	ARTHROPODA	Malacostraca	Ampeliscidae	11	0.28	7.3
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	11	0.28	14.6
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	11	0.28	9.8
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	11	0.28	17.1
<i>Brissopsis pacifica</i>	ECHINODERMATA	Echinoidea	Brissidae	11	0.28	14.6

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cyclocardia</i> sp	MOLLUSCA	Bivalvia	Carditidae	11	0.28	9.8
<i>Prionospio (Prionospio) dubia</i>	ANNELIDA	Polychaeta	Spionidae	10	0.25	4.9
<i>Aphelochaeta</i> sp SD18 (B13-1)	ANNELIDA	Polychaeta	Cirratulidae	10	0.25	7.3
<i>Phoronis</i> sp SD1	PHORONA		Phoronidae	10	0.25	7.3
<i>Levinsenia gracilis</i>	ANNELIDA	Polychaeta	Paraonidae	10	0.25	22.0
<i>Tellina</i> sp B	MOLLUSCA	Bivalvia	Tellinidae	9	0.23	7.3
<i>Rictaxis punctocaelatus</i>	MOLLUSCA	Gastropoda	Acteonidae	9	0.23	12.2
<i>Monticellina serratiseta</i>	ANNELIDA	Polychaeta	Cirratulidae	9	0.23	9.8
<i>Nuculana</i> sp B	MOLLUSCA	Bivalvia	Nuculanidae	8	0.20	9.8
Polynoidae	ANNELIDA	Polychaeta	Polynoidae	8	0.20	12.2
<i>Nicippe tumida</i>	ARTHROPODA	Malacostraca	Pandaliscidae	8	0.20	7.3
<i>Euphilomedes producta</i>	ARTHROPODA	Ostracoda	Philomedidae	8	0.20	2.4
<i>Notomastus hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	8	0.20	12.2
<i>Calocarides quinqueseriatus</i>	ARTHROPODA	Malacostraca	Axiidae	8	0.20	14.6
<i>Aphelochaeta</i> sp HYP5	ANNELIDA	Polychaeta	Cirratulidae	8	0.20	7.3
<i>Ancistrosyllis groenlandica</i>	ANNELIDA	Polychaeta	Pilargidae	8	0.20	19.5
<i>Byblis</i> sp	ARTHROPODA	Malacostraca	Ampeliscidae	8	0.20	2.4
<i>Dougaloplus amphacanthus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	7	0.18	7.3
<i>Aglaophamus erectans</i>	ANNELIDA	Polychaeta	Nephtyidae	7	0.18	17.1
Cirratulidae	ANNELIDA	Polychaeta	Cirratulidae	7	0.18	7.3
<i>Pherusa neopapillata</i>	ANNELIDA	Polychaeta	Flabelligeridae	7	0.18	7.3
<i>Amphiodia</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	7	0.18	9.8
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	7	0.18	7.3
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	7	0.18	4.9
<i>Malmgreniella sanpedroensis</i>	ANNELIDA	Polychaeta	Polynoidae	7	0.18	12.2
<i>Sternaspis affinis</i>	ANNELIDA	Polychaeta	Sternaspidae	6	0.15	7.3
<i>Chiridota</i> sp	ECHINODERMATA	Holothuroidea	Chiridotidae	6	0.15	12.2
<i>Ericthonius rubricornis</i>	ARTHROPODA	Malacostraca	Ischyroceridae	6	0.15	4.9
<i>Nereis</i> sp SD1	ANNELIDA	Polychaeta	Nereididae	6	0.15	4.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Prionospio (Prionospio) jubata</i>	ANNELIDA	Polychaeta	Spionidae	6	0.15	7.3
<i>Amphiodia digitata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	6	0.15	7.3
<i>Goniada brunnea</i>	ANNELIDA	Polychaeta	Goniadidae	6	0.15	7.3
<i>Coxophoxus hidalgo</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	6	0.15	2.4
<i>Laonice nuchala</i>	ANNELIDA	Polychaeta	Spionidae	5	0.13	7.3
<i>Laonice cirrata</i>	ANNELIDA	Polychaeta	Spionidae	5	0.13	7.3
Echinoidea	ECHINODERMATA	Echinoidea		5	0.13	2.4
<i>Ampelisca careyi</i>	ARTHROPODA	Malacostraca	Ampeliscidae	5	0.13	4.9
<i>Hinea insculpta</i>	MOLLUSCA	Gastropoda	Nassariidae	5	0.13	7.3
<i>Spatangus californicus</i>	ECHINODERMATA	Echinoidea	Spatangiidae	5	0.13	7.3
<i>Heteromastus sp</i>	ANNELIDA	Polychaeta	Capitellidae	5	0.13	7.3
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	5	0.13	4.9
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	5	0.13	12.2
<i>Pholoe glabra</i>	ANNELIDA	Polychaeta	Pholoidae	5	0.13	4.9
<i>Ampelisca sp</i>	ARTHROPODA	Malacostraca	Ampeliscidae	5	0.13	9.8
Oligochaeta	ANNELIDA	Oligochaeta		5	0.13	4.9
<i>Monticellina tesselata</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.13	4.9
<i>Amphipholis squamata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	5	0.13	2.4
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.13	9.8
Gnathiidae	ARTHROPODA	Malacostraca	Gnathiidae	5	0.13	4.9
<i>Phascolion sp A</i>	SIPUNCULA	Sipunculidea	Phascolionidae	5	0.13	4.9
<i>Lumbrineris index</i>	ANNELIDA	Polychaeta	Lumbrineridae	5	0.13	7.3
<i>Brissopsis sp LA1</i>	ECHINODERMATA	Echinoidea	Brissidae	5	0.13	9.8
<i>Malmgreniella sp A</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.13	12.2
<i>Polycirrus sp</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.13	9.8
<i>Cuspidaria parapodema</i>	MOLLUSCA	Bivalvia	Cuspidariidae	5	0.13	9.8
Phoronida	PHORONA			5	0.13	2.4
<i>Malmgreniella sp</i>	ANNELIDA	Polychaeta	Polynoidae	5	0.13	7.3
<i>Lirobittium sp</i>	MOLLUSCA	Gastropoda	Cerithiidae	5	0.13	7.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Pista estevanica</i>	ANNELIDA	Polychaeta	Terebellidae	5	0.13	7.3
Scaphopoda	MOLLUSCA	Scaphopoda		5	0.13	12.2
<i>Volvulella californica</i>	MOLLUSCA	Gastropoda	Retusidae	5	0.13	7.3
<i>Photis</i> sp	ARTHROPODA	Malacostraca	Photidae	5	0.13	4.9
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	4	0.10	4.9
<i>Leucon declivis</i>	ARTHROPODA	Malacostraca	Leuconidae	4	0.10	7.3
<i>Ampelisca pacifica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	4	0.10	9.8
<i>Cossura</i> sp A	ANNELIDA	Polychaeta	Cossuridae	4	0.10	2.4
<i>Polycirrus</i> sp A	ANNELIDA	Polychaeta	Terebellidae	4	0.10	4.9
<i>Monticellina</i> sp	ANNELIDA	Polychaeta	Cirratulidae	4	0.10	4.9
<i>Rhabdus dalli</i>	MOLLUSCA	Scaphopoda	Rhabdidae	4	0.10	2.4
<i>Amphioplus strongyloplax</i>	ECHINODERMATA	Ophiuroidae	Amphiuridae	4	0.10	9.8
<i>Praxillella pacifica</i>	ANNELIDA	Polychaeta	Maldanidae	4	0.10	9.8
<i>Harpiniopsis fulgens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.10	9.8
<i>Hippomedon</i> sp A	ARTHROPODA	Malacostraca	Lysianassidae	4	0.10	4.9
Ceriantharia	CNIDARIA	Anthozoa		4	0.10	7.3
<i>Acteocina cerealis</i>	MOLLUSCA	Gastropoda	Cylichnidae	4	0.10	9.8
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		4	0.10	7.3
<i>Odostomia</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	4	0.10	7.3
<i>Araphura cuspirostris</i>	ARTHROPODA	Malacostraca	Tanaellidae	4	0.10	7.3
<i>Spiophanes duplex</i>	ANNELIDA	Polychaeta	Spionidae	4	0.10	4.9
<i>Eranno lagunae</i>	ANNELIDA	Polychaeta	Lumbrineridae	4	0.10	7.3
<i>Lineus bilineatus</i>	NEMERTEA	Anopla	Lineidae	4	0.10	7.3
<i>Paradiopatra parva</i>	ANNELIDA	Polychaeta	Onuphidae	4	0.10	7.3
<i>Ampelisca hancocki</i>	ARTHROPODA	Malacostraca	Ampeliscidae	4	0.10	4.9
<i>Monoculodes emarginatus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.10	4.9
<i>Leptochiton rugatus</i>	MOLLUSCA	Polyplacophora	Leptochitonidae	4	0.10	2.4
<i>Exogone lourei</i>	ANNELIDA	Polychaeta	Syllidae	4	0.10	4.9
<i>Brada pluribranchiata</i>	ANNELIDA	Polychaeta	Flabelligeridae	4	0.10	9.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	4	0.10	9.8
<i>Falcidens longus</i>	MOLLUSCA	Caudofoveata	Falcidentidae	4	0.10	4.9
<i>Fauveliopsis</i> sp	ANNELIDA	Polychaeta	Fauveliopsidae	4	0.10	2.4
<i>Monoculodes latissimanus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	4	0.10	9.8
<i>Arhynchite californicus</i>	ECHIURA	Echiuridea	Thalassematidae	4	0.10	4.9
<i>Glycera americana</i>	ANNELIDA	Polychaeta	Glyceridae	3	0.08	7.3
<i>Hippomedon columbianus</i>	ARTHROPODA	Malacostraca	Lysianassidae	3	0.08	4.9
<i>Typosyllis heterochaeta</i>	ANNELIDA	Polychaeta	Syllidae	3	0.08	4.9
<i>Ampharete acutifrons</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.08	4.9
<i>Amphicteis mucronata</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.08	4.9
<i>Lirobittium calenum</i>	MOLLUSCA	Gastropoda	Cerithiidae	3	0.08	2.4
<i>Malmgreniella scriptoria</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.08	4.9
<i>Maldane</i> sp	ANNELIDA	Polychaeta	Maldanidae	3	0.08	4.9
<i>Westwoodilla tone</i>	ARTHROPODA	Malacostraca	Oedicerotidae	3	0.08	4.9
<i>Monticellina siblina</i>	ANNELIDA	Polychaeta	Cirratulidae	3	0.08	2.4
Actiniaria	CNIDARIA	Anthozoa		3	0.08	7.3
<i>Ampelisca pugetica</i>	ARTHROPODA	Malacostraca	Ampeliscidae	3	0.08	7.3
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	3	0.08	2.4
<i>Aoroides</i> sp A	ARTHROPODA	Malacostraca	Aoridae	3	0.08	4.9
<i>Brisaster latifrons</i>	ECHINODERMATA	Echinoidea	Schizasteridae	3	0.08	7.3
<i>Cylichna diegensis</i>	MOLLUSCA	Gastropoda	Cylichnidae	3	0.08	4.9
Bivalvia	MOLLUSCA	Bivalvia		3	0.08	4.9
<i>Scleroconcha trituberculata</i>	ARTHROPODA	Ostracoda	Philomedidae	3	0.08	7.3
<i>Samytha californiensis</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.08	4.9
<i>Podarkeopsis perkinsi</i>	ANNELIDA	Polychaeta	Hesionidae	3	0.08	4.9
<i>Spiophanes berkeleyorum</i>	ANNELIDA	Polychaeta	Spionidae	3	0.08	2.4
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	3	0.08	7.3
<i>Dialychnone</i> sp SD1	ANNELIDA	Polychaeta	Sabellidae	3	0.08	2.4
<i>Polygireulima rutila</i>	MOLLUSCA	Gastropoda	Eulimidae	3	0.08	7.3

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Gastropoda	MOLLUSCA	Gastropoda		3	0.08	4.9
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	3	0.08	2.4
<i>Procampylaspis caenosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	3	0.08	7.3
<i>Myxoderma platyacanthum</i>	ECHINODERMATA	Asteroidea	Zoroasteridae	3	0.08	7.3
<i>Heteromastus filiformis</i> Cmplx	ANNELIDA	Polychaeta	Capitellidae	3	0.08	2.4
<i>Argissa hamatipes</i>	ARTHROPODA	Malacostraca	Argissidae	3	0.08	7.3
<i>Tritella tenuissima</i>	ARTHROPODA	Malacostraca	Caprellidae	3	0.08	7.3
<i>Ophelina acuminata</i>	ANNELIDA	Polychaeta	Opheliidae	3	0.08	7.3
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.08	7.3
<i>Tanaopsis cadieni</i>	ARTHROPODA	Malacostraca		3	0.08	2.4
<i>Sternaspis williamsae</i>	ANNELIDA	Polychaeta	Sternaspidae	3	0.08	2.4
<i>Subadyte mexicana</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.08	7.3
<i>Malmgreniella nigralba</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.05	2.4
<i>Podarkeopsis</i> sp	ANNELIDA	Polychaeta	Hesionidae	2	0.05	2.4
<i>Rhachotropis distincta</i>	ARTHROPODA	Malacostraca	Eusiridae	2	0.05	4.9
<i>Pherusa</i> sp SD2	ANNELIDA	Polychaeta	Flabelligeridae	2	0.05	2.4
<i>Maldane californiensis</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.05	4.9
<i>Phyllodoce groenlandica</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.05	4.9
<i>Waldo</i> sp A	MOLLUSCA	Bivalvia	Galeommatidae	2	0.05	2.4
<i>Malmgreniella</i> sp SD2	ANNELIDA	Polychaeta	Polynoidae	2	0.05	2.4
<i>Phyllodoce cuspidata</i>	ANNELIDA	Polychaeta	Phyllodocidae	2	0.05	4.9
<i>Photis viuda</i>	ARTHROPODA	Malacostraca	Photidae	2	0.05	2.4
<i>Photis californica</i>	ARTHROPODA	Malacostraca	Photidae	2	0.05	2.4
<i>Strongylocentrotus fragilis</i>	ECHINODERMATA	Echinoidea	Strongylocentrotidae	2	0.05	4.9
<i>Phisidia sanctaemariae</i>	ANNELIDA	Polychaeta	Terebellidae	2	0.05	2.4
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	2	0.05	4.9
<i>Metasynchis disparidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.05	2.4
<i>Metopa dawsoni</i>	ARTHROPODA	Malacostraca	Stenothoidae	2	0.05	2.4
<i>Paralysippe annectens</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.05	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Travisia pupa</i>	ANNELIDA	Polychaeta	Opheliidae	2	0.05	4.9
Nassariidae	MOLLUSCA	Gastropoda	Nassariidae	2	0.05	4.9
<i>Myriochele striolata</i>	ANNELIDA	Polychaeta	Oweniidae	2	0.05	2.4
<i>Turbanilla</i> sp	MOLLUSCA	Gastropoda	Pyramidellidae	2	0.05	4.9
<i>Bathymedon roquedo</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.05	4.9
<i>Lepidasthenia longicirrata</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.05	4.9
<i>Kurtzina beta</i>	MOLLUSCA	Gastropoda	Mangeliidae	2	0.05	4.9
<i>Heterophoxus oculatus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.05	2.4
<i>Hesperoneoe laevis</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.05	4.9
<i>Harpiniopsis epistomata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.05	2.4
<i>Aphelochaeta</i> sp LA1	ANNELIDA	Polychaeta	Cirratulidae	2	0.05	4.9
<i>Aricidea (Acmira) lopezi</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.05	4.9
Asterioidea	ECHINODERMATA	Asteroidea		2	0.05	4.9
<i>Amphiporus californicus</i>	NEMERTEA	Enopla	Amphiporidae	2	0.05	2.4
Gammaridea	ARTHROPODA	Malacostraca		2	0.05	4.9
<i>Haliophasma geminatum</i>	ARTHROPODA	Malacostraca	Anthuridae	2	0.05	4.9
<i>Gadila tolmiei</i>	MOLLUSCA	Scaphopoda	Gadilidae	2	0.05	4.9
<i>Eulalia levicornuta</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	2	0.05	2.4
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	2	0.05	4.9
<i>Euchone velifera</i>	ANNELIDA	Polychaeta	Sabellidae	2	0.05	4.9
<i>Edwardsia olguini</i>	CNIDARIA	Anthozoa	Edwardsiidae	2	0.05	4.9
<i>Dorvillea (Schistomeringsos)</i> sp	ANNELIDA	Polychaeta	Dorvilleidae	2	0.05	2.4
<i>Maera jerrica</i>	ARTHROPODA	Malacostraca	Melitidae	2	0.05	2.4
Demospongiae	SILICEA	Demospongiae		2	0.05	2.4
<i>Halcampa decententaculata</i>	CNIDARIA	Anthozoa	Halcampidae	2	0.05	4.9
<i>Macoma</i> sp	MOLLUSCA	Bivalvia	Tellinidae	2	0.05	2.4
<i>Maera bousfieldi</i>	ARTHROPODA	Malacostraca	Melitidae	2	0.05	2.4
<i>Listriolobus pelodes</i>	ECHIURA	Echiuridea	Thalassematidae	2	0.05	4.9
<i>Aglaja ocelligera</i>	MOLLUSCA	Gastropoda	Aglajidae	2	0.05	4.9

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Lumbrineris ligulata</i>	ANNELIDA	Polychaeta	Lumbrineridae	2	0.05	4.9
<i>Amphipholis pugetana</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	2	0.05	2.4
<i>Leptostylis calva</i>	ARTHROPODA	Malacostraca	Diastylidae	2	0.05	4.9
<i>Amphicteis scaphobranchiata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.05	2.4
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	1	0.03	2.4
<i>Pseudatherospio fauchaldi</i>	ANNELIDA	Polychaeta	Spionidae	1	0.03	2.4
<i>Pseudotaranis strongi</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.03	2.4
<i>Volvulella panamica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.03	2.4
Chaetodermatida	MOLLUSCA	Caudofoveata		1	0.03	2.4
<i>Cardiomya pectinata</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.03	2.4
<i>Campylaspis</i> sp N	ARTHROPODA	Malacostraca	Nannastacidae	1	0.03	2.4
<i>Campylaspis rufa</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.03	2.4
<i>Campylaspis maculinodulosa</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.03	2.4
<i>Campylaspis blakei</i>	ARTHROPODA	Malacostraca	Nannastacidae	1	0.03	2.4
<i>Callianopsis goniophthalma</i>	ARTHROPODA	Malacostraca	Ctenochelidae	1	0.03	2.4
<i>Bruzelia tuberculata</i>	ARTHROPODA	Malacostraca	Synopiidae	1	0.03	2.4
<i>Aglaophamus</i> sp	ANNELIDA	Polychaeta	Nephtyidae	1	0.03	2.4
Scalibregmatidae	ANNELIDA	Polychaeta	Scalibregmatidae	1	0.03	2.4
<i>Cardiomya planetica</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.03	2.4
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.03	2.4
Cumacea	ARTHROPODA	Malacostraca		1	0.03	2.4
<i>Policordia</i> sp OC1	Mollusca	Bivalvia	Lyonsiellidae	1	0.03	2.4
<i>Polycirrus californicus</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.03	2.4
<i>Crepidatella orbiculata</i>	MOLLUSCA	Gastropoda	Calyptaeidae	1	0.03	2.4
<i>Cossura</i> sp	ANNELIDA	Polychaeta	Cossuridae	1	0.03	2.4
<i>Cossura pygodactylata</i>	ANNELIDA	Polychaeta	Cossuridae	1	0.03	2.4
<i>Corymorpha palma</i>	CNIDARIA	Hydrozoa	Corymorphidae	1	0.03	2.4
<i>Prionospio (Prionospio)</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.03	2.4
<i>Prachynella lodo</i>	ARTHROPODA	Malacostraca	Pachynidae	1	0.03	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Acteon traskii</i>	MOLLUSCA	Gastropoda	Acteonidae	1	0.03	2.4
<i>Clymenura gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.03	2.4
<i>Clavopora occidentalis</i>	ECTOPROCTA	Gymnolaemata	Clavoporidae	1	0.03	2.4
<i>Chirimia biceps</i>	Annelida	Polychaeta	Maldanidae	1	0.03	2.4
<i>Yoldia seminuda</i>	MOLLUSCA	Bivalvia	Yoldiidae	1	0.03	2.4
<i>Chaetozone sp</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.03	2.4
<i>Chaetozone commonalis</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.03	2.4
<i>Brada sp</i>	ANNELIDA	Polychaeta	Flabelligeridae	1	0.03	2.4
<i>Polyschides quadrifissatus</i>	MOLLUSCA	Scaphopoda	Gadiliidae	1	0.03	2.4
<i>Tritella pilimana</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.03	2.4
<i>Schizocardium sp</i>	CHORDATA	Enteropneusta	Spengeliidae	1	0.03	2.4
<i>Streblosoma pacifica</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.03	2.4
<i>Aoroides sp</i>	ARTHROPODA	Malacostraca	Aoridae	1	0.03	2.4
<i>Antiplanes thalea</i>	MOLLUSCA	Gastropoda	Pseudomelatomidae	1	0.03	2.4
<i>Tanaella propinquus</i>	ARTHROPODA	Malacostraca	Tanaellidae	1	0.03	2.4
Anopla	NEMERTEA	Anopla		1	0.03	2.4
<i>Sthenelais tertiaiglabra</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.03	2.4
<i>Tenellia adspersa</i>	Mollusca	Gastropoda	Terqipedidae	1	0.03	2.4
<i>Aphrodisa sp</i>	ANNELIDA	Polychaeta	Aphroditidae	1	0.03	2.4
<i>Amphissa undata</i>	MOLLUSCA	Gastropoda	Columbellidae	1	0.03	2.4
<i>Terebellides reishi</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.03	2.4
<i>Terebellides sp</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.03	2.4
<i>Terebellides sp Type C</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.03	2.4
<i>Terebellides sp Type D</i>	ANNELIDA	Polychaeta	Trichobranchidae	1	0.03	2.4
<i>Amphipholis sp</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.03	2.4
Thalassematidae	ECHIURA	Echiuridea	Thalassematidae	1	0.03	2.4
<i>Tiburonella viscana</i>	ARTHROPODA	Malacostraca	Platyischnopidae	1	0.03	2.4
<i>Amygdalum pallidulum</i>	MOLLUSCA	Bivalvia	Mytilidae	1	0.03	2.4
<i>Americhelidium shoemakeri</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.03	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Bathymedon vulpeculus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.03	2.4
<i>Thysanocardia nigra</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.03	2.4
<i>Urothoe elegans</i> Cmplx	ARTHROPODA	Malacostraca	Urothoidae	1	0.03	2.4
<i>Amage anops</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.03	2.4
<i>Sigambla setosa</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.03	2.4
<i>Sigambla</i> sp DC1	ANNELIDA	Polychaeta	Pilargidae	1	0.03	2.4
Sipuncula	SIPUNCULA			1	0.03	2.4
<i>Sthenelanella uniformis</i>	ANNELIDA	Polychaeta	Sigalionidae	1	0.03	2.4
<i>Balcis oldroydae</i>	MOLLUSCA	Gastropoda	Eulimidae	1	0.03	2.4
Asellota	ARTHROPODA	Malacostraca		1	0.03	2.4
Cyamioidea	MOLLUSCA	Bivalvia		1	0.03	2.4
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	1	0.03	2.4
<i>Diastylis crenellata</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.03	2.4
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	1	0.03	2.4
<i>Aricidea (Allia) antennata</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.03	2.4
<i>Amphichondrius granulatus</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.03	2.4
<i>Aricidea (Acmina) catherinae</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.03	2.4
<i>Stachyptilum superbum</i>	CNIDARIA	Anthozoa	Stachyptilidae	1	0.03	2.4
<i>Bathymedon covilhani</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.03	2.4
Nephtyidae	ANNELIDA	Polychaeta	Nephtyidae	1	0.03	2.4
<i>Mooreonuphis</i> sp	ANNELIDA	Polychaeta	Onuphidae	1	0.03	2.4
Hoploneuromeritea	NEMERTEA	Enopla		1	0.03	2.4
<i>Myriochele</i> sp	ANNELIDA	Polychaeta	Oweniidae	1	0.03	2.4
Heteronuromeritea	NEMERTEA	Anopla		1	0.03	2.4
Mysidae	ARTHROPODA	Malacostraca	Mysidae	1	0.03	2.4
<i>Nellobia eusoma</i>	ECHIURA	Echiuridea	Bonelliidae	1	0.03	2.4
<i>Phyllochaetopterus limicolus</i>	ANNELIDA	Polychaeta	Chaetopteridae	1	0.03	2.4
<i>Nephasoma diaphanes</i>	SIPUNCULA	Sipunculidea	Golfingiidae	1	0.03	2.4
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	1	0.03	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Harpiniopsis emeryi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.03	2.4
<i>Nephtys punctata</i>	ANNELIDA	Polychaeta	Nephtyidae	1	0.03	2.4
<i>Nephtys</i> sp	ANNELIDA	Polychaeta	Nephtyidae	1	0.03	2.4
<i>Nereiphylla ferruginea</i> Cmplx	ANNELIDA	Polychaeta	Phyllodocidae	1	0.03	2.4
<i>Nereis</i> sp	ANNELIDA	Polychaeta	Nereididae	1	0.03	2.4
<i>Harmothoe</i> sp LA1	ANNELIDA	Polychaeta	Polynoidae	1	0.03	2.4
<i>Harmothoe</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.03	2.4
Haloclavidae	CNIDARIA	Anthozoa	Haloclavidae	1	0.03	2.4
Nemertea	NEMERTEA			1	0.03	2.4
<i>Melinna oculata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.03	2.4
<i>Lysippe</i> sp A	ANNELIDA	Polychaeta	Ampharetidae	1	0.03	2.4
<i>Luzonia chilensis</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.03	2.4
<i>Malmgreniella baschi</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.03	2.4
Lumbrineridae	ANNELIDA	Polychaeta	Lumbrineridae	1	0.03	2.4
<i>Lucinoma annulatum</i>	MOLLUSCA	Bivalvia	Lucinidae	1	0.03	2.4
<i>Listriella eriopisa</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.03	2.4
<i>Listriella albina</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.03	2.4
<i>Mayerella banksia</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.03	2.4
<i>Levinsenia</i> sp	ANNELIDA	Polychaeta	Paraonidae	1	0.03	2.4
Hormathiidae	CNIDARIA	Anthozoa	Hormathiidae	1	0.03	2.4
<i>Metaphoxus frequens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.03	2.4
<i>Lepidepecreum gurjanovae</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.03	2.4
<i>Metopella aporis</i>	ARTHROPODA	Malacostraca	Stenothoidae	1	0.03	2.4
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	1	0.03	2.4
<i>Micrura wilsoni</i>	NEMERTEA	Anopla	Lineidae	1	0.03	2.4
<i>Lepidepecreum garthi</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.03	2.4
<i>Lepidasthenia berkeleyae</i>	ANNELIDA	Polychaeta	Polynoidae	1	0.03	2.4
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	1	0.03	2.4
<i>Liljeborgia cota</i>	ARTHROPODA	Malacostraca	Liljeborgiidae	1	0.03	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Diastylidae	ARTHROPODA	Malacostraca	Diastylidae	1	0.03	2.4
<i>Notomastus magnus</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.03	2.4
<i>Epitonium berryi</i>	MOLLUSCA	Gastropoda	Epitoniidae	1	0.03	2.4
<i>Edwardsia profunda</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.03	2.4
Drilonereis sp	ANNELIDA	Polychaeta	Oenonidae	1	0.03	2.4
<i>Pholoides asperus</i>	ANNELIDA	Polychaeta	Pholoidae	1	0.03	2.4
<i>Dougaloplus sp</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.03	2.4
<i>Dodecamastus mariaensis</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.03	2.4
<i>Dipolydora bidentata</i>	ANNELIDA	Polychaeta	Spionidae	1	0.03	2.4
<i>Pentamera populifera</i>	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.03	2.4
<i>Diastylis sentosa</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.03	2.4
<i>Pennatula californica</i>	CNIDARIA	Anthozoa	Pennatulidae	1	0.03	2.4
<i>Admete gracilior</i>	MOLLUSCA	Gastropoda	Cancellariidae	1	0.03	2.4
<i>Diasterope pilosa</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.03	2.4
<i>Dialychnone sp 1</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.03	2.4
<i>Phyllodoce medipapillata</i>	ANNELIDA	Polychaeta	Phyllodocidae	1	0.03	2.4
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.03	2.4
Phyllophoridae	ECHINODERMATA	Holothuroidea	Phyllophoridae	1	0.03	2.4
<i>Pista brevibranchiata</i>	ANNELIDA	Polychaeta	Terebellidae	1	0.03	2.4
<i>Cyclocardia gouldii</i>	MOLLUSCA	Bivalvia	Carditidae	1	0.03	2.4
<i>Photis chiconola</i>	ARTHROPODA	Malacostraca	Photidae	1	0.03	2.4
<i>Paradialychnone paramollis</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.03	2.4
<i>Pleusymtes subglaber</i>	ARTHROPODA	Malacostraca	Pleustidae	1	0.03	2.4
<i>Glycera tesselata</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.03	2.4
<i>Glottidia albida</i>	BRACHIOPODA	Inarticulata	Lingulidae	1	0.03	2.4
<i>Onuphis sp</i>	ANNELIDA	Polychaeta	Onuphidae	1	0.03	2.4
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	1	0.03	2.4
<i>Ophelina pallida</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.03	2.4
<i>Orchomene anaquelus</i>	ARTHROPODA	Malacostraca	Lysianassidae	1	0.03	2.4

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Oweniidae	ANNELIDA	Polychaeta	Oweniidae	1	0.03	2.4
<i>Eudorellopsis longirostris</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.03	2.4
Paguroidea	ARTHROPODA	Malacostraca		1	0.03	2.4
<i>Haliella abyssicola</i>	Mollusca	Gastropoda	Eulimidae	1	0.03	2.4
<i>Foxiphalus obtusidens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.03	2.4
<i>Paramage scutata</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.03	2.4
<i>Paranemertes californica</i>	NEMERTEA	Enopla	Emplectonematidae	1	0.03	2.4
<i>Exogone</i> sp SD1	ANNELIDA	Polychaeta	Syllidae	1	0.03	2.4
<i>Eunice</i> sp	ANNELIDA	Polychaeta	Eunicidae	1	0.03	2.4
Pardaliscidae	ARTHROPODA	Malacostraca	Pardaliscidae	1	0.03	2.4
<i>Parexogone molesta</i>	ANNELIDA	Polychaeta	Syllidae	1	0.03	2.4
Eulimidae	MOLLUSCA	Gastropoda	Eulimidae	1	0.03	2.4
<i>Pachynus barnardi</i>	ARTHROPODA	Malacostraca	Pachynidae	1	0.03	2.4

Table B12. Macrofaunal community summary for the Lower Slope stratum in the Bight'13 survey. Total abundance from all samples (probabilistic and non-probabilistic), relative abundance across the stratum as a whole, and the frequency of occurrence within the stratum are presented. Taxa are ranked by total abundance

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
Ophiuroidea	ECHINODERMATA	Ophiuroidea		45	5.25	47.6
<i>Eclysippe trilobata</i>	ANNELIDA	Polychaeta	Ampharetidae	41	4.78	23.8
<i>Byblis barbarensis</i>	ARTHROPODA	Malacostraca	Ampeliscidae	30	3.50	19.0
Amphiuridae	ECHINODERMATA	Ophiuroidea	Amphiuridae	28	3.27	14.3
<i>Fauveliopsis glabra</i>	ANNELIDA	Polychaeta	Fauveliopsidae	24	2.80	33.3
<i>Falcidens hartmanae</i>	MOLLUSCA	Caudofoveata	Falcidentidae	21	2.45	47.6
<i>Phyllochaetopterus limiculus</i>	ANNELIDA	Polychaeta	Chaetopteridae	20	2.33	19.0
<i>Tritella tenuissima</i>	ARTHROPODA	Malacostraca	Caprellidae	19	2.22	38.1
<i>Monticellina cryptica</i>	ANNELIDA	Polychaeta	Cirratulidae	18	2.10	33.3
<i>Maldane sarsi</i>	ANNELIDA	Polychaeta	Maldanidae	18	2.10	23.8
<i>Paralysippe annectens</i>	ANNELIDA	Polychaeta	Ampharetidae	18	2.10	14.3
Maldanidae	ANNELIDA	Polychaeta	Maldanidae	17	1.98	47.6
<i>Myriochele gracilis</i>	ANNELIDA	Polychaeta	Oweniidae	17	1.98	23.8
<i>Harpiniopsis epistomata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	16	1.87	28.6
<i>Leiochrides hemipodus</i>	ANNELIDA	Polychaeta	Capitellidae	14	1.63	47.6
<i>Mendicula ferruginosa</i>	MOLLUSCA	Bivalvia	Thyasiridae	13	1.52	28.6
Stereobalanus sp	CHORDATA	Enteropneusta	Harrimaniidae	13	1.52	23.8
<i>Galathowenia pygidialis</i>	ANNELIDA	Polychaeta	Oweniidae	10	1.17	4.8
<i>Yoldiella nana</i>	MOLLUSCA	Bivalvia	Yoldiidae	10	1.17	23.8
<i>Limifossor fratula</i>	MOLLUSCA	Caudofoveata	Limifossoridae	10	1.17	23.8
<i>Ophiura leptoctenia</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	10	1.17	4.8
<i>Hippomedon</i> sp	ARTHROPODA	Malacostraca	Lysianassidae	9	1.05	4.8
<i>Balanoglossus</i> sp	CHORDATA	Enteropneusta	Ptychoderidae	9	1.05	14.3
<i>Nephasoma diaphanes</i>	SIPUNCULA	Sipunculidae	Golfingiidae	9	1.05	4.8
<i>Lumbriclymene lineus</i>	Annelida	Polychaeta	Maldanidae	8	0.93	4.8
<i>Adontorhina cyclia</i>	MOLLUSCA	Bivalvia	Thyasiridae	8	0.93	33.3
Lineidae	NEMERTEA	Anopla	Lineidae	8	0.93	23.8
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	7	0.82	23.8
<i>Edwardsia profunda</i>	CNIDARIA	Anthozoa	Edwardsiidae	7	0.82	28.6
<i>Ophelina pallida</i>	ANNELIDA	Polychaeta	Opheliidae	7	0.82	19.0
<i>Aphelochaeta</i> sp	ANNELIDA	Polychaeta	Cirratulidae	7	0.82	19.0
<i>Neilonella ritteri</i>	MOLLUSCA	Bivalvia	Neilonellidae	7	0.82	9.5

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Schizocardium</i> sp	CHORDATA	Enteropneusta	Spengeliidae	7	0.82	4.8
<i>Sternaspis williamsae</i>	ANNELIDA	Polychaeta	Sternaspidae	7	0.82	14.3
<i>Maldane californiensis</i>	ANNELIDA	Polychaeta	Maldanidae	7	0.82	23.8
<i>Chaetoderma hancocki</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	7	0.82	19.0
Ampharetidae	ANNELIDA	Polychaeta	Ampharetidae	7	0.82	23.8
<i>Brada pilosa</i>	ANNELIDA	Polychaeta	Flabelligeridae	6	0.70	4.8
<i>Ampelisca unsocalae</i>	ARTHROPODA	Malacostraca	Ampeliscidae	6	0.70	23.8
<i>Astyris permodesta</i>	MOLLUSCA	Gastropoda	Columbellidae	6	0.70	4.8
<i>Protula superba</i>	ANNELIDA	Polychaeta	Serpulidae	5	0.58	4.8
<i>Sonatsa carinata</i>	ANNELIDA	Polychaeta	Maldanidae	5	0.58	9.5
<i>Aphelochaeta phillipsi</i>	ANNELIDA	Polychaeta	Cirratulidae	5	0.58	14.3
<i>Myriochele olgae</i>	ANNELIDA	Polychaeta	Oweniidae	5	0.58	14.3
Philomedidae	ARTHROPODA	Ostracoda	Philomedidae	5	0.58	4.8
<i>Levinsenia oculata</i>	ANNELIDA	Polychaeta	Paraonidae	4	0.47	14.3
<i>Harpiniopsis emeryi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.47	19.0
<i>Aphelochaeta</i> sp LA3	ANNELIDA	Polychaeta	Cirratulidae	4	0.47	9.5
<i>Heterophoxus ellisi</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.47	19.0
<i>Cephalophoxoides homilis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	4	0.47	14.3
<i>Haliella abyssicola</i>	Mollusca	Gastropoda	Eulimidae	4	0.47	9.5
<i>Aphelochaeta williamsae</i>	ANNELIDA	Polychaeta	Cirratulidae	4	0.47	9.5
<i>Spiophanes fimbriata</i>	ANNELIDA	Polychaeta	Spionidae	4	0.47	19.0
<i>Leptosynapta</i> sp	ECHINODERMATA	Holothuroidea	Synaptidae	4	0.47	19.0
<i>Leucon declivis</i>	ARTHROPODA	Malacostraca	Leuconidae	4	0.47	19.0
<i>Anobothrus gracilis</i>	ANNELIDA	Polychaeta	Ampharetidae	4	0.47	4.8
<i>Pherusa</i> sp SD2	ANNELIDA	Polychaeta	Flabelligeridae	4	0.47	9.5
<i>Leucon bishopi</i>	ARTHROPODA	Malacostraca	Leuconidae	4	0.47	14.3
<i>Ennucula tenuis</i>	MOLLUSCA	Bivalvia	Nuculidae	3	0.35	4.8
<i>Cerebratulus marginatus</i>	NEMERTEA	Anopla	Lineidae	3	0.35	4.8
<i>Ypsilothuria bitentaculata</i>	Echinodermata	Holothuroidea	Ypsilothuriidae	3	0.35	14.3
<i>Glycinde armigera</i>	ANNELIDA	Polychaeta	Goniadidae	3	0.35	14.3
<i>Glyphanostomum pallescens</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.35	4.8
<i>Melinna heterodonta</i>	ANNELIDA	Polychaeta	Ampharetidae	3	0.35	4.8
<i>Thyasiridae</i> sp SD1	MOLLUSCA	Bivalvia	Thyasiridae	3	0.35	14.3
<i>Terebellides</i> sp Type D	ANNELIDA	Polychaeta	Trichobranchidae	3	0.35	9.5
<i>Proclea</i> sp	ANNELIDA	Polychaeta	Terebellidae	3	0.35	4.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Trichobranchidae</i> sp LA1	ANNELIDA	Polychaeta	Trichobranchidae	3	0.35	14.3
<i>Heteromastus filobranchus</i>	ANNELIDA	Polychaeta	Capitellidae	3	0.35	4.8
<i>Leaena caeca</i>	Annelida	Polychaeta	Terebellidae	3	0.35	4.8
<i>Subadyte mexicana</i>	ANNELIDA	Polychaeta	Polynoidae	3	0.35	14.3
<i>Dacrydium pacificum</i>	MOLLUSCA	Bivalvia	Mytilidae	3	0.35	14.3
<i>Cadulus californicus</i>	MOLLUSCA	Scaphopoda	Gadilidae	3	0.35	9.5
<i>Ceriantharia</i>	CNIDARIA	Anthozoa		3	0.35	14.3
<i>Califia calida</i>	ANNELIDA	Polychaeta	Orbiniidae	3	0.35	9.5
<i>Ancistrosyllis groenlandica</i>	ANNELIDA	Polychaeta	Pilargidae	3	0.35	9.5
<i>Bivalvia</i>	MOLLUSCA	Bivalvia		3	0.35	14.3
<i>Bipalponephthys cornuta</i>	ANNELIDA	Polychaeta	Nephtyidae	3	0.35	14.3
<i>Polynoidae</i>	ANNELIDA	Polychaeta	Polynoidae	2	0.23	9.5
<i>Caprellinae</i> sp B	ARTHROPODA	Malacostraca	Caprellidae	2	0.23	4.8
<i>Prionospio (Prionospio) ehlersi</i>	ANNELIDA	Polychaeta	Spionidae	2	0.23	9.5
<i>Podarkeopsis perkinsi</i>	ANNELIDA	Polychaeta	Hesionidae	2	0.23	4.8
<i>Rhodine bitorquata</i>	ANNELIDA	Polychaeta	Maldanidae	2	0.23	9.5
<i>Brissopsis pacifica</i>	ECHINODERMATA	Echinoidea	Brissidae	2	0.23	4.8
<i>Kurtiella compressa</i>	MOLLUSCA	Bivalvia	Lasaeidae	2	0.23	4.8
<i>Bathymedon flebilis</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.23	9.5
<i>Ceratocephale hartmanae</i>				2	0.23	4.8
<i>Aphelochaeta monilaris</i>	ANNELIDA	Polychaeta	Cirratulidae	2	0.23	9.5
<i>Leitoscoloplos</i> sp A	ANNELIDA	Polychaeta	Orbiniidae	2	0.23	4.8
<i>Cerebratulus</i> sp	NEMERTEA	Anopla	Lineidae	2	0.23	9.5
<i>Aricidea (Allia)</i> sp A	ANNELIDA	Polychaeta	Paraonidae	2	0.23	9.5
<i>Ophiuridae</i>	ECHINODERMATA	Ophiuroidea	Ophiuridae	2	0.23	9.5
<i>Neomediomastus glabrus</i>	Annelida	Polychaeta	Capitellidae	2	0.23	4.8
<i>Ophiuropinis bispinosa</i>	ECHINODERMATA	Ophiuropinis	Ophiodermatidae	2	0.23	4.8
<i>Aricidea (Allia) monicae</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.23	9.5
<i>Pista disjuncta</i>	Annelida	Polychaeta	Terebellidae	2	0.23	4.8
<i>Mooresomytha bioculata</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.23	9.5
<i>Cerebratulus californiensis</i>	NEMERTEA	Anopla	Lineidae	2	0.23	9.5
<i>Bathymedon pumilus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	2	0.23	4.8
<i>Paraphoxus</i> sp 1	ARTHROPODA	Malacostraca	Phoxocephalidae	2	0.23	4.8
<i>Aricidea (Acmira) rubra</i>	ANNELIDA	Polychaeta	Paraonidae	2	0.23	9.5
<i>Araphura cuspirostris</i>	ARTHROPODA	Malacostraca	Tanaellidae	2	0.23	4.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Kinbergonuphis vexillaria</i>	ANNELIDA	Polychaeta	Onuphidae	2	0.23	4.8
<i>Listriolobus hexamyotus</i>	ECHIURA	Echiuridea	Thalassematidae	2	0.23	9.5
<i>Palaeonemertea</i>	NEMERTEA	Anopla		2	0.23	9.5
<i>Virgularia</i> sp	CNIDARIA	Anthozoa	Virgulariidae	2	0.23	4.8
<i>Terebellides</i> sp	ANNELIDA	Polychaeta	Trichobranchidae	2	0.23	9.5
<i>Glycera branchiopoda</i>	ANNELIDA	Polychaeta	Glyceridae	2	0.23	9.5
<i>Exogone</i> sp SD1	ANNELIDA	Polychaeta	Syllidae	2	0.23	4.8
<i>Chone</i> sp SD3	Annelida	Polychaeta	Sabellidae	2	0.23	4.8
Enteropneusta	CHORDATA	Enteropneusta		2	0.23	9.5
Terebellidae	ANNELIDA	Polychaeta	Terebellidae	2	0.23	9.5
<i>Therochaeta pacifica</i>	ANNELIDA	Polychaeta		2	0.23	4.8
<i>Chaetozone</i> sp	ANNELIDA	Polychaeta	Cirratulidae	2	0.23	4.8
<i>Compressidens stearnsii</i>	MOLLUSCA	Scaphopoda		2	0.23	9.5
Actiniaria	CNIDARIA	Anthozoa		2	0.23	9.5
<i>Cossura candida</i>	ANNELIDA	Polychaeta	Cossuridae	2	0.23	9.5
<i>Amage anops</i>	ANNELIDA	Polychaeta	Ampharetidae	2	0.23	4.8
<i>Spathoderma californicum</i>	MOLLUSCA	Caudofoveata	Prochaetodermatidae	2	0.23	9.5
<i>Admete californica</i>	MOLLUSCA	Gastropoda	Cancellariidae	1	0.12	4.8
<i>Parvapulustrum</i> sp B	MOLLUSCA	Gastropoda	Aplustridae	1	0.12	4.8
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	1	0.12	4.8
<i>Philine polystrigma</i>	MOLLUSCA	Gastropoda	Philinidae	1	0.12	4.8
Tubulanidae	NEMERTEA	Anopla	Tubulanidae	1	0.12	4.8
<i>Tubulanus polymorphus</i>	NEMERTEA	Anopla	Tubulanidae	1	0.12	4.8
Paraonidae	ANNELIDA	Polychaeta	Paraonidae	1	0.12	4.8
<i>Aricidea (Allia) hartleyi</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.12	4.8
<i>Paradialychnone bimaculata</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.12	4.8
<i>Vernakylindrus hystericosa</i>	Arthropoda	Malacostraca	Diastylidae	1	0.12	4.8
Oweniidae	ANNELIDA	Polychaeta	Oweniidae	1	0.12	4.8
<i>Volvulella cylindrica</i>	MOLLUSCA	Gastropoda	Retusidae	1	0.12	4.8
<i>Acharax johnsoni</i>	MOLLUSCA	Bivalvia	Solemyidae	1	0.12	4.8
Ophiacanthidae	ECHINODERMATA	Ophiuroidea	Ophiacanthidae	1	0.12	4.8
<i>Typosyllis hyperioni</i>	ANNELIDA	Polychaeta	Syllidae	1	0.12	4.8
<i>Aphelochaeta</i> sp SD18 (B13-1)	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Solemya pervernicolor</i>	MOLLUSCA	Bivalvia	Solemyidae	1	0.12	4.8
<i>Spiophanes anomolata</i>	ANNELIDA	Polychaeta	Spioniidae	1	0.12	4.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Sigambra setosa</i>	ANNELIDA	Polychaeta	Pilargidae	1	0.12	4.8
<i>Aphelochaeta</i> sp SD15	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Saccoglossus</i> sp	CHORDATA	Enteropneusta	Harrimaniidae	1	0.12	4.8
<i>Aphelochaeta glandaria</i> Cmplx	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Spiophanes</i> sp	ANNELIDA	Polychaeta	Spionidae	1	0.12	4.8
<i>Asabellides cornuta</i>	ANNELIDA	Polychaeta	Ampharetidae	1	0.12	4.8
<i>Apistobranchus</i> sp	ANNELIDA	Polychaeta	Apistobranchidae	1	0.12	4.8
<i>Pseudoharpinia excavata</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.12	4.8
Phoronida	PHORONA			1	0.12	4.8
<i>Aphelochaeta tigrina</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Amphipholis</i> sp	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.12	4.8
<i>Praxillella gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.12	4.8
<i>Tellina carpenteri</i>	MOLLUSCA	Bivalvia	Tellinidae	1	0.12	4.8
<i>Ampelisca coeca</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.12	4.8
<i>Podarkeopsis glabrus</i>	ANNELIDA	Polychaeta	Hesionidae	1	0.12	4.8
Spatangoida	ECHINODERMATA	Echinoidea		1	0.12	4.8
<i>Ampelisca amblyopsoides</i>	ARTHROPODA	Malacostraca	Ampeliscidae	1	0.12	4.8
Sabellidae	ANNELIDA	Polychaeta	Sabellidae	1	0.12	4.8
<i>Amphiura arcystata</i>	ECHINODERMATA	Ophiuroidea	Amphiuridae	1	0.12	4.8
<i>Flabelligeridae</i> sp OC1	ANNELIDA	Polychaeta	Flabelligeridae	1	0.12	4.8
<i>Monoculodes latissimanus</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.12	4.8
<i>Heterophoxus affinis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.12	4.8
<i>Heteronemertea</i> sp SD2	NEMERTEA	Anopla		1	0.12	4.8
<i>Harpiniopsis similis</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.12	4.8
<i>Harpiniopsis fulgens</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.12	4.8
<i>Harmothoe</i> sp	ANNELIDA	Polychaeta	Polynoidae	1	0.12	4.8
<i>Chaetoderma elegans</i>	MOLLUSCA	Caudofoveata	Chaetodermidae	1	0.12	4.8
<i>Halianthella</i> sp A	CNIDARIA	Anthozoa	Halcampidae	1	0.12	4.8
<i>Goniada maculata</i>	ANNELIDA	Polychaeta	Goniadidae	1	0.12	4.8
Chaetopteridae	ANNELIDA	Polychaeta	Chaetopteridae	1	0.12	4.8
<i>Glycera nana</i>	ANNELIDA	Polychaeta	Glyceridae	1	0.12	4.8
<i>Glottidia albida</i>	BRACHIOPODA	Inarticulata	Lingulidae	1	0.12	4.8
Hoplонемерта	NEMERTEA	Enopla		1	0.12	4.8
<i>Chaetozone</i> sp SD7	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Fauveliopsis</i> sp	ANNELIDA	Polychaeta	Fauveliopsidae	1	0.12	4.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Cirrophorus furcatus</i>	ANNELIDA	Polychaeta	Paraonidae	1	0.12	4.8
<i>Euphosine arctia</i>	ANNELIDA	Polychaeta	Euphosinidae	1	0.12	4.8
<i>Eudorella pacifica</i>	ARTHROPODA	Malacostraca	Leuconidae	1	0.12	4.8
<i>Eucranta anomulata</i>	Annelida	Polychaeta	Polynoidae	1	0.12	4.8
<i>Euclymeninae</i> sp A	ANNELIDA	Polychaeta	Maldanidae	1	0.12	4.8
<i>Euchone velifera</i>	ANNELIDA	Polychaeta	Sabellidae	1	0.12	4.8
<i>Eranno</i> sp	ANNELIDA	Polychaeta	Lumbrineridae	1	0.12	4.8
<i>Enopla</i>	NEMERTEA	Enopla		1	0.12	4.8
<i>Clymenura gracilis</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.12	4.8
<i>Edwardsia mcmurrichi</i>	CNIDARIA	Anthozoa	Edwardsiidae	1	0.12	4.8
<i>Dodecamastus mariaensis</i>	ANNELIDA	Polychaeta	Capitellidae	1	0.12	4.8
<i>Gastropteron pacificum</i>	MOLLUSCA	Gastropoda	Gastropteridae	1	0.12	4.8
<i>Lysippe</i> sp	ANNELIDA	Polychaeta	Ampharetidae	1	0.12	4.8
<i>Oediceropsis elsula</i>	ARTHROPODA	Malacostraca	Oedicerotidae	1	0.12	4.8
<i>Nuculanida</i>	MOLLUSCA	Bivalvia		1	0.12	4.8
<i>Asellota</i>	ARTHROPODA	Malacostraca		1	0.12	4.8
<i>Asteroidea</i>	ECHINODERMATA	Asteroidea		1	0.12	4.8
<i>Neilonella mexicana</i>	MOLLUSCA	Bivalvia	Neilonellidae	1	0.12	4.8
<i>Bathyleberis garthi</i>	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.12	4.8
<i>Bathyleberis</i> sp	ARTHROPODA	Ostracoda	Cylindroleberididae	1	0.12	4.8
<i>Monticellina siblini</i>	ANNELIDA	Polychaeta	Cirratulidae	1	0.12	4.8
<i>Micrura alaskensis</i>	NEMERTEA	Anopla	Lineidae	1	0.12	4.8
<i>Metasychis dispartidentatus</i>	ANNELIDA	Polychaeta	Maldanidae	1	0.12	4.8
<i>Belonectes</i> sp A	ARTHROPODA	Malacostraca	Munnopsidae	1	0.12	4.8
<i>Mediomastus</i> sp	ANNELIDA	Polychaeta	Capitellidae	1	0.12	4.8
<i>Cephalaspidea</i>	MOLLUSCA	Gastropoda		1	0.12	4.8
<i>Lysippe</i> sp B	ANNELIDA	Polychaeta	Ampharetidae	1	0.12	4.8
<i>Opheliidae</i>	ANNELIDA	Polychaeta	Opheliidae	1	0.12	4.8
<i>Lysianassoidea</i>	ARTHROPODA	Malacostraca		1	0.12	4.8
<i>Luzonia chilensis</i>	MOLLUSCA	Bivalvia	Cuspidariidae	1	0.12	4.8
<i>Brissopsis</i> sp	ECHINODERMATA	Echinoidea	Brissidae	1	0.12	4.8
<i>Brissopsis</i> sp LA1	ECHINODERMATA	Echinoidea	Brissidae	1	0.12	4.8
<i>Cactosoma</i> sp	Cnidaria	Anthozoa	Halcampidae	1	0.12	4.8
<i>Leucon</i> sp	ARTHROPODA	Malacostraca	Leuconidae	1	0.12	4.8
<i>Caprella gracilior</i>	ARTHROPODA	Malacostraca	Caprellidae	1	0.12	4.8

Taxon	Phylum	Class	Family	Total Abundance	Relative Abundance (%)	Frequency of Occurrence (%)
<i>Leptostylis calva</i>	ARTHROPODA	Malacostraca	Diastylidae	1	0.12	4.8
<i>Leptophoxus falcatus icelus</i>	ARTHROPODA	Malacostraca	Phoxocephalidae	1	0.12	4.8
<i>Carpoapseudes caraspinosus</i>	ARTHROPODA	Malacostraca	Apseudidae	1	0.12	4.8
<i>Caulleryaspis nuda</i>	Annelida	Polychaeta	Sternaspidae	1	0.12	4.8
Lasaeidae	MOLLUSCA	Bivalvia	Lasaeidae	1	0.12	4.8
<i>Jasmineira</i> sp B	ANNELIDA	Polychaeta	Sabellidae	1	0.12	4.8
<i>Brisaster</i> sp	ECHINODERMATA	Echinoidea	Schizasteridae	1	0.12	4.8

APPENDIX C

Table C1. Areal estimates of habitat condition for each assessable stratum across the Southern California Bight in 2013, with the number of samples and the local neighborhood 95% confidence intervals

Analysis Type	Stratum	Trend Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
Bight-Wide	Entire Bight	Reference	120	77.9	69.9	85.9
	Entire Bight	Low Disturbance	97	20.6	12.7	28.5
	Entire Bight	Moderate Disturbance	36	1.4	0.0	3.2
	Entire Bight	High Disturbance	12	0.0	0.0	0.1
Embayment & Offshore Aggregated	Offshore	Reference	102	79.2	71.0	87.3
	Offshore	Low Disturbance	25	19.7	11.7	27.7
	Offshore	Moderate Disturbance	1	1.2	0.0	3.0
	Offshore	High Disturbance	0	0.0	0.0	0.0
	Embayments	Reference	18	19.2	11.7	26.8
	Embayments	Low Disturbance	72	64.4	55.8	73.0
	Embayments	Moderate Disturbance	35	14.0	8.4	19.7
	Embayments	High Disturbance	12	2.3	1.0	3.6
Offshore Strata	Inner Shelf	Reference	21	68.7	56.0	81.5
	Inner Shelf	Low Disturbance	10	31.3	18.5	44.0
	Inner Shelf	Moderate Disturbance	0	0.0	0.0	0.0
	Inner Shelf	High Disturbance	0	0.0	0.0	0.0
	Mid Shelf	Reference	27	89.2	79.1	99.2
	Mid Shelf	Low Disturbance	2	7.2	0.0	15.4
	Mid Shelf	Moderate Disturbance	1	3.6	0.0	9.6
	Mid Shelf	High Disturbance	0	0.0	0.0	0.0
	Outer Shelf	Reference	25	85.4	74.2	96.6
	Outer Shelf	Low Disturbance	4	14.6	3.4	25.8
	Outer Shelf	Moderate Disturbance	0	0.0	0.0	0.0
	Outer Shelf	High Disturbance	0	0.0	0.0	0.0
	MPA	Reference	18	85.2	71.2	99.2
	MPA	Low Disturbance	5	14.8	0.8	28.8
	MPA	Moderate Disturbance	0	0.0	0.0	0.0
	MPA	High Disturbance	0	0.0	0.0	0.0
Embayment Strata	Channel Islands	Reference	11	73.3	53.5	93.1
	Channel Islands	Low Disturbance	4	26.7	6.9	46.5
	Channel Islands	Moderate Disturbance	0	0.0	0.0	0.0
	Channel Islands	High Disturbance	0	0.0	0.0	0.0
	Estuaries	Reference	2	6.4	0.0	13.6
	Estuaries	Low Disturbance	14	39.0	24.7	53.3
	Estuaries	Moderate Disturbance	16	35.4	22.2	48.6

Analysis Type	Stratum	Trend Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
	Estuaries	High Disturbance	10	19.2	8.2	30.2
	Marinas	Reference	3	6.8	0.0	14.3
	Marinas	Low Disturbance	15	44.7	30.4	59.1
	Marinas	Moderate Disturbance	15	44.3	28.5	60.2
	Marinas	High Disturbance	1	4.1	0.0	11.1
	Ports	Reference	5	17.7	5.7	29.6
	Ports	Low Disturbance	22	75.3	61.4	89.2
	Ports	Moderate Disturbance	2	6.0	0.0	13.3
	Ports	High Disturbance	1	1.1	0.0	2.9
	Bays	Reference	8	24.3	11.9	36.6
	Bays	Low Disturbance	21	68.3	54.1	82.6
	Bays	Moderate Disturbance	2	7.4	0.0	16.1
	Bays	High Disturbance	0	0.0	0.0	0.0

Table C2. Areal estimates of habitat condition categories for each assessable stratum in the Southern California Bight from 1998 - 2013, with number of samples and the local neighborhood 95% confidence intervals.

Analysis Type	Stratum	Year	Condition Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
Bight-wide	Entire Bight	1998	Reference	190	89.1	85.5	92.7
	Entire Bight	1998	Low Disturbance	84	8.9	5.7	12.1
	Entire Bight	1998	Moderate Disturbance	27	1.9	0.3	3.6
	Entire Bight	1998	High Disturbance	8	0.1	0.0	0.2
	Entire Bight	2003	Reference	171	90.0	87.0	92.9
	Entire Bight	2003	Low Disturbance	65	9.0	5.9	12.2
	Entire Bight	2003	Moderate Disturbance	29	0.9	0.0	2.1
	Entire Bight	2003	High Disturbance	6	0.1	0.0	0.2
	Entire Bight	2008	Reference	145	90.7	87.3	94.1
	Entire Bight	2008	Low Disturbance	90	9.0	5.6	12.4
	Entire Bight	2008	Moderate Disturbance	59	0.2	0.2	0.3
	Entire Bight	2008	High Disturbance	18	0.0	0.0	0.1
	Entire Bight	2013	Reference	120	77.9	69.9	85.9
	Entire Bight	2013	Low Disturbance	97	20.6	12.7	28.5
	Entire Bight	2013	Moderate Disturbance	36	1.4	0.0	3.2
	Entire Bight	2013	High Disturbance	12	0.0	0.0	0.1
Embayment & Offshore Aggregated	Offshore	1998	Reference	161	90.6	86.9	94.2
	Offshore	1998	Low Disturbance	30	7.9	4.6	11.1
	Offshore	1998	Moderate Disturbance	5	1.6	0.0	3.2
	Offshore	1998	High Disturbance	0	0.0	0.0	0.0
	Offshore	2003	Reference	151	91.1	88.1	94.1
	Offshore	2003	Low Disturbance	20	8.2	5.0	11.4
	Offshore	2003	Moderate Disturbance	1	0.7	0.0	1.9
	Offshore	2003	High Disturbance	0	0.0	0.0	0.0
	Offshore	2008	Reference	108	92.1	88.6	95.6
	Offshore	2008	Low Disturbance	12	7.9	4.4	11.4
	Offshore	2008	Moderate Disturbance	0	0.0	0.0	0.0
	Offshore	2008	High Disturbance	0	0.0	0.0	0.0
	Offshore	2013	Reference	102	79.2	71.0	87.3
	Offshore	2013	Low Disturbance	25	19.7	11.6	27.7
	Offshore	2013	Moderate Disturbance	1	1.2	0.0	3.0
	Offshore	2013	High Disturbance	0	0.0	0.0	0.0
Embayment	Embayment	1998	Reference	29	27.4	20.6	34.2
	Embayment	1998	Low Disturbance	54	51.5	43.1	59.8

Analysis Type	Stratum	Year	Condition Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
Embayment	Embayment	1998	Moderate Disturbance	22	16.5	10.0	23.1
	Embayment	1998	High Disturbance	8	4.6	1.1	8.1
	Embayment	2003	Reference	20	32.1	21.8	42.4
	Embayment	2003	Low Disturbance	45	51.3	41.5	61.1
	Embayment	2003	Moderate Disturbance	28	12.7	5.5	19.9
	Embayment	2003	High Disturbance	6	3.9	0.0	9.0
	Embayment	2008	Reference	37	30.7	22.2	39.2
	Embayment	2008	Low Disturbance	78	56.8	47.8	65.8
	Embayment	2008	Moderate Disturbance	59	10.5	7.5	13.5
	Embayment	2008	High Disturbance	18	2.0	0.8	3.2
	Embayment	2013	Reference	18	19.2	11.6	26.8
	Embayment	2013	Low Disturbance	72	64.4	55.6	73.1
	Embayment	2013	Moderate Disturbance	35	14.1	8.4	19.8
	Embayment	2013	High Disturbance	12	2.4	1.0	3.7
Inner Shelf	Inner Shelf	1998	Reference	41	68.1	55.5	80.6
	Inner Shelf	1998	Low Disturbance	15	28.4	16.3	40.4
	Inner Shelf	1998	Moderate Disturbance	2	3.6	0.0	9.0
	Inner Shelf	1998	High Disturbance	0	0.0	0.0	0.0
	Inner Shelf	2003	Reference	27	55.6	42.5	68.8
	Inner Shelf	2003	Low Disturbance	15	40.5	25.9	55.0
	Inner Shelf	2003	Moderate Disturbance	1	3.9	0.0	10.6
	Inner Shelf	2003	High Disturbance	0	0.0	0.0	0.0
	Inner Shelf	2008	Reference	21	70.0	56.1	83.9
	Inner Shelf	2008	Low Disturbance	9	30.0	16.1	43.9
	Inner Shelf	2008	Moderate Disturbance	0	0.0	0.0	0.0
	Inner Shelf	2008	High Disturbance	0	0.0	0.0	0.0
	Inner Shelf	2013	Reference	21	68.7	56.0	81.5
Offshore Strata	Inner Shelf	2013	Low Disturbance	10	31.3	18.5	44.0
	Inner Shelf	2013	Moderate Disturbance	0	0.0	0.0	0.0
	Inner Shelf	2013	High Disturbance	0	0.0	0.0	0.0
	Mid Shelf	1998	Reference	69	89.0	81.0	96.9
	Mid Shelf	1998	Low Disturbance	13	7.9	1.4	14.4
	Mid Shelf	1998	Moderate Disturbance	3	3.1	0.0	7.8
	Mid Shelf	1998	High Disturbance	0	0.0	0.0	0.0
	Mid Shelf	2003	Reference	69	99.0	98.2	99.7
	Mid Shelf	2003	Low Disturbance	4	1.0	0.3	1.8
	Mid Shelf	2003	Moderate Disturbance	0	0.0	0.0	0.0

Analysis Type	Stratum	Year	Condition Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
	Mid Shelf	2003	High Disturbance	0	0.0	0.0	0.0
	Mid Shelf	2008	Reference	31	96.9	91.6	100.0
	Mid Shelf	2008	Low Disturbance	1	3.1	0.0	8.4
	Mid Shelf	2008	Moderate Disturbance	0	0.0	0.0	0.0
	Mid Shelf	2008	High Disturbance	0	0.0	0.0	0.0
	Mid Shelf	2013	Reference	27	89.2	79.1	99.2
	Mid Shelf	2013	Low Disturbance	2	7.2	0.0	15.4
	Mid Shelf	2013	Moderate Disturbance	1	3.6	0.0	9.6
	Mid Shelf	2013	High Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2003	Reference	23	96.2	90.1	100.0
	Outer Shelf	2003	Low Disturbance	1	3.8	0.0	9.9
	Outer Shelf	2003	Moderate Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2003	High Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2008	Reference	26	92.9	84.3	100.0
	Outer Shelf	2008	Low Disturbance	2	7.1	0.0	15.7
	Outer Shelf	2008	Moderate Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2008	High Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2013	Reference	25	85.4	74.2	96.6
	Outer Shelf	2013	Low Disturbance	4	14.6	3.4	25.8
	Outer Shelf	2013	Moderate Disturbance	0	0.0	0.0	0.0
	Outer Shelf	2013	High Disturbance	0	0.0	0.0	0.0
	Channel Islands	1998	Reference	34	97.8	95.0	100.0
	Channel Islands	1998	Low Disturbance	2	2.2	0.0	5.0
	Channel Islands	1998	Moderate Disturbance	0	0.0	0.0	0.0
	Channel Islands	1998	High Disturbance	0	0.0	0.0	0.0
	Channel Islands	2003	Reference	32	100.0	100.0	100.0
	Channel Islands	2003	Low Disturbance	0	0.0	0.0	0.0
	Channel Islands	2003	Moderate Disturbance	0	0.0	0.0	0.0
	Channel Islands	2003	High Disturbance	0	0.0	0.0	0.0
	Channel Islands	2008	Reference	30	100.0	100.0	100.0
	Channel Islands	2008	Low Disturbance	0	0.0	0.0	0.0
	Channel Islands	2008	Moderate Disturbance	0	0.0	0.0	0.0
	Channel Islands	2008	High Disturbance	0	0.0	0.0	0.0
	Channel Islands	2013	Reference	11	73.3	53.6	93.1
	Channel Islands	2013	Low Disturbance	4	26.7	6.9	46.4
	Channel Islands	2013	Moderate Disturbance	0	0.0	0.0	0.0
	Channel Islands	2013	High Disturbance	0	0.0	0.0	0.0

Analysis Type	Stratum	Year	Condition Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
Embayment Strata	Estuaries	2003	Reference	1	2.2	0.0	5.7
	Estuaries	2003	Low Disturbance	18	52.4	34.2	70.6
	Estuaries	2003	Moderate Disturbance	17	40.3	22.1	58.6
	Estuaries	2003	High Disturbance	3	5.1	0.0	10.9
	Estuaries	2008	Reference	4	9.1	0.1	18.2
	Estuaries	2008	Low Disturbance	14	31.1	17.1	45.2
	Estuaries	2008	Moderate Disturbance	29	37.3	23.0	51.7
	Estuaries	2008	High Disturbance	17	22.4	9.2	35.6
	Estuaries	2013	Reference	2	6.4	0.0	13.5
	Estuaries	2013	Low Disturbance	14	38.9	24.5	53.3
	Estuaries	2013	Moderate Disturbance	16	35.3	22.2	48.4
	Estuaries	2013	High Disturbance	10	19.3	8.2	30.5
	Marina	1998	Reference	7	14.5	5.4	23.6
	Marina	1998	Low Disturbance	17	54.9	39.5	70.3
	Marina	1998	Moderate Disturbance	11	23.5	12.2	34.8
	Marina	1998	High Disturbance	5	7.1	2.3	11.8
	Marina	2003	Reference	10	32.2	17.6	46.7
	Marina	2003	Low Disturbance	13	38.9	24.3	53.5
	Marina	2003	Moderate Disturbance	9	28.9	16.2	41.7
	Marina	2003	High Disturbance	0	0.0	0.0	0.0
	Marina	2008	Reference	9	20.6	9.0	32.2
	Marina	2008	Low Disturbance	16	42.0	27.5	56.6
	Marina	2008	Moderate Disturbance	18	37.1	21.8	52.4
	Marina	2008	High Disturbance	1	0.3	0.0	0.9
	Marina	2013	Reference	3	6.9	0.0	14.5
	Marina	2013	Low Disturbance	15	44.7	30.4	59.1
	Marina	2013	Moderate Disturbance	15	44.3	28.4	60.1
	Marina	2013	High Disturbance	1	4.1	0.0	11.1
Port	Port	1998	Reference	9	24.6	14.4	34.9
	Port	1998	Low Disturbance	18	44.4	31.4	57.5
	Port	1998	Moderate Disturbance	10	26.2	13.9	38.5
	Port	1998	High Disturbance	2	4.7	0.0	10.5
	Port	2003	Reference	1	11.1	0.0	31.0
Port	Port	2003	Low Disturbance	7	77.8	53.0	100.0
	Port	2003	Moderate Disturbance	1	11.1	0.0	29.5

Analysis Type	Stratum	Year	Condition Category	Number of Samples	% Area Estimate	Lower Confidence Interval	Upper Confidence Interval
	Port	2003	High Disturbance	0	0.0	0.0	0.0
	Port	2008	Reference	9	23.7	12.1	35.3
	Port	2008	Low Disturbance	27	66.5	53.0	79.9
	Port	2008	Moderate Disturbance	10	9.8	1.1	18.5
	Port	2008	High Disturbance	0	0.0	0.0	0.0
	Port	2013	Reference	5	17.6	5.4	29.8
	Port	2013	Low Disturbance	22	75.3	61.3	89.3
	Port	2013	Moderate Disturbance	2	6.0	0.0	13.3
	Port	2013	High Disturbance	1	1.1	0.0	2.9
	Bay	1998	Reference	13	35.3	25.4	45.2
	Bay	1998	Low Disturbance	19	58.6	46.4	70.7
	Bay	1998	Moderate Disturbance	1	2.5	0.0	6.7
	Bay	1998	High Disturbance	1	3.6	0.0	9.4
	Bay	2003	Reference	8	46.6	28.4	64.9
	Bay	2003	Low Disturbance	7	40.8	25.8	55.8
	Bay	2003	Moderate Disturbance	1	5.8	0.0	15.4
	Bay	2003	High Disturbance	2	6.7	0.0	16.5
	Bay	2008	Reference	15	39.3	25.4	53.3
	Bay	2008	Low Disturbance	21	60.5	46.6	74.5
	Bay	2008	Moderate Disturbance	2	0.1	0.0	0.2
	Bay	2008	High Disturbance	0	0.0	0.0	0.0
	Bay	2013	Reference	8	24.3	11.8	36.7
	Bay	2013	Low Disturbance	21	68.3	53.9	82.8
	Bay	2013	Moderate Disturbance	2	7.4	0.0	16.1
	Bay	2013	High Disturbance	0	0.0	0.0	0.0

Table C3. Areal estimates of revisit site-based condition trends from 1998-2013 in the assessable portions of the Southern California Bight, with the number of samples and the local neighborhood 95% confidence intervals

Analysis Type	Stratum	Trend Category	Number of Samples	%Area Estimate	Lower Confidence Interval	Upper Confidence Interval
Bight-Wide	Entire Bight	Improving	19	5.0	1.5	8.4
	Entire Bight	Stable	78	62.8	51.1	74.5
	Entire Bight	Declining	25	32.2	20.8	43.5
Embayments & Offshore Aggregated	Offshore	Improving	6	4.8	1.0	8.6
	Offshore	Stable	39	62.8	50.1	75.5
	Offshore	Declining	14	32.4	20.1	44.7
	Embayments	Improving	13	16.1	6.5	25.7
	Embayments	Stable	39	63.1	49.0	77.1
	Embayments	Declining	11	19.6	7.1	32.1
Offshore Strata	Inner Shelf	Improving	3	16.3	0.0	34.9
	Inner Shelf	Stable	12	83.7	65.1	100.0
	Inner Shelf	Declining	0	0.0	0.0	0.0
	Mid Shelf	Improving	1	7.1	0.0	18.8
	Mid Shelf	Stable	8	57.1	33.7	80.6
	Mid Shelf	Declining	5	35.6	14.3	56.8
	Outer Shelf	Improving	2	13.3	0.0	29.4
	Outer Shelf	Stable	10	66.7	43.5	89.8
	Outer Shelf	Declining	3	20.0	1.6	38.4
	Channel Islands	Improving	0	0.0	0.0	0.0
Embayment Strata	Channel Islands	Stable	9	60.0	41.9	78.1
	Channel Islands	Declining	6	40.0	21.9	58.1
	Estuaries	Improving	3	24.2	1.8	46.6
	Estuaries	Stable	11	71.9	48.4	95.3
	Estuaries	Declining	1	3.9	0.0	10.7
	Marina	Improving	3	13.2	0.0	27.7
	Marina	Stable	11	53.9	31.7	76.1
	Marina	Declining	5	32.9	9.8	56.0
	Port	Improving	4	25.3	4.9	45.7
	Port	Stable	7	56.7	29.8	83.5
Bay	Port	Declining	2	11.4	0.0	24.8
	Bay	Improving	3	12.5	0.0	26.8
	Bay	Stable	10	66.1	44.7	87.5
	Bay	Declining	3	21.4	1.5	41.4

APPENDIX D

Figure D1. Channel Island revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories

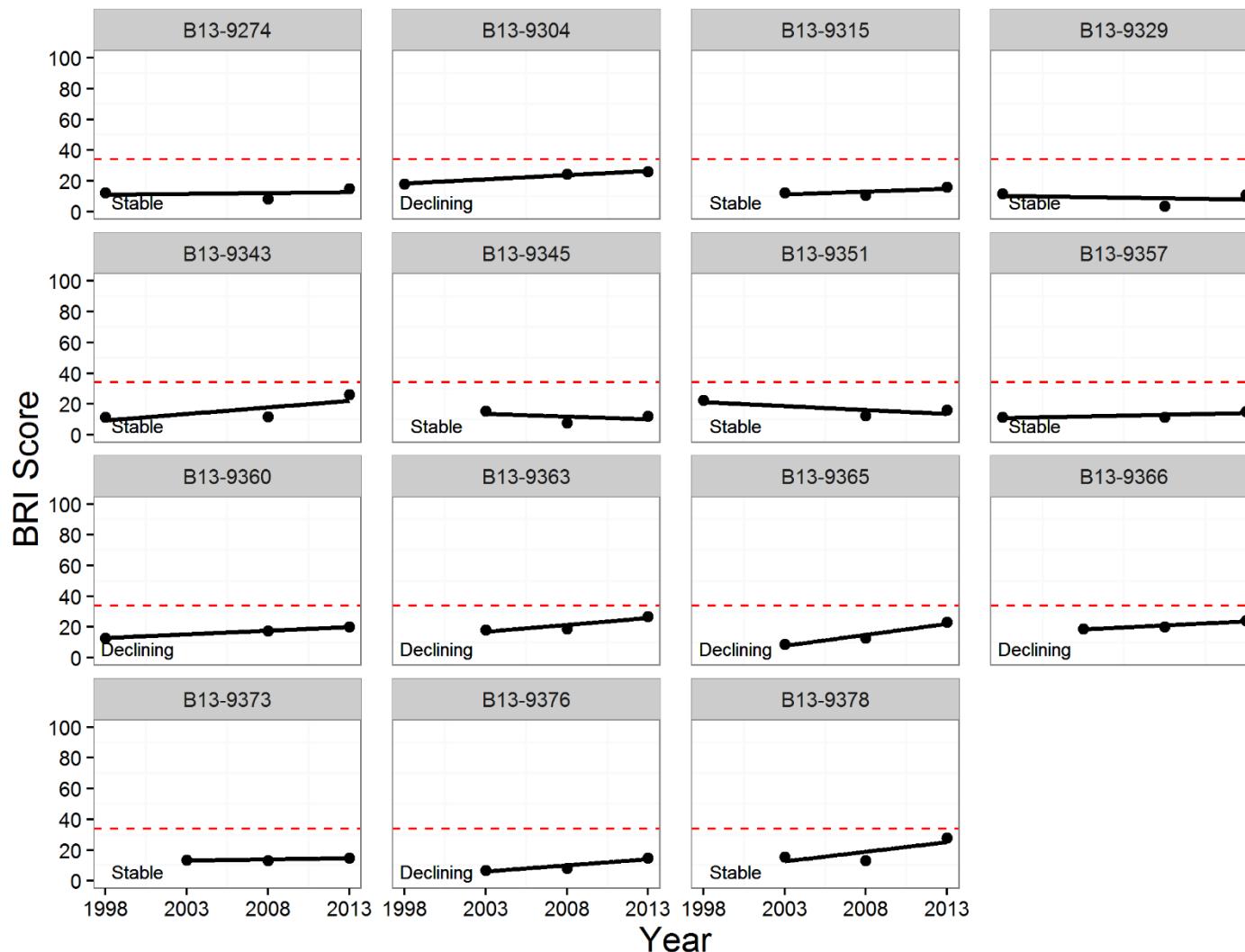


Figure D2. Outer shelf revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

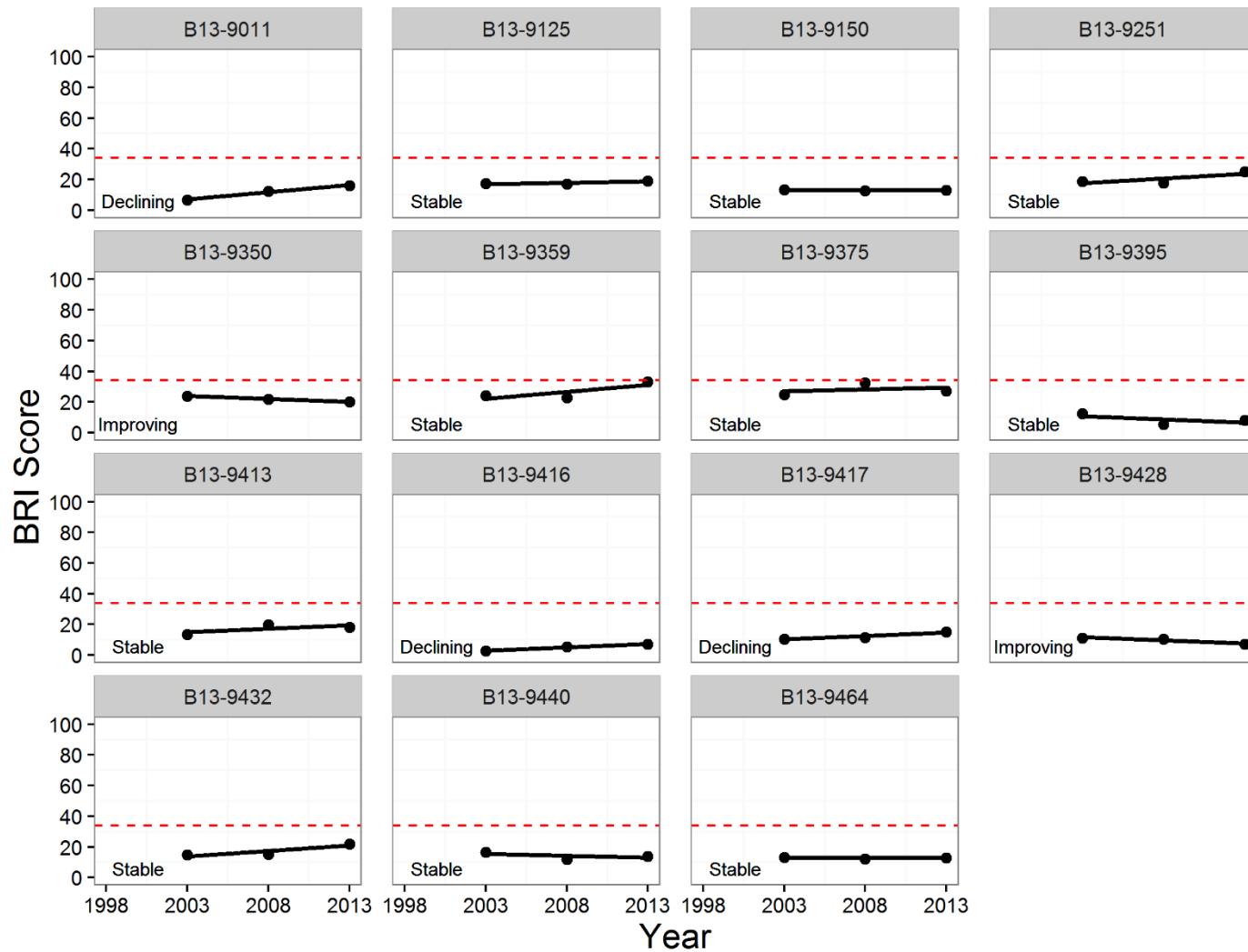


Figure D3. Mid shelf revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

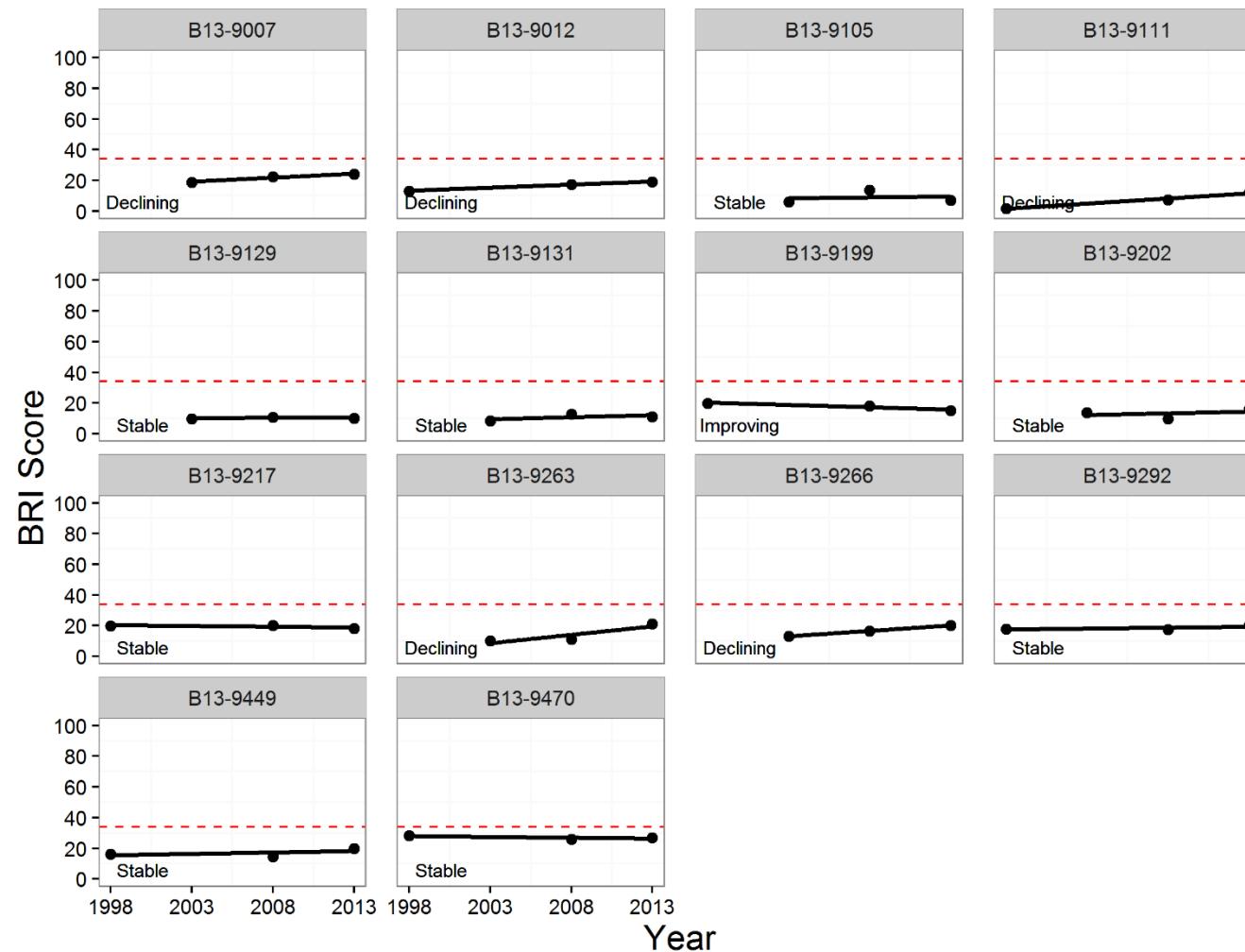


Figure D4. Inner-shelf revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

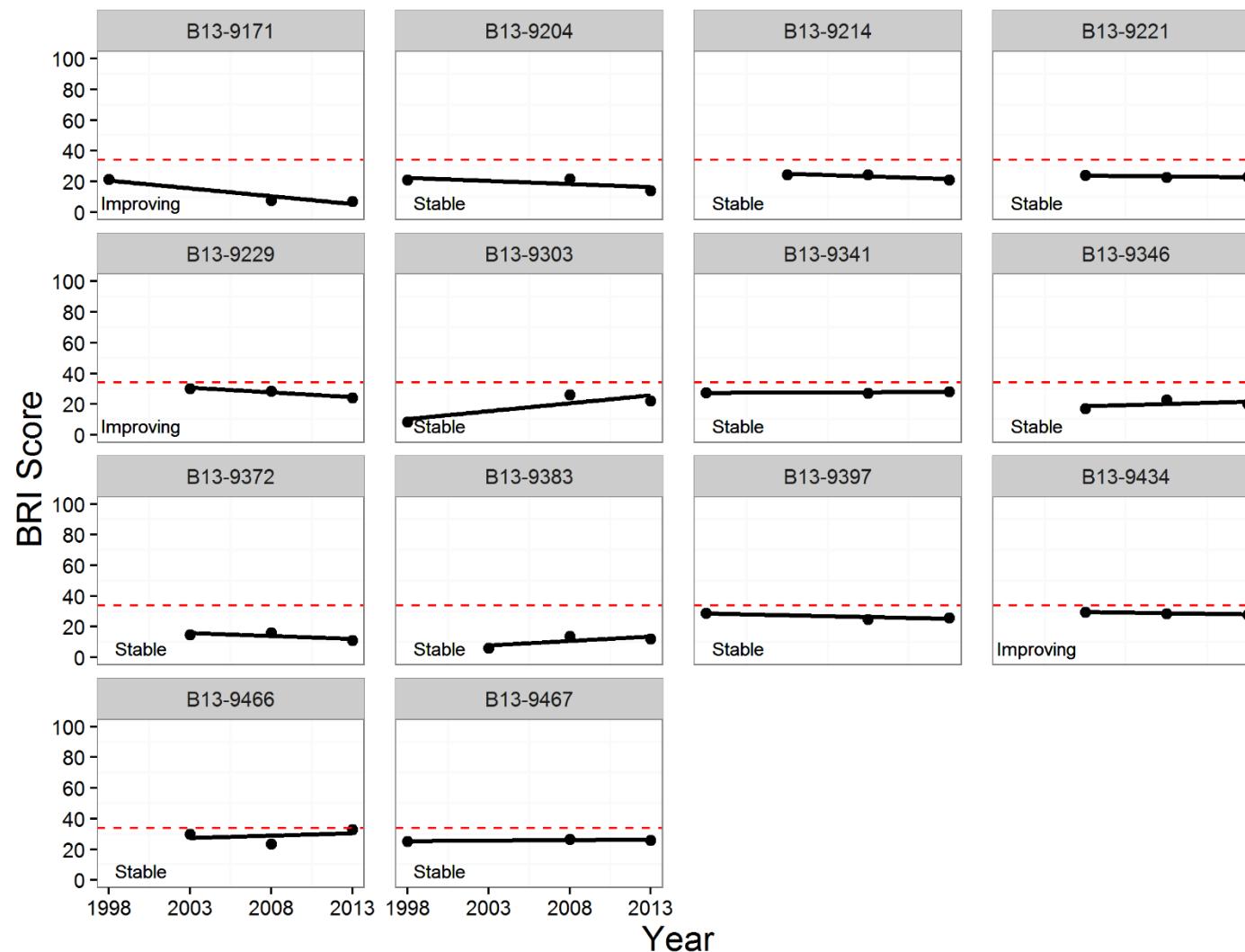


Figure D5. Bay revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

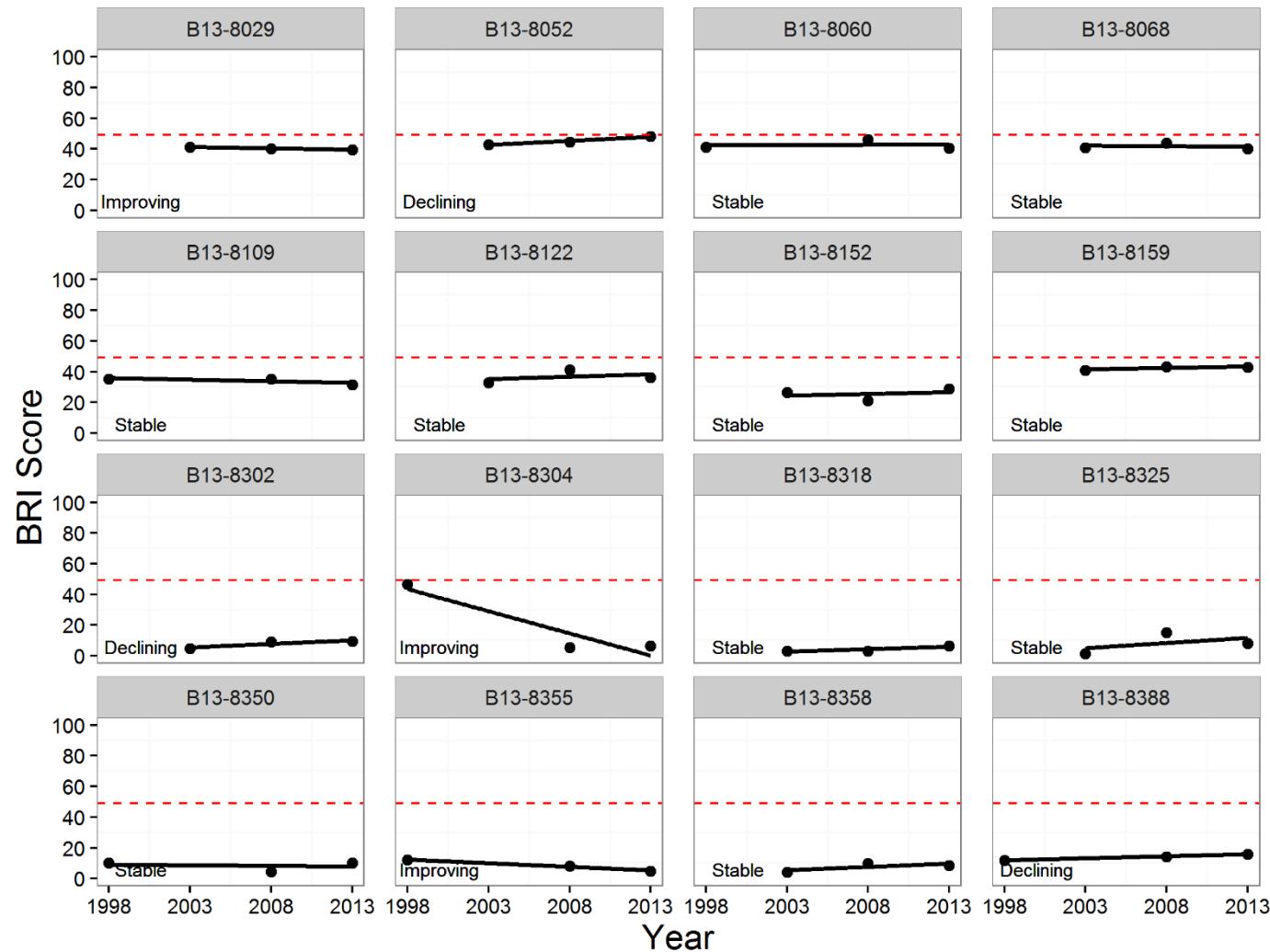


Figure D6 Port revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

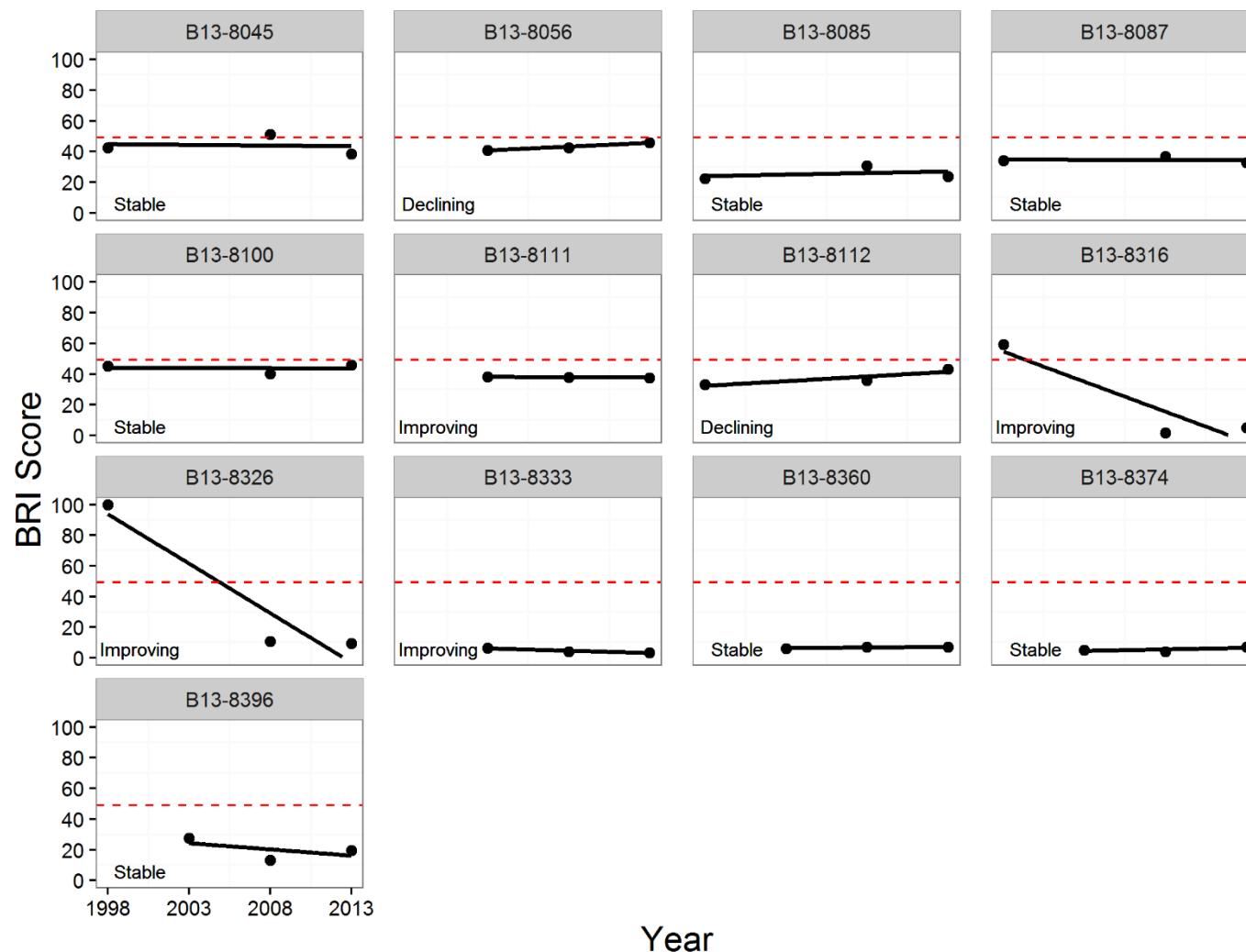


Figure D7 Marina revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.

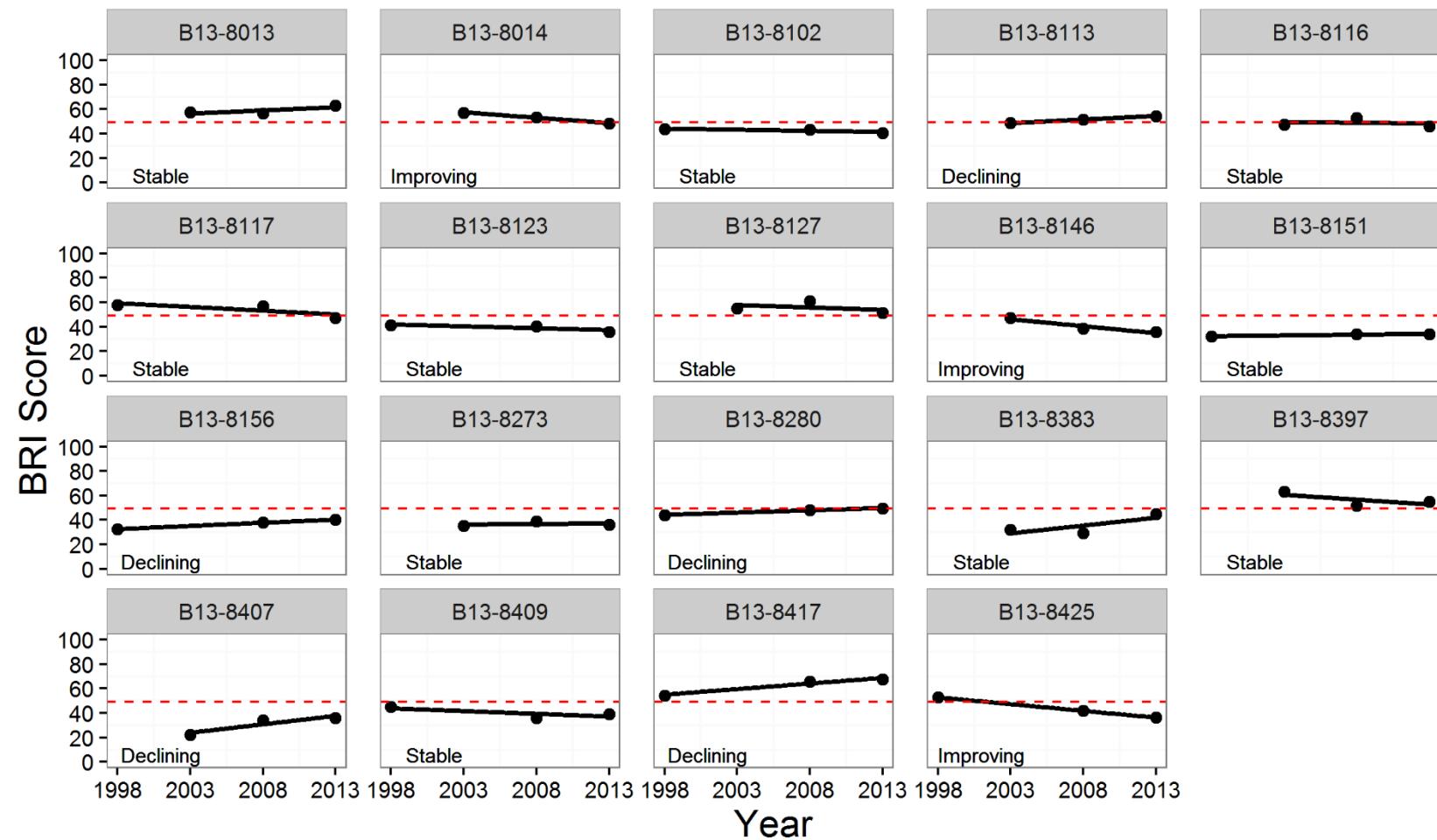
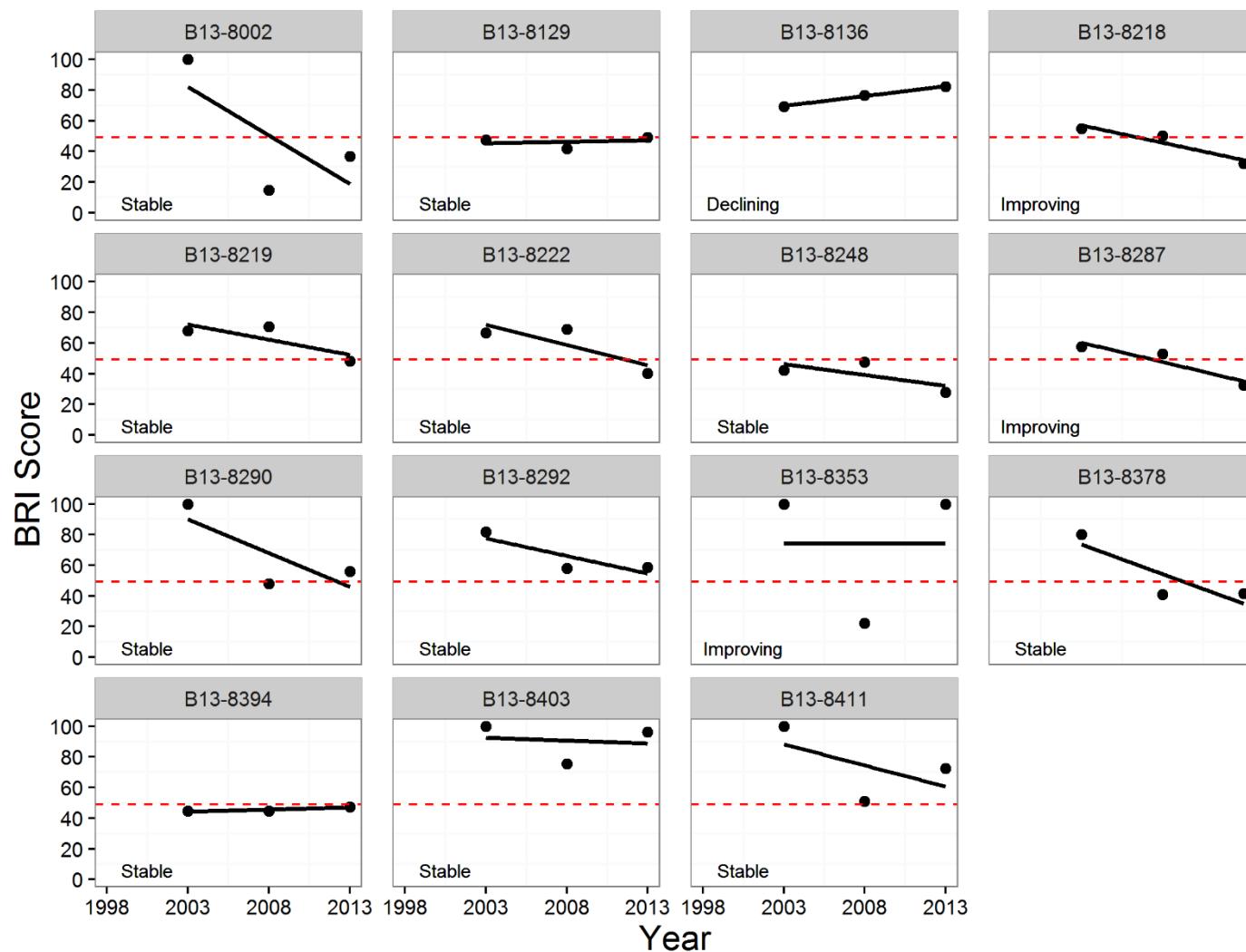


Figure D8 Estuaries revisit site BRI scores through time with the linear model trend line. The trends were classified as *improving*, *stable*, or *declining* based upon the slope and confidence limits associated with the slope estimate as described in the body text. The red, dashed line indicates the threshold between Good and Poor condition categories.



EVALUATING THE EFFICACY OF TEMPORAL TRENDS

Given the survey design of the Bight Program, benthic community data are only collected every 5 years. From 1998 to 2013, 122 sites were revisited a total of three times each (2013, 2008, and either 2003 or 1998). BRI scores from each of those sampling events were used to characterize the trend in benthic condition at each site. To evaluate the suitability of characterizing a trend from those three data points across the 15 year span, we compared trends in condition characterized from an independent dataset of fixed monitoring stations that were sampled annually from 1998 – 2013. These data were obtained from the regular benthic monitoring stations of the CSD, LACSD, and OCSD POTWs. Among the three POTWs, 93 stations were sampled in 1998, 2008, and 2013 (three data points) and were also sampled between 14 and 16 times annually from 1998 – 2013.

As was done with the Bight benthic data, simple linear regression was used to model the trend (slope w/ 95% confidence intervals) in BRI scores for each site. Trends were characterized across the full data set (14 – 16 data points) ($\text{trend}_{\text{full}}$) and the three-point data set (trend_3). Like the results presented in the Bight '13 benthic report, trends were characterized using the following scheme:

- If slope + 95% CI < 0, then the trend was characterized as **improving**
- If slope + 95% CI ≥ 0, then the trend was characterized as **stable**
- If slope – 95% CI ≤ 0, then the trend was characterized as **stable**
- If slope – 95% CI > 0, then the trend was characterized as **declining**

The concordance in trend characterization between the three-point and full data sets was evaluated using a contingency table (Table D1) and agreement between the two was measured with Cohen's Kappa.

Table D1. Contingency table comparing the trends in BRI scores from 1998- 2013 characterized using 3 data points from 1998, 2008 and 2013 (3-Point Trend) and characterized using all of the data points across the time period (Full Data Trend). The shaded diagonal indicates where there was agreement between the two characterization approaches for each trend type.

		3-Point Trend		
		Improving	Stable	Declining
Full Data Trend	Improving	18	11	0
	Stable	5	25	5
	Declining	0	12	17

Sixty-five percent of the stations were determined to have the same trend using both data sets ($K_w = 0.56$ [0.43 – 0.69]). Of those stations that were classified with different trends between

the two data sets, they were only different by one category (i.e., improving vs. stable, or stable vs. declining) and there were no instances where one data set would characterize the trend as improving and other classified it as declining.

These results would suggest that trends in BRI scores characterized with data from 1998, 2008, and 2013 are reasonably similar to trends from the same sites characterized with annual data from 1998 and 2013. More importantly, the 3-point data set did not present incongruous trends compared to the full data set (i.e., $\text{trend}_3 = \text{declining}$ with $\text{trend}_{\text{full}} = \text{improving}$). When there was disagreement between the two data sets, it was most often where the 3-point data set trend was muted with respect to the full data set trend (i.e., $\text{trend}_{\text{full}} = \text{Improving or Declining}$, but $\text{trend}_3 = \text{Stable}$).

APPENDIX E

Staff or representatives from each of the five large Publicly Owned Treatment Works (POTW) provided macrobenthic community data (abundance, community metrics, and Benthic Response Index scores) from their regular continental shelf benthic monitoring grids from either 2012, 2013, or 2014. These data were divided into one of three depth strata (inner, mid, and outer shelf) and compared to regional data from the same depth zone collected as part of the Bight'13 survey. Community metrics for each data set – Shannon Weiner Diversity, Pielou's Evenness, and Species Richness – are presented in Table E1. Benthic Response Index scores were compared with a 1-way Analysis of Variance ($\alpha=0.05$) using Proc glm in SAS v9.4 (Figures E1a, E2a, and E3a). The distribution of Benthic Response Index categories from each data source were compared using a Fisher's exact Chi-Square test ($\alpha=0.05$) using Proc freq in SAS v9.4.

Table E1. Average community metric values (min – max) for the Bight'13 survey and the region's five large POTW benthic monitoring efforts within the inner, mid, and outer continental shelf.

Depth Zone	Source	Year	Number of Samples	Shannon Weiner Diversity (H')	Pielou's Evenness (J')	Species Richness (S)
Inner Shelf (6-30m)	Bight	2013	33	3.5 (2.5-4.3)	0.8 (0.6-0.9)	80.7 (27-164)
	CLAEMD	2012	3	3.6 (3-4)	0.8 (0.8-0.8)	87.7 (38-120)
	CSD-SB	2013	17	2.1 (0.8-3.7)	0.5 (0.2-0.9)	93.5 (38-157)
	LACSD	2013	11	3.7 (3.3-4)	0.8 (0.7-0.9)	101 (83-129)
	OX	2012	7	3.6 (2.5-4.1)	0.8 (0.8-0.9)	81.1 (28-101)
Mid Shelf (31-120m)	Bight	2013	28	3.6 (2.1-4.1)	0.8 (0.4-0.9)	89.1 (45-171)
	CLAEMD	2012	39	3.9 (3.2-4.5)	0.8 (0.7-0.9)	103.5 (84-148)
	CSD-PL	2013	22	3.7 (3.2-4.5)	0.8 (0.8-0.9)	96.5 (63-143)
	CSD-SB	2013	10	2.7 (1.1-4)	0.6 (0.3-0.9)	86.2 (57-152)
	LACSD	2013	11	3.7 (3.4-4)	0.8 (0.7-0.9)	92 (65-122)
Outer Shelf (121-200m)	OCSD	2014	51	3.6 (2.9-4.3)	0.8 (0.7-0.9)	94.8 (40-140)
	Bight	2013	26	3.4 (2.3-4.1)	0.8 (0.7-0.9)	69 (24-129)
	CLAEMD	2012	4	3.4 (2.8-3.7)	0.8 (0.7-0.9)	71 (47-96)
	LACSD	2013	11	3.3 (2.9-3.8)	0.8 (0.8-0.9)	54.5 (31-75)
	OCSD	2014	9	3.2 (2.5-3.6)	0.9 (0.7-0.9)	43.8 (23-64)

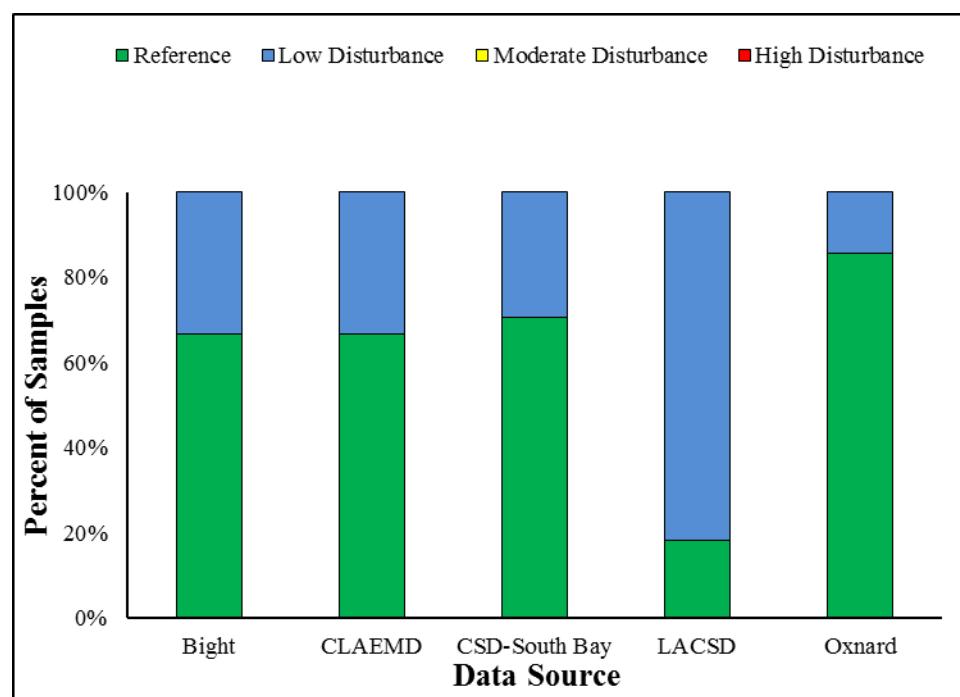
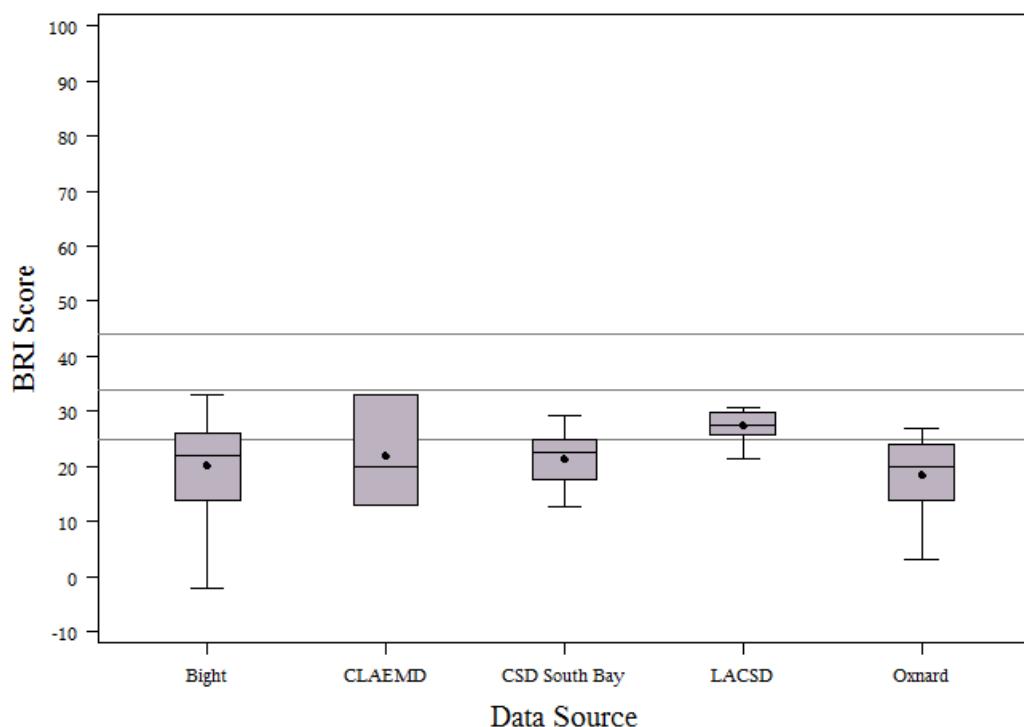


Figure E1. (A) Schematic box plots of inner shelf (6 – 30m) BRI scores from Bight'13 and the large POTW benthic monitoring grids. Black dots indicate the mean score. * indicates significantly different than Bight'13 (1-way ANOVA) (B) Proportional distribution of inner shelf (6 – 30m) samples from the Bight'13 and the large POTW benthic monitoring grid. * indicates significantly different than Bight'13 (chi-Square)

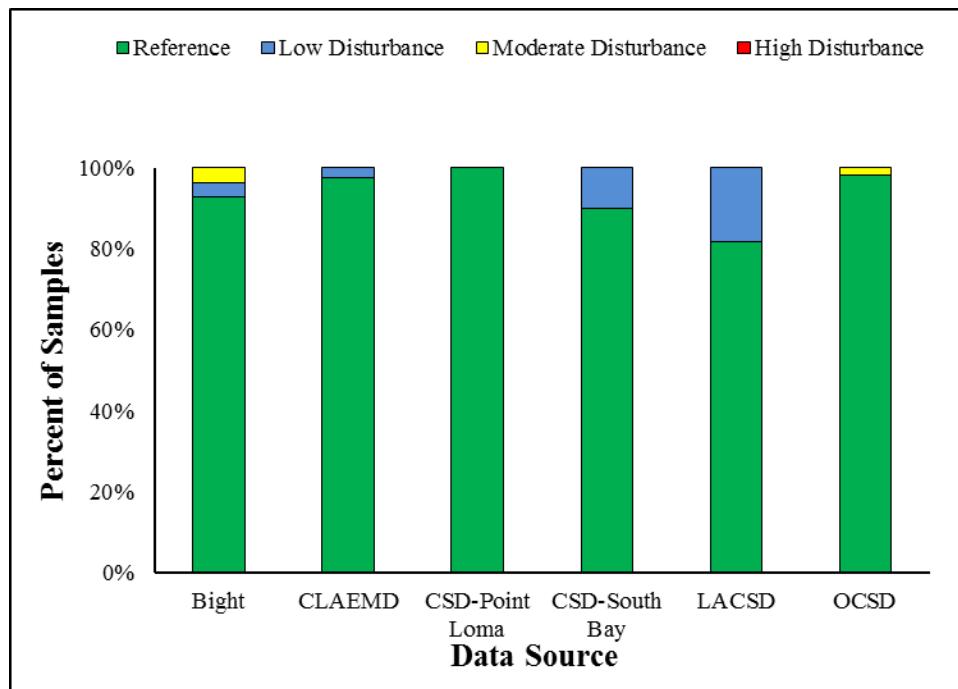
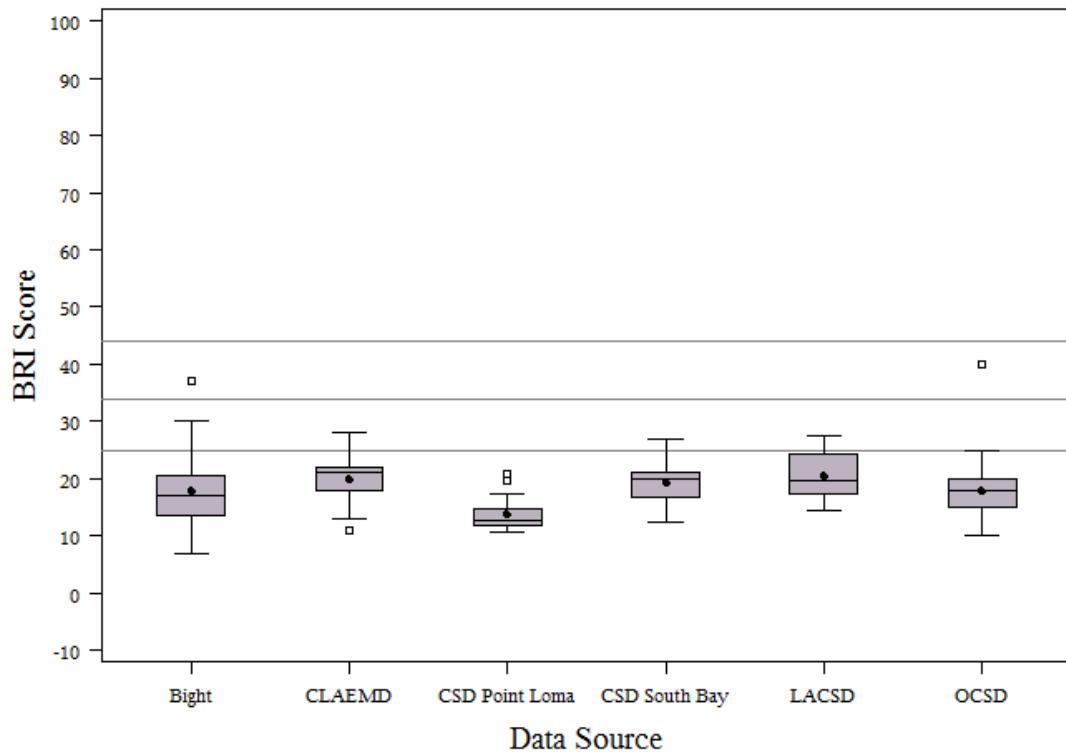


Figure E2. (A) Schematic box plots of mid shelf (31 – 120m) BRI scores from Bight'13 and the large POTW benthic monitoring grids. Black dots indicate the mean score. * indicates significantly different than Bight'13 (1-way ANOVA) (B) Proportional distribution of mid shelf (31 – 120m) samples from the Bight'13 and the large POTW benthic monitoring grid* indicates significantly different than Bight'13 (chi-Square)

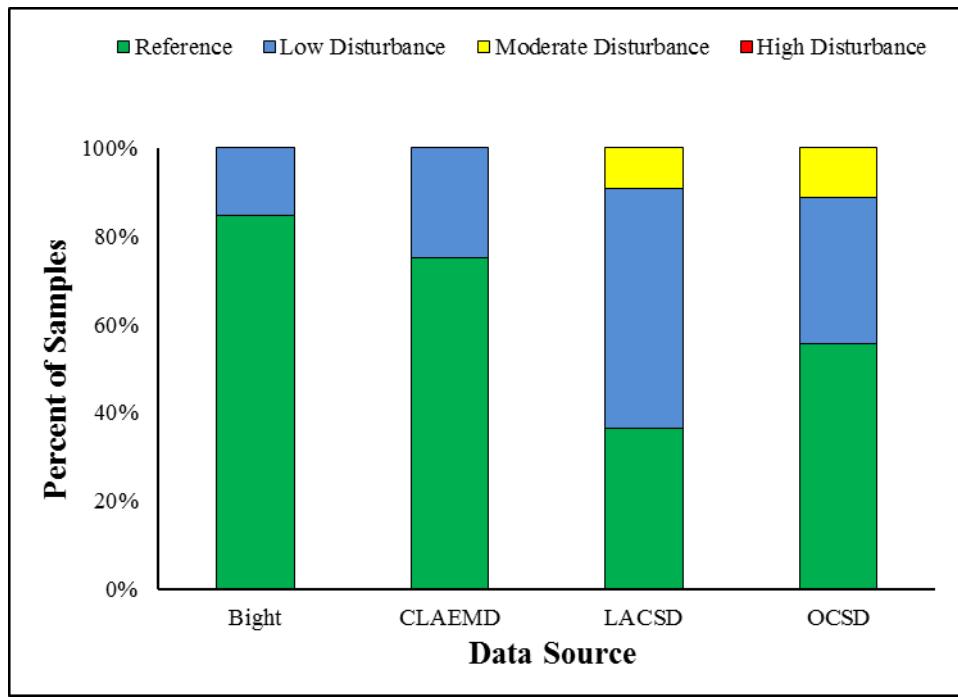
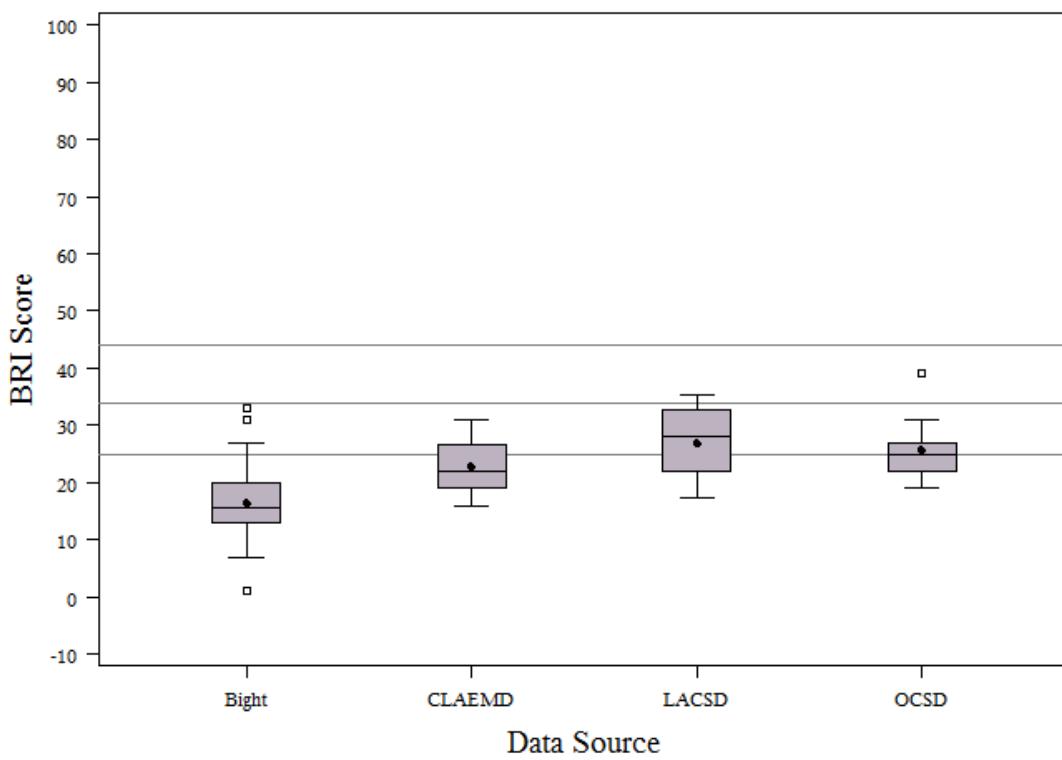


Figure E3. (A) Schematic box plots of outer shelf (120 – 200m) BRI scores from Bight'13 and the large POTW benthic monitoring grids. Black dots indicate the mean score. * indicates significantly different than Bight'13 (1-way ANOVA) (B) Proportional distribution of outer shelf (120 – 200m) samples from the Bight'13 and the large POTW benthic monitoring grid. * indicates significantly different than Bight'13 (chi-Square)

APPENDIX F

Table F1 Off-shore Benthic Response Index (BRI) scores (Smith et al. 2001) and attendant condition categories for all sites in the coastal ocean of the Southern California Bight between 6 and 324 m deep. § - denotes sites below 200m where the Bight Program has traditionally not applied the BRI and for which the condition category and score assessments may not be an accurate reflection of habitat condition.

Stratum	Station	Replicate	BRI Score	BRI Category
Inner Shelf	B13-9005	1	18	Reference
Inner Shelf	B13-9040	1	12	Reference
Inner Shelf	B13-9080	1	7	Reference
Inner Shelf	B13-9121	1	22	Reference
Inner Shelf	B13-9135	1	-2	Reference
Inner Shelf	B13-9171	1	7	Reference
Inner Shelf	B13-9204	1	14	Reference
Inner Shelf	B13-9214	1	21	Reference
Inner Shelf	B13-9219	1	19	Reference
Inner Shelf	B13-9221	1	23	Reference
Inner Shelf	B13-9229	1	24	Reference
Inner Shelf	B13-9239	1	32	Low Disturbance
Inner Shelf	B13-9245	1	4	Reference
Inner Shelf	B13-9257	1	25	Reference
Inner Shelf	B13-9303	1	22	Reference
Inner Shelf	B13-9319	1	4	Reference
Inner Shelf	B13-9336	1	31	Low Disturbance
Inner Shelf	B13-9341	1	28	Low Disturbance
Inner Shelf	B13-9346	1	20	Reference
Inner Shelf	B13-9372	1	11	Reference
Inner Shelf	B13-9377	1	16	Reference
Inner Shelf	B13-9383	1	12	Reference
Inner Shelf	B13-9397	1	26	Low Disturbance
Inner Shelf	B13-9409	1	30	Low Disturbance
Inner Shelf	B13-9421	1	24	Reference
Inner Shelf	B13-9434	1	28	Low Disturbance
Inner Shelf	B13-9447	1	30	Low Disturbance
Inner Shelf	B13-9466	1	33	Low Disturbance
Inner Shelf	B13-9467	1	26	Low Disturbance
Inner Shelf	B13-9484	1	21	Reference
Inner Shelf	B13-9487	1	26	Low Disturbance
Mid Shelf	B13-9007	1	24	Reference

Mid Shelf	B13-9012	1	19	Reference
Mid Shelf	B13-9025	1	15	Reference
Mid Shelf	B13-9037	1	11	Reference
Mid Shelf	B13-9104	1	16	Reference
Mid Shelf	B13-9105	1	7	Reference
Mid Shelf	B13-9111	1	12	Reference
Mid Shelf	B13-9129	1	10	Reference
Mid Shelf	B13-9130	1	7	Reference
Mid Shelf	B13-9131	1	11	Reference
Mid Shelf	B13-9166	1	24	Reference
Mid Shelf	B13-9194	1	30	Low Disturbance
Mid Shelf	B13-9199	1	15	Reference
Mid Shelf	B13-9202	1	16	Reference
Mid Shelf	B13-9217	1	18	Reference
Mid Shelf	B13-9263	1	21	Reference
Mid Shelf	B13-9266	1	20	Reference
Mid Shelf	B13-9267	1	16	Reference
Mid Shelf	B13-9292	1	20	Reference
Mid Shelf	B13-9316	1	17	Reference
Mid Shelf	B13-9326	1	25	Reference
Mid Shelf	B13-9331	1	24	Reference
Mid Shelf	B13-9424	1	17	Reference
Mid Shelf	B13-9433	1	12	Reference
Mid Shelf	B13-9448	1	17	Reference
Mid Shelf	B13-9449	1	20	Reference
Mid Shelf	B13-9456	1	18	Reference
Mid Shelf	B13-9458	1	37	Moderate Disturbance
Mid Shelf	B13-9470	1	27	Low Disturbance
Mid Shelf	B13-9482	1	24	Reference
Outer Shelf	B13-9011	1	16	Reference
Outer Shelf	B13-9019	1	1	Reference
Outer Shelf	B13-9056	1	16	Reference
Outer Shelf	B13-9073	1	26	Low Disturbance
Outer Shelf	B13-9100	1	15	Reference
Outer Shelf	B13-9125	1	19	Reference
Outer Shelf	B13-9150	1	13	Reference
Outer Shelf	B13-9251	1	25	Reference
Outer Shelf	B13-9287 §	1	19	Reference
Outer Shelf	B13-9310	1	20	Reference
Outer Shelf	B13-9350 §	1	20	Reference
Outer Shelf	B13-9356	1	14	Reference
Outer Shelf	B13-9359	1	33	Low Disturbance
Outer Shelf	B13-9375	1	27	Low Disturbance

Outer Shelf	B13-9395	1	8	Reference
Outer Shelf	B13-9403	1	16	Reference
Outer Shelf	B13-9407	1	16	Reference
Outer Shelf	B13-9413	1	18	Reference
Outer Shelf	B13-9414	1	14	Reference
Outer Shelf	B13-9415	1	7	Reference
Outer Shelf	B13-9416	1	7	Reference
Outer Shelf	B13-9417	1	15	Reference
Outer Shelf	B13-9428	1	7	Reference
Outer Shelf	B13-9432 §	1	22	Reference
Outer Shelf	B13-9440	1	14	Reference
Outer Shelf	B13-9444	1	13	Reference
Outer Shelf	B13-9455	1	21	Reference
Outer Shelf	B13-9464	1	13	Reference
Outer Shelf	B13-9476	1	31	Low Disturbance
MPA	B13-9049	1	13	Reference
MPA	B13-9059	1	27	Low Disturbance
MPA	B13-9087	1	21	Reference
MPA	B13-9091 §	1	25	Reference
MPA	B13-9092	1	16	Reference
MPA	B13-9152	1	24	Reference
MPA	B13-9159	1	24	Reference
MPA	B13-9161	1	20	Reference
MPA	B13-9173	1	19	Reference
MPA	B13-9177	1	17	Reference
MPA	B13-9186	1	23	Reference
MPA	B13-9192	1	23	Reference
MPA	B13-9237 §	1	22	Reference
MPA	B13-9314	1	22	Reference
MPA	B13-9320	1	14	Reference
MPA	B13-9321	1	28	Low Disturbance
MPA	B13-9323	1	26	Low Disturbance
MPA	B13-9339	1	17	Reference
MPA	B13-9454	1	21	Reference
MPA	B13-9465	1	23	Reference
MPA	B13-9468	1	28	Low Disturbance
MPA	B13-9474	1	19	Reference
MPA	B13-9481	1	28	Low Disturbance
Channel Islands	B13-9274	1	15	Reference
Channel Islands	B13-9304	1	26	Low Disturbance
Channel Islands	B13-9315	1	16	Reference
Channel Islands	B13-9329	1	11	Reference
Channel Islands	B13-9343	1	26	Low Disturbance

Channel Islands	B13-9345	1	12	Reference
Channel Islands	B13-9351	1	16	Reference
Channel Islands	B13-9357	1	15	Reference
Channel Islands	B13-9360	1	20	Reference
Channel Islands	B13-9363	1	27	Low Disturbance
Channel Islands	B13-9365	1	23	Reference
Channel Islands	B13-9366	1	24	Reference
Channel Islands	B13-9373	1	15	Reference
Channel Islands	B13-9376	1	15	Reference
Channel Islands	B13-9378	1	28	Low Disturbance
Canyon Bottom	B13-9193	1	19	Reference
Canyon Bottom	B13-9197	1	42	Moderate Disturbance
Canyon Bottom	B13-9205	1	27	Low Disturbance
Canyon Bottom	B13-9277	1	24	Reference
Canyon Bottom	B13-9285	1	26	Low Disturbance
Canyon Bottom	B13-9369	1	30	Low Disturbance
Upper Slope	B13-9001 §	1	21	Reference
Upper Slope	B13-9002 §	1	29	Low Disturbance
Upper Slope	B13-9022 §	1	24	Reference
Upper Slope	B13-9028 §	1	21	Reference
Upper Slope	B13-9055 §	1	24	Reference
Upper Slope	B13-9068 §	1	29	Low Disturbance
Upper Slope	B13-9074 §	1	24	Reference
Upper Slope	B13-9122 §	1	20	Reference
Upper Slope	B13-9179 §	1	24	Reference
Upper Slope	B13-9185	1	13	Reference
Upper Slope	B13-9228 §	1	27	Low Disturbance
Upper Slope	B13-9354 §	1	18	Reference
Upper Slope	B13-9379 §	1	24	Reference
Upper Slope	B13-9394 §	1	21	Reference
Upper Slope	B13-9398 §	1	15	Reference
Upper Slope	B13-9399 §	1	20	Reference
Upper Slope	B13-9426 §	1	22	Reference
Upper Slope	B13-9450 §	1	22	Reference

APPENDIX G

The results from the SIMPER analysis presented a similar pattern to the one graphically displayed in the 2-dimensional representation of the nMDS ordination of all 2013 Bight survey benthic samples. The samples from the embayment assemblage were the most clearly separated group in the ordination and the SIMPER indicated that they were very dissimilar from the offshore (0.937) and deep water (0.984) samples. The samples from the offshore group were the most tightly grouped in the ordination, with the least amount of dispersion. Following suit, they had the largest within-group similarity (0.188) of the three assemblage designations in the SIMPER output. The deep water samples, as depicted in the ordination plot, were relatively grouped unto themselves, but clearly had the greatest within group dispersion. This was paralleled in the SIMPER analysis which suggests clear dissimilarity between the deep water group and either the embayment (0.984) or offshore groups (0.948), but very low within-group similarity (0.08).

These patterns in group similarity/dissimilarity expressed in the SIMPER and graphical presentation of the data are the product of the taxonomic composition of the samples and, ultimately, the autecology/natural history of the fauna. The taxa that contributed the most to the dissimilarity of the embayment samples to the other groups of samples were taxa that were unique the embayment samples or not found there at all (Tables G1 and G2). This stark present/absent pattern is because of the equally stark environmental differences between coastal embayments and the open ocean. The different habitats from which the embayment samples came from comprise one side of an ecotone, with the other more marine parts of the Southern California Bight on the opposite side. The embayments have distinctly different and more variable salinity, temperature, and sediment composition.

In contrast, the most important taxa contributing to the differences in the offshore versus deep water samples were often found in both groups, but differed in their relative and absolute abundance between groups (Table G3, Appendix B). The offshore and deep water assemblages represent more of a continuum of habitats with relatively homogenous salinity, and less variable temperature and sediment composition than embayments. The primary environmental factor that changes between the offshore and deep water samples was depth, with a lack larval transport across pycnoclines and exposure to low oxygen/elevated pH in the deepest waters of the Bight creating structuring communities along the depth gradient.

Both approaches to considering the multivariate species information presented in this report – SIMPER decomposing the contributions of taxa to Bray-Curtis dissimilarity between samples or the correlation of taxa abundance to the spatial patterns in the 2-d representation of the Bray-Curtis informed nMDS – identified taxa that were important in differentiating the samples collected in the survey. The two different approaches did not produce identical lists of characteristic taxa for the different groups (Table 10 vs. Tables 11-13), but that would be expected given the nature of the two types of analysis.

The SIMPER analysis was designed to deconstruct how each taxon in an apriori defined grouping of samples contributes to within-group similarity and between-group dissimilarity (both

measured as Bray-Curtis dissimilarity) (see Clarke 1993 or Clarke and Gorley 2006 for more detail). It produces a relative measure of contribution for each taxon that will always identify taxa as important within the apriori groupings. The vector analysis was looking at the contribution of different taxa to the pattern of samples in Figure 2, which was itself a 2-d representation of the nMDS ordination among all of samples, irrespective of what groups the samples were classified into (see Oksanen 2016 for more detail). This approach produced results on an absolute scale, where the r^2 value for each taxon represented the strength of association to the whole ordination plot. The assignment of a taxon to a given group of samples was made visually after the fact, based upon where a vector was oriented on the ordination plot.

More important than any methodological differences, the two different approaches did not produce diametrically opposed results – both suggest *Leitoscoloplos pugettensis* is commonly found in embayments, but one does not suggest that *Spiochaetopterus costarum* Cmplx is characteristic of offshore samples while one suggests it is characteristic of embayments. In contrast, there was reasonable overlap in taxa between the different output tables (Tables 10-13). In the end, both approaches present useful ways to distill complex community information and should be used for any further investigation of the underlying biotic and abiotic factors that shape the composition of the different benthic communities that live across the region within the 2013 survey or between different surveys through time.

Table G1 SIMPER results comparing the species composition of Embayment samples to Deep Water samples, as designated in Figure 2. Mean Bray-Curtis Dissimilarity between the two groups was 0.984. The $\log_{10}(\text{abundance} + 1)$ for each taxon that was in the top 90% of dissimilarity contributors is presented, along with its mean Bray Curtis dissimilarity value, its % contribution to the average dissimilarity between the Embayments and Deep Water groups, and the cumulative % dissimilarity.

Taxon	Embayment Log Abun	Deep Water Log Abun	Mean Dissimilarity	% Contribution to Dissimilarity	% Cumulative Contribution
<i>Leitoscoloplos pugettensis</i>	1.73	0.00	0.0211	2.14	2.14
<i>Theora lubrica</i>	1.45	0.00	0.0190	1.93	4.07
<i>Scoletoma</i> sp C	1.31	0.00	0.0171	1.74	5.82
<i>Mediomastus</i> sp	1.50	0.29	0.0169	1.72	7.53
<i>Scoletoma</i> sp	1.31	0.02	0.0160	1.63	9.16
<i>Pseudopolydora paucibranchiata</i>	1.15	0.00	0.0140	1.42	10.58
<i>Cossura</i> sp A	1.12	0.02	0.0132	1.34	11.92
Oligochaeta	1.04	0.04	0.0122	1.24	13.16
<i>Euchone limnicola</i>	1.03	0.00	0.0120	1.22	14.38
<i>Musculista senhousia</i>	0.92	0.00	0.0113	1.15	15.53
<i>Grandidierella japonica</i>	0.88	0.00	0.0113	1.15	16.67
<i>Exogone lourei</i>	1.03	0.02	0.0111	1.13	17.80
<i>Tagelus affinis</i>	0.82	0.00	0.0104	1.05	18.85
<i>Amphideutopus oculatus</i>	0.94	0.00	0.0098	1.00	19.85
<i>Prionospio (Prionospio) heterobranchia</i>	0.79	0.00	0.0089	0.91	20.76
<i>Megalomma pigmentum</i>	0.76	0.00	0.0089	0.90	21.66
<i>Euphilomedes carcharodonta</i>	0.73	0.04	0.0079	0.81	22.46
<i>Lyonsia californica</i>	0.68	0.00	0.0078	0.80	23.26
<i>Phoronis</i> sp	0.58	0.08	0.0077	0.78	24.04
<i>Neotrypaea gigas</i>	0.60	0.00	0.0076	0.77	24.81
<i>Diplocirrus</i> sp SD1	0.63	0.00	0.0076	0.77	25.58
<i>Paraprionospio alata</i>	0.29	0.51	0.0075	0.77	26.34
<i>Byblis barbarensis</i>	0.00	0.48	0.0075	0.76	27.10
<i>Acteocina carinata</i>	0.50	0.00	0.0074	0.76	27.86

<i>Chloea pinnata</i>	0.00	0.64	0.0073	0.74	28.60
<i>Maldanidae</i>	0.42	0.30	0.0068	0.69	29.30
<i>Aphelochaeta monilaris</i>	0.35	0.35	0.0063	0.64	29.94
<i>Petaloclymene pacifica</i>	0.51	0.08	0.0063	0.64	30.58
<i>Spiophanes duplex</i>	0.56	0.02	0.0062	0.63	31.21
<i>Maldane sarsi</i>	0.00	0.45	0.0060	0.61	31.81
<i>Mayerella acanthopoda</i>	0.51	0.00	0.0057	0.58	32.40
<i>Scoletoma</i> sp A	0.47	0.00	0.0057	0.58	32.97
<i>Macoma carlottensis</i>	0.01	0.48	0.0054	0.55	33.52
<i>Capitella capitata</i> Cmplx	0.28	0.03	0.0052	0.53	34.05
<i>Heterophoxus</i> cf <i>ellisi</i>	0.43	0.00	0.0049	0.50	34.55
<i>Monticellina cryptica</i>	0.28	0.20	0.0047	0.48	35.03
<i>Prionospio</i> (<i>Prionospio</i>) <i>ehlersi</i>	0.00	0.34	0.0047	0.48	35.51
<i>Eclysippe trilobata</i>	0.00	0.35	0.0047	0.48	35.99
<i>Edwardsia californica</i>	0.43	0.00	0.0047	0.48	36.47
<i>Neotrypaea</i> sp	0.39	0.00	0.0046	0.47	36.94
<i>Neanthes acuminata</i> Cmplx	0.46	0.00	0.0046	0.46	37.41
<i>Prionospio</i> (<i>Minusprio</i>) <i>lighti</i>	0.37	0.12	0.0046	0.46	37.87
<i>Lineidae</i>	0.22	0.18	0.0043	0.43	38.30
<i>Scoletoma</i> sp B	0.37	0.00	0.0042	0.43	38.73
<i>Fabricinuda limnicola</i>	0.43	0.00	0.0042	0.43	39.16
<i>Pista brevibranchiata</i>	0.41	0.01	0.0042	0.43	39.59
<i>Glycera americana</i>	0.36	0.02	0.0042	0.43	40.02
<i>Ophiuroidea</i>	0.00	0.33	0.0042	0.42	40.44
<i>Armandia brevis</i>	0.38	0.00	0.0041	0.42	40.86
<i>Leptochelia dubia</i> Cmplx	0.40	0.00	0.0041	0.42	41.28
<i>Amphipholis squamata</i>	0.45	0.02	0.0041	0.41	41.69
<i>Pista wui</i>	0.29	0.10	0.0040	0.41	42.10
<i>Laevicardium substriatum</i>	0.29	0.00	0.0040	0.41	42.50
<i>Falcidens hartmanae</i>	0.00	0.27	0.0040	0.41	42.91
<i>Tubulanus polymorphus</i>	0.35	0.03	0.0039	0.40	43.31

<i>Rudilemboides stenopropodus</i>	0.41	0.00	0.0039	0.40	43.71
<i>Limifossor fratula</i>	0.00	0.29	0.0039	0.40	44.11
<i>Tellina carpenteri</i>	0.00	0.42	0.0038	0.39	44.50
<i>Euclymeninae</i> sp A	0.37	0.08	0.0038	0.39	44.89
<i>Ampelisca unsocalae</i>	0.00	0.29	0.0038	0.39	45.28
<i>Paranemertes californica</i>	0.31	0.01	0.0038	0.38	45.67
<i>Phyllochaetopterus limicolus</i>	0.00	0.20	0.0036	0.37	46.03
<i>Amphiuridae</i>	0.14	0.20	0.0036	0.36	46.40
<i>Heteromastus filobranchus</i>	0.00	0.23	0.0036	0.36	46.76
<i>Cossura</i> sp	0.31	0.03	0.0036	0.36	47.12
<i>Scleroplax granulata</i>	0.34	0.00	0.0035	0.36	47.48
<i>Leptosynapta</i> sp	0.31	0.04	0.0035	0.36	47.84
<i>Streblospio benedicti</i>	0.25	0.00	0.0033	0.34	48.18
<i>Onuphis iridescent</i>	0.00	0.27	0.0033	0.34	48.51
<i>Cossura candida</i>	0.22	0.10	0.0033	0.34	48.85
<i>Fauveliopsis glabra</i>	0.00	0.26	0.0032	0.33	49.18
<i>Listriella goleta</i>	0.31	0.00	0.0032	0.32	49.50
<i>Bulla gouldiana</i>	0.20	0.00	0.0032	0.32	49.82
<i>Diastylis pellucida</i>	0.00	0.24	0.0031	0.32	50.14
<i>Bipalponephthys cornuta</i>	0.12	0.15	0.0031	0.32	50.45
<i>Compressidens stearnsii</i>	0.00	0.30	0.0031	0.31	50.76
<i>Pectinaria californiensis</i>	0.12	0.21	0.0031	0.31	51.07
<i>Asthenothaerus diegensis</i>	0.28	0.00	0.0031	0.31	51.38
<i>Rictaxis punctocaelatus</i>	0.25	0.06	0.0030	0.30	51.68
<i>Monocorophium acherusicum</i>	0.27	0.00	0.0029	0.30	51.98
<i>Haminoea vesicula</i>	0.19	0.00	0.0029	0.29	52.27
<i>Paralysippe annectens</i>	0.00	0.18	0.0029	0.29	52.57
<i>Astyris permodes</i>	0.00	0.17	0.0028	0.29	52.85
<i>Amphiodia urtica</i>	0.26	0.05	0.0028	0.29	53.14
<i>Laonice cirrata</i>	0.24	0.03	0.0028	0.29	53.42
<i>Amphissa bicolor</i>	0.00	0.20	0.0028	0.28	53.71

<i>Glycinde armigera</i>	0.02	0.20	0.0027	0.28	53.98
<i>Melinna heterodonta</i>	0.00	0.22	0.0027	0.28	54.26
<i>Harpiniopsis epistomata</i>	0.00	0.19	0.0027	0.27	54.53
<i>Monticellina siblina</i>	0.24	0.03	0.0027	0.27	54.80
<i>Zeuxo normani</i>	0.28	0.00	0.0027	0.27	55.08
<i>Pinnotheridae</i>	0.26	0.00	0.0027	0.27	55.35
<i>Ampharetidae</i>	0.02	0.19	0.0027	0.27	55.62
<i>Phoronida</i>	0.17	0.05	0.0026	0.27	55.89
<i>Ampeliscidae</i>	0.00	0.18	0.0026	0.27	56.16
<i>Dorvillea (Schistomerengos) sp</i>	0.25	0.01	0.0026	0.26	56.42
<i>Yoldiella nana</i>	0.00	0.22	0.0026	0.26	56.68
<i>Tellina meropsis</i>	0.22	0.00	0.0026	0.26	56.94
<i>Glycera nana</i>	0.01	0.21	0.0025	0.26	57.20
<i>Scoloplos acmeceps</i>	0.19	0.00	0.0025	0.25	57.45
<i>Barleeia haliotiphila</i>	0.24	0.00	0.0025	0.25	57.70
<i>Leitoscoloplos sp A</i>	0.00	0.19	0.0024	0.25	57.95
<i>Tritella tenuissima</i>	0.00	0.17	0.0024	0.24	58.19
<i>Cadulus californicus</i>	0.00	0.22	0.0024	0.24	58.43
<i>Podocerus fulanus</i>	0.26	0.00	0.0023	0.23	58.67
<i>Solen rostriformis</i>	0.20	0.00	0.0023	0.23	58.90
<i>Actiniaria</i>	0.18	0.04	0.0023	0.23	59.13
<i>Volvulella panamica</i>	0.21	0.02	0.0022	0.22	59.36
<i>Leiochrides hemipodus</i>	0.00	0.14	0.0022	0.22	59.58
<i>Amphiodia sp</i>	0.17	0.04	0.0022	0.22	59.80
<i>Streblosoma sp B</i>	0.22	0.00	0.0022	0.22	60.02
<i>Sabellidae</i>	0.12	0.06	0.0021	0.22	60.24
<i>Eochelidium sp A</i>	0.20	0.00	0.0021	0.22	60.46
<i>Heterophoxus ellisi</i>	0.00	0.18	0.0021	0.21	60.67
<i>Aphelochaeta glandaria Cmplx</i>	0.06	0.19	0.0021	0.21	60.88
<i>Maldane californiensis</i>	0.00	0.15	0.0021	0.21	61.10
<i>Phoronis sp SD1</i>	0.10	0.07	0.0021	0.21	61.31

<i>Notomastus tenuis</i>	0.18	0.00	0.0021	0.21	61.52
<i>Mendicula ferruginosa</i>	0.00	0.14	0.0020	0.21	61.72
<i>Spiochaetopterus costarum</i> Cmplx	0.15	0.10	0.0020	0.20	61.93
<i>Goniada littorea</i>	0.15	0.00	0.0020	0.20	62.13
<i>Scoletoma tetraura</i> Cmplx	0.10	0.12	0.0020	0.20	62.33
<i>Oxyurostylis pacifica</i>	0.16	0.00	0.0020	0.20	62.53
<i>Schmittius politus</i>	0.15	0.00	0.0019	0.20	62.73
<i>Amphicteis scaphobranchiata</i>	0.19	0.01	0.0019	0.20	62.93
<i>Neilonella ritteri</i>	0.00	0.15	0.0019	0.20	63.13
<i>Cryptomya californica</i>	0.14	0.00	0.0019	0.20	63.32
<i>Myriochele gracilis</i>	0.00	0.14	0.0019	0.19	63.52
<i>Anoplodactylus erectus</i>	0.16	0.00	0.0019	0.19	63.71
<i>Spiophanes berkeleyorum</i>	0.17	0.03	0.0019	0.19	63.91
<i>Aphelochaeta</i> sp	0.07	0.12	0.0019	0.19	64.10
<i>Paramage scutata</i>	0.18	0.01	0.0019	0.19	64.29
<i>Kurtiella tumida</i>	0.16	0.03	0.0019	0.19	64.48
<i>Parvilucina tenuisculpta</i>	0.03	0.15	0.0019	0.19	64.68
<i>Heteronemertea</i>	0.13	0.01	0.0019	0.19	64.87
<i>Chaetoderma nanulum</i>	0.00	0.11	0.0018	0.19	65.05
<i>Paracerceis sculpta</i>	0.25	0.00	0.0018	0.18	65.24
<i>Ericthonius brasiliensis</i>	0.22	0.01	0.0018	0.18	65.42
<i>Macoma nasuta</i>	0.15	0.00	0.0018	0.18	65.60
<i>Stereobalanus</i> sp	0.00	0.12	0.0018	0.18	65.78
<i>Monocorophium</i> sp	0.14	0.00	0.0018	0.18	65.96
<i>Periploma discus</i>	0.18	0.00	0.0017	0.18	66.14
<i>Dacrydium pacificum</i>	0.00	0.14	0.0017	0.18	66.31
<i>Adontorhina cyclia</i>	0.00	0.15	0.0017	0.17	66.49
<i>Alpheus californiensis</i>	0.14	0.00	0.0017	0.17	66.66
<i>Bivalvia</i>	0.09	0.07	0.0017	0.17	66.84
<i>Thyasira flexuosa</i>	0.12	0.07	0.0017	0.17	67.01
<i>Actiniaria</i> sp 1	0.21	0.00	0.0017	0.17	67.18

<i>Nuculana conceptionis</i>	0.00	0.15	0.0017	0.17	67.35
<i>Axinopsida serricata</i>	0.02	0.15	0.0017	0.17	67.52
<i>Enteropneusta</i>	0.02	0.10	0.0017	0.17	67.69
<i>Brisaster townsendi</i>	0.00	0.11	0.0016	0.17	67.85
<i>Monocorophium insidiosum</i>	0.12	0.00	0.0016	0.16	68.02
<i>Notomastus hemipodus</i>	0.12	0.05	0.0016	0.16	68.18
<i>Saxicavella pacifica</i>	0.00	0.12	0.0016	0.16	68.34
<i>Sigambra</i> sp DC1	0.12	0.02	0.0016	0.16	68.50
<i>Metasychis disparidentatus</i>	0.12	0.02	0.0015	0.16	68.65
<i>Leukoma staminea</i>	0.10	0.00	0.0015	0.15	68.80
<i>Pinnixa franciscana</i>	0.15	0.00	0.0015	0.15	68.96
<i>Typosyllis nipponica</i>	0.15	0.00	0.0015	0.15	69.11
Polynoidae	0.00	0.10	0.0015	0.15	69.26
<i>Lumbrineris cruzensis</i>	0.03	0.13	0.0015	0.15	69.41
<i>Spiophanes fimbriata</i>	0.00	0.11	0.0015	0.15	69.56
<i>Cerebratulus</i> sp	0.03	0.08	0.0015	0.15	69.71
<i>Rhabdus rectius</i>	0.00	0.14	0.0014	0.15	69.85
<i>Exogone</i> sp A	0.12	0.00	0.0014	0.14	70.00
<i>Protohyale</i> sp	0.19	0.00	0.0014	0.14	70.14
<i>Leitoscoloplos</i> sp	0.00	0.12	0.0014	0.14	70.29
<i>Ennucula tenuis</i>	0.00	0.12	0.0014	0.14	70.43
<i>Brisaster</i> sp	0.00	0.11	0.0014	0.14	70.57
<i>Spiophanes kimballi</i>	0.00	0.16	0.0014	0.14	70.71
Cirratulidae	0.07	0.08	0.0014	0.14	70.86
Palaeonemertea	0.09	0.04	0.0014	0.14	71.00
Edwardsiidae	0.11	0.01	0.0014	0.14	71.13
<i>Nutricola tantilla</i>	0.14	0.00	0.0013	0.14	71.27
<i>Eunice americana</i>	0.00	0.11	0.0013	0.14	71.41
<i>Leucon declivis</i>	0.00	0.09	0.0013	0.14	71.54
<i>Prionospio (Minusprio) multibranchiata</i>	0.13	0.00	0.0013	0.14	71.68
<i>Sinocorophium heteroceratum</i>	0.11	0.00	0.0013	0.13	71.81

<i>Nephtys ferruginea</i>	0.01	0.13	0.0013	0.13	71.95
<i>Praxillella pacifica</i>	0.11	0.03	0.0013	0.13	72.08
<i>Ampharete labrops</i>	0.13	0.00	0.0013	0.13	72.22
<i>Nereis</i> sp A	0.13	0.00	0.0013	0.13	72.35
<i>Micrura alaskensis</i>	0.08	0.03	0.0012	0.13	72.47
<i>Ancistrosyllis groenlandica</i>	0.00	0.10	0.0012	0.13	72.60
<i>Spatangoida</i>	0.00	0.10	0.0012	0.13	72.73
<i>Sternaspis williamsae</i>	0.00	0.09	0.0012	0.13	72.85
<i>Malmgreniella macginitieei</i>	0.12	0.00	0.0012	0.13	72.98
<i>Tellina cadieni</i>	0.09	0.00	0.0012	0.13	73.10
<i>Marphysa disjuncta</i>	0.12	0.02	0.0012	0.12	73.23
<i>Chaetoderma pacificum</i>	0.00	0.12	0.0012	0.12	73.35
<i>Lumbrineris</i> sp	0.01	0.11	0.0012	0.12	73.47
<i>Myriochele olgae</i>	0.00	0.08	0.0012	0.12	73.60
<i>Nephtys caecoides</i>	0.09	0.00	0.0012	0.12	73.72
<i>Levinsenia gracilis</i>	0.05	0.08	0.0012	0.12	73.84
<i>Venerupis philippinarum</i>	0.07	0.00	0.0012	0.12	73.96
<i>Pinnixa</i> sp	0.10	0.01	0.0012	0.12	74.08
<i>Pherusa</i> sp SD2	0.00	0.08	0.0012	0.12	74.20
<i>Hartmanodes hartmanae</i>	0.11	0.00	0.0011	0.12	74.31
<i>Paranthura japonica</i> Cmplx	0.14	0.00	0.0011	0.12	74.43
<i>Polydora nuchalis</i>	0.07	0.00	0.0011	0.12	74.55
<i>Macoma yoldiformis</i>	0.13	0.00	0.0011	0.12	74.66
<i>Terebellides californica</i>	0.04	0.09	0.0011	0.11	74.78
<i>Caecognathia crenulatifrons</i>	0.03	0.10	0.0011	0.11	74.89
<i>Cyclocardia ventricosa</i>	0.00	0.09	0.0011	0.11	75.00
<i>Dodecamastus mariaensis</i>	0.00	0.07	0.0011	0.11	75.12
<i>Edwardsia profunda</i>	0.00	0.07	0.0011	0.11	75.23
<i>Prionospio (Prionospio) jubata</i>	0.08	0.05	0.0011	0.11	75.34
<i>Aricidea (Acmira)</i> sp LA1	0.00	0.06	0.0011	0.11	75.45
<i>Scoletoma erecta</i>	0.09	0.00	0.0011	0.11	75.57

<i>Tellina modesta</i>	0.10	0.00	0.0011	0.11	75.68
<i>Arcularia tiarula</i>	0.08	0.00	0.0011	0.11	75.79
<i>Cirrophorus branchiatus</i>	0.00	0.09	0.0011	0.11	75.90
Scaphopoda	0.01	0.08	0.0011	0.11	76.01
<i>Nuculana taphria</i>	0.10	0.00	0.0011	0.11	76.12
<i>Caprella californica</i>	0.15	0.00	0.0011	0.11	76.22
<i>Calocarides quinqueseriatus</i>	0.00	0.07	0.0011	0.11	76.33
<i>Pherusa negligens</i>	0.12	0.00	0.0010	0.11	76.44
<i>Cooperella subdiaphana</i>	0.11	0.00	0.0010	0.11	76.54
<i>Pseudofabriciola californica</i>	0.10	0.00	0.0010	0.10	76.65
<i>Malacoplax californiensis</i>	0.07	0.00	0.0010	0.10	76.75
<i>Heteroserolis carinata</i>	0.09	0.00	0.0010	0.10	76.85
<i>Aglaophamus erectans</i>	0.00	0.07	0.0010	0.10	76.96
Podocopida	0.05	0.00	0.0010	0.10	77.06
<i>Brissopsis pacifica</i>	0.00	0.08	0.0010	0.10	77.16
<i>Scolelepis (Parascolelepis) texana</i>	0.09	0.00	0.0010	0.10	77.26
<i>Chaetozone corona</i>	0.10	0.00	0.0010	0.10	77.36
Sphaeromatidae	0.10	0.00	0.0010	0.10	77.46
<i>Neastacilla californica</i>	0.10	0.00	0.0010	0.10	77.56
<i>Ampelisca brevisimulata</i>	0.06	0.04	0.0010	0.10	77.66
Chaetodermatida	0.00	0.07	0.0010	0.10	77.76
<i>Cephalophoxoides homilis</i>	0.00	0.07	0.0010	0.10	77.85
<i>Phtisica marina</i>	0.10	0.00	0.0010	0.10	77.95
<i>Schizocardium</i> sp	0.05	0.03	0.0009	0.10	78.05
Ceriantharia	0.02	0.05	0.0009	0.10	78.14
<i>Cerebratulus marginatus</i>	0.01	0.06	0.0009	0.09	78.24
<i>Paramicrodeutopus schmitti</i>	0.13	0.00	0.0009	0.09	78.33
<i>Tryonia imitator</i>	0.07	0.00	0.0009	0.09	78.43
<i>Ophelina pallida</i>	0.00	0.06	0.0009	0.09	78.52
Nereididae	0.10	0.00	0.0009	0.09	78.61
<i>Brissopsis</i> sp LA1	0.00	0.07	0.0009	0.09	78.70

<i>Ambidexter panamensis</i>	0.07	0.00	0.0009	0.09	78.79
<i>Paraphoxus</i> sp 1	0.00	0.07	0.0009	0.09	78.88
<i>Aphelochaeta</i> sp SD18 (B13-1)	0.00	0.07	0.0009	0.09	78.97
<i>Heterophoxus</i> sp	0.07	0.01	0.0009	0.09	79.06
<i>Philine</i> sp A	0.08	0.00	0.0009	0.09	79.15
<i>Harmothoe imbricata</i> Cmplx	0.12	0.00	0.0009	0.09	79.24
Tubulanidae	0.06	0.02	0.0009	0.09	79.32
<i>Heterophoxus affinis</i>	0.00	0.08	0.0009	0.09	79.41
<i>Tubulanus</i> sp A	0.08	0.00	0.0009	0.09	79.50
<i>Scolanthus scamiti</i>	0.08	0.00	0.0009	0.09	79.58
<i>Betaeus ensenadensis</i>	0.07	0.00	0.0008	0.09	79.67
<i>Poecilochaetus martini</i>	0.08	0.00	0.0008	0.09	79.75
<i>Aphelochaeta phillipsi</i>	0.00	0.06	0.0008	0.09	79.84
<i>Cyathodonta pedroana</i>	0.08	0.00	0.0008	0.09	79.93
<i>Heteronemertea</i> sp SD2	0.01	0.06	0.0008	0.08	80.01
<i>Listriella albina</i>	0.00	0.06	0.0008	0.08	80.09
<i>Chaetozone</i> sp	0.02	0.05	0.0008	0.08	80.18
<i>Aphelochaeta</i> sp LA3	0.00	0.06	0.0008	0.08	80.26
<i>Gadila aberrans</i>	0.08	0.00	0.0008	0.08	80.35
<i>Lumbrineris japonica</i>	0.09	0.00	0.0008	0.08	80.43
<i>Odostomia</i> sp	0.04	0.05	0.0008	0.08	80.51
<i>Hemipodia borealis</i>	0.03	0.00	0.0008	0.08	80.60
<i>Amphiodia digitata</i>	0.05	0.04	0.0008	0.08	80.68
<i>Monticellina</i> sp 1	0.07	0.00	0.0008	0.08	80.76
<i>Odontosyllis phosphorea</i>	0.08	0.00	0.0008	0.08	80.84
<i>Piromis capulata</i>	0.09	0.00	0.0008	0.08	80.92
<i>Philine auriformis</i>	0.06	0.01	0.0008	0.08	81.00
<i>Aphelochaeta williamsae</i>	0.00	0.06	0.0008	0.08	81.08
<i>Cerebratulus californiensis</i>	0.01	0.05	0.0008	0.08	81.16
<i>Tubulanus</i> sp SD1	0.06	0.00	0.0008	0.08	81.24
<i>Barleeia subtenuis</i>	0.08	0.00	0.0008	0.08	81.32

<i>Cyclocardia</i> sp	0.00	0.06	0.0008	0.08	81.40
<i>Pista</i> sp	0.06	0.00	0.0008	0.08	81.48
<i>Sonatsa carinata</i>	0.00	0.05	0.0008	0.08	81.56
<i>Heterophoxus oculatus</i>	0.07	0.01	0.0008	0.08	81.64
<i>Notomastus magnus</i>	0.04	0.01	0.0008	0.08	81.71
<i>Elasmopus bampo</i>	0.09	0.00	0.0008	0.08	81.79
<i>Streblosoma crassibranchia</i>	0.08	0.00	0.0008	0.08	81.87
<i>Tagelus</i> sp	0.06	0.00	0.0008	0.08	81.95
<i>Monticellina serratiseta</i>	0.01	0.06	0.0008	0.08	82.02
<i>Aphelochaeta</i> sp SD5	0.05	0.01	0.0008	0.08	82.10
<i>Ninoe tridentata</i>	0.07	0.00	0.0008	0.08	82.18
<i>Listriella melanica</i>	0.07	0.00	0.0008	0.08	82.26
<i>Malmgreniella</i> sp	0.04	0.05	0.0008	0.08	82.33
<i>Podarkeopsis perkinsi</i>	0.00	0.05	0.0007	0.08	82.41
<i>Aphelochaeta petersenae</i>	0.05	0.03	0.0007	0.08	82.48
<i>Pherusa neopapillata</i>	0.02	0.05	0.0007	0.08	82.56
<i>Aricidea (Allia)</i> sp A	0.00	0.05	0.0007	0.08	82.64
<i>Crepipatella lingulata</i>	0.07	0.00	0.0007	0.08	82.71
<i>Carinoma mutabilis</i>	0.05	0.01	0.0007	0.08	82.79
<i>Kurtiella compressa</i>	0.04	0.03	0.0007	0.08	82.86
<i>Subadyte mexicana</i>	0.00	0.06	0.0007	0.08	82.94
<i>Listriolobus pelodes</i>	0.06	0.02	0.0007	0.07	83.01
<i>Decamastus gracilis</i>	0.02	0.07	0.0007	0.07	83.09
<i>Melinna oculata</i>	0.08	0.01	0.0007	0.07	83.16
<i>Lumbrineris index</i>	0.03	0.03	0.0007	0.07	83.23
<i>Postasterope barnesi</i>	0.09	0.02	0.0007	0.07	83.30
<i>Photis parvidons</i>	0.00	0.05	0.0007	0.07	83.37
<i>Notomastus</i> sp	0.04	0.00	0.0007	0.07	83.44
<i>Leucon bishopi</i>	0.00	0.05	0.0007	0.07	83.51
<i>Scyphoproctus oculatus</i>	0.07	0.00	0.0007	0.07	83.58
<i>Protomedieia articulata</i> Cmplx	0.00	0.07	0.0007	0.07	83.65

<i>Heteromastus filiformis</i> Cmplx	0.00	0.05	0.0007	0.07	83.72
<i>Heteromyysis odontops</i>	0.06	0.00	0.0007	0.07	83.79
<i>Chaetoderma hancocki</i>	0.00	0.04	0.0007	0.07	83.86
<i>Solen sicarius</i>	0.07	0.00	0.0007	0.07	83.92
<i>Hartmanodes</i> sp SD1	0.07	0.00	0.0007	0.07	83.99
Brachyura	0.06	0.00	0.0006	0.07	84.06
Gammaridea	0.04	0.02	0.0006	0.06	84.12
<i>Aricidea (Acmira) rubra</i>	0.00	0.04	0.0006	0.06	84.19
<i>Caprella simia</i>	0.09	0.00	0.0006	0.06	84.25
<i>Drilonereis</i> sp	0.05	0.01	0.0006	0.06	84.31
<i>Caprella</i> sp	0.08	0.00	0.0006	0.06	84.38
<i>Mactrotoma californica</i>	0.06	0.00	0.0006	0.06	84.44
<i>Nicippe tumida</i>	0.00	0.06	0.0006	0.06	84.51
<i>Tellina</i> sp B	0.01	0.06	0.0006	0.06	84.57
<i>Nebalia puggettensis</i> Cmplx	0.08	0.00	0.0006	0.06	84.64
<i>Glycera branchiopoda</i>	0.00	0.04	0.0006	0.06	84.70
<i>Acuminodeutopus heteruropus</i>	0.07	0.00	0.0006	0.06	84.77
<i>Eudorella pacifica</i>	0.00	0.05	0.0006	0.06	84.83
<i>Ampelisca cristata cristata</i>	0.06	0.00	0.0006	0.06	84.89
<i>Balanoglossus</i> sp	0.00	0.04	0.0006	0.06	84.96
<i>Listriolobus hexamyotus</i>	0.00	0.04	0.0006	0.06	85.02
Calyptaeidae	0.06	0.00	0.0006	0.06	85.08
<i>Brada pilosa</i>	0.01	0.04	0.0006	0.06	85.14
<i>Terebellides</i> sp	0.00	0.04	0.0006	0.06	85.20
<i>Ampelisca pugetica</i>	0.00	0.05	0.0006	0.06	85.26
<i>Araphura cuspirostris</i>	0.00	0.05	0.0006	0.06	85.32
<i>Malmgreniella</i> sp A	0.02	0.04	0.0006	0.06	85.38
<i>Aristias</i> sp DC1	0.00	0.04	0.0006	0.06	85.44
<i>Owenia collaris</i>	0.05	0.00	0.0006	0.06	85.50
<i>Adontorhina lynnae</i>	0.00	0.04	0.0006	0.06	85.56
<i>Levinsenia oculata</i>	0.00	0.04	0.0006	0.06	85.61

<i>Ampelisca brachycladus</i>	0.06	0.00	0.0006	0.06	85.67
<i>Fauveliopsis</i> sp	0.00	0.04	0.0006	0.06	85.73
<i>Psammotreta obesa</i>	0.06	0.00	0.0006	0.06	85.78
<i>Ypsilothuria bitentaculata</i>	0.00	0.04	0.0005	0.06	85.84
<i>Acanthoptilum</i> sp	0.05	0.00	0.0005	0.06	85.90
<i>Monoculodes latissimanus</i>	0.00	0.05	0.0005	0.06	85.95
<i>Anobothrus gracilis</i>	0.00	0.05	0.0005	0.06	86.01
<i>Podocerus cristatus</i>	0.05	0.00	0.0005	0.06	86.06
<i>Zygonemertes virescens</i>	0.07	0.00	0.0005	0.06	86.12
<i>Spatangus californicus</i>	0.00	0.04	0.0005	0.06	86.17
<i>Lucinoma aequizonatum</i>	0.00	0.04	0.0005	0.05	86.23
<i>Heteromastus</i> sp	0.00	0.04	0.0005	0.05	86.28
Spirorbinae	0.06	0.00	0.0005	0.05	86.33
<i>Harpiniopsis emeryi</i>	0.00	0.04	0.0005	0.05	86.39
<i>Podarkeopsis glabrus</i>	0.05	0.01	0.0005	0.05	86.44
Ophiuridae	0.03	0.02	0.0005	0.05	86.49
<i>Cylichna diegensis</i>	0.04	0.02	0.0005	0.05	86.55
<i>Excirrolana chiltoni</i>	0.02	0.00	0.0005	0.05	86.60
<i>Acteocina inculta</i>	0.04	0.00	0.0005	0.05	86.65
<i>Metaphoxus frequens</i>	0.00	0.04	0.0005	0.05	86.70
<i>Solemya perverncosa</i>	0.00	0.04	0.0005	0.05	86.75
<i>Ampelisca cristata microdentata</i>	0.05	0.00	0.0005	0.05	86.80
<i>Diastylis</i> sp DC1	0.00	0.03	0.0005	0.05	86.85
<i>Exogone</i> sp	0.03	0.00	0.0005	0.05	86.90
Caprellidae	0.06	0.00	0.0005	0.05	86.95
Lumbrineridae	0.03	0.02	0.0005	0.05	87.00
<i>Califia calida</i>	0.00	0.04	0.0005	0.05	87.05
<i>Bathymedon flebilis</i>	0.00	0.03	0.0005	0.05	87.10
<i>Polycirrus</i> sp	0.02	0.04	0.0005	0.05	87.15
<i>Chiridota</i> sp	0.00	0.04	0.0005	0.05	87.20
<i>Goniada maculata</i>	0.04	0.01	0.0005	0.05	87.24

<i>Nephasoma diaphanes</i>	0.00	0.04	0.0005	0.05	87.29
<i>Harpiniopsis fulgens</i>	0.00	0.05	0.0005	0.05	87.34
<i>Apoprionospio pygmaea</i>	0.06	0.00	0.0005	0.05	87.39
<i>Majoidea</i>	0.05	0.00	0.0005	0.05	87.44
<i>Pyromaia tuberculata</i>	0.05	0.00	0.0005	0.05	87.48
<i>Mooreamytha bioculata</i>	0.00	0.04	0.0005	0.05	87.53
<i>Acteocina culcitella</i>	0.04	0.00	0.0005	0.05	87.58
<i>Photis</i> sp	0.03	0.03	0.0005	0.05	87.63
<i>Corymorpha palma</i>	0.03	0.01	0.0005	0.05	87.67
<i>Amphipholis</i> sp	0.02	0.02	0.0005	0.05	87.72
<i>Lysippe</i> sp B	0.00	0.04	0.0005	0.05	87.76
<i>Spathoderma californicum</i>	0.00	0.03	0.0004	0.05	87.81
<i>Periploma rosewateri</i>	0.00	0.03	0.0004	0.05	87.86
<i>Edwardsia juliae</i>	0.04	0.00	0.0004	0.05	87.90
<i>Halcampa decententaculata</i>	0.02	0.02	0.0004	0.05	87.95
<i>Nasageneia quinsana</i>	0.07	0.00	0.0004	0.05	87.99
<i>Diopatra tridentata</i>	0.04	0.00	0.0004	0.05	88.04
<i>Maldane</i> sp	0.00	0.03	0.0004	0.04	88.08
<i>Spiophanes wigleyi</i>	0.00	0.03	0.0004	0.04	88.13
<i>Brania californiensis</i>	0.07	0.00	0.0004	0.04	88.17
<i>Malmgreniella sanpedroensis</i>	0.00	0.05	0.0004	0.04	88.22
<i>Lineus bilineatus</i>	0.01	0.04	0.0004	0.04	88.26
<i>Pholoe glabra</i>	0.03	0.03	0.0004	0.04	88.31
<i>Heptacarpus stimpsoni</i>	0.05	0.00	0.0004	0.04	88.35
Gastropoda	0.01	0.03	0.0004	0.04	88.39
<i>Paradexamine</i> sp SD1	0.07	0.00	0.0004	0.04	88.44
<i>Arynchite californicus</i>	0.00	0.03	0.0004	0.04	88.48
<i>Diopatra</i> sp	0.05	0.00	0.0004	0.04	88.52
<i>Rhodine bitorquata</i>	0.00	0.04	0.0004	0.04	88.57
<i>Streblosoma</i> sp	0.04	0.00	0.0004	0.04	88.61
<i>Aphelochaeta tigrina</i>	0.00	0.05	0.0004	0.04	88.65

<i>Ampelisca</i> sp	0.00	0.04	0.0004	0.04	88.70
Terebellidae	0.02	0.02	0.0004	0.04	88.74
<i>Astyris aurantiaca</i>	0.06	0.00	0.0004	0.04	88.78
<i>Rhamphidonta retifera</i>	0.04	0.00	0.0004	0.04	88.83
<i>Mysidopsis californica</i>	0.04	0.00	0.0004	0.04	88.87
<i>Nuculana</i> sp B	0.00	0.05	0.0004	0.04	88.91
<i>Protula superba</i>	0.00	0.02	0.0004	0.04	88.95
<i>Saccoglossus</i> sp	0.00	0.03	0.0004	0.04	89.00
<i>Thyasiridae</i> sp SD1	0.00	0.03	0.0004	0.04	89.04
<i>Amphioplus strongyloplax</i>	0.00	0.04	0.0004	0.04	89.08
<i>Tenonia priops</i>	0.04	0.00	0.0004	0.04	89.12
<i>Valettiopsis</i> sp DC1	0.00	0.03	0.0004	0.04	89.17
<i>Virgularia</i> sp	0.00	0.02	0.0004	0.04	89.21
<i>Glyphanostomum pallescens</i>	0.00	0.03	0.0004	0.04	89.25
Serpulidae	0.06	0.00	0.0004	0.04	89.29
<i>Myxoderma platyacanthum</i>	0.00	0.02	0.0004	0.04	89.33
<i>Paradiopatra parva</i>	0.00	0.04	0.0004	0.04	89.38
<i>Alienacanthomysis macropsis</i>	0.04	0.00	0.0004	0.04	89.42
<i>Nuttallia nuttallii</i>	0.01	0.00	0.0004	0.04	89.46
<i>Gastropteron pacificum</i>	0.00	0.03	0.0004	0.04	89.50
<i>Foxiphalus similis</i>	0.00	0.03	0.0004	0.04	89.54
<i>Crucibulum spinosum</i>	0.04	0.00	0.0004	0.04	89.58
Hoplonephertea	0.01	0.02	0.0004	0.04	89.62
<i>Nereis</i> sp SD1	0.00	0.03	0.0004	0.04	89.66
<i>Orchomenella decipiens</i>	0.00	0.05	0.0004	0.04	89.70
<i>Amaeana occidentalis</i>	0.03	0.00	0.0004	0.04	89.74
Gnathiidae	0.02	0.03	0.0004	0.04	89.78
<i>Polydora cornuta</i>	0.04	0.00	0.0004	0.04	89.82
<i>Scalibregma californicum</i>	0.04	0.01	0.0004	0.04	89.86
<i>Westwoodilla tone</i>	0.02	0.02	0.0004	0.04	89.90
<i>Byblis</i> sp	0.00	0.02	0.0004	0.04	89.94

<i>Protodorvillea gracilis</i>	0.02	0.00	0.0004	0.04	89.98
<i>Acteocina</i> sp	0.04	0.00	0.0004	0.04	90.02

Table G2. SIMPER results comparing the species composition of Embayment samples to Offshore samples, as designated in Figure 2. Mean Bray-Curtis Dissimilarity between the two groups was 0.937. The $\log_{10}(\text{abundance} + 1)$ for each taxon that was in the top 90% of dissimilarity contributors is presented, along with its mean Bray Curtis dissimilarity value, its % contribution to the average dissimilarity between the Embayments and Offshore groups, and the cumulative % dissimilarity.

Taxon	Embayment log Abun	Offshore Log Abun	Mean Dissimilarity	% Contribution to Dissimilarity	% Cumulative Contribution
<i>Leitoscoloplos pugettensis</i>	1.73	0.13	0.0104	1.11	1.11
<i>Spiochaetopterus costarum</i> Cmplx	0.15	1.83	0.01	1.07	2.18
<i>Mediomastus</i> sp	1.50	1.81	0.0097	1.03	3.21
<i>Theora lubrica</i>	1.45	0.00	0.0094	1.00	4.21
<i>Scoletoma</i> sp C	1.31	0.02	0.0085	0.90	5.12
<i>Scoletoma</i> sp	1.31	0.14	0.0082	0.87	5.99
<i>Spiophanes duplex</i>	0.56	1.48	0.008	0.85	6.84
<i>Chloeria pinnata</i>	0.00	1.17	0.0076	0.81	7.65
<i>Cossura</i> sp A	1.12	0.44	0.0075	0.80	8.45
<i>Paraprionospio alata</i>	0.29	1.24	0.0073	0.78	9.23
<i>Amphiodia urtica</i>	0.26	1.13	0.0071	0.76	9.99
<i>Pseudopolydora paucibranchiata</i>	1.15	0.00	0.0071	0.76	10.75
<i>Euphilomedes carcharodonta</i>	0.73	0.91	0.0071	0.75	11.50
<i>Exogone lourei</i>	1.03	0.37	0.0067	0.71	12.21
Oligochaeta	1.04	0.25	0.0066	0.71	12.92
<i>Prionospio (Prionospio) jubata</i>	0.08	1.24	0.0064	0.69	13.61
<i>Euchone limnicola</i>	1.03	0.01	0.0062	0.67	14.27
<i>Petaloclymene pacifica</i>	0.51	0.81	0.0061	0.65	14.92
Amphiuridae	0.14	1.01	0.006	0.64	15.57
<i>Amphideutopus oculatus</i>	0.94	0.24	0.0058	0.62	16.19
Maldanidae	0.42	0.93	0.0058	0.62	16.81
<i>Scoletoma tetraura</i> Cmplx	0.10	0.86	0.0058	0.62	17.42
<i>Amphiodia</i> sp	0.17	0.94	0.0058	0.62	18.04
<i>Spiophanes norrisi</i>	0.02	1.07	0.0058	0.62	18.66

<i>Tellina carpenteri</i>	0.00	0.95	0.0058	0.62	19.28
<i>Musculista senhousia</i>	0.92	0.00	0.0058	0.61	19.89
<i>Grandidierella japonica</i>	0.88	0.00	0.0056	0.60	20.49
<i>Leptochelia dubia Cmplx</i>	0.40	0.86	0.0052	0.56	21.05
<i>Tagelus affinis</i>	0.82	0.00	0.0052	0.55	21.60
<i>Phoronis</i> sp	0.58	0.59	0.0052	0.55	22.15
<i>Euclymeninae</i> sp A	0.37	0.79	0.005	0.53	22.69
<i>Monticellina cryptica</i>	0.28	0.83	0.005	0.53	23.22
<i>Sthenelanella uniformis</i>	0.04	0.96	0.0048	0.52	23.74
<i>Aphelochaeta monilaris</i>	0.35	0.62	0.0048	0.51	24.24
<i>Megalomma pigmentum</i>	0.76	0.08	0.0048	0.51	24.75
<i>Prionospio</i> (<i>Prionospio</i>) <i>heterobranchia</i>	0.79	0.00	0.0047	0.50	25.25
<i>Tellina modesta</i>	0.10	0.69	0.0046	0.49	25.74
<i>Pectinaria californiensis</i>	0.12	0.67	0.0045	0.48	26.23
<i>Kurtiella tumida</i>	0.16	0.74	0.0045	0.48	26.71
<i>Pholoe glabra</i>	0.03	0.78	0.0045	0.48	27.19
<i>Monticellina siblina</i>	0.24	0.69	0.0044	0.47	27.65
<i>Spiophanes kimballi</i>	0.00	0.69	0.0043	0.46	28.12
<i>Aphelochaeta glandaria Cmplx</i>	0.06	0.77	0.0043	0.46	28.58
<i>Nephtys ferruginea</i>	0.01	0.70	0.0043	0.46	29.03
<i>Lyonsia californica</i>	0.68	0.06	0.0042	0.45	29.48
<i>Pista wui</i>	0.29	0.43	0.0042	0.45	29.93
<i>Spiophanes berkeleyorum</i>	0.17	0.71	0.0041	0.44	30.37
<i>Ampelisca brevisimulata</i>	0.06	0.72	0.004	0.43	30.80
<i>Sternaspis affinis</i>	0.00	0.66	0.004	0.43	31.23
<i>Diplocirrus</i> sp SD1	0.63	0.00	0.0039	0.42	31.65
<i>Photis</i> sp	0.03	0.78	0.0039	0.41	32.06
<i>Euphilomedes producta</i>	0.00	0.64	0.0038	0.41	32.47
<i>Glycera nana</i>	0.01	0.64	0.0038	0.41	32.87
<i>Neotrypaea gigas</i>	0.60	0.03	0.0038	0.40	33.28

<i>Lumbrineris cruzensis</i>	0.03	0.64	0.0038	0.40	33.68
<i>Tubulanus polymorphus</i>	0.35	0.49	0.0037	0.39	34.08
<i>Glycinde armigera</i>	0.02	0.56	0.0036	0.39	34.46
<i>Prionospio (Minusprio) lighti</i>	0.37	0.39	0.0036	0.38	34.85
<i>Rhepoxynius bicuspidatus</i>	0.00	0.59	0.0035	0.38	35.23
<i>Axinopsida serricata</i>	0.02	0.53	0.0035	0.37	35.60
<i>Acteocina carinata</i>	0.50	0.00	0.0034	0.37	35.97
Lineidae	0.22	0.53	0.0034	0.36	36.32
<i>Ampelisca careyi</i>	0.00	0.57	0.0033	0.35	36.67
<i>Neotrypaea</i> sp	0.39	0.22	0.0033	0.35	37.02
<i>Parvilucina tenuisculpta</i>	0.03	0.59	0.0032	0.35	37.37
<i>Macoma yoldiformis</i>	0.13	0.47	0.0032	0.34	37.71
<i>Nereis</i> sp A	0.13	0.54	0.0032	0.34	38.05
<i>Mayerella acanthopoda</i>	0.51	0.00	0.003	0.33	38.37
<i>Tellina</i> sp B	0.01	0.49	0.003	0.32	38.69
<i>Glottidia albida</i>	0.00	0.57	0.003	0.32	39.01
<i>Scoletoma</i> sp A	0.47	0.01	0.003	0.32	39.32
<i>Heterophoxus oculatus</i>	0.07	0.50	0.003	0.32	39.64
<i>Nuculana</i> sp A	0.00	0.47	0.0029	0.31	39.95
<i>Listriella goleta</i>	0.31	0.27	0.0029	0.31	40.27
<i>Pista brevibranchiata</i>	0.41	0.19	0.0029	0.31	40.58
<i>Photis brevipes</i>	0.03	0.55	0.0028	0.30	40.88
<i>Ampelisca agassizi</i>	0.00	0.50	0.0028	0.30	41.18
<i>Levinsenia gracilis</i>	0.05	0.46	0.0028	0.30	41.48
<i>Byblis millsii</i>	0.00	0.55	0.0028	0.30	41.78
<i>Rhepoxynius menziesi</i>	0.00	0.43	0.0028	0.30	42.07
<i>Caecognathia crenulatifrons</i>	0.03	0.45	0.0028	0.30	42.37
<i>Cossura candida</i>	0.22	0.29	0.0027	0.29	42.66
<i>Rictaxis punctocaelatus</i>	0.25	0.29	0.0027	0.29	42.95
<i>Leptosynapta</i> sp	0.31	0.26	0.0027	0.29	43.24
<i>Paranemertes californica</i>	0.31	0.33	0.0027	0.29	43.53

<i>Notomastus hemipodus</i>	0.12	0.44	0.0027	0.29	43.81
<i>Cossura</i> sp	0.31	0.19	0.0027	0.28	44.10
<i>Glycera americana</i>	0.36	0.22	0.0026	0.28	44.38
<i>Amphipholis squamata</i>	0.45	0.12	0.0026	0.28	44.66
<i>Heterophoxus</i> cf <i>ellisi</i>	0.43	0.00	0.0026	0.27	44.93
<i>Ampelisca cristata cristata</i>	0.06	0.40	0.0026	0.27	45.20
<i>Edwardsia californica</i>	0.43	0.01	0.0025	0.27	45.47
<i>Protomediea articulata</i> Cmplx	0.00	0.38	0.0025	0.27	45.74
<i>Neanthes acuminata</i> Cmplx	0.46	0.00	0.0025	0.27	46.01
<i>Kurtzina beta</i>	0.00	0.43	0.0025	0.27	46.28
<i>Prionospio</i> (<i>Prionospio</i>) <i>dubia</i>	0.00	0.46	0.0025	0.26	46.55
<i>Compressidens stearnsii</i>	0.00	0.32	0.0025	0.26	46.81
<i>Polyschides quadrifissatus</i>	0.00	0.37	0.0024	0.26	47.07
<i>Phyllodoce hartmanae</i>	0.03	0.44	0.0024	0.26	47.33
<i>Maldane sarsi</i>	0.00	0.35	0.0024	0.26	47.58
<i>Photis californica</i>	0.01	0.49	0.0024	0.25	47.84
<i>Praxillella pacifica</i>	0.11	0.36	0.0024	0.25	48.09
<i>Capitella capitata</i> Cmplx	0.28	0.08	0.0024	0.25	48.34
<i>Rudilemboides stenopropodus</i>	0.41	0.05	0.0024	0.25	48.59
<i>Fabricinuda limnicola</i>	0.43	0.00	0.0023	0.25	48.84
<i>Gadila aberrans</i>	0.08	0.35	0.0023	0.25	49.09
<i>Westwoodilla tone</i>	0.02	0.43	0.0023	0.24	49.33
<i>Armandia brevis</i>	0.38	0.03	0.0023	0.24	49.58
<i>Travisia brevis</i>	0.00	0.37	0.0023	0.24	49.82
<i>Scoletoma</i> sp B	0.37	0.00	0.0022	0.24	50.06
<i>Macoma carlottensis</i>	0.01	0.29	0.0022	0.24	50.30
<i>Nephtys caecoides</i>	0.09	0.33	0.0022	0.24	50.53
<i>Rhepoxynius stenodes</i>	0.00	0.40	0.0022	0.24	50.77
<i>Volvulella panamica</i>	0.21	0.22	0.0022	0.24	51.01
<i>Decamastus gracilis</i>	0.02	0.41	0.0022	0.23	51.24
<i>Laonice cirrata</i>	0.24	0.19	0.0022	0.23	51.47

<i>Nuculana taphria</i>	0.10	0.30	0.0021	0.23	51.70
<i>Ampelisca hancocki</i>	0.00	0.35	0.0021	0.22	51.92
<i>Terebellides californica</i>	0.04	0.33	0.0021	0.22	52.14
<i>Amphicteis scaphobranchiata</i>	0.19	0.24	0.0021	0.22	52.36
<i>Paradiopatra parva</i>	0.00	0.32	0.002	0.22	52.58
<i>Scleroplax granulata</i>	0.34	0.02	0.002	0.22	52.80
<i>Thyasira flexuosa</i>	0.12	0.26	0.002	0.21	53.01
<i>Foxiphalus obtusidens</i>	0.00	0.38	0.0019	0.21	53.21
<i>Laevicardium substriatum</i>	0.29	0.00	0.0019	0.20	53.42
<i>Phoronis sp SD1</i>	0.10	0.27	0.0019	0.20	53.62
<i>Ampharete labrops</i>	0.13	0.23	0.0019	0.20	53.82
<i>Listriolobus pelodes</i>	0.06	0.23	0.0019	0.20	54.02
<i>Ampelisca pugetica</i>	0.00	0.38	0.0019	0.20	54.22
<i>Goniada littorea</i>	0.15	0.13	0.0019	0.20	54.42
<i>Scoloplos armiger Cmplx</i>	0.00	0.31	0.0018	0.19	54.61
<i>Goniada maculata</i>	0.04	0.31	0.0018	0.19	54.80
<i>Dialychnone veleronis</i>	0.00	0.36	0.0018	0.19	54.99
<i>Solen sicarius</i>	0.07	0.25	0.0018	0.19	55.18
<i>Amphiodia digitata</i>	0.05	0.26	0.0018	0.19	55.37
<i>Diastylopsis tenuis</i>	0.00	0.22	0.0017	0.18	55.55
<i>Asthenothaerus diegensis</i>	0.28	0.01	0.0017	0.18	55.73
<i>Ceriantharia</i>	0.02	0.31	0.0017	0.18	55.91
<i>Malmgreniella sanpedroensis</i>	0.00	0.21	0.0017	0.18	56.09
<i>Photis lacia</i>	0.00	0.39	0.0017	0.18	56.27
<i>Melinna oculata</i>	0.08	0.27	0.0017	0.18	56.45
<i>Aphelochaeta sp</i>	0.07	0.26	0.0017	0.18	56.62
<i>Streblosoma sp B</i>	0.22	0.10	0.0016	0.18	56.80
<i>Streblospio benedicti</i>	0.25	0.00	0.0016	0.18	56.97
<i>Sigalion spinosus</i>	0.00	0.24	0.0016	0.17	57.15
<i>Pherusa neopapillata</i>	0.02	0.30	0.0016	0.17	57.32
<i>Pinnotheridae</i>	0.26	0.03	0.0016	0.17	57.50

<i>Ampelisca pacifica</i>	0.00	0.28	0.0016	0.17	57.67
<i>Metasychis disparidentatus</i>	0.12	0.17	0.0016	0.17	57.83
<i>Haliophasma geminatum</i>	0.00	0.32	0.0016	0.17	58.00
<i>Heteronemertea</i> sp SD2	0.01	0.31	0.0016	0.17	58.17
<i>Monocorophium acherusicum</i>	0.27	0.00	0.0016	0.17	58.34
<i>Cyllichna diegensis</i>	0.04	0.26	0.0015	0.17	58.50
<i>Saxicavella pacifica</i>	0.00	0.19	0.0015	0.17	58.67
<i>Dorvillea (Schistomerings) sp</i>	0.25	0.03	0.0015	0.16	58.83
<i>Phyllodoce longipes</i>	0.00	0.32	0.0015	0.16	58.99
<i>Stereobalanus</i> sp	0.00	0.26	0.0015	0.16	59.16
<i>Aricidea (Acmira) catherinae</i>	0.02	0.29	0.0015	0.16	59.32
<i>Zeuxo normani</i>	0.28	0.01	0.0015	0.16	59.48
<i>Arachnanthus</i> sp A	0.01	0.30	0.0015	0.16	59.64
<i>Odostomia</i> sp	0.04	0.23	0.0015	0.16	59.81
<i>Cooperella subdiaphana</i>	0.11	0.16	0.0015	0.16	59.97
<i>Palaeonemertea</i>	0.09	0.23	0.0015	0.16	60.13
<i>Amphissa undata</i>	0.00	0.37	0.0015	0.16	60.29
<i>Foxiphalus similis</i>	0.00	0.29	0.0015	0.16	60.45
<i>Magelona sacculata</i>	0.00	0.22	0.0015	0.16	60.61
<i>Chaetozone hartmanna</i>	0.01	0.27	0.0015	0.16	60.76
<i>Ampelisca</i> sp	0.00	0.27	0.0015	0.16	60.92
<i>Dipolydora socialis</i>	0.02	0.27	0.0014	0.15	61.08
<i>Cirratulidae</i>	0.07	0.23	0.0014	0.15	61.23
<i>Lineus bilineatus</i>	0.01	0.29	0.0014	0.15	61.38
<i>Sthenelais tertia glabra</i>	0.02	0.24	0.0014	0.15	61.54
<i>Bulla gouldiana</i>	0.20	0.00	0.0014	0.15	61.69
<i>Asteroidea</i>	0.00	0.28	0.0014	0.15	61.84
<i>Paramage scutata</i>	0.18	0.09	0.0014	0.15	61.99
<i>Schizocardium</i> sp	0.05	0.21	0.0014	0.15	62.14
<i>Onuphis</i> sp A	0.01	0.20	0.0014	0.15	62.29
<i>Aphelochaeta tigrina</i>	0.00	0.26	0.0014	0.15	62.44

<i>Tellina meropsis</i>	0.22	0.01	0.0014	0.15	62.59
Actiniaria	0.18	0.09	0.0014	0.15	62.74
<i>Ericthonius brasiliensis</i>	0.22	0.08	0.0014	0.15	62.88
<i>Compsomyax subdiaphana</i>	0.04	0.21	0.0014	0.15	63.03
<i>Owenia collaris</i>	0.05	0.23	0.0014	0.15	63.18
<i>Turbonilla</i> sp	0.02	0.23	0.0014	0.15	63.32
<i>Rhabdus rectius</i>	0.00	0.17	0.0014	0.15	63.47
<i>Typosyllis heterochaeta</i>	0.00	0.27	0.0014	0.15	63.61
<i>Phascolion</i> sp A	0.00	0.26	0.0013	0.14	63.76
<i>Carinoma mutabilis</i>	0.05	0.17	0.0013	0.14	63.90
<i>Monticellina tesselata</i>	0.00	0.26	0.0013	0.14	64.04
<i>Eudorella pacifica</i>	0.00	0.26	0.0013	0.14	64.19
<i>Barleeia haliotiphila</i>	0.24	0.00	0.0013	0.14	64.33
<i>Podocerus fulanus</i>	0.26	0.00	0.0013	0.14	64.47
<i>Lumbrineris</i> sp	0.01	0.25	0.0013	0.14	64.61
<i>Pinnixa</i> sp	0.10	0.15	0.0013	0.14	64.76
<i>Chaetozone columbiana</i>	0.00	0.23	0.0013	0.14	64.90
<i>Lysippe</i> sp A	0.01	0.26	0.0013	0.14	65.04
<i>Scoloplos acmeceps</i>	0.19	0.02	0.0013	0.14	65.18
<i>Ennucula tenuis</i>	0.00	0.20	0.0013	0.14	65.32
<i>Haminoea vesicula</i>	0.19	0.00	0.0013	0.14	65.45
<i>Diopatra</i> sp	0.05	0.21	0.0013	0.14	65.59
<i>Aglaophamus verrilli</i>	0.00	0.20	0.0013	0.14	65.73
Phoronida	0.17	0.06	0.0013	0.14	65.87
<i>Anobothrus gracilis</i>	0.00	0.24	0.0013	0.14	66.01
<i>Drilonereis</i> sp	0.05	0.21	0.0013	0.14	66.14
<i>Pista estevanica</i>	0.00	0.24	0.0013	0.13	66.28
<i>Apoprionospio pygmaea</i>	0.06	0.15	0.0013	0.13	66.41
<i>Diastylis crenellata</i>	0.00	0.23	0.0013	0.13	66.55
<i>Periploma discus</i>	0.18	0.07	0.0012	0.13	66.68
<i>Aoroides</i> sp A	0.00	0.27	0.0012	0.13	66.81

<i>Solen rostriformis</i>	0.20	0.00	0.0012	0.13	66.94
<i>Cuspidaria parapodema</i>	0.00	0.19	0.0012	0.13	67.07
<i>Magelona berkeleyi</i>	0.01	0.23	0.0012	0.13	67.20
<i>Rhepoxyinius abronius</i>	0.00	0.18	0.0012	0.13	67.33
<i>Heterophoxus</i> sp	0.07	0.16	0.0012	0.13	67.46
<i>Scalibregma californicum</i>	0.04	0.21	0.0012	0.13	67.58
<i>Tubulanus</i> sp A	0.08	0.15	0.0012	0.13	67.71
<i>Malmgreniella</i> sp A	0.02	0.19	0.0012	0.13	67.83
<i>Macoma nasuta</i>	0.15	0.04	0.0012	0.12	67.96
<i>Heteronemertea</i>	0.13	0.07	0.0011	0.12	68.08
<i>Eochelidium</i> sp A	0.20	0.00	0.0011	0.12	68.20
<i>Paracerceis sculpta</i>	0.25	0.00	0.0011	0.12	68.32
<i>Oxyurostylis pacifica</i>	0.16	0.02	0.0011	0.12	68.45
<i>Heterophoxus ellisi</i>	0.00	0.17	0.0011	0.12	68.57
<i>Foxiphalus golfensis</i>	0.03	0.21	0.0011	0.12	68.68
<i>Chaetoderma pacificum</i>	0.00	0.17	0.0011	0.12	68.80
<i>Notomastus tenuis</i>	0.18	0.01	0.0011	0.12	68.92
Bivalvia	0.09	0.11	0.0011	0.12	69.04
<i>Mooreonuphis nebulosa</i>	0.00	0.25	0.0011	0.12	69.15
<i>Melinna heterodonta</i>	0.00	0.13	0.0011	0.12	69.27
<i>Malmgreniella macginitieei</i>	0.12	0.08	0.0011	0.12	69.39
Ampharetidae	0.02	0.19	0.0011	0.11	69.50
<i>Ninoe tridentata</i>	0.07	0.12	0.0011	0.11	69.61
<i>Xenoleberis californica</i>	0.04	0.17	0.001	0.11	69.73
<i>Anoplodactylus erectus</i>	0.16	0.02	0.001	0.11	69.84
<i>Ampelisca brachycladus</i>	0.06	0.14	0.001	0.11	69.95
Enteropneusta	0.02	0.19	0.001	0.11	70.06
<i>Actiniaria</i> sp 1	0.21	0.00	0.001	0.11	70.17
<i>Onuphis iridescent</i>	0.00	0.11	0.001	0.11	70.28
<i>Balanoglossus</i> sp	0.00	0.17	0.001	0.11	70.39
<i>Pinnixa franciscana</i>	0.15	0.03	0.001	0.11	70.50

Sabellidae	0.12	0.06	0.001	0.11	70.61
<i>Goniada brunnea</i>	0.00	0.14	0.001	0.11	70.71
<i>Gammaropsis ociosa</i>	0.00	0.19	0.001	0.11	70.82
<i>Gymnonereis crosslandi</i>	0.00	0.17	0.001	0.11	70.93
<i>Aruga oculata</i>	0.00	0.20	0.001	0.11	71.03
<i>Schmittius politus</i>	0.15	0.00	0.001	0.10	71.14
<i>Bipalponephthys cornuta</i>	0.12	0.07	0.001	0.10	71.24
Tubulanidae	0.06	0.12	0.001	0.10	71.34
<i>Sigambra</i> sp DC1	0.12	0.06	0.0009	0.10	71.44
<i>Polycirrus</i> sp A	0.00	0.19	0.0009	0.10	71.54
<i>Lumbrineris ligulata</i>	0.00	0.20	0.0009	0.10	71.64
<i>Aphelochaeta</i> sp HYP5	0.00	0.17	0.0009	0.10	71.74
<i>Podarkeopsis glabrus</i>	0.05	0.14	0.0009	0.10	71.84
<i>Platynereis bicanaliculata</i>	0.02	0.17	0.0009	0.10	71.94
<i>Hartmanodes hartmaeae</i>	0.11	0.07	0.0009	0.10	72.04
<i>Ophiura luetkenii</i>	0.00	0.16	0.0009	0.10	72.13
<i>Cryptomya californica</i>	0.14	0.00	0.0009	0.10	72.23
<i>Malmgreniella baschi</i>	0.00	0.13	0.0009	0.10	72.33
<i>Streblosoma crassibranchia</i>	0.08	0.11	0.0009	0.10	72.43
<i>Alvania rosana</i>	0.00	0.18	0.0009	0.10	72.52
<i>Photis parvidons</i>	0.00	0.15	0.0009	0.10	72.62
<i>Micrura alaskensis</i>	0.08	0.10	0.0009	0.10	72.71
<i>Poecilochaetus johnsoni</i>	0.00	0.17	0.0009	0.10	72.81
<i>Chaetozone corona</i>	0.10	0.07	0.0009	0.10	72.91
<i>Hesperonoe laevis</i>	0.00	0.13	0.0009	0.09	73.00
<i>Protohyale</i> sp	0.19	0.00	0.0009	0.09	73.09
<i>Heterophoxus affinis</i>	0.00	0.14	0.0009	0.09	73.19
<i>Monocorophium</i> sp	0.14	0.00	0.0009	0.09	73.28
<i>Caprella californica</i>	0.15	0.04	0.0009	0.09	73.38
<i>Alpheus californiensis</i>	0.14	0.00	0.0009	0.09	73.47
<i>Poecilochaetus martini</i>	0.08	0.08	0.0009	0.09	73.56

<i>Pandora bilirata</i>	0.00	0.13	0.0009	0.09	73.66
<i>Lumbrineris japonica</i>	0.09	0.09	0.0009	0.09	73.75
<i>Odontosyllis phosphorea</i>	0.08	0.11	0.0009	0.09	73.84
<i>Pista</i> sp	0.06	0.11	0.0009	0.09	73.93
<i>Pseudofabriciola californica</i>	0.10	0.08	0.0009	0.09	74.02
<i>Aphelochaeta</i> sp LA1	0.00	0.17	0.0008	0.09	74.11
<i>Orchomenella decipiens</i>	0.00	0.13	0.0008	0.09	74.20
<i>Aoridae</i>	0.03	0.15	0.0008	0.09	74.29
<i>Ampharete finmarchica</i>	0.00	0.16	0.0008	0.09	74.38
<i>Ampelisca cristata microdentata</i>	0.05	0.11	0.0008	0.09	74.47
<i>Amphiura arcystata</i>	0.00	0.13	0.0008	0.09	74.55
<i>Hoplonemertea</i>	0.01	0.15	0.0008	0.09	74.64
<i>Monocorophium insidiosum</i>	0.12	0.00	0.0008	0.09	74.73
<i>Typosyllis nipponica</i>	0.15	0.00	0.0008	0.09	74.81
<i>Edwardsiidae</i>	0.11	0.03	0.0008	0.09	74.90
<i>Yoldia seminuda</i>	0.00	0.09	0.0008	0.09	74.98
<i>Monoculodes emarginatus</i>	0.00	0.12	0.0008	0.08	75.07
<i>Amaeana occidentalis</i>	0.03	0.10	0.0008	0.08	75.15
<i>Malmgreniella scriptoria</i>	0.00	0.09	0.0008	0.08	75.23
<i>Gammaropsis thompsoni</i>	0.00	0.18	0.0008	0.08	75.32
<i>Paradialychone ecaudata</i>	0.02	0.16	0.0008	0.08	75.40
<i>Lucinoma annulatum</i>	0.00	0.13	0.0008	0.08	75.48
<i>Magelona hartmanae</i>	0.00	0.13	0.0008	0.08	75.56
<i>Marphysa disjuncta</i>	0.12	0.03	0.0008	0.08	75.64
<i>Exogone</i> sp A	0.12	0.01	0.0008	0.08	75.73
<i>Phyllodoce groenlandica</i>	0.00	0.11	0.0008	0.08	75.81
<i>Prionospio (Minuspio)</i> <i>multibranchiata</i>	0.13	0.00	0.0008	0.08	75.89
<i>Leukoma staminea</i>	0.10	0.01	0.0008	0.08	75.97
<i>Neastacilla californica</i>	0.10	0.05	0.0007	0.08	76.05
<i>Americhelidium shoemakeri</i>	0.00	0.10	0.0007	0.08	76.13

<i>Lirobittium</i> sp	0.01	0.14	0.0007	0.08	76.20
<i>Nutricola tantilla</i>	0.14	0.00	0.0007	0.08	76.28
<i>Phyllodoce</i> sp	0.00	0.15	0.0007	0.08	76.36
<i>Brada pluribranchiata</i>	0.00	0.11	0.0007	0.08	76.44
<i>Chiridota</i> sp	0.00	0.14	0.0007	0.08	76.52
<i>Macoma</i> sp	0.03	0.10	0.0007	0.08	76.60
<i>Brisaster</i> sp	0.00	0.08	0.0007	0.08	76.67
<i>Limifossor fratula</i>	0.00	0.08	0.0007	0.08	76.75
<i>Laonice nuchala</i>	0.01	0.11	0.0007	0.08	76.83
<i>Lumbrineridae</i>	0.03	0.12	0.0007	0.08	76.91
<i>Tellina cadieni</i>	0.09	0.03	0.0007	0.08	76.98
<i>Amphichondrius granulatus</i>	0.00	0.13	0.0007	0.08	77.06
<i>Lysippe</i> sp B	0.00	0.12	0.0007	0.08	77.13
<i>Sinocorophium heteroceratum</i>	0.11	0.00	0.0007	0.07	77.21
<i>Paranthura japonica</i> Cmplx	0.14	0.00	0.0007	0.07	77.28
<i>Nicippe tumida</i>	0.00	0.10	0.0007	0.07	77.36
<i>Dialychnone albocincta</i>	0.02	0.14	0.0007	0.07	77.43
<i>Eyakia robusta</i>	0.00	0.11	0.0007	0.07	77.50
<i>Siphonosoma ingens</i>	0.01	0.09	0.0007	0.07	77.57
<i>Dougaloplus amphacanthus</i>	0.00	0.11	0.0007	0.07	77.64
<i>Gibberosus myersi</i>	0.00	0.08	0.0007	0.07	77.72
<i>Ampelisciphotis podophthalma</i>	0.00	0.14	0.0007	0.07	77.79
Nereididae	0.10	0.03	0.0007	0.07	77.86
Cancridae	0.03	0.10	0.0007	0.07	77.93
<i>Photis</i> sp OC1	0.01	0.09	0.0007	0.07	78.00
Ophiuroidea	0.00	0.13	0.0007	0.07	78.07
<i>Glycera macrobranchia</i>	0.01	0.07	0.0007	0.07	78.14
<i>Edwardsia juliae</i>	0.04	0.09	0.0007	0.07	78.21
<i>Levinsenia</i> sp B	0.01	0.13	0.0007	0.07	78.28
<i>Micranellum crebricinctum</i>	0.00	0.15	0.0006	0.07	78.35
<i>Tenonia priops</i>	0.04	0.08	0.0006	0.07	78.42

<i>Araphura breviaria</i>	0.00	0.12	0.0006	0.07	78.49
<i>Aricidea (Acmira) simplex</i>	0.00	0.12	0.0006	0.07	78.55
<i>Kurtiella compressa</i>	0.04	0.07	0.0006	0.07	78.62
<i>Chaetozone lunula</i>	0.01	0.09	0.0006	0.07	78.69
<i>Calyptaeidae</i>	0.06	0.07	0.0006	0.07	78.76
<i>Amphioplus</i> sp A	0.00	0.13	0.0006	0.07	78.83
<i>Paramicrodeutopus schmitti</i>	0.13	0.02	0.0006	0.07	78.90
<i>Thysanocardia nigra</i>	0.02	0.12	0.0006	0.07	78.96
<i>Malmgreniella</i> sp	0.04	0.07	0.0006	0.07	79.03
<i>Aphelochaeta</i> sp HYP8	0.00	0.12	0.0006	0.07	79.10
<i>Aphelochaeta williamsae</i>	0.00	0.11	0.0006	0.07	79.17
<i>Sphaeromatidae</i>	0.10	0.02	0.0006	0.07	79.23
<i>Turbanilla</i> sp A	0.00	0.10	0.0006	0.07	79.30
<i>Zygeupolia rubens</i>	0.01	0.10	0.0006	0.07	79.37
<i>Pinnixa occidentalis</i> Cmplx	0.00	0.10	0.0006	0.07	79.43
<i>Podocopida</i>	0.05	0.06	0.0006	0.07	79.50
<i>Alia tuberosa</i>	0.01	0.13	0.0006	0.07	79.56
<i>Listriella melanica</i>	0.07	0.05	0.0006	0.07	79.63
<i>Polycirrus</i> sp	0.02	0.11	0.0006	0.06	79.69
<i>Mesolamprops bispinosus</i>	0.00	0.11	0.0006	0.06	79.76
<i>Ampelisca romigi</i>	0.00	0.14	0.0006	0.06	79.82
<i>Typosyllis hyperionti</i>	0.02	0.12	0.0006	0.06	79.89
<i>Pherusa negligens</i>	0.12	0.00	0.0006	0.06	79.95
<i>Modiolinae</i>	0.01	0.10	0.0006	0.06	80.02
<i>Heteromastus filobranchus</i>	0.00	0.05	0.0006	0.06	80.08
<i>Philine</i> sp A	0.08	0.03	0.0006	0.06	80.14
<i>Phyllochaetopterus limicolus</i>	0.00	0.08	0.0006	0.06	80.21
<i>Artacamella hancocki</i>	0.00	0.12	0.0006	0.06	80.27
<i>Hemilamprops californicus</i>	0.00	0.11	0.0006	0.06	80.33
<i>Diopatra tridentata</i>	0.04	0.07	0.0006	0.06	80.39
<i>Asteropella slatteryi</i>	0.00	0.10	0.0006	0.06	80.46

<i>Aricidea (Acmira) horikoshii</i>	0.04	0.07	0.0006	0.06	80.52
<i>Photis bifurcata</i>	0.00	0.12	0.0006	0.06	80.58
<i>Polydora cirrosa</i>	0.01	0.07	0.0006	0.06	80.64
<i>Carazziella</i> sp A	0.00	0.10	0.0006	0.06	80.70
<i>Cyathodonta pedroana</i>	0.08	0.02	0.0006	0.06	80.77
Scaphopoda	0.01	0.07	0.0006	0.06	80.83
<i>Rhepoxyinius variatus</i>	0.00	0.10	0.0006	0.06	80.89
<i>Cerebratulus californiensis</i>	0.01	0.09	0.0006	0.06	80.95
<i>Astropecten californicus</i>	0.00	0.10	0.0006	0.06	81.01
Echinoidea	0.00	0.12	0.0006	0.06	81.06
<i>Scoletoma erecta</i>	0.09	0.00	0.0006	0.06	81.12
<i>Alienacanthomysis macropsis</i>	0.04	0.03	0.0006	0.06	81.18
<i>Phtisica marina</i>	0.10	0.00	0.0006	0.06	81.24
<i>Nebalia pugettensis</i> Cmplx	0.08	0.04	0.0005	0.06	81.30
<i>Rhepoxyinius lucubrans</i>	0.00	0.09	0.0005	0.06	81.36
<i>Aphelochaeta petersenae</i>	0.05	0.05	0.0005	0.06	81.42
<i>Paradialychone paramollis</i>	0.00	0.11	0.0005	0.06	81.47
<i>Heteroserolis carinata</i>	0.09	0.00	0.0005	0.06	81.53
<i>Aoroides</i> sp	0.01	0.13	0.0005	0.06	81.59
<i>Ophiuroconis bispinosa</i>	0.00	0.12	0.0005	0.06	81.65
Chaetozone sp	0.02	0.08	0.0005	0.06	81.70
<i>Harmothoe imbricata</i> Cmplx	0.12	0.00	0.0005	0.06	81.76
<i>Tanaella propinquus</i>	0.00	0.09	0.0005	0.06	81.82
<i>Proclea</i> sp A	0.00	0.09	0.0005	0.06	81.87
<i>Acteocina culcitella</i>	0.04	0.04	0.0005	0.06	81.93
<i>Monticellina serratiseta</i>	0.01	0.08	0.0005	0.06	81.99
<i>Arcularia tiarula</i>	0.08	0.00	0.0005	0.06	82.04
<i>Scolanthus triangulus</i>	0.00	0.09	0.0005	0.06	82.10
<i>Scolelepis (Parascolelepis) texana</i>	0.09	0.00	0.0005	0.06	82.15
<i>Ampelisca indentata</i>	0.00	0.11	0.0005	0.06	82.21
<i>Piromis capulata</i>	0.09	0.02	0.0005	0.06	82.27

<i>Nemocardium centifilosum</i>	0.00	0.09	0.0005	0.06	82.32
<i>Paradialychone harrisae</i>	0.00	0.13	0.0005	0.06	82.38
<i>Scleroconcha trituberculata</i>	0.00	0.08	0.0005	0.06	82.43
<i>Philine auriformis</i>	0.06	0.02	0.0005	0.06	82.49
<i>Protodorvillea gracilis</i>	0.02	0.08	0.0005	0.06	82.54
<i>Terebellides reishi</i>	0.00	0.09	0.0005	0.06	82.60
<i>Astropecten</i> sp	0.00	0.10	0.0005	0.05	82.65
Gnathiidae	0.02	0.09	0.0005	0.05	82.71
<i>Sthenelais</i> sp	0.00	0.09	0.0005	0.05	82.76
<i>Venerupis philippinarum</i>	0.07	0.00	0.0005	0.05	82.82
<i>Eunice americana</i>	0.00	0.08	0.0005	0.05	82.87
<i>Polydora nuchalis</i>	0.07	0.00	0.0005	0.05	82.93
<i>Pholoides asperus</i>	0.00	0.13	0.0005	0.05	82.98
<i>Kurtiella grippi</i>	0.03	0.06	0.0005	0.05	83.04
<i>Phisidia sanctaemariae</i>	0.00	0.10	0.0005	0.05	83.09
<i>Caprella mendax</i>	0.00	0.10	0.0005	0.05	83.14
<i>Metamysidopsis elongata</i>	0.01	0.05	0.0005	0.05	83.20
Brachyura	0.06	0.03	0.0005	0.05	83.25
<i>Scolanthus scamiti</i>	0.08	0.01	0.0005	0.05	83.30
<i>Chauliopleona dentata</i>	0.00	0.10	0.0005	0.05	83.36
<i>Aglaja ocelligera</i>	0.01	0.08	0.0005	0.05	83.41
<i>Polygireulima rutila</i>	0.01	0.08	0.0005	0.05	83.46
Majoidea	0.05	0.05	0.0005	0.05	83.51
<i>Phyllochaetopterus prolifica</i>	0.01	0.10	0.0005	0.05	83.56
<i>Urothoe elegans</i> Cmplx	0.00	0.10	0.0005	0.05	83.62
<i>Diopatra ornata</i>	0.02	0.07	0.0005	0.05	83.67
<i>Malacoplax californiensis</i>	0.07	0.00	0.0005	0.05	83.72
<i>Monticellina</i> sp 1	0.07	0.02	0.0005	0.05	83.77
<i>Mayerella banksia</i>	0.00	0.10	0.0005	0.05	83.82
<i>Procampylaspis caenosa</i>	0.00	0.09	0.0005	0.05	83.87
<i>Eulalia levicornuta</i> Cmplx	0.00	0.09	0.0005	0.05	83.92

<i>Ampharete</i> sp	0.00	0.08	0.0005	0.05	83.97
<i>Aoroides inermis</i>	0.00	0.09	0.0005	0.05	84.02
<i>Amphipholis</i> sp	0.02	0.08	0.0005	0.05	84.07
<i>Leptopecten latiauratus</i>	0.02	0.06	0.0005	0.05	84.12
<i>Notopoma</i> sp A	0.01	0.06	0.0005	0.05	84.17
<i>Elasmopus bampo</i>	0.09	0.00	0.0005	0.05	84.22
<i>Ensis myrae</i>	0.00	0.08	0.0005	0.05	84.27
<i>Tryonia imitator</i>	0.07	0.00	0.0005	0.05	84.32
<i>Mooreonuphis segmentispadix</i>	0.00	0.07	0.0005	0.05	84.37
<i>Halcampa decemtentaculata</i>	0.02	0.05	0.0004	0.05	84.41
<i>Adontorhina cyclia</i>	0.00	0.07	0.0004	0.05	84.46
<i>Ampelisca cf brevisimulata</i>	0.00	0.08	0.0004	0.05	84.51
Veneridae	0.03	0.04	0.0004	0.05	84.56
<i>Nereis latescens</i>	0.01	0.07	0.0004	0.05	84.60
<i>Spiophanes</i> sp	0.00	0.07	0.0004	0.05	84.65
<i>Lumbrineris index</i>	0.03	0.04	0.0004	0.05	84.70
<i>Clymenura gracilis</i>	0.00	0.07	0.0004	0.05	84.74
<i>Barleeia subtenuis</i>	0.08	0.00	0.0004	0.05	84.79
<i>Euchone incolor</i>	0.00	0.10	0.0004	0.05	84.84
<i>Mooreonuphis</i> sp	0.00	0.08	0.0004	0.05	84.88
<i>Amphiura</i> sp	0.00	0.08	0.0004	0.05	84.93
<i>Hamatoscalpellum californicum</i>	0.00	0.10	0.0004	0.05	84.98
<i>Ambidexter panamensis</i>	0.07	0.00	0.0004	0.05	85.02
<i>Caprella</i> sp	0.08	0.02	0.0004	0.05	85.07
<i>Paleanotus bellis</i>	0.00	0.08	0.0004	0.05	85.12
<i>Streblosoma</i> sp	0.04	0.04	0.0004	0.05	85.16
<i>Nebalia daytoni</i>	0.00	0.07	0.0004	0.05	85.21
<i>Jasmineira</i> sp B	0.00	0.09	0.0004	0.05	85.26
<i>Aricidea (Allia)</i> sp A	0.00	0.08	0.0004	0.05	85.30
<i>Caesia perpinguis</i>	0.00	0.07	0.0004	0.05	85.35
Terebellidae	0.02	0.06	0.0004	0.05	85.39

<i>Betaeus ensenadensis</i>	0.07	0.00	0.0004	0.05	85.44
Onuphidae	0.00	0.08	0.0004	0.05	85.49
<i>Arcteobia cf anticostiensis</i>	0.03	0.07	0.0004	0.05	85.53
<i>Argissa hamatipes</i>	0.01	0.07	0.0004	0.05	85.58
<i>Onuphis</i> sp	0.00	0.08	0.0004	0.04	85.62
<i>Branchiostoma californiense</i>	0.00	0.04	0.0004	0.04	85.67
<i>Hippomedon zetesimus</i>	0.02	0.05	0.0004	0.04	85.71
<i>Pyromia tuberculata</i>	0.05	0.03	0.0004	0.04	85.76
<i>Hartmanodes</i> sp SD1	0.07	0.02	0.0004	0.04	85.80
Spionidae	0.02	0.05	0.0004	0.04	85.84
<i>Tubulanus cingulatus</i>	0.02	0.07	0.0004	0.04	85.89
<i>Americhelidium</i> sp SD4	0.00	0.09	0.0004	0.04	85.93
<i>Exogone dwisula</i>	0.00	0.09	0.0004	0.04	85.98
<i>Myriochele olgae</i>	0.00	0.06	0.0004	0.04	86.02
<i>Metaphoxus frequens</i>	0.00	0.09	0.0004	0.04	86.06
<i>Aricidea (Aricidea) wassi</i>	0.00	0.08	0.0004	0.04	86.11
<i>Asabellides lineata</i>	0.00	0.10	0.0004	0.04	86.15
<i>Tubulanus</i> sp SD1	0.06	0.00	0.0004	0.04	86.19
<i>Micropodarke dubia</i>	0.00	0.11	0.0004	0.04	86.24
<i>Crepipatella lingulata</i>	0.07	0.00	0.0004	0.04	86.28
<i>Aricidea (Allia) antennata</i>	0.00	0.07	0.0004	0.04	86.32
<i>Pleusymtes subglaber</i>	0.00	0.09	0.0004	0.04	86.36
<i>Eclysippe trilobata</i>	0.00	0.07	0.0004	0.04	86.41
<i>Dendraster</i> sp	0.00	0.05	0.0004	0.04	86.45
<i>Tagelus</i> sp	0.06	0.00	0.0004	0.04	86.49
<i>Caprella simia</i>	0.09	0.00	0.0004	0.04	86.54
<i>Spiophanes fimbriata</i>	0.00	0.06	0.0004	0.04	86.58
<i>Maera jerrica</i>	0.01	0.08	0.0004	0.04	86.62
<i>Hippomedon columbianus</i>	0.00	0.06	0.0004	0.04	86.66
<i>Glossaulax reclusianus</i>	0.00	0.06	0.0004	0.04	86.71
<i>Halicoides synopiae</i>	0.00	0.09	0.0004	0.04	86.75

<i>Volvulella cylindrica</i>	0.00	0.06	0.0004	0.04	86.79
<i>Scyphoproctus oculatus</i>	0.07	0.00	0.0004	0.04	86.83
<i>Tetrastremma albidum</i>	0.02	0.08	0.0004	0.04	86.87
<i>Gammaropsis</i> sp	0.00	0.09	0.0004	0.04	86.91
<i>Kurtzia arteaga</i>	0.00	0.09	0.0004	0.04	86.95
<i>Orchomenella pacifica</i>	0.00	0.08	0.0004	0.04	87.00
<i>Glycera oxycephala</i>	0.00	0.06	0.0004	0.04	87.04
<i>Sphaerosyllis californiensis</i>	0.02	0.07	0.0004	0.04	87.08
Balanidae	0.00	0.07	0.0004	0.04	87.12
<i>Brisaster latifrons</i>	0.00	0.05	0.0004	0.04	87.16
<i>Podocerus cristatus</i>	0.05	0.02	0.0004	0.04	87.20
<i>Rutiderma lomae</i>	0.00	0.10	0.0004	0.04	87.24
<i>Photis macrotica</i>	0.00	0.08	0.0004	0.04	87.28
<i>Hemipodia borealis</i>	0.03	0.03	0.0004	0.04	87.32
<i>Notomastus</i> sp	0.04	0.02	0.0004	0.04	87.36
<i>Acuminodeutopus heteruropus</i>	0.07	0.00	0.0004	0.04	87.40
<i>Listriella eriopisa</i>	0.03	0.03	0.0004	0.04	87.44
<i>Americhelidium rectipalmum</i>	0.04	0.05	0.0004	0.04	87.48
<i>Prionospio</i> sp	0.02	0.06	0.0004	0.04	87.52
<i>Chaetozone</i> sp SD5	0.00	0.05	0.0004	0.04	87.56
<i>Acanthoptilum</i> sp	0.05	0.02	0.0004	0.04	87.60
<i>Astyris aurantiaca</i>	0.06	0.03	0.0004	0.04	87.64
<i>Pisione</i> sp	0.00	0.06	0.0004	0.04	87.68
<i>Amygdalum pallidulum</i>	0.00	0.07	0.0004	0.04	87.71
<i>Postasterope barnesi</i>	0.09	0.01	0.0004	0.04	87.75
<i>Brania californiensis</i>	0.07	0.01	0.0004	0.04	87.79
<i>Ampelisca unsocalae</i>	0.00	0.05	0.0004	0.04	87.83
<i>Heteromysis odontops</i>	0.06	0.00	0.0004	0.04	87.87
Decapoda	0.00	0.05	0.0004	0.04	87.91
<i>Aphelochaeta phillipsi</i>	0.00	0.07	0.0004	0.04	87.94
<i>Siliqua lucida</i>	0.00	0.04	0.0004	0.04	87.98

<i>Mactrotoma californica</i>	0.06	0.00	0.0004	0.04	88.02
<i>Bathymedon pumilus</i>	0.00	0.06	0.0004	0.04	88.06
<i>Falcidens longus</i>	0.00	0.07	0.0004	0.04	88.09
<i>Polycirrus</i> sp OC1	0.01	0.07	0.0003	0.04	88.13
<i>Caprellidae</i>	0.06	0.02	0.0003	0.04	88.17
<i>Anonyx lilljeborgi</i>	0.00	0.05	0.0003	0.04	88.21
<i>Polydora cornuta</i>	0.04	0.03	0.0003	0.04	88.24
<i>Harpiniopsis epistomata</i>	0.00	0.02	0.0003	0.04	88.28
<i>Dialychnone trilineata</i>	0.00	0.07	0.0003	0.04	88.32
<i>Edwardsia olguini</i>	0.00	0.07	0.0003	0.04	88.35
<i>Terebellides</i> sp	0.00	0.07	0.0003	0.04	88.39
<i>Aphelochaeta</i> sp SD5	0.05	0.01	0.0003	0.04	88.43
<i>Notomastus magnus</i>	0.04	0.01	0.0003	0.04	88.46
<i>Magelona</i> sp B	0.00	0.05	0.0003	0.04	88.50
<i>Brissopsis pacifica</i>	0.00	0.05	0.0003	0.04	88.54
Gastropoda	0.01	0.04	0.0003	0.04	88.57
<i>Ericthonius rubricornis</i>	0.00	0.07	0.0003	0.04	88.61
<i>Chaetodermatida</i>	0.00	0.05	0.0003	0.04	88.64
<i>Ampharete acutifrons</i>	0.00	0.06	0.0003	0.04	88.68
<i>Dipolydora</i> sp	0.01	0.06	0.0003	0.04	88.72
<i>Solemya pervernicolor</i>	0.00	0.07	0.0003	0.03	88.75
<i>Zygonemertes virescens</i>	0.07	0.00	0.0003	0.03	88.78
<i>Notocirrus californiensis</i>	0.00	0.06	0.0003	0.03	88.82
<i>Megabalanus californicus</i>	0.01	0.04	0.0003	0.03	88.85
<i>Eudorellopsis longirostris</i>	0.00	0.07	0.0003	0.03	88.89
<i>Rhodine bitorquata</i>	0.00	0.06	0.0003	0.03	88.92
<i>Psammotreta obesa</i>	0.06	0.00	0.0003	0.03	88.96
<i>Nutricola ovalis</i>	0.00	0.07	0.0003	0.03	88.99
<i>Acteocina cerealis</i>	0.00	0.06	0.0003	0.03	89.03
<i>Ampithoe</i> sp	0.05	0.02	0.0003	0.03	89.06
<i>Pholoe</i> sp B	0.00	0.08	0.0003	0.03	89.09

<i>Listriella</i> sp	0.01	0.03	0.0003	0.03	89.13
<i>Nuculana hamata</i>	0.00	0.08	0.0003	0.03	89.16
<i>Prionospio (Prionospio) ehlersi</i>	0.00	0.03	0.0003	0.03	89.19
<i>Monticellina</i> sp	0.00	0.05	0.0003	0.03	89.23
<i>Cyclocardia ventricosa</i>	0.00	0.05	0.0003	0.03	89.26
<i>Deflexilodes norvegicus</i>	0.00	0.06	0.0003	0.03	89.30
<i>Chaetoderma nanulum</i>	0.00	0.04	0.0003	0.03	89.33
<i>Owenia johnsoni</i>	0.00	0.08	0.0003	0.03	89.36
<i>Kurtziella plumbea</i>	0.01	0.05	0.0003	0.03	89.40
<i>Solamen columbianum</i>	0.00	0.08	0.0003	0.03	89.43
<i>Lucinisca nuttalli</i>	0.02	0.04	0.0003	0.03	89.46
<i>Sige</i> sp A	0.00	0.07	0.0003	0.03	89.50
<i>Gastropteron pacificum</i>	0.00	0.05	0.0003	0.03	89.53
<i>Stylochus exiguus</i>	0.04	0.02	0.0003	0.03	89.56
<i>Cerebratulus</i> sp	0.03	0.02	0.0003	0.03	89.60
<i>Lumbrineris latreilli</i>	0.02	0.04	0.0003	0.03	89.63
<i>Parandalia fauveti</i>	0.01	0.06	0.0003	0.03	89.66
<i>Guernea reduncans</i>	0.00	0.07	0.0003	0.03	89.70
<i>Eumida longicornuta</i>	0.00	0.06	0.0003	0.03	89.73
<i>Lumbrineris</i> sp E	0.04	0.03	0.0003	0.03	89.76
<i>Spirorbinae</i>	0.06	0.00	0.0003	0.03	89.79
<i>Balcis micans</i>	0.00	0.04	0.0003	0.03	89.83
<i>Amage anops</i>	0.00	0.05	0.0003	0.03	89.86
<i>Glycera</i> sp	0.01	0.04	0.0003	0.03	89.89
<i>Leuroleberis sharpei</i>	0.00	0.07	0.0003	0.03	89.92
<i>Rhynchospio arenincola</i>	0.03	0.02	0.0003	0.03	89.95
<i>Eranno lagunae</i>	0.00	0.05	0.0003	0.03	89.99
<i>Tiron biocellata</i>	0.00	0.05	0.0003	0.03	90.02

Table G3. SIMPER results comparing the species composition of Deep Water samples to Offshore samples, as designated in Figure 2. Mean Bray-Curtis Dissimilarity between the two groups was 0.948. The $\log_{10}(\text{abundance} + 1)$ for each taxon that was in the top 90% of dissimilarity contributors is presented, along with its mean Bray Curtis dissimilarity value, its % contribution to the average dissimilarity between the Deep Water and Offshore groups, and the cumulative % dissimilarity.

Taxon	Deep Water $\log \text{Abun}$	Offshore $\log \text{Abun}$	Mean Dissimilarity	% Contribution to Dissimilarity	% Cumulative Contribution
<i>Spiochaetopterus costarum</i> Cmplx	0.10	1.83	0.0125	1.31	1.31
<i>Mediomastus</i> sp	0.29	1.81	0.012	1.26	2.58
<i>Chloea pinnata</i>	0.64	1.17	0.0109	1.15	3.73
<i>Spiophanes duplex</i>	0.02	1.48	0.0096	1.02	4.75
<i>Paraprionospio alata</i>	0.51	1.24	0.0094	0.99	5.74
<i>Tellina carpenteri</i>	0.42	0.95	0.0084	0.88	6.62
<i>Amphiodia urtica</i>	0.05	1.13	0.0084	0.88	7.51
<i>Prionospio (Prionospio) jubata</i>	0.05	1.24	0.0077	0.82	8.32
Amphiuridae	0.20	1.01	0.0075	0.79	9.12
<i>Scoletoma tetraura</i> Cmplx	0.12	0.86	0.0071	0.75	9.87
<i>Amphiodia</i> sp	0.04	0.94	0.007	0.74	10.60
<i>Spiophanes norrisi</i>	0.00	1.07	0.007	0.73	11.34
Maldanidae	0.30	0.93	0.0066	0.69	12.03
<i>Euphilomedes carcharodonta</i>	0.04	0.91	0.0062	0.65	12.68
<i>Pectinaria californiensis</i>	0.21	0.67	0.006	0.64	13.32
<i>Petaloclymene pacifica</i>	0.08	0.81	0.0059	0.62	13.94
<i>Spiophanes kimballi</i>	0.16	0.69	0.0058	0.61	14.55
<i>Monticellina cryptica</i>	0.20	0.83	0.0058	0.61	15.17
<i>Aphelochaeta monilaris</i>	0.35	0.62	0.0057	0.61	15.77
<i>Sthenelanella uniformis</i>	0.01	0.96	0.0057	0.60	16.37
<i>Aphelochaeta glandaria</i> Cmplx	0.19	0.77	0.0055	0.58	16.96
<i>Pholoe glabra</i>	0.03	0.78	0.0054	0.57	17.53
<i>Tellina modesta</i>	0.00	0.69	0.0054	0.57	18.11

<i>Euclymeninae</i> sp A	0.08	0.79	0.0054	0.57	18.68
<i>Macoma carlottensis</i>	0.48	0.29	0.0054	0.57	19.24
<i>Nephtys ferruginea</i>	0.13	0.70	0.0054	0.57	19.81
<i>Maldane sarsi</i>	0.45	0.35	0.0052	0.55	20.36
<i>Kurtiella tumida</i>	0.03	0.74	0.0052	0.55	20.91
<i>Sternaspis affinis</i>	0.03	0.66	0.005	0.53	21.44
<i>Lumbrineris cruzensis</i>	0.13	0.64	0.0049	0.52	21.96
<i>Ampelisca brevisimulata</i>	0.04	0.72	0.0048	0.51	22.47
<i>Euphilomedes producta</i>	0.02	0.64	0.0048	0.51	22.97
<i>Glycera nana</i>	0.21	0.64	0.0048	0.51	23.48
<i>Axinopsida serricata</i>	0.15	0.53	0.0048	0.51	23.99
<i>Leptochelia dubia</i> Cmplx	0.00	0.86	0.0048	0.51	24.49
<i>Pista wui</i>	0.10	0.43	0.0047	0.50	24.99
<i>Spiophanes berkeleyorum</i>	0.03	0.71	0.0047	0.50	25.49
<i>Glycinde armigera</i>	0.20	0.56	0.0046	0.48	25.97
<i>Monticellina siblina</i>	0.03	0.69	0.0046	0.48	26.45
<i>Photis</i> sp	0.03	0.78	0.0046	0.48	26.93
<i>Compressidens stearnsii</i>	0.30	0.32	0.0045	0.48	27.41
<i>Rhepoxyinius bicuspidatus</i>	0.04	0.59	0.0044	0.47	27.88
<i>Byblis barbarensis</i>	0.48	0.00	0.0043	0.46	28.33
<i>Parvilucina tenuisculpta</i>	0.15	0.59	0.0042	0.45	28.78
<i>Phoronis</i> sp	0.08	0.59	0.0042	0.44	29.22
<i>Ampelisca careyi</i>	0.03	0.57	0.004	0.42	29.64
Lineidae	0.18	0.53	0.0039	0.41	30.05
<i>Tellina</i> sp B	0.06	0.49	0.0039	0.41	30.46
<i>Nuculana</i> sp A	0.01	0.47	0.0036	0.38	30.85
<i>Caecognathia crenulatifrons</i>	0.10	0.45	0.0036	0.38	31.23
<i>Glottidia albida</i>	0.02	0.57	0.0036	0.38	31.61
<i>Macoma yoldiformis</i>	0.00	0.47	0.0036	0.38	31.99
<i>Nereis</i> sp A	0.00	0.54	0.0035	0.37	32.36
<i>Tubulanus polymorphus</i>	0.03	0.49	0.0034	0.36	32.72

<i>Protomediea articulata</i> Cmplx	0.07	0.38	0.0034	0.36	33.09
<i>Rhepoxynius menziesi</i>	0.00	0.43	0.0034	0.36	33.45
<i>Levinsenia gracilis</i>	0.08	0.46	0.0034	0.36	33.81
<i>Ampelisca agassizi</i>	0.00	0.50	0.0034	0.36	34.17
<i>Heterophoxus oculatus</i>	0.01	0.50	0.0034	0.35	34.52
<i>Byblis millsi</i>	0.00	0.55	0.0033	0.35	34.87
<i>Photis brevipes</i>	0.00	0.55	0.0033	0.35	35.22
<i>Eclysippe trilobata</i>	0.35	0.07	0.0032	0.34	35.56
<i>Kurtzina beta</i>	0.02	0.43	0.0031	0.33	35.88
<i>Polyschides quadrifissatus</i>	0.01	0.37	0.0031	0.33	36.21
<i>Prionospio (Minusprio) lighti</i>	0.12	0.39	0.0031	0.33	36.54
<i>Prionospio (Prionospio) dubia</i>	0.04	0.46	0.0031	0.32	36.86
<i>Prionospio (Prionospio) ehlersi</i>	0.34	0.03	0.003	0.32	37.18
<i>Onuphis iridescent</i>	0.27	0.11	0.003	0.32	37.51
<i>Notomastus hemipodus</i>	0.05	0.44	0.003	0.32	37.82
Ophiuroidae	0.33	0.13	0.003	0.32	38.14
<i>Limifossor fratula</i>	0.29	0.08	0.0029	0.31	38.45
<i>Ampelisca cristata</i> cristata	0.00	0.40	0.0029	0.30	38.75
<i>Melinna heterodonta</i>	0.22	0.13	0.0029	0.30	39.06
<i>Saxicavella pacifica</i>	0.12	0.19	0.0028	0.30	39.36
<i>Cossura</i> sp A	0.02	0.44	0.0028	0.30	39.66
<i>Photis californica</i>	0.01	0.49	0.0028	0.30	39.95
<i>Decamastus gracilis</i>	0.07	0.41	0.0028	0.30	40.25
<i>Phyllodoce hartmanae</i>	0.00	0.44	0.0028	0.29	40.54
<i>Travisia brevis</i>	0.00	0.37	0.0028	0.29	40.83
<i>Westwoodilla tone</i>	0.02	0.43	0.0027	0.29	41.12
<i>Rhepoxynius stenodes</i>	0.00	0.40	0.0027	0.28	41.41
<i>Heteromastus filobranchus</i>	0.23	0.05	0.0027	0.28	41.69
<i>Terebellides californica</i>	0.09	0.33	0.0027	0.28	41.97
<i>Paradiopatra parva</i>	0.04	0.32	0.0027	0.28	42.26
<i>Ampelisca unsocalae</i>	0.29	0.05	0.0027	0.28	42.54

<i>Ampelisca hancocki</i>	0.02	0.35	0.0026	0.28	42.82
<i>Cossura candida</i>	0.10	0.29	0.0026	0.28	43.09
<i>Stereobalanus</i> sp	0.12	0.26	0.0026	0.27	43.37
<i>Praxillella pacifica</i>	0.03	0.36	0.0026	0.27	43.64
<i>Exogone lourei</i>	0.02	0.37	0.0025	0.27	43.91
<i>Gadila aberrans</i>	0.00	0.35	0.0025	0.26	44.17
<i>Phyllochaetopterus limicolus</i>	0.20	0.08	0.0025	0.26	44.44
<i>Rhabdus rectius</i>	0.14	0.17	0.0025	0.26	44.70
<i>Ampelisca pugetica</i>	0.05	0.38	0.0025	0.26	44.96
<i>Malmgreniella sanpedroensis</i>	0.05	0.21	0.0024	0.25	45.21
<i>Heterophoxus ellisi</i>	0.18	0.17	0.0024	0.25	45.46
<i>Ampharetidae</i>	0.19	0.19	0.0024	0.25	45.71
<i>Rictaxis punctocaelatus</i>	0.06	0.29	0.0024	0.25	45.96
<i>Falcidens hartmanae</i>	0.27	0.00	0.0023	0.25	46.21
<i>Foxiphalus obtusidens</i>	0.01	0.38	0.0023	0.25	46.45
<i>Nephtys caecoides</i>	0.00	0.33	0.0023	0.25	46.70
<i>Aphelochaeta</i> sp	0.12	0.26	0.0022	0.24	46.94
<i>Thyasira flexuosa</i>	0.07	0.26	0.0022	0.23	47.17
<i>Diastylopsis tenuis</i>	0.00	0.22	0.0022	0.23	47.40
<i>Scoloplos armiger</i> Cmplx	0.00	0.31	0.0022	0.23	47.63
<i>Ennucula tenuis</i>	0.12	0.20	0.0022	0.23	47.87
<i>Nuculana taphria</i>	0.00	0.30	0.0022	0.23	48.10
<i>Ceriantharia</i>	0.05	0.31	0.0022	0.23	48.33
<i>Listriolobus pelodes</i>	0.02	0.23	0.0022	0.23	48.56
<i>Phoronis</i> sp SD1	0.07	0.27	0.0021	0.22	48.78
<i>Dialychone veleronis</i>	0.00	0.36	0.0021	0.22	49.00
<i>Pherusa neopapillata</i>	0.05	0.30	0.0021	0.22	49.22
<i>Diastylis pellucida</i>	0.24	0.03	0.0021	0.22	49.44
<i>Amphiodia digitata</i>	0.04	0.26	0.0021	0.22	49.67
<i>Heteronemertea</i> sp SD2	0.06	0.31	0.0021	0.22	49.88
<i>Paranemertes californica</i>	0.01	0.33	0.0021	0.22	50.10

<i>Sigalion spinosus</i>	0.00	0.24	0.0021	0.22	50.32
<i>Lumbrineris</i> sp	0.11	0.25	0.002	0.22	50.54
<i>Ampelisca pacifica</i>	0.03	0.28	0.002	0.21	50.75
<i>Harpiniopsis epistomata</i>	0.19	0.02	0.002	0.21	50.97
<i>Goniada maculata</i>	0.01	0.31	0.002	0.21	51.18
<i>Fauveliopsis glabra</i>	0.26	0.00	0.002	0.21	51.39
<i>Listriella goleta</i>	0.00	0.27	0.002	0.21	51.60
<i>Foxiphalus similis</i>	0.03	0.29	0.002	0.21	51.81
<i>Chaetoderma pacificum</i>	0.12	0.17	0.0019	0.21	52.02
<i>Photis lacia</i>	0.00	0.39	0.0019	0.20	52.22
<i>Ampelisca</i> sp	0.04	0.27	0.0019	0.20	52.42
<i>Odostomia</i> sp	0.05	0.23	0.0019	0.20	52.62
<i>Magelona sacculata</i>	0.00	0.22	0.0019	0.20	52.83
<i>Leptosynapta</i> sp	0.04	0.26	0.0019	0.20	53.03
<i>Haliophasma geminatum</i>	0.02	0.32	0.0019	0.20	53.23
<i>Enteropneusta</i>	0.10	0.19	0.0019	0.20	53.43
<i>Eudorella pacifica</i>	0.05	0.26	0.0019	0.20	53.62
<i>Aphelochaeta tigrina</i>	0.05	0.26	0.0019	0.20	53.82
<i>Amphissa bicolor</i>	0.20	0.03	0.0018	0.19	54.01
<i>Cylichna diegensis</i>	0.02	0.26	0.0018	0.19	54.21
<i>Solen sicarius</i>	0.00	0.25	0.0018	0.19	54.40
Asteroidea	0.03	0.28	0.0018	0.19	54.59
Cirratulidae	0.08	0.23	0.0018	0.19	54.78
<i>Phyllodoce longipes</i>	0.00	0.32	0.0018	0.19	54.97
<i>Lineus bilineatus</i>	0.04	0.29	0.0018	0.19	55.16
<i>Onuphis</i> sp A	0.00	0.20	0.0018	0.19	55.35
<i>Anobothrus gracilis</i>	0.05	0.24	0.0018	0.18	55.53
<i>Aricidea (Acmira) catherinae</i>	0.01	0.29	0.0017	0.18	55.72
<i>Arachnanthus</i> sp A	0.00	0.30	0.0017	0.18	55.90
<i>Amphissa undata</i>	0.01	0.37	0.0017	0.18	56.08
<i>Phascolion</i> sp A	0.03	0.26	0.0017	0.18	56.27

<i>Chaetozone hartmanae</i>	0.00	0.27	0.0017	0.18	56.45
<i>Sthenelais tertiglabra</i>	0.01	0.24	0.0017	0.18	56.62
<i>Brisaster</i> sp	0.11	0.08	0.0017	0.18	56.80
<i>Monticellina tessellata</i>	0.03	0.26	0.0017	0.18	56.98
<i>Volvulella panamica</i>	0.02	0.22	0.0017	0.18	57.16
<i>Typosyllis heterochaeta</i>	0.02	0.27	0.0017	0.18	57.33
<i>Neotrypaea</i> sp	0.00	0.22	0.0017	0.18	57.51
<i>Paralysippe annectens</i>	0.18	0.00	0.0017	0.17	57.68
<i>Yoldiella nana</i>	0.22	0.00	0.0017	0.17	57.86
<i>Schizocardium</i> sp	0.03	0.21	0.0017	0.17	58.03
<i>Turbanilla</i> sp	0.02	0.23	0.0017	0.17	58.21
<i>Aglaophamus verrilli</i>	0.00	0.20	0.0016	0.17	58.38
Oligochaeta	0.04	0.25	0.0016	0.17	58.55
<i>Melinna oculata</i>	0.01	0.27	0.0016	0.17	58.72
<i>Dipolydora socialis</i>	0.00	0.27	0.0016	0.17	58.90
<i>Cuspidaria parapodema</i>	0.04	0.19	0.0016	0.17	59.07
<i>Pista estevanica</i>	0.03	0.24	0.0016	0.17	59.24
<i>Bipalponephrys cornuta</i>	0.15	0.07	0.0016	0.17	59.41
<i>Chaetozone columbiana</i>	0.00	0.23	0.0016	0.17	59.58
Palaeonemertea	0.04	0.23	0.0016	0.17	59.75
<i>Ampharete labrops</i>	0.00	0.23	0.0016	0.17	59.92
<i>Cossura</i> sp	0.03	0.19	0.0016	0.17	60.08
<i>Amphicteis scaphobranchiata</i>	0.01	0.24	0.0016	0.17	60.25
<i>Astyris permodesta</i>	0.17	0.00	0.0016	0.17	60.42
<i>Leitoscoloplos</i> sp A	0.19	0.01	0.0016	0.17	60.58
<i>Cadulus californicus</i>	0.22	0.00	0.0016	0.17	60.75
<i>Heterophoxus affinis</i>	0.08	0.14	0.0016	0.16	60.91
<i>Aoroides</i> sp A	0.02	0.27	0.0016	0.16	61.08
Ampeliscidae	0.18	0.00	0.0016	0.16	61.24
<i>Adontorhina cyclia</i>	0.15	0.07	0.0015	0.16	61.40
<i>Diastylis crenellata</i>	0.01	0.23	0.0015	0.16	61.56

<i>Laonice cirrata</i>	0.03	0.19	0.0015	0.16	61.73
<i>Lysippe</i> sp A	0.01	0.26	0.0015	0.16	61.89
<i>Compsomyax subdiaphana</i>	0.00	0.21	0.0015	0.16	62.05
<i>Balanoglossus</i> sp	0.04	0.17	0.0015	0.16	62.21
<i>Rhepoxyinius abronius</i>	0.00	0.18	0.0015	0.16	62.36
<i>Tritella tenuissima</i>	0.17	0.01	0.0015	0.16	62.52
<i>Malmgreniella</i> sp A	0.04	0.19	0.0015	0.16	62.68
<i>Photis parvidons</i>	0.05	0.15	0.0015	0.16	62.84
<i>Goniada brunnea</i>	0.04	0.14	0.0015	0.15	62.99
<i>Carinoma mutabilis</i>	0.01	0.17	0.0014	0.15	63.14
<i>Glycera americana</i>	0.02	0.22	0.0014	0.15	63.29
<i>Chaetoderma nanulum</i>	0.11	0.04	0.0014	0.15	63.43
<i>Myriochele gracilis</i>	0.14	0.03	0.0014	0.15	63.58
<i>Eunice americana</i>	0.11	0.08	0.0014	0.15	63.72
<i>Goniada littorea</i>	0.00	0.13	0.0014	0.14	63.87
<i>Magelona berkeleyi</i>	0.00	0.23	0.0014	0.14	64.01
<i>Owenia collaris</i>	0.00	0.23	0.0014	0.14	64.16
<i>Cooperella subdiaphana</i>	0.00	0.16	0.0014	0.14	64.30
Bivalvia	0.07	0.11	0.0014	0.14	64.44
<i>Nuculana conceptionis</i>	0.15	0.02	0.0013	0.14	64.58
<i>Diopatra</i> sp	0.00	0.21	0.0013	0.14	64.73
<i>Metasychis disparidentatus</i>	0.02	0.17	0.0013	0.14	64.87
<i>Maldane californiensis</i>	0.15	0.01	0.0013	0.14	65.01
<i>Spiophanes fimbriata</i>	0.11	0.06	0.0013	0.14	65.15
<i>Amphideutopus oculatus</i>	0.00	0.24	0.0013	0.14	65.29
<i>Drilonereis</i> sp	0.01	0.21	0.0013	0.14	65.42
<i>Aphelochaeta</i> sp HYP5	0.04	0.17	0.0013	0.14	65.56
<i>Apoprionospio pygmaea</i>	0.00	0.15	0.0013	0.14	65.70
<i>Orchomenella decipiens</i>	0.05	0.13	0.0013	0.14	65.84
<i>Scalibregma californicum</i>	0.01	0.21	0.0013	0.14	65.97
<i>Leiochrides hemipodus</i>	0.14	0.00	0.0013	0.14	66.11

<i>Mooreonuphis nebulosa</i>	0.00	0.25	0.0013	0.13	66.24
<i>Gymnonereis crosslandi</i>	0.02	0.17	0.0013	0.13	66.38
<i>Lumbrineris ligulata</i>	0.03	0.20	0.0013	0.13	66.51
<i>Pista brevibranchiata</i>	0.01	0.19	0.0013	0.13	66.64
<i>Hesperoneoe laevis</i>	0.02	0.13	0.0013	0.13	66.78
<i>Nicippe tumida</i>	0.06	0.10	0.0012	0.13	66.91
<i>Gammaropsis ociosa</i>	0.00	0.19	0.0012	0.13	67.04
<i>Mendicula ferruginosa</i>	0.14	0.00	0.0012	0.13	67.17
<i>Polycirrus sp A</i>	0.02	0.19	0.0012	0.13	67.30
<i>Malmgreniella baschi</i>	0.02	0.13	0.0012	0.13	67.43
<i>Foxiphalus golfensis</i>	0.00	0.21	0.0012	0.13	67.55
<i>Malmgreniella scriptoria</i>	0.03	0.09	0.0012	0.13	67.68
<i>Neilonella ritteri</i>	0.15	0.00	0.0012	0.13	67.81
<i>Yoldia seminuda</i>	0.02	0.09	0.0012	0.13	67.93
<i>Aphelochaeta williamsae</i>	0.06	0.11	0.0012	0.12	68.06
<i>Brisaster townsendi</i>	0.11	0.02	0.0012	0.12	68.18
<i>Aruga oculata</i>	0.00	0.20	0.0012	0.12	68.30
Scaphopoda	0.08	0.07	0.0012	0.12	68.43
<i>Myriochele olgae</i>	0.08	0.06	0.0012	0.12	68.55
<i>Chiridota sp</i>	0.04	0.14	0.0011	0.12	68.67
<i>Ophiura luetkenii</i>	0.00	0.16	0.0011	0.12	68.79
<i>Heterophoxus sp</i>	0.01	0.16	0.0011	0.12	68.90
<i>Lysippe sp B</i>	0.04	0.12	0.0011	0.12	69.02
<i>Leitoscoloplos pugettensis</i>	0.00	0.13	0.0011	0.12	69.13
<i>Xenoleberis californica</i>	0.00	0.17	0.0011	0.12	69.25
<i>Pandora bilirata</i>	0.00	0.13	0.0011	0.11	69.36
<i>Dacrydium pacificum</i>	0.14	0.00	0.0011	0.11	69.48
<i>Pinnixa sp</i>	0.01	0.15	0.0011	0.11	69.59
<i>Phyllodoce groenlandica</i>	0.02	0.11	0.0011	0.11	69.71
<i>Alvania rosana</i>	0.00	0.18	0.0011	0.11	69.82
<i>Monoculodes emarginatus</i>	0.02	0.12	0.0011	0.11	69.93

<i>Cyclocardia ventricosa</i>	0.09	0.05	0.0011	0.11	70.05
<i>Brada pluribranchiata</i>	0.03	0.11	0.0011	0.11	70.16
<i>Aphelochaeta</i> sp LA1	0.02	0.17	0.0011	0.11	70.27
<i>Lirobittium</i> sp	0.03	0.14	0.0011	0.11	70.39
<i>Polynoidae</i>	0.10	0.04	0.0011	0.11	70.50
<i>Leitoscoloplos</i> sp	0.12	0.02	0.0011	0.11	70.61
<i>Dougaloplus amphacanthus</i>	0.04	0.11	0.0011	0.11	70.72
<i>Poecilochaetus johnsoni</i>	0.00	0.17	0.001	0.11	70.83
<i>Amphiura arcystata</i>	0.01	0.13	0.001	0.11	70.94
<i>Americhelidium shoemakeri</i>	0.02	0.10	0.001	0.11	71.05
<i>Scoletoma</i> sp	0.02	0.14	0.001	0.11	71.16
<i>Brissopsis pacifica</i>	0.08	0.05	0.001	0.11	71.26
<i>Tubulanus</i> sp A	0.00	0.15	0.001	0.10	71.37
<i>Laonice nuchala</i>	0.03	0.11	0.001	0.10	71.47
<i>Platynereis bicanaliculata</i>	0.00	0.17	0.001	0.10	71.58
<i>Hoploneurtea</i>	0.02	0.15	0.001	0.10	71.68
<i>Lucinoma annulatum</i>	0.01	0.13	0.001	0.10	71.78
<i>Ampharete finmarchica</i>	0.00	0.16	0.001	0.10	71.88
<i>Ampelisca brachycladus</i>	0.00	0.14	0.001	0.10	71.99
<i>Actiniaria</i>	0.04	0.09	0.0009	0.10	72.09
<i>Magelona hartmanae</i>	0.00	0.13	0.0009	0.10	72.18
<i>Chaetozone</i> sp	0.05	0.08	0.0009	0.10	72.28
<i>Tubulanidae</i>	0.02	0.12	0.0009	0.10	72.38
<i>Cirrophorus branchiatus</i>	0.09	0.03	0.0009	0.10	72.48
<i>Podarkeopsis glabrus</i>	0.01	0.14	0.0009	0.10	72.58
<i>Aricidea (Allia)</i> sp A	0.05	0.08	0.0009	0.10	72.67
<i>Aphelochaeta phillipsi</i>	0.06	0.07	0.0009	0.10	72.77
<i>Cerebratulus californiensis</i>	0.05	0.09	0.0009	0.10	72.86
<i>Gibberosus myersi</i>	0.00	0.08	0.0009	0.09	72.96
<i>Chaetodermatida</i>	0.07	0.05	0.0009	0.09	73.05
<i>Gammaropsis thompsoni</i>	0.00	0.18	0.0009	0.09	73.15

<i>Phyllodoce</i> sp	0.01	0.15	0.0009	0.09	73.24
<i>Amphichondrius granulatus</i>	0.01	0.13	0.0009	0.09	73.33
<i>Polycirrus</i> sp	0.04	0.11	0.0009	0.09	73.42
<i>Echinoidea</i>	0.04	0.12	0.0009	0.09	73.52
<i>Monticellina serratiseta</i>	0.06	0.08	0.0009	0.09	73.61
<i>Ninoe tridentata</i>	0.00	0.12	0.0009	0.09	73.70
<i>Lumbrineridae</i>	0.02	0.12	0.0009	0.09	73.79
<i>Malmgreniella</i> sp	0.05	0.07	0.0008	0.09	73.88
<i>Eyakia robusta</i>	0.00	0.11	0.0008	0.09	73.96
<i>Ampelisca romigi</i>	0.01	0.14	0.0008	0.08	74.05
<i>Scleroconcha trituberculata</i>	0.02	0.08	0.0008	0.08	74.13
<i>Leucon declivis</i>	0.09	0.00	0.0008	0.08	74.22
<i>Spatangoidea</i>	0.10	0.01	0.0008	0.08	74.30
<i>Sabellidae</i>	0.06	0.06	0.0008	0.08	74.39
<i>Kurtiella compressa</i>	0.03	0.07	0.0008	0.08	74.47
<i>Ampelisciphotis podophthalma</i>	0.00	0.14	0.0008	0.08	74.55
<i>Turbonilla</i> sp A	0.00	0.10	0.0008	0.08	74.63
<i>Cerebratulus</i> sp	0.08	0.02	0.0008	0.08	74.72
<i>Aoridae</i>	0.00	0.15	0.0008	0.08	74.80
<i>Paradialychone ecaudata</i>	0.00	0.16	0.0008	0.08	74.88
<i>Ancistrosyllis groenlandica</i>	0.10	0.00	0.0008	0.08	74.96
<i>Macoma</i> sp	0.01	0.10	0.0008	0.08	75.05
<i>Micranellum crebricinctum</i>	0.00	0.15	0.0008	0.08	75.13
<i>Glycera macrobranchia</i>	0.00	0.07	0.0008	0.08	75.21
<i>Aricidea (Acmira) simplex</i>	0.00	0.12	0.0008	0.08	75.29
<i>Araphura brevioria</i>	0.00	0.12	0.0008	0.08	75.37
<i>Capitella capitata</i> Cmplx	0.03	0.08	0.0008	0.08	75.45
<i>Photis</i> sp OC1	0.00	0.09	0.0008	0.08	75.53
<i>Pinnixa occidentalis</i> Cmplx	0.00	0.10	0.0008	0.08	75.61
<i>Amaeana occidentalis</i>	0.00	0.10	0.0008	0.08	75.70
<i>Polygireulima rutila</i>	0.04	0.08	0.0008	0.08	75.78

<i>Micrura alaskensis</i>	0.03	0.10	0.0008	0.08	75.86
<i>Amphioplus</i> sp A	0.00	0.13	0.0008	0.08	75.93
<i>Aphelochaeta</i> sp HYP8	0.00	0.12	0.0008	0.08	76.01
<i>Sternaspis williamsae</i>	0.09	0.00	0.0008	0.08	76.09
<i>Chaetozone lunula</i>	0.00	0.09	0.0007	0.08	76.17
<i>Siphonosoma ingens</i>	0.00	0.09	0.0007	0.08	76.25
<i>Terebellides</i> sp	0.04	0.07	0.0007	0.08	76.33
<i>Levinsenia</i> sp B	0.00	0.13	0.0007	0.08	76.41
<i>Thysanocardia nigra</i>	0.01	0.12	0.0007	0.08	76.48
<i>Mesolamprops bispinosus</i>	0.00	0.11	0.0007	0.08	76.56
<i>Metaphoxus frequens</i>	0.04	0.09	0.0007	0.08	76.64
<i>Cephalophoxoides homilis</i>	0.07	0.02	0.0007	0.08	76.71
<i>Asteropella slatteryi</i>	0.00	0.10	0.0007	0.08	76.79
<i>Pherusa</i> sp SD2	0.08	0.01	0.0007	0.08	76.87
<i>Ophiuroconis bispinosa</i>	0.01	0.12	0.0007	0.08	76.94
<i>Amphipholis squamata</i>	0.02	0.12	0.0007	0.08	77.02
<i>Hemilamprops californicus</i>	0.00	0.11	0.0007	0.07	77.09
<i>Spiophanes</i> sp	0.03	0.07	0.0007	0.07	77.16
Modiolinae	0.00	0.10	0.0007	0.07	77.24
<i>Zygeupolia rubens</i>	0.00	0.10	0.0007	0.07	77.31
<i>Dialychone albocincta</i>	0.00	0.14	0.0007	0.07	77.38
<i>Alia tuberosa</i>	0.00	0.13	0.0007	0.07	77.46
<i>Ampelisca cristata microdentata</i>	0.00	0.11	0.0007	0.07	77.53
<i>Photis bifurcata</i>	0.00	0.12	0.0007	0.07	77.60
<i>Artacamella hancocki</i>	0.00	0.12	0.0007	0.07	77.68
<i>Procampylaspis caenosa</i>	0.02	0.09	0.0007	0.07	77.75
<i>Tanaella propinquus</i>	0.01	0.09	0.0007	0.07	77.82
<i>Rhepoxyinius variatus</i>	0.00	0.10	0.0007	0.07	77.89
<i>Solemya perverncosa</i>	0.04	0.07	0.0007	0.07	77.96
<i>Rhepoxyinius lucubrans</i>	0.00	0.09	0.0007	0.07	78.04
<i>Astropecten californicus</i>	0.00	0.10	0.0007	0.07	78.11

<i>Paradialychnone paramollis</i>	0.01	0.11	0.0007	0.07	78.18
<i>Carazziella</i> sp A	0.00	0.10	0.0007	0.07	78.25
Gnathiidae	0.03	0.09	0.0007	0.07	78.32
<i>Harpiniopsis fulgens</i>	0.05	0.03	0.0007	0.07	78.39
<i>Polydora cirrosa</i>	0.00	0.07	0.0007	0.07	78.46
<i>Cerebratulus marginatus</i>	0.06	0.03	0.0007	0.07	78.53
<i>Streblosoma</i> sp B	0.00	0.10	0.0007	0.07	78.60
<i>Edwardsia profunda</i>	0.07	0.00	0.0007	0.07	78.67
<i>Dodecamastus mariaensis</i>	0.07	0.00	0.0007	0.07	78.74
<i>Pista</i> sp	0.00	0.11	0.0006	0.07	78.81
Phoronida	0.05	0.06	0.0006	0.07	78.88
<i>Briissopsis</i> sp LA1	0.07	0.01	0.0006	0.07	78.95
<i>Proclea</i> sp A	0.00	0.09	0.0006	0.07	79.01
<i>Phisidia sanctaemariae</i>	0.01	0.10	0.0006	0.07	79.08
<i>Halcampa decententaculata</i>	0.02	0.05	0.0006	0.07	79.15
<i>Nemocardium centifilosum</i>	0.00	0.09	0.0006	0.07	79.22
<i>Brisaster latifrons</i>	0.02	0.05	0.0006	0.07	79.28
<i>Typosyllis hyperioni</i>	0.01	0.12	0.0006	0.07	79.35
<i>Aoroides</i> sp	0.01	0.13	0.0006	0.07	79.42
<i>Jasmineira</i> sp B	0.02	0.09	0.0006	0.07	79.48
<i>Paraphoxus</i> sp 1	0.07	0.02	0.0006	0.07	79.55
<i>Pholoides asperus</i>	0.01	0.13	0.0006	0.07	79.62
<i>Amphipholis</i> sp	0.02	0.08	0.0006	0.07	79.68
<i>Rhodine bitorquata</i>	0.04	0.06	0.0006	0.07	79.75
<i>Listriella albina</i>	0.06	0.01	0.0006	0.07	79.81
<i>Paramage scutata</i>	0.01	0.09	0.0006	0.07	79.88
<i>Terebellides reishi</i>	0.01	0.09	0.0006	0.07	79.95
<i>Sthenelais</i> sp	0.00	0.09	0.0006	0.07	80.01
<i>Urothoe elegans</i> Cmplx	0.01	0.10	0.0006	0.07	80.08
<i>Scolanthus triangulus</i>	0.00	0.09	0.0006	0.06	80.14
<i>Aglaia ocelligera</i>	0.02	0.08	0.0006	0.06	80.20

<i>Ampelisca indentata</i>	0.00	0.11	0.0006	0.06	80.27
<i>Gastropteron pacificum</i>	0.03	0.05	0.0006	0.06	80.33
<i>Astropecten</i> sp	0.00	0.10	0.0006	0.06	80.40
<i>Falcidens longus</i>	0.02	0.07	0.0006	0.06	80.46
<i>Clymenura gracilis</i>	0.02	0.07	0.0006	0.06	80.53
<i>Hippomedon columbianus</i>	0.02	0.06	0.0006	0.06	80.59
<i>Lumbrineris index</i>	0.03	0.04	0.0006	0.06	80.65
<i>Eulalia levicornuta</i> Cmplx	0.01	0.09	0.0006	0.06	80.72
<i>Argissa hamatipes</i>	0.02	0.07	0.0006	0.06	80.78
<i>Branchiostoma californiense</i>	0.00	0.04	0.0006	0.06	80.85
<i>Cancridae</i>	0.00	0.10	0.0006	0.06	80.91
<i>Caprella mendax</i>	0.00	0.10	0.0006	0.06	80.97
<i>Calocarides quinqueseriatus</i>	0.07	0.00	0.0006	0.06	81.04
<i>Aglaophamus erectans</i>	0.07	0.00	0.0006	0.06	81.10
<i>Ericthonius rubricornis</i>	0.03	0.07	0.0006	0.06	81.16
<i>Mayerella banksia</i>	0.01	0.10	0.0006	0.06	81.22
<i>Cyclocardia</i> sp	0.06	0.02	0.0006	0.06	81.29
<i>Amphiura</i> sp	0.01	0.08	0.0006	0.06	81.35
<i>Bathymedon pumilus</i>	0.02	0.06	0.0006	0.06	81.41
<i>Aricidea (Acmira)</i> sp LA1	0.06	0.00	0.0006	0.06	81.47
<i>Chauliopleona dentata</i>	0.00	0.10	0.0006	0.06	81.53
<i>Terebellidae</i>	0.02	0.06	0.0006	0.06	81.60
<i>Subadyte mexicana</i>	0.06	0.02	0.0006	0.06	81.66
<i>Paradialychone harrisae</i>	0.00	0.13	0.0006	0.06	81.72
<i>Aphelochaeta petersenae</i>	0.03	0.05	0.0006	0.06	81.78
<i>Malmgreniella macginitiei</i>	0.00	0.08	0.0006	0.06	81.84
<i>Phyllochaetopterus prolifica</i>	0.01	0.10	0.0006	0.06	81.90
<i>Mooreonuphis segmentispadix</i>	0.00	0.07	0.0006	0.06	81.96
<i>Streblosoma crassibranchia</i>	0.00	0.11	0.0006	0.06	82.02
<i>Metamysidopsis elongata</i>	0.00	0.05	0.0006	0.06	82.08
<i>Mooreonuphis</i> sp	0.01	0.08	0.0006	0.06	82.14

<i>Acteocina cerealis</i>	0.03	0.06	0.0006	0.06	82.20
<i>Tenonia priops</i>	0.00	0.08	0.0006	0.06	82.26
<i>Aoroides inermis</i>	0.00	0.09	0.0006	0.06	82.32
Gastropoda	0.03	0.04	0.0006	0.06	82.37
<i>Odontosyllis phosphorea</i>	0.00	0.11	0.0005	0.06	82.43
<i>Ampharete</i> sp	0.00	0.08	0.0005	0.06	82.49
<i>Aphelochaeta</i> sp SD18 (B13-1)	0.07	0.00	0.0005	0.06	82.55
<i>Ericthonius brasiliensis</i>	0.01	0.08	0.0005	0.06	82.61
<i>Notopoma</i> sp A	0.00	0.06	0.0005	0.06	82.66
<i>Amphioplus strongyloplax</i>	0.04	0.04	0.0005	0.06	82.72
<i>Eranno lagunae</i>	0.03	0.05	0.0005	0.06	82.78
<i>Aricidea (Allia) antennata</i>	0.01	0.07	0.0005	0.06	82.84
<i>Caesia perpinguis</i>	0.00	0.07	0.0005	0.06	82.89
<i>Saccoglossus</i> sp	0.03	0.04	0.0005	0.06	82.95
<i>Dendraster</i> sp	0.00	0.05	0.0005	0.06	83.01
<i>Poecilochaetus martini</i>	0.00	0.08	0.0005	0.06	83.06
<i>Amage anops</i>	0.02	0.05	0.0005	0.06	83.12
Decapoda	0.01	0.05	0.0005	0.06	83.18
<i>Ampelisca</i> cf <i>brevisimulata</i>	0.00	0.08	0.0005	0.06	83.23
<i>Nebalia daytoni</i>	0.00	0.07	0.0005	0.06	83.29
<i>Podarkeopsis perkinsi</i>	0.05	0.01	0.0005	0.06	83.35
<i>Onuphis</i> sp	0.01	0.08	0.0005	0.06	83.40
<i>Ampharete acutifrons</i>	0.02	0.06	0.0005	0.06	83.46
<i>Brada pilosa</i>	0.04	0.03	0.0005	0.06	83.51
<i>Ophelina pallida</i>	0.06	0.00	0.0005	0.06	83.57
<i>Ensis myrae</i>	0.00	0.08	0.0005	0.06	83.62
<i>Nereis latescens</i>	0.00	0.07	0.0005	0.05	83.68
<i>Aricidea (Acmira) rubra</i>	0.04	0.01	0.0005	0.05	83.73
<i>Pleusymtes subglaber</i>	0.01	0.09	0.0005	0.05	83.79
<i>Lumbrineris japonica</i>	0.00	0.09	0.0005	0.05	83.84
<i>Araphura cuspirostris</i>	0.05	0.01	0.0005	0.05	83.90

<i>Edwardsia juliae</i>	0.00	0.09	0.0005	0.05	83.95
<i>Heteronemertea</i>	0.01	0.07	0.0005	0.05	84.00
<i>Paleanotus bellis</i>	0.00	0.08	0.0005	0.05	84.06
<i>Euchone incolor</i>	0.00	0.10	0.0005	0.05	84.11
<i>Hamatoscalpellum californicum</i>	0.00	0.10	0.0005	0.05	84.16
<i>Maera jerrica</i>	0.01	0.08	0.0005	0.05	84.22
<i>Ophelina acuminata</i>	0.02	0.03	0.0005	0.05	84.27
<i>Volvulella cylindrica</i>	0.01	0.06	0.0005	0.05	84.32
<i>Aricidea (Acmira) horikoshii</i>	0.00	0.07	0.0005	0.05	84.37
<i>Terebellides</i> sp Type D	0.03	0.06	0.0005	0.05	84.43
<i>Heteromastus filiformis</i> Cmplx	0.05	0.01	0.0005	0.05	84.48
<i>Aphelochaeta</i> sp LA3	0.06	0.00	0.0005	0.05	84.53
<i>Diopatra ornata</i>	0.00	0.07	0.0005	0.05	84.58
<i>Onuphidae</i>	0.00	0.08	0.0005	0.05	84.63
<i>Edwardsia olguini</i>	0.02	0.07	0.0005	0.05	84.68
<i>Amygdalum pallidulum</i>	0.01	0.07	0.0005	0.05	84.73
<i>Exogone dwisula</i>	0.00	0.09	0.0005	0.05	84.79
<i>Americhelidium</i> sp SD4	0.00	0.09	0.0005	0.05	84.84
<i>Hinea insculpta</i>	0.03	0.04	0.0005	0.05	84.89
<i>Glycera oxycephala</i>	0.00	0.06	0.0005	0.05	84.94
<i>Chaetozone</i> sp SD5	0.00	0.05	0.0005	0.05	84.99
<i>Tiburonella viscana</i>	0.01	0.02	0.0005	0.05	85.04
<i>Pisione</i> sp	0.00	0.06	0.0005	0.05	85.09
<i>Kurtiella grippi</i>	0.00	0.06	0.0005	0.05	85.14
<i>Glossaulax reclusianus</i>	0.00	0.06	0.0005	0.05	85.19
<i>Asabellides lineata</i>	0.00	0.10	0.0005	0.05	85.23
<i>Protodorvillea gracilis</i>	0.00	0.08	0.0005	0.05	85.28
<i>Leptopecten latiauratus</i>	0.00	0.06	0.0005	0.05	85.33
<i>Notoproctus pacificus</i>	0.03	0.06	0.0005	0.05	85.38
<i>Spirionidae</i>	0.01	0.05	0.0005	0.05	85.43
<i>Micropodarke dubia</i>	0.00	0.11	0.0005	0.05	85.48

<i>Alienacanthomysis macropsis</i>	0.00	0.03	0.0005	0.05	85.53
<i>Monticellina</i> sp	0.02	0.05	0.0005	0.05	85.57
<i>Chaetozone corona</i>	0.00	0.07	0.0005	0.05	85.62
<i>Sigambra</i> sp DC1	0.02	0.06	0.0005	0.05	85.67
<i>Halicoides synopiae</i>	0.00	0.09	0.0005	0.05	85.72
<i>Heteromastus</i> sp	0.04	0.01	0.0005	0.05	85.77
<i>Sonatsa carinata</i>	0.05	0.00	0.0005	0.05	85.81
<i>Orchomenella pacifica</i>	0.00	0.08	0.0005	0.05	85.86
<i>Diopatra tridentata</i>	0.00	0.07	0.0005	0.05	85.91
<i>Hippomedon</i> sp A	0.02	0.04	0.0005	0.05	85.96
<i>Aricidea (Aricidea) wassi</i>	0.00	0.08	0.0004	0.05	86.00
<i>Siliqua lucida</i>	0.00	0.04	0.0004	0.05	86.05
<i>Anonyx lilljeborgi</i>	0.00	0.05	0.0004	0.05	86.10
<i>Kurtzia arteaga</i>	0.00	0.09	0.0004	0.05	86.14
<i>Macoma nasuta</i>	0.00	0.04	0.0004	0.05	86.19
<i>Photis macrotica</i>	0.00	0.08	0.0004	0.05	86.24
<i>Megalomma pigmentum</i>	0.00	0.08	0.0004	0.05	86.28
<i>Samytha californiensis</i>	0.02	0.04	0.0004	0.05	86.33
<i>Magelona</i> sp B	0.00	0.05	0.0004	0.05	86.37
<i>Rutiderma lomae</i>	0.00	0.10	0.0004	0.05	86.42
<i>Gammaropsis</i> sp	0.00	0.09	0.0004	0.04	86.46
<i>Glycera branchiopoda</i>	0.04	0.01	0.0004	0.04	86.51
<i>Volvulella californica</i>	0.03	0.03	0.0004	0.04	86.55
Balanidae	0.00	0.07	0.0004	0.04	86.60
<i>Eudorellopsis longirostris</i>	0.01	0.07	0.0004	0.04	86.64
<i>Aricidea (Acmira) lopezi</i>	0.02	0.06	0.0004	0.04	86.69
<i>Balcis micans</i>	0.00	0.04	0.0004	0.04	86.73
<i>Mooresamytha bioculata</i>	0.04	0.02	0.0004	0.04	86.78
<i>Leucon bishopi</i>	0.05	0.00	0.0004	0.04	86.82
<i>Dialychone trilineata</i>	0.00	0.07	0.0004	0.04	86.86
<i>Hartmanodes hartmanae</i>	0.00	0.07	0.0004	0.04	86.91

<i>Periploma discus</i>	0.00	0.07	0.0004	0.04	86.95
<i>Hippomedon zetesimus</i>	0.00	0.05	0.0004	0.04	86.99
<i>Notocirrus californiensis</i>	0.00	0.06	0.0004	0.04	87.03
<i>Americhelidium</i> sp SD1	0.00	0.04	0.0004	0.04	87.07
<i>Calyptaeidae</i>	0.00	0.07	0.0004	0.04	87.11
<i>Chaetoderma hancocki</i>	0.04	0.00	0.0004	0.04	87.15
<i>Halianthella</i> sp A	0.02	0.06	0.0004	0.04	87.20
<i>Lyonsia californica</i>	0.00	0.06	0.0004	0.04	87.24
<i>Acteocina culcitella</i>	0.00	0.04	0.0004	0.04	87.28
<i>Eumida longicornuta</i>	0.00	0.06	0.0004	0.04	87.32
<i>Nutricola ovalis</i>	0.00	0.07	0.0004	0.04	87.36
<i>Deflexilodes norvegicus</i>	0.00	0.06	0.0004	0.04	87.40
<i>Listriella</i> sp	0.00	0.03	0.0004	0.04	87.44
<i>Tetrastemma albidum</i>	0.00	0.08	0.0004	0.04	87.48
<i>Pholoe</i> sp B	0.00	0.08	0.0004	0.04	87.51
<i>Listriolobus hexamyotus</i>	0.04	0.00	0.0004	0.04	87.55
<i>Phyllophoridae</i>	0.01	0.05	0.0004	0.04	87.59
<i>Veneridae</i>	0.00	0.04	0.0004	0.04	87.63
<i>Arhynchite californicus</i>	0.03	0.01	0.0004	0.04	87.67
<i>Chaetopteridae</i>	0.02	0.03	0.0004	0.04	87.71
<i>Tiron biocellata</i>	0.00	0.05	0.0004	0.04	87.75
<i>Sige</i> sp A	0.00	0.07	0.0004	0.04	87.78
<i>Nuculana hamata</i>	0.00	0.08	0.0004	0.04	87.82
<i>Arcteobia</i> cf <i>anticostiensis</i>	0.00	0.07	0.0004	0.04	87.86
<i>Owenia johnsoni</i>	0.00	0.08	0.0004	0.04	87.90
<i>Guernea reduncans</i>	0.00	0.07	0.0004	0.04	87.94
<i>Sphaerosyllis californiensis</i>	0.00	0.07	0.0004	0.04	87.97
<i>Tubulanus cingulatus</i>	0.00	0.07	0.0004	0.04	88.01
<i>Monoculodes latissimanus</i>	0.05	0.00	0.0004	0.04	88.05
<i>Nephasoma diaphanes</i>	0.04	0.01	0.0003	0.04	88.08
<i>Dorvillea (Schistomerengos)</i> sp	0.01	0.03	0.0003	0.04	88.12

<i>Polycirrus</i> sp OC1	0.00	0.07	0.0003	0.04	88.16
<i>Leuroleberis sharpei</i>	0.00	0.07	0.0003	0.04	88.19
<i>Aristias</i> sp DC1	0.04	0.00	0.0003	0.04	88.23
<i>Megabalanus californicus</i>	0.00	0.04	0.0003	0.04	88.27
<i>Leptochiton rugatus</i>	0.02	0.05	0.0003	0.04	88.30
<i>Strongylocentrotus fragilis</i>	0.04	0.02	0.0003	0.04	88.34
<i>Solamen columbianum</i>	0.00	0.08	0.0003	0.04	88.38
<i>Prionospio</i> sp	0.00	0.06	0.0003	0.04	88.41
<i>Typosyllis farallonensis</i>	0.00	0.04	0.0003	0.04	88.45
<i>Latulambrus occidentalis</i>	0.00	0.06	0.0003	0.04	88.48
<i>Pseudofabriciola californica</i>	0.00	0.08	0.0003	0.04	88.52
<i>Listriella eriopisa</i>	0.01	0.03	0.0003	0.04	88.55
<i>Spatangus californicus</i>	0.04	0.00	0.0003	0.04	88.59
<i>Eusyllis transecta</i>	0.00	0.05	0.0003	0.04	88.63
<i>Malmgreniella</i> sp SD2	0.01	0.03	0.0003	0.04	88.66
<i>Adontorhina lynnae</i>	0.04	0.00	0.0003	0.03	88.70
<i>Fauveliopsis</i> sp	0.04	0.00	0.0003	0.03	88.73
<i>Synidotea magnifica</i>	0.00	0.07	0.0003	0.03	88.76
<i>Kurtziella plumbea</i>	0.00	0.05	0.0003	0.03	88.80
<i>Lucinoma aequizonatum</i>	0.04	0.00	0.0003	0.03	88.83
<i>Levinsenia oculata</i>	0.04	0.00	0.0003	0.03	88.87
<i>Harpiniopsis emeryi</i>	0.04	0.00	0.0003	0.03	88.90
<i>Diastylis californica</i>	0.00	0.06	0.0003	0.03	88.94
<i>Monticellina</i> sp HYP3	0.00	0.04	0.0003	0.03	88.97
<i>Ypsilothuria bitentaculata</i>	0.04	0.00	0.0003	0.03	89.00
<i>Cardiomya pectinata</i>	0.01	0.02	0.0003	0.03	89.04
<i>Pentamera populifera</i>	0.01	0.05	0.0003	0.03	89.07
<i>Edotia sublittoralis</i>	0.01	0.03	0.0003	0.03	89.10
<i>Virgularia</i> sp	0.02	0.02	0.0003	0.03	89.14
<i>Lytechinus pictus</i>	0.00	0.06	0.0003	0.03	89.17
<i>Praxillella gracilis</i>	0.02	0.02	0.0003	0.03	89.20

Mysidae	0.02	0.01	0.0003	0.03	89.23
<i>Dipolydora barbilla</i>	0.00	0.07	0.0003	0.03	89.26
<i>Eulalia californiensis</i>	0.00	0.07	0.0003	0.03	89.30
<i>Marphysa disjuncta</i>	0.02	0.03	0.0003	0.03	89.33
<i>Chaetozone</i> sp SD7	0.01	0.03	0.0003	0.03	89.36
<i>Nellobia eusoma</i>	0.01	0.03	0.0003	0.03	89.39
<i>Waldo</i> sp A	0.01	0.03	0.0003	0.03	89.42
<i>Glycera</i> sp	0.00	0.04	0.0003	0.03	89.46
Capitellidae	0.01	0.04	0.0003	0.03	89.49
<i>Califia calida</i>	0.04	0.00	0.0003	0.03	89.52
<i>Deilocerus decorus</i>	0.00	0.07	0.0003	0.03	89.55
<i>Dipolydora</i> sp	0.00	0.06	0.0003	0.03	89.58
<i>Tetrastremma nigrifrons</i>	0.01	0.05	0.0003	0.03	89.61
<i>Munnogonium tillerae</i>	0.00	0.06	0.0003	0.03	89.64
Gammaridea	0.02	0.02	0.0003	0.03	89.67
<i>Idarcturus allelomorphus</i>	0.00	0.06	0.0003	0.03	89.71
<i>Phyllodoce pettiboneae</i>	0.00	0.05	0.0003	0.03	89.74
<i>Diastylis</i> sp DC1	0.03	0.00	0.0003	0.03	89.77
<i>Metatiron tropakis</i>	0.00	0.06	0.0003	0.03	89.80
<i>Nuculana</i> sp B	0.05	0.00	0.0003	0.03	89.83
<i>Parandalia fauveli</i>	0.00	0.06	0.0003	0.03	89.86
<i>Amphipholis pugetana</i>	0.01	0.05	0.0003	0.03	89.89
<i>Ampelisca milleri</i>	0.00	0.07	0.0003	0.03	89.92
Nassariidae	0.02	0.02	0.0003	0.03	89.95
<i>Amphicteis mucronata</i>	0.02	0.02	0.0003	0.03	89.98
Sipuncula	0.01	0.04	0.0003	0.03	90.01

