TEXT TABLES

TABLE 1. Abundance of Numerically Dominant Nonmollusk Taxa, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Taxon	Number of Individuals															Total
	Station															
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6	
Leptochelia dubia	2		1	2	1	9	62*	215*	215*	88*	9		79*	12*	4	699
Euchone sp. B						106*	22	1	216*	9	11			5	6	376
Aspidosiphon muelleri			1	2	1	11*	52*	85*	8	36*	31*	4	27*	23*	42*	323
Synelmis acuminata	1	3		6		31*	18	145*	39*	28*	10	1	13	7	7	309
Pionosyllis heterocirrata	3	11*	30*	16*	23*		49*	36*	11	5		12*	30*	14*	5	245
Myriochele oculata			1			33*	91*	21	57*	30*	1		3	2	4	243
Dipolydora normalis						5		161*								166
Prionospio cirrifera		2	5*	9*	2	10*	24	14	26	12	16*	3	12	11*	7	153
Eriopisella sechellensis				11*			22	8	20	67*			3			131
Prionospio cirrobranchiata	1		1			8	5	11	12		9	9*	34*	9	14*	113
Ophiodromus angustifrons	3	1	4*	4	5*		25	11	11	16		1	22	2	5	110
Tanaissus sp. A					1			2	1		26*		58*		3	91
Branchiostoma sp. A			2	12*		5	18	21	3	17	1	1	9			89
Konatopus paao							6	11	5	23	16*	4	15	1	2	83
Spionidae sp. D											29*	1	16	14*	18*	78
Sphaerosyllis sp. G			1	15*	1		9	18	6	2	4		9	6	1	72
Micropodarke sp. A	3	6*		7		4	5	6	13	3	2	1	12	3		65
Nereis sp. B							1	4	41*	7			5			58
Acrocirrus sp. A											5			10	36*	51
Aphelochaeta marioni									3		12		7	3	16*	41
Ophryotrocha adherens							26*	1			3	2	2			34
Spio blakei	4*	1	2			2	5	2	1	1		2	3	2	3	28
Protodorvillea biarticulata		1		3	1							15*	4	2	1	27
Mooreonuphis sp. A											3	8*	7			18
Processa aequimana		7*		1		1		2	1	2			2			16
Pisione sp. A		5*	2	3				2					3			15
Ophiodromus sp. B												9*	1			10
Saccocirrus waianaensis			5*													5

*Ranked among the five most abundant nonmollusk taxa at individual stations. Taxa with three or fewer individuals per station were not eligible to be classified as a dominant.

TABLE 2. Summary of Statistical Comparisons Among Transects C, D, and E for the Number of Individuals and Number of Taxa of Nonmollusks, Crustaceans, and Mollusks, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Taxon	Parameter	Mean Untransformed Values			ANOVA Transformation	Statistic	*p*	Significant Differences
		Transect C	Transect D	Transect E				
Nonmollusks[a]	No. of Individuals	55.27	442.00	231.80	Log	28.74[b]	0.0003	D>C, D>E, E>C
Nonmollusks[a]	No. of Taxa	16.27	41.53	38.13	Square Root	26.01[b]	<0.0001	D>C, E>C
Crustaceans	No. of Individuals	7.13	102.00	67.47	Log	18.65[b]	<0.0001	D>C, D>E, E>C
Crustaceans	No. of Taxa	3.07	9.00	7.13	Square Root	12.58[b]	<0.0001	D>C, E>C
Mollusks	No. of Individuals	264.80	290.80	415.47	None	1.88[c]	0.3913	None
Mollusks	No. of Taxa	38.73	34.00	34.33	None	0.44[c]	0.6474	None

[a]Including crustaceans.
[b]ANOVA F statistic and Student–Newman–Keuls comparison.
[c]Kruskal–Wallis statistic and pairwise comparison.

TABLE 3. Abundance of Numerically Dominant Mollusk Taxa, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Taxon	Number of Individuals															Total
	Station															
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6	
Diala scopulorum	1	12		8	1	69*		44*	49*	33	243*	398*	725*	1,137*	70*	2,790
Cerithidium perparvulum	55*	56*	100*	176*	132*	49*	311*	51*	47*	93*	18*	143*	240*	147*	4*	1,622
Pusillina marmorata	39*	49*	230*	203*	87*	70*	36	36*	28	35	20*	52	174*	242*	3	1,304
Finella pupoides				3		346*	210*	31	283*	184*	2	2	6	9	3	1,079
Scaliola spp.	9	9	54	42	39	12	77*	20	18	13	5	245*	194*	75*	4*	816
Diala semistriata	3	49*	37	113*	69*	18	67*	25	26	50*	9	203*	94*	44		807
Balcis spp.	12	18	2	16	2	88*	92*	32	77*	77*	41*	81*		130*	22*	690
Tricolia variabilis	18*	50*	97*	152*	133*	15		77*	22	10		17	67	4		662
Parashiela beetsi	29*	11	84*	75*	70*	12	58	21	15	26	17*	45	26	17	2	508
Orbitestella regina	34*	9	61	38	36	3	5	43*	17	7	1	16	20	10	1	301
Lophocochlias minutissimus	9	14	89*	55	47	6	13	9	4	2		16	21	4		289
Ervilia bisculpta	1		1	1	1	42	17		44*	15		1	16	3	6*	148
Acteocina sp.	1			5		22	36	11	10	36*	4	13	9			147
Triphora spp.	4	20*	13	19	19	1	1	13		4		14	13	11		132
Natica gualteriana			1	5	3					27			10	6	4*	56
Omalogyra japonica	2	1	2	1	1			14	4	2		3		8	4*	42

*Ranked among the five most abundant mollusk taxa at individual stations.

APPENDIXES

Appendix A. Sediment Data and Sample Locations

TABLE A.1. Position and Depth for Replicate Grab Samples, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Station	Sampling Date	Replicate	Position		Depth (m)
			Latitude	Longitude	
C1A	29 August	1	21°17'39.2"	157°55'28.0"	19.8
		2	21°17'39.2"	157°55'27.8"	19.5
		3	21°17'38.9"	157°55'28.1"	19.5
C2A	30 August	1	21°17'21.7"	157°54'36.5"	18.9
		2	21°17'21.8"	157°54'36.2"	18.6
		3	21°17'21.9"	157°54'36.5"	18.6
C3A	29 August	1	21°17'16.9"	157°53'35.1"	18.6
		2	21°17'16.9"	157°53'34.9"	18.9
		3	21°17'17.0"	157°53'34.8"	18.6
C5A	29 August	1	21°16'53.5"	157°51'24.0"	20.7
		2	21°16'53.4"	157°51'24.3"	21.0
		3	21°16'53.5"	157°51'24.3"	20.7
C6	29 August	1	21°16'11.4"	157°50'31.0"	18.9
		2	21°16'11.4"	157°50'30.8"	18.9
		3	21°16'11.4"	157°50'30.8"	18.9
D1	30 August	1	21°17'23.2"	157°55'30.3"	49.4
		2	21°17'23.2"	157°55'30.1"	49.4
		3	21°17'22.8"	157°55'30.0"	49.1
D2	30 August	1	21°16'56.5"	157°54'35.5"	53.3
		2	21°16'56.7"	157°54'35.5"	53.0
		3	21°16'56.6"	157°54'35.6"	53.3
D3A	30 August	1	21°16'55.2"	157°53'49.3"	50.9
		2	21°16'55.2"	157°53'49.1"	51.2
		3	21°16'55.0"	157°53'49.1"	51.2
D5	29 August	1	21°16'37.3"	157°51'31.6"	49.4
		2	21°16'37.3"	157°51'31.7"	49.1
		3	21°16'37.3"	157°51'31.4"	49.4
D6	29 August	1	21°16'02.1"	157°50'45.8"	49.4
		2	21°16'02.2"	157°50'45.9"	49.1
		3	21°16'02.3"	157°50'46.0"	49.1
E1	29 August	1	21°17'10.4"	157°55'32.7"	101.2
		2	21°17'10.5"	157°55'32.7"	100.9
		3	21°17'10.5"	157°55'32.6"	100.6
E2	29 August	1	21°16'43.1"	157°54'39.0"	100.6
		2	21°16'43.0"	157°54'39.0"	100.6
		3	21°16'42.9"	157°54'38.7"	100.9
E3	29 August	1	21°16'43.4"	157°53'49.8"	83.8
		2	21°16'43.2"	157°53'49.7"	83.8
		3	21°16'43.1"	157°53'49.6"	84.1
E5	30 August	1	21°16'22.8"	157°51'40.9"	100.6
		2	21°16'22.7"	157°51'40.7"	100.9
		3	21°16'22.8"	157°51'40.8"	100.9
E6	29 August	1	21°15'50.7"	157°50'57.8"	101.8
		2	21°15'50.7"	157°50'57.7"	101.5
		3	21°15'50.8"	157°50'58.1"	101.2

SOURCE: Oceanographic Team, Department of Environmental Services, City and County of Honolulu.

TABLE A.2. Sediment Chemical Characterization of Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Station (Replicate)	PD (cm)	ORP (+mV)	TKN (mg/dry kg)	TOC (% dry weight)
C1A-1	10.5	35	271	0.36
C1A-2	8.5	120	239	0.44
C1A-3	6.0	155		
C2A-1	14.5	175	248	0.31
C2A-2	8.0	175		
C2A-3	7.5	195	263	0.24
C3A-1	10.5	195	300	0.37
C3A-2	6.5	200		
C3A-3	7.5	195	297	0.59
C5A-1	8.5	190	218	0.50
C5A-2	8.5	190		
C5A-3	9.0	195	282	0.56
C6-1	14.0	180	204	0.35
C6-2	14.5	195	223	0.40
C6-3	12.0	195		
D1-1	6.5	195	295	0.48
D1-2	7.0	120	286	0.32
D1-3	7.5	75		
D2-1	7.5	195	195	0.38
D2-2	7.5	205	204	0.31
D2-3	7.5	200		
D3A-1	7.5	175	236	0.34
D3A-2	6.5	190		
D3A-3	7.5	165	236	0.36
D5-1	6.5	195		
D5-2	7.5	200	133	0.23
D5-3	8.0	190	218	0.29
D6-1	7.0	140	241	0.33
D6-2	8.0	175	284	0.28
D6-3	7.0	170		
E1-1	10.5	110	249	0.42
E1-2	7.5	55		
E1-3	6.5	25		
E2-1	10.5	150	141	0.32
E2-2	13.5	145		
E2-3	9.5	160		
E3-1	7.0	160		
E3-2	7.0	165	203	0.36
E3-3	7.5	165		
E5-1	8.5	210	303	0.38
E5-2	7.0	70		
E5-3	10.0	160		
E6-1	7.5	140	336	0.34
E6-2	8.0	30		
E6-3	13.0	35		

SOURCE: PD (penetration depth) and ORP (oxidation-reduction potential) data from Oceanographic Team, Department of Environmental Services, City and County of Honolulu; TKN (total Kjeldahl nitrogen) data from Environmental Laboratory, Department of Environmental Services, City and County of Honolulu; TOC (total organic carbon) data from Columbia Analytical Services, Inc., Kelso, Washington.

TABLE A.3. Sediment Grain-Size Analysis of Sand Island Ocean Outfall Sampling Stations, Oahu, Hawaii, August 2002

Station-Replicate	Sample Dry Weight Distribution (%)							
	Phi Size							
	-2	-1	0	1	2	3	4	>4 to 12
C1A-1	0.00	0.30	1.34	8.93	34.79	34.73	14.64	2.03
C1A-2	0.00	0.48	0.92	4.63	18.09	41.98	31.74	2.43
C2A-1	0.00	0.46	15.35	63.68	12.15	6.30	1.29	0.94
C2A-2	1.19	4.74	20.63	47.89	9.78	8.81	2.31	1.63
C3A-1	0.00	0.28	1.87	26.95	52.92	14.11	0.53	1.81
C3A-2	0.45	2.98	6.93	26.21	40.56	16.93	1.06	2.04
C3A-2 (duplicate)	0.42	2.66	7.91	28.59	41.22	16.47	1.06	2.16
C5A-1	5.52	9.69	22.34	29.06	19.47	8.70	1.23	1.87
C5A-2	3.91	9.61	15.60	22.46	27.39	15.87	2.92	1.97
C6-1	0.00	0.18	0.83	8.64	54.00	32.49	0.54	1.85
C6-2	0.00	0.28	1.78	17.42	45.25	31.62	0.83	1.46
D1-1	0.00	0.36	1.46	4.03	9.09	20.09	54.45	9.29
D1-2	0.00	1.02	2.72	5.69	10.29	19.07	49.37	9.29
D2-1	0.27	1.93	7.04	13.28	25.80	35.69	11.18	3.21
D2-2	0.11	1.12	4.48	11.82	27.81	39.48	11.56	3.11
D3A-1	0.34	0.86	4.39	11.66	36.69	28.30	13.36	3.02
D3A-2	0.00	1.70	6.35	14.43	35.61	24.04	13.38	2.62
D5-1	0.00	0.64	1.40	5.70	15.92	36.33	31.66	7.23
D5-2	0.00	0.51	2.01	5.93	15.08	33.94	34.56	7.15
D6-1	1.45	2.31	7.85	13.91	16.68	25.51	26.40	5.35
D6-2	0.04	2.11	6.18	12.87	16.71	26.82	28.63	5.00
D6-2 (duplicate)	0.98	3.03	7.01	14.34	17.66	26.22	26.76	4.95
E1-1	0.31	1.31	1.92	3.67	6.53	19.46	49.64	13.78
E1-2	0.00	0.18	0.71	1.65	4.69	18.98	55.51	15.16
E2-1	0.06	0.46	2.07	14.31	50.40	28.44	0.52	1.87
E2-2	0.00	0.42	3.17	15.47	46.66	30.94	0.58	1.46
E3-1	3.62	4.65	12.65	21.94	26.71	20.75	5.43	2.83
E3-2	0.12	0.53	4.24	16.89	31.01	30.45	9.99	4.05
E5-1	0.83	2.96	7.71	12.72	14.91	27.32	24.43	7.17
E5-2	0.29	1.98	5.83	12.48	15.94	29.51	26.00	7.59
E6-1	0.00	0.07	0.18	0.80	3.05	37.05	48.89	7.33
E6-2	0.00	0.01	0.13	0.36	1.79	28.82	56.83	10.67
E6-2 (duplicate)	0.28	0.04	0.10	0.41	1.89	29.20	56.75	10.13

SOURCE: Environmental Quality Laboratory, Department of Environmental Services, City and County of Honolulu.

NOTE: The values listed indicate the fraction percentage of the estimated dry weight of the sediment samples. The coarse fraction (-2 to +4) was analyzed by the sieve method. The fine fraction (greater than +4 to +12) was analyzed by the pipette method.

Appendix B. Basic Statistics and Variances for Nonmollusk Data

TABLE B.1. Basic Statistics for Untransformed Nonmollusk Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	55.000	32.000	48.333	103.000	38.333	250.667	368.333	456.000	825.667	309.333	168.333	57.667	490.667	180.667	261.667
Median	36.000	33.000	56.000	108.000	42.000	153.000	426.000	351.000	733.000	308.000	159.000	62.000	193.000	83.000	132.000
Standard Deviation	35.539	9.539	15.948	27.839	23.714	225.930	117.628	212.897	524.180	62.011	61.533	19.858	556.773	175.261	278.173
Standard Error of Mean	20.518	5.508	9.207	16.073	13.691	130.441	67.913	122.916	302.635	35.802	35.526	11.465	321.453	101.187	160.603
95% of CI Mean	88.290	23.699	39.620	69.161	58.913	561.287	292.228	528.908	1302.240	154.056	152.869	49.334	1383.213	435.407	691.077
Skewness	1.718	-0.467	-1.663	-0.782	-0.679	1.582	-1.676	1.680	0.771	0.097	0.667	-0.935	1.718	1.729	1.642
Normality Test (D)	0.370ns	0.181ns	0.351ns	0.238ns	0.228ns	0.334ns	0.355ns	0.356ns	0.237ns	0.177ns	0.227ns	0.253ns	0.370ns	0.378ns	0.346ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE B.2. Basic Statistics for Untransformed Nonmollusk Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	13.667	11.667	15.667	27.000	13.333	24.667	47.667	46.667	51.667	37.000	35.000	23.333	61.333	37.000	34.000
Median	13.000	13.000	12.000	30.000	13.000	23.000	48.000	42.000	51.000	40.000	33.000	22.000	57.000	34.000	29.000
Standard Deviation	1.155	3.215	8.145	7.000	5.508	6.658	7.506	10.786	4.041	8.888	3.464	4.163	15.948	6.083	9.539
Standard Error of Mean	0.667	1.856	4.702	4.041	3.180	3.844	4.333	6.227	2.333	5.132	2.000	2.404	9.207	3.512	5.508
95% of CI Mean	2.869	7.986	20.234	17.390	13.683	16.542	18.646	26.796	10.040	22.081	8.606	10.343	39.620	15.112	23.699
Skewness	1.732	-1.545	1.615	-1.574	0.271	1.056	-0.199	1.583	0.722	-1.346	1.732	1.293	1.132	1.680	1.711
Normality Test (D)	0.385ns	0.328ns	0.340ns	0.333ns	0.191ns	0.267ns	0.184ns	0.334ns	0.232ns	0.298ns	0.385ns	0.292ns	0.274ns	0.356ns	0.367ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE B.3. Analysis of Variance and A Posteriori Comparison of Means of Square Root Transformed Nonmollusk Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	1,804.27	14	128.876	4.39	0.0003
Experimental Error	880.78	30	29.359		
Total	2,685.05	44			

Square Root Transformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	7.181	5.583	6.881	10.083	5.944	14.806	19.008	20.996	27.724	17.528	12.830	7.511	19.879	12.466	14.693
Standard Deviation	2.270	0.859	1.219	1.410	2.122	6.869	3.251	4.770	9.251	1.770	2.365	1.367	11.969	6.156	8.288

F_{max} test for equal variance: Square root transformed data, F_{max} = 194.291, not significant at $p > 0.05$.

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	55.000	32.000	48.333	103.000	38.333	250.667	368.333	456.000	825.667	309.333	168.333	57.667	490.667	180.667	261.667
Standard Deviation	35.539	9.539	15.948	27.839	23.714	225.930	117.628	212.897	524.180	62.011	61.533	19.858	556.773	175.261	278.173

F_{max} test for equal variance: Untransformed data, F_{max} = 3,431.694 significant at $p < 0.05$.

Conclusion: There are significant differences in mean nonmollusk abundance between the following station pairs, as determined by Student–Newman–Keuls tests:

	C6	C3A	C1A	E2	C5A	E5	E1	E6	D1	D6	D2	E3	D3A	D5
C2A	–	–	–	–	–	–	–	–	–	–	–	–	–	*
C6		–	–	–	–	–	–	–	–	–	–	–	–	*
C3A			–	–	–	–	–	–	–	–	–	–	–	*
C1A				–	–	–	–	–	–	–	–	–	–	*
E2					–	–	–	–	–	–	–	–	–	*
C5A						–	–	–	–	–	–	–	–	*
E5							–	–	–	–	–	–	–	*
E1								–	–	–	–	–	–	*
E6									–	–	–	–	–	–
D1										–	–	–	–	–
D6											–	–	–	–
D2												–	–	–
E3													–	–
D3A														–

*$p < 0.05$.

TABLE B.4. Analysis of Variance and A Posteriori Comparison of Means of Untransformed Nonmollusk Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	9,868.31	14	704.879	11.997	<0.0001
Experimental Error	1,762.67	30	58.756		
Total	11,630.98	44			

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	13.667	11.667	15.667	27.000	13.333	24.667	47.667	46.667	51.667	37.000	35.000	23.333	61.333	37.000	34.000
Standard Deviation	1.155	3.215	8.145	7.000	5.508	6.658	7.506	10.786	4.041	8.888	3.464	4.163	15.948	6.083	9.539

F_{max} test for equal variance: Untransformed data, F_{max} = 190.750, not significant at $p > 0.05$.

Conclusion: There are significant differences in mean nonmollusk taxa number between the following station pairs, as determined by Student–Newman–Keuls tests:

	C6	C1A	C3A	E2	D1	C5A	E6	E1	D6	E5	D3A	D2	D5	E3
C2A	–	–	–	–	–	–	*	*	*	*	*	*	*	*
C6		–	–	–	–	–	*	*	*	*	*	*	*	*
C1A			–	–	–	–	*	*	*	*	*	*	*	*
C3A				–	–	–	*	*	*	*	*	*	*	*
E2					–	–	–	–	–	–	*	*	*	*
D1						–	–	–	–	–	*	*	*	*
C5A							–	–	–	–	*	*	*	*
E6								–	–	–	–	–	–	*
E1									–	–	–	–	–	*
D6										–	–	–	–	*
E5											–	–	–	*
D3A												–	–	–
D2													–	–
D5														–

*$p < 0.05$.

TABLE B.5. Basic Statistics for Untransformed Crustacean Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	8.667	3.667	6.000	13.000	4.333	56.000	45.000	126.333	201.667	81.000	44.000	5.667	204.000	45.000	38.667
Median	3.000	0.000	6.000	10.000	4.000	12.000	32.000	59.000	217.000	82.000	45.000	6.000	41.000	11.000	9.000
Standard Deviation	10.693	6.351	3.000	8.888	1.528	80.579	24.269	145.222	123.715	25.515	22.517	2.517	294.532	60.630	51.384
Standard Error of Mean	6.173	3.667	1.732	5.132	0.882	46.522	14.012	83.844	71.427	14.731	13.000	1.453	170.048	35.005	29.667
95% of CI Mean	26.564	15.778	7.453	22.081	3.795	200.186	60.293	360.780	307.349	63.387	55.939	6.252	731.717	150.626	127.656
Skewness	1.715	1.732	0.000	1.346	0.935	1.725	1.719	1.638	-0.549	-0.176	-0.199	-0.586	1.728	1.730	1.732
Normality Test (D)	0.369ns	0.385ns	0.175ns	0.299ns	0.253ns	0.374ns	0.371ns	0.345ns	0.216ns	0.182ns	0.184ns	0.219ns	0.377ns	0.379ns	0.385ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE B.6. Basic Statistics for Untransformed Crustacean Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	2.333	1.333	2.667	6.000	3.000	4.000	7.667	11.667	12.333	9.333	7.333	3.000	13.667	6.667	5.000
Median	2.000	0.000	2.000	7.000	2.000	5.000	7.000	9.000	11.000	9.000	7.000	3.000	10.000	7.000	5.000
Standard Deviation	1.528	2.309	2.082	2.646	1.732	1.732	3.055	5.508	2.309	1.528	2.517	1.000	7.234	0.577	1.000
Standard Error of Mean	0.882	1.333	1.202	1.528	1.000	1.000	1.764	3.180	1.333	0.882	1.453	0.577	4.177	0.333	0.577
95% of CI Mean	3.795	5.737	5.172	6.573	4.303	4.303	7.590	13.683	5.737	3.795	6.252	2.484	17.972	1.434	2.484
Skewness	0.935	1.732	1.293	-1.458	1.732	-1.732	0.935	1.668	1.732	0.935	0.586	0.000	1.695	-1.732	0.000
Normality Test (D)	0.253ns	0.385ns	0.292ns	0.314ns	0.385ns	0.385ns	0.253ns	0.352ns	0.385ns	0.253ns	0.219ns	0.175ns	0.360ns	0.385ns	0.175ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE B.7. Analysis of Variance and A Posteriori Comparison of Means of Square Root Transformed Crustacean Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	601.169	14	42.941	2.628	0.0129
Experimental Error	490.190	30	16.340		
Total	1,091.359	44			

Square Root Transformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	2.576	1.106	2.394	3.469	2.061	6.105	6.559	9.998	13.654	8.922	6.472	2.337	11.641	5.680	5.300
Standard Deviation	1.745	1.915	0.636	1.203	0.363	5.300	1.721	6.289	4.781	1.444	1.783	0.557	10.136	4.371	3.983

F_{max} test for equal variance: Square root transformed data, F_{max} = 781.654, not significant at $p > 0.05$.

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	8.667	3.667	6.000	13.000	4.333	56.000	45.000	126.333	201.667	81.000	44.000	5.667	204.000	45.000	38.667
Standard Deviation	10.693	6.351	3.000	8.888	1.528	80.579	24.269	145.222	123.715	25.515	22.517	2.517	294.532	60.630	51.384

F_{max} test for equal variance: Untransformed data, F_{max} = 37,178.143, significant at $p < 0.05$.

Conclusion: There are significant differences in mean crustacean abundance between the following station pairs, as determined by Student–Newman–Keuls tests:

	C6	E2	C3	C1	C5	E6	E5	D1	E1	D2	D6	D3	E3	D5
C2	–	–	–	–	–	–	–	–	–	–	–	–	–	*
C6		–	–	–	–	–	–	–	–	–	–	–	–	–
E2			–	–	–	–	–	–	–	–	–	–	–	–
C3				–	–	–	–	–	–	–	–	–	–	–
C1					–	–	–	–	–	–	–	–	–	–
C5						–	–	–	–	–	–	–	–	–
E6							–	–	–	–	–	–	–	–
E5								–	–	–	–	–	–	–
D1									–	–	–	–	–	–
E1										–	–	–	–	–
D2											–	–	–	–
D6												–	–	–
D3													–	–
E3														–

*$p < 0.05$.

TABLE B.8. Analysis of Variance and A Posteriori Comparison of Means of Untransformed Crustacean Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	642.133	14	45.867	5.160	<0.0001
Experimental Error	266.667	30	8.889		
Total	908.800	44			

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	2.333	1.333	2.667	6.000	3.000	4.000	7.667	11.667	12.333	9.333	7.333	3.000	13.667	6.667	5.000
Standard Deviation	1.528	2.309	2.082	2.646	1.732	1.732	3.055	5.508	2.309	1.528	2.517	1.000	7.234	0.577	1.000

F_{max} test for equal variance: Untransformed data, F_{max} = 157.000, not significant at $p > 0.05$.

Conclusion: There are significant differences in mean crustacean taxa number between the following station pairs, as determined by Student–Newman–Keuls tests:

	C1A	C3A	C6	E2	D1	E6	C5A	E5	E1	D2	D6	D3A	D5	E3
C2A	–	–	–	–	–	–	–	–	–	–	–	*	*	*
C1A		–	–	–	–	–	–	–	–	–	–	*	*	*
C3A			–	–	–	–	–	–	–	–	–	*	*	*
C6				–	–	–	–	–	–	–	–	*	*	*
E2					–	–	–	–	–	–	–	*	*	*
D1						–	–	–	–	–	–	–	*	*
E6							–	–	–	–	–	–	–	*
C5A								–	–	–	–	–	–	–
E5									–	–	–	–	–	–
E1										–	–	–	–	–
D2											–	–	–	–
D6												–	–	–
D3A													–	–
D5														–

*$p < 0.05$.

Appendix C. Basic Statistics and Variances for Mollusk Data

TABLE C.1. Basic Statistics for Untransformed Mollusk Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	89.000	134.667	400.000	391.333	309.000	309.333	376.333	178.333	308.667	281.333	139.667	469.000	701.000	718.333	49.333
Median	66.000	133.000	383.000	382.000	336.000	252.000	385.000	178.000	317.000	285.000	148.000	498.000	705.000	751.000	48.000
Standard Deviation	48.754	34.530	65.184	27.227	53.842	164.664	31.896	26.502	36.226	21.733	43.108	75.783	74.081	57.449	3.215
Standard Error of Mean	28.148	19.936	37.634	15.720	31.086	95.069	18.415	15.301	20.915	12.548	24.889	43.753	42.771	33.168	1.856
95% of CI Mean	121.123	85.785	161.940	67.642	133.763	409.082	79.240	65.839	89.998	53.993	107.096	188.270	184.042	142.722	7.986
Skewness	1.650	0.217	1.094	1.361	-1.689	1.377	-1.132	0.057	-0.980	-0.738	-0.837	-1.470	-0.242	-1.731	1.545
Normality Test (D)	0.348ns	0.186ns	0.270ns	0.301ns	0.359ns	0.303ns	0.274ns	0.176ns	0.258ns	0.234ns	0.243ns	0.316ns	0.188ns	0.382ns	0.328ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE C.2. Basic Statistics for Untransformed Mollusk Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Statistic	Station														
	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Mean	19.667	25.000	59.333	38.333	51.333	29.333	26.000	27.000	50.333	37.333	16.333	32.667	57.333	49.333	16.000
Median	21.000	27.000	53.000	41.000	51.000	31.000	28.000	25.000	52.000	33.000	16.000	31.000	63.000	50.000	16.000
Standard Deviation	3.215	4.359	11.846	4.619	6.506	5.686	3.464	4.359	3.786	10.214	1.528	3.786	10.693	3.055	1.000
Standard Error of Mean	1.856	2.517	6.839	2.667	3.756	3.283	2.000	2.517	2.186	5.897	0.882	2.186	6.173	1.764	0.577
95% of CI Mean	7.986	10.829	29.430	11.475	16.164	14.127	8.606	10.829	9.406	25.376	3.795	9.406	26.564	7.590	2.484
Skewness	-1.545	-1.630	1.718	-1.732	0.230	-1.206	-1.732	1.630	-1.597	1.565	0.935	1.597	-1.715	-0.935	0.000
Normality Test (D)	0.328ns	0.344ns	0.370ns	0.385ns	0.187ns	0.282ns	0.385ns	0.344ns	0.337ns	0.331ns	0.253ns	0.337ns	0.369ns	0.253ns	0.175ns

NOTE: CI = confidence interval. Normality was assessed with the Kolmogorov–Smirnov D statistic of goodness of fit to a normal distribution, $D_{.05} > 0.4$; ns = not significant.

TABLE C.3. Analysis of Variance and A Posteriori Comparison of Means of Square Root Transformed Mollusk Abundance, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	1,381.394	14	98.671	31.047	<0.0001
Experimental Error	95.344	30	3.178		
Total	1,476.738	44			

Square Root Transformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	9.216	11.540	19.957	19.774	17.531	17.192	19.387	13.329	17.548	16.765	11.717	21.607	26.452	26.787	7.021
Standard Deviation	2.468	1.494	1.611	0.683	1.576	4.543	0.829	0.995	1.043	0.651	1.889	1.791	1.404	1.085	0.227

F_{max} test for equal variance: Square root transformed data, F_{max} = 400.439, not significant at $p > 0.05$.

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	89.000	134.667	400.000	391.333	309.000	309.333	376.333	178.333	308.667	281.333	139.667	469.000	701.000	718.333	49.333
Standard Deviation	48.754	34.530	65.184	27.227	53.842	164.664	31.896	26.502	36.226	21.733	43.108	75.783	74.081	57.449	3.215

F_{max} test for equal variance: Untransformed data, F_{max} = 2,623.968, significant at $p < 0.05$.

Conclusion: There are significant differences in mean mollusk abundance between the following station pairs, as determined by Student–Newman–Keuls tests:

	C1	C2	E1	D3	D6	D1	C6	D5	D2	C5	C3	E2	E3	E5
E6	–	*	*	*	*	*	*	*	*	*	*	*	*	*
C1		–	–	*	*	*	*	*	*	*	*	*	*	*
C2			–	–	*	*	*	*	*	*	*	*	*	*
E1				–	*	*	*	*	*	*	*	*	*	*
D3					*	*	–	–	*	*	*	*	*	*
D6						–	–	–	–	–	–	*	*	*
D1							–	–	–	–	–	–	*	*
C6								–	–	–	–	–	*	*
D5									–	–	–	–	*	*
D2										–	–	–	*	*
C5											–	–	*	*
C3												–	*	*
E2				–									*	*
E3														–

*$p < 0.05$.

TABLE C.4. Analysis of Variance and A Posteriori Comparison of Means of Untransformed Mollusk Taxa Number, Sand Island Ocean Outfall Sampling Stations, O'ahu, Hawai'i, August 2002

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio	p
Among Stations	9,104.311	14	650.308	17.523	<0.0001
Experimental Error	1,113.333	30	37.111		
Total	10,217.644	44			

Untransformed Data

Station	C1A	C2A	C3A	C5A	C6	D1	D2	D3A	D5	D6	E1	E2	E3	E5	E6
Number	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mean	19.667	25.000	59.333	38.333	51.333	29.333	26.000	27.000	50.333	37.333	16.333	32.667	57.333	49.333	16.000
Standard Deviation	3.215	4.359	11.846	4.619	6.506	5.686	3.464	4.359	3.786	10.214	1.528	3.786	10.693	3.055	1.000

F_{max} test for equal variance: Untransformed data, F_{max} = 140.333, not significant at $p > 0.05$.

Conclusion: There are significant differences in mean mollusk taxa number between the following station pairs, as determined by Student–Newman–Keuls tests:

	E1	C1A	C2A	D2	D3A	D1	E2	D6	C5A	E5	D5	C6	E3	C3A
E6	–	–	–	–	–	–	*	*	*	*	*	*	*	*
E1		–	–	–	–	–	*	*	*	*	*	*	*	*
C1A			–	–	–	–	–	*	*	*	*	*	*	*
C2A				–	–	–	–	–	–	*	*	*	*	*
D2					–	–	–	–	–	*	*	*	*	*
D3A						–	–	–	–	*	*	*	*	*
D1							–	–	–	*	*	*	*	*
E2								–	–	*	*	*	*	*
D6									–	–	–	–	*	*
C5A										–	–	–	*	*
E5											–	–	–	–
D5												–	–	–
C6													–	–
E3														–

*$p < 0.05$.

Appendix D. Taxon Abundance for Nonmollusks

TABLE D.1. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations C1A and C2A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A								
Aglaophamus circinata								
Amphicorina sp. B	0	0	0	0	0	0	0	0
Amphicteis gunneri								
Amphiduros sp. A								
Amphiglena mediterranea								
Amphiglena sp. A								
Aonides oxycephala								
Aonides sp. A	0	0	1	1	0	0	1	1
Aphelochaeta marioni								
Aphroditidae sp. A								
Arabella cf. *multidentata*								
Aricidea catherinae								
Aricidea (Aedicira) sp. A								
Armandia intermedia	0	0	0	0	0	0	0	0
Augeneriella dubia								
Axiothella quadrimaculata								
Bispira sp. A								
Branchiomma nigromaculata								
Branchiosyllis exilis								
Brania rhopalophora	0	0	0	0	0	0	0	0
Brania sp. B								
Capitella capitata	1	0	0	1	0	0	0	0
Capitellidae sp.	0	0	0	0	0	0	0	0
Caulleriella acicula								
Caulleriella bioculatus								
Caulleriella zetlandica								
Caulleriella sp. A								
Caulleriella sp. B								
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus								
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis								
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B								
Euchone cf. *rosea*								
Euchone sp. B								
Eumida sanguinea								
Eumida sp. B								
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A								

TABLE D.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis								
Exogone sp. C								
Exogone sp. E	0	0	0	0	0	0	0	0
Fabricia sp. A								
Glycera tesselata								
Goniada emerita								
Goniada maculata								
Grubeosyllis mediodentata	0	0	1	1	0	0	0	0
Haplosyllis spongicola								
Harmothoe sp. A								
Hesionidae sp. G								
Hesionidae sp. H								
Hesionura australiensis	0	0	0	0	0	0	1	1
Hydroides bannerorum								
Jasmineira caudata								
Josephella marenzelleri								
Laonice cirrata	0	0	0	0	0	0	1	1
Laonome sp. A								
Lepidasthenia sp. A								
Linopherus microcephala	0	0	0	0	0	0	0	0
Loimia sp. A								
Lumbrineriopsis sp. A								
Lumbrineris latreilli								
Lumbrineris tetraura	0	0	1	1	0	0	0	0
Lumbrineris sp. A								
Lygdamis nesiotes								
Lysidice ninetta								
Lysidice sp. A								
Lysippe sp. A								
Magelona capensis								
Magelona cincta								
Magelona sp. A								
Malacoceros sp. A								
Maldanidae sp. A								
Marphysa cf. *conferta*								
Marphysa depressa								
Megalomma intermedium								
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.	0	0	0	0	0	0	0	0
Micropodarke sp. A	1	0	2	3	0	2	4	6
Micropodarke sp. B								
Microspio granulata								
Monticellina cf. *dorsobranchialis*								
Monticellina sp. A								
Monticellina sp. B								
Mooreonuphis sp. A								
Myriochele oculata	0	0	0	0	0	0	0	0
Myriochele pygidialis								
Myriochele sp. A								
Mystides nr. *caeca*								

TABLE D.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata								
Nematonereis unicornis								
Neodexiospira preacuta								
Nereis sp. B								
Nothria sp. B								
Notomastus tenuis	1	1	1	3	0	0	0	0
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B								
Ophiodromus angustifrons	2	1	0	3	0	0	1	1
Ophiodromus sp. A								
Ophiodromus sp. B								
Ophryotrocha adherens								
Paleanotus sp. B								
Palmyra sp. A								
Paramphinome sp. A	0	0	0	0	0	0	0	0
Paraonella sp. A	0	0	0	0	0	0	0	0
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A								
Phyllodoce madeirensis	0	0	0	0	0	1	0	1
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F								
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	0	0	3	3	2	1	8	11
Pionosyllis spinisetosa	0	0	0	0	0	0	0	0
Pionosyllis weismanni								
Pionosyllis sp. C								
Pisione remota	0	0	0	0	0	0	0	0
Pisione sp. A	0	0	0	0	1	1	3	5
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus								
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	0	0	0	0	0	1	0	1
Potamilla sp. A								
Prionospio cirrifera	0	0	0	0	1	1	0	2

TABLE D.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	1	0	0	1	0	0	0	0
Prionospio steenstrupi	0	0	0	0	0	0	0	0
Progoniada sp. A	0	0	0	0	0	0	0	0
Progoniada sp. C								
Protodorvillea biarticulata	0	0	0	0	1	0	0	1
Protodorvillea egena	0	0	0	0	0	0	0	0
Protodriloides sp. A								
Protodrilus sp. A.	0	0	0	0	0	0	0	0
Psamathe sp. A								
Pseudopolydora corallicola								
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	1	1	0	2	0	0	0	0
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A								
Sabellastarte spectabilis								
Saccocirrus oahuensis	0	0	0	0	0	0	1	1
Saccocirrus waianaensis	0	0	0	0	0	0	0	0
Salmacina dysteri								
Samythella sp. A								
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta								
Schistomeringos rudolphi	0	1	0	1	0	0	0	0
Scolelepis victoriensis	0	0	0	0	0	0	0	0
Scolelepis sp. B	0	0	0	0	0	0	0	0
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata	0	0	0	0	0	0	0	0
Sphaerodoropsis sp. C								
Sphaerosyllis riseri	0	0	0	0	0	0	0	0
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	0	0	0	0	0	0	0	0
Spio blakei	1	3	0	4	0	0	1	1
Spio filicornis								
Spiochaetopterus sp. A								
Spionidae sp. B								
Spionidae sp. D								
Spiophanes bombyx								
Streptosyllis sp. A	0	0	0	0	0	0	0	0
Syllides bansei	0	0	0	0	0	0	0	0
Syllis gracilis								
Synelmis acuminata	1	0	0	1	2	0	1	3
Synelmis albini								
Synelmis sp. A								
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Terebellidae sp. B								
Travisia sp. A								
Trichobranchus glacialis								
Typosyllis aciculata orientalis								
Typosyllis cornuta	0	0	0	0	0	0	0	0
Typosyllis variegata								
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	4	3	4	11	7	2	5	14
NEMATODA	5	17	61	83	7	7	10	24
PLATYHELMINTHES	0	0	0	0	0	0	0	0
PORIFERA								
ECHINODERMATA								
Asteroidea								
Echinoidea	0	1	0	1	0	0	0	0
Holothuroidea	1	0	0	1	0	0	0	0
Ophiuroidea	0	1	0	1	0	0	0	0
ANTHOZOA	1	0	0	1	0	0	0	0
HYDROZOA								
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	0	0	0	0	0	0
NEMERTEA	10	3	1	14	0	5	4	9
INSECTA								
SIPUNCULA								
Apionsoma misakianum	0	0	0	0	0	0	0	0
Aspidosiphon muelleri	0	0	0	0	0	0	0	0
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus								
Sipuncula sp. G	0	0	0	0	0	0	0	0
Sipuncula spp.	0	0	0	0	0	0	0	0
PRIAPULIDA	0	1	0	1	0	0	0	0
CHAETOGNATHA	0	0	0	0	1	1	0	2

TABLE D.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila	1	0	0	1	0	0	0	0
BRYOZOA								
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata								
Branchiostoma sp. A	0	0	0	0	0	0	0	0
Osteichthyes								
Total No. of Individuals/Replicate	31	33	75		22	22	41	
Total No. of Taxa/Replicate	14	11	9		8	10	13	
Total No. of Individuals Sampled				139				85
Total No. of Taxa Sampled				22				18

TABLE D.2. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations C3A and C5A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A								
Aglaophamus circinata								
Amphicorina sp. B	0	0	0	0	1	0	0	1
Amphicteis gunneri								
Amphiduros sp. A								
Amphiglena mediterranea								
Amphiglena sp. A								
Aonides oxycephala								
Aonides sp. A	0	1	0	1	1	0	0	1
Aphelochaeta marioni								
Aphroditidae sp. A								
Arabella cf. *multidentata*								
Aricidea catherinae								
Aricidea (Aedicira) sp. A								
Armandia intermedia	0	0	0	0	1	0	0	1
Augeneriella dubia								
Axiothella quadrimaculata								
Bispira sp. A								
Branchiomma nigromaculata								
Branchiosyllis exilis								
Brania rhopalophora	0	0	0	0	0	0	0	0
Brania sp. B								
Capitella capitata	0	0	0	0	0	0	0	0
Capitellidae sp.	0	0	0	0	0	0	0	0
Caulleriella acicula								
Caulleriella bioculatus								
Caulleriella zetlandica								
Caulleriella sp. A								
Caulleriella sp. B								
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus								
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis								
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B								
Euchone cf. *rosea*								
Euchone sp. B								
Eumida sanguinea								
Eumida sp. B								
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A								

TABLE D.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis								
Exogone sp. C								
Exogone sp. E	0	0	0	0	1	0	0	1
Fabricia sp. A								
Glycera tesselata								
Goniada emerita								
Goniada maculata								
Grubeosyllis mediodentata	0	0	0	0	0	0	0	0
Haplosyllis spongicola								
Harmothoe sp. A								
Hesionidae sp. G								
Hesionidae sp. H								
Hesionura australiensis	0	0	0	0	0	0	1	1
Hydroides bannerorum								
Jasmineira caudata								
Josephella marenzelleri								
Laonice cirrata	0	0	0	0	1	1	0	2
Laonome sp. A								
Lepidasthenia sp. A								
Linopherus microcephala	0	0	0	0	0	2	0	2
Loimia sp. A								
Lumbrineriopsis sp. A								
Lumbrineris latreilli								
Lumbrineris tetraura	0	0	0	0	0	0	0	0
Lumbrineris sp. A								
Lygdamis nesiotes								
Lysidice ninetta								
Lysidice sp. A								
Lysippe sp. A								
Magelona capensis								
Magelona cincta								
Magelona sp. A								
Malacoceros sp. A								
Maldanidae sp. A								
Marphysa cf. *conferta*								
Marphysa depressa								
Megalomma intermedium								
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.	0	0	1	1	0	0	0	0
Micropodarke sp. A	0	0	0	0	1	6	0	7
Micropodarke sp. B								
Microspio granulata								
Monticellina cf. *dorsobranchialis*								
Monticellina sp. A								
Monticellina sp. B								
Mooreonuphis sp. A								
Myriochele oculata	0	1	0	1	0	0	0	0
Myriochele pygidialis								
Myriochele sp. A								
Mystides nr. *caeca*								

TABLE D.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata								
Nematonereis unicornis								
Neodexiospira preacuta								
Nereis sp. B								
Nothria sp. B								
Notomastus tenuis	0	0	0	0	1	1	0	2
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B								
Ophiodromus angustifrons	0	2	2	4	1	1	2	4
Ophiodromus sp. A								
Ophiodromus sp. B								
Ophryotrocha adherens								
Paleanotus sp. B								
Palmyra sp. A								
Paramphinome sp. A	0	0	1	1	0	0	1	1
Paraonella sp. A	0	0	0	0	0	0	0	0
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A								
Phyllodoce madeirensis	0	0	0	0	0	1	0	1
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F								
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	4	10	16	30	7	8	1	16
Pionosyllis spinisetosa	0	0	0	0	0	0	0	0
Pionosyllis weismanni								
Pionosyllis sp. C								
Pisione remota	0	1	0	1	0	0	0	0
Pisione sp. A	1	0	1	2	0	3	0	3
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus								
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	0	0	0	0	0	1	1	2
Potamilla sp. A								
Prionospio cirrifera	0	5	0	5	4	5	0	9

TABLE D.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	0	1	0	1	0	0	0	0
Prionospio steenstrupi	0	2	0	2	1	1	0	2
Progoniada sp. A	0	0	0	0	1	0	0	1
Progoniada sp. C								
Protodorvillea biarticulata	0	0	0	0	0	3	0	3
Protodorvillea egena	0	3	0	3	0	0	0	0
Protodriloides sp. A								
Protodrilus sp. A	0	0	0	0	1	0	1	2
Psamathe sp. A								
Pseudopolydora corallicola								
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	0	0	0	0	0	2	0	2
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A								
Sabellastarte spectabilis								
Saccocirrus oahuensis	0	0	0	0	0	0	0	0
Saccocirrus waianaensis	3	0	2	5	0	0	0	0
Salmacina dysteri								
Samythella sp. A								
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta								
Schistomeringos rudolphi	0	0	0	0	0	0	0	0
Scolelepis victoriensis	0	1	0	1	0	0	0	0
Scolelepis sp. B	0	0	0	0	0	0	1	1
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata	0	0	0	0	1	0	0	1
Sphaerodoropsis sp. C								
Sphaerosyllis riseri	3	0	0	3	0	1	0	1
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	0	1	0	1	2	12	1	15
Spio blakei	1	1	0	2	0	0	0	0
Spio filicornis								
Spiochaetopterus sp. A								
Spionidae sp. B								
Spionidae sp. D								
Spiophanes bombyx								
Streptosyllis sp. A	0	0	0	0	0	3	1	4
Syllides bansei	0	0	1	1	0	0	0	0
Syllis gracilis								
Synelmis acuminata	0	0	0	0	4	1	1	6
Synelmis albini								
Synelmis sp. A								
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Terebellidae sp. B								
Travisia sp. A								
Trichobranchus glacialis								
Typosyllis aciculata orientalis								
Typosyllis cornuta	0	0	0	0	0	1	0	1
Typosyllis variegata								
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	2	2	12	16	16	14	17	47
NEMATODA	7	10	17	34	40	22	31	93
PLATYHELMINTHES	0	1	0	1	0	0	3	3
PORIFERA								
ECHINODERMATA								
Asteroidea	0	0	0	0	0	0	0	0
Echinoidea	0	0	0	0	0	0	0	0
Holothuroidea	0	1	0	1	0	1	0	1
Ophiuroidea								
ANTHOZOA	0	0	0	0	0	0	0	0
HYDROZOA								
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	0	0	2	0	0	2
NEMERTEA	1	3	0	4	5	7	1	13
INSECTA								
SIPUNCULA								
Apionsoma misakianum	1	0	0	1	2	0	0	2
Aspidosiphon muelleri	0	1	0	1	0	0	2	2
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus	0	0	0	0	0	1	0	1
Sipuncula sp. G	1	0	0	1	1	0	0	1
Sipuncula spp.								
PRIAPULIDA	0	0	0	0	0	0	0	0
CHAETOGNATHA	0	1	0	1	0	0	0	0

TABLE D.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila	0	0	0	0	0	0	0	0
BRYOZOA								
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata								
Branchiostoma sp. A	0	2	0	2	3	7	2	12
Osteichthyes								
Total No. of Individuals/Replicate	24	50	53		98	105	67	
Total No. of Taxa/Replicate	10	20	9		23	24	16	
Total No. of Individuals Sampled				127				270
Total No. of Taxa Sampled				28				39

TABLE D.3. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Station C6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
POLYCHAETA					
Acrocirrus sp. A					
Aglaophamus circinata					
Amphicorina sp. B	0	0	0	0	1
Amphicteis gunneri					
Amphiduros sp. A					
Amphiglena mediterranea					
Amphiglena sp. A					
Aonides oxycephala					
Aonides sp. A	0	0	0	0	4
Aphelochaeta marioni					
Aphroditidae sp. A					
Arabella cf. *multidentata*					
Aricidea catherinae					
Aricidea (Aedicira) sp. A					
Armandia intermedia	0	0	0	0	1
Augeneriella dubia					
Axiothella quadrimaculata					
Bispira sp. A					
Branchiomma nigromaculata					
Branchiosyllis exilis					
Brania rhopalophora	0	1	0	1	1
Brania sp. B					
Capitella capitata	0	0	0	0	1
Capitellidae sp.	1	0	0	1	1
Caulleriella acicula					
Caulleriella bioculatus					
Caulleriella zetlandica					
Caulleriella sp. A					
Caulleriella sp. B					
Chaetopteridae sp. A					
Cirratulidae sp. A					
Cirratulus africanus					
Cirratulus sp. B					
Cirriformia punctata					
Cossura sp. A					
Dipolydora normalis					
Dipolydora pilikia					
Dipolydora sp. B					
Dodecaceria sp. A					
Dorvillea sp. B					
Euchone cf. *rosea*					
Euchone sp. B					
Eumida sanguinea					
Eumida sp. B					
Eunice antennata					
Eunice australis					
Eunice havaica					
Eunice vittata					
Euthalenessa sp. A					
Exogone longicornis					

TABLE D.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Exogone sp. C					
Exogone sp. E	0	0	0	0	1
Fabricia sp. A					
Glycera tesselata					
Goniada emerita					
Goniada maculata					
Grubeosyllis mediodentata	0	0	0	0	1
Haplosyllis spongicola					
Harmothoe sp. A					
Hesionidae sp. G					
Hesionidae sp. H					
Hesionura australiensis	0	0	2	2	4
Hydroides bannerorum					
Jasmineira caudata					
Josephella marenzelleri					
Laonice cirrata	0	0	0	0	3
Laonome sp. A					
Lepidasthenia sp. A					
Linopherus microcephala	0	0	0	0	2
Loimia sp. A					
Lumbrineriopsis sp. A					
Lumbrineris latreilli					
Lumbrineris tetraura	0	0	0	0	1
Lumbrineris sp. A					
Lygdamis nesiotes					
Lysidice ninetta					
Lysidice sp. A					
Lysippe sp. A					
Magelona capensis					
Magelona cincta					
Magelona sp. A					
Malacoceros sp. A					
Maldanidae sp. A					
Marphysa cf. *conferta*					
Marphysa depressa					
Megalomma intermedium					
Melinna monoceroides					
Mesochaetopterus sagittarius					
Micronereis sp. A					
Microphthalmus sp.	1	0	0	1	2
Micropodarke sp. A	0	0	0	0	16
Micropodarke sp. B					
Microspio granulata					
Monticellina cf. *dorsobranchialis*					
Monticellina sp. A					
Monticellina sp. B					
Mooreonuphis sp. A					
Myriochele oculata	0	0	0	0	1
Myriochele pygidialis					
Myriochele sp. A					
Mystides nr. *caeca*					
Naineris sp. A					

TABLE D.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Neanthes arenaceodentata					
Nematonereis unicornis					
Neodexiospira preacuta					
Nereis sp. B					
Nothria sp. B					
Notomastus tenuis	0	0	0	0	5
Odontosyllis maculata					
Odontosyllis sp. A					
Odontosyllis sp. B					
Ophiodromus angustifrons	2	0	3	5	17
Ophiodromus sp. A					
Ophiodromus sp. B					
Ophryotrocha adherens					
Paleanotus sp. B					
Palmyra sp. A					
Paramphinome sp. A	0	0	0	0	2
Paraonella sp. A	0	0	1	1	1
Pareulepis malayana					
Pholoe sp. A					
Pholoe sp. B					
Pholoe sp. C					
Pholoe sp. D					
Pholoe sp. F					
Phyllochaetopterus socialis					
Phyllochaetopterus verrilli					
Phyllochaetopterus sp. A					
Phyllodoce madeirensis	0	0	0	0	2
Phyllodoce parva					
Phyllodoce sp. A					
Phyllodoce sp. C					
Phyllodoce sp. F					
Phyllodocidae sp. A					
Phyllodocidae sp. C					
Phyllodocidae sp. G					
Pionosyllis heterocirrata	8	3	12	23	83
Pionosyllis spinisetosa	0	0	1	1	1
Pionosyllis weismanni					
Pionosyllis sp. C					
Pisione remota	0	0	2	2	3
Pisione sp. A	0	0	0	0	10
Pisionidens sp. A					
Poecilochaetus johnsoni					
Poecilochaetus serpens					
Polycirrus plumosus					
Polycirrus sp. A					
Polycirrus sp. C					
Polynoidae sp. B					
Polynoidae sp. C					
Polyophthalmus pictus	0	0	0	0	3
Potamilla sp. A					
Prionospio cirrifera	0	0	2	2	18
Prionospio cirrobranchiata	0	0	0	0	2

TABLE D.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Prionospio steenstrupi	0	0	0	0	4
Progoniada sp. A	0	0	0	0	1
Progoniada sp. C					
Protodorvillea biarticulata	1	0	0	1	5
Protodorvillea egena	0	0	0	0	3
Protodriloides sp. A					
Protodrilus sp. A	0	0	0	0	2
Psamathe sp. A					
Pseudopolydora corallicola					
Pseudopotamilla reniformis					
Pseudovermilia occidentalis					
Questa caudicirra					
Questa sp. A	0	0	0	0	4
Questa sp. B					
Rhodine sp. A					
Rhynchospio sp. B					
Sabella sp. A					
Sabellastarte spectabilis					
Saccocirrus oahuensis	0	0	0	0	1
Saccocirrus waianaensis	0	0	0	0	5
Salmacina dysteri					
Samythella sp. A					
Scalibregmidae sp. B					
Scalisetosus sp. A					
Schistomeringos macilenta					
Schistomeringos rudolphi	0	0	0	0	1
Scolelepis victoriensis	0	0	0	0	1
Scolelepis sp. B	0	0	0	0	1
Scyphoproctus djiboutiensis					
Sigalion sp. A					
Sigambra tentaculata	0	0	0	0	1
Sphaerodoropsis sp. C					
Sphaerosyllis riseri	1	0	0	1	5
Sphaerosyllis sublaevis					
Sphaerosyllis sp. D					
Sphaerosyllis sp. E					
Sphaerosyllis sp. G	0	0	1	1	17
Spio blakei	0	0	0	0	7
Spio filicornis					
Spiochaetopterus sp. A					
Spionidae sp. B					
Spionidae sp. D					
Spiophanes bombyx					
Streptosyllis sp. A	1	0	1	2	6
Syllides bansei	0	0	0	0	1
Syllis gracilis					
Synelmis acuminata	0	0	0	0	10
Synelmis albini					
Synelmis sp. A					
Synelmis sp. B					
Terebellidae sp. A					
Terebellidae sp. B					

TABLE D.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Travisia sp. A					
Trichobranchus glacialis					
Typosyllis aciculata orientalis					
Typosyllis cornuta	0	0	0	0	1
Typosyllis variegata					
Typosyllis sp. A					
Typosyllis sp. G					
Vermiliopsis torquata					
OLIGOCHAETA	1	0	9	10	98
NEMATODA	14	2	9	25	259
PLATYHELMINTHES	0	0	2	2	6
PORIFERA					
ECHINODERMATA					
Asteroidea					
Echinoidea	0	0	0	0	1
Holothuroidea	0	0	0	0	1
Ophiuroidea	0	0	2	2	5
ANTHOZOA	0	0	0	0	1
HYDROZOA					
SCYPHOZOA					
KINORHYNCHA					
Echinoderes sp. A	1	0	0	1	3
NEMERTEA	8	1	7	16	56
INSECTA					
SIPUNCULA					
Apionsoma misakianum	0	1	0	1	4
Aspidosiphon muelleri	0	1	0	1	4
Lithacrosiphon cristatus					
Phascolosoma nigrescens					
Siphonosoma cumanense					
Sipunculus nudus					
Sipuncula sp. G	0	0	0	0	1
Sipuncula spp.	0	0	0	0	2
PRIAPULIDA	0	0	0	0	1
CHAETOGNATHA	0	0	0	0	3
PHORONIDA					
Phoronis psammophila	0	0	0	0	1

TABLE D.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
BRYOZOA					
ECHIURA					
HEMICHORDATA					
CHORDATA					
Urochordata					
Branchiostoma sp. A	0	0	0	0	14
Osteichthyes					
Total No. of Individuals/Replicate	39	9	54		
Total No. of Taxa/Replicate	11	5	14		
Total No. of Individuals Sampled				102	723
Total No. of Taxa Sampled				22	63

TABLE D.4. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations D1 and D2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A								
Aglaophamus circinata								
Amphicorina sp. B								
Amphicteis gunneri								
Amphiduros sp. A								
Amphiglena mediterranea	0	0	0	0	0	1	0	1
Amphiglena sp. A	0	0	0	0	0	5	0	5
Aonides oxycephala								
Aonides sp. A	1	0	0	1	0	0	0	0
Aphelochaeta marioni	0	0	0	0	0	0	0	0
Aphroditidae sp. A								
Arabella cf. *multidentata*								
Aricidea catherinae	0	1	0	1	0	0	0	0
Aricidea (Aedicira) sp. A								
Armandia intermedia	0	0	1	1	2	1	3	6
Augeneriella dubia	0	0	0	0	5	5	9	19
Axiothella quadrimaculata								
Bispira sp. A	0	0	0	0	0	0	0	0
Branchiomma nigromaculata	0	0	0	0	0	1	0	1
Branchiosyllis exilis								
Brania rhopalophora	0	0	0	0	0	1	0	1
Brania sp. B								
Capitella capitata	0	0	0	0	1	0	0	1
Capitellidae sp.	0	0	0	0	0	0	0	0
Caulleriella acicula	0	0	0	0	1	0	0	1
Caulleriella bioculatus								
Caulleriella zetlandica								
Caulleriella sp. A								
Caulleriella sp. B	0	1	0	1	0	0	0	0
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus	0	0	0	0	1	0	0	1
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis	0	3	2	5	0	0	0	0
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B								
Euchone cf. *rosea*								
Euchone sp. B	62	41	3	106	6	16	0	22
Eumida sanguinea	0	0	0	0	0	0	0	0
Eumida sp. B								
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A	0	0	0	0	0	0	0	0

TABLE D.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis	0	0	0	0	1	5	0	6
Exogone sp. C	0	2	0	2	2	0	1	3
Exogone sp. E	0	0	0	0	0	0	0	0
Fabricia sp. A	0	1	1	2	6	9	1	16
Glycera tesselata								
Goniada emerita	0	0	1	1	0	0	1	1
Goniada maculata	0	0	0	0	0	0	0	0
Grubeosyllis mediodentata	0	0	0	0	2	0	0	2
Haplosyllis spongicola								
Harmothoe sp. A	0	0	0	0	0	0	0	0
Hesionidae sp. G	0	0	0	0	0	0	0	0
Hesionidae sp. H	0	0	0	0	1	0	0	1
Hesionura australiensis								
Hydroides bannerorum	0	0	0	0	0	0	0	0
Jasmineira caudata	1	0	0	1	0	0	0	0
Josephella marenzelleri	0	0	0	0	1	0	0	1
Laonice cirrata	0	0	0	0	0	0	0	0
Laonome sp. A	0	2	0	2	0	0	4	4
Lepidasthenia sp. A								
Linopherus microcephala	0	0	0	0	0	1	0	1
Loimia sp. A								
Lumbrineriopsis sp. A								
Lumbrineris latreilli	1	1	2	4	1	0	1	2
Lumbrineris tetraura	0	0	1	1	3	3	0	6
Lumbrineris sp. A								
Lygdamis nesiotes								
Lysidice ninetta								
Lysidice sp. A								
Lysippe sp. A	0	0	0	0	1	0	1	2
Magelona capensis								
Magelona cincta								
Magelona sp. A	0	0	0	0	0	0	0	0
Malacoceros sp. A	1	0	0	1	0	0	0	0
Maldanidae sp. A	0	0	0	0	0	1	0	1
Marphysa cf. *conferta*								
Marphysa depressa								
Megalomma intermedium	0	0	1	1	0	0	0	0
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.								
Micropodarke sp. A	4	0	0	4	2	1	2	5
Micropodarke sp. B	0	0	0	0	0	0	0	0
Microspio granulata								
Monticellina cf. *dorsobranchialis*	0	0	0	0	0	0	0	0
Monticellina sp. A								
Monticellina sp. B	0	0	0	0	0	0	0	0
Mooreonuphis sp. A								
Myriochele oculata	8	14	11	33	34	37	20	91
Myriochele pygidialis								
Myriochele sp. A	0	1	0	1	4	3	1	8
Mystides nr. *caeca*								

TABLE D.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata								
Nematonereis unicornis								
Neodexiospira preacuta								
Nereis sp. B	0	0	0	0	1	0	0	1
Nothria sp. B								
Notomastus tenuis	1	0	0	1	1	4	0	5
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B	0	0	0	0	0	0	0	0
Ophiodromus angustifrons	0	0	0	0	10	8	7	25
Ophiodromus sp. A								
Ophiodromus sp. B								
Ophryotrocha adherens	0	0	0	0	9	9	8	26
Paleanotus sp. B				0				0
Palmyra sp. A	0	0	0	0	0	0	0	0
Paramphinome sp. A				0				0
Paraonella sp. A	0	0	0	0	2	1	0	3
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A								
Phyllodoce madeirensis	0	0	0	0	0	0	1	1
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F	0	0	0	0	0	1	0	1
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	0	0	0	0	30	3	16	49
Pionosyllis spinisetosa								
Pionosyllis weismanni								
Pionosyllis sp. C								
Pisione remota								
Pisione sp. A	0	0	0	0	0	0	0	0
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus	0	0	0	0	0	0	0	0
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	0	0	0	0	0	2	1	3
Potamilla sp. A								
Prionospio cirrifera	0	9	1	10	5	5	14	24

TABLE D.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	2	5	1	8	2	1	2	5
Prionospio steenstrupi	0	3	0	3	0	3	1	4
Progoniada sp. A								
Progoniada sp. C								
Protodorvillea biarticulata								
Protodorvillea egena	0	2	0	2	0	0	0	0
Protodriloides sp. A								
Protodrilus sp. A								
Psamathe sp. A								
Pseudopolydora corallicola								
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	0	0	0	0	0	0	0	0
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A	0	1	0	1	0	0	0	0
Sabellastarte spectabilis								
Saccocirrus oahuensis								
Saccocirrus waianaensis								
Salmacina dysteri	0	0	0	0	0	0	0	0
Samythella sp. A								
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta	0	1	0	1	0	0	0	0
Schistomeringos rudolphi	0	0	0	0	2	0	0	2
Scolelepis victoriensis								
Scolelepis sp. B								
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata	0	0	0	0	1	0	0	1
Sphaerodoropsis sp. C								
Sphaerosyllis riseri	0	0	0	0	0	0	0	0
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	0	0	0	0	6	2	1	9
Spio blakei	1	1	0	2	0	3	2	5
Spio filicornis								
Spiochaetopterus sp. A	0	0	0	0	0	0	0	0
Spionidae sp. B								
Spionidae sp. D								
Spiophanes bombyx	0	0	0	0	0	0	0	0
Streptosyllis sp. A								
Syllides bansei								
Syllis gracilis								
Synelmis acuminata	9	18	4	31	5	10	3	18
Synelmis albini								
Synelmis sp. A								
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Terebellidae sp. B								
Travisia sp. A								
Trichobranchus glacialis	0	0	0	0	0	0	0	0
Typosyllis aciculata orientalis	0	0	0	0	0	1	0	1
Typosyllis cornuta	0	0	0	0	1	4	2	7
Typosyllis variegata								
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	7	23	13	43	96	33	16	145
NEMATODA	29	215	31	275	109	69	51	229
PLATYHELMINTHES	0	0	0	0	1	1	1	3
PORIFERA								
ECHINODERMATA								
Asteroidea	0	0	0	0	1	0	0	1
Echinoidea	0	0	0	0	7	43	0	50
Holothuroidea	1	1	0	2	1	4	1	6
Ophiuroidea								
ANTHOZOA	0	1	0	1	0	1	5	6
HYDROZOA	0	0	0	0	0	1	0	1
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	0	0	0	0	0	0
NEMERTEA	6	4	6	16	24	17	4	45
INSECTA	0	0	0	0	0	1	0	1
SIPUNCULA								
Apionsoma misakianum	0	1	0	1	0	2	1	3
Aspidosiphon muelleri	5	3	3	11	14	25	13	52
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus								
Sipuncula sp. G								
Sipuncula spp.	0	0	0	0	4	3	0	7
PRIAPULIDA	0	1	0	1	0	1	0	1
CHAETOGNATHA	1	0	0	1	0	0	0	0

TABLE D.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila	0	0	1	1	1	0	2	3
BRYOZOA	0	0	0	0	0	0	0	0
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata	0	0	0	0	1	0	0	1
Branchiostoma sp. A	1	4	0	5	8	5	5	18
Osteichthyes								
Total No. of Individuals/Replicate	141	360	83		416	353	201	
Total No. of Taxa/Replicate	18	27	17		43	44	33	
Total No. of Individuals Sampled				584				970
Total No. of Taxa Sampled				38				62

TABLE D.5. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations D3A and D5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A								
Aglaophamus circinata								
Amphicorina sp. B								
Amphicteis gunneri								
Amphiduros sp. A								
Amphiglena mediterranea	0	0	0	0	0	0	0	0
Amphiglena sp. A	0	0	0	0	0	0	0	0
Aonides oxycephala								
Aonides sp. A	0	0	0	0	0	0	0	0
Aphelochaeta marioni	0	0	0	0	0	3	0	3
Aphroditidae sp. A								
Arabella cf. *multidentata*								
Aricidea catherinae	0	0	0	0	2	1	0	3
Aricidea (Aedicira) sp. A								
Armandia intermedia	4	3	2	9	1	2	0	3
Augeneriella dubia	0	1	0	1	8	3	0	11
Axiothella quadrimaculata								
Bispira sp. A	0	0	0	0	0	0	0	0
Branchiomma nigromaculata	0	0	0	0	0	0	0	0
Branchiosyllis exilis								
Brania rhopalophora	0	0	0	0	0	0	0	0
Brania sp. B								
Capitella capitata	1	0	0	1	0	1	1	2
Capitellidae sp.	0	0	0	0	1	0	0	1
Caulleriella acicula	0	0	0	0	0	0	0	0
Caulleriella bioculatus								
Caulleriella zetlandica								
Caulleriella sp. A								
Caulleriella sp. B	0	0	0	0	0	0	0	0
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus	0	0	0	0	0	0	0	0
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis	108	52	1	161	0	0	0	0
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B								
Euchone cf. *rosea*								
Euchone sp. B	0	1	0	1	66	119	31	216
Eumida sanguinea	0	1	0	1	0	0	0	0
Eumida sp. B								
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A	1	0	0	1	0	0	0	0

TABLE D.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis	7	0	0	7	0	0	0	0
Exogone sp. C	0	0	0	0	1	0	4	5
Exogone sp. E	0	0	0	0	1	0	0	1
Fabricia sp. A	0	0	0	0	5	6	8	19
Glycera tesselata								
Goniada emerita	0	0	0	0	0	0	1	1
Goniada maculata	0	0	0	0	0	0	0	0
Grubeosyllis mediodentata	2	1	0	3	1	0	4	5
Haplosyllis spongicola								
Harmothoe sp. A	1	0	0	1	0	0	0	0
Hesionidae sp. G	0	0	1	1	2	0	1	3
Hesionidae sp. H	0	0	0	0	0	0	1	1
Hesionura australiensis								
Hydroides bannerorum	1	0	0	1	0	0	0	0
Jasmineira caudata	0	0	0	0	0	1	0	1
Josephella marenzelleri	0	0	0	0	0	0	0	0
Laonice cirrata	0	0	0	0	0	0	0	0
Laonome sp. A	0	0	1	1	1	0	0	1
Lepidasthenia sp. A								
Linopherus microcephala	0	0	0	0	0	0	0	0
Loimia sp. A								
Lumbrineriopsis sp. A								
Lumbrineris latreilli	1	0	0	1	5	2	1	8
Lumbrineris tetraura	1	0	0	1	9	13	10	32
Lumbrineris sp. A								
Lygdamis nesiotes								
Lysidice ninetta								
Lysidice sp. A								
Lysippe sp. A	1	0	0	1	0	2	1	3
Magelona capensis								
Magelona cincta								
Magelona sp. A	0	0	0	0	0	2	2	4
Malacoceros sp. A	0	0	0	0	0	0	0	0
Maldanidae sp. A	1	0	0	1	0	2	0	2
Marphysa cf. *conferta*								
Marphysa depressa								
Megalomma intermedium	0	0	0	0	0	0	0	0
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.								
Micropodarke sp. A	2	1	3	6	3	5	5	13
Micropodarke sp. B	0	0	0	0	0	0	2	2
Microspio granulata								
Monticellina cf. *dorsobranchialis*	0	1	0	1	0	0	0	0
Monticellina sp. A								
Monticellina sp. B	1	0	0	1	0	0	0	0
Mooreonuphis sp. A								
Myriochele oculata	16	1	4	21	19	26	12	57
Myriochele pygidialis								
Myriochele sp. A	4	0	4	8	2	0	0	2
Mystides nr. *caeca*								

TABLE D.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata								
Nematonereis unicornis								
Neodexiospira preacuta								
Nereis sp. B	1	1	2	4	12	17	12	41
Nothria sp. B								
Notomastus tenuis	0	0	0	0	3	1	2	6
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B	1	0	0	1	0	2	0	2
Ophiodromus angustifrons	5	2	4	11	5	3	3	11
Ophiodromus sp. A								
Ophiodromus sp. B								
Ophryotrocha adherens	1	0	0	1	0	0	0	0
Paleanotus sp. B								
Palmyra sp. A	0	0	0	0	1	0	0	1
Paramphinome sp. A								
Paraonella sp. A	0	0	0	0	0	0	0	0
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A								
Phyllodoce madeirensis	0	0	0	0	0	1	0	1
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F	0	0	0	0	0	0	0	0
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	6	18	12	36	2	2	7	11
Pionosyllis spinisetosa								
Pionosyllis weismanni								
Pionosyllis sp. C								
Pisione remota								
Pisione sp. A	0	0	2	2	0	0	0	0
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus	1	1	0	2	0	0	0	0
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	0	0	1	1	0	0	0	0
Potamilla sp. A								
Prionospio cirrifera	5	2	7	14	6	11	9	26

TABLE D.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	4	5	2	11	6	3	3	12
Prionospio steenstrupi	4	1	1	6	4	3	1	8
Progoniada sp. A								
Progoniada sp. C								
Protodorvillea biarticulata								
Protodorvillea egena	0	2	0	2	0	3	0	3
Protodriloides sp. A								
Protodrilus sp. A								
Psamathe sp. A								
Pseudopolydora corallicola								
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	0	3	3	6	0	0	0	0
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A	0	0	0	0	0	0	0	0
Sabellastarte spectabilis								
Saccocirrus oahuensis								
Saccocirrus waianaensis								
Salmacina dysteri	1	0	0	1	2	17	6	25
Samythella sp. A								
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta	0	0	0	0	0	0	0	0
Schistomeringos rudolphi	8	4	2	14	0	0	0	0
Scolelepis victoriensis								
Scolelepis sp. B								
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata	1	0	1	2	0	0	0	0
Sphaerodoropsis sp. C								
Sphaerosyllis riseri	0	2	0	2	1	3	0	4
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	6	5	7	18	2	4	0	6
Spio blakei	0	0	2	2	1	0	0	1
Spio filicornis								
Spiochaetopterus sp. A	0	0	0	0	0	1	0	1
Spionidae sp. B								
Spionidae sp. D								
Spiophanes bombyx	0	0	0	0	3	3	1	7
Streptosyllis sp. A								
Syllides bansei								
Syllis gracilis								
Synelmis acuminata	72	22	51	145	15	17	7	39
Synelmis albini								
Synelmis sp. A								
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Terebellidae sp. B								
Travisia sp. A								
Trichobranchus glacialis	0	0	0	0	1	0	0	1
Typosyllis aciculata orientalis	0	0	0	0	0	0	0	0
Typosyllis cornuta	0	0	2	2	0	0	0	0
Typosyllis variegata								
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	45	74	41	160	11	23	18	52
NEMATODA	46	62	34	142	66	179	834	1079
PLATYHELMINTHES	1	0	0	1	0	0	0	0
PORIFERA								
ECHINODERMATA								
Asteroidea								
Echinoidea	0	1	1	2	0	0	0	0
Holothuroidea	0	1	0	1	0	6	0	6
Ophiuroidea	5	2	2	9	0	1	1	2
ANTHOZOA	0	0	1	1	1	0	0	1
HYDROZOA	0	0	0	0	2	0	1	3
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	0	0	1	8	1	10
NEMERTEA	14	7	13	34	3	13	28	44
INSECTA	1	1	0	2	0	2	2	4
SIPUNCULA								
Apionsoma misakianum	3	7	1	11	0	0	0	0
Aspidosiphon muelleri	12	31	42	85	3	2	3	8
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus								
Sipuncula sp. G								
Sipuncula spp.	5	0	0	5	2	2	1	5
PRIAPULIDA	0	0	0	0	3	0	45	48
CHAETOGNATHA	0	0	0	0	0	1	0	1

TABLE D.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila	1	1	0	2	0	0	0	0
BRYOZOA	0	0	0	0	0	0	1	1
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata	0	0	0	0	0	0	0	0
Branchiostoma sp. A	7	7	7	21	0	0	3	3
Osteichthyes								
Total No. of Individuals/Replicate	408	324	257		283	516	1,073	
Total No. of Taxa/Replicate	41	33	21		40	41	37	
Total No. of Individuals Sampled				989				1,872
Total No. of Taxa Sampled				57				59

TABLE D.6. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Station D6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
POLYCHAETA					
Acrocirrus sp. A					
Aglaophamus circinata					
Amphicorina sp. B					
Amphicteis gunneri					
Amphiduros sp. A					
Amphiglena mediterranea	0	0	0	0	1
Amphiglena sp. A	1	0	0	1	6
Aonides oxycephala					
Aonides sp. A	0	0	0	0	1
Aphelochaeta marioni	0	0	0	0	3
Aphroditidae sp. A					
Arabella cf. *multidentata*					
Aricidea catherinae	0	0	1	1	5
Aricidea (Aedicira) sp. A					
Armandia intermedia	1	0	1	2	21
Augeneriella dubia	1	8	3	12	43
Axiothella quadrimaculata					
Bispira sp. A	1	0	0	1	1
Branchiomma nigromaculata	0	0	0	0	1
Branchiosyllis exilis					
Brania rhopalophora	0	0	0	0	1
Brania sp. B					
Capitella capitata	0	0	0	0	4
Capitellidae sp.	0	0	0	0	1
Caulleriella acicula	0	0	0	0	1
Caulleriella bioculatus					
Caulleriella zetlandica					
Caulleriella sp. A					
Caulleriella sp. B	0	0	0	0	1
Chaetopteridae sp. A					
Cirratulidae sp. A					
Cirratulus africanus	0	0	0	0	1
Cirratulus sp. B					
Cirriformia punctata					
Cossura sp. A					
Dipolydora normalis	0	0	0	0	166
Dipolydora pilikia					
Dipolydora sp. B					
Dodecaceria sp. A					
Dorvillea sp. B					
Euchone cf. *rosea*					
Euchone sp. B	7	0	2	9	354
Eumida sanguinea	0	0	0	0	1
Eumida sp. B					
Eunice antennata					
Eunice australis					
Eunice havaica					
Eunice vittata					
Euthalenessa sp. A	0	0	0	0	1
Exogone longicornis	0	0	0	0	13

TABLE D.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Exogone sp. C	3	0	0	3	13
Exogone sp. E	1	0	2	3	4
Fabricia sp. A	0	0	0	0	37
Glycera tesselata					
Goniada emerita	0	0	0	0	3
Goniada maculata	0	0	1	1	1
Grubeosyllis mediodentata	0	0	0	0	10
Haplosyllis spongicola					
Harmothoe sp. A	0	0	0	0	1
Hesionidae sp. G	0	1	0	1	5
Hesionidae sp. H	1	0	0	1	3
Hesionura australiensis					
Hydroides bannerorum	0	0	0	0	1
Jasmineira caudata	3	0	2	5	7
Josephella marenzelleri	0	0	0	0	1
Laonice cirrata	0	0	1	1	1
Laonome sp. A	0	0	0	0	8
Lepidasthenia sp. A					
Linopherus microcephala	0	0	0	0	1
Loimia sp. A					
Lumbrineriopsis sp. A					
Lumbrineris latreilli	3	0	1	4	19
Lumbrineris tetraura	0	1	2	3	43
Lumbrineris sp. A					
Lygdamis nesiotes					
Lysidice ninetta					
Lysidice sp. A					
Lysippe sp. A	1	1	1	3	9
Magelona capensis					
Magelona cincta					
Magelona sp. A	0	0	0	0	4
Malacoceros sp. A	0	0	0	0	1
Maldanidae sp. A	0	0	0	0	4
Marphysa cf. *conferta*					
Marphysa depressa					
Megalomma intermedium	0	0	0	0	1
Melinna monoceroides					
Mesochaetopterus sagittarius					
Micronereis sp. A					
Microphthalmus sp.					
Micropodarke sp. A	2	0	1	3	31
Micropodarke sp. B	0	0	0	0	2
Microspio granulata					
Monticellina cf. *dorsobranchialis*	0	0	0	0	1
Monticellina sp. A					
Monticellina sp. B	0	0	0	0	1
Mooreonuphis sp. A					
Myriochele oculata	15	0	15	30	232
Myriochele pygidialis					
Myriochele sp. A	0	0	0	0	19
Mystides nr. *caeca*					
Naineris sp. A					

TABLE D.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Neanthes arenaceodentata					
Nematonereis unicornis					
Neodexiospira preacuta					
Nereis sp. B	1	1	5	7	53
Nothria sp. B					
Notomastus tenuis	1	0	1	2	14
Odontosyllis maculata					
Odontosyllis sp. A					
Odontosyllis sp. B	0	0	0	0	3
Ophiodromus angustifrons	3	7	6	16	63
Ophiodromus sp. A					
Ophiodromus sp. B					
Ophryotrocha adherens	0	0	0	0	27
Paleanotus sp. B					
Palmyra sp. A	0	0	0	0	1
Paramphinome sp. A					
Paraonella sp. A	0	0	0	0	3
Pareulepis malayana					
Pholoe sp. A					
Pholoe sp. B					
Pholoe sp. C					
Pholoe sp. D					
Pholoe sp. F					
Phyllochaetopterus socialis					
Phyllochaetopterus verrilli					
Phyllochaetopterus sp. A					
Phyllodoce madeirensis	1	0	0	1	3
Phyllodoce parva					
Phyllodoce sp. A					
Phyllodoce sp. C					
Phyllodoce sp. F	0	0	0	0	1
Phyllodocidae sp. A					
Phyllodocidae sp. C					
Phyllodocidae sp. G					
Pionosyllis heterocirrata	2	0	3	5	101
Pionosyllis spinisetosa					
Pionosyllis weismanni					
Pionosyllis sp. C					
Pisione remota					
Pisione sp. A	0	0	0	0	2
Pisionidens sp. A					
Poecilochaetus johnsoni					
Poecilochaetus serpens					
Polycirrus plumosus	0	0	0	0	2
Polycirrus sp. A					
Polycirrus sp. C					
Polynoidae sp. B					
Polynoidae sp. C					
Polyophthalmus pictus	0	0	0	0	4
Potamilla sp. A					
Prionospio cirrifera	8	0	4	12	86
Prionospio cirrobranchiata	0	0	0	0	36

TABLE D.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	2	3	Total	
Prionospio steenstrupi	3	0	0	3	24
Progoniada sp. A					
Progoniada sp. C					
Protodorvillea biarticulata					
Protodorvillea egena	2	1	1	4	11
Protodriloides sp. A					
Protodrilus sp. A					
Psamathe sp. A					
Pseudopolydora corallicola					
Pseudopotamilla reniformis					
Pseudovermilia occidentalis					
Questa caudicirra					
Questa sp. A	0	0	0	0	6
Questa sp. B					
Rhodine sp. A					
Rhynchospio sp. B					
Sabella sp. A	0	0	0	0	1
Sabellastarte spectabilis					
Saccocirrus oahuensis					
Saccocirrus waianaensis					
Salmacina dysteri	0	0	0	0	26
Samythella sp. A					
Scalibregmidae sp. B					
Scalisetosus sp. A					
Schistomeringos macilenta	0	0	0	0	1
Schistomeringos rudolphi	0	0	0	0	16
Scolelepis victoriensis					
Scolelepis sp. B					
Scyphoproctus djiboutiensis					
Sigalion sp. A					
Sigambra tentaculata	0	1	0	1	4
Sphaerodoropsis sp. C					
Sphaerosyllis riseri	1	0	1	2	8
Sphaerosyllis sublaevis					
Sphaerosyllis sp. D					
Sphaerosyllis sp. E					
Sphaerosyllis sp. G	2	0	0	2	35
Spio blakei	1	0	0	1	11
Spio filicornis					
Spiochaetopterus sp. A	1	1	1	3	4
Spionidae sp. B					
Spionidae sp. D					
Spiophanes bombyx	0	0	0	0	7
Streptosyllis sp. A					
Syllides bansei					
Syllis gracilis					
Synelmis acuminata	10	11	7	28	261
Synelmis albini					
Synelmis sp. A					
Synelmis sp. B					
Terebellidae sp. A					
Terebellidae sp. B					

TABLE D.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Travisia sp. A					
Trichobranchus glacialis	0	0	0	0	1
Typosyllis aciculata orientalis	0	0	0	0	1
Typosyllis cornuta	0	0	0	0	9
Typosyllis variegata					
Typosyllis sp. A					
Typosyllis sp. G					
Vermiliopsis torquata					
OLIGOCHAETA	24	29	13	66	466
NEMATODA	130	120	93	343	2068
PLATYHELMINTHES	1	0	0	1	5
PORIFERA					
ECHINODERMATA					
Asteroidea					
Echinoidea	2	0	0	2	5
Holothuroidea	0	0	0	0	57
Ophiuroidea	2	0	0	2	21
ANTHOZOA	0	0	0	0	9
HYDROZOA	0	0	0	0	4
SCYPHOZOA					
KINORHYNCHA					
Echinoderes sp. A	1	3	0	4	14
NEMERTEA	8	10	10	28	167
INSECTA	0	0	5	5	12
SIPUNCULA					
Apionsoma misakianum	0	0	0	0	15
Aspidosiphon muelleri	11	23	2	36	192
Lithacrosiphon cristatus					
Phascolosoma nigrescens					
Siphonosoma cumanense					
Sipunculus nudus					
Sipuncula sp. G					
Sipuncula spp.	0	0	0	0	17
PRIAPULIDA	3	4	1	8	58
CHAETOGNATHA	0	0	0	0	2
PHORONIDA					
Phoronis psammophila	0	2	0	2	8

TABLE D.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
BRYOZOA	0	0	0	0	1
ECHIURA					
HEMICHORDATA					
CHORDATA					
Urochordata	0	0	0	0	1
Branchiostoma sp. A	8	2	7	17	64
Osteichthyes					
Total No. of Individuals/Replicate	266	226	193		
Total No. of Taxa/Replicate	36	18	29		
Total No. of Individuals Sampled				685	5,100
Total No. of Taxa Sampled				44	100

TABLE D.7. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations E1 and E2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A	2	2	1	5	0	0	0	0
Aglaophamus circinata								
Amphicorina sp. B	0	0	0	0	0	0	0	0
Amphicteis gunneri	1	2	0	3	0	0	0	0
Amphiduros sp. A								
Amphiglena mediterranea								
Amphiglena sp. A	0	0	0	0	0	0	0	0
Aonides oxycephala								
Aonides sp. A	0	1	2	3	0	0	1	1
Aphelochaeta marioni	3	8	1	12	0	0	0	0
Aphroditidae sp. A								
Arabella cf. *multidentata*	1	0	0	1	0	0	0	0
Aricidea catherinae	0	0	0	0	1	0	0	1
Aricidea (Aedicira) sp. A	0	0	0	0	0	0	0	0
Armandia intermedia	3	3	1	7	0	0	0	0
Augeneriella dubia	0	0	0	0	0	0	0	0
Axiothella quadrimaculata								
Bispira sp. A								
Branchiomma nigromaculata	0	0	0	0	0	0	0	0
Branchiosyllis exilis								
Brania rhopalophora	0	1	0	1	0	0	0	0
Brania sp. B	0	0	0	0	0	0	0	0
Capitella capitata	0	0	0	0	0	0	0	0
Capitellidae sp.	0	0	0	0	0	0	0	0
Caulleriella acicula	0	1	0	1	1	1	0	2
Caulleriella bioculatus	0	0	0	0	0	0	2	2
Caulleriella zetlandica								
Caulleriella sp. A	0	0	0	0	0	0	0	0
Caulleriella sp. B	0	0	0	0	0	2	0	2
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus								
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis								
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B	0	0	0	0	0	0	0	0
Euchone cf. *rosea*	0	0	0	0	1	0	0	1
Euchone sp. B	3	5	3	11	0	0	0	0
Eumida sanguinea	0	0	0	0	0	0	0	0
Eumida sp. B	0	1	0	1	0	0	0	0
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A								

TABLE D.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis	1	0	0	1	0	0	0	0
Exogone sp. C	0	0	2	2	0	0	0	0
Exogone sp. E	0	0	0	0	0	0	0	0
Fabricia sp. A								
Glycera tesselata	1	0	0	1	1	0	1	2
Goniada emerita	0	0	0	0	0	0	0	0
Goniada maculata								
Grubeosyllis mediodentata	0	0	0	0	0	0	0	0
Haplosyllis spongicola								
Harmothoe sp. A								
Hesionidae sp. G								
Hesionidae sp. H								
Hesionura australiensis	0	0	0	0	0	1	2	3
Hydroides bannerorum	0	0	0	0	0	0	0	0
Jasmineira caudata	0	0	0	0	0	0	0	0
Josephella marenzelleri								
Laonice cirrata	0	0	0	0	0	0	0	0
Laonome sp. A								
Lepidasthenia sp. A								
Linopherus microcephala	0	0	0	0	0	0	0	0
Loimia sp. A								
Lumbrineriopsis sp. A	0	0	0	0	0	0	0	0
Lumbrineris latreilli	0	0	0	0	0	0	0	0
Lumbrineris tetraura	1	0	3	4	0	0	0	0
Lumbrineris sp. A								
Lygdamis nesiotes	0	0	0	0	0	0	0	0
Lysidice ninetta								
Lysidice sp. A	0	0	0	0	0	0	0	0
Lysippe sp. A	0	1	0	1	0	0	0	0
Magelona capensis								
Magelona cincta								
Magelona sp. A	0	0	0	0	0	0	0	0
Malacoceros sp. A								
Maldanidae sp. A	0	0	0	0	0	0	0	0
Marphysa cf. *conferta*	0	0	1	1	0	0	0	0
Marphysa depressa								
Megalomma intermedium								
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.								
Micropodarke sp. A	0	2	0	2	1	0	0	1
Micropodarke sp. B	0	0	0	0	0	0	0	0
Microspio granulata								
Monticellina cf. *dorsobranchialis*								
Monticellina sp. A	0	0	0	0	1	0	0	1
Monticellina sp. B								
Mooreonuphis sp. A	2	0	1	3	1	3	4	8
Myriochele oculata	1	0	0	1	0	0	0	0
Myriochele pygidialis								
Myriochele sp. A	0	0	0	0	0	0	0	0
Mystides nr. *caeca*								

TABLE D.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata	1	0	0	1	0	0	0	0
Nematonereis unicornis	0	0	0	0	0	0	0	0
Neodexiospira preacuta								
Nereis sp. B	0	0	0	0	0	0	0	0
Nothria sp. B	0	0	0	0	0	0	0	0
Notomastus tenuis	0	1	1	2	1	0	0	1
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B	0	0	0	0	0	0	0	0
Ophiodromus angustifrons	0	0	0	0	1	0	0	1
Ophiodromus sp. A								
Ophiodromus sp. B	0	0	0	0	1	0	8	9
Ophryotrocha adherens	3	0	0	3	1	0	1	2
Paleanotus sp. B								
Palmyra sp. A								
Paramphinome sp. A								
Paraonella sp. A	0	0	0	0	1	0	0	1
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A	0	0	0	0	0	0	0	0
Phyllodoce madeirensis	0	0	0	0	0	0	0	0
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F								
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	0	0	0	0	6	1	5	12
Pionosyllis spinisetosa	0	0	0	0	0	0	0	0
Pionosyllis weismanni	0	0	0	0	0	0	0	0
Pionosyllis sp. C								
Pisione remota	0	0	0	0	1	0	0	1
Pisione sp. A	0	0	0	0	0	0	0	0
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus								
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	0	0	0	0	0	0	0	0
Potamilla sp. A								
Prionospio cirrifera	6	9	1	16	3	0	0	3

TABLE D.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	4	2	3	9	6	2	1	9
Prionospio steenstrupi	0	1	1	2	0	0	0	0
Progoniada sp. A	0	0	1	1	1	2	1	4
Progoniada sp. C	0	0	0	0	0	0	0	0
Protodorvillea biarticulata	0	0	0	0	3	2	10	15
Protodorvillea egena	0	0	0	0	0	0	0	0
Protodriloides sp. A								
Protodrilus sp. A								
Psamathe sp. A	0	0	0	0	0	1	0	1
Pseudopolydora corallicola	0	0	0	0	0	0	1	1
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	0	0	0	0	0	0	0	0
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A								
Sabellastarte spectabilis								
Saccocirrus oahuensis								
Saccocirrus waianaensis								
Salmacina dysteri	2	0	0	2	0	0	0	0
Samythella sp. A	0	0	0	0	0	0	0	0
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta								
Schistomeringos rudolphi	1	0	0	1	0	0	0	0
Scolelepis victoriensis								
Scolelepis sp. B								
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata								
Sphaerodoropsis sp. C	2	4	0	6	0	0	0	0
Sphaerosyllis riseri	1	2	0	3	0	0	0	0
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	1	1	2	4	0	0	0	0
Spio blakei	0	0	0	0	1	0	1	2
Spio filicornis								
Spiochaetopterus sp. A	0	0	0	0	0	0	0	0
Spionidae sp. B								
Spionidae sp. D	5	21	3	29	0	1	0	1
Spiophanes bombyx	0	0	1	1	0	0	0	0
Streptosyllis sp. A	0	0	0	0	0	0	0	0
Syllides bansei								
Syllis gracilis								
Synelmis acuminata	2	5	3	10	1	0	0	1
Synelmis albini								
Synelmis sp. A	0	0	0	0	0	0	0	0
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Terebellidae sp. B								
Travisia sp. A	0	0	0	0	0	0	0	0
Trichobranchus glacialis								
Typosyllis aciculata orientalis	0	0	0	0	0	0	0	0
Typosyllis cornuta	0	0	0	0	0	1	3	4
Typosyllis variegata	0	0	0	0	0	0	0	0
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	4	11	8	23	3	3	8	14
NEMATODA	45	64	36	145	9	3	15	27
PLATYHELMINTHES	0	0	0	0	0	0	0	0
PORIFERA								
ECHINODERMATA								
Asteroidea								
Echinoidea	0	0	0	0	0	0	0	0
Holothuroidea	0	0	1	1	0	0	0	0
Ophiuroidea	0	0	1	1	1	2	0	3
ANTHOZOA	0	1	1	2	0	0	1	1
HYDROZOA	1	0	0	1	0	0	0	0
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	0	0	0	1	0	1
NEMERTEA	7	3	1	11	7	4	2	13
INSECTA								
SIPUNCULA								
Apionsoma misakianum								
Aspidosiphon muelleri	7	15	9	31	0	3	1	4
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus								
Sipuncula sp. G	0	0	1	1	0	0	0	0
Sipuncula spp.	2	0	1	3	0	0	0	0
PRIAPULIDA	0	0	0	0	0	0	0	0
CHAETOGNATHA								

TABLE D.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila								
BRYOZOA	1	0	1	2	0	0	0	0
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata								
Branchiostoma sp. A	0	1	0	1	0	0	1	1
Osteichthyes								
Total No. of Individuals/Replicate	114	168	91		54	33	69	
Total No. of Taxa/Replicate	29	26	28		24	17	20	
Total No. of Individuals Sampled				373				156
Total No. of Taxa Sampled				46				36

TABLE D.8. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Stations E3 and E5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
POLYCHAETA								
Acrocirrus sp. A	0	0	0	0	4	1	5	10
Aglaophamus circinata								
Amphicorina sp. B	0	1	6	7	0	0	0	0
Amphicteis gunneri	0	0	1	1	1	0	0	1
Amphiduros sp. A								
Amphiglena mediterranea								
Amphiglena sp. A	0	1	0	1	0	0	0	0
Aonides oxycephala								
Aonides sp. A	2	4	1	7	1	1	1	3
Aphelochaeta marioni	1	3	3	7	1	2	0	3
Aphroditidae sp. A								
Arabella cf. *multidentata*	0	0	0	0	0	0	0	0
Aricidea catherinae	0	0	0	0	1	4	1	6
Aricidea (Aedicira) sp. A	0	0	0	0	0	1	0	1
Armandia intermedia	3	0	4	7	1	3	0	4
Augeneriella dubia	0	0	0	0	0	0	0	0
Axiothella quadrimaculata								
Bispira sp. A								
Branchiomma nigromaculata	0	0	1	1	0	0	0	0
Branchiosyllis exilis								
Brania rhopalophora	0	0	0	0	0	0	0	0
Brania sp. B	1	0	0	1	0	0	0	0
Capitella capitata	0	0	0	0	0	0	0	0
Capitellidae sp.	0	0	0	0	0	0	1	1
Caulleriella acicula	0	0	0	0	0	0	0	0
Caulleriella bioculatus	0	0	1	1	0	0	0	0
Caulleriella zetlandica								
Caulleriella sp. A	1	0	0	1	0	0	1	1
Caulleriella sp. B	0	0	0	0	0	0	0	0
Chaetopteridae sp. A								
Cirratulidae sp. A								
Cirratulus africanus								
Cirratulus sp. B								
Cirriformia punctata								
Cossura sp. A								
Dipolydora normalis								
Dipolydora pilikia								
Dipolydora sp. B								
Dodecaceria sp. A								
Dorvillea sp. B	0	0	1	1	0	0	3	3
Euchone cf. *rosea*	1	1	4	6	0	0	0	0
Euchone sp. B	0	0	0	0	1	1	3	5
Eumida sanguinea	0	2	0	2	0	0	0	0
Eumida sp. B	0	0	0	0	0	0	0	0
Eunice antennata								
Eunice australis								
Eunice havaica								
Eunice vittata								
Euthalenessa sp. A								

TABLE D.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Exogone longicornis	0	0	0	0	0	0	0	0
Exogone sp. C	0	0	3	3	0	0	0	0
Exogone sp. E	0	1	1	2	0	1	0	1
Fabricia sp. A								
Glycera tesselata	0	0	1	1	1	0	0	1
Goniada emerita	0	0	0	0	0	0	1	1
Goniada maculata								
Grubeosyllis mediodentata	0	0	1	1	0	0	0	0
Haplosyllis spongicola								
Harmothoe sp. A								
Hesionidae sp. G								
Hesionidae sp. H								
Hesionura australiensis	1	1	0	2	0	0	0	0
Hydroides bannerorum	1	0	0	1	0	0	0	0
Jasmineira caudata	0	1	2	3	0	0	0	0
Josephella marenzelleri								
Laonice cirrata	0	0	0	0	0	0	4	4
Laonome sp. A								
Lepidasthenia sp. A								
Linopherus microcephala	0	1	0	1	0	0	0	0
Loimia sp. A								
Lumbrineriopsis sp. A	0	1	1	2	0	0	1	1
Lumbrineris latreilli	0	1	0	1	1	0	0	1
Lumbrineris tetraura	0	0	0	0	1	3	4	8
Lumbrineris sp. A								
Lygdamis nesiotes	0	1	1	2	0	0	0	0
Lysidice ninetta								
Lysidice sp. A	0	3	0	3	0	0	0	0
Lysippe sp. A	1	0	0	1	0	0	0	0
Magelona capensis								
Magelona cincta								
Magelona sp. A	0	1	0	1	0	0	0	0
Malacoceros sp. A								
Maldanidae sp. A	0	1	0	1	0	0	0	0
Marphysa cf. *conferta*	0	0	0	0	0	0	0	0
Marphysa depressa								
Megalomma intermedium								
Melinna monoceroides								
Mesochaetopterus sagittarius								
Micronereis sp. A								
Microphthalmus sp.								
Micropodarke sp. A	2	0	10	12	0	0	3	3
Micropodarke sp. B	0	0	5	5	0	0	0	0
Microspio granulata								
Monticellina cf. *dorsobranchialis*								
Monticellina sp. A	0	0	0	0	0	0	0	0
Monticellina sp. B								
Mooreonuphis sp. A	0	1	6	7	0	0	0	0
Myriochele oculata	2	1	0	3	1	0	1	2
Myriochele pygidialis								
Myriochele sp. A	0	0	2	2	0	0	1	1
Mystides nr. *caeca*								

TABLE D.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Naineris sp. A								
Neanthes arenaceodentata	0	0	0	0	0	0	0	0
Nematonereis unicornis	2	0	1	3	2	0	1	3
Neodexiospira preacuta								
Nereis sp. B	0	1	4	5	0	0	0	0
Nothria sp. B	0	0	0	0	1	2	0	3
Notomastus tenuis	2	1	0	3	0	4	1	5
Odontosyllis maculata								
Odontosyllis sp. A								
Odontosyllis sp. B	0	1	3	4	0	0	0	0
Ophiodromus angustifrons	4	2	16	22	1	0	1	2
Ophiodromus sp. A								
Ophiodromus sp. B	0	1	0	1	0	0	0	0
Ophryotrocha adherens	0	0	2	2	0	0	0	0
Paleanotus sp. B								
Palmyra sp. A								
Paramphinome sp. A								
Paraonella sp. A	0	0	0	0	0	0	0	0
Pareulepis malayana								
Pholoe sp. A								
Pholoe sp. B								
Pholoe sp. C								
Pholoe sp. D								
Pholoe sp. F								
Phyllochaetopterus socialis								
Phyllochaetopterus verrilli								
Phyllochaetopterus sp. A	3	1	1	5	0	0	0	0
Phyllodoce madeirensis	0	1	2	3	0	0	0	0
Phyllodoce parva								
Phyllodoce sp. A								
Phyllodoce sp. C								
Phyllodoce sp. F								
Phyllodocidae sp. A								
Phyllodocidae sp. C								
Phyllodocidae sp. G								
Pionosyllis heterocirrata	3	1	26	30	0	1	13	14
Pionosyllis spinisetosa	1	0	0	1	0	0	0	0
Pionosyllis weismanni	2	0	1	3	0	0	0	0
Pionosyllis sp. C								
Pisione remota	0	0	0	0	0	0	0	0
Pisione sp. A	3	0	0	3	0	0	0	0
Pisionidens sp. A								
Poecilochaetus johnsoni								
Poecilochaetus serpens								
Polycirrus plumosus								
Polycirrus sp. A								
Polycirrus sp. C								
Polynoidae sp. B								
Polynoidae sp. C								
Polyophthalmus pictus	2	3	6	11	0	0	0	0
Potamilla sp. A								
Prionospio cirrifera	5	4	3	12	2	4	5	11

TABLE D.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Prionospio cirrobranchiata	7	16	11	34	2	5	2	9
Prionospio steenstrupi	0	0	1	1	0	0	1	1
Progoniada sp. A	2	1	1	4	1	0	1	2
Progoniada sp. C	0	0	0	0	0	0	0	0
Protodorvillea biarticulata	2	0	2	4	0	0	2	2
Protodorvillea egena	0	0	0	0	0	0	2	2
Protodriloides sp. A								
Protodrilus sp. A								
Psamathe sp. A	0	0	0	0	0	0	0	0
Pseudopolydora corallicola	0	0	0	0	0	0	0	0
Pseudopotamilla reniformis								
Pseudovermilia occidentalis								
Questa caudicirra								
Questa sp. A	0	0	1	1	0	1	4	5
Questa sp. B								
Rhodine sp. A								
Rhynchospio sp. B								
Sabella sp. A								
Sabellastarte spectabilis								
Saccocirrus oahuensis								
Saccocirrus waianaensis								
Salmacina dysteri	3	4	5	12	0	0	0	0
Samythella sp. A	1	0	5	6	0	0	0	0
Scalibregmidae sp. B								
Scalisetosus sp. A								
Schistomeringos macilenta								
Schistomeringos rudolphi	1	3	0	4	0	0	0	0
Scolelepis victoriensis								
Scolelepis sp. B								
Scyphoproctus djiboutiensis								
Sigalion sp. A								
Sigambra tentaculata								
Sphaerodoropsis sp. C	0	0	0	0	0	0	0	0
Sphaerosyllis riseri	0	1	5	6	0	0	5	5
Sphaerosyllis sublaevis								
Sphaerosyllis sp. D								
Sphaerosyllis sp. E								
Sphaerosyllis sp. G	1	2	6	9	0	1	5	6
Spio blakei	2	1	0	3	0	2	0	2
Spio filicornis								
Spiochaetopterus sp. A	0	0	0	0	2	0	0	2
Spionidae sp. B								
Spionidae sp. D	4	5	7	16	5	8	1	14
Spiophanes bombyx	0	0	1	1	0	1	0	1
Streptosyllis sp. A	0	0	1	1	0	0	0	0
Syllides bansei								
Syllis gracilis								
Synelmis acuminata	8	1	4	13	2	1	4	7
Synelmis albini								
Synelmis sp. A	0	1	0	1	0	0	0	0
Synelmis sp. B								
Terebellidae sp. A								

TABLE D.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Terebellidae sp. B								
Travisia sp. A	0	0	0	0	0	1	0	1
Trichobranchus glacialis								
Typosyllis aciculata orientalis	0	3	3	6	0	0	0	0
Typosyllis cornuta	0	0	0	0	0	0	1	1
Typosyllis variegata	0	1	0	1	0	0	0	0
Typosyllis sp. A								
Typosyllis sp. G								
Vermiliopsis torquata								
OLIGOCHAETA	8	21	17	46	8	5	11	24
NEMATODA	21	24	341	386	14	12	144	170
PLATYHELMINTHES	0	0	1	1	0	0	0	0
PORIFERA								
ECHINODERMATA								
Asteroidea								
Echinoidea	0	1	1	2	0	0	0	0
Holothuroidea	0	0	0	0	0	0	1	1
Ophiuroidea	3	3	4	10	1	0	0	1
ANTHOZOA	0	0	0	0	0	2	0	2
HYDROZOA	0	0	1	1	0	0	0	0
SCYPHOZOA								
KINORHYNCHA								
Echinoderes sp. A	0	0	5	5	1	0	0	1
NEMERTEA	5	13	17	35	2	1	19	22
INSECTA								
SIPUNCULA								
Apionsoma misakianum								
Aspidosiphon muelleri	1	8	18	27	8	3	12	23
Lithacrosiphon cristatus								
Phascolosoma nigrescens								
Siphonosoma cumanense								
Sipunculus nudus								
Sipuncula sp. G	0	0	0	0	1	0	0	1
Sipuncula spp.	1	0	6	7	0	1	1	2
PRIAPULIDA	0	0	2	2	0	0	1	1
CHAETOGNATHA								

TABLE D.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
PHORONIDA								
Phoronis psammophila								
BRYOZOA	1	0	0	1	0	0	0	0
ECHIURA								
HEMICHORDATA								
CHORDATA								
Urochordata								
Branchiostoma sp. A	5	1	3	9	0	0	0	0
Osteichthyes								
Total No. of Individuals/Replicate	119	152	589		67	72	268	
Total No. of Taxa/Replicate	39	47	57		27	27	37	
Total No. of Individuals Sampled				860				407
Total No. of Taxa Sampled				79				53

TABLE D.9. Taxon Abundance from Three Replicates for Nonmollusk Components (Excluding Crustaceans), Sand Island Ocean Outfall Sampling Station E6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
POLYCHAETA					
Acrocirrus sp. A	10	23	3	36	51
Aglaophamus circinata					
Amphicorina sp. B	0	0	0	0	7
Amphicteis gunneri	0	1	0	1	6
Amphiduros sp. A					
Amphiglena mediterranea					
Amphiglena sp. A	0	1	0	1	2
Aonides oxycephala					
Aonides sp. A	3	3	0	6	20
Aphelochaeta marioni	6	4	6	16	38
Aphroditidae sp. A					
Arabella cf. *multidentata*	0	0	0	0	1
Aricidea catherinae	0	4	3	7	14
Aricidea (Aedicira) sp. A	1	1	0	2	3
Armandia intermedia	1	1	2	4	22
Augeneriella dubia	0	1	0	1	1
Axiothella quadrimaculata					
Bispira sp. A					
Branchiomma nigromaculata	0	0	0	0	1
Branchiosyllis exilis					
Brania rhopalophora	0	0	0	0	1
Brania sp. B	0	0	0	0	1
Capitella capitata	0	0	1	1	1
Capitellidae sp.	0	0	0	0	1
Caulleriella acicula	0	0	0	0	3
Caulleriella bioculatus	0	0	0	0	3
Caulleriella zetlandica					
Caulleriella sp. A	0	0	0	0	2
Caulleriella sp. B	0	0	0	0	2
Chaetopteridae sp. A					
Cirratulidae sp. A					
Cirratulus africanus					
Cirratulus sp. B					
Cirriformia punctata					
Cossura sp. A					
Dipolydora normalis					
Dipolydora pilikia					
Dipolydora sp. B					
Dodecaceria sp. A					
Dorvillea sp. B	0	2	0	2	6
Euchone cf. *rosea*	0	0	0	0	7
Euchone sp. B	0	5	1	6	22
Eumida sanguinea	0	0	0	0	2
Eumida sp. B	0	0	0	0	1
Eunice antennata					
Eunice australis					
Eunice havaica					
Eunice vittata					
Euthalenessa sp. A					
Exogone longicornis	0	0	0	0	1

TABLE D.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
Exogone sp. C	0	1	0	1	6
Exogone sp. E	0	0	0	0	3
Fabricia sp. A					
Glycera tesselata	1	1	0	2	7
Goniada emerita	0	3	1	4	5
Goniada maculata					
Grubeosyllis mediodentata	0	0	0	0	1
Haplosyllis spongicola					
Harmothoe sp. A					
Hesionidae sp. G					
Hesionidae sp. H					
Hesionura australiensis	0	0	0	0	5
Hydroides bannerorum	0	0	0	0	1
Jasmineira caudata	0	0	0	0	3
Josephella marenzelleri					
Laonice cirrata	0	1	0	1	5
Laonome sp. A					
Lepidasthenia sp. A					
Linopherus microcephala	0	0	0	0	1
Loimia sp. A					
Lumbrineriopsis sp. A	0	0	0	0	3
Lumbrineris latreilli	4	2	1	7	9
Lumbrineris tetraura	1	3	1	5	17
Lumbrineris sp. A					
Lygdamis nesiotes	0	0	0	0	2
Lysidice ninetta					
Lysidice sp. A	0	0	0	0	3
Lysippe sp. A	1	0	1	2	4
Magelona capensis					
Magelona cincta					
Magelona sp. A	0	0	1	1	2
Malacoceros sp. A					
Maldanidae sp. A	0	0	0	0	1
Marphysa cf. *conferta*	0	0	0	0	1
Marphysa depressa					
Megalomma intermedium					
Melinna monoceroides					
Mesochaetopterus sagittarius					
Micronereis sp. A					
Microphthalmus sp.					
Micropodarke sp. A	0	0	0	0	18
Micropodarke sp. B	0	0	0	0	5
Microspio granulata					
Monticellina cf. *dorsobranchialis*					
Monticellina sp. A	0	0	0	0	1
Monticellina sp. B					
Mooreonuphis sp. A	0	0	0	0	18
Myriochele oculata	4	0	0	4	10
Myriochele pygidialis					
Myriochele sp. A	0	2	0	2	5
Mystides nr. *caeca*					
Naineris sp. A					

TABLE D.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
Neanthes arenaceodentata	0	0	0	0	1
Nematonereis unicornis	0	0	0	0	6
Neodexiospira preacuta					
Nereis sp. B	0	0	0	0	5
Nothria sp. B	0	0	0	0	3
Notomastus tenuis	0	0	0	0	11
Odontosyllis maculata					
Odontosyllis sp. A					
Odontosyllis sp. B	0	0	0	0	4
Ophiodromus angustifrons	0	5	0	5	30
Ophiodromus sp. A					
Ophiodromus sp. B	0	0	0	0	10
Ophryotrocha adherens	0	0	0	0	7
Paleanotus sp. B					
Palmyra sp. A					
Paramphinome sp. A					
Paraonella sp. A	0	0	0	0	1
Pareulepis malayana					
Pholoe sp. A					
Pholoe sp. B					
Pholoe sp. C					
Pholoe sp. D					
Pholoe sp. F					
Phyllochaetopterus socialis					
Phyllochaetopterus verrilli					
Phyllochaetopterus sp. A	0	0	0	0	5
Phyllodoce madeirensis	0	0	0	0	3
Phyllodoce parva					
Phyllodoce sp. A					
Phyllodoce sp. C					
Phyllodoce sp. F					
Phyllodocidae sp. A					
Phyllodocidae sp. C					
Phyllodocidae sp. G					
Pionosyllis heterocirrata	2	3	0	5	61
Pionosyllis spinisetosa	0	0	0	0	1
Pionosyllis weismanni	0	0	0	0	3
Pionosyllis sp. C					
Pisione remota	0	0	0	0	1
Pisione sp. A	0	0	0	0	3
Pisionidens sp. A					
Poecilochaetus johnsoni					
Poecilochaetus serpens					
Polycirrus plumosus					
Polycirrus sp. A					
Polycirrus sp. C					
Polynoidae sp. B					
Polynoidae sp. C					
Polyophthalmus pictus	0	0	0	0	11
Potamilla sp. A					
Prionospio cirrifera	2	2	3	7	49
Prionospio cirrobranchiata	4	5	5	14	75

TABLE D.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
Prionospio steenstrupi	0	1	0	1	5
Progoniada sp. A	0	1	0	1	12
Progoniada sp. C	1	0	1	2	2
Protodorvillea biarticulata	1	0	0	1	22
Protodorvillea egena	0	2	0	2	4
Protodriloides sp. A					
Protodrilus sp. A					
Psamathe sp. A	0	0	0	0	1
Pseudopolydora corallicola	0	0	0	0	1
Pseudopotamilla reniformis					
Pseudovermilia occidentalis					
Questa caudicirra					
Questa sp. A	0	12	0	12	18
Questa sp. B					
Rhodine sp. A					
Rhynchospio sp. B					
Sabella sp. A					
Sabellastarte spectabilis					
Saccocirrus oahuensis					
Saccocirrus waianaensis					
Salmacina dysteri	0	0	0	0	14
Samythella sp. A	0	0	0	0	6
Scalibregmidae sp. B					
Scalisetosus sp. A					
Schistomeringos macilenta					
Schistomeringos rudolphi	0	0	0	0	5
Scolelepis victoriensis					
Scolelepis sp. B					
Scyphoproctus djiboutiensis					
Sigalion sp. A					
Sigambra tentaculata					
Sphaerodoropsis sp. C	0	0	0	0	6
Sphaerosyllis riseri	0	1	0	1	15
Sphaerosyllis sublaevis					
Sphaerosyllis sp. D					
Sphaerosyllis sp. E					
Sphaerosyllis sp. G	1	0	0	1	20
Spio blakei	0	1	2	3	10
Spio filicornis					
Spiochaetopterus sp. A	0	0	1	1	3
Spionidae sp. B					
Spionidae sp. D	8	5	5	18	78
Spiophanes bombyx	0	1	0	1	4
Streptosyllis sp. A	0	0	0	0	1
Syllides bansei					
Syllis gracilis					
Synelmis acuminata	1	5	1	7	38
Synelmis albini					
Synelmis sp. A	0	0	0	0	1
Synelmis sp. B					
Terebellidae sp. A					
Terebellidae sp. B					

TABLE D.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Travisia sp. A	0	0	0	0	1
Trichobranchus glacialis					
Typosyllis aciculata orientalis	0	0	0	0	6
Typosyllis cornuta	0	1	0	1	6
Typosyllis variegata	0	0	0	0	1
Typosyllis sp. A					
Typosyllis sp. G					
Vermiliopsis torquata					
OLIGOCHAETA	14	7	12	33	140
NEMATODA	26	328	4	358	1086
PLATYHELMINTHES	0	0	0	0	1
PORIFERA					
ECHINODERMATA					
Asteroidea					
Echinoidea	0	0	0	0	2
Holothuroidea	0	10	4	14	16
Ophiuroidea	1	2	0	3	18
ANTHOZOA	0	0	0	0	5
HYDROZOA	0	0	0	0	2
SCYPHOZOA					
KINORHYNCHA					
Echinoderes sp. A	0	0	0	0	7
NEMERTEA	4	11	3	18	99
INSECTA					
SIPUNCULA					
Apionsoma misakianum					
Aspidosiphon muelleri	25	16	1	42	127
Lithacrosiphon cristatus					
Phascolosoma nigrescens					
Siphonosoma cumanense					
Sipunculus nudus					
Sipuncula sp. G	0	3	0	3	5
Sipuncula spp.	0	2	0	2	14
PRIAPULIDA	1	0	0	1	4
CHAETOGNATHA					
PHORONIDA					
Phoronis psammophila					

TABLE D.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
BRYOZOA	0	0	0	0	3
ECHIURA					
HEMICHORDATA					
CHORDATA					
Urochordata					
Branchiostoma sp. A	0	0	0	0	11
Osteichthyes					
Total No. of Individuals/Replicate	123	483	63		
Total No. of Taxa/Replicate	24	40	23		
Total No. of Individuals Sampled				669	2,465
Total No. of Taxa Sampled				49	117

TABLE D.10. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations C1A and C2A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A								
PYCNOGONIDA								
Anoplodactylus projectus								
Callipallene sp. A								
COPEPODA	2	2	15	19	0	0	0	0
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A								
Myodocope sp. B	0	0	3	3	0	0	0	0
Myodocope sp. C								
Myodocope sp. D								
Sarsiella janiceae	0	1	1	2	0	0	0	0
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis								
Bythoceratina cf. *monstruosa*								
Cytherelloidea cf. *monodenticulata*								
Macrocypris gracilis								
Mutilus cf. *oahuensis*								
CUMACEA								
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA								
TANAIDACEA								
Apseudes tropicalis	0	0	0	0	0	0	0	0
Leptochelia dubia	0	0	2	2	0	0	0	0
Leptochelia sp. A								
Tanaissus sp. A	0	0	0	0	0	0	0	0
Tanaid sp. A								
ISOPODA								
Apanthura inornata								
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	0	0	0	0	0	0
Jaeropsis hawaiiensis								
Janira algicola	0	0	0	0	0	0	0	0
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina								
Munna sp. A								
Paranthura ostergaardi								

TABLE D.10—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A								
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra								
Caprella cf. *subtilis*								
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).								
Atylus nani								
Bemlos macromanus	0	0	0	0	0	1	0	1
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi	0	0	0	0	0	2	0	2
Ericthonius brasiliensis								
Eriopisa sp. A								
Eriopisella sechellensis	0	0	0	0	0	0	0	0
Gammaropsis atlantica								
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu								
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao								
Laetmatophilus hala								
Leucothoe hyhelia								
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A								
Paraphoxus sp. B	0	0	0	0	0	0	0	0
Photis kapapa								
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu	0	0	0	0	0	0	0	0
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis	0	0	0	0	0	0	0	0
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*								
Penaeopsis sp. A								
Processa aequimana	0	0	0	0	0	7	0	7

TABLE D.10—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis	0	0	0	0	0	0	0	0
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A								
Pagurid sp. A								
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A	0	0	0	0	0	0	0	0
Pilumnus sp. A								
Portumnus sp. A								
Portunus macrophthalamus								
Tlos sp. A								
Megalops (unid.)	0	0	0	0	0	1	0	1
Total No. of Individuals/Replicate	2	3	21		0	11	0	
Total No. of Taxa/Replicate	1	2	4		0	4	0	
Total No. of Individuals Sampled				26				11
Total No. of Taxa Sampled				4				4

TABLE D.11. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations C3A and C5A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A								
PYCNOGONIDA								
Anoplodactylus projectus								
Callipallene sp. A								
COPEPODA	3	4	3	10	4	8	2	14
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A								
Myodocope sp. B	3	0	0	3	0	0	0	0
Myodocope sp. C								
Myodocope sp. D								
Sarsiella janiceae	0	0	0	0	0	0	0	0
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis								
Bythoceratina cf. *monstruosa*								
Cytherelloidea cf. *monodenticulata*								
Macrocypris gracilis								
Mutilus cf. *oahuensis*								
CUMACEA								
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA								
TANAIDACEA								
Apseudes tropicalis	0	0	0	0	1	0	0	1
Leptochelia dubia	0	1	0	1	1	1	0	2
Leptochelia sp. A								
Tanaissus sp. A	0	0	0	0	0	0	0	0
Tanaid sp. A								
ISOPODA								
Apanthura inornata								
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	0	0	1	1	0	2
Jaeropsis hawaiiensis								
Janira algicola	0	1	0	1	1	1	0	2
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina								
Munna sp. A								
Paranthura ostergaardi								

TABLE D.11—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A								
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra								
Caprella cf. *subtilis*								
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).								
Atylus nani								
Bemlos macromanus	0	0	0	0	0	0	0	0
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi	0	0	0	0	1	1	0	2
Ericthonius brasiliensis								
Eriopisa sp. A								
Eriopisella sechellensis	0	0	0	0	0	9	2	11
Gammaropsis atlantica								
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu								
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao								
Laetmatophilus hala								
Leucothoe hyhelia								
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A								
Paraphoxus sp. B	0	2	0	2	0	0	0	0
Photis kapapa								
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu	0	0	0	0	0	0	2	2
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis	0	0	0	0	0	1	0	1
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*								
Penaeopsis sp. A								
Processa aequimana	0	0	0	0	0	1	0	1

TABLE D.11—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis	0	0	0	0	1	0	0	1
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A								
Pagurid sp. A								
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A	0	0	0	0	0	0	0	0
Pilumnus sp. A								
Portumnus sp. A								
Portunus macrophthalamus								
Tlos sp. A								
Megalops (unid.)	0	1	0	1	0	0	0	0
Total No. of Individuals/Replicate	6	9	3		10	23	6	
Total No. of Taxa/Replicate	2	5	1		7	8	3	
Total No. of Individuals Sampled				18				39
Total No. of Taxa Sampled				6				11

TABLE D.12. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Station C6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
ACARI					
Halacaridae sp. A					
PYCNOGONIDA					
Anoplodactylus projectus					
Callipallene sp. A					
COPEPODA	2	3	1	6	49
OSTRACODA–MYODOCOPIDA					
Myodocope sp. A					
Myodocope sp. B	1	0	1	2	8
Myodocope sp. C					
Myodocope sp. D					
Sarsiella janiceae	0	0	0	0	2
OSTRACODA–PODOCOPIDA					
Bairdia hanaumaensis					
Bairdia kauaiensis					
Bythoceratina cf. *monstruosa*					
Cytherelloidea cf. *monodenticulata*					
Macrocypris gracilis					
Mutilus cf. *oahuensis*					
CUMACEA					
NEBALIACEA					
Nebalia sp. A					
MYSIDACEA					
TANAIDACEA					
Apseudes tropicalis	0	0	0	0	1
Leptochelia dubia	0	0	1	1	6
Leptochelia sp. A					
Tanaissus sp. A	0	1	0	1	1
Tanaid sp. A					
ISOPODA					
Apanthura inornata					
Caecianiropsis (?) sp. A					
Cryptoniscus form					
Gnathia sp. A					
Hyssuridae sp. A	0	0	0	0	2
Jaeropsis hawaiiensis					
Janira algicola	0	0	0	0	3
Mesanthura hieroglyphica					
Metacirolana sp. A					
Munna acarina					
Munna sp. A					
Paranthura ostergaardi					

TABLE D.12—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Pleurocope sp. A					
Santia sp. A					
AMPHIPODA–CAPRELLIDEA					
Caprella equilibra					
Caprella inequilbra					
Caprella cf. *subtilis*					
Metaprotella sandalensis					
Paraprotella cf. *prima*					
AMPHIPODA–GAMMARIDEA					
Amphilochidae sp(p).					
Atylus nani					
Bemlos macromanus	0	0	0	0	1
Bemlos pualani					
Ceradocus hawaiiensis					
Elasmopus piikoi	0	0	0	0	4
Ericthonius brasiliensis					
Eriopisa sp. A					
Eriopisella sechellensis	0	0	0	0	11
Gammaropsis atlantica					
Gammaropsis pokipoki					
Gitanopsis pele					
Grandierella japonica					
Ischyrocerus kapu					
Ischyrocerus oahu					
Kanaloa manoa					
Konatopus paao					
Laetmatophilus hala					
Leucothoe hyhelia					
Liljeborgia heeia					
Melita appendiculata					
Paradexamine maunaloa					
Paraphoxus sp. A					
Paraphoxus sp. B	0	0	0	0	2
Photis kapapa					
Podocerus talegus					
Podocerus sp. A					
Seba ekepuu	0	0	2	2	4
Seba sp. A					
DECAPODA–NATANTIA					
Alpheopsis equalis					
Alpheus paracrinitus					
Ambidexter sp. A					
Leptochela hawaiiensis	0	0	0	0	1
Metapenaeus sp. A					
Ogyrides sp. A					
Pandalus cf. *brevis*					
Penaeopsis sp. A					
Processa aequimana	0	0	0	0	8

TABLE D.12—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Processa australiensis	0	0	0	0	1
Solenocera lucasii					
DECAPODA–ANOMURA					
Axius sp. A					
Callianassa sp. A					
Pagurid sp. A					
Pomatocheles sp. A					
DECAPODA–BRACHYURA					
Cleistostoma sp. A					
Cryptosoma granulosum					
Dorippe (?) sp. A					
Lissocarcinus laevis					
Macrophthalmus sp. A					
Micippa (?) sp. A					
Nucia (?) sp. A	0	0	1	1	1
Pilumnus sp. A					
Portumnus sp. A					
Portunus macrophthalamus					
Tlos sp. A					
Megalops (unid.)	0	0	0	0	2
Total No. of Individuals/Replicate	3	4	6		
Total No. of Taxa/Replicate	2	2	5		
Total No. of Individuals Sampled				13	107
Total No. of Taxa Sampled				6	18

TABLE D.13. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations D1 and D2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A	0	0	0	0	0	0	0	0
PYCNOGONIDA								
Anoplodactylus projectus	0	0	0	0	0	0	0	0
Callipallene sp. A								
COPEPODA	1	136	6	143	9	2	6	17
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A	1	0	0	1	0	0	0	0
Myodocope sp. B	0	0	0	0	0	0	0	0
Myodocope sp. C								
Myodocope sp. D	0	0	0	0	0	0	0	0
Sarsiella janiceae	0	0	0	0	0	0	0	0
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis	0	0	0	0	0	1	1	2
Bythoceratina cf. *monstruosa*								
Cytherelloidea cf. *monodenticulata*	0	0	0	0	0	0	0	0
Macrocypris gracilis								
Mutilus cf. *oahuensis*	0	0	0	0	0	0	0	0
CUMACEA	0	0	0	0	0	0	0	0
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA								
TANAIDACEA								
Apseudes tropicalis								
Leptochelia dubia	5	4	0	9	15	37	10	62
Leptochelia sp. A	0	0	0	0	1	0	0	1
Tanaissus sp. A	0	0	0	0	0	0	0	0
Tanaid sp. A								
ISOPODA								
Apanthura inornata	2	5	0	7	1	0	1	2
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	0	0	0	0	0	0
Jaeropsis hawaiiensis								
Janira algicola								
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina	0	2	0	2	0	0	0	0
Munna sp. A	0	0	0	0	0	0	0	0
Paranthura ostergaardi	0	0	0	0	0	1	1	2

TABLE D.13—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A								
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra	0	0	0	0	0	0	0	0
Caprella cf. *subtilis*	0	0	0	0	0	0	0	0
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).	0	0	0	0	0	1	0	1
Atylus nani								
Bemlos macromanus	0	0	0	0	0	0	0	0
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi	3	2	0	5	0	3	3	6
Ericthonius brasiliensis	0	0	0	0	0	2	0	2
Eriopisa sp. A								
Eriopisella sechellensis	0	0	0	0	4	8	10	22
Gammaropsis atlantica	0	0	0	0	0	11	0	11
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu	0	0	0	0	0	0	0	0
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao	0	0	0	0	0	6	0	6
Laetmatophilus hala								
Leucothoe hyhelia	0	0	0	0	0	0	0	0
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A	0	0	0	0	0	1	0	1
Paraphoxus sp. B								
Photis kapapa	0	0	0	0	0	0	0	0
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu								
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis								
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*								
Penaeopsis sp. A								
Processa aequimana	0	0	1	1	0	0	0	0

TABLE D.13—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis								
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A	0	0	0	0	0	0	0	0
Pagurid sp. A	0	0	0	0	0	0	0	0
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A								
Pilumnus sp. A	0	0	0	0	0	0	0	0
Portumnus sp. A								
Portunus macrophthalamus	0	0	0	0	0	0	0	0
Tlos sp. A								
Megalops (unid.)								
Total No. of Individuals/Replicate	12	149	7		30	73	32	
Total No. of Taxa/Replicate	5	5	2		5	11	7	
Total No. of Individuals Sampled				168				135
Total No. of Taxa Sampled				7				13

TABLE D.14. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations D3A and D5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A	1	0	0	1	0	0	0	0
PYCNOGONIDA								
Anoplodactylus projectus	1	0	1	2	0	0	0	0
Callipallene sp. A								
COPEPODA	59	8	34	101	9	51	216	276
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A	2	0	2	4	0	1	0	1
Myodocope sp. B	1	0	1	2	0	0	0	0
Myodocope sp. C								
Myodocope sp. D	0	0	0	0	1	0	0	1
Sarsiella janiceae	2	0	0	2	0	0	0	0
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis	1	2	2	5	1	2	1	4
Bythoceratina cf. *monstruosa*								
Cytherelloidea cf. *monodenticulata*	0	0	0	0	1	0	4	5
Macrocypris gracilis								
Mutilus cf. *oahuensis*	0	0	0	0	0	2	0	2
CUMACEA	0	0	0	0	0	8	0	8
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA								
TANAIDACEA								
Apseudes tropicalis								
Leptochelia dubia	189	9	17	215	44	109	62	215
Leptochelia sp. A	0	0	0	0	3	10	8	21
Tanaissus sp. A	2	0	0	2	0	1	0	1
Tanaid sp. A								
ISOPODA								
Apanthura inornata	0	0	0	0	0	0	0	0
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	0	0	0	0	0	0
Jaeropsis hawaiiensis								
Janira algicola								
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina	5	1	1	7	0	0	7	7
Munna sp. A	0	0	0	0	0	5	0	5
Paranthura ostergaardi	0	0	0	0	0	0	0	0

TABLE D.14—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A								
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra	0	0	0	0	4	0	0	4
Caprella cf. *subtilis*	0	0	0	0	0	7	3	10
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).	1	0	0	1	0	0	0	0
Atylus nani								
Bemlos macromanus	6	1	0	7	1	4	0	5
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi	0	0	0	0	0	0	0	0
Ericthonius brasiliensis	4	0	0	4	1	0	2	3
Eriopisa sp. A								
Eriopisella sechellensis	6	1	1	8	0	12	8	20
Gammaropsis atlantica	0	0	0	0	0	0	0	0
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu	0	0	0	0	2	0	0	2
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao	9	2	0	11	0	1	4	5
Laetmatophilus hala								
Leucothoe hyhelia	2	0	0	2	0	0	0	0
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A	0	0	0	0	0	0	0	0
Paraphoxus sp. B								
Photis kapapa	1	0	0	1	4	3	0	7
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu								
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis								
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*								
Penaeopsis sp. A								
Processa aequimana	0	2	0	2	0	1	0	1

TABLE D.14—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis								
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A	0	0	0	0	0	0	0	0
Pagurid sp. A	1	0	0	1	0	0	0	0
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A								
Pilumnus sp. A	0	1	0	1	0	0	0	0
Portumnus sp. A								
Portunus macrophthalamus	0	0	0	0	0	0	2	2
Tlos sp. A								
Megalops (unid.)								
Total No. of Individuals/Replicate	293	27	59		71	217	317	
Total No. of Taxa/Replicate	18	9	8		11	15	11	
Total No. of Individuals Sampled				379				605
Total No. of Taxa Sampled				20				22

TABLE D.15. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Station D6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
ACARI					
Halacaridae sp. A	0	0	0	0	1
PYCNOGONIDA					
Anoplodactylus projectus	0	0	0	0	2
Callipallene sp. A					
COPEPODA	12	22	4	38	575
OSTRACODA–MYODOCOPIDA					
Myodocope sp. A	0	1	2	3	9
Myodocope sp. B	0	0	0	0	2
Myodocope sp. C					
Myodocope sp. D	2	0	0	2	3
Sarsiella janiceae	0	0	1	1	3
OSTRACODA–PODOCOPIDA					
Bairdia hanaumaensis					
Bairdia kauaiensis	0	0	0	0	11
Bythoceratina cf. *monstruosa*					
Cytherelloidea cf. *monodenticulata*	0	1	0	1	6
Macrocypris gracilis					
Mutilus cf. *oahuensis*	0	0	0	0	2
CUMACEA	0	0	1	1	9
NEBALIACEA					
Nebalia sp. A					
MYSIDACEA					
TANAIDACEA					
Apseudes tropicalis					
Leptochelia dubia	39	27	22	88	589
Leptochelia sp. A	4	3	0	7	29
Tanaissus sp. A	0	0	0	0	3
Tanaid sp. A					
ISOPODA					
Apanthura inornata	0	0	0	0	9
Caecianiropsis (?) sp. A					
Cryptoniscus form					
Gnathia sp. A					
Hyssuridae sp. A	2	0	0	2	2
Jaeropsis hawaiiensis					
Janira algicola					
Mesanthura hieroglyphica					
Metacirolana sp. A					
Munna acarina	0	0	1	1	17
Munna sp. A	0	0	0	0	5
Paranthura ostergaardi	0	0	0	0	2

TABLE D.15—Continued

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Pleurocope sp. A					
Santia sp. A					
AMPHIPODA–CAPRELLIDEA					
Caprella equilibra					
Caprella inequilbra	0	0	0	0	4
Caprella cf. *subtilis*	0	0	0	0	10
Metaprotella sandalensis					
Paraprotella cf. *prima*					
AMPHIPODA–GAMMARIDEA					
Amphilochidae sp(p).	0	0	0	0	2
Atylus nani					
Bemlos macromanus	0	0	1	1	13
Bemlos pualani					
Ceradocus hawaiiensis					
Elasmopus piikoi	0	0	0	0	11
Ericthonius brasiliensis	0	0	0	0	9
Eriopisa sp. A					
Eriopisella sechellensis	38	19	10	67	117
Gammaropsis atlantica	0	2	0	2	13
Gammaropsis pokipoki					
Gitanopsis pele					
Grandierella japonica					
Ischyrocerus kapu	0	0	0	0	2
Ischyrocerus oahu					
Kanaloa manoa					
Konatopus paao	6	6	11	23	45
Laetmatophilus hala					
Leucothoe hyhelia	0	0	0	0	2
Liljeborgia heeia					
Melita appendiculata					
Paradexamine maunaloa					
Paraphoxus sp. A	0	0	0	0	1
Paraphoxus sp. B					
Photis kapapa	3	0	0	3	11
Podocerus talegus					
Podocerus sp. A					
Seba ekepuu					
Seba sp. A					
DECAPODA–NATANTIA					
Alpheopsis equalis					
Alpheus paracrinitus					
Ambidexter sp. A					
Leptochela hawaiiensis					
Metapenaeus sp. A					
Ogyrides sp. A					
Pandalus cf. *brevis*					
Penaeopsis sp. A					
Processa aequimana	0	1	1	2	6

TABLE D.15—Continued

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Processa australiensis					
Solenocera lucasii					
DECAPODA–ANOMURA					
Axius sp. A					
Callianassa sp. A	0	0	1	1	1
Pagurid sp. A	0	0	0	0	1
Pomatocheles sp. A					
DECAPODA–BRACHYURA					
Cleistostoma sp. A					
Cryptosoma granulosum					
Dorippe (?) sp. A					
Lissocarcinus laevis					
Macrophthalmus sp. A					
Micippa (?) sp. A					
Nucia (?) sp. A					
Pilumnus sp. A	0	0	0	0	1
Portumnus sp. A					
Portunus macrophthalamus	0	0	0	0	2
Tlos sp. A					
Megalops (unid.)					
Total No. of Individuals/Replicate	106	82	55		
Total No. of Taxa/Replicate	8	9	11		
Total No. of Individuals Sampled				243	1,530
Total No. of Taxa Sampled				17	37

TABLE D.16. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations E1 and E2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A	0	0	0	0	0	0	0	0
PYCNOGONIDA								
Anoplodactylus projectus	0	0	0	0	0	0	0	0
Callipallene sp. A								
COPEPODA	16	41	6	63	0	1	2	3
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A	1	0	0	1	0	0	0	0
Myodocope sp. B	0	0	0	0	0	0	0	0
Myodocope sp. C								
Myodocope sp. D	3	0	0	3	0	0	0	0
Sarsiella janiceae								
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis	0	0	0	0	1	0	0	1
Bythoceratina cf. *monstruosa*	0	0	0	0	0	0	0	0
Cytherelloidea cf. *monodenticulata*	0	0	0	0	0	0	0	0
Macrocypris gracilis								
Mutilus cf. *oahuensis*								
CUMACEA	2	0	2	4	0	0	0	0
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA	0	0	1	1	0	0	0	0
TANAIDACEA								
Apseudes tropicalis								
Leptochelia dubia	6	3	0	9	0	0	0	0
Leptochelia sp. A	0	0	0	0	0	0	0	0
Tanaissus sp. A	9	6	11	26	0	0	0	0
Tanaid sp. A								
ISOPODA								
Apanthura inornata	0	0	0	0	0	1	0	1
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	0	0	0	0	0	0
Jaeropsis hawaiiensis								
Janira algicola	0	0	0	0	0	0	0	0
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina	1	0	0	1	0	0	0	0
Munna sp. A	0	0	0	0	0	0	0	0
Paranthura ostergaardi								

TABLE D.16—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A	1	0	0	1	0	0	0	0
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra								
Caprella cf. *subtilis*	0	2	0	2	0	0	0	0
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).	0	0	0	0	0	0	0	0
Atylus nani	2	2	0	4	1	0	0	1
Bemlos macromanus	0	0	0	0	0	0	0	0
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi								
Ericthonius brasiliensis	0	0	0	0	2	0	0	2
Eriopisa sp. A								
Eriopisella sechellensis	0	0	0	0	0	0	0	0
Gammaropsis atlantica								
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu								
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao	4	11	1	16	4	0	0	4
Laetmatophilus hala								
Leucothoe hyhelia								
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A	0	0	0	0	0	0	0	0
Paraphoxus sp. B								
Photis kapapa	0	0	0	0	0	1	4	5
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu								
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis	0	0	0	0	0	0	0	0
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*	0	1	0	1	0	0	0	0
Penaeopsis sp. A								
Processa aequimana	0	0	0	0	0	0	0	0

TABLE D.16—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis								
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A								
Pagurid sp. A								
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A								
Pilumnus sp. A								
Portumnus sp. A								
Portunus macrophthalamus								
Tlos sp. A								
Megalops (unid.)								
Total No. of Individuals/Replicate	45	66	21		8	3	6	
Total No. of Taxa/Replicate	10	7	5		4	3	2	
Total No. of Individuals Sampled				132				17
Total No. of Taxa Sampled				13				7

TABLE D.17. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Stations E3 and E5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
ACARI								
Halacaridae sp. A	0	0	1	1	0	0	0	0
PYCNOGONIDA								
Anoplodactylus projectus	0	0	0	0	1	0	0	1
Callipallene sp. A								
COPEPODA	5	11	328	344	3	4	92	99
OSTRACODA–MYODOCOPIDA								
Myodocope sp. A	6	5	8	19	1	0	0	1
Myodocope sp. B	0	4	6	10	0	0	3	3
Myodocope sp. C								
Myodocope sp. D	0	0	0	0	0	0	0	0
Sarsiella janiceae								
OSTRACODA–PODOCOPIDA								
Bairdia hanaumaensis								
Bairdia kauaiensis	0	0	7	7	0	1	0	1
Bythoceratina cf. *monstruosa*	0	0	0	0	0	0	5	5
Cytherelloidea cf. *monodenticulata*	0	0	24	24	0	0	0	0
Macrocypris gracilis								
Mutilus cf. *oahuensis*								
CUMACEA	0	1	1	2	0	2	2	4
NEBALIACEA								
Nebalia sp. A								
MYSIDACEA	0	0	1	1	0	0	1	1
TANAIDACEA								
Apseudes tropicalis								
Leptochelia dubia	1	7	71	79	1	2	9	12
Leptochelia sp. A	2	0	9	11	0	0	0	0
Tanaissus sp. A	8	3	47	58	0	0	0	0
Tanaid sp. A								
ISOPODA								
Apanthura inornata	0	0	0	0	1	0	0	1
Caecianiropsis (?) sp. A								
Cryptoniscus form								
Gnathia sp. A								
Hyssuridae sp. A	0	0	1	1	0	0	0	0
Jaeropsis hawaiiensis								
Janira algicola	0	0	3	3	0	0	0	0
Mesanthura hieroglyphica								
Metacirolana sp. A								
Munna acarina	0	0	8	8	0	1	0	1
Munna sp. A	0	1	0	1	0	0	3	3
Paranthura ostergaardi								

TABLE D.17—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Pleurocope sp. A	0	0	3	3	0	0	0	0
Santia sp. A								
AMPHIPODA–CAPRELLIDEA								
Caprella equilibra								
Caprella inequilbra								
Caprella cf. *subtilis*	0	0	0	0	0	1	0	1
Metaprotella sandalensis								
Paraprotella cf. *prima*								
AMPHIPODA–GAMMARIDEA								
Amphilochidae sp(p).	0	0	3	3	0	0	0	0
Atylus nani	0	1	3	4	1	0	0	1
Bemlos macromanus	0	0	5	5	0	0	0	0
Bemlos pualani								
Ceradocus hawaiiensis								
Elasmopus piikoi								
Ericthonius brasiliensis	1	0	0	1	0	0	0	0
Eriopisa sp. A								
Eriopisella sechellensis	0	0	3	3	0	0	0	0
Gammaropsis atlantica								
Gammaropsis pokipoki								
Gitanopsis pele								
Grandierella japonica								
Ischyrocerus kapu								
Ischyrocerus oahu								
Kanaloa manoa								
Konatopus paao	1	6	8	15	1	0	0	1
Laetmatophilus hala								
Leucothoe hyhelia								
Liljeborgia heeia								
Melita appendiculata								
Paradexamine maunaloa								
Paraphoxus sp. A	0	0	2	2	0	0	0	0
Paraphoxus sp. B								
Photis kapapa	0	2	2	4	0	0	0	0
Podocerus talegus								
Podocerus sp. A								
Seba ekepuu								
Seba sp. A								
DECAPODA–NATANTIA								
Alpheopsis equalis								
Alpheus paracrinitus								
Ambidexter sp. A								
Leptochela hawaiiensis	1	0	0	1	0	0	0	0
Metapenaeus sp. A								
Ogyrides sp. A								
Pandalus cf. *brevis*	0	0	0	0	0	0	0	0
Penaeopsis sp. A								
Processa aequimana	2	0	0	2	0	0	0	0

TABLE D.17—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Processa australiensis								
Solenocera lucasii								
DECAPODA–ANOMURA								
Axius sp. A								
Callianassa sp. A								
Pagurid sp. A								
Pomatocheles sp. A								
DECAPODA–BRACHYURA								
Cleistostoma sp. A								
Cryptosoma granulosum								
Dorippe (?) sp. A								
Lissocarcinus laevis								
Macrophthalmus sp. A								
Micippa (?) sp. A								
Nucia (?) sp. A								
Pilumnus sp. A								
Portumnus sp. A								
Portunus macrophthalamus								
Tlos sp. A								
Megalops (unid.)								
Total No. of Individuals/Replicate	27	41	544		9	11	115	
Total No. of Taxa/Replicate	9	10	22		7	6	7	
Total No. of Individuals Sampled				612				135
Total No. of Taxa Sampled				26				15

TABLE D.18. Taxon Abundance from Three Replicates for Crustacean Components, Sand Island Ocean Outfall Sampling Station E6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
ACARI					
Halacaridae sp. A	0	0	0	0	1
PYCNOGONIDA					
Anoplodactylus projectus	0	0	1	1	2
Callipallene sp. A					
COPEPODA	4	93	3	100	609
OSTRACODA–MYODOCOPIDA					
Myodocope sp. A	0	0	1	1	22
Myodocope sp. B	0	2	0	2	15
Myodocope sp. C					
Myodocope sp. D	0	0	0	0	3
Sarsiella janiceae					
OSTRACODA–PODOCOPIDA					
Bairdia hanaumaensis	1	1	0	2	11
Bairdia kauaiensis	0	0	0	0	5
Bythoceratina cf. *monstruosa*	0	0	0	0	24
Cytherelloidea cf. *monodenticulata*					
Macrocypris gracilis					
Mutilus cf. *oahuensis*					
CUMACEA	0	0	1	1	11
NEBALIACEA					
Nebalia sp. A					
MYSIDACEA	0	0	0	0	3
TANAIDACEA					
Apseudes tropicalis	2	0	2	4	104
Leptochelia dubia	0	0	0	0	11
Leptochelia sp. A	2	1	0	3	87
Tanaissus sp. A					
Tanaid sp. A					
ISOPODA	0	0	0	0	2
Apanthura inornata					
Caecianiropsis (?) sp. A					
Cryptoniscus form					
Gnathia sp. A	0	0	0	0	1
Hyssuridae sp. A					
Jaeropsis hawaiiensis	0	0	0	0	3
Janira algicola					
Mesanthura hieroglyphica					
Metacirolana sp. A	0	0	0	0	10
Munna acarina	0	0	0	0	4
Munna sp. A					
Paranthura ostergaardi					

TABLE D.18—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Pleurocope sp. A	0	0	0	0	4
Santia sp. A					
AMPHIPODA–CAPRELLIDEA					
Caprella equilibra					
Caprella inequilbra					
Caprella cf. *subtilis*	0	0	0	0	3
Metaprotella sandalensis					
Paraprotella cf. *prima*					
AMPHIPODA–GAMMARIDEA					
Amphilochidae sp(p).	0	0	0	0	3
Atylus nani	0	0	0	0	10
Bemlos macromanus	0	0	0	0	5
Bemlos pualani					
Ceradocus hawaiiensis					
Elasmopus piikoi					
Ericthonius brasiliensis	0	0	0	0	3
Eriopisa sp. A					
Eriopisella sechellensis	0	0	0	0	3
Gammaropsis atlantica					
Gammaropsis pokipoki					
Gitanopsis pele					
Grandierella japonica					
Ischyrocerus kapu					
Ischyrocerus oahu					
Kanaloa manoa					
Konatopus paao	0	1	1	2	38
Laetmatophilus hala					
Leucothoe hyhelia					
Liljeborgia heeia					
Melita appendiculata					
Paradexamine maunaloa					
Paraphoxus sp. A	0	0	0	0	2
Paraphoxus sp. B					
Photis kapapa	0	0	0	0	9
Podocerus talegus					
Podocerus sp. A					
Seba ekepuu					
Seba sp. A					
DECAPODA–NATANTIA					
Alpheopsis equalis					
Alpheus paracrinitus					
Ambidexter sp. A					
Leptochela hawaiiensis	0	0	0	0	1
Metapenaeus sp. A					
Ogyrides sp. A					
Pandalus cf. *brevis*	0	0	0	0	1
Penaeopsis sp. A					
Processa aequimana	0	0	0	0	2

TABLE D.18—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
Processa australiensis					
Solenocera lucasii					
DECAPODA–ANOMURA					
Axius sp. A					
Callianassa sp. A					
Pagurid sp. A					
Pomatocheles sp. A					
DECAPODA–BRACHYURA					
Cleistostoma sp. A					
Cryptosoma granulosum					
Dorippe (?) sp. A					
Lissocarcinus laevis					
Macrophthalmus sp. A					
Micippa (?) sp. A					
Nucia (?) sp. A					
Pilumnus sp. A					
Portumnus sp. A					
Portunus macrophthalamus					
Tlos sp. A					
Megalops (unid.)					
Total No. of Individuals/Replicate	9	98	9		
Total No. of Taxa/Replicate	4	5	6		
Total No. of Individuals Sampled				116	1,012
Total No. of Taxa Sampled				9	32

Appendix E. Taxon Abundance for Mollusks

TABLE E.1. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations C1A and C2A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
BIVALVIA								
Acar cf. *plicata*	0	0	0	0	0	0	0	0
Adipicola cf. *crypta*								
Amygdalum newcombi								
Amygdalum sp.								
Anguipecten cf. *lamberti*								
Anisodonta lutea								
Anomia nobilis								
Arca kauaia								
Arcidae sp.	0	0	1	1	0	0	0	0
Barbatia divaricata	0	0	0	0	0	0	0	0
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	0	0	0	0	0	0	0	0
Cardita thaanumi	0	0	0	0	0	0	0	0
Cardita sp.								
Carditella hawaiensis	0	0	0	0	0	0	0	0
Carditella sp.	0	0	0	0	0	0	0	0
Chlamydella sp. A								
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	0	1	1	0	0	0	0
Codakia punctata								
Cosa waikikia	0	0	0	0	0	0	0	0
Crenella sp.								
Ctena bella								
Ctena transversa								
Ctena sp.	0	0	1	1	0	0	0	0
Cuspidaria hawaiensis								
Cuspidaria pailoloana								
Epicodakia sp.				0				0
Ervilia bisculpta	0	1	0	1	0	0	0	0
Euciroa pacifica								
Fragum mundum	0	0	0	0	0	0	1	1
Gastrochaena sp.								
Glycymeris sp.								
Grammatomya kanaka	0	0	0	0	0	0	0	0
Haumea juddi								
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis								
Kona symmetrica	0	0	0	0	0	0	0	0
Leptonacea sp.								
Lima keokea								
Lima sp.								
Limopsis sp.								
Lioconcha hieroglyphica	0	0	0	0	0	0	1	1
Lonoa hawaiensis								
Lucina edentula								

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Macoma dispar								
Macoma obliquilineata	0	0	0	0	0	0	0	0
Mactra thaanumi								
Mactra sp.								
Malleus regula	0	0	0	0	0	0	0	0
Malleus sp.	0	0	0	0	0	0	0	0
Modiolus sp.	0	0	0	0	0	0	0	0
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.								
Nemocardium thaanumi								
Nemocardium sp.								
Nucula hawaiensis	0	0	0	0	0	0	0	0
Ostrea sp.	0	0	0	0	0	0	0	0
Pectinidae sp. A	0	0	0	0	0	0	0	0
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.	0	0	0	0	0	0	0	0
Poromya transversa								
Propeamusiidae sp.								
Pteria sp.								
Rochefortina sandwichensis	2	0	0	2	0	0	0	0
Rochefortina sp.								
Scintilla hiloa								
Semelangulus crebrimaculatus	0	0	0	0	0	0	0	0
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	0	0	0	0	0	0
Septifer sp.	0	0	0	0	0	0	0	0
Spondylus sp.								
Tellina oahuana								
Tellina robusta								
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	0	0	0	0	0	0	0	0
Bivalvia sp. A	0	0	0	0	1	0	0	1
Bivalvia sp. B	0	0	0	0	0	0	0	0
Bivalvia sp. C	0	0	0	0	0	0	0	0
Bivalvia spp.	0	0	0	0	0	0	2	2
GASTROPODA								
Acteocina hawaiensis	0	0	0	0	0	0	0	0
Acteocina sandwicensis	0	0	0	0	0	0	0	0
Acteocina sp. A								
Acteocina sp.	1	0	0	1	0	0	0	0
Alcyna ocellata	0	0	0	0	0	0	0	0
Alcyna subangulata	0	0	0	0	0	0	0	0
Alvania isolata	0	0	0	0	0	0	0	0
Anacithara perfecta	0	0	0	0	0	0	0	0

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Antisabia foliacea								
Aplysiidae								
Architectonicidae sp.								
Argyropeza leucocephala	0	0	0	0	0	0	0	0
Argyropeza sp.	0	0	0	0	0	0	0	0
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata								
Atys sp.								
Balcis cf. *brunnimaculata*								
Balcis spp.	9	1	2	12	12	2	4	18
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	0	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	0	0	0	0
Brookula hawaiiensis								
Brookula iki	0	0	0	0	0	0	0	0
Brookula sp.								
Buccinidae sp.								
Bulla vernicosa								
Bulla sp.								
Bullina scabra								
Caecum arcuatum								
Caecum cf. *glabella*								
Caecum cf. *glabriformis*	0	0	0	0	0	0	0	0
Caecum oahuense	0	0	0	0	0	0	1	1
Caecum sepimentum	1	0	0	1	5	0	1	6
Caecum sp. A	0	2	0	2	0	0	0	0
Caecum sp.	0	2	0	2	0	0	0	0
Cancilla granatina								
Cancilla sp.								
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	0	0	0	0	0	0	0	0
Carinapex papillosa								
Cephalaspidea sp.	0	0	0	0	0	0	0	0
Cerithidium diplax	0	0	0	0	1	0	8	9
Cerithidium perparvulum	29	15	11	55	21	20	15	56
Cerithiopsis spp.	0	0	0	0	0	0	1	1
Cerithium atromarginatum								
Cerithium columna	0	0	0	0	0	0	0	0
Cerithium glareosum								
Cerithium interstriatum	0	0	0	0	0	0	0	0
Cerithium nesioticum	0	0	0	0	0	0	0	0
Cerithium rostratum	0	0	0	0	0	0	0	0
Cerithium zebrum	0	0	0	0	0	0	0	0
Cerithium spp.	0	1	1	2	1	5	7	13
Ceritoturris bittium	0	0	0	0	1	0	0	1
Circulus sp.								
Cirsotrema varicosa								

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Clavus pusilla	0	0	0	0	0	0	0	0
Clavus sp.	0	0	0	0	0	0	0	0
Collonista candida	0	0	0	0	0	0	0	0
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	1	0	0	1	0	0	0	0
Cyclostremiscus striatus	0	0	0	0	0	0	0	0
Cyclostremiscus sp. A	5	0	0	5	0	0	0	0
Cylichna pusilla								
Cypraeidae spp.	0	0	0	0	0	0	0	0
Cystiscus huna	0	0	0	0	0	0	1	1
Daphnellinae sp.	0	0	0	0	0	0	0	0
Dentimargo pumila								
Diala scopulorum	0	1	0	1	4	7	1	12
Diala semistriata	2	1	0	3	23	18	8	49
Diala sp.								
Diniatys dentifer								
Diodora granifera								
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae	0	0	0	0	0	0	0	0
Eatoniella pigmenta								
Eatoniella sp.								
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.								
Epitonium spp.	0	0	1	1	0	0	0	0
Erato sandwicensis								
Etrema acricula	0	0	0	0	0	0	0	0
Euchelus gemmatus	0	0	0	0	0	0	0	0
Euchelus sp.								
Eucithara angiostoma	0	0	0	0	0	0	0	0
Eucithara pusilla								
Eucithara sp.								
Eucylotoma albomacula								
Eulima peasei	0	0	0	0	0	0	0	0
Eulimidae sp.	0	0	0	0	0	0	0	0
Euplica varians	0	0	0	0	0	0	0	0
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	0	0	0	0	0	0	0	0
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	0	0	0	0	0	0	0	0
Glyphostoma kihikihi	0	0	0	0	0	0	1	1

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Granula sandwicensis	0	0	1	1	0	0	0	0
Granulina vitrea	0	0	0	0	5	0	2	7
Granulina sp.	0	0	0	0	0	1	0	1
Gyrineum pusillum	0	0	0	0	0	0	0	0
Haminoea curta	0	0	0	0	0	0	0	0
Haminoea sp.	0	0	0	0	0	0	0	0
Heliacus implexus								
Heliacus sp. A	0	0	0	0	0	0	0	0
Heliacus sp.	0	0	1	1	0	0	0	0
Herviera gliriella	1	0	0	1	5	1	1	7
Herviera patricia	0	0	0	0	0	0	0	0
Hinemoa indica	0	0	0	0	0	0	0	0
Hipponix australis	0	0	0	0	0	0	0	0
Hipponix imbricatus								
Hipponix pilosus	0	0	0	0	0	0	0	0
Hipponix sp.	0	1	1	2	0	0	1	1
Hydatina sp.								
Ittibittium parcum	0	0	0	0	0	0	0	0
Julia exquisita	0	0	0	0	0	0	0	0
Juliidae sp.	0	0	0	0	0	0	0	0
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea	0	0	0	0	0	1	0	1
Kermia sp.	0	0	0	0	0	0	1	1
Koloonella hawaiiensis	0	0	0	0	0	0	0	0
Koloonella sp.								
Leptothyra rubricincta	0	0	1	1	7	6	4	17
Leptothyra verruca	0	0	0	0	0	0	0	0
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.								
Lophocochlias minutissimus	7	1	1	9	6	3	5	14
Lophocochlias sp. A	0	0	0	0	0	0	0	0
Lophocochlias sp.								
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa	0	0	0	0	0	0	0	0
Merelina wanawana	0	0	0	0	0	0	0	0
Metaxia albicephala	0	0	0	0	0	0	0	0
Metaxia brunnicephala	0	0	0	0	0	0	0	0
Metaxia sp.								
Microdaphne trichodes	0	0	0	0	0	0	0	0
Miralda paulbartschi	0	0	0	0	0	0	0	0
Miralda scopulorum	0	0	0	0	0	0	0	0
Miralda sp.								
Mitra earlei								
Mitra saltata								
Mitra sp.	0	0	0	0	3	0	0	3
Mitrella bella								
Mitrella loyaltensis								
Mitrella margarita								

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Mitrella rorida								
Mitrolumna metula								
Modulus tectum	0	0	0	0	0	0	0	0
Morula sp.	0	0	0	0	0	0	0	0
Nassarius crematus								
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	0	0	0	0	0	0	0	0
Natica sp.	0	0	3	3	0	0	0	0
Nerita spp.	0	0	0	0	0	0	0	0
Neritopsis radula								
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	0	1	1
Odostomia gulicki	0	0	0	0	0	0	0	0
Odostomia oxia	0	0	0	0	0	0	0	0
Odostomia stearnsiella								
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.								
Omalaxis sp.								
Omalogyra japonica	1	0	1	2	1	0	0	1
Omalogyra spp.	0	0	0	0	0	0	0	0
Orbitestella regina	13	13	8	34	4	3	2	9
Orbitestella sp. A	0	0	0	0	0	0	0	0
Orbitestella sp. B	0	0	0	0	0	0	0	0
Orbitestella sp.	0	0	0	0	0	2	0	2
Parashiela beetsi	17	8	4	29	4	4	3	11
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis	0	0	0	0	0	0	0	0
Planaxis sp.								
Plesiotrochus luteus	0	0	0	0	0	0	0	0
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella								
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.								
Pusillina marmorata	19	6	14	39	16	8	25	49
Pyramidella sulcata								
Pyramidella sp. A	0	0	0	0	3	0	0	3
Pyramidella sp. B								
Pyramidella sp. C								
Pyramidella sp. D								
Pyramidella spp.								
Pyramidellidae sp. A								

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C								
Pyramidellidae sp. D								
Pyramidellidae sp.	1	0	0	1	1	2	0	3
Pyramidelloides angusta								
Pyramidelloides gracilis	0	0	0	0	0	0	0	0
Pyramidelloides suta	0	0	0	0	0	0	0	0
Pyrgulina oodes	0	0	0	0	0	0	0	0
Pyrgulina sp.								
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	0	0	0	0	5	0	0	5
Rissoidae spp.	14	0	0	14	0	0	0	0
Rissoina ambigua	0	0	0	0	0	0	0	0
Rissoina cerithiiformis	0	0	0	0	1	0	7	8
Rissoina costata	0	0	0	0	0	0	0	0
Rissoina imbricata								
Rissoina pulchella	0	1	0	1	0	0	0	0
Rissoina sp.								
Rufodardanula ponderi	0	0	0	0	0	0	0	0
Rufodardanula sp.								
Sansonia kenneyi	0	0	0	0	1	1	0	2
Sansonia sp. A	0	0	0	0	0	0	0	0
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	7	0	2	9	3	1	5	9
Scaphander sp.	0	0	1	1	0	0	0	0
Schwartziella ephamilla	2	0	0	2	4	0	0	4
Schwartziella triticea								
Scissurella coronata								
Scissurella pseudoequatoria	0	0	0	0	0	0	0	0
Seminella peasei	0	0	0	0	0	0	0	0
Seminella smithi								
Sinezona insignis	0	0	0	0	0	0	0	0
Smaragdia bryanae	0	0	0	0	0	0	0	0
Stilifer sp.								
Stosicia hiloense	0	0	0	0	0	0	0	0
Strebloceras subannulatum	1	0	0	1	0	0	0	0
Strombus helli								
Strombus maculatus								
Styliferina goniochila	0	0	0	0	0	0	0	0
Synaptocochlea concinna								
Terebra spp.	0	0	0	0	0	0	0	0
Thala milium								
Tricolia variabilis	9	1	8	18	27	6	17	50
Triphora spp.	2	0	2	4	5	8	7	20
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.	0	0	0	0	0	0	0	0

TABLE E.1—*Continued*

Taxon	No. of Individuals at C1A				No. of Individuals at C2A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Trochus intextus	0	0	0	0	0	0	0	0
Trochus sp.								
Tugali oblonga								
Tugali sp.								
Turbo sandwicensis	0	0	0	0	0	0	0	0
Turbonilla cornelliana	0	0	0	0	0	0	0	0
Turbonilla thaanumi	0	0	0	0	0	0	0	0
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C	0	0	0	0	0	0	0	0
Turbonilla sp. D								
Turbonilla sp. E	0	0	0	0	0	0	0	0
Turbonilla sp. F								
Turbonilla spp.	0	0	0	0	0	0	0	0
Turridae sp.	0	0	0	0	0	0	0	0
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.								
Veprecula brunonia								
Vermetidae spp.	0	0	0	0	0	0	0	0
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum								
Vexillum tusum	0	0	0	0	0	0	0	0
Vexillum sp. A								
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis	0	0	0	0	0	0	0	0
Williamia radiata	1	1	0	2	0	2	0	2
Xenuroturris sp.								
Zebina bidentata								
Zebina sp.	0	0	0	0	0	0	0	0
Gastropoda sp. A	0	0	0	0	0	0	0	0
Gastropoda spp.								
SCAPHOPODA								
Scaphopoda sp.								
POLYPLACOPHORA								
Polyplacophora sp.	0	0	0	0	0	0	0	0
Total No. of Individuals	145	56	66	267	170	101	133	404
Total No. of Individuals/cm^3	9.7	3.7	4.4	5.9	11.3	6.7	8.9	9.0
Total No. of Taxa	22	16	21	38	27	20	28	41

TABLE E.2. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations C3A and C5A, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
BIVALVIA								
Acar cf. *plicata*	1	1	0	2	0	0	0	0
Adipicola cf. *crypta*								
Amygdalum newcombi								
Amygdalum sp.								
Anguipecten cf. *lamberti*								
Anisodonta lutea								
Anomia nobilis								
Arca kauaia								
Arcidae sp.	0	0	0	0	0	0	0	0
Barbatia divaricata	1	0	0	1	0	0	0	0
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	0	4	0	4	0	1	0	1
Cardita thaanumi	0	0	0	0	1	0	0	1
Cardita sp.								
Carditella hawaiensis	0	0	0	0	0	0	0	0
Carditella sp.	0	0	1	1	0	1	0	1
Chlamydella sp. A								
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	0	0	0	0	0	0	0
Codakia punctata								
Cosa waikikia	0	0	0	0	0	0	0	0
Crenella sp.								
Ctena bella								
Ctena transversa								
Ctena sp.	0	0	0	0	0	0	0	0
Cuspidaria hawaiensis								
Cuspidaria pailoloana								
Epicodakia sp.	0	0	0	0	0	0	0	0
Ervilia bisculpta	0	1	0	1	0	0	1	1
Euciroa pacifica								
Fragum mundum	0	1	0	1	0	0	0	0
Gastrochaena sp.								
Glycymeris sp.								
Grammatomya kanaka	0	0	1	1	0	0	0	0
Haumea juddi								
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis								
Kona symmetrica	1	1	1	3	0	0	0	0
Leptonacea sp.								
Lima keokea								
Lima sp.								
Limopsis sp.								
Lioconcha hieroglyphica	0	0	0	0	0	0	0	0
Lonoa hawaiensis								
Lucina edentula								

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Macoma dispar								
Macoma obliquilineata	0	0	0	0	0	1	0	1
Mactra thaanumi								
Mactra sp.								
Malleus regula	0	1	0	1	0	0	0	0
Malleus sp.	0	5	2	7	0	0	0	0
Modiolus sp.	0	1	0	1	0	0	0	0
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.								
Nemocardium thaanumi								
Nemocardium sp.								
Nucula hawaiensis	0	2	1	3	0	0	0	0
Ostrea sp.	0	6	1	7	0	0	0	0
Pectinidae sp. A	0	1	0	1	0	0	0	0
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.[a]	frag	0	0	frag	0	0	0	0
Poromya transversa								
Propeamusiidae sp.								
Pteria sp.								
Rochefortina sandwichensis	2	5	3	10	2	2	0	4
Rochefortina sp.								
Scintilla hiloa								
Semelangulus crebrimaculatus	0	0	0	0	0	0	0	0
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	2	2	0	0	0	0
Septifer sp.	0	0	0	0	1	0	0	1
Spondylus sp.								
Tellina oahuana								
Tellina robusta								
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	0	0	0	0	0	0	0	0
Bivalvia sp. A	0	0	0	0	0	0	0	0
Bivalvia sp. B	1	0	0	1	0	0	0	0
Bivalvia sp. C	1	0	0	1	0	0	0	0
Bivalvia spp.	0	0	0	0	3	4	0	7
GASTROPODA								
Acteocina hawaiensis	0	0	0	0	0	0	2	2
Acteocina sandwicensis	0	2	0	2	0	0	0	0
Acteocina sp. A								
Acteocina sp.	0	0	0	0	2	3	0	5
Alcyna ocellata	5	12	14	31	1	0	13	14
Alcyna subangulata	3	0	0	3	0	0	1	1
Alvania isolata	0	0	0	0	0	0	1	1
Anacithara perfecta	0	1	0	1	0	0	0	0

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Antisabia foliacea								
Aplysiidae								
Architectonicidae sp.								
Argyropeza leucocephala	2	0	0	2	0	0	0	0
Argyropeza sp.	0	0	0	0	0	26	0	26
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata								
Atys sp.								
Balcis cf. *brunnimaculata*								
Balcis spp.	1	0	1	2	14	2	0	16
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	2	1	0	3	0	0	0	0
Bittium sp.	0	0	0	0	0	0	2	2
Brookula hawaiiensis								
Brookula iki	1	0	0	1	0	0	0	0
Brookula sp.								
Buccinidae sp.								
Bulla vernicosa								
Bulla sp.								
Bullina scabra								
Caecum arcuatum								
Caecum cf. *glabella*								
Caecum cf. *glabriformis*	0	1	0	1	0	0	0	0
Caecum oahuense	0	0	0	0	0	0	0	0
Caecum sepimentum	8	12	15	35	2	0	0	2
Caecum sp. A	0	0	0	0	0	0	0	0
Caecum sp.	0	0	0	0	0	2	0	2
Cancilla granatina								
Cancilla sp.								
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	8	1	1	10	0	0	0	0
Carinapex papillosa								
Cephalaspidea sp.	0	3	0	3	1	0	0	1
Cerithidium diplax	19	31	18	68	0	0	34	34
Cerithidium perparvulum	27	31	42	100	68	61	47	176
Cerithiopsis spp.	1	0	1	2	10	2	0	12
Cerithium atromarginatum								
Cerithium columna	0	1	1	2	0	0	0	0
Cerithium glareosum								
Cerithium interstriatum	1	0	2	3	0	0	1	1
Cerithium nesioticum	0	0	0	0	0	0	6	6
Cerithium rostratum	0	0	0	0	0	0	1	1
Cerithium zebrum	0	0	0	0	0	0	0	0
Cerithium spp.	0	1	0	1	22	0	0	22
Ceritoturris bittium	0	0	0	0	0	0	0	0
Circulus sp.								
Cirsotrema varicosa								

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Clavus pusilla	0	0	0	0	0	0	0	0
Clavus sp.	0	0	1	1	0	0	0	0
Collonista candida	2	4	1	7	0	0	2	2
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	2	8	3	13	0	0	1	1
Cyclostremiscus striatus	1	0	0	1	0	0	0	0
Cyclostremiscus sp. A	0	0	0	0	0	0	0	0
Cylichna pusilla								
Cypraeidae spp.	0	1	0	1	0	0	0	0
Cystiscus huna	0	0	0	0	4	0	0	4
Daphnellinae sp.	0	1	0	1	0	0	1	1
Dentimargo pumila								
Diala scopulorum	0	0	0	0	7	1	0	8
Diala semistriata	15	10	12	37	38	34	41	113
Diala sp.								
Diniatys dentifer								
Diodora granifera								
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae	0	0	0	0	0	0	0	0
Eatoniella pigmenta								
Eatoniella sp.								
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.								
Epitonium spp.	0	0	0	0	1	0	0	1
Erato sandwicensis								
Etrema acricula	1	0	0	1	0	0	0	0
Euchelus gemmatus	1	3	1	5	0	0	1	1
Euchelus sp.								
Eucithara angiostoma	0	1	0	1	0	0	0	0
Eucithara pusilla								
Eucithara sp.								
Eucylotoma albomacula								
Eulima peasei	0	1	0	1	0	0	0	0
Eulimidae sp.	0	4	0	4	0	0	0	0
Euplica varians	0	0	0	0	3	0	0	3
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	0	0	0	0	3	0	0	3
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	0	1	0	1	0	0	1	1
Glyphostoma kihikihi	0	0	0	0	0	0	0	0

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Granula sandwicensis	0	7	0	7	0	5	0	5
Granulina vitrea	0	0	0	0	0	0	0	0
Granulina sp.	5	0	4	9	1	0	3	4
Gyrineum pusillum	0	0	0	0	0	0	0	0
Haminoea curta	0	1	0	1	0	0	0	0
Haminoea sp.	0	0	0	0	0	0	0	0
Heliacus implexus								
Heliacus sp. A	0	0	0	0	1	0	0	1
Heliacus sp.	0	0	0	0	0	0	0	0
Herviera gliriella	0	1	0	1	0	0	2	2
Herviera patricia	2	0	0	2	0	0	0	0
Hinemoa indica	0	1	1	2	0	0	0	0
Hipponix australis	0	0	0	0	0	0	0	0
Hipponix imbricatus								
Hipponix pilosus	0	0	1	1	0	0	1	1
Hipponix sp.	0	0	0	0	1	0	0	1
Hydatina sp.								
Ittibittium parcum	0	0	0	0	0	0	0	0
Julia exquisita	0	1	1	2	0	0	0	0
Juliidae sp.	0	0	0	0	0	0	0	0
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea	0	0	0	0	0	0	0	0
Kermia sp.	0	0	0	0	0	0	0	0
Koloonella hawaiiensis	0	0	0	0	0	0	0	0
Koloonella sp.								
Leptothyra rubricincta	2	2	9	13	3	4	2	9
Leptothyra verruca	0	0	0	0	0	0	0	0
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.								
Lophocochlias minutissimus	37	30	22	89	12	23	20	55
Lophocochlias sp. A	0	2	1	3	0	0	3	3
Lophocochlias sp.								
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa	0	0	0	0	1	0	0	1
Merelina wanawana	1	0	0	1	0	0	0	0
Metaxia albicephala	0	1	1	2	0	0	0	0
Metaxia brunnicephala	0	1	0	1	0	0	0	0
Metaxia sp.								
Microdaphne trichodes	1	0	4	5	0	0	0	0
Miralda paulbartschi	1	0	0	1	0	0	0	0
Miralda scopulorum	0	0	0	0	0	0	0	0
Miralda sp.								
Mitra earlei								
Mitra saltata								
Mitra sp.	0	0	0	0	1	0	0	1
Mitrella bella								
Mitrella loyaltensis								
Mitrella margarita								

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Mitrella rorida								
Mitrolumna metula								
Modulus tectum	0	0	0	0	0	0	0	0
Morula sp.	0	0	0	0	0	0	0	0
Nassarius crematus								
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	0	1	0	1	1	2	2	5
Natica sp.	0	0	0	0	0	0	0	0
Nerita spp.	0	0	0	0	1	6	0	7
Neritopsis radula								
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	0	0	0
Odostomia gulicki	2	1	4	7	0	0	0	0
Odostomia oxia	0	0	1	1	0	0	0	0
Odostomia stearnsiella								
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.								
Omalaxis sp.								
Omalogyra japonica	0	2	0	2	0	1	0	1
Omalogyra spp.	0	0	0	0	1	0	0	1
Orbitestella regina	25	25	11	61	6	16	16	38
Orbitestella sp. A	0	0	0	0	0	1	1	2
Orbitestella sp. B	0	0	2	2	0	0	2	2
Orbitestella sp.	0	0	0	0	0	0	0	0
Parashiela beetsi	26	32	26	84	27	27	21	75
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis	1	0	0	1	0	0	0	0
Planaxis sp.								
Plesiotrochus luteus	1	0	0	1	2	0	1	3
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella								
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.								
Pusillina marmorata	59	100	71	230	60	71	72	203
Pyramidella sulcata								
Pyramidella sp. A	0	0	0	0	0	0	0	0
Pyramidella sp. B								
Pyramidella sp. C								
Pyramidella sp. D								
Pyramidella spp.								
Pyramidellidae sp. A								

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C								
Pyramidellidae sp. D								
Pyramidellidae sp.	0	0	0	0	7	3	0	10
Pyramidelloides angusta								
Pyramidelloides gracilis	0	2	0	2	0	0	0	0
Pyramidelloides suta	0	0	1	1	0	0	0	0
Pyrgulina oodes	0	0	0	0	0	0	0	0
Pyrgulina sp.								
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	2	1	2	5	0	0	4	4
Rissoidae spp.	0	0	0	0	4	5	0	9
Rissoina ambigua	0	4	0	4	1	0	0	1
Rissoina cerithiiformis	0	1	1	2	0	2	2	4
Rissoina costata	0	0	0	0	0	0	0	0
Rissoina imbricata								
Rissoina pulchella	0	1	0	1	0	0	0	0
Rissoina sp.								
Rufodardanula ponderi	1	1	2	4	0	0	1	1
Rufodardanula sp.								
Sansonia kenneyi	0	0	0	0	0	2	0	2
Sansonia sp. A	0	0	0	0	0	1	0	1
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	10	22	22	54	19	21	2	42
Scaphander sp.	0	0	0	0	0	0	0	0
Schwartziella ephamilla	6	4	4	14	6	5	4	15
Schwartziella triticea								
Scissurella coronata								
Scissurella pseudoequatoria	0	1	0	1	1	0	0	1
Seminella peasei	0	0	0	0	0	0	1	1
Seminella smithi								
Sinezona insignis	0	2	2	4	0	0	0	0
Smaragdia bryanae	0	0	0	0	0	0	1	1
Stilifer sp.								
Stosicia hiloense	1	0	0	1	0	0	0	0
Strebloceras subannulatum	1	3	2	6	1	0	0	1
Strombus helli								
Strombus maculatus								
Styliferina goniochila	3	3	11	17	0	0	1	1
Synaptocochlea concinna								
Terebra spp.	0	0	0	0	0	0	0	0
Thala milium								
Tricolia variabilis	31	33	33	97	37	72	43	152
Triphora spp.	5	4	4	13	5	14	0	19
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.	0	1	0	1	0	0	0	0

TABLE E.2—*Continued*

Taxon	No. of Individuals at C3A				No. of Individuals at C5A			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Trochus intextus	0	1	0	1	0	0	0	0
Trochus sp.								
Tugali oblonga								
Tugali sp.								
Turbo sandwicensis	1	0	0	1	0	0	0	0
Turbonilla cornelliana	0	0	1	1	0	0	0	0
Turbonilla thaanumi	0	0	0	0	0	0	0	0
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C	0	1	0	1	0	0	0	0
Turbonilla sp. D								
Turbonilla sp. E	0	1	2	3	0	0	0	0
Turbonilla sp. F								
Turbonilla spp.	0	0	0	0	0	0	0	0
Turridae sp.	0	2	0	2	0	0	2	2
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.								
Veprecula brunonia								
Vermetidae spp.	8	11	9	28	0	0	7	7
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum								
Vexillum tusum	0	1	0	1	0	0	0	0
Vexillum sp. A								
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis	0	0	0	0	0	0	0	0
Williamia radiata	1	1	1	3	0	1	0	1
Xenuroturris sp.								
Zebina bidentata								
Zebina sp.	3	0	0	3	0	0	0	0
Gastropoda sp. A	2	3	2	7	0	0	0	0
Gastropoda spp.								
SCAPHOPODA								
Scaphopoda sp.								
POLYPLACOPHORA								
Polyplacophora sp.	0	0	0	0	0	0	0	0
Total No. of Individuals	345	472	383	1,200	382	422	370	1,174
Total No. of Individuals/cm^3	23.0	31.5	25.5	26.7	25.5	28.1	24.7	26.1
Total No. of Taxa	52	73	53	104	41	33	41	78

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.3. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Station C6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
BIVALVIA					
Acar cf. *plicata*	0	0	0	0	2
Adipicola cf. *crypta*					
Amygdalum newcombi					
Amygdalum sp.					
Anguipecten cf. *lamberti*					
Anisodonta lutea					
Anomia nobilis					
Arca kauaia					
Arcidae sp.	0	0	0	0	1
Barbatia divaricata	0	0	0	0	1
Barbatia lima					
Barbatia nuttingi					
Barbatia sp.					
Brachidontes crebristriatus	0	0	0	0	5
Cardita thaanumi	0	0	1	1	2
Cardita sp.					
Carditella hawaiensis	0	1	0	1	1
Carditella sp.	0	0	0	0	2
Chlamydella sp. A					
Chlamys coruscans hawaiensis					
Chlamys kauaiensis					
Chlamys sp. B					
Chlamys sp.	0	0	1	1	2
Codakia punctata					
Cosa waikikia	1	0	0	1	1
Crenella sp.					
Ctena bella					
Ctena transversa					
Ctena sp.	0	0	0	0	1
Cuspidaria hawaiensis					
Cuspidaria pailoloana					
Epicodakia sp.	1	0	0	1	1
Ervilia bisculpta	1	0	0	1	4
Euciroa pacifica					
Fragum mundum	4	2	0	6	8
Gastrochaena sp.					
Glycymeris sp.					
Grammatomya kanaka	1	0	0	1	2
Haumea juddi					
Hiatella arctica					
Hitia ovalis					
Kellia hawaiensis					
Kona symmetrica	3	1	0	4	7
Leptonacea sp.					
Lima keokea					
Lima sp.					
Limopsis sp.					
Lioconcha hieroglyphica	0	0	0	0	1
Lonoa hawaiensis					
Lucina edentula					

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Macoma dispar					
Macoma obliquilineata	0	0	0	0	1
Mactra thaanumi					
Mactra sp.					
Malleus regula	0	0	0	0	1
Malleus sp.	0	0	0	0	7
Modiolus sp.	0	0	0	0	1
Mytilidae sp. A					
Mytilidae sp. B					
Mytilidae sp. C					
Mytilidae sp.					
Nemocardium thaanumi					
Nemocardium sp.					
Nucula hawaiensis	0	0	0	0	3
Ostrea sp.	0	0	1	1	8
Pectinidae sp. A	0	0	0	0	1
Pillucina hawaiiensis					
Pillucina spaldingi					
Pillucina sp.					
Pinna sp.[a]	0	0	0	0	frag
Poromya transversa					
Propeamusiidae sp.					
Pteria sp.					
Rochefortina sandwichensis	0	3	0	3	19
Rochefortina sp.					
Scintilla hiloa					
Semelangulus crebrimaculatus	0	1	0	1	1
Semelangulus sp.					
Semele australis					
Septifer bryanae	0	0	1	1	3
Septifer sp.	0	0	0	0	1
Spondylus sp.					
Tellina oahuana					
Tellina robusta					
Tellina sp. A					
Tellina sp. B					
Tellina sp. C					
Tellina sp.	1	0	0	1	1
Bivalvia sp. A	0	0	0	0	1
Bivalvia sp. B	0	0	0	0	1
Bivalvia sp. C	0	0	0	0	1
Bivalvia spp.	0	0	1	1	10
GASTROPODA					
Acteocina hawaiensis	0	0	0	0	2
Acteocina sandwicensis	1	0	1	2	4
Acteocina sp. A					
Acteocina sp.				0	6
Alcyna ocellata	4	4	3	11	56
Alcyna subangulata	0	0	0	0	4
Alvania isolata	1	1	1	3	4
Anacithara perfecta	0	0	0	0	1

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate 1	2	3	Total	
Antisabia foliacea					
Aplysiidae					
Architectonicidae sp.					
Argyropeza leucocephala	0	0	0	0	2
Argyropeza sp.	0	0	0	0	26
Aspella producta					
Aspella sp.					
Atys curta					
Atys debilis					
Atys semistriata					
Atys sp.					
Balcis cf. *brunnimaculata*					
Balcis spp.	0	2	0	2	50
Barleeia calcarea					
Benthonella sp.					
Bittium impendens	0	1	2	3	6
Bittium sp.	0	0	0	0	2
Brookula hawaiiensis					
Brookula iki	0	0	0	0	1
Brookula sp.					
Buccinidae sp.					
Bulla vernicosa					
Bulla sp.					
Bullina scabra					
Caecum arcuatum					
Caecum cf. *glabella*					
Caecum cf. *glabriformis*	0	0	0	0	1
Caecum oahuense	0	0	0	0	1
Caecum sepimentum	2	6	7	15	59
Caecum sp. A	0	0	0	0	2
Caecum sp.	0	0	0	0	4
Cancilla granatina					
Cancilla sp.					
Cantharus sp.					
Capulidae sp.					
Carinapex minutissima	0	2	0	2	12
Carinapex papillosa					
Cephalaspidea sp.	0	0	0	0	4
Cerithidium diplax	20	21	20	61	172
Cerithidium perparvulum	50	45	37	132	519
Cerithiopsis spp.	0	0	1	1	16
Cerithium atromarginatum					
Cerithium columna	1	3	0	4	6
Cerithium glareosum					
Cerithium interstriatum	2	2	0	4	8
Cerithium nesioticum	0	1	0	1	7
Cerithium rostratum	0	0	0	0	1
Cerithium zebrum	1	0	0	1	1
Cerithium spp.	0	0	0	0	38
Ceritoturris bittium	0	0	0	0	1
Circulus sp.					
Cirsotrema varicosa					

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Clavus pusilla	0	1	0	1	1
Clavus sp.	0	0	0	0	1
Collonista candida	3	2	1	6	15
Conus pulicarius					
Conus quercinus					
Conus sp.					
Coralliophilidae sp.					
Costellariidae sp.					
Crepidula aculeata					
Crucibulum spinosum					
Cycloscala hyalina					
Cyclostremiscus emeryi	2	2	0	4	19
Cyclostremiscus striatus	0	0	0	0	1
Cyclostremiscus sp. A	0	0	0	0	5
Cylichna pusilla					
Cypraeidae spp.	0	0	0	0	1
Cystiscus huna	0	0	0	0	5
Daphnellinae sp.	0	0	0	0	2
Dentimargo pumila					
Diala scopulorum	1	0	0	1	22
Diala semistriata	21	31	17	69	271
Diala sp.					
Diniatys dentifer					
Diodora granifera					
Drupella sp. A					
Drupella sp.					
Eatoniella janetaylorae	1	0	0	1	1
Eatoniella pigmenta					
Eatoniella sp.					
Elachisina robertsoni					
Elacorbis callusa					
Emarginula dilecta					
Emarginula sp.					
Epitonium spp.	0	0	0	0	2
Erato sandwicensis					
Etrema acricula	0	0	0	0	1
Euchelus gemmatus	1	0	0	1	7
Euchelus sp.					
Eucithara angiostoma	0	0	0	0	1
Eucithara pusilla					
Eucithara sp.					
Eucylotoma albomacula					
Eulima peasei	0	0	0	0	1
Eulimidae sp.	0	0	0	0	4
Euplica varians	0	0	0	0	3
Evalea peasei					
Evalea waikikiensis					
Finella pupoides	0	0	0	0	3
Fusinus sp.					
Gemmula monilifera					
Gibbula marmorea	0	0	0	0	2
Glyphostoma kihikihi	0	0	0	0	1

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Granula sandwicensis	0	0	0	0	13
Granulina vitrea	1	5	0	6	13
Granulina sp.	1	0	0	1	15
Gyrineum pusillum	0	0	1	1	1
Haminoea curta	0	0	0	0	1
Haminoea sp.	1	0	0	1	1
Heliacus implexus					
Heliacus sp. A	0	0	0	0	1
Heliacus sp.	0	0	1	1	2
Herviera gliriella	2	3	3	8	19
Herviera patricia	0	0	0	0	2
Hinemoa indica	0	0	0	0	2
Hipponix australis	1	0	1	2	2
Hipponix imbricatus					
Hipponix pilosus	0	0	1	1	3
Hipponix sp.	0	0	0	0	4
Hydatina sp.					
Ittibittium parcum	4	5	3	12	12
Julia exquisita	3	2	1	6	8
Juliidae sp.	0	0	2	2	2
Kermia aniani					
Kermia brunnea					
Kermia cylindrica					
Kermia daedalea	0	0	0	0	1
Kermia sp.	0	0	0	0	1
Koloonella hawaiiensis	0	0	1	1	1
Koloonella sp.					
Leptothyra rubricincta	0	2	2	4	44
Leptothyra verruca	1	4	1	6	6
Lienardia apiculata					
Lienardia mighelsi					
Liotiidae sp.					
Lophocochlias minutissimus	17	13	17	47	214
Lophocochlias sp. A	2	0	0	2	8
Lophocochlias sp.					
Meioceras sandwichensis					
Merelina granulosa					
Merelina hewa	0	1	0	1	2
Merelina wanawana	0	0	0	0	1
Metaxia albicephala	0	0	0	0	2
Metaxia brunnicephala	0	0	0	0	1
Metaxia sp.					
Microdaphne trichodes	0	0	0	0	5
Miralda paulbartschi	1	0	0	1	2
Miralda scopulorum	0	1	0	1	1
Miralda sp.					
Mitra earlei					
Mitra saltata					
Mitra sp.	0	0	0	0	4
Mitrella bella					
Mitrella loyaltensis					
Mitrella margarita					

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate			Total	
	1	2	3		
Mitrella rorida					
Mitrolumna metula					
Modulus tectum	1	0	0	1	1
Morula sp.	0	0	1	1	1
Nassarius crematus					
Nassarius papillosus					
Nassarius sp.					
Natica bougei					
Natica gualteriana	2	0	1	3	9
Natica sp.	0	0	0	0	3
Nerita spp.	0	0	0	0	7
Neritopsis radula					
Nesiodostomia quarta					
Nesiodostomia sp.	0	0	0	0	1
Odostomia gulicki	3	1	0	4	11
Odostomia oxia	0	0	0	0	1
Odostomia stearnsiella					
Odostomia sp. A					
Odostomia sp. B					
Odostomia sp.					
Omalaxis sp.					
Omalogyra japonica	1	0	0	1	7
Omalogyra spp.	0	0	0	0	1
Orbitestella regina	11	12	13	36	178
Orbitestella sp. A	0	0	0	0	2
Orbitestella sp. B	0	1	0	1	5
Orbitestella sp.	0	0	0	0	2
Parashiela beetsi	30	21	19	70	269
Pelycidion habei					
Peristernia chlorostoma					
Phenacolepas scobinata					
Philippia oxytropis					
Philippia sp.					
Planaxis suturalis	0	0	0	0	1
Planaxis sp.					
Plesiotrochus luteus	3	1	2	6	10
Powellsetia fallax					
Prodotia iostomus					
Pseudodaphnella pulchella					
Pseudomalaxis sp.					
Pterygia pudica					
Pupa pudica					
Pupa tessellata					
Pupa sp.					
Pusillina marmorata	27	35	25	87	608
Pyramidella sulcata					
Pyramidella sp. A	0	0	0	0	3
Pyramidella sp. B					
Pyramidella sp. C					
Pyramidella sp. D					
Pyramidella spp.					
Pyramidellidae sp. A					

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Pyramidellidae sp. B					
Pyramidellidae sp. C					
Pyramidellidae sp. D					
Pyramidellidae sp.	0	0	0	0	14
Pyramidelloides angusta					
Pyramidelloides gracilis	0	0	1	1	3
Pyramidelloides suta	0	0	0	0	1
Pyrgulina oodes	0	1	0	1	1
Pyrgulina sp.					
Rastodens sp.					
Rhinoclavis articulata					
Rissoella sp.	3	1	1	5	19
Rissoidae spp.	0	0	0	0	23
Rissoina ambigua	0	4	1	5	10
Rissoina cerithiiformis	1	0	0	1	15
Rissoina costata	2	0	1	3	3
Rissoina imbricata					
Rissoina pulchella	0	0	0	0	2
Rissoina sp.					
Rufodardanula ponderi	0	0	0	0	5
Rufodardanula sp.					
Sansonia kenneyi	0	0	0	0	4
Sansonia sp. A	0	0	0	0	1
Sansonia spp.					
Scabricola casta					
Scalenostoma sp.					
Scaliola spp.	14	16	9	39	153
Scaphander sp.	0	0	0	0	1
Schwartziella ephamilla	0	9	5	14	49
Schwartziella triticea					
Scissurella coronata					
Scissurella pseudoequatoria	1	0	0	1	3
Seminella peasei	0	0	0	0	1
Seminella smithi					
Sinezona insignis	1	1	0	2	6
Smaragdia bryanae	0	1	0	1	2
Stilifer sp.					
Stosicia hiloense	0	0	0	0	1
Strebloceras subannulatum	0	2	0	2	10
Strombus helli					
Strombus maculatus					
Styliferina goniochila	1	3	1	5	23
Synaptocochlea concinna					
Terebra spp.	0	0	1	1	1
Thala milium					
Tricolia variabilis	62	44	27	133	450
Triphora spp.	8	6	5	19	75
Tritonoturris sp. A					
Trivia globosa pilula					
Trivia hordacea					
Trivia pellucida					
Trivia spp.	0	0	0	0	1

TABLE E.3—*Continued*

Taxon	No. of Individuals at C6				Transect C Total
	Replicate 1	2	3	Total	
Trochus intextus	0	0	0	0	1
Trochus sp.					
Tugali oblongata					
Tugali sp.					
Turbo sandwicensis	1	0	0	1	2
Turbonilla cornelliana	0	0	0	0	1
Turbonilla thaanumi	1	2	0	3	3
Turbonilla sp. A					
Turbonilla sp. B					
Turbonilla sp. C	0	0	0	0	1
Turbonilla sp. D					
Turbonilla sp. E	1	0	0	1	4
Turbonilla sp. F					
Turbonilla spp.	1	0	0	1	1
Turridae sp.	0	0	0	0	4
Umbraculum sinicum					
Umbraculum sp.					
Vanikoro cancellata					
Vanikoro sp.					
Veprecula brunonia					
Vermetidae spp.	8	3	4	15	50
Vexillum adamsianum					
Vexillum approximatum					
Vexillum cosmani					
Vexillum interruptum					
Vexillum pacificum					
Vexillum rubrum					
Vexillum rufofilosum					
Vexillum tusum	0	0	0	0	1
Vexillum sp. A					
Vexillum sp.					
Vitrinellidae sp.					
Volvarina fusiformis	0	0	1	1	1
Williamia radiata	0	1	0	1	9
Xenuroturris sp.					
Zebina bidentata					
Zebina sp.	1	0	0	1	4
Gastropoda sp. A	2	2	0	4	11
Gastropoda spp.					
SCAPHOPODA					
Scaphopoda sp.					
POLYPLACOPHORA					
Polyplacophora sp.	1	1	0	2	2
Total No. of Individuals	344	336	247	927	3,972
Total No. of Individuals/cm^3	22.9	22.4	16.5	20.6	17.7
Total No. of Taxa	58	51	45	91	168

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.4. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations D1 and D2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
BIVALVIA								
Acar cf. *plicata*								
Adipicola cf. *crypta*								
Amygdalum newcombi								
Amygdalum sp.	0	0	0	0	0	0	0	0
Anguipecten cf. *lamberti*								
Anisodonta lutea								
Anomia nobilis								
Arca kauaia	0	0	0	0	2	2	2	6
Arcidae sp.	0	1	0	1	0	0	0	0
Barbatia divaricata								
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	0	0	0	0	0	0	0	0
Cardita thaanumi								
Cardita sp.								
Carditella hawaiensis	0	0	0	0	0	0	0	0
Carditella sp.								
Chlamydella sp. A								
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	0	0	0	0	0	0	0
Codakia punctata								
Cosa waikikia								
Crenella sp.								
Ctena bella								
Ctena transversa	3	0	0	3	0	0	0	0
Ctena sp.	0	0	0	0	0	0	0	0
Cuspidaria hawaiensis								
Cuspidaria pailoloana								
Epicodakia sp.	0	0	0	0	0	0	0	0
Ervilia bisculpta	19	11	12	42	6	5	6	17
Euciroa pacifica								
Fragum mundum	0	0	0	0	0	0	0	0
Gastrochaena sp.								
Glycymeris sp.								
Grammatomya kanaka								
Haumea juddi	0	0	0	0	0	0	0	0
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis	0	0	0	0	0	0	0	0
Kona symmetrica								
Leptonacea sp.								
Lima keokea								
Lima sp.								
Limopsis sp.								
Lioconcha hieroglyphica								
Lonoa hawaiensis								
Lucina edentula								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Macoma dispar								
Macoma obliquilineata	0	0	0	0	0	0	0	0
Mactra thaanumi	0	0	0	0	0	0	0	0
Mactra sp.								
Malleus regula								
Malleus sp.								
Modiolus sp.								
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.	0	0	0	0	0	0	0	0
Nemocardium thaanumi								
Nemocardium sp.								
Nucula hawaiensis								
Ostrea sp.								
Pectinidae sp. A								
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.[a]	++	+	+	+	+	+	+	+
Poromya transversa								
Propeamusiidae sp.								
Pteria sp.	0	0	0	0	0	0	0	0
Rochefortina sandwichensis	7	0	0	7	0	0	0	0
Rochefortina sp.								
Scintilla hiloa	0	0	0	0	0	0	0	0
Semelangulus crebrimaculatus								
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	0	0	0	0	0	0
Septifer sp.	0	0	0	0	0	0	0	0
Spondylus sp.								
Tellina oahuana								
Tellina robusta	0	0	0	0	0	0	0	0
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	1	0	0	1	0	0	0	0
Bivalvia sp. A								
Bivalvia sp. B								
Bivalvia sp. C								
Bivalvia spp.	0	0	1	1	0	0	11	11
GASTROPODA								
Acteocina hawaiensis	0	0	0	0	0	0	0	0
Acteocina sandwicensis	15	0	0	15	11	12	17	40
Acteocina sp. A	0	0	0	0	0	0	0	0
Acteocina sp.	7	15	0	22	21	15	0	36
Alcyna ocellata	0	0	0	0	0	0	0	0
Alcyna subangulata	0	0	0	0	0	0	0	0
Alvania isolata	0	0	0	0	0	0	0	0
Anacithara perfecta								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Antisabia foliacea								
Aplysiidae	0	0	0	0	0	0	0	0
Architectonicidae sp.	1	0	1	2	0	0	1	1
Argyropeza leucocephala								
Argyropeza sp.								
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata	0	0	0	0	0	0	0	0
Atys sp.	0	0	0	0	0	0	0	0
Balcis cf. *brunnimaculata*								
Balcis spp.	49	25	14	88	29	34	29	92
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	0	0	0	0	0	0	0	0
Bittium sp.								
Brookula hawaiiensis								
Brookula iki	0	0	0	0	0	0	0	0
Brookula sp.								
Buccinidae sp.								
Bulla vernicosa	0	0	0	0	0	0	0	0
Bulla sp.	0	0	0	0	1	0	0	1
Bullina scabra								
Caecum arcuatum								
Caecum cf. *glabella*								
Caecum cf. *glabriformis*								
Caecum oahuense								
Caecum sepimentum	0	0	0	0	0	0	0	0
Caecum sp. A								
Caecum sp.	0	0	0	0	2	0	1	3
Cancilla granatina	0	0	0	0	1	0	1	2
Cancilla sp.	0	1	0	1	0	0	0	0
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	0	0	0	0	0	0	0	0
Carinapex papillosa								
Cephalaspidea sp.	0	0	0	0	0	0	0	0
Cerithidium diplax	0	0	0	0	48	17	0	65
Cerithidium perparvulum	42	7	0	49	95	117	99	311
Cerithiopsis spp.								
Cerithium atromarginatum								
Cerithium columna								
Cerithium glareosum								
Cerithium interstriatum	0	3	0	3	0	0	0	0
Cerithium nesioticum								
Cerithium rostratum								
Cerithium zebrum								
Cerithium spp.	0	16	4	20	0	1	0	1
Ceritoturris bittium	0	0	0	0	0	0	0	0
Circulus sp.								
Cirsotrema varicosa								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Clavus pusilla								
Clavus sp.	0	0	0	0	0	0	0	0
Collonista candida								
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	2	1	1	4	4	4	2	10
Cyclostremiscus striatus								
Cyclostremiscus sp. A	2	0	0	2	0	0	0	0
Cylichna pusilla	0	0	0	0	0	0	4	4
Cypraeidae spp.								
Cystiscus huna	0	2	0	2	0	0	0	0
Daphnellinae sp.	0	0	0	0	0	1	0	1
Dentimargo pumila								
Diala scopulorum	41	12	16	69	0	0	0	0
Diala semistriata	18	0	0	18	11	19	37	67
Diala sp.								
Diniatys dentifer	0	0	0	0	0	0	0	0
Diodora granifera	0	0	0	0	0	0	0	0
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae								
Eatoniella pigmenta								
Eatoniella sp.								
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.								
Epitonium spp.	6	3	1	10	0	0	0	0
Erato sandwicensis	0	0	0	0	0	1	0	1
Etrema acricula								
Euchelus gemmatus	0	0	0	0	3	1	0	4
Euchelus sp.								
Eucithara angiostoma								
Eucithara pusilla	1	0	0	1	0	0	0	0
Eucithara sp.								
Eucylotoma albomacula								
Eulima peasei								
Eulimidae sp.								
Euplica varians								
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	178	86	82	346	80	49	81	210
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	0	0	0	0	0	0	0	0
Glyphostoma kihikihi								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Granula sandwicensis	0	0	0	0	0	0	0	0
Granulina vitrea	0	1	0	1	3	0	2	5
Granulina sp.	2	2	2	6	0	0	1	1
Gyrineum pusillum	0	1	0	1	0	0	0	0
Haminoea curta	0	0	0	0	0	2	0	2
Haminoea sp.	0	0	0	0	0	0	0	0
Heliacus implexus	0	0	0	0	0	0	0	0
Heliacus sp. A								
Heliacus sp.	0	0	0	0	0	0	0	0
Herviera gliriella								
Herviera patricia								
Hinemoa indica	0	0	0	0	0	0	0	0
Hipponix australis	0	0	0	0	0	0	0	0
Hipponix imbricatus								
Hipponix pilosus								
Hipponix sp.								
Hydatina sp.								
Ittibittium parcum	0	0	0	0	0	0	0	0
Julia exquisita								
Juliidae sp.								
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea								
Kermia sp.								
Koloonella hawaiiensis								
Koloonella sp.	18	6	7	31	1	0	0	1
Leptothyra rubricincta	0	0	0	0	0	0	0	0
Leptothyra verruca	0	0	0	0	0	0	0	0
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.	0	0	0	0	0	0	0	0
Lophocochlias minutissimus	1	4	1	6	4	5	4	13
Lophocochlias sp. A	0	0	0	0	0	0	0	0
Lophocochlias sp.	0	0	0	0	0	0	0	0
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa								
Merelina wanawana	0	0	0	0	0	0	0	0
Metaxia albicephala								
Metaxia brunnicephala								
Metaxia sp.	0	0	0	0	0	0	0	0
Microdaphne trichodes	0	0	0	0	0	0	0	0
Miralda paulbartschi	0	1	0	1	0	0	0	0
Miralda scopulorum	0	0	0	0	0	0	0	0
Miralda sp.								
Mitra earlei	0	2	0	2	0	0	0	0
Mitra saltata								
Mitra sp.								
Mitrella bella								
Mitrella loyaltensis								
Mitrella margarita								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Mitrella rorida								
Mitrolumna metula								
Modulus tectum								
Morula sp.	0	0	0	0	0	0	0	0
Nassarius crematus								
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	0	0	0	0	0	0	0	0
Natica sp.	9	5	4	18	3	3	3	9
Nerita spp.	1	0	0	1	0	0	0	0
Neritopsis radula								
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	0	0	0
Odostomia gulicki	0	0	0	0	0	0	0	0
Odostomia oxia								
Odostomia stearnsiella	1	0	0	1	0	0	0	0
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.	0	0	0	0	0	0	0	0
Omalaxis sp.								
Omalogyra japonica	0	0	0	0	0	0	0	0
Omalogyra spp.	0	0	0	0	0	0	0	0
Orbitestella regina	2	0	1	3	0	2	3	5
Orbitestella sp. A								
Orbitestella sp. B	0	0	0	0	0	0	0	0
Orbitestella sp.	0	0	0	0	0	3	0	3
Parashiela beetsi	7	3	2	12	22	12	24	58
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis								
Planaxis sp.								
Plesiotrochus luteus								
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella	0	0	0	0	0	0	0	0
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.	2	2	0	4	0	0	0	0
Pusillina marmorata	30	19	21	70	0	14	22	36
Pyramidella sulcata	0	0	0	0	0	0	0	0
Pyramidella sp. A								
Pyramidella sp. B								
Pyramidella sp. C	2	2	0	4	0	0	0	0
Pyramidella sp. D	2	5	4	11	0	0	0	0
Pyramidella spp.	0	0	0	0	0	9	7	16
Pyramidellidae sp. A								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C	0	0	0	0	0	0	1	1
Pyramidellidae sp. D								
Pyramidellidae sp.	0	0	0	0	0	0	0	0
Pyramidelloides angusta								
Pyramidelloides gracilis								
Pyramidelloides suta								
Pyrgulina oodes	9	6	0	15	0	0	0	0
Pyrgulina sp.	0	0	0	0	0	0	0	0
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	0	0	0	0	0	0	0	0
Rissoidae spp.								
Rissoina ambigua								
Rissoina cerithiiformis	0	0	0	0	0	1	1	2
Rissoina costata	0	0	0	0	0	0	2	2
Rissoina imbricata								
Rissoina pulchella	0	0	0	0	0	0	0	0
Rissoina sp.	0	0	0	0	0	6	0	6
Rufodardanula ponderi	0	0	0	0	0	0	0	0
Rufodardanula sp.								
Sansonia kenneyi								
Sansonia sp. A								
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	7	3	2	12	37	0	40	77
Scaphander sp.								
Schwartziella ephamilla	0	0	0	0	0	2	0	2
Schwartziella triticea	0	0	0	0	0	0	0	0
Scissurella coronata								
Scissurella pseudoequatoria								
Seminella peasei								
Seminella smithi	0	0	0	0	0	0	0	0
Sinezona insignis	0	0	0	0	0	0	0	0
Smaragdia bryanae								
Stilifer sp.								
Stosicia hiloense	0	0	0	0	0	0	0	0
Strebloceras subannulatum	0	0	0	0	0	0	0	0
Strombus helli								
Strombus maculatus								
Styliferina goniochila	0	0	0	0	0	0	0	0
Synaptocochlea concinna	0	0	0	0	0	0	0	0
Terebra spp.	0	0	0	0	0	0	0	0
Thala milium								
Tricolia variabilis	8	6	1	15	0	0	0	0
Triphora spp.	0	0	1	1	0	1	0	1
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.								

TABLE E.4—*Continued*

Taxon	No. of Individuals at D1				No. of Individuals at D2			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Trochus intextus								
Trochus sp.	0	0	0	0	0	0	0	0
Tugali oblonga								
Tugali sp.	1	0	0	1	0	0	0	0
Turbo sandwicensis	0	0	0	0	0	0	0	0
Turbonilla cornelliana	0	1	2	3	0	0	0	0
Turbonilla thaanumi								
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C								
Turbonilla sp. D								
Turbonilla sp. E	0	0	0	0	0	0	0	0
Turbonilla sp. F								
Turbonilla spp.	0	0	0	0	0	0	0	0
Turridae sp.	0	0	0	0	0	3	1	4
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.								
Veprecula brunonia	0	0	1	1	1	0	0	1
Vermetidae spp.	0	0	0	0	0	0	0	0
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum								
Vexillum tusum								
Vexillum sp. A								
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis								
Williamia radiata	1	0	0	1	0	0	0	0
Xenuroturris sp.	0	0	0	0	0	0	1	1
Zebina bidentata								
Zebina sp.								
Gastropoda sp. A								
Gastropoda spp.	0	0	0	0	0	0	0	0
SCAPHOPODA								
Scaphopoda sp.								
POLYPLACOPHORA								
Polyplacophora sp.								
Total No. of Individuals	495	252	181	928	385	341	403	1,129
Total No. of Individuals/cm^3	33.0	16.8	12.1	20.6	25.7	22.7	26.9	25.1
Total No. of Taxa	34	31	23	47	22	28	28	42

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.5. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations D3A and D5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
BIVALVIA								
Acar cf. *plicata*								
Adipicola cf. *crypta*								
Amygdalum newcombi								
Amygdalum sp.	0	0	0	0	0	2	0	2
Anguipecten cf. *lamberti*								
Anisodonta lutea								
Anomia nobilis								
Arca kauaia	0	0	0	0	0	0	0	0
Arcidae sp.	1	0	0	1	0	0	0	0
Barbatia divaricata								
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	0	0	0	0	0	2	0	2
Cardita thaanumi								
Cardita sp.								
Carditella hawaiensis	1	1	0	2	0	0	0	0
Carditella sp.								
Chlamydella sp. A								
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	0	0	0	0	0	1	1
Codakia punctata								
Cosa waikikia								
Crenella sp.								
Ctena bella								
Ctena transversa	0	0	0	0	3	0	0	3
Ctena sp.	0	0	0	0	0	0	1	1
Cuspidaria hawaiensis								
Cuspidaria pailoloana								
Epicodakia sp.	0	0	0	0	0	1	2	3
Ervilia bisculpta	0	0	0	0	21	7	16	44
Euciroa pacifica								
Fragum mundum	0	0	0	0	1	0	0	1
Gastrochaena sp.								
Glycymeris sp.								
Grammatomya kanaka								
Haumea juddi	0	0	0	0	0	3	0	3
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis	0	0	0	0	0	1	0	1
Kona symmetrica								
Leptonacea sp.								
Lima keokea								
Lima sp.								
Limopsis sp.								
Lioconcha hieroglyphica								
Lonoa hawaiensis								
Lucina edentula								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Macoma dispar								
Macoma obliquilineata	0	0	0	0	0	0	0	0
Mactra thaanumi	0	0	0	0	0	0	0	0
Mactra sp.								
Malleus regula								
Malleus sp.								
Modiolus sp.								
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.	0	0	0	0	0	0	1	1
Nemocardium thaanumi								
Nemocardium sp.								
Nucula hawaiensis								
Ostrea sp.								
Pectinidae sp. A								
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.[a]	+	+	frag+	frag+	+	+	+	+
Poromya transversa								
Propeamusiidae sp.								
Pteria sp.	0	0	0	0	0	1	0	1
Rochefortina sandwichensis	0	0	0	0	0	0	0	0
Rochefortina sp.								
Scintilla hiloa	0	0	0	0	0	0	0	0
Semelangulus crebrimaculatus								
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	0	0	0	0	1	1
Septifer sp.	0	0	0	0	1	0	0	1
Spondylus sp.								
Tellina oahuana								
Tellina robusta	0	0	0	0	1	1	0	2
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	0	0	0	0	3	1	4	8
Bivalvia sp. A								
Bivalvia sp. B								
Bivalvia sp. C								
Bivalvia spp.	1	3	2	6	0	0	0	0
GASTROPODA								
Acteocina hawaiensis	0	0	0	0	0	0	0	0
Acteocina sandwicensis	0	0	0	0	16	11	0	27
Acteocina sp. A	0	2	0	2	0	0	0	0
Acteocina sp.	4	4	3	11	0	0	10	10
Alcyna ocellata	0	0	0	0	1	0	1	2
Alcyna subangulata	0	0	0	0	0	2	0	2
Alvania isolata	0	0	0	0	2	0	0	2
Anacithara perfecta								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Antisabia foliacea								
Aplysiidae	0	0	0	0	0	1	0	1
Architectonicidae sp.	0	0	0	0	0	0	0	0
Argyropeza leucocephala								
Argyropeza sp.								
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata	0	0	0	0	0	0	1	1
Atys sp.	0	0	0	0	0	0	2	2
Balcis cf. *brunnimaculata*								
Balcis spp.	17	7	8	32	21	20	36	77
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	0	0	0	0	2	0	0	2
Bittium sp.								
Brookula hawaiiensis								
Brookula iki	0	0	0	0	2	0	0	2
Brookula sp.								
Buccinidae sp.								
Bulla vernicosa	0	0	0	0	0	0	0	0
Bulla sp.	0	0	0	0	0	0	0	0
Bullina scabra								
Caecum arcuatum								
Caecum cf. *glabella*								
Caecum cf. *glabriformis*								
Caecum oahuense								
Caecum sepimentum	0	0	0	0	0	1	0	1
Caecum sp. A								
Caecum sp.	0	3	0	3	0	0	0	0
Cancilla granatina	0	0	0	0	0	0	0	0
Cancilla sp.	0	0	0	0	0	0	0	0
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	0	0	0	0	0	1	0	1
Carinapex papillosa								
Cephalaspidea sp.	0	0	0	0	3	0	0	3
Cerithidium diplax	0	0	0	0	7	2	13	22
Cerithidium perparvulum	12	20	19	51	16	15	16	47
Cerithiopsis spp.								
Cerithium atromarginatum								
Cerithium columna								
Cerithium glareosum								
Cerithium interstriatum	0	0	0	0	0	2	0	2
Cerithium nesioticum								
Cerithium rostratum								
Cerithium zebrum								
Cerithium spp.	0	4	7	11	0	0	0	0
Ceritoturris bittium	0	0	0	0	1	0	0	1
Circulus sp.								
Cirsotrema varicosa								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Clavus pusilla								
Clavus sp.	0	0	1	1	0	0	0	0
Collonista candida								
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	5	8	0	13	0	0	0	0
Cyclostremiscus striatus								
Cyclostremiscus sp. A	0	0	0	0	0	0	0	0
Cylichna pusilla	0	0	0	0	0	0	0	0
Cypraeidae spp.								
Cystiscus huna	0	0	3	3	0	0	0	0
Daphnellinae sp.	0	0	0	0	0	0	0	0
Dentimargo pumila								
Diala scopulorum	11	17	16	44	17	11	21	49
Diala semistriata	8	10	7	25	13	5	8	26
Diala sp.								
Diniatys dentifer	0	0	0	0	4	1	1	6
Diodora granifera	0	0	2	2	0	0	0	0
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae								
Eatoniella pigmenta								
Eatoniella sp.								
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.								
Epitonium spp.	0	0	0	0	3	4	0	7
Erato sandwicensis	0	0	0	0	0	0	0	0
Etrema acricula								
Euchelus gemmatus	0	0	0	0	0	1	2	3
Euchelus sp.								
Eucithara angiostoma								
Eucithara pusilla	0	0	0	0	0	0	0	0
Eucithara sp.								
Eucylotoma albomacula								
Eulima peasei								
Eulimidae sp.								
Euplica varians								
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	25	6	0	31	101	87	95	283
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	0	0	0	0	1	3	0	4
Glyphostoma kihikihi								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Granula sandwicensis	0	0	1	1	0	0	0	0
Granulina vitrea	0	0	0	0	5	5	4	14
Granulina sp.	0	0	0	0	3	3	2	8
Gyrineum pusillum	0	0	0	0	0	0	0	0
Haminoea curta	0	0	0	0	0	2	1	3
Haminoea sp.	0	0	0	0	0	0	0	0
Heliacus implexus	0	0	0	0	0	4	1	5
Heliacus sp. A								
Heliacus sp.	0	0	2	2	2	0	0	2
Herviera gliriella								
Herviera patricia								
Hinemoa indica	0	0	0	0	1	0	0	1
Hipponix australis	0	1	0	1	0	0	0	0
Hipponix imbricatus								
Hipponix pilosus								
Hipponix sp.								
Hydatina sp.								
Ittibittium parcum	0	0	0	0	2	2	2	6
Julia exquisita								
Juliidae sp.								
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea								
Kermia sp.								
Koloonella hawaiiensis								
Koloonella sp.	0	0	0	0	3	0	2	5
Leptothyra rubricincta	2	3	1	6	0	0	1	1
Leptothyra verruca	0	0	0	0	0	0	1	1
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.	0	1	0	1	0	0	0	0
Lophocochlias minutissimus	5	4	0	9	0	2	2	4
Lophocochlias sp. A	0	0	0	0	0	0	1	1
Lophocochlias sp.	0	5	0	5	0	0	0	0
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa								
Merelina wanawana	0	0	0	0	1	0	0	1
Metaxia albicephala								
Metaxia brunnicephala								
Metaxia sp.	0	0	0	0	0	1	0	1
Microdaphne trichodes	0	0	0	0	0	0	0	0
Miralda paulbartschi	0	0	0	0	1	0	1	2
Miralda scopulorum	0	0	0	0	1	0	0	1
Miralda sp.								
Mitra earlei	0	0	0	0	0	0	0	0
Mitra saltata								
Mitra sp.								
Mitrella bella								
Mitrella loyaltensis								
Mitrella margarita								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Mitrella rorida								
Mitrolumna metula								
Modulus tectum								
Morula sp.	0	0	0	0	0	0	0	0
Nassarius crematus								
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	0	0	0	0	0	0	0	0
Natica sp.	0	0	0	0	4	7	5	16
Nerita spp.	0	0	0	0	0	0	0	0
Neritopsis radula								
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	0	0	0
Odostomia gulicki	0	0	0	0	0	0	2	2
Odostomia oxia								
Odostomia stearnsiella	0	0	0	0	0	0	0	0
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.	0	0	0	0	0	0	0	0
Omalaxis sp.								
Omalogyra japonica	1	10	3	14	1	1	2	4
Omalogyra spp.	9	0	0	9	0	0	0	0
Orbitestella regina	13	20	10	43	13	0	4	17
Orbitestella sp. A								
Orbitestella sp. B	2	0	0	2	0	0	0	0
Orbitestella sp.	0	0	8	8	0	0	0	0
Parashiela beetsi	4	7	10	21	4	5	6	15
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis								
Planaxis sp.								
Plesiotrochus luteus								
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella	0	0	0	0	0	0	0	0
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.	0	0	0	0	3	3	4	10
Pusillina marmorata	16	8	12	36	12	11	5	28
Pyramidella sulcata	0	0	0	0	0	0	0	0
Pyramidella sp. A								
Pyramidella sp. B								
Pyramidella sp. C	0	0	0	0	0	0	0	0
Pyramidella sp. D	0	0	0	0	0	0	0	0
Pyramidella spp.	0	0	0	0	0	0	0	0
Pyramidellidae sp. A								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C	0	0	0	0	0	0	0	0
Pyramidellidae sp. D								
Pyramidellidae sp.	5	0	5	10	0	0	0	0
Pyramidelloides angusta								
Pyramidelloides gracilis								
Pyramidelloides suta								
Pyrgulina oodes	0	0	0	0	0	0	0	0
Pyrgulina sp.	0	0	0	0	9	6	12	27
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	0	6	0	6	4	6	5	15
Rissoidae spp.								
Rissoina ambigua								
Rissoina cerithiiformis	0	0	0	0	1	0	0	1
Rissoina costata	0	0	0	0	0	0	0	0
Rissoina imbricata								
Rissoina pulchella	0	0	0	0	1	0	0	1
Rissoina sp.	0	0	0	0	0	0	0	0
Rufodardanula ponderi	0	0	0	0	1	1	0	2
Rufodardanula sp.								
Sansonia kenneyi								
Sansonia sp. A								
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	9	7	4	20	5	3	10	18
Scaphander sp.								
Schwartziella ephamilla	0	0	0	0	0	0	0	0
Schwartziella triticea	0	0	0	0	1	0	0	1
Scissurella coronata								
Scissurella pseudoequatoria								
Seminella peasei								
Seminella smithi	2	0	1	3	0	0	0	0
Sinezona insignis	0	0	0	0	1	1	1	3
Smaragdia bryanae								
Stilifer sp.								
Stosicia hiloense	0	1	0	1	0	0	0	0
Strebloceras subannulatum	0	1	0	1	0	1	0	1
Strombus helli								
Strombus maculatus								
Styliferina goniochila	0	0	0	0	2	3	0	5
Synaptocochlea concinna	0	1	0	1	1	0	0	1
Terebra spp.	0	0	0	0	0	1	0	1
Thala milium								
Tricolia variabilis	19	36	22	77	10	6	6	22
Triphora spp.	6	3	4	13	0	0	0	0
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.								

TABLE E.5—*Continued*

Taxon	No. of Individuals at D3A				No. of Individuals at D5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Trochus intextus								
Trochus sp.	0	1	0	1	0	0	0	0
Tugali oblonga								
Tugali sp.	0	0	0	0	0	0	0	0
Turbo sandwicensis	0	0	0	0	0	0	1	1
Turbonilla cornelliana	0	0	0	0	2	1	0	3
Turbonilla thaanumi								
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C								
Turbonilla sp. D								
Turbonilla sp. E	0	0	0	0	3	5	0	8
Turbonilla sp. F								
Turbonilla spp.	0	0	0	0	0	1	0	1
Turridae sp.	0	1	1	2	0	1	3	4
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.								
Veprecula brunonia	0	0	0	0	0	1	0	1
Vermetidae spp.	0	0	0	0	2	0	1	3
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum								
Vexillum tusum								
Vexillum sp. A								
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis								
Williamia radiata	0	0	0	0	1	0	0	1
Xenuroturris sp.	0	0	0	0	0	0	0	0
Zebina bidentata								
Zebina sp.								
Gastropoda sp. A								
Gastropoda spp.	0	4	0	4	0	0	0	0
SCAPHOPODA								
Scaphopoda sp.								
POLYPLACOPHORA								
Polyplacophora sp.								
Total No. of Individuals	178	205	152	535	340	269	317	926
Total No. of Individuals/cm^3	11.9	13.7	10.1	11.9	22.7	17.9	21.1	20.6
Total No. of Taxa	24	32	25	43	53	52	46	86

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.6. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Station D6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	Replicate 2	Replicate 3	Total	
BIVALVIA					
Acar cf. *plicata*					
Adipicola cf. *crypta*					
Amygdalum newcombi					
Amygdalum sp.	0	0	0	0	2
Anguipecten cf. *lamberti*					
Anisodonta lutea					
Anomia nobilis					
Arca kauaia	0	0	0	0	6
Arcidae sp.	0	0	0	0	2
Barbatia divaricata					
Barbatia lima					
Barbatia nuttingi					
Barbatia sp.					
Brachidontes crebristriatus	0	0	0	0	2
Cardita thaanumi					
Cardita sp.					
Carditella hawaiensis	0	0	0	0	2
Carditella sp.					
Chlamydella sp. A					
Chlamys coruscans hawaiensis					
Chlamys kauaiensis					
Chlamys sp. B					
Chlamys sp.	1	2	0	3	4
Codakia punctata					
Cosa waikikia					
Crenella sp.					
Ctena bella					
Ctena transversa	3	1	2	6	12
Ctena sp.	0	0	0	0	1
Cuspidaria hawaiensis					
Cuspidaria pailoloana					
Epicodakia sp.	0	1	0	1	4
Ervilia bisculpta	0	15	0	15	118
Euciroa pacifica					
Fragum mundum	0	0	0	0	1
Gastrochaena sp.					
Glycymeris sp.					
Grammatomya kanaka					
Haumea juddi	0	0	0	0	3
Hiatella arctica					
Hitia ovalis					
Kellia hawaiensis	0	0	0	0	1
Kona symmetrica					
Leptonacea sp.					
Lima keokea					
Lima sp.					
Limopsis sp.					
Lioconcha hieroglyphica					
Lonoa hawaiensis					
Lucina edentula					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Macoma dispar					
Macoma obliquilineata	0	1	0	1	1
Mactra thaanumi	9	0	2	11	11
Mactra sp.					
Malleus regula					
Malleus sp.					
Modiolus sp.					
Mytilidae sp. A					
Mytilidae sp. B					
Mytilidae sp. C					
Mytilidae sp.	0	2	0	2	3
Nemocardium thaanumi					
Nemocardium sp.					
Nucula hawaiensis					
Ostrea sp.	0	1	0	1	1
Pectinidae sp. A					
Pillucina hawaiiensis					
Pillucina spaldingi					
Pillucina sp.					
Pinna sp.[a]	+	++	+	++	frag+
Poromya transversa					
Propeamusiidae sp.					
Pteria sp.	0	0	0	0	1
Rochefortina sandwichensis	0	0	0	0	7
Rochefortina sp.					
Scintilla hiloa	12	0	0	12	12
Semelangulus crebrimaculatus					
Semelangulus sp.					
Semele australis					
Septifer bryanae	0	0	0	0	1
Septifer sp.	0	0	0	0	1
Spondylus sp.					
Tellina oahuana					
Tellina robusta	0	3	0	3	5
Tellina sp. A					
Tellina sp. B					
Tellina sp. C					
Tellina sp.	1	0	0	1	10
Bivalvia sp. A					
Bivalvia sp. B					
Bivalvia sp. C					
Bivalvia spp.	0	6	4	10	28
GASTROPODA					
Acteocina hawaiensis	2	0	3	5	5
Acteocina sandwicensis	0	8	0	8	90
Acteocina sp. A	0	0	0	0	2
Acteocina sp.	15	10	11	36	115
Alcyna ocellata	0	3	0	3	5
Alcyna subangulata	0	0	0	0	2
Alvania isolata	0	0	0	0	2
Anacithara perfecta					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Antisabia foliacea					
Aplysiidae	0	0	0	0	1
Architectonicidae sp.	0	0	0	0	3
Argyropeza leucocephala					
Argyropeza sp.					
Aspella producta					
Aspella sp.					
Atys curta					
Atys debilis					
Atys semistriata	0	0	0	0	1
Atys sp.	0	0	0	0	2
Balcis cf. *brunnimaculata*					
Balcis spp.	15	40	22	77	366
Barleeia calcarea					
Benthonella sp.					
Bittium impendens	0	0	0	0	2
Bittium sp.					
Brookula hawaiiensis					
Brookula iki	0	0	0	0	2
Brookula sp.					
Buccinidae sp.					
Bulla vernicosa	0	1	0	1	1
Bulla sp.	0	0	0	0	1
Bullina scabra					
Caecum arcuatum					
Caecum cf. *glabella*					
Caecum cf. *glabriformis*					
Caecum oahuense					
Caecum sepimentum	0	0	1	1	2
Caecum sp. A					
Caecum sp.	0	0	0	0	6
Cancilla granatina	0	0	0	0	2
Cancilla sp.	0	0	0	0	1
Cantharus sp.					
Capulidae sp.					
Carinapex minutissima	0	0	0	0	1
Carinapex papillosa					
Cephalaspidea sp.	0	0	0	0	3
Cerithidium diplax	0	6	0	6	93
Cerithidium perparvulum	41	20	32	93	551
Cerithiopsis spp.					
Cerithium atromarginatum					
Cerithium columna					
Cerithium glareosum					
Cerithium interstriatum	0	0	0	0	5
Cerithium nesioticum					
Cerithium rostratum					
Cerithium zebrum					
Cerithium spp.	1	1	2	4	36
Ceritoturris bittium	0	0	0	0	1
Circulus sp.					
Cirsotrema varicosa					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Clavus pusilla					
Clavus sp.	0	0	0	0	1
Collonista candida					
Conus pulicarius					
Conus quercinus					
Conus sp.					
Coralliophilidae sp.					
Costellariidae sp.					
Crepidula aculeata					
Crucibulum spinosum					
Cycloscala hyalina					
Cyclostremiscus emeryi	0	0	0	0	27
Cyclostremiscus striatus					
Cyclostremiscus sp. A	0	0	0	0	2
Cylichna pusilla	0	1	0	1	5
Cypraeidae spp.					
Cystiscus huna	0	0	0	0	5
Daphnellinae sp.	0	0	0	0	1
Dentimargo pumila					
Diala scopulorum	9	12	12	33	195
Diala semistriata	7	21	22	50	186
Diala sp.					
Diniatys dentifer	0	0	0	0	6
Diodora granifera	0	0	0	0	2
Drupella sp. A					
Drupella sp.					
Eatoniella janetaylorae					
Eatoniella pigmenta					
Eatoniella sp.					
Elachisina robertsoni					
Elacorbis callusa					
Emarginula dilecta					
Emarginula sp.					
Epitonium spp.	2	0	2	4	21
Erato sandwicensis	0	0	0	0	1
Etrema acricula					
Euchelus gemmatus	0	2	0	2	9
Euchelus sp.					
Eucithara angiostoma					
Eucithara pusilla	0	0	1	1	2
Eucithara sp.					
Eucylotoma albomacula					
Eulima peasei					
Eulimidae sp.					
Euplica varians					
Evalea peasei					
Evalea waikikiensis					
Finella pupoides	51	43	90	184	1,054
Fusinus sp.					
Gemmula monilifera					
Gibbula marmorea	0	0	0	0	4
Glyphostoma kihikihi					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate			Total	
	1	2	3		
Granula sandwicensis	0	0	0	0	1
Granulina vitrea	4	8	0	12	32
Granulina sp.	2	7	6	15	30
Gyrineum pusillum	0	0	0	0	1
Haminoea curta	0	0	0	0	5
Haminoea sp.	0	0	3	3	3
Heliacus implexus	0	1	0	1	6
Heliacus sp. A					
Heliacus sp.	0	1	0	1	5
Herviera gliriella					
Herviera patricia					
Hinemoa indica	0	1	0	1	2
Hipponix australis	0	0	0	0	1
Hipponix imbricatus					
Hipponix pilosus					
Hipponix sp.					
Hydatina sp.					
Ittibittium parcum	0	0	0	0	6
Julia exquisita					
Juliidae sp.					
Kermia aniani					
Kermia brunnea					
Kermia cylindrica					
Kermia daedalea					
Kermia sp.					
Koloonella hawaiiensis					
Koloonella sp.	0	7	0	7	44
Leptothyra rubricincta	0	0	0	0	7
Leptothyra verruca	0	0	0	0	1
Lienardia apiculata					
Lienardia mighelsi					
Liotiidae sp.	0	0	0	0	1
Lophocochlias minutissimus	0	1	1	2	34
Lophocochlias sp. A	0	0	0	0	1
Lophocochlias sp.	0	0	0	0	5
Meioceras sandwichensis					
Merelina granulosa					
Merelina hewa					
Merelina wanawana	0	0	0	0	1
Metaxia albicephala					
Metaxia brunnicephala					
Metaxia sp.	0	0	0	0	1
Microdaphne trichodes	0	0	1	1	1
Miralda paulbartschi	0	0	0	0	3
Miralda scopulorum	0	0	0	0	1
Miralda sp.					
Mitra earlei	0	0	0	0	2
Mitra saltata					
Mitra sp.					
Mitrella bella					
Mitrella loyaltensis					
Mitrella margarita					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	2	3	Total	
Mitrella rorida					
Mitrolumna metula					
Modulus tectum					
Morula sp.	1	1	0	2	2
Nassarius crematus					
Nassarius papillosus					
Nassarius sp.					
Natica bougei					
Natica gualteriana	13	11	3	27	27
Natica sp.	0	0	0	0	43
Nerita spp.	0	0	0	0	1
Neritopsis radula					
Nesiodostomia quarta					
Nesiodostomia sp.	12	10	9	31	31
Odostomia gulicki	0	0	0	0	2
Odostomia oxia					
Odostomia stearnsiella	0	0	0	0	1
Odostomia sp. A					
Odostomia sp. B					
Odostomia sp.	0	2	0	2	2
Omalaxis sp.					
Omalogyra japonica	1	1	0	2	20
Omalogyra spp.	0	0	0	0	9
Orbitestella regina	0	1	6	7	75
Orbitestella sp. A					
Orbitestella sp. B	0	1	0	1	3
Orbitestella sp.	0	0	1	1	12
Parashiela beetsi	7	10	9	26	132
Pelycidion habei					
Peristernia chlorostoma					
Phenacolepas scobinata					
Philippia oxytropis					
Philippia sp.					
Planaxis suturalis					
Planaxis sp.					
Plesiotrochus luteus					
Powellsetia fallax					
Prodotia iostomus					
Pseudodaphnella pulchella	0	0	1	1	1
Pseudomalaxis sp.					
Pterygia pudica					
Pupa pudica					
Pupa tessellata					
Pupa sp.	0	2	1	3	17
Pusillina marmorata	10	13	12	35	205
Pyramidella sulcata	3	0	0	3	3
Pyramidella sp. A					
Pyramidella sp. B					
Pyramidella sp. C	0	0	0	0	4
Pyramidella sp. D	0	0	0	0	11
Pyramidella spp.	0	0	4	4	20
Pyramidellidae sp. A					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	2	3	Total	
Pyramidellidae sp. B					
Pyramidellidae sp. C	0	2	0	2	3
Pyramidellidae sp. D					
Pyramidellidae sp.	0	0	0	0	10
Pyramidelloides angusta					
Pyramidelloides gracilis					
Pyramidelloides suta					
Pyrgulina oodes	0	2	0	2	17
Pyrgulina sp.	0	0	0	0	27
Rastodens sp.					
Rhinoclavis articulata					
Rissoella sp.	20	7	0	27	48
Rissoidae spp.					
Rissoina ambigua					
Rissoina cerithiiformis	0	0	0	0	3
Rissoina costata	0	0	0	0	2
Rissoina imbricata					
Rissoina pulchella	0	0	0	0	1
Rissoina sp.	0	0	7	7	13
Rufodardanula ponderi	0	0	0	0	2
Rufodardanula sp.					
Sansonia kenneyi					
Sansonia sp. A					
Sansonia spp.					
Scabricola casta					
Scalenostoma sp.					
Scaliola spp.	3	4	6	13	140
Scaphander sp.					
Schwartziella ephamilla	3	0	0	3	5
Schwartziella triticea	0	0	0	0	1
Scissurella coronata					
Scissurella pseudoequatoria					
Seminella peasei					
Seminella smithi	0	0	0	0	3
Sinezona insignis	0	0	0	0	3
Smaragdia bryanae					
Stilifer sp.					
Stosicia hiloense	0	0	0	0	1
Strebloceras subannulatum	0	0	0	0	2
Strombus helli					
Strombus maculatus					
Styliferina goniochila	0	0	0	0	5
Synaptocochlea concinna	4	0	0	4	6
Terebra spp.	0	0	0	0	1
Thala milium					
Tricolia variabilis	3	2	5	10	124
Triphora spp.	0	1	3	4	19
Tritonoturris sp. A					
Trivia globosa pilula					
Trivia hordacea					
Trivia pellucida					
Trivia spp.					

TABLE E.6—*Continued*

Taxon	No. of Individuals at D6				Transect D Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Trochus intextus					
Trochus sp.	0	0	0	0	1
Tugali oblonga					
Tugali sp.	0	0	0	0	1
Turbo sandwicensis				0	1
Turbonilla cornelliana	0	3	0	3	9
Turbonilla thaanumi					
Turbonilla sp. A					
Turbonilla sp. B					
Turbonilla sp. C					
Turbonilla sp. D					
Turbonilla sp. E	0	0	0	0	8
Turbonilla sp. F					
Turbonilla spp.	3	0	0	3	4
Turridae sp.	0	0	1	1	11
Umbraculum sinicum					
Umbraculum sp.					
Vanikoro cancellata					
Vanikoro sp.					
Veprecula brunonia	0	1	0	1	4
Vermetidae spp.	0	0	0	0	3
Vexillum adamsianum					
Vexillum approximatum					
Vexillum cosmani					
Vexillum interruptum					
Vexillum pacificum					
Vexillum rubrum					
Vexillum rufofilosum					
Vexillum tusum					
Vexillum sp. A					
Vexillum sp.					
Vitrinellidae sp.					
Volvarina fusiformis					
Williamia radiata	0	1	0	1	3
Xenuroturris sp.	0	0	0	0	1
Zebina bidentata					
Zebina sp.					
Gastropoda sp. A					
Gastropoda spp.	0	0	0	0	4
SCAPHOPODA					
Scaphopoda sp.					
POLYPLACOPHORA					
Polyplacophora sp.					
Total No. of Individuals	258	301	285	844	4,362
Total No. of Individuals/cm^3	17.2	20.1	19.0	18.8	19.4
Total No. of Taxa	30	49	33	67	148

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.7. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations E1 and E2, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
BIVALVIA								
Acar cf. *plicata*	0	0	0	0	0	0	0	0
Adipicola cf. *crypta*	0	0	0	0	0	0	0	0
Amygdalum newcombi								
Amygdalum sp.								
Anguipecten cf. *lamberti*	0	1	0	1	0	0	0	0
Anisodonta lutea								
Anomia nobilis	0	0	0	0	0	0	0	0
Arca kauaia								
Arcidae sp.								
Barbatia divaricata	0	0	0	0	0	0	0	0
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	0	0	0	0	0	0	0	0
Cardita thaanumi								
Cardita sp.								
Carditella hawaiensis	0	0	0	0	0	0	0	0
Carditella sp.								
Chlamydella sp. A	0	0	0	0	0	0	0	0
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	1	1	2	0	0	1	1
Codakia punctata								
Cosa waikikia	0	0	0	0	0	0	0	0
Crenella sp.								
Ctena bella								
Ctena transversa	0	2	3	5	0	2	0	2
Ctena sp.	0	0	0	0	0	0	0	0
Cuspidaria hawaiensis								
Cuspidaria pailoloana	0	0	0	0	0	0	0	0
Epicodakia sp.	0	0	0	0	0	0	0	0
Ervilia bisculpta	0	0	0	0	0	1	0	1
Euciroa pacifica								
Fragum mundum	0	0	0	0	0	0	0	0
Gastrochaena sp.								
Glycymeris sp.	0	0	0	0	1	0	0	1
Grammatomya kanaka	0	0	0	0	0	0	0	0
Haumea juddi	0	0	0	0	0	0	1	1
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis	0	0	0	0	0	0	0	0
Kona symmetrica								
Leptonacea sp.								
Lima keokea								
Lima sp.	0	0	0	0	0	0	0	0
Limopsis sp.								
Lioconcha hieroglyphica								
Lonoa hawaiensis								
Lucina edentula								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Macoma dispar								
Macoma obliquilineata								
Mactra thaanumi								
Mactra sp.								
Malleus regula								
Malleus sp.								
Modiolus sp.	0	0	0	0	0	0	0	0
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.	0	0	0	0	0	0	0	0
Nemocardium thaanumi	0	0	0	0	0	0	0	0
Nemocardium sp.	0	0	0	0	0	0	0	0
Nucula hawaiensis	0	0	0	0	0	0	0	0
Ostrea sp.	0	0	0	0	0	0	0	0
Pectinidae sp. A								
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.[a]	+	+	+	+	0	0	0	0
Poromya transversa								
Propeamusiidae sp.	0	0	0	0	0	0	0	0
Pteria sp.								
Rochefortina sandwichensis	0	0	0	0	0	0	6	6
Rochefortina sp.								
Scintilla hiloa								
Semelangulus crebrimaculatus								
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	0	0	0	0	0	0
Septifer sp.	0	0	0	0	1	0	3	4
Spondylus sp.								
Tellina oahuana								
Tellina robusta								
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	0	0	0	0	0	0	0	0
Bivalvia sp. A	0	0	0	0	0	0	0	0
Bivalvia sp. B								
Bivalvia sp. C								
Bivalvia spp.	5	6	5	16	2	0	4	6
GASTROPODA								
Acteocina hawaiensis	0	0	0	0	0	0	0	0
Acteocina sandwicensis	0	0	0	0	0	0	0	0
Acteocina sp. A								
Acteocina sp.	1	1	2	4	7	2	4	13
Alcyna ocellata	0	0	0	0	0	0	1	1
Alcyna subangulata	0	0	0	0	0	0	0	0
Alvania isolata								
Anacithara perfecta	0	0	0	0	0	0	0	0

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Antisabia foliacea	0	0	0	0	0	0	0	0
Aplysiidae	0	0	0	0	0	0	0	0
Architectonicidae sp.								
Argyropeza leucocephala	0	0	0	0	0	0	0	0
Argyropeza sp.								
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata								
Atys sp.	1	0	0	1	0	1	0	1
Balcis cf. *brunnimaculata*								
Balcis spp.	1	26	14	41	25	19	37	81
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	0	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	4	0	0	4
Brookula hawaiiensis								
Brookula iki								
Brookula sp.	0	0	0	0	0	0	0	0
Buccinidae sp.								
Bulla vernicosa								
Bulla sp.	0	0	3	3	1	0	0	1
Bullina scabra								
Caecum arcuatum	0	0	0	0	0	3	1	4
Caecum cf. *glabella*								
Caecum cf. *glabriformis*	0	0	0	0	0	0	0	0
Caecum oahuense								
Caecum sepimentum	0	1	1	2	2	0	0	2
Caecum sp. A	0	0	0	0	1	0	0	1
Caecum sp.	0	0	1	1	0	1	0	1
Cancilla granatina	0	0	0	0	0	0	1	1
Cancilla sp.								
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	0	0	0	0	0	0	0	0
Carinapex papillosa								
Cephalaspidea sp.	0	0	0	0	0	1	0	1
Cerithidium diplax	0	0	0	0	0	0	1	1
Cerithidium perparvulum	18	0	0	18	66	75	2	143
Cerithiopsis spp.								
Cerithium atromarginatum								
Cerithium columna	0	0	0	0	0	0	0	0
Cerithium glareosum								
Cerithium interstriatum	0	0	0	0	0	0	0	0
Cerithium nesioticum	0	0	0	0	0	0	0	0
Cerithium rostratum	0	0	0	0	4	0	0	4
Cerithium zebrum	0	0	0	0	0	0	0	0
Cerithium spp.	2	0	0	2	6	0	8	14
Ceritoturris bittium	0	0	0	0	0	0	0	0
Circulus sp.								
Cirsotrema varicosa								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Clavus pusilla								
Clavus sp.								
Collonista candida	0	0	0	0	0	0	0	0
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	0	0	0	0	0	0	0	0
Cyclostremiscus striatus								
Cyclostremiscus sp. A	0	0	0	0	1	0	0	1
Cylichna pusilla								
Cypraeidae spp.								
Cystiscus huna								
Daphnellinae sp.	0	0	0	0	0	0	0	0
Dentimargo pumila								
Diala scopulorum	93	102	48	243	118	88	192	398
Diala semistriata	5	1	3	9	79	65	59	203
Diala sp.								
Diniatys dentifer								
Diodora granifera	0	0	0	0	0	0	0	0
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae								
Eatoniella pigmenta								
Eatoniella sp.	0	0	0	0	14	0	0	14
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.	0	0	0	0	0	0	1	1
Epitonium spp.	0	0	0	0	0	0	0	0
Erato sandwicensis	0	0	0	0	0	1	0	1
Etrema acricula								
Euchelus gemmatus	0	0	0	0	0	0	0	0
Euchelus sp.								
Eucithara angiostoma	0	0	0	0	0	0	0	0
Eucithara pusilla								
Eucithara sp.								
Eucylotoma albomacula	0	0	0	0	0	0	2	2
Eulima peasei								
Eulimidae sp.	0	0	0	0	0	0	0	0
Euplica varians								
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	2	0	0	2	2	0	0	2
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	0	0	0	0	0	0	0	0
Glyphostoma kihikihi								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Granula sandwicensis	0	0	0	0	0	0	0	0
Granulina vitrea	0	0	0	0	0	0	0	0
Granulina sp.	0	1	0	1	1	2	2	5
Gyrineum pusillum								
Haminoea curta								
Haminoea sp.	0	0	0	0	0	0	2	2
Heliacus implexus								
Heliacus sp. A								
Heliacus sp.	0	0	0	0	0	0	1	1
Herviera gliriella								
Herviera patricia								
Hinemoa indica	0	0	0	0	0	0	0	0
Hipponix australis								
Hipponix imbricatus								
Hipponix pilosus	0	0	0	0	0	0	0	0
Hipponix sp.	0	0	0	0	2	0	0	2
Hydatina sp.								
Ittibittium parcum	0	0	0	0	0	0	0	0
Julia exquisita								
Juliidae sp.								
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea								
Kermia sp.								
Koloonella hawaiiensis								
Koloonella sp.	0	0	0	0	0	0	0	0
Leptothyra rubricincta	0	0	0	0	0	0	0	0
Leptothyra verruca	0	0	0	0	0	0	0	0
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.								
Lophocochlias minutissimus	0	0	0	0	4	7	5	16
Lophocochlias sp. A	0	0	0	0	0	0	0	0
Lophocochlias sp.								
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa	0	0	0	0	0	0	0	0
Merelina wanawana	0	0	0	0	0	0	0	0
Metaxia albicephala								
Metaxia brunnicephala								
Metaxia sp.	0	0	0	0	0	0	0	0
Microdaphne trichodes								
Miralda paulbartschi	0	0	0	0	0	0	0	0
Miralda scopulorum	0	0	0	0	0	1	0	1
Miralda sp.								
Mitra earlei								
Mitra saltata								
Mitra sp.	0	0	0	0	0	2	0	2
Mitrella bella								
Mitrella loyaltensis	0	0	0	0	0	0	0	0
Mitrella margarita								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Mitrella rorida								
Mitrolumna metula								
Modulus tectum								
Morula sp.								
Nassarius crematus	0	0	0	0	0	0	0	0
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	0	0	0	0	0	0	0	0
Natica sp.	1	2	1	4	3	1	4	8
Nerita spp.	0	0	0	0	0	0	3	3
Neritopsis radula	0	0	0	0	0	0	2	2
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	3	0	3
Odostomia gulicki	0	0	0	0	0	1	0	1
Odostomia oxia								
Odostomia stearnsiella								
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.	0	0	0	0	0	0	0	0
Omalaxis sp.								
Omalogyra japonica	0	0	0	0	1	2	0	3
Omalogyra spp.								
Orbitestella regina	0	0	1	1	6	9	1	16
Orbitestella sp. A	0	0	0	0	3	0	0	3
Orbitestella sp. B	0	0	0	0	0	0	0	0
Orbitestella sp.								
Parashiela beetsi	6	11	0	17	24	12	9	45
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis								
Planaxis sp.								
Plesiotrochus luteus								
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella								
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.	0	0	0	0	0	0	0	0
Pusillina marmorata	6	10	4	20	19	14	19	52
Pyramidella sulcata								
Pyramidella sp. A								
Pyramidella sp. B								
Pyramidella sp. C								
Pyramidella sp. D								
Pyramidella spp.	6	5	3	14	0	0	0	0
Pyramidellidae sp. A								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C	0	0	0	0	0	0	0	0
Pyramidellidae sp. D								
Pyramidellidae sp.	0	5	0	5	8	2	5	15
Pyramidelloides angusta								
Pyramidelloides gracilis	0	0	0	0	0	0	0	0
Pyramidelloides suta								
Pyrgulina oodes	0	0	0	0	0	3	0	3
Pyrgulina sp.	0	0	0	0	0	0	0	0
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	0	0	0	0	0	0	0	0
Rissoidae spp.	1	0	0	1	3	9	7	19
Rissoina ambigua								
Rissoina cerithiiformis	0	0	0	0	0	0	1	1
Rissoina costata								
Rissoina imbricata								
Rissoina pulchella	0	0	0	0	0	0	0	0
Rissoina sp.	0	0	0	0	0	0	5	5
Rufodardanula ponderi								
Rufodardanula sp.								
Sansonia kenneyi	0	0	0	0	0	0	0	0
Sansonia sp. A								
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	0	2	3	5	82	46	117	245
Scaphander sp.								
Schwartziella ephamilla	0	0	0	0	0	0	0	0
Schwartziella triticea	0	0	0	0	0	0	0	0
Scissurella coronata								
Scissurella pseudoequatoria	0	0	0	0	0	0	0	0
Seminella peasei								
Seminella smithi	0	0	0	0	0	0	0	0
Sinezona insignis	0	0	0	0	0	0	0	0
Smaragdia bryanae	0	0	0	0	0	0	0	0
Stilifer sp.								
Stosicia hiloense	0	0	0	0	0	0	2	2
Strebloceras subannulatum	0	0	0	0	0	0	0	0
Strombus helli								
Strombus maculatus								
Styliferina goniochila	0	0	0	0	0	0	0	0
Synaptocochlea concinna								
Terebra spp.								
Thala milium								
Tricolia variabilis	0	0	0	0	3	5	9	17
Triphora spp.	0	0	0	0	5	4	5	14
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.								

TABLE E.7—*Continued*

Taxon	No. of Individuals at E1				No. of Individuals at E2			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Trochus intextus	0	0	0	0	0	0	0	0
Trochus sp.								
Tugali oblonga								
Tugali sp.								
Turbo sandwicensis								
Turbonilla cornelliana	0	0	0	0	0	0	0	0
Turbonilla thaanumi								
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C	0	0	0	0	0	0	0	0
Turbonilla sp. D	0	0	0	0	0	0	0	0
Turbonilla sp. E								
Turbonilla sp. F								
Turbonilla spp.								
Turridae sp.	0	0	0	0	0	0	1	1
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.	0	0	0	0	0	0	0	0
Veprecula brunonia								
Vermetidae spp.	0	0	0	0	0	0	0	0
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum	0	0	0	0	0	0	2	2
Vexillum tusum								
Vexillum sp. A	0	0	0	0	0	0	0	0
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis								
Williamia radiata	0	0	0	0	0	1	0	1
Xenuroturris sp.								
Zebina bidentata								
Zebina sp.								
Gastropoda sp. A								
Gastropoda spp.								
SCAPHOPODA								
Scaphopoda sp.	0	1	0	1	0	0	0	0
POLYPLACOPHORA								
Polyplacophora sp.								
Total No. of Individuals	148	178	93	419	498	383	526	1,407
Total No. of Individuals/cm^3	9.9	11.9	6.2	9.3	33.2	25.5	35.1	31.3
Total No. of Taxa	15	18	16	26	31	30	37	61

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.8. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Stations E3 and E5, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
BIVALVIA								
Acar cf. *plicata*	1	0	0	1	0	0	1	1
Adipicola cf. *crypta*	0	0	0	0	1	2	0	3
Amygdalum newcombi								
Amygdalum sp.								
Anguipecten cf. *lamberti*	0	0	0	0	0	0	0	0
Anisodonta lutea								
Anomia nobilis	0	0	0	0	1	0	0	1
Arca kauaia								
Arcidae sp.								
Barbatia divaricata	1	2	0	3	0	0	0	0
Barbatia lima								
Barbatia nuttingi								
Barbatia sp.								
Brachidontes crebristriatus	1	1	0	2	0	0	0	0
Cardita thaanumi								
Cardita sp.								
Carditella hawaiensis	2	5	1	8	0	1	2	3
Carditella sp.								
Chlamydella sp. A	0	0	0	0	0	2	3	5
Chlamys coruscans hawaiensis								
Chlamys kauaiensis								
Chlamys sp. B								
Chlamys sp.	0	2	1	3	1	2	1	4
Codakia punctata								
Cosa waikikia	0	2	2	4	14	3	4	21
Crenella sp.								
Ctena bella								
Ctena transversa	0	0	0	0	0	0	8	8
Ctena sp.	8	13	10	31	0	0	0	0
Cuspidaria hawaiensis								
Cuspidaria pailoloana	0	1	0	1	0	0	0	0
Epicodakia sp.	4	11	3	18	0	0	0	0
Ervilia bisculpta	5	4	7	16	1	2	0	3
Euciroa pacifica								
Fragum mundum	0	0	1	1	0	0	0	0
Gastrochaena sp.								
Glycymeris sp.	0	0	0	0	0	0	0	0
Grammatomya kanaka	0	0	1	1	0	0	0	0
Haumea juddi	0	0	0	0	0	0	0	0
Hiatella arctica								
Hitia ovalis								
Kellia hawaiensis	0	0	2	2	4	5	2	11
Kona symmetrica								
Leptonacea sp.								
Lima keokea								
Lima sp.	0	0	0	0	0	1	0	1
Limopsis sp.								
Lioconcha hieroglyphica								
Lonoa hawaiensis								
Lucina edentula								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Macoma dispar								
Macoma obliquilineata								
Mactra thaanumi								
Mactra sp.								
Malleus regula								
Malleus sp.								
Modiolus sp.	0	0	0	0	0	1	0	1
Mytilidae sp. A								
Mytilidae sp. B								
Mytilidae sp. C								
Mytilidae sp.	4	5	1	10	0	4	0	4
Nemocardium thaanumi	1	0	1	2	0	1	0	1
Nemocardium sp.	0	0	1	1	0	0	0	0
Nucula hawaiensis	1	0	1	2	0	0	2	2
Ostrea sp.	0	2	0	2	2	2	1	5
Pectinidae sp. A								
Pillucina hawaiiensis								
Pillucina spaldingi								
Pillucina sp.								
Pinna sp.[a]	+	+	+	+	0	0	0	0
Poromya transversa								
Propeamusiidae sp.	0	0	0	0	3	0	0	3
Pteria sp.								
Rochefortina sandwichensis	2	1	2	5	1	2	0	3
Rochefortina sp.								
Scintilla hiloa								
Semelangulus crebrimaculatus								
Semelangulus sp.								
Semele australis								
Septifer bryanae	0	0	0	0	2	0	0	2
Septifer sp.	0	0	0	0	0	0	3	3
Spondylus sp.								
Tellina oahuana								
Tellina robusta								
Tellina sp. A								
Tellina sp. B								
Tellina sp. C								
Tellina sp.	0	0	1	1	0	0	0	0
Bivalvia sp. A	2	6	0	8	0	0	0	0
Bivalvia sp. B								
Bivalvia sp. C								
Bivalvia spp.	0	0	1	1	0	0	0	0
GASTROPODA								
Acteocina hawaiensis	0	1	0	1	0	0	0	0
Acteocina sandwicensis	0	0	0	0	1	0	1	2
Acteocina sp. A								
Acteocina sp.	5	4	0	9	0	0	0	0
Alcyna ocellata	3	7	7	17	0	3	0	3
Alcyna subangulata	0	2	1	3	0	0	0	0
Alvania isolata								
Anacithara perfecta	0	1	0	1	0	0	0	0

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Antisabia foliacea	0	2	0	2	0	0	1	1
Aplysiidae	0	0	0	0	0	8	0	8
Architectonicidae sp.								
Argyropeza leucocephala	0	2	0	2	0	0	0	0
Argyropeza sp.								
Aspella producta								
Aspella sp.								
Atys curta								
Atys debilis								
Atys semistriata								
Atys sp.	0	0	0	0	0	0	0	0
Balcis cf. *brunnimaculata*								
Balcis spp.	0	0	0	0	38	35	57	130
Barleeia calcarea								
Benthonella sp.								
Bittium impendens	1	0	0	1	0	0	1	1
Bittium sp.	0	0	0	0	0	0	0	0
Brookula hawaiiensis								
Brookula iki								
Brookula sp.	0	0	0	0	1	1	0	2
Buccinidae sp.								
Bulla vernicosa								
Bulla sp.	0	0	0	0	0	0	0	0
Bullina scabra								
Caecum arcuatum	0	0	0	0	0	0	0	0
Caecum cf. *glabella*								
Caecum cf. *glabriformis*	0	0	0	0	3	0	1	4
Caecum oahuense								
Caecum sepimentum	15	10	14	39	17	11	0	28
Caecum sp. A	0	0	0	0	0	0	0	0
Caecum sp.	0	0	0	0	0	0	0	0
Cancilla granatina	0	0	0	0	0	0	0	0
Cancilla sp.								
Cantharus sp.								
Capulidae sp.								
Carinapex minutissima	0	0	0	0	0	1	1	2
Carinapex papillosa								
Cephalaspidea sp.	0	0	0	0	1	0	3	4
Cerithidium diplax	16	10	19	45	2	3	1	6
Cerithidium perparvulum	94	67	79	240	50	41	56	147
Cerithiopsis spp.								
Cerithium atromarginatum								
Cerithium columna	1	0	0	1	0	0	2	2
Cerithium glareosum								
Cerithium interstriatum	1	4	0	5	18	0	10	28
Cerithium nesioticum	0	0	0	0	1	0	0	1
Cerithium rostratum	0	1	0	1	0	0	0	0
Cerithium zebrum	1	0	0	1	0	0	0	0
Cerithium spp.	0	0	0	0	0	0	0	0
Ceritoturris bittium	0	0	0	0	1	1	1	3
Circulus sp.								
Cirsotrema varicosa								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate 1	2	3	Total	Replicate 1	2	3	Total
Clavus pusilla								
Clavus sp.								
Collonista candida	0	1	1	2	0	0	0	0
Conus pulicarius								
Conus quercinus								
Conus sp.								
Coralliophilidae sp.								
Costellariidae sp.								
Crepidula aculeata								
Crucibulum spinosum								
Cycloscala hyalina								
Cyclostremiscus emeryi	1	0	5	6	0	0	0	0
Cyclostremiscus striatus								
Cyclostremiscus sp. A	0	0	0	0	0	0	0	0
Cylichna pusilla								
Cypraeidae spp.								
Cystiscus huna								
Daphnellinae sp.	0	1	0	1	0	0	0	0
Dentimargo pumila								
Diala scopulorum	239	194	292	725	318	400	419	1,137
Diala semistriata	39	35	20	94	11	20	13	44
Diala sp.								
Diniatys dentifer								
Diodora granifera	1	0	1	2	0	0	0	0
Drupella sp. A								
Drupella sp.								
Eatoniella janetaylorae								
Eatoniella pigmenta								
Eatoniella sp.	4	0	1	5	0	0	0	0
Elachisina robertsoni								
Elacorbis callusa								
Emarginula dilecta								
Emarginula sp.	0	0	0	0	0	1	0	1
Epitonium spp.	0	0	1	1	2	1	2	5
Erato sandwicensis	0	0	0	0	0	0	0	0
Etrema acricula								
Euchelus gemmatus	3	2	2	7	2	1	0	3
Euchelus sp.								
Eucithara angiostoma	0	0	0	0	0	0	0	0
Eucithara pusilla								
Eucithara sp.								
Eucylotoma albomacula	0	0	0	0	0	0	0	0
Eulima peasei								
Eulimidae sp.	35	22	35	92	0	0	0	0
Euplica varians								
Evalea peasei								
Evalea waikikiensis								
Finella pupoides	5	1	0	6	6	1	2	9
Fusinus sp.								
Gemmula monilifera								
Gibbula marmorea	1	0	0	1	0	0	1	1
Glyphostoma kihikihi								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Granula sandwicensis	0	1	0	1	0	0	0	0
Granulina vitrea	0	0	0	0	0	0	0	0
Granulina sp.	0	0	0	0	0	0	0	0
Gyrineum pusillum								
Haminoea curta								
Haminoea sp.	1	0	1	2	3	1	0	4
Heliacus implexus								
Heliacus sp. A								
Heliacus sp.	0	0	0	0	0	0	0	0
Herviera gliriella								
Herviera patricia								
Hinemoa indica	1	0	0	1	0	0	0	0
Hipponix australis								
Hipponix imbricatus								
Hipponix pilosus	1	1	0	2	0	0	0	0
Hipponix sp.	0	0	0	0	0	0	0	0
Hydatina sp.								
Ittibittium parcum	1	1	0	2	0	0	0	0
Julia exquisita								
Juliidae sp.								
Kermia aniani								
Kermia brunnea								
Kermia cylindrica								
Kermia daedalea								
Kermia sp.								
Koloonella hawaiiensis								
Koloonella sp.	0	0	0	0	3	0	0	3
Leptothyra rubricincta	2	0	0	2	1	1	1	3
Leptothyra verruca	1	1	0	2	0	2	2	4
Lienardia apiculata								
Lienardia mighelsi								
Liotiidae sp.								
Lophocochlias minutissimus	14	4	3	21	1	2	1	4
Lophocochlias sp. A	3	0	0	3	0	0	0	0
Lophocochlias sp.								
Meioceras sandwichensis								
Merelina granulosa								
Merelina hewa	1	1	1	3	0	0	0	0
Merelina wanawana	2	1	0	3	0	0	0	0
Metaxia albicephala								
Metaxia brunnicephala								
Metaxia sp.	1	0	0	1	1	0	0	1
Microdaphne trichodes								
Miralda paulbartschi	3	0	0	3	0	0	0	0
Miralda scopulorum	0	0	0	0	0	0	1	1
Miralda sp.								
Mitra earlei								
Mitra saltata								
Mitra sp.	0	0	0	0	0	0	0	0
Mitrella bella								
Mitrella loyaltensis	0	1	0	1	2	0	0	2
Mitrella margarita								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate			Total	Replicate			Total
	1	2	3		1	2	3	
Mitrella rorida								
Mitrolumna metula								
Modulus tectum								
Morula sp.								
Nassarius crematus	0	0	0	0	0	0	1	1
Nassarius papillosus								
Nassarius sp.								
Natica bougei								
Natica gualteriana	2	4	4	10	4	1	1	6
Natica sp.	0	0	0	0	0	0	0	0
Nerita spp.	0	0	0	0	0	0	0	0
Neritopsis radula	0	0	0	0	0	0	0	0
Nesiodostomia quarta								
Nesiodostomia sp.	0	0	0	0	0	0	0	0
Odostomia gulicki	0	0	0	0	0	0	0	0
Odostomia oxia								
Odostomia stearnsiella								
Odostomia sp. A								
Odostomia sp. B								
Odostomia sp.	6	0	0	6	0	0	0	0
Omalaxis sp.								
Omalogyra japonica	0	0	0	0	4	4	0	8
Omalogyra spp.								
Orbitestella regina	7	6	7	20	1	6	3	10
Orbitestella sp. A	0	0	0	0	0	0	0	0
Orbitestella sp. B	1	1	0	2	0	1	2	3
Orbitestella sp.								
Parashiela beetsi	13	6	7	26	4	5	8	17
Pelycidion habei								
Peristernia chlorostoma								
Phenacolepas scobinata								
Philippia oxytropis								
Philippia sp.								
Planaxis suturalis								
Planaxis sp.								
Plesiotrochus luteus								
Powellsetia fallax								
Prodotia iostomus								
Pseudodaphnella pulchella								
Pseudomalaxis sp.								
Pterygia pudica								
Pupa pudica								
Pupa tessellata								
Pupa sp.	0	1	0	1	0	0	0	0
Pusillina marmorata	71	56	47	174	73	85	84	242
Pyramidella sulcata								
Pyramidella sp. A								
Pyramidella sp. B								
Pyramidella sp. C								
Pyramidella sp. D								
Pyramidella spp.	0	0	0	0	0	0	0	0
Pyramidellidae sp. A								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Pyramidellidae sp. B								
Pyramidellidae sp. C	1	0	0	1	0	2	1	3
Pyramidellidae sp. D								
Pyramidellidae sp.	0	0	0	0	0	0	0	0
Pyramidelloides angusta								
Pyramidelloides gracilis	1	0	0	1	0	0	0	0
Pyramidelloides suta								
Pyrgulina oodes	3	6	0	9	6	6	0	12
Pyrgulina sp.	0	0	0	0	2	2	0	4
Rastodens sp.								
Rhinoclavis articulata								
Rissoella sp.	6	3	4	13	1	5	4	10
Rissoidae spp.	0	0	0	0	0	0	0	0
Rissoina ambigua								
Rissoina cerithiiformis	0	1	0	1	0	0	0	0
Rissoina costata								
Rissoina imbricata								
Rissoina pulchella	14	26	12	52	9	3	8	20
Rissoina sp.	0	0	0	0	0	0	0	0
Rufodardanula ponderi								
Rufodardanula sp.								
Sansonia kenneyi	0	0	0	0	0	1	0	1
Sansonia sp. A								
Sansonia spp.								
Scabricola casta								
Scalenostoma sp.								
Scaliola spp.	67	47	80	194	21	31	23	75
Scaphander sp.								
Schwartziella ephamilla	3	4	0	7	2	8	2	12
Schwartziella triticea	0	1	0	1	0	0	0	0
Scissurella coronata								
Scissurella pseudoequatoria	0	0	0	0	1	3	0	4
Seminella peasei								
Seminella smithi	0	0	0	0	0	2	0	2
Sinezona insignis	0	1	1	2	0	0	0	0
Smaragdia bryanae	0	0	0	0	1	0	1	2
Stilifer sp.								
Stosicia hiloense	0	1	0	1	0	0	0	0
Strebloceras subannulatum	0	0	0	0	1	14	0	15
Strombus helli								
Strombus maculatus								
Styliferina goniochila	1	1	0	2	0	0	0	0
Synaptocochlea concinna								
Terebra spp.								
Thala milium								
Tricolia variabilis	30	17	20	67	1	1	2	4
Triphora spp.	8	5	0	13	3	8	0	11
Tritonoturris sp. A								
Trivia globosa pilula								
Trivia hordacea								
Trivia pellucida								
Trivia spp.								

TABLE E.8—*Continued*

Taxon	No. of Individuals at E3				No. of Individuals at E5			
	Replicate 1	Replicate 2	Replicate 3	Total	Replicate 1	Replicate 2	Replicate 3	Total
Trochus intextus	1	0	0	1	0	0	0	0
Trochus sp.								
Tugali oblonga								
Tugali sp.								
Turbo sandwicensis								
Turbonilla cornelliana	0	1	0	1	0	0	0	0
Turbonilla thaanumi								
Turbonilla sp. A								
Turbonilla sp. B								
Turbonilla sp. C	0	1	0	1	0	0	0	0
Turbonilla sp. D	0	1	0	1	2	0	0	2
Turbonilla sp. E								
Turbonilla sp. F								
Turbonilla spp.								
Turridae sp.	1	1	0	2	0	0	0	0
Umbraculum sinicum								
Umbraculum sp.								
Vanikoro cancellata								
Vanikoro sp.	0	1	1	2	0	0	3	3
Veprecula brunonia								
Vermetidae spp.	8	0	3	11	0	2	4	6
Vexillum adamsianum								
Vexillum approximatum								
Vexillum cosmani								
Vexillum interruptum								
Vexillum pacificum								
Vexillum rubrum								
Vexillum rufofilosum	0	0	0	0	0	0	0	0
Vexillum tusum								
Vexillum sp. A	0	0	0	0	3	0	0	3
Vexillum sp.								
Vitrinellidae sp.								
Volvarina fusiformis								
Williamia radiata	1	0	0	1	0	0	0	0
Xenuroturris sp.								
Zebina bidentata								
Zebina sp.								
Gastropoda sp. A								
Gastropoda spp.								
SCAPHOPODA								
Scaphopoda sp.	0	0	0	0	0	0	0	0
POLYPLACOPHORA								
Polyplacophora sp.								
Total No. of Individuals	773	625	705	2,103	652	752	751	2,155
Total No. of Individuals/cm^3	51.5	41.7	47.0	46.7	43.5	50.1	50.1	47.9
Total No. of Taxa	63	64	45	93	50	52	46	77

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.

TABLE E.9. Taxon Abundance from Three Replicates for Mollusk Components, Sand Island Ocean Outfall Sampling Station E6, O'ahu, Hawai'i, August 2002

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	Replicate 2	Replicate 3	Total	
BIVALVIA					
Acar cf. *plicata*	0	0	0	0	2
Adipicola cf. *crypta*	0	0	0	0	3
Amygdalum newcombi					
Amygdalum sp.					
Anguipecten cf. *lamberti*	0	0	0	0	1
Anisodonta lutea					
Anomia nobilis	0	0	0	0	1
Arca kauaia					
Arcidae sp.					
Barbatia divaricata	0	0	0	0	3
Barbatia lima					
Barbatia nuttingi					
Barbatia sp.					
Brachidontes crebristriatus	0	0	0	0	2
Cardita thaanumi					
Cardita sp.					
Carditella hawaiensis	0	0	0	0	11
Carditella sp.					
Chlamydella sp. A	1	0	0	1	6
Chlamys coruscans hawaiensis					
Chlamys kauaiensis					
Chlamys sp. B					
Chlamys sp.	0	1	1	2	12
Codakia punctata					
Cosa waikikia	0	0	0	0	25
Crenella sp.					
Ctena bella					
Ctena transversa	0	0	0	0	15
Ctena sp.	0	0	0	0	31
Cuspidaria hawaiensis					
Cuspidaria pailoloana	0	0	0	0	1
Epicodakia sp.	0	0	0	0	18
Ervilia bisculpta	4	0	2	6	26
Euciroa pacifica					
Fragum mundum	0	0	0	0	1
Gastrochaena sp.					
Glycymeris sp.	0	0	0	0	1
Grammatomya kanaka	0	0	0	0	1
Haumea juddi	0	0	0	0	1
Hiatella arctica					
Hitia ovalis					
Kellia hawaiensis	0	0	0	0	13
Kona symmetrica					
Leptonacea sp.					
Lima keokea					
Lima sp.	0	1	2	3	4
Limopsis sp.					
Lioconcha hieroglyphica					
Lonoa hawaiensis					
Lucina edentula					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Macoma dispar					
Macoma obliquilineata					
Mactra thaanumi					
Mactra sp.					
Malleus regula					
Malleus sp.					
Modiolus sp.	0	0	0	0	1
Mytilidae sp. A					
Mytilidae sp. B					
Mytilidae sp. C					
Mytilidae sp.	0	0	0	0	14
Nemocardium thaanumi	0	0	0	0	3
Nemocardium sp.	0	0	0	0	1
Nucula hawaiensis	0	1	0	1	5
Ostrea sp.	0	0	0	0	7
Pectinidae sp. A					
Pillucina hawaiiensis					
Pillucina spaldingi					
Pillucina sp.					
Pinna sp.[a]	+	+	+	+	frag+
Poromya transversa					
Propeamusiidae sp.	0	0	0	0	3
Pteria sp.					
Rochefortina sandwichensis	0	2	0	2	16
Rochefortina sp.					
Scintilla hiloa					
Semelangulus crebrimaculatus					
Semelangulus sp.					
Semele australis					
Septifer bryanae	0	0	0	0	2
Septifer sp.	0	0	0	0	7
Spondylus sp.					
Tellina oahuana					
Tellina robusta					
Tellina sp. A					
Tellina sp. B					
Tellina sp. C					
Tellina sp.	0	0	0	0	1
Bivalvia sp. A	0	0	0	0	8
Bivalvia sp. B	1	0	0	1	1
Bivalvia sp. C					
Bivalvia spp.	0	0	0	0	23
GASTROPODA					
Acteocina hawaiensis	0	0	0	0	1
Acteocina sandwicensis	0	0	0	0	2
Acteocina sp. A					
Acteocina sp.	0	0	0	0	26
Alcyna ocellata	0	0	0	0	21
Alcyna subangulata	0	0	0	0	3
Alvania isolata					
Anacithara perfecta	0	0	0	0	1

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Antisabia foliacea	0	0	0	0	3
Aplysiidae	0	0	0	0	8
Architectonicidae sp.					
Argyropeza leucocephala	0	0	0	0	2
Argyropeza sp.					
Aspella producta					
Aspella sp.					
Atys curta					
Atys debilis					
Atys semistriata					
Atys sp.	0	0	0	0	2
Balcis cf. *brunnimaculata*					
Balcis spp.	6	5	11	22	274
Barleeia calcarea					
Benthonella sp.					
Bittium impendens	0	0	0	0	2
Bittium sp.	0	0	0	0	4
Brookula hawaiiensis					
Brookula iki					
Brookula sp.	0	0	0	0	2
Buccinidae sp.					
Bulla vernicosa					
Bulla sp.	0	0	0	0	4
Bullina scabra					
Caecum arcuatum	0	0	0	0	4
Caecum cf. *glabella*					
Caecum cf. *glabriformis*	0	0	0	0	4
Caecum oahuense					
Caecum sepimentum	0	0	0	0	71
Caecum sp. A	0	0	0	0	1
Caecum sp.	0	0	0	0	2
Cancilla granatina	0	0	0	0	1
Cancilla sp.					
Cantharus sp.					
Capulidae sp.					
Carinapex minutissima	0	0	0	0	2
Carinapex papillosa					
Cephalaspidea sp.	0	0	0	0	5
Cerithidium diplax	2	0	0	2	54
Cerithidium perparvulum	3	0	1	4	552
Cerithiopsis spp.					
Cerithium atromarginatum					
Cerithium columna	0	0	0	0	3
Cerithium glareosum					
Cerithium interstriatum	0	0	0	0	33
Cerithium nesioticum	0	0	0	0	1
Cerithium rostratum	0	0	0	0	5
Cerithium zebrum	0	0	0	0	1
Cerithium spp.	0	0	0	0	16
Ceritoturris bittium	0	0	0	0	3
Circulus sp.					
Cirsotrema varicosa					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	Replicate 2	Replicate 3	Total	
Clavus pusilla					
Clavus sp.					
Collonista candida	0	0	0	0	2
Conus pulicarius					
Conus quercinus					
Conus sp.					
Coralliophilidae sp.					
Costellariidae sp.					
Crepidula aculeata					
Crucibulum spinosum					
Cycloscala hyalina					
Cyclostremiscus emeryi	0	0	0	0	6
Cyclostremiscus striatus					
Cyclostremiscus sp. A	0	0	0	0	1
Cylichna pusilla					
Cypraeidae spp.					
Cystiscus huna					
Daphnellinae sp.	0	0	0	0	1
Dentimargo pumila					
Diala scopulorum	23	26	21	70	2,573
Diala semistriata	0	0	0	0	350
Diala sp.					
Diniatys dentifer					
Diodora granifera	0	0	0	0	2
Drupella sp. A					
Drupella sp.					
Eatoniella janetaylorae					
Eatoniella pigmenta					
Eatoniella sp.	1	0	0	1	20
Elachisina robertsoni					
Elacorbis callusa					
Emarginula dilecta					
Emarginula sp.	0	0	0	0	2
Epitonium spp.	0	1	0	1	7
Erato sandwicensis	0	0	0	0	1
Etrema acricula					
Euchelus gemmatus	0	0	0	0	10
Euchelus sp.					
Eucithara angiostoma	0	1	0	1	1
Eucithara pusilla					
Eucithara sp.					
Eucylotoma albomacula	0	0	0	0	2
Eulima peasei					
Eulimidae sp.	0	0	0	0	92
Euplica varians					
Evalea peasei					
Evalea waikikiensis					
Finella pupoides	0	0	3	3	22
Fusinus sp.					
Gemmula monilifera					
Gibbula marmorea	0	0	0	0	2
Glyphostoma kihikihi					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate			Total	
	1	2	3		
Granula sandwicensis	0	0	0	0	1
Granulina vitrea	1	0	0	1	1
Granulina sp.	0	0	0	0	6
Gyrineum pusillum					
Haminoea curta					
Haminoea sp.	0	0	0	0	8
Heliacus implexus					
Heliacus sp. A					
Heliacus sp.	0	0	1	1	2
Herviera gliriella					
Herviera patricia					
Hinemoa indica	0	0	0	0	1
Hipponix australis					
Hipponix imbricatus					
Hipponix pilosus	0	0	0	0	2
Hipponix sp.	0	0	0	0	2
Hydatina sp.					
Ittibittium parcum	0	0	0	0	2
Julia exquisita					
Juliidae sp.					
Kermia aniani					
Kermia brunnea					
Kermia cylindrica					
Kermia daedalea					
Kermia sp.					
Koloonella hawaiiensis					
Koloonella sp.	0	1	0	1	4
Leptothyra rubricincta	0	0	0	0	5
Leptothyra verruca	0	0	0	0	6
Lienardia apiculata					
Lienardia mighelsi					
Liotiidae sp.					
Lophocochlias minutissimus	0	0	0	0	41
Lophocochlias sp. A	0	0	0	0	3
Lophocochlias sp.					
Meioceras sandwichensis					
Merelina granulosa					
Merelina hewa	0	0	0	0	3
Merelina wanawana	0	0	0	0	3
Metaxia albicephala					
Metaxia brunnicephala					
Metaxia sp.	0	0	0	0	2
Microdaphne trichodes					
Miralda paulbartschi	0	0	0	0	3
Miralda scopulorum	0	0	0	0	2
Miralda sp.					
Mitra earlei					
Mitra saltata					
Mitra sp.	0	0	0	0	2
Mitrella bella					
Mitrella loyaltensis	0	0	0	0	3
Mitrella margarita					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Mitrella rorida					
Mitrolumna metula					
Modulus tectum					
Morula sp.					
Nassarius crematus	0	0	0	0	1
Nassarius papillosus					
Nassarius sp.					
Natica bougei					
Natica gualteriana	1	2	1	4	20
Natica sp.	0	0	0	0	12
Nerita spp.	0	0	0	0	3
Neritopsis radula	0	0	0	0	2
Nesiodostomia quarta					
Nesiodostomia sp.	0	0	0	0	3
Odostomia gulicki	0	0	0	0	1
Odostomia oxia					
Odostomia stearnsiella					
Odostomia sp. A					
Odostomia sp. B					
Odostomia sp.	0	0	0	0	6
Omalaxis sp.					
Omalogyra japonica	1	2	1	4	15
Omalogyra spp.					
Orbitestella regina	0	1	0	1	48
Orbitestella sp. A	0	0	0	0	3
Orbitestella sp. B	1	0	0	1	6
Orbitestella sp.					
Parashiela beetsi	0	1	1	2	107
Pelycidion habei					
Peristernia chlorostoma					
Phenacolepas scobinata					
Philippia oxytropis					
Philippia sp.					
Planaxis suturalis					
Planaxis sp.					
Plesiotrochus luteus					
Powellsetia fallax					
Prodotia iostomus					
Pseudodaphnella pulchella					
Pseudomalaxis sp.					
Pterygia pudica					
Pupa pudica					
Pupa tessellata					
Pupa sp.	0	0	0	0	1
Pusillina marmorata	1	0	2	3	491
Pyramidella sulcata					
Pyramidella sp. A					
Pyramidella sp. B					
Pyramidella sp. C					
Pyramidella sp. D					
Pyramidella spp.	0	0	0	0	14
Pyramidellidae sp. A					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Pyramidellidae sp. B					
Pyramidellidae sp. C	0	0	0	0	4
Pyramidellidae sp. D					
Pyramidellidae sp.	0	1	1	2	22
Pyramidelloides angusta					
Pyramidelloides gracilis	0	0	0	0	1
Pyramidelloides suta					
Pyrgulina oodes	0	0	0	0	24
Pyrgulina sp.	0	0	0	0	4
Rastodens sp.					
Rhinoclavis articulata					
Rissoella sp.	0	0	0	0	23
Rissoidae spp.	0	0	0	0	20
Rissoina ambigua					
Rissoina cerithiiformis	0	0	0	0	2
Rissoina costata					
Rissoina imbricata					
Rissoina pulchella	0	0	0	0	72
Rissoina sp.	0	0	0	0	5
Rufodardanula ponderi					
Rufodardanula sp.					
Sansonia kenneyi	0	0	0	0	1
Sansonia sp. A					
Sansonia spp.					
Scabricola casta					
Scalenostoma sp.					
Scaliola spp.	2	0	2	4	523
Scaphander sp.					
Schwartziella ephamilla	0	0	1	1	20
Schwartziella triticea	0	0	0	0	1
Scissurella coronata					
Scissurella pseudoequatoria	0	0	0	0	4
Seminella peasei					
Seminella smithi	0	0	0	0	2
Sinezona insignis	0	0	0	0	2
Smaragdia bryanae	0	1	0	1	3
Stilifer sp.					
Stosicia hiloense	0	0	0	0	3
Strebloceras subannulatum	0	0	0	0	15
Strombus helli					
Strombus maculatus					
Styliferina goniochila	0	0	0	0	2
Synaptocochlea concinna					
Terebra spp.					
Thala milium					
Tricolia variabilis	0	0	0	0	88
Triphora spp.	0	0	0	0	38
Tritonoturris sp. A					
Trivia globosa pilula					
Trivia hordacea					
Trivia pellucida					
Trivia spp.					

TABLE E.9—*Continued*

Taxon	No. of Individuals at E6				Transect E Total
	Replicate 1	2	3	Total	
Trochus intextus	0	0	0	0	1
Trochus sp.					
Tugali oblonga					
Tugali sp.					
Turbo sandwicensis					
Turbonilla cornelliana	0	0	0	0	1
Turbonilla thaanumi					
Turbonilla sp. A					
Turbonilla sp. B					
Turbonilla sp. C	0	0	0	0	1
Turbonilla sp. D	0	0	0	0	3
Turbonilla sp. E					
Turbonilla sp. F					
Turbonilla spp.					
Turridae sp.	0	0	0	0	3
Umbraculum sinicum					
Umbraculum sp.					
Vanikoro cancellata					
Vanikoro sp.	0	0	0	0	5
Veprecula brunonia					
Vermetidae spp.	0	0	2	2	19
Vexillum adamsianum					
Vexillum approximatum					
Vexillum cosmani					
Vexillum interruptum					
Vexillum pacificum					
Vexillum rubrum					
Vexillum rufofilosum	0	0	0	0	2
Vexillum tusum					
Vexillum sp. A	0	0	0	0	3
Vexillum sp.					
Vitrinellidae sp.					
Volvarina fusiformis					
Williamia radiata	0	0	0	0	2
Xenuroturris sp.					
Zebina bidentata					
Zebina sp.					
Gastropoda sp. A					
Gastropoda spp.					
SCAPHOPODA					
Scaphopoda sp.	0	0	0	0	1
POLYPLACOPHORA					
Polyplacophora sp.					
Total No. of Individuals	48	47	53	148	6,232
Total No. of Individuals/cm^3	3.2	3.1	3.5	3.3	27.7
Total No. of Taxa	15	16	17	30	156

[a]*Pinna* sp. are indicated by a "+" for larval shells and by "frag" for shell fragments.