

Long-Term Marine Sediment Monitoring



Benthic Invertebrate Data Summary

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Sample selection

Until 2003, five replicate grabs were taken for benthos at each station, each year, though after 1993, only three were taxonomically identified. From 2004 through 2014, four replicates were taken and three identified. From 2015 on, three replicates were taken; all were identified.

For purposes of statistical analyses of the data, only Replicates 1-3 were used, for consistency over the years, even if more replicates had been taxonomically identified. Occasionally a sample was lost or compromised; in such cases, if there were more than three replicates, another one was used instead. In two cases, there were fewer than three replicates used in the statistical analyses:

- In 1994, the Thea Foss (Station 40) samples had been in formalin too long prior to identification. For two of the three replicates, more than 20% of the molluscs were not identifiable beyond "Bivalvia" or "Gastropoda", hence the data for those samples were excluded.
- Due to a lab mix-up during the sorting of the 2001 samples from the Thea Foss and Anderson Island stations (Stations 40 and 44), only two samples from each station could be taxonomically identified.

Details of the sample selection are given in [benthos sample usability table](#).

Taxonomic standardization

Taxonomic identifications changed over the years, due to use of different taxonomists in the early years (1989-1993) than later, increase in skill over time among the consistently-used taxonomists, and ever-changing taxonomy. Name-changes were kept up with and applied to all relevant identifications in the database (see "Data Quality Control Narrative" section at the end of this appendix). While combinations of two species into a single species were easily accomplished, division of one species into two could not be applied to past data. Immature life-stage or physical damage of a specimen made identification to species difficult, if not impossible, and so animals of a single species could be identified at any one of multiple taxonomic levels.

In order to analyze the data, it is necessary first to standardize the taxonomy. The challenge is to preserve as much detailed information as possible. After much discussion, Ecology's Marine Sediment Monitoring Team developed the rules given in the box below.

Colonial organisms and hard-substrate organisms such as barnacles were excluded from the dataset for analysis. In phyla (highest taxonomic groups) in which organisms are ordinarily identified to species or genus, organisms which had been identified only to high taxonomic levels (e.g., order or class) also were excluded, except for phylum-level analyses. Because many organisms in less-well-known phyla (e.g., Nemertea) had not been identified beyond phylum in the early years, it was necessary to "roll up" all identifications to phylum for data analyses.

Rules for Univariate Measures

Calculate all univariate measures with and without redundant taxa.

1. Regardless of whether there are redundant taxa:
 - a. Count everything.
 - b. Calculate all univariate measures: total abundance, taxa richness, Pielou's evenness (which depends on Shannon-Wiener diversity), Swartz dominance.
2. When there are redundant taxa (multiple levels of identification for the same organism):
 - a. Drop the higher level(s) and include only the lowest level.
 - b. Calculate all univariate measures: total abundance, taxa richness, Pielou's evenness (which depends on Shannon-Wiener diversity), Swartz dominance.

Rules for Redundant Taxa for Multivariate Analyses

0. A. Taxon is to be excluded (reasons include: incidental, not picked in early years, etc.).....Delete the taxon
- B. Taxon is at lowest identified level and there are no redundant higher taxa.....Keep the taxon
- C. Taxon is redundant (one or more lower levels present).....1
1. A. Taxon level contains only one lower-level identification.....Roll up to higher level
- B. Taxon level contains >1 lower-level identification*.....2
2. A. Identifications have been taken to the same level consistently over multiple years.....3
- B. Identifications have NOT been taken to the same level consistently over multiple years (data look confused).....Roll all to higher level
3. A. Abundance at higher level is $\leq 20\%$ (within a single year) of the total abundance within that taxon and lower (family/genus/species, etc.).....Delete higher level
- B. Abundance at higher level is $>20\%$ (within a single year) of the total abundance within that taxon and lower (family/genus/species, etc.).....4
4. A. Lower-level taxa that are easy to identify.....5
- B. Mixed levels of difficulty.....Leave easy-to-identify levels separate and roll up levels that are difficult to identify into the higher taxon level (Ex: species within the genera *Macoma*, *Chaetozone*)
- C. Lower-level taxa are difficult to identify.....Roll to higher level
5. A. Higher-level taxon contains ≥ 2 lower-level identifications and $<50\%$ (within a single year) of the total abundance within that taxon and lower.....Delete the higher level
- B. Higher-level taxon contains only 2 lower-level identifications and $\geq 50\%$ (within a single year) of the total abundance within that taxon and lower.....Roll to higher level
- C. Higher-level taxon contains >2 lower-level identifications and $\geq 50\%$ (within a single year) of the total abundance within that taxon and lower (Ex: *Euclymeninae*, *Praxillella* sp, *Praxillella gracilis*).....Leave the higher level AND lower levels

* Decision rules should be applied from highest to lowest taxonomic levels (Ex: delete family level before genus level).

Link to final within-station and between-stations taxonomic standardizations:

[Final taxonomic standardization.](#)

Results

Benthic invertebrate organisms (benthos) were identified and counted for all samples. After taxonomic standardization across years and stations, there were 396 taxa¹ in the 772-sample dataset.

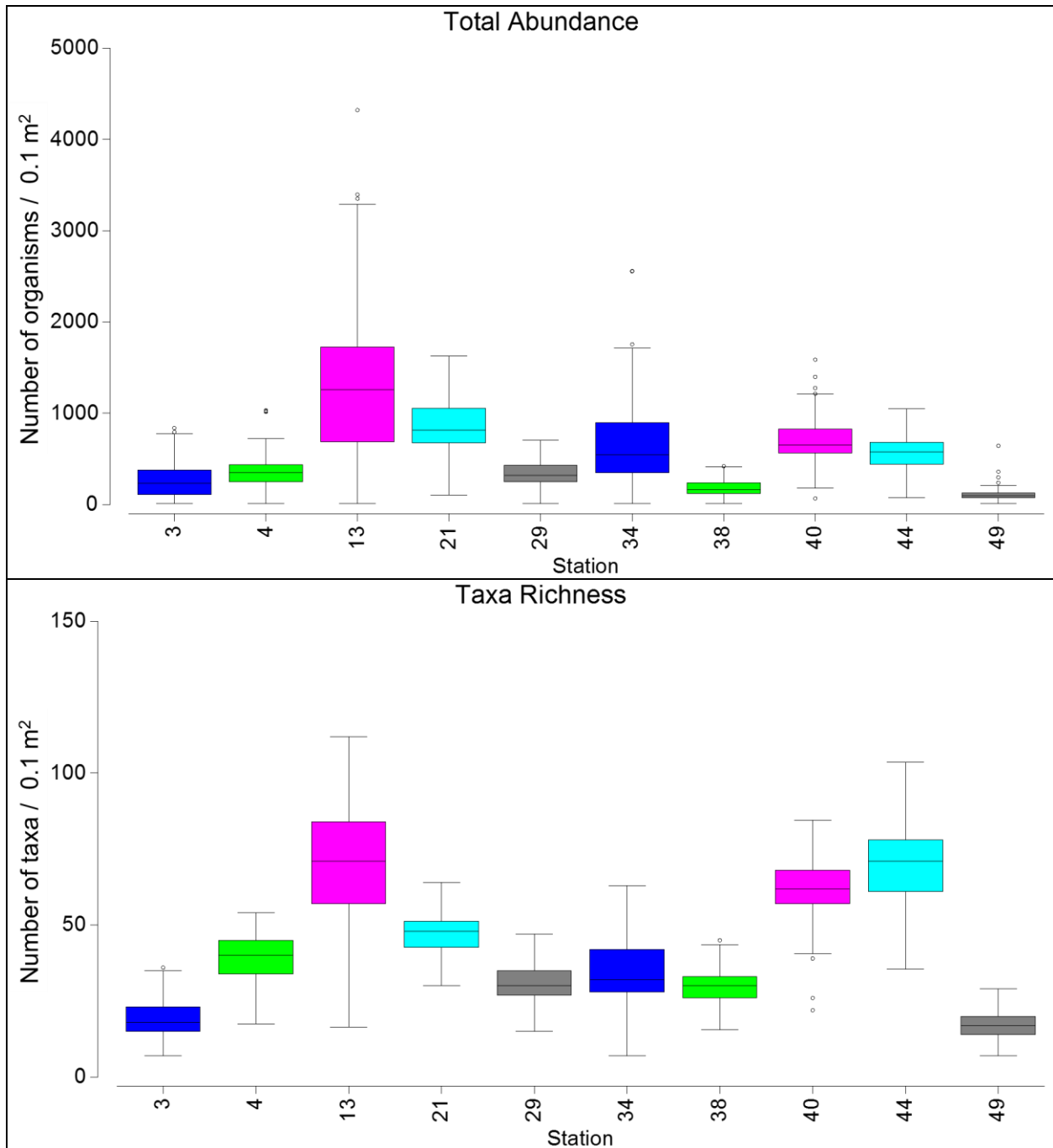
Univariate measures of abundance and diversity

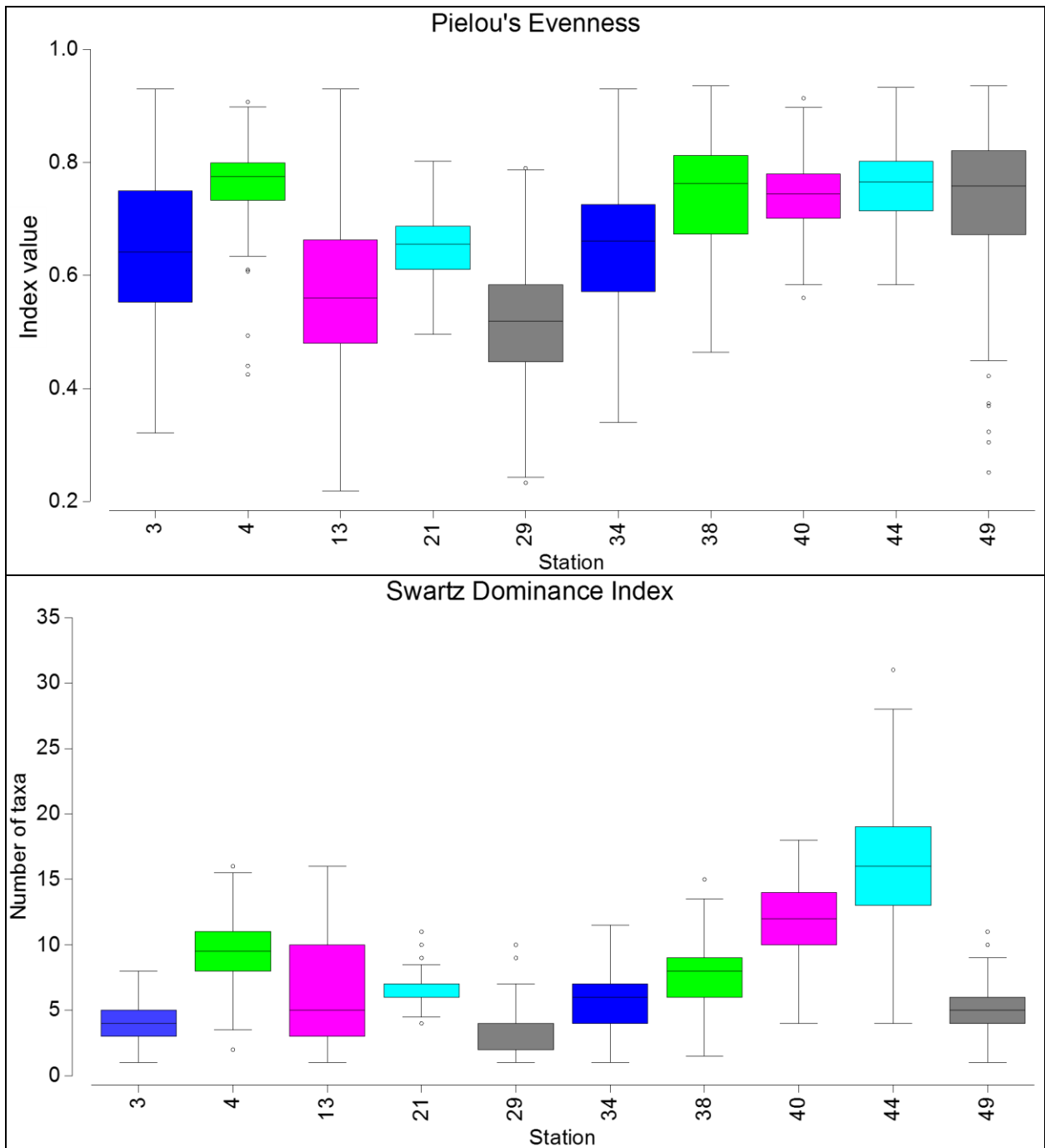
Univariate measures calculated to characterize the abundance and diversity of invertebrate communities.

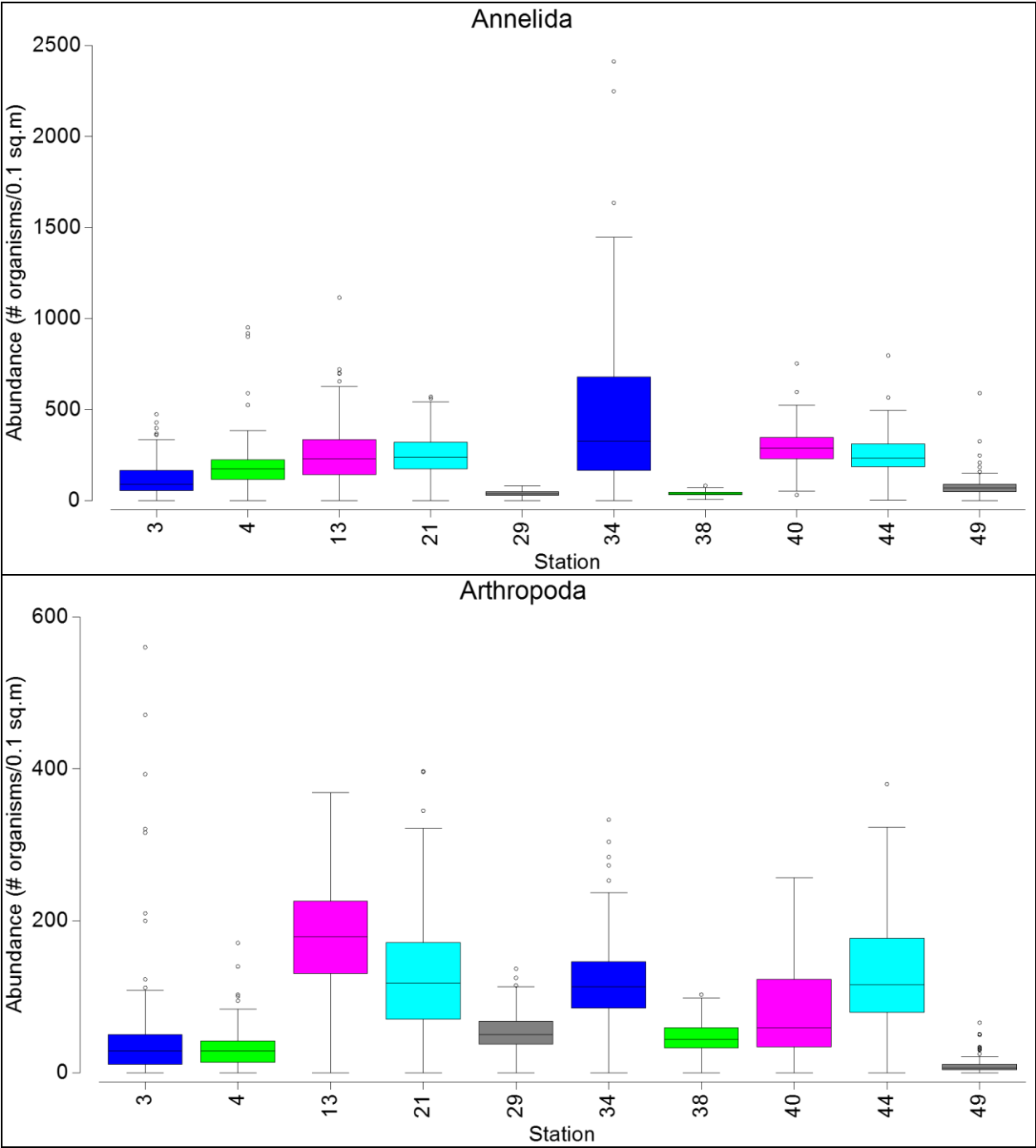
Index	Definition	Calculation
Total Abundance	A measure of density equal to the total number of organisms per sample area	Sum of all organisms counted in each sample
Major Taxa Abundance (5 groups)	A measure of density equal to the total number of organisms in each major taxa group (Annelida, Mollusca, Echinodermata, Arthropoda, Miscellaneous Taxa) per sample area	Sum of all organisms counted in each major taxa group per sample
Taxa Richness	Total number of taxa (taxa = lowest level of identification for each organism) per sample area	Count of all taxa identified in each sample
Pielou's Evenness (J') (Pielou, 1966, 1974)	Relates the observed diversity in benthic assemblages as a proportion of the maximum possible diversity for the data set (the equitability (evenness) of the distribution of individuals among species)	$J' = H'/\log S,$ where S = the total number of species and H' is the Shannon-Wiener diversity index $H' = -\sum_{i=1}^S p_i \log p_i,$ where p_i = the proportion of the assemblage that belongs to the i^{th} species ($p_i = n_i/N$, where n_i = the number of individuals in the i^{th} species and N = total number of individuals)
Swartz Dominance Index (SDI) (Swartz et al., 1985)	The minimum number of taxa whose combined abundance accounts for 75 percent of the total abundance in each sample	Count of taxa whose combined abundance accounts for at least 75 percent of the total abundance in each sample

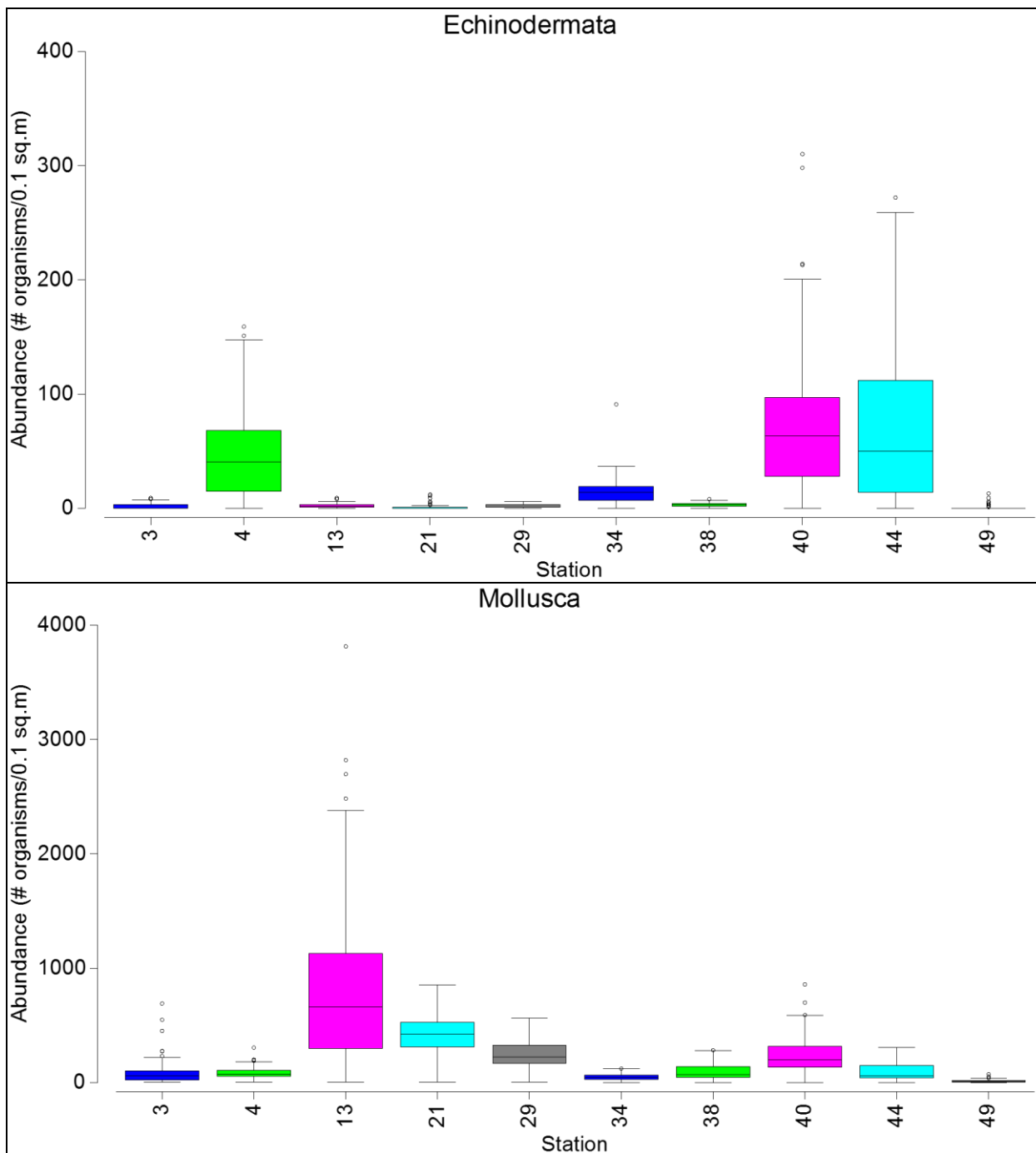
¹Lowest-level taxonomic identification practicable, often species, but sometimes a higher level (e.g., genus, family).

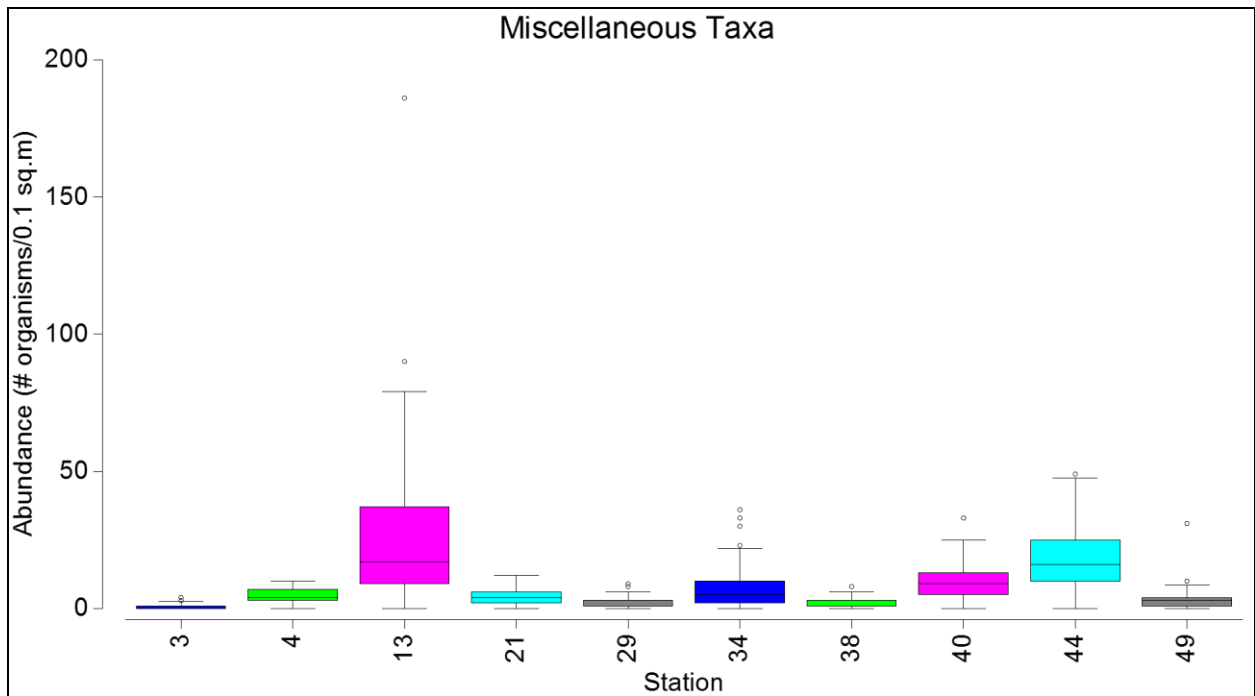
Boxplots of univariate benthic measures by station.











Summary statistics of univariate benthic measures by station.

	Station	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Univariate Measure	N Years	26	26	22	27	27	26	27	26	26	26
	N Samples	78	78	66	81	81	78	81	75	77	78
Total Abundance (# organisms / 0.1 m ²)	Mean	275.9	376.9	1349.6	836.9	338.5	684.9	187.9	699.5	554.3	116.0
	Std. Dev.	202.1	184.9	825.3	229.6	113.7	474.5	91.6	286.4	190.3	80.5
	Median	230	348	1257	817	322	547.5	160	656	572	99.5
	Minimum	14	40	253	329	75	178	67	67	145	46
	Maximum	839	1031	4316	1251	613	2559	420	1588	993	644
Taxa Richness (# taxa / 0.1 m ²)	Mean	19.4	39.7	74.3	47.5	31.1	35.7	30.0	65.1	73.1	17.2
	Std. Dev.	5.8	7.6	21.1	6.5	5.0	8.5	4.7	11.4	13.6	4.1
	Median	18.5	41	73	48	30	34	30	67	74	17
	Minimum	7	19	28	33	20	22	17	22	44	9
	Maximum	38	54	125	60	42	61	45	82	101	29
Pielou's Evenness (index value)	Mean	0.651	0.766	0.551	0.645	0.515	0.639	0.742	0.746	0.767	0.720
	Std. Dev.	0.135	0.083	0.133	0.054	0.109	0.113	0.103	0.061	0.058	0.142
	Median	0.651	0.788	0.556	0.654	0.516	0.658	0.762	0.750	0.773	0.757
	Minimum	0.319	0.425	0.217	0.494	0.233	0.354	0.485	0.565	0.627	0.249
	Maximum	0.930	0.908	0.796	0.757	0.790	0.840	0.936	0.913	0.886	0.916
Swartz Dominance (# taxa)	Mean	4.1	9.9	6.5	6.6	3.6	5.9	7.8	13.0	17.0	5.1
	Std. Dev.	1.6	2.8	3.7	1.6	1.7	1.9	2.8	3.4	5.0	2.2
	Median	4	10	5.5	7	4	6	8	13	17	5
	Minimum	1	2	1	4	1	2	3	6	8	1
	Maximum	9	16	14	11	10	10	16	21	33	11
Annelida (# organisms / 0.1 m ²)	Mean	127.1	204.8	279.5	265.1	39.3	493.0	41.0	292.2	251.4	86.7
	Std. Dev.	105.4	172.4	200.6	119.3	14.8	471.5	13.7	116.5	118.0	75.4
	Median	90.5	175.5	230.5	240	39	325.5	39	289	232	69.5
	Minimum	1	16	34	80	0	79	16	31	47	24
	Maximum	474	951	1114	568	81	2410	82	753	797	590
	Mean	58.4	35.1	180.7	133.9	54.4	122.1	46.2	79.7	128.0	10.4

	Station	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Arthropoda (# organisms / 0.1 m ²)	Std. Dev.	103.1	30.7	73.1	80.7	25.5	62.4	19.7	55.0	67.3	12.1
	Median	28.5	28.5	179	118	50	113	44	60	116	6
	Minimum	0	1	38	21	4	28	10	2	31	0
	Maximum	560	171	338	397	137	333	103	245	380	66
Echinodermata (# organisms / 0.1 m ²)	Mean	1.7	46.9	2.0	1.2	1.9	14.3	3.2	73.3	67.8	0.8
	Std. Dev.	2.5	39.2	2.0	2.2	1.3	11.5	1.9	64.7	63.0	2.1
	Median	0	41	2	0	1	14	3	67	50	0
	Minimum	0	0	0	0	0	0	0	0	4	0
Mollusca (# organisms / 0.1 m ²)	Maximum	9	159	9	12	5	91	8	310	272	13
	Mean	88.1	85.6	861.0	432.6	241.1	48.5	95.5	244.7	89.2	14.7
	Std. Dev.	115.3	50.3	728.0	151.6	105.1	23.0	79.5	158.2	68.6	12.6
	Median	59	73	664.5	423	225	44	68	199	61	11
Misc. Taxa (# organisms / 0.1 m ²)	Minimum	6	3	67	194	7	0	0	23	9	0
	Maximum	691	305	3812	798	548	121	283	858	286	74
	Mean	0.6	4.4	26.4	4.0	1.8	7.0	1.9	9.6	17.8	3.3
	Std. Dev.	0.9	2.5	27.5	3.0	1.7	7.4	1.8	6.3	10.0	3.7
	Median	0	4	17	4	1	5	1	9	16	3
Misc. Taxa (# organisms / 0.1 m ²)	Minimum	0	0	1	0	0	0	0	0	0	0
	Maximum	4	10	186	12	9	36	8	33	49	30

Summary statistics of univariate benthic measures by year.

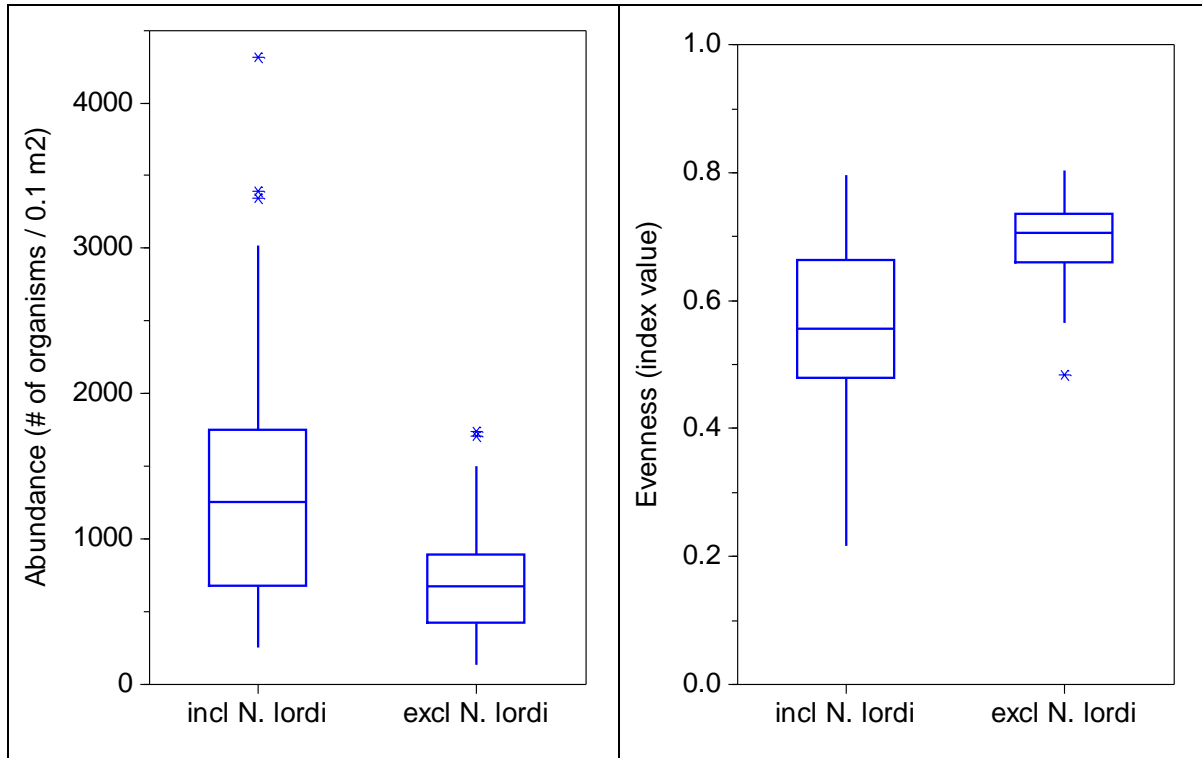
	Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Univariate Measure	N Stations	10	9	10	9	9	10	9	3	10	10	10	10	10	10
	N Samples	30	27	30	27	27	28	27	9	30	30	30	30	28	30
Total Abundance (# orgs / 0.1 m ²)	Mean	514.5	381.9	438.3	485.8	411.7	518.3	562.9	391.8	804.9	756.5	419.1	651.5	550.7	552.3
	Std. Dev.	403.7	280.3	331.8	367.8	234.8	450.8	571.5	259.1	876.5	1057.2	326.1	382.5	479.8	534.1
	Median	438	340	367	479	446	383.5	422	299	474.5	261	311	554.5	327.5	368
	Minimum	75	14	78	83	74	17	65	131	82	63	38	48	97	73
	Maximum	1598	993	1495	1448	959	1482	2559	833	3396	4316	1166	1335	1580	2142
Taxa Richness (# taxa / 0.1 m ²)	Mean	42.6	41.5	42.0	43.1	41.0	44.1	44.1	30.6	44.1	43.1	39.5	49.5	42.7	41.3
	Std. Dev.	17.3	22.7	22.4	23.1	20.6	25.1	25.1	6.1	26.3	25.6	19.8	25.0	25.5	22.8
	Median	44	42	35.5	35	37	38.5	41	29	37	37	34	43.5	34.5	36
	Minimum	17	7	16	17	16	9	11	23	10	13	11	18	12	10
	Maximum	90	99	101	98	84	98	99	43	114	120	75	117	99	86
Pielou's Evenness (index value)	Mean	0.687	0.731	0.685	0.682	0.655	0.699	0.688	0.621	0.612	0.669	0.689	0.665	0.694	0.657
	Std. Dev.	0.133	0.102	0.148	0.150	0.153	0.159	0.127	0.176	0.157	0.161	0.117	0.140	0.109	0.160
	Median	0.745	0.746	0.720	0.722	0.677	0.763	0.731	0.668	0.679	0.729	0.701	0.661	0.699	0.726
	Minimum	0.365	0.485	0.397	0.364	0.305	0.364	0.354	0.387	0.296	0.217	0.506	0.384	0.413	0.330
	Maximum	0.837	0.930	0.910	0.886	0.806	0.912	0.867	0.822	0.811	0.828	0.885	0.916	0.845	0.840
Swartz Dominance (# taxa)	Mean	8.2	8.7	8.6	9.2	7.6	8.5	8.8	5.3	6.1	7.2	7.7	8.6	7.8	7.4
	Std. Dev.	5.0	4.9	7.2	7.6	5.1	6.3	6.1	2.7	3.8	3.8	5.2	5.5	4.3	5.1
	Median	7	7	6	7	6	6	7	6	5.5	6.5	6.5	7.5	7	5.5
	Minimum	2	3	2	2	1	2	2	2	1	1	2	2	2	1
	Maximum	22	23	33	31	19	25	23	9	15	17	25	23	21	19
Annelida (# orgs / 0.1 m ²)	Mean	209.6	180.6	184.7	197.1	195.3	261.2	329.0	87.8	280.4	230.6	143.6	233.1	214.1	145.0
	Std. Dev.	168.4	188.1	262.2	254.3	188.1	320.2	535.0	77.8	444.3	292.1	102.9	231.6	237.8	102.6
	Median	161	142	84	84	158	141.5	177	42	169.5	115.5	127	193.5	85.5	97
	Minimum	29	1	16	16	17	7	22	29	31	36	28	24	21	17
	Maximum	736	797	1286	1242	754	1317	2410	243	2248	1090	448	1140	753	384
Arthropoda (# orgs / 0.1 m ²)	Mean	91.3	89.1	72.4	99.0	91.4	74.8	81.9	76.3	106.8	75.5	72.9	102.0	92.7	79.8
	Std. Dev.	75.6	70.7	47.7	108.5	70.0	53.7	66.7	53.3	90.2	72.9	74.6	65.7	61.9	77.5
	Median	59	81	53.5	63	86	73.5	65	55	78.5	53	42	96.5	101	47.5
	Minimum	0	3	13	6	4	2	2	31	3	2	1	2	1	2

	Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	Maximum	271	345	174	397	252	220	220	186	270	263	263	239	213	290
Echinodermata (# orgs / 0.1 m ²)	Mean	4.1	9.3	9.9	9.7	16.0	9.1	28.4	1.7	42.9	29.3	17.4	19.2	18.3	18.9
	Std. Dev.	4.3	16.6	23.1	18.7	21.8	14.0	38.0	1.1	77.6	67.6	29.3	30.0	29.5	35.1
	Median	3.5	3	2.5	3	4	4	6	2	4	3.5	1.5	3.5	2.5	2.5
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Maximum	19	68	106	81	73	62	115	4	298	310	98	90	100	145
Mollusca (# orgs / 0.1 m ²)	Mean	204.3	98.0	166.5	175.5	101.9	167.5	116.3	224.1	360.5	414.2	179.2	286.5	218.8	301.3
	Std. Dev.	325.2	119.5	198.2	185.6	98.8	277.9	143.8	151.4	704.4	913.0	216.2	232.1	211.5	390.7
	Median	62.5	55	74.5	82	61	59.5	66	225	95.5	76	80	246.5	144.5	145
	Minimum	7	6	16	20	3	3	6	46	10	6	6	16	5	3
	Maximum	1180	440	910	689	334	1126	631	439	2819	3812	778	770	649	1492
Misc. Taxa (# orgs / 0.1 m ²)	Mean	5.2	5.0	4.9	4.4	7.1	5.6	7.3	1.9	14.3	6.9	6.0	10.7	6.8	7.3
	Std. Dev.	8.9	7.8	7.4	5.7	8.1	6.0	9.8	2.3	34.7	9.1	6.4	21.6	10.9	12.6
	Median	2	3	3	3	5	3	3	1	2.5	3	3.5	3	4	3
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Maximum	47	31	31	28	32	17	30	7	186	38	27	90	50	48

	Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Univariate Measure	N Stations	10	10	10	10	10	10	10	10	10	10	10	10	10
	N Samples	30	30	30	30	30	30	30	30	30	30	30	30	30
Total Abundance (# orgs / 0.1 m ²)	Mean	542.8	455.8	546.7	465.0	509.3	603.4	665.8	435.5	414.8	525.7	593.2	527.9	404.2
	Std. Dev.	551.0	279.8	368.8	330.5	379.0	575.0	530.1	264.7	311.5	354.6	255.9	374.9	289.3
	Median	309.5	433.5	510	406	430.5	386	504.5	353	365	547	591	436.5	321.5
	Minimum	46	76	54	48	80	58	97	67	53	90	229	62	40
	Maximum	2056	1226	1589	1500	1550	2314	2226	1280	1208	1806	1176	1258	1118
Taxa Richness (# taxa / 0.1 m ²)	Mean	40.7	40.4	43.3	41.1	42.0	46.6	47.2	43.4	39.0	45.2	42.9	40.4	41.1
	Std. Dev.	25.1	19.1	21.4	22.2	19.5	24.4	23.9	19.6	17.1	24.9	18.3	17.0	20.8
	Median	32.5	39.5	37.5	38	38	41	40	35.5	35	37	35	36.5	34
	Minimum	10	12	11	9	15	15	15	15	13	20	21	14	12
	Maximum	102	78	95	85	75	103	103	82	78	125	80	75	91
Pielou's Evenness (index value)	Mean	0.634	0.663	0.663	0.683	0.700	0.676	0.670	0.715	0.693	0.692	0.592	0.673	0.711
	Std. Dev.	0.154	0.127	0.101	0.086	0.110	0.123	0.102	0.116	0.125	0.095	0.124	0.176	0.106
	Median	0.674	0.672	0.644	0.684	0.709	0.694	0.665	0.740	0.728	0.709	0.608	0.765	0.699

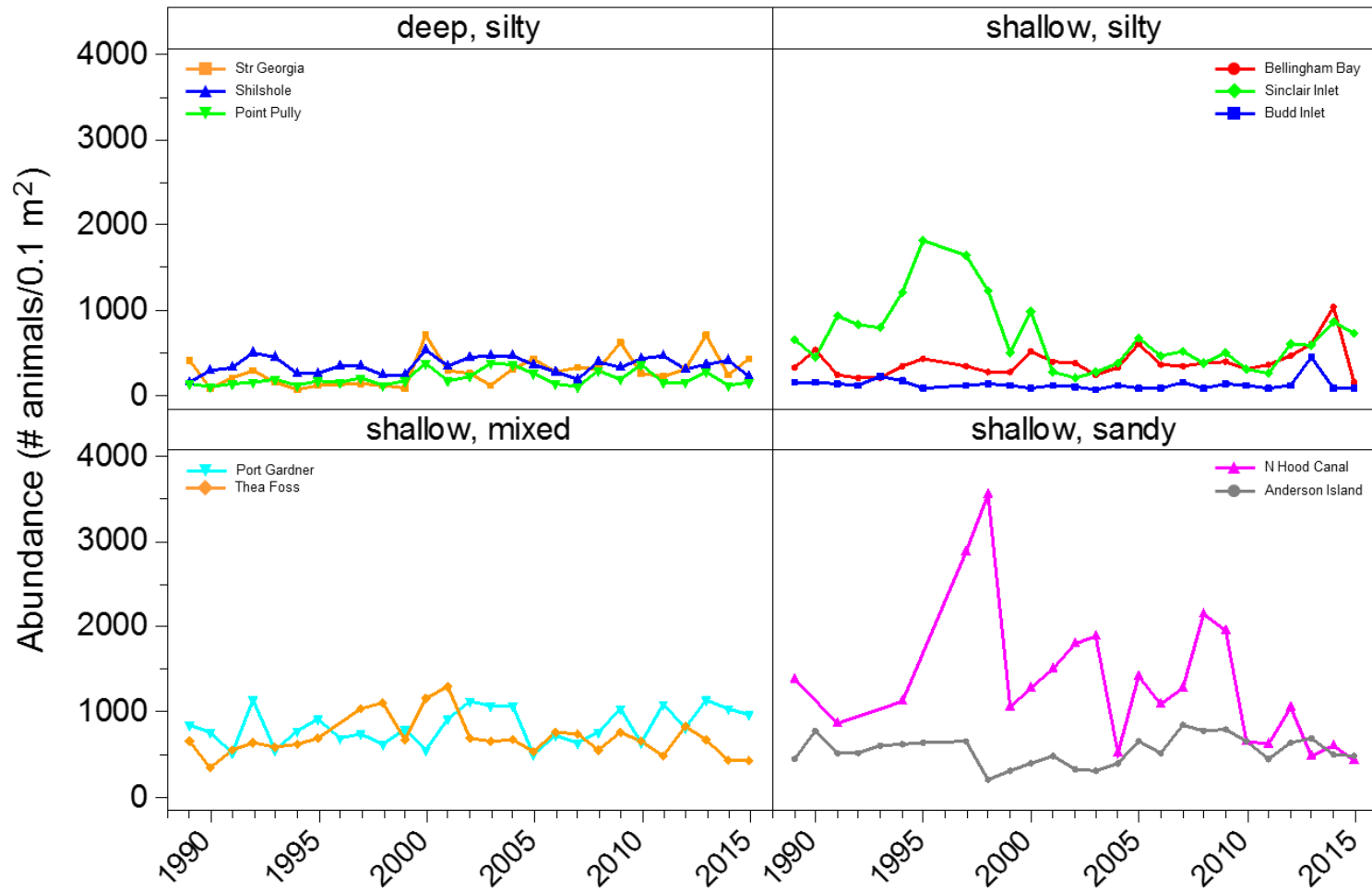
	Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
	Minimum	0.233	0.338	0.502	0.531	0.512	0.358	0.389	0.476	0.420	0.452	0.249	0.304	0.476	
	Maximum	0.850	0.884	0.839	0.837	0.936	0.843	0.809	0.876	0.913	0.804	0.784	0.913	0.908	
Swartz Dominance (# taxa)	Mean	6.8	7.6	7.7	7.6	8.6	7.9	8.0	8.9	8.0	8.6	6.4	7.7	8.9	
	Std. Dev.	3.9	4.4	4.6	4.2	3.8	4.1	4.1	4.4	4.4	4.6	4.3	5.3	5.0	
	Median	6.5	7.5	5.5	6	8	7	7	9	6.5	7	6	5.5	8	
	Minimum	1	1	3	2	3	1	2	3	2	2	1	2	3	
	Maximum	15	16	20	19	16	15	18	19	19	18	20	17	17	20
Annelida (# orgs / 0.1 m ²)	Mean	123.8	180.2	196.2	160.8	183.7	205.8	230.1	158.3	176.3	222.3	262.4	284.7	200.2	
	Std. Dev.	110.7	136.4	135.5	104.1	101.5	174.1	160.1	99.7	136.5	206.4	175.5	298.2	175.6	
	Median	80	125	189.5	147	198.5	166	175.5	163	130.5	204	247	163.5	139.5	
	Minimum	0	35	25	27	36	23	31	25	26	27	22	24	13	
	Maximum	479	488	577	417	347	700	618	334	504	1114	590	951	617	
Arthropoda (# orgs / 0.1 m ²)	Mean	85.0	79.8	100.3	80.0	81.9	76.7	136.8	69.3	38.5	75.5	92.5	59.7	65.2	
	Std. Dev.	82.6	64.7	93.0	75.5	75.5	67.8	129.0	72.5	24.5	86.8	102.9	49.3	73.6	
	Median	57	60.5	63.5	51.5	55.5	44	83	49.5	38	43	50.5	47	48.5	
	Minimum	2	0	6	1	1	1	6	2	2	2	5	3	1	
	Maximum	292	249	380	332	227	259	560	338	97	333	471	190	393	
Echinodermata (# orgs / 0.1 m ²)	Mean	13.7	16.9	27.2	31.8	36.9	40.3	32.0	26.4	18.9	28.2	19.8	14.2	13.0	
	Std. Dev.	23.1	25.5	47.2	48.0	60.2	68.9	53.2	54.1	38.3	48.8	34.8	26.1	23.2	
	Median	3.5	4.5	3	4	4.5	6	3.5	3.5	3	4.5	2	1.5	2	
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Maximum	84	91	159	159	230	272	168	238	150	171	141	89	103	
Mollusca (# orgs / 0.1 m ²)	Mean	314.9	173.5	212.5	184.4	198.6	271.0	256.7	175.0	173.7	191.4	211.6	164.3	117.8	
	Std. Dev.	400.1	177.7	238.8	210.2	258.9	366.3	344.6	156.4	198.6	139.1	178.4	209.7	123.2	
	Median	143.5	131	153.5	91	89.5	119.5	131	152.5	70	168	173.5	83	69	
	Minimum	1	0	0	4	6	8	0	12	3	17	25	9	3	
	Maximum	1512	689	984	941	1076	1443	1260	699	676	512	639	996	487	
Misc. Taxa (# orgs / 0.1 m ²)	Mean	5.3	5.5	10.5	8.0	8.2	9.6	10.2	6.6	7.4	8.3	6.9	5.1	8.0	
	Std. Dev.	7.1	6.8	13.0	9.8	9.3	12.7	11.7	7.4	8.2	12.3	6.8	3.8	11.5	
	Median	3	3	4	2.5	4	3	6.5	4.5	5	5.5	5	4	4	
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Maximum	36	30	41	36	32	49	50	26	35	66	33	13	54	

Total abundance (a) and Pielou's Evenness (b) at the North Hood Canal station with and without the small bivalve *Nutricola lordi*.

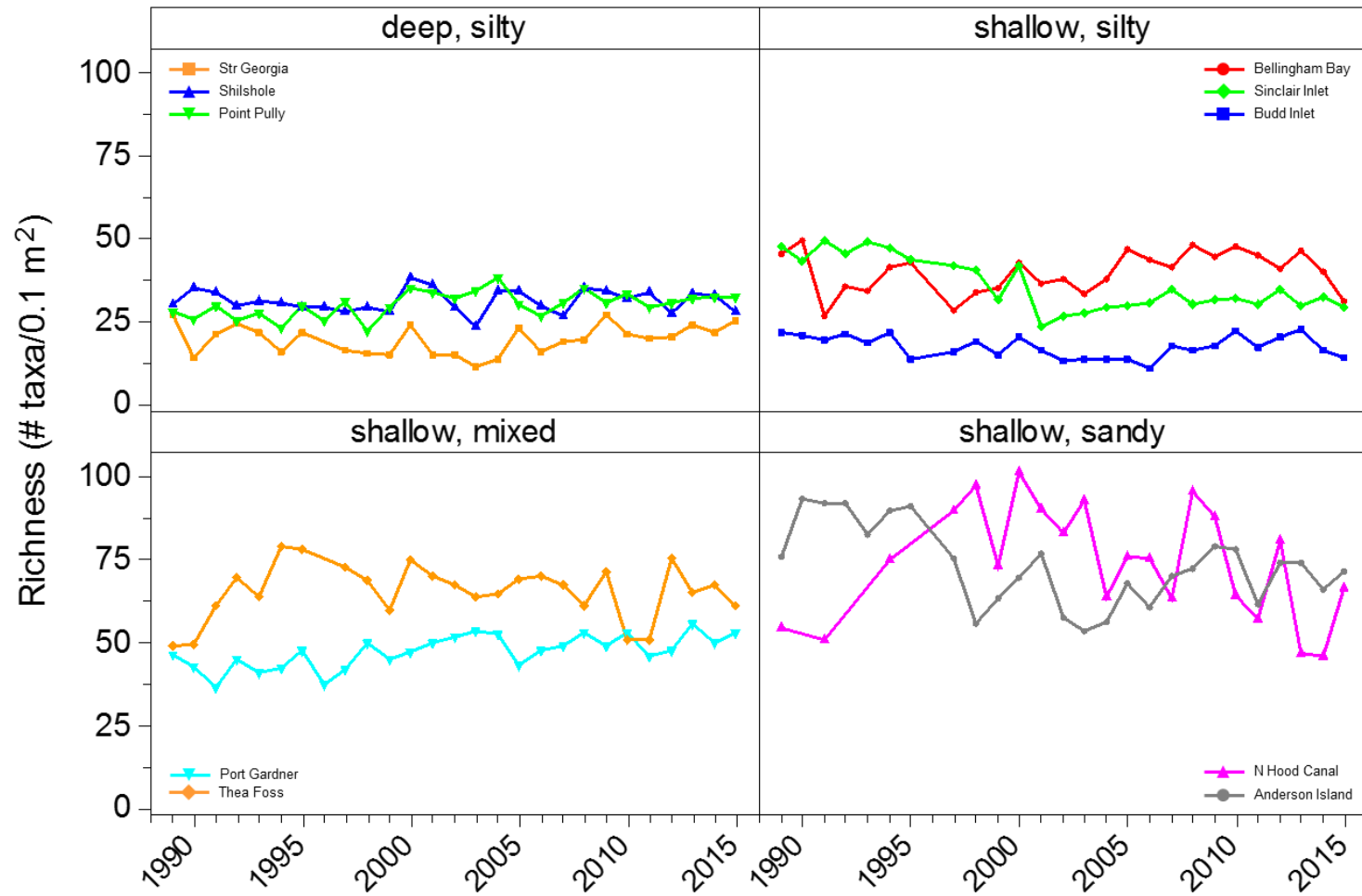


Graphical summaries of mean univariate benthic measures by station and year. Stations are grouped by habitat type.

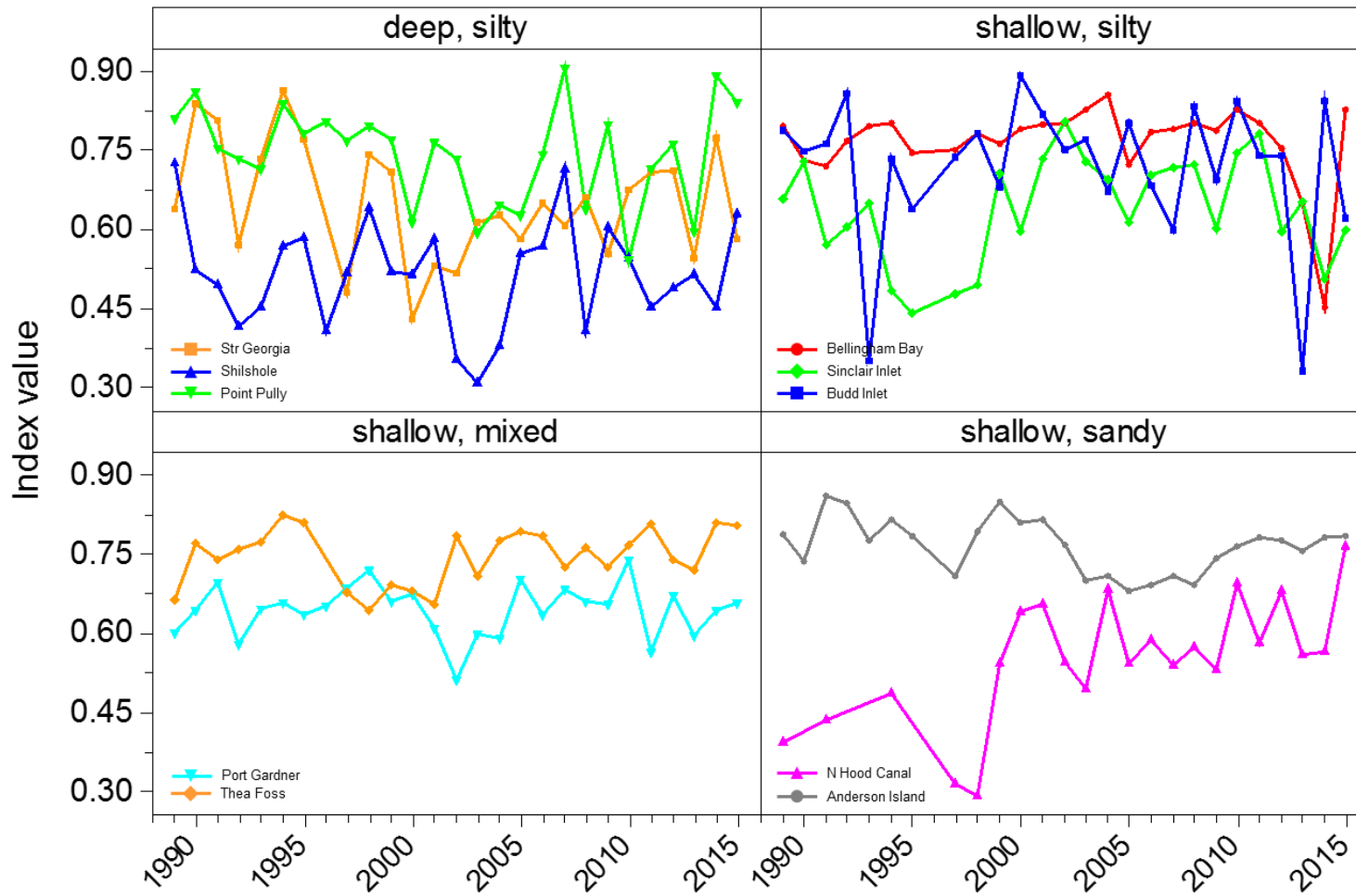
Total Abundance (means)



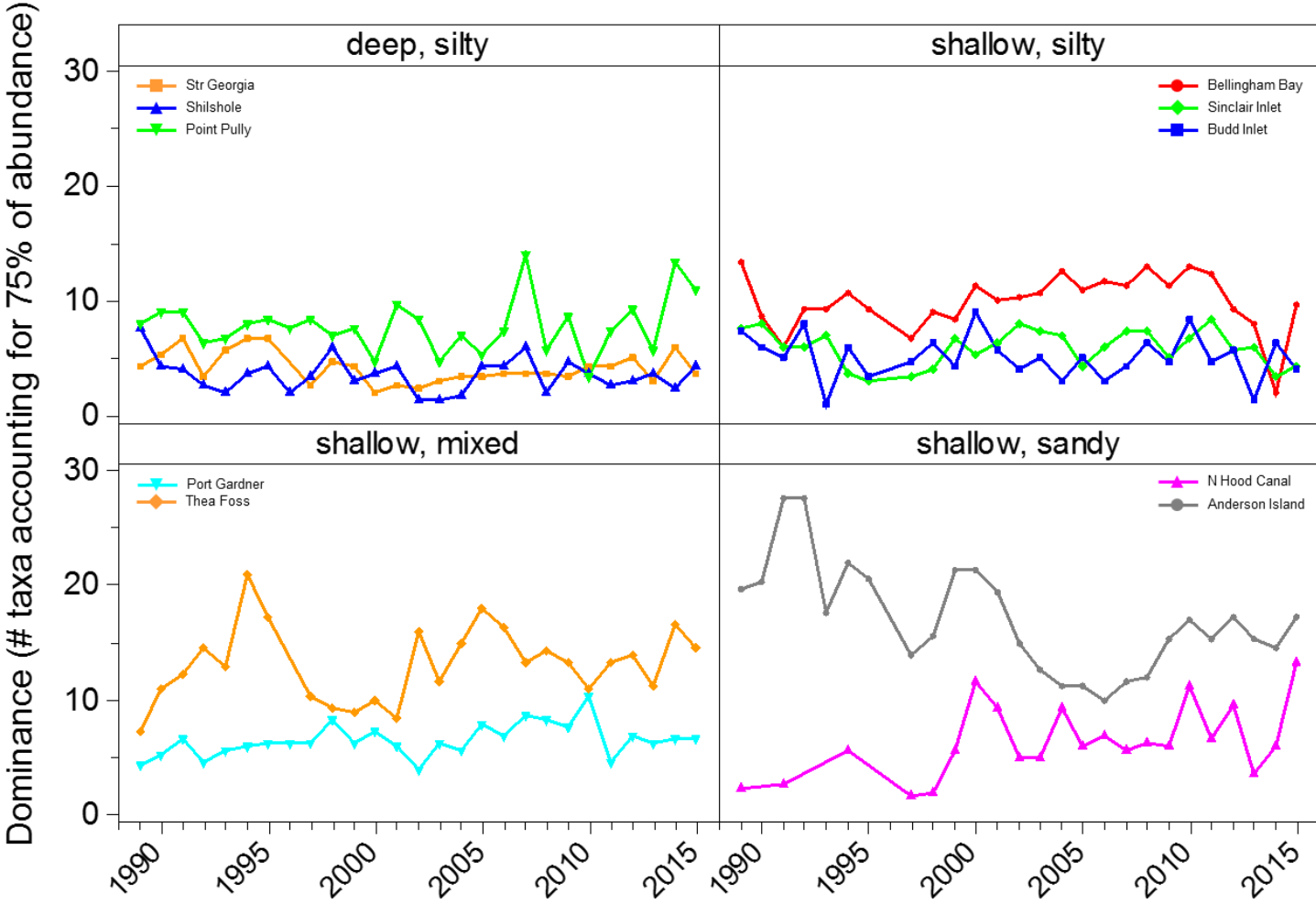
Taxa Richness (means)



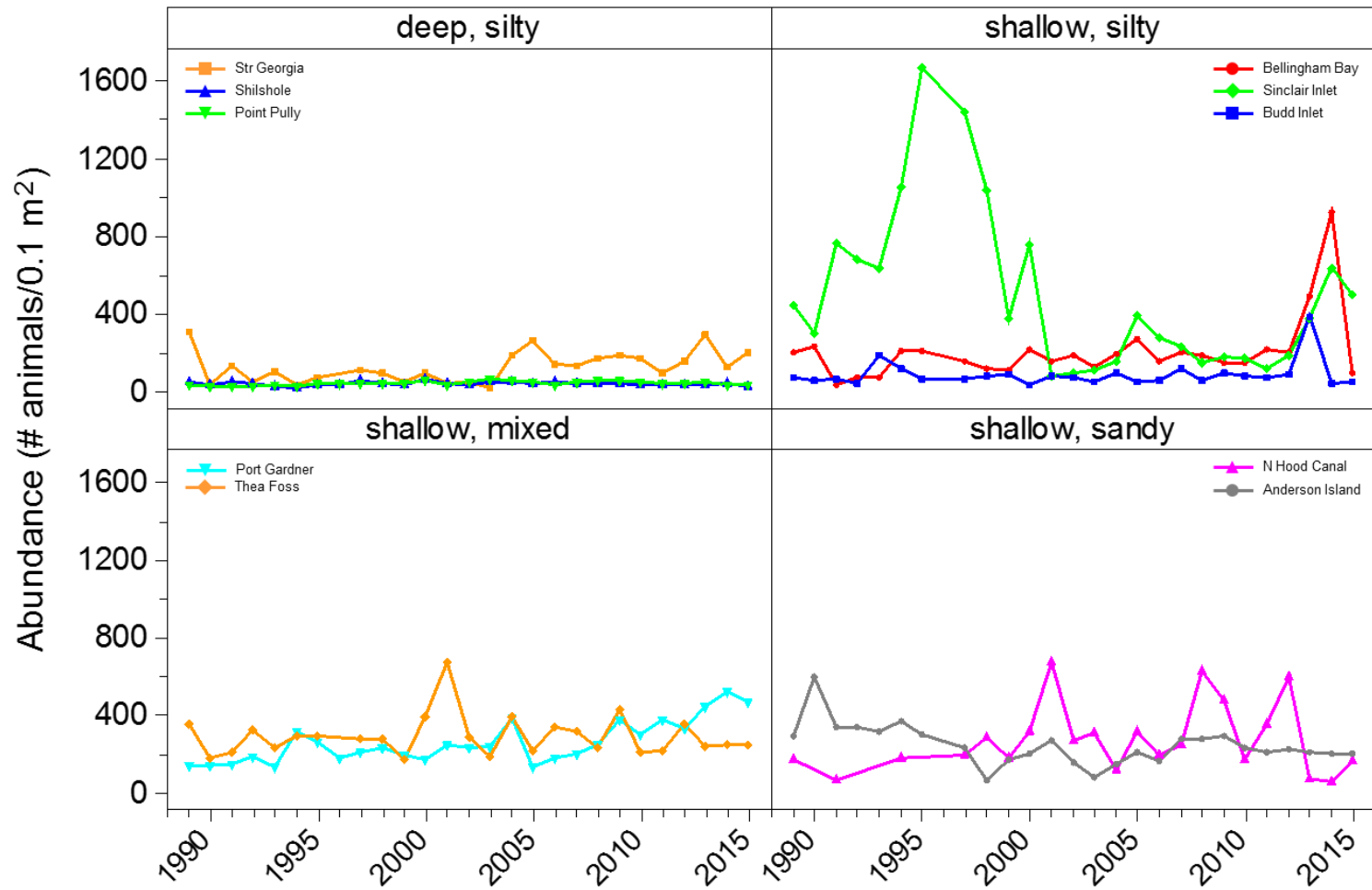
Pielou's Evenness (means)



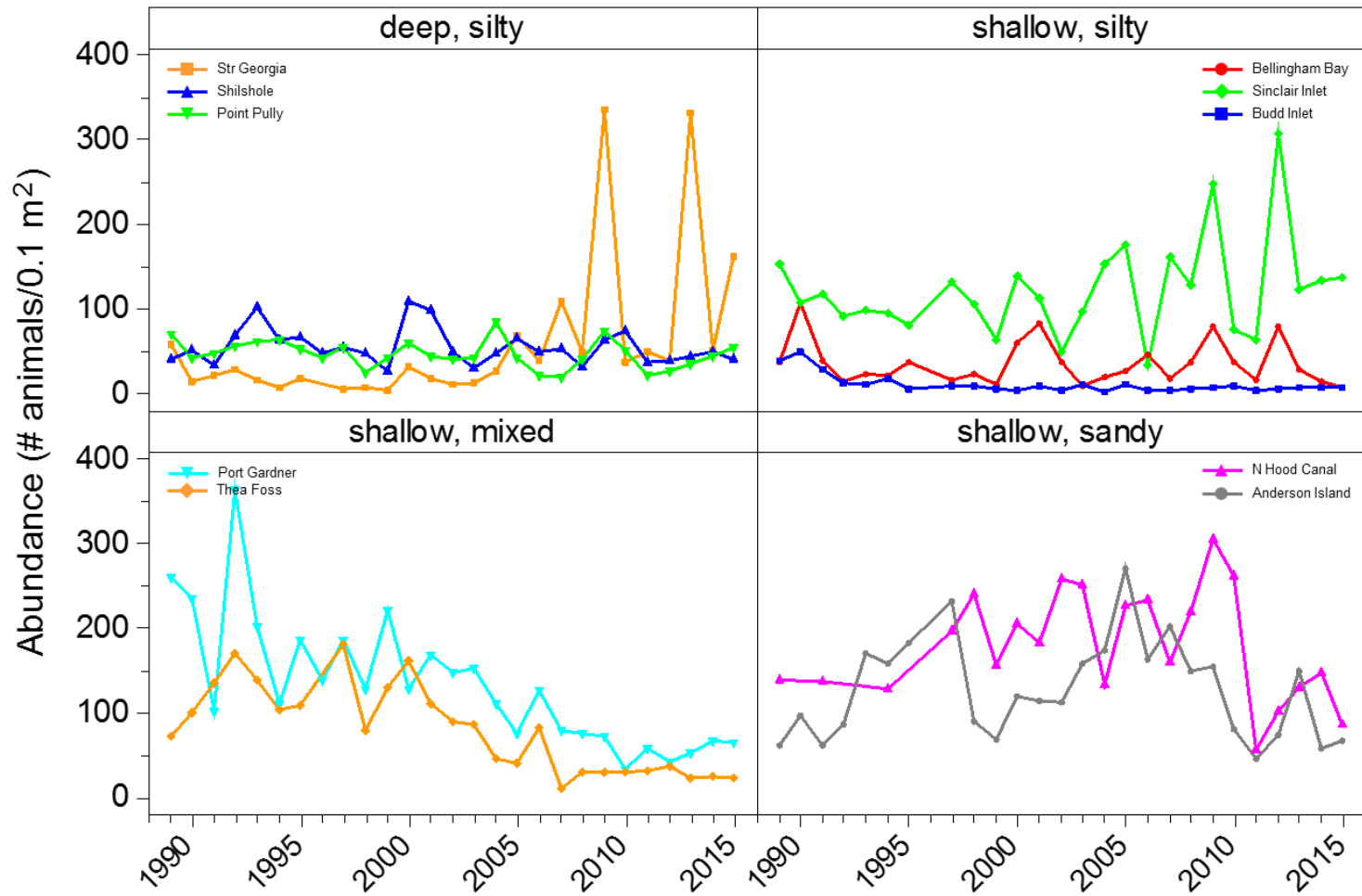
Swartz Dominance Index (means)



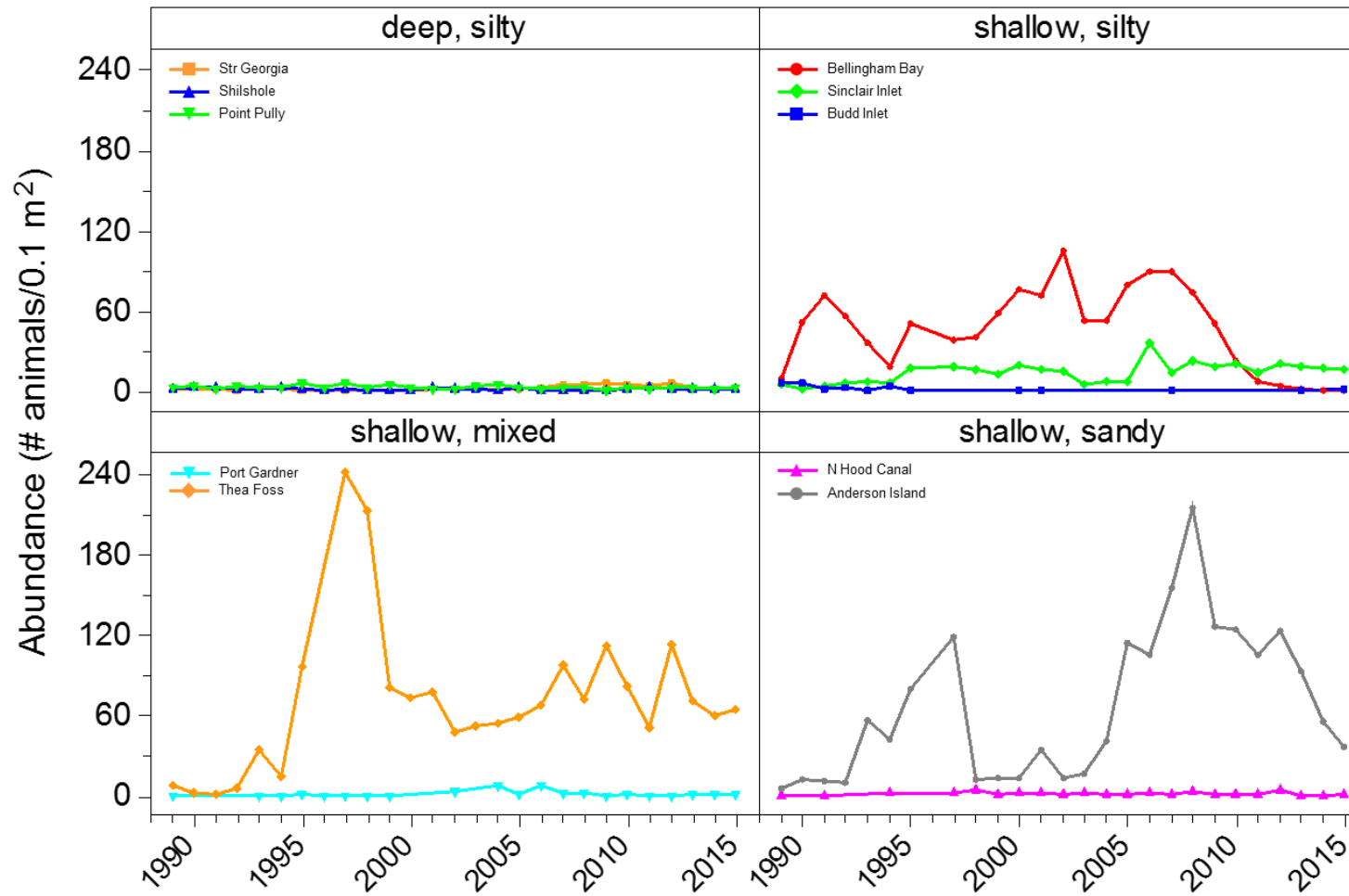
Annelid abundance (means)



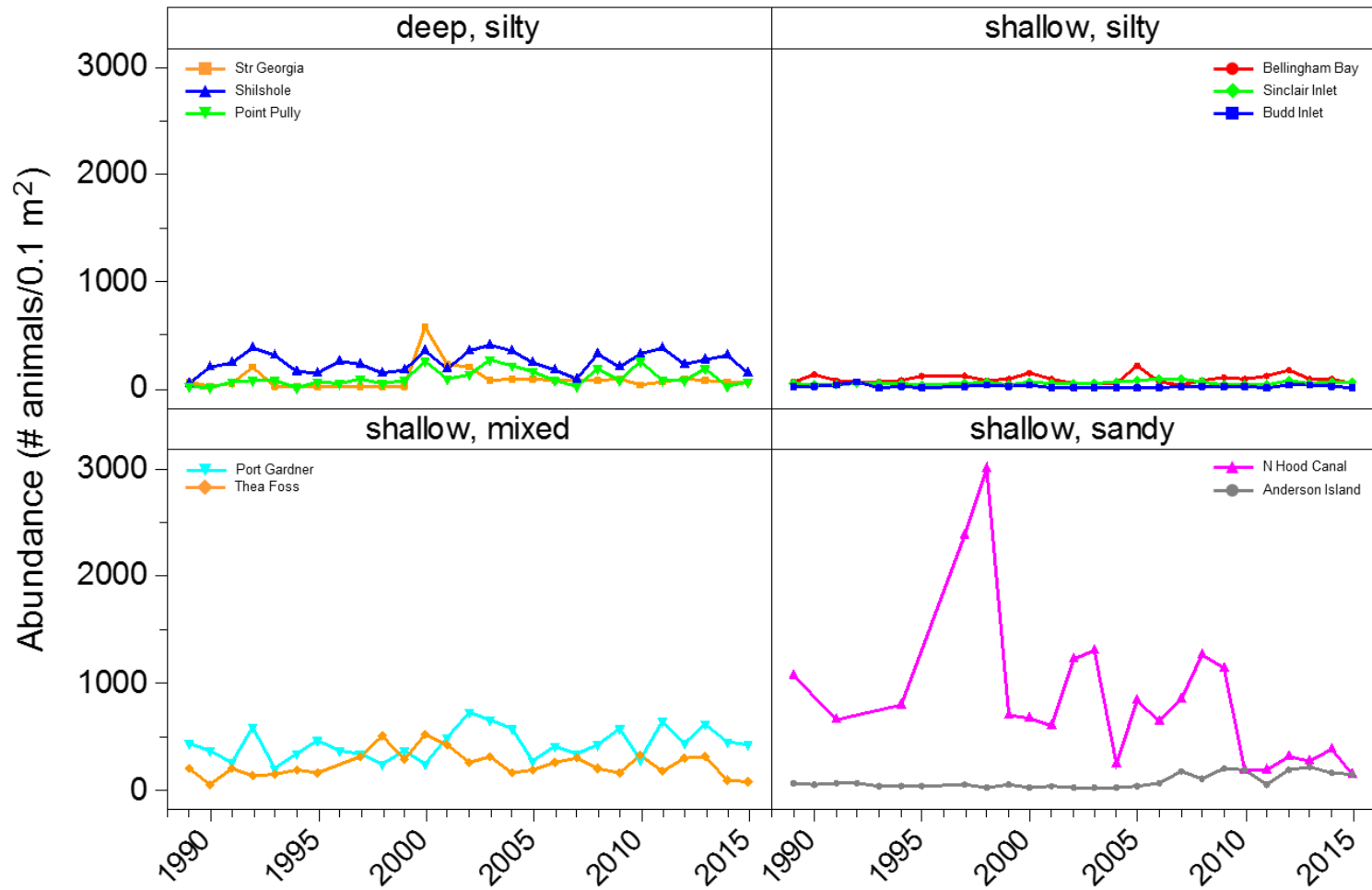
Arthropod abundance (means)



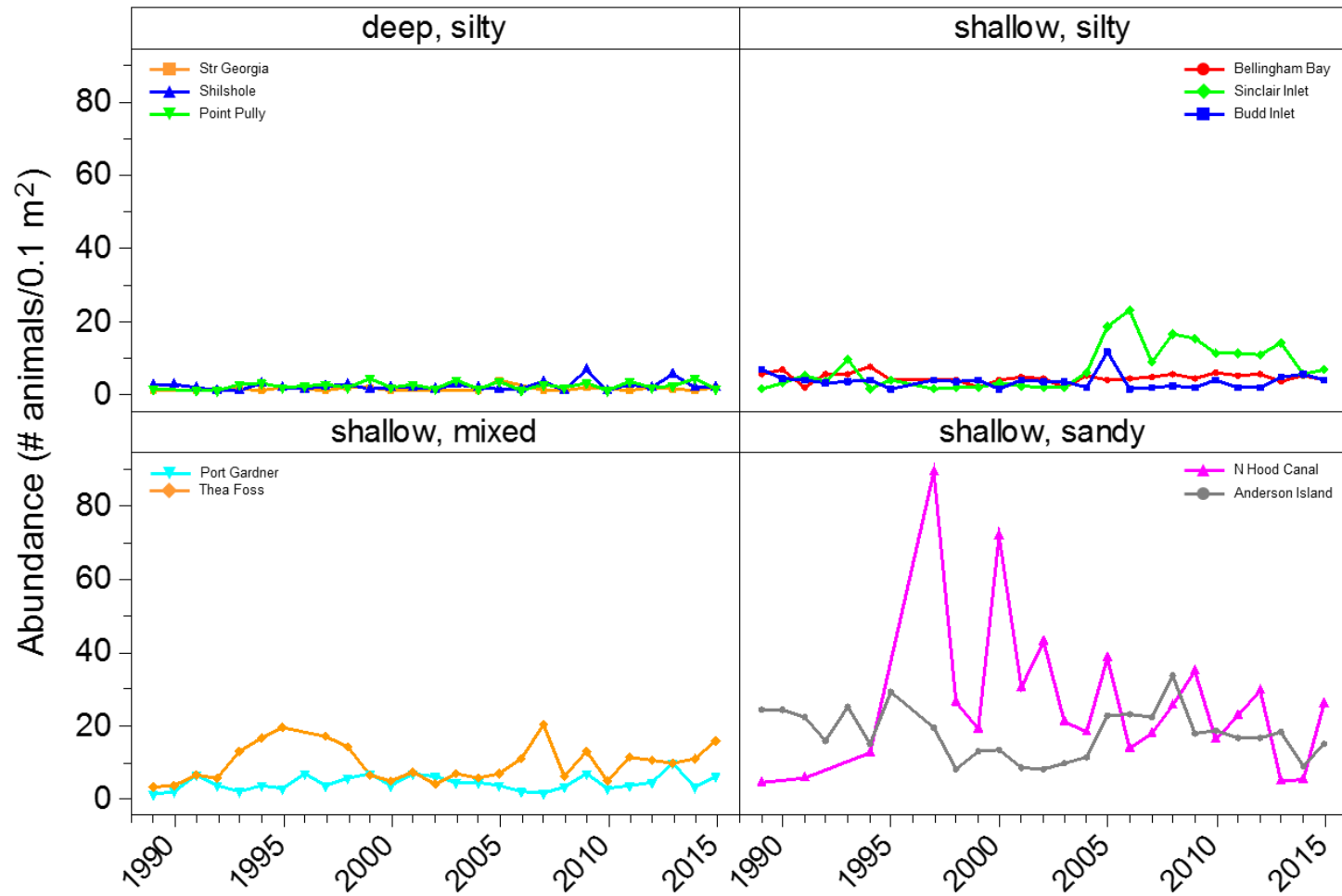
Echinoderm abundance (means)



Mollusc abundance (means)



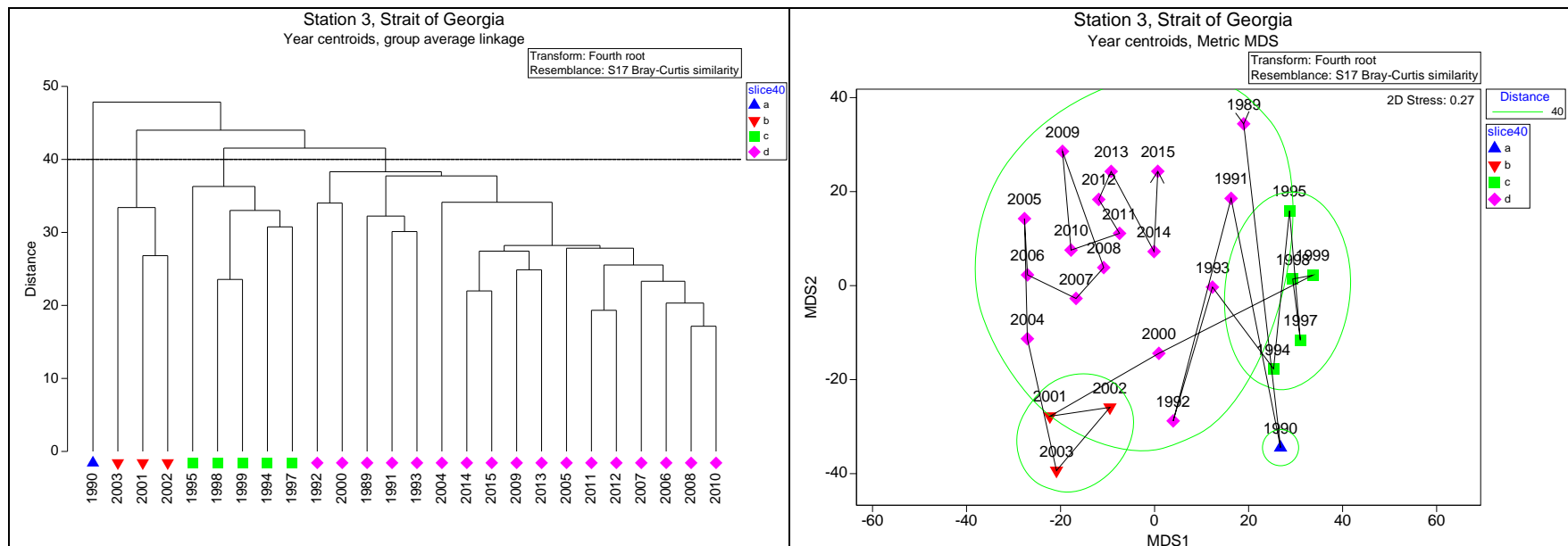
Abundance of miscellaneous taxa (means)

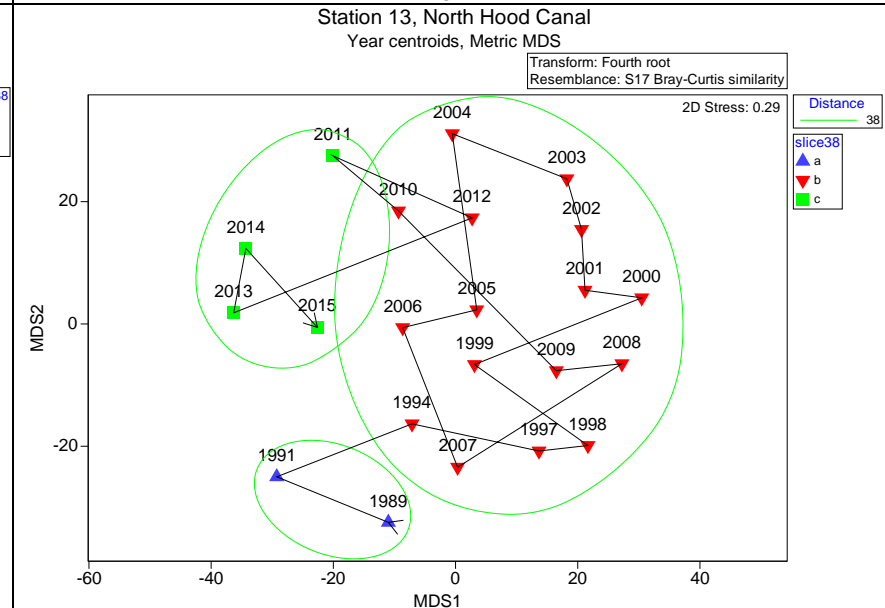
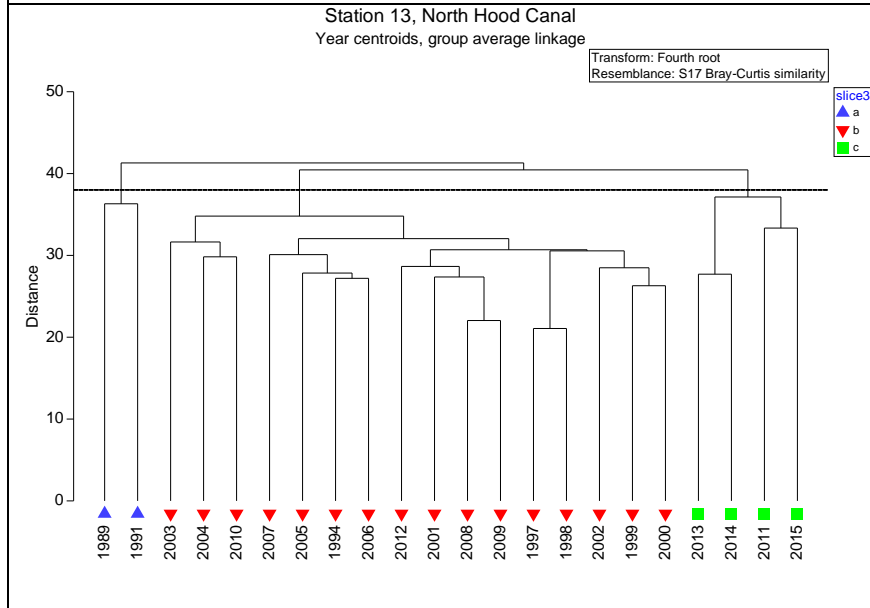
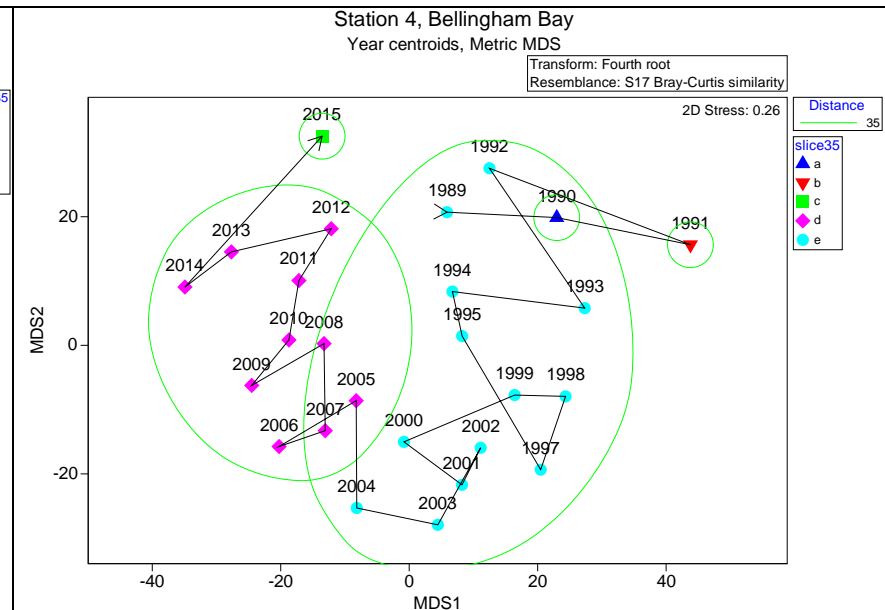
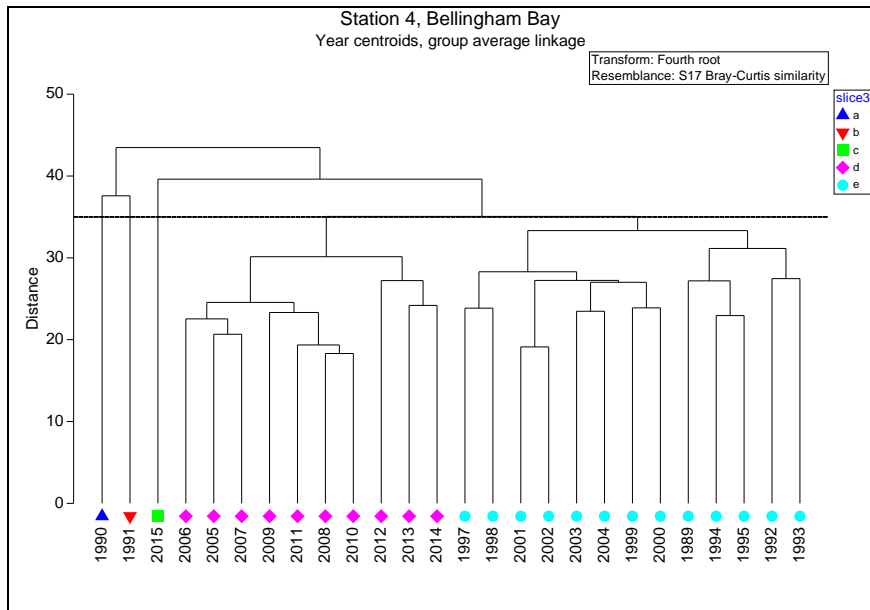


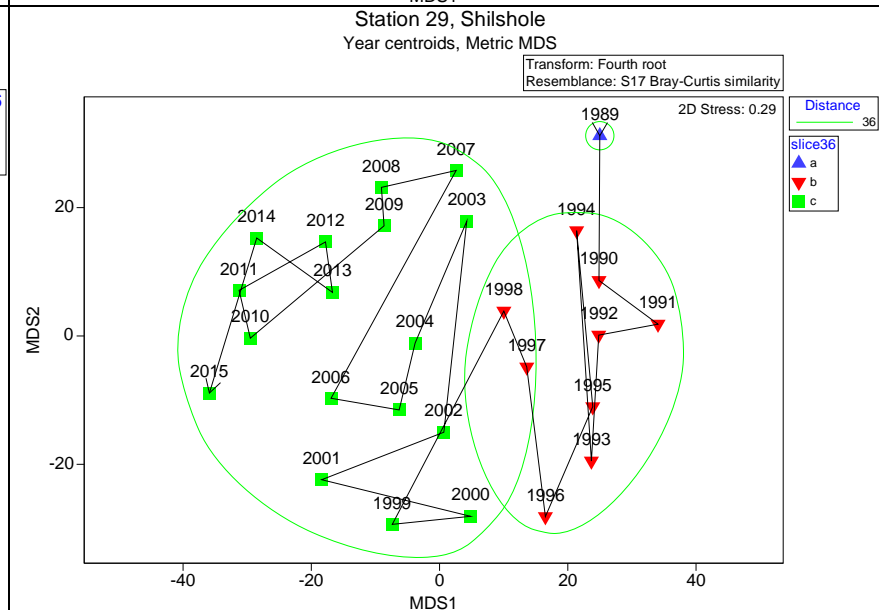
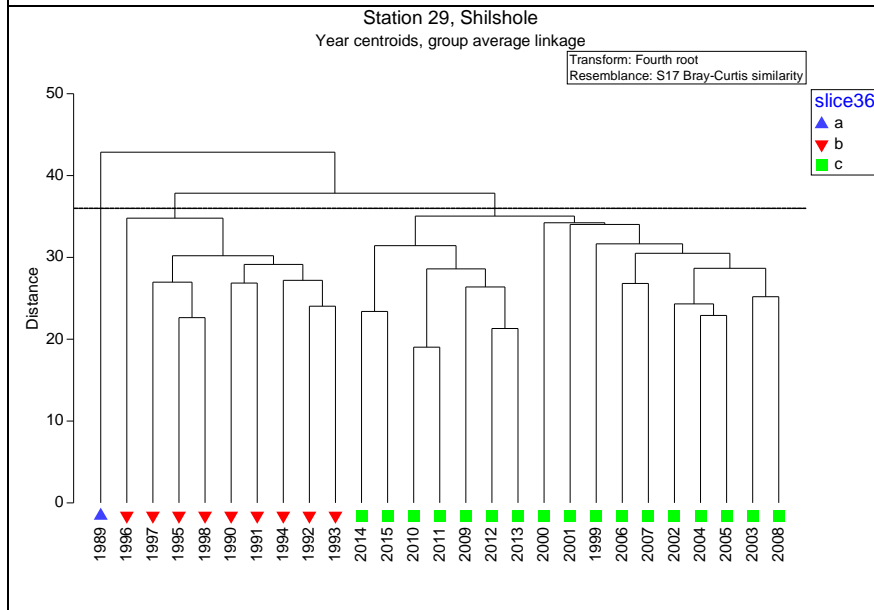
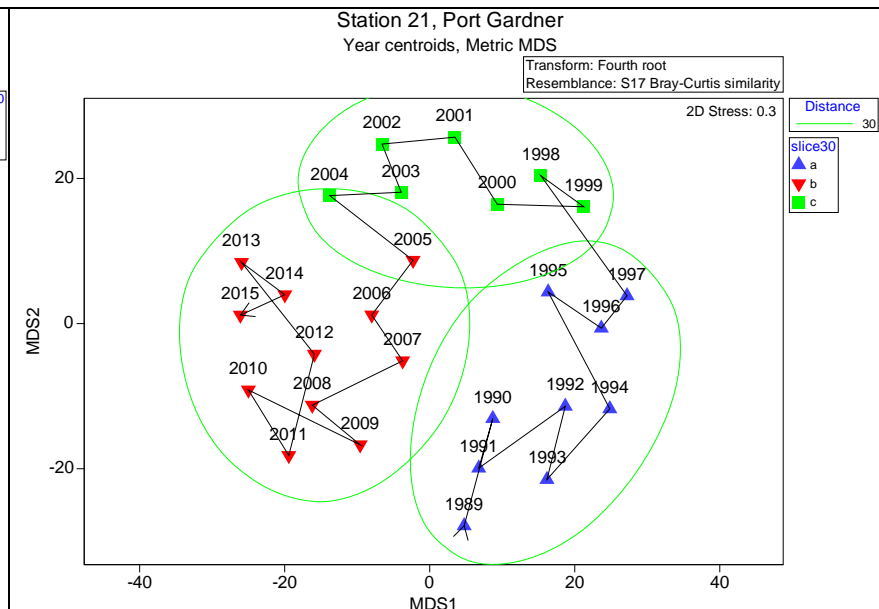
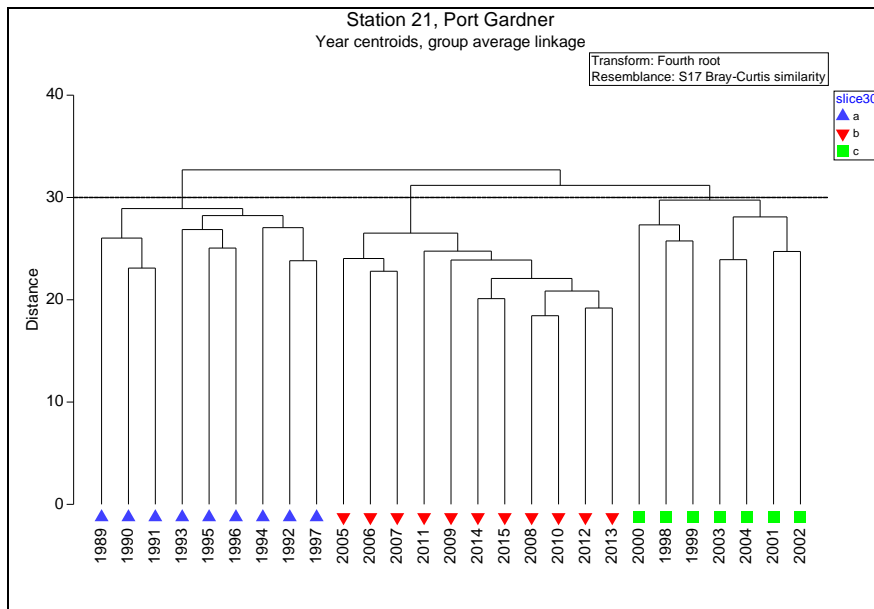
Communities

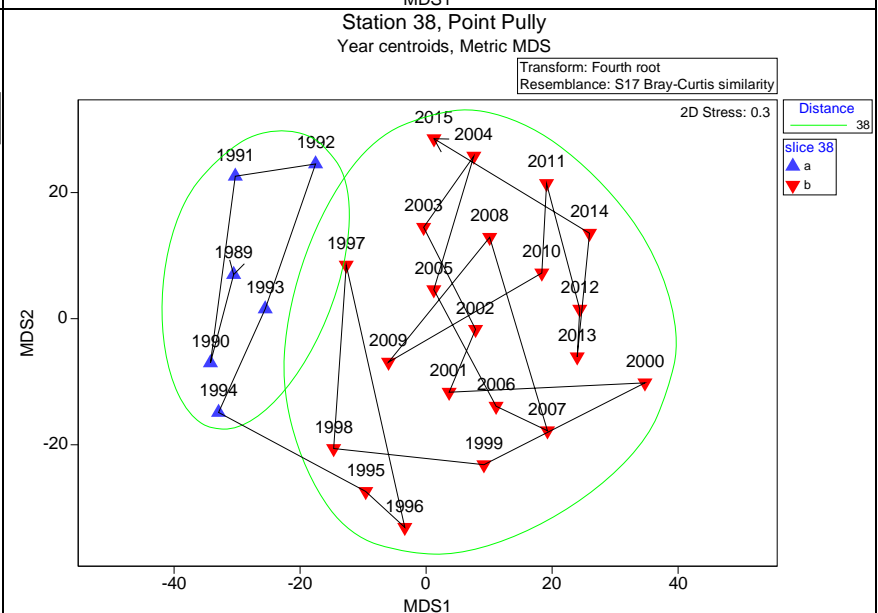
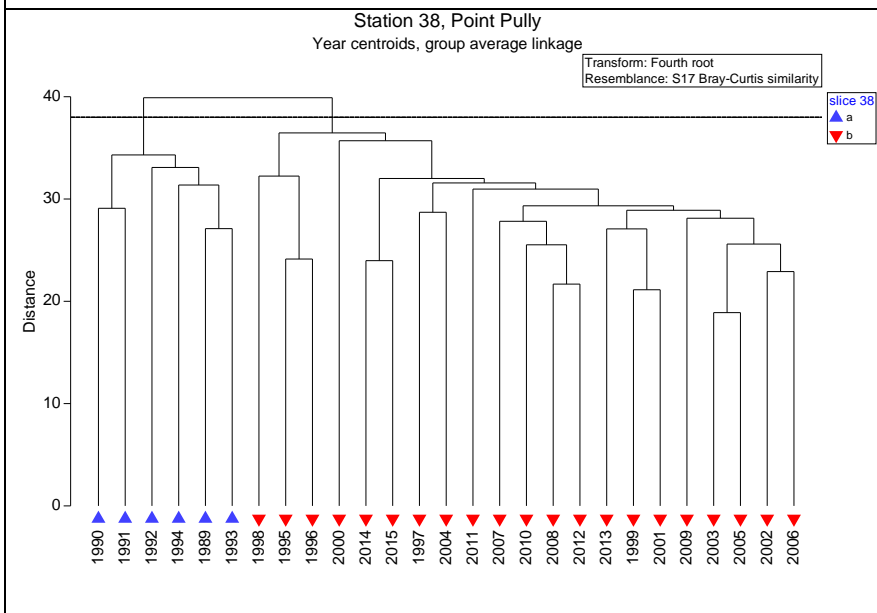
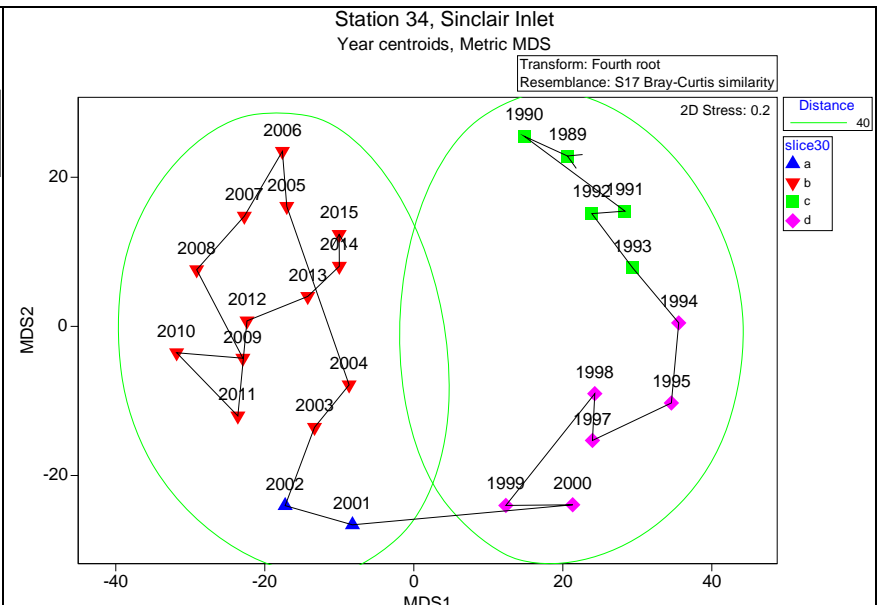
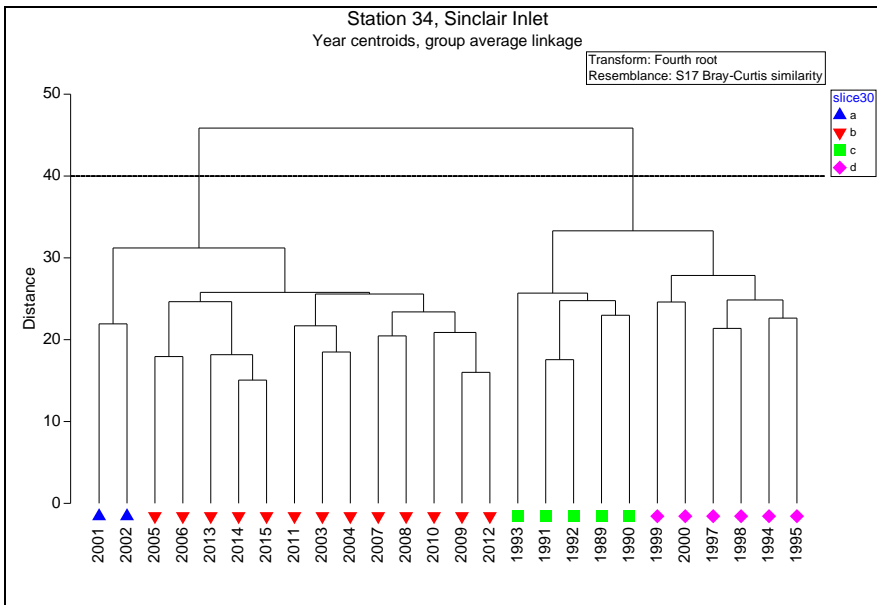
Bray-Curtis similarity was calculated for every pair of samples at each station, based on 4th-root-transformed abundances, every taxon. The centroid (multidimensional mean) of the three replicates for each year was calculated and the distances between the centroids analyzed by ordered ANOSIM (analysis of similarities), hierarchical cluster analysis, and metric multidimensional scaling (mMDS) ordination. Ellipses corresponding to slices through the cluster dendrogram are drawn around groups of year centroids on the mMDS maps.

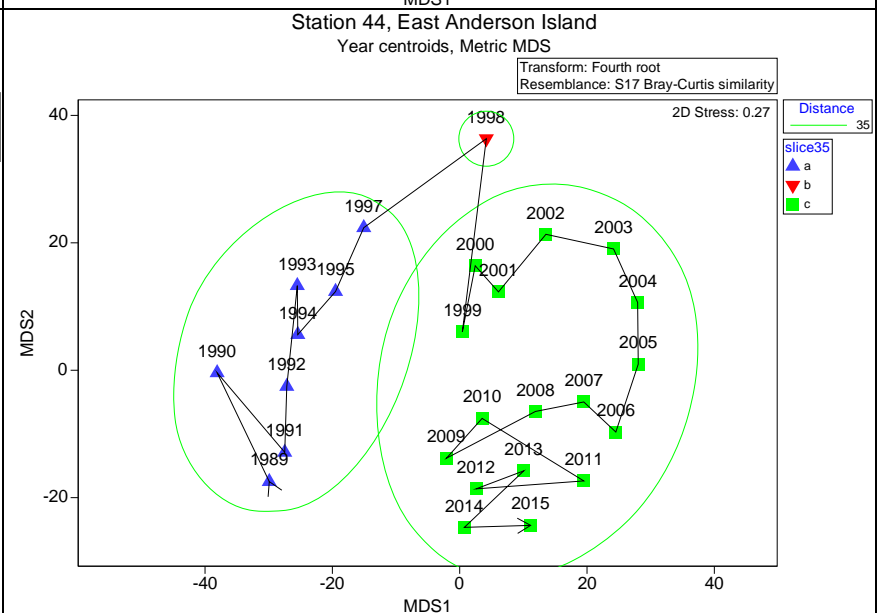
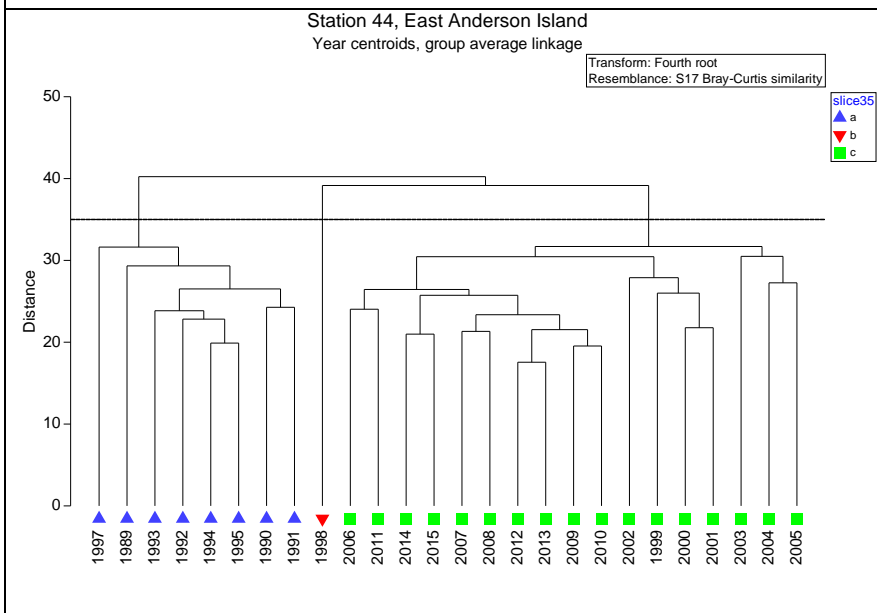
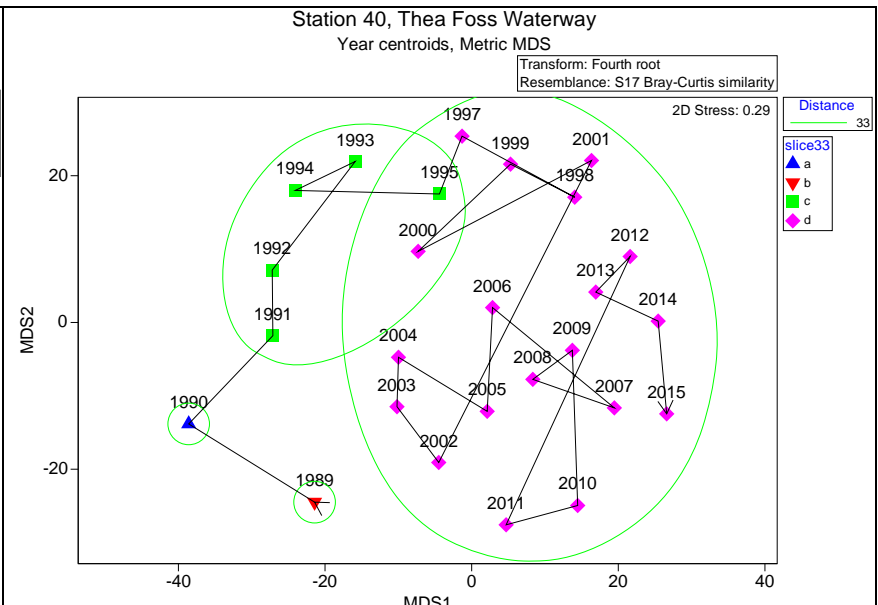
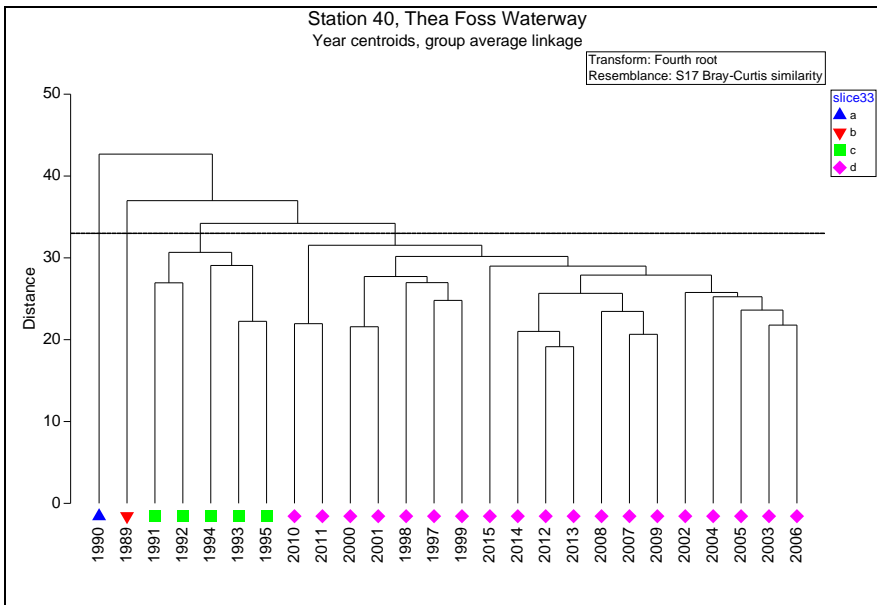
Similarity of benthic assemblages over time, by station.

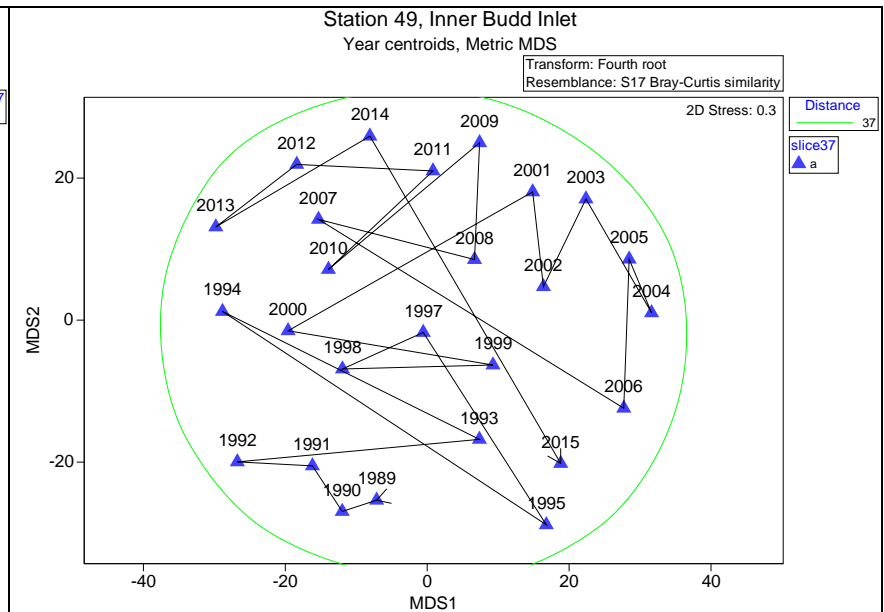
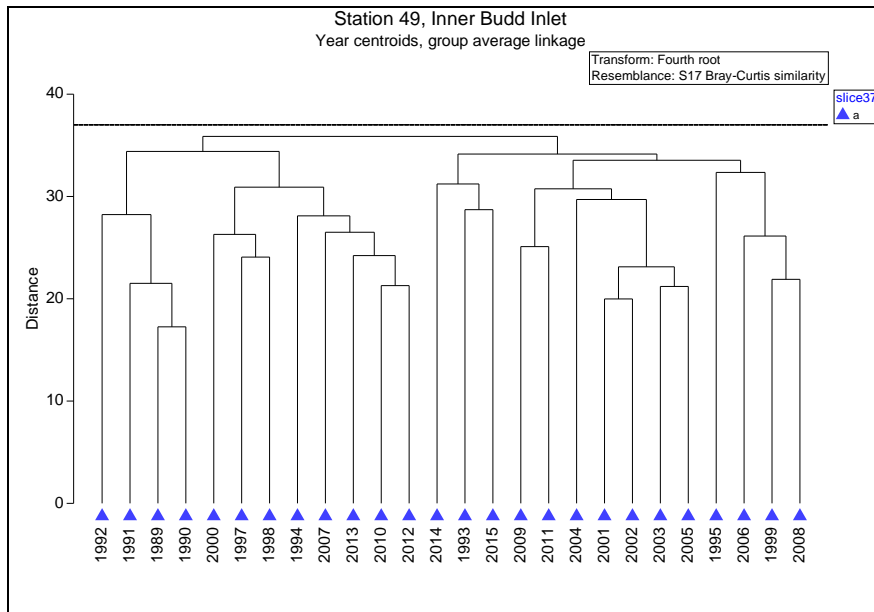




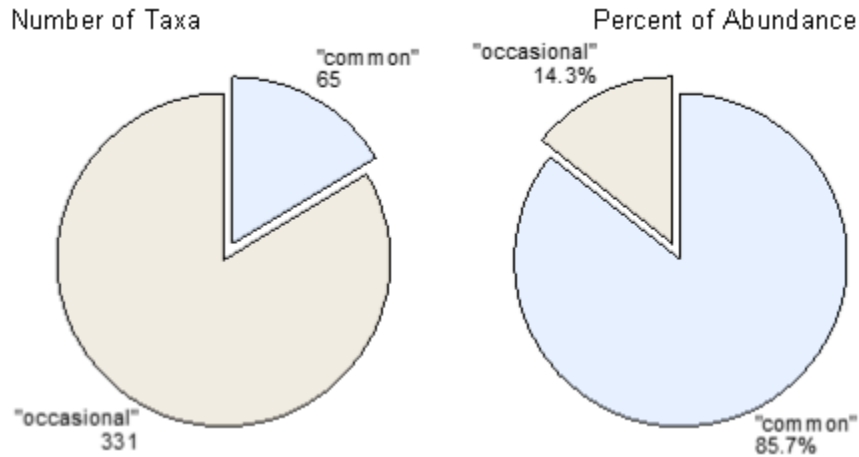




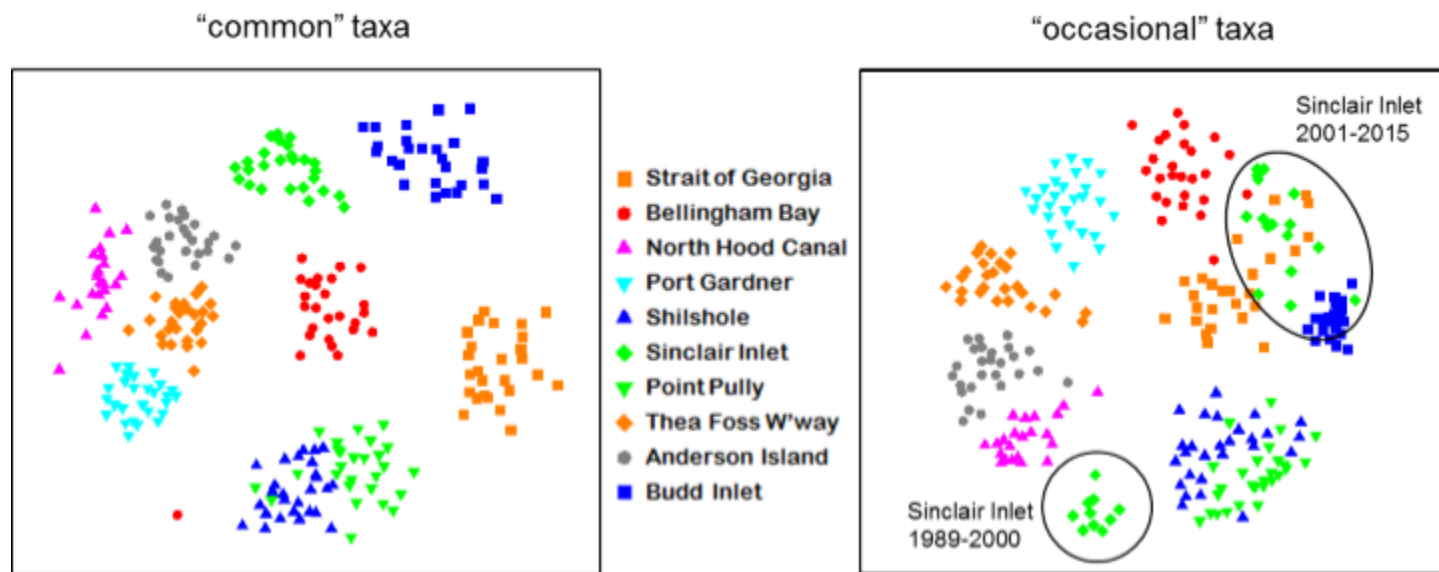




Number and relative abundance of “common” taxa found at all stations and/or all years, and of the remaining “occasional” taxa found collectively over the long-term stations and years.



Degree of similarity of the species mixes and abundances at the ten long-term stations over the years, based on (a) just the 65 “common” taxa found at all stations and/or all years and (b) the other 331 “occasional” taxa. (Compare to Figure 5 in the report, which is based on all 396 taxa.) Each station has a separate symbol, repeated for each year. The closer the symbols are, the more similar the assemblages are. Note the separation of the Sinclair Inlet benthos before vs. after 2000, based on the “occasional” taxa.



Common taxa

Sixty-five taxa were found at all 10 stations and/or in all 27 years. The following tables list those taxa, their taxonomic hierarchies, and summary statistics of occurrence and abundance by station and year.

Link to graphical summaries of abundance, mean, and median of each taxon by station, grouped by habitat type:
[Taxa at all 10 stations and-or 27 years.](#)

Taxa common across stations and years, sorted in decreasing order of occurrence.

Phylum	Taxon	Number of Stations	Number of Years	Station Missing	Year Missing	Number of Samples	Percent of 772 Total Samples
Annelida	<i>Prionospio</i> spp.	10	27			711	92.1%
Mollusca	<i>Macoma</i> spp.	10	27			695	90.0%
Nemertea	Nemertea	10	27			628	81.3%
Mollusca	<i>Axinopsida serricata</i>	10	27			623	80.7%
Annelida	<i>Paraprionospio</i> spp.	9	27	3		575	74.5%
Arthropoda	<i>Pinnixa</i> spp.	10	27			502	65.0%
Mollusca	<i>Parvilucina tenuisculpta</i>	10	27			497	64.4%
Annelida	<i>Pholoe</i> spp.	10	27			492	63.7%
Mollusca	<i>Kurtiella tumida</i>	10	27			488	63.2%
Annelida	<i>Nephtys ferruginea</i>	10	27			466	60.4%
Annelida	<i>Glycera nana</i>	9	27	49		464	60.1%
Annelida	<i>Spiophanes</i> spp.	10	27			453	58.7%
Echinodermata	Amphiuridae	10	27			445	57.6%
Annelida	<i>Aphelochaeta</i> spp.	10	27			434	56.2%
Arthropoda	<i>Eudorella pacifica</i>	10	27			428	55.4%
Annelida	<i>Bipalponephtys cornuta</i>	10	27			423	54.8%
Annelida	<i>Scoletoma</i> spp.	9	27	49		416	53.9%
Annelida	<i>Cossura</i> spp.	9	27	49		412	53.4%
Arthropoda	<i>Euphilomedes producta</i>	10	27			406	52.6%
Annelida	Ampharetidae	10	27			403	52.2%
Annelida	<i>Mediomastus</i> spp.	10	27			400	51.8%

Phylum	Taxon	Number of Stations	Number of Years	Station Missing	Year Missing	Number of Samples	Percent of 772 Total Samples
Annelida	<i>Levinsenia gracilis</i>	8	27	13, 49		388	50.3%
Annelida	Lumbrineridae	9	27	38		388	50.3%
Mollusca	<i>Astyris gausapata</i>	10	27			377	48.8%
Arthropoda	<i>Heterophoxus</i> spp.	10	27			372	48.2%
Arthropoda	Corophiidae	10	27			364	47.2%
Annelida	Euclymeninae	9	27	49		361	46.8%
Mollusca	<i>Ennucula tenuis</i>	9	27	49		356	46.1%
Annelida	<i>Pectinaria</i> spp.	10	27			354	45.9%
Mollusca	<i>Odostomia</i> spp.	10	27			349	45.2%
Annelida	<i>Dipolydora</i> spp.	10	27			342	44.3%
Arthropoda	<i>Euphilomedes carcharodonta</i>	9	27	3		318	41.2%
Annelida	Hesionidae	10	27			316	40.9%
Annelida	<i>Leitoscoloplos pugettensis</i>	9	27	49		316	40.9%
Annelida	<i>Polycirrus</i> spp.	9	27	38		313	40.5%
Mollusca	<i>Nutricula lordi</i>	10	27			303	39.2%
Annelida	<i>Glycinde armigera</i>	10	27			299	38.7%
Annelida	<i>Terebellides</i> spp.	8	27	3, 38		288	37.3%
Annelida	<i>Eteone</i> spp.	10	27			285	36.9%
Annelida	<i>Heteromastus</i> spp.	10	27			272	35.2%
Mollusca	<i>Alvania compacta</i>	9	26	3	1996	267	34.6%
Mollusca	<i>Turbonilla</i> spp.	10	27			256	33.2%
Mollusca	<i>Acila castrensis</i>	9	27	49		249	32.3%
Annelida	<i>Phyllodoce</i> spp.	10	27			244	31.6%
Annelida	<i>Nephtys</i> spp.	9	27	49		240	31.1%
Annelida	<i>Glycinde picta</i>	10	26		1996	237	30.7%
Arthropoda	<i>Diastylis</i> spp.	9	27	4		230	29.8%
Annelida	<i>Spiochaetopterus costarum</i> Cmplx	9	27	3		214	27.7%
Mollusca	Cylichnidae	10	26		1996	212	27.5%
Annelida	<i>Laonice</i> spp.	9	26	49	1996	207	26.8%
Mollusca	<i>Compsomyax</i> spp.	9	27	3		192	24.9%

Phylum	Taxon	Number of Stations	Number of Years	Station Missing	Year Missing	Number of Samples	Percent of 772 Total Samples
Annelida	<i>Aricidea</i> spp.	9	27	49		185	24.0%
Arthropoda	<i>Ampelisca</i> spp.	10	27			182	23.6%
Arthropoda	<i>Westwoodilla tone</i>	9	27	38		172	22.3%
Annelida	Oligochaeta	10	26		1996	169	21.9%
Annelida	<i>Pista</i> spp.	8	27	3, 49		169	21.9%
Mollusca	<i>Macoma yoldiformis</i>	8	27	3, 29		161	20.9%
Mollusca	<i>Yoldia</i> spp.	9	27	49		153	19.8%
Annelida	<i>Chaetozone</i> spp.	9	26	49	1996	145	18.8%
Mollusca	<i>Lucinoma annulatum</i>	8	27	34, 49		143	18.5%
Annelida	Polynoidae	10	27			134	17.4%
Annelida	<i>Ophelina</i> spp.	9	26	49	1993	123	15.9%
Annelida	<i>Malmgreniella</i> spp.	10	27			117	15.2%
Annelida	Flabelligeridae	9	27	49		95	12.3%
Arthropoda	<i>Aoroides</i> spp.	9	26	49	1996	86	11.1%

Taxonomic level and hierarchy of common taxa, by station.

Taxon	Level	Phylum	Class	Order	Family
<i>Acila castrensis</i>	species	Mollusca	Bivalvia	Nuculida	Nuculidae
<i>Alvania compacta</i>	species	Mollusca	Gastropoda	Littorinimorpha	Rissoidae
<i>Ampelisca</i> spp.	genus	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae
Ampharetidae	family	Annelida	Polychaeta	Terebellida	Ampharetidae
Amphiuridae	family	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae
<i>Aoroides</i> spp.	genus	Arthropoda	Malacostraca	Amphipoda	Aoridae
<i>Aphelochaeta</i> spp.	genus	Annelida	Polychaeta	Terebellida	Cirratulidae
<i>Aricidea</i> spp.	genus	Annelida	Polychaeta	Orbiniida	Paraonidae
<i>Astyris gausapata</i>	species	Mollusca	Gastropoda	Neogastropoda	Columbellidae
<i>Axinopsida serricata</i>	species	Mollusca	Bivalvia	Lucinida	Thyasiridae
<i>Bipalponephtys cornuta</i>	species	Annelida	Polychaeta	Phyllodocida	Nephtyidae

Taxon	Level	Phylum	Class	Order	Family
<i>Chaetozone</i> spp.	genus	Annelida	Polychaeta	Terebellida	Cirratulidae
<i>Compsomyax</i> spp.	genus	Mollusca	Bivalvia	Venerida	Veneridae
Corophiidae	family	Arthropoda	Malacostraca	Amphipoda	Corophiidae
<i>Cossura</i> spp.	genus	Annelida	Polychaeta	Cossurida	Cossuridae
Cylichnidae	family	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae
<i>Diastylis</i> spp.	genus	Arthropoda	Malacostraca	Cumacea	Diastylidae
<i>Dipolydora</i> spp.	genus	Annelida	Polychaeta	Spionida	Spionidae
<i>Ennucula tenuis</i>	species	Mollusca	Bivalvia	Nuculida	Nuculidae
<i>Eteone</i> spp.	genus	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
Euclymeninae	subfamily	Annelida	Polychaeta	Capitellida	Maldanidae
<i>Eudorella pacifica</i>	species	Arthropoda	Malacostraca	Cumacea	Leuconidae
<i>Euphilomedes carcharodonta</i>	species	Arthropoda	Ostracoda	Myodocopida	Philomedidae
<i>Euphilomedes producta</i>	species	Arthropoda	Ostracoda	Myodocopida	Philomedidae
Flabelligeridae	family	Annelida	Polychaeta	Terebellida	Flabelligeridae
<i>Glycera nana</i>	species	Annelida	Polychaeta	Phyllodocida	Glyceridae
<i>Glycinde armigera</i>	species	Annelida	Polychaeta	Phyllodocida	Goniadidae
<i>Glycinde picta</i>	species	Annelida	Polychaeta	Phyllodocida	Goniadidae
Hesionidae	family	Annelida	Polychaeta	Phyllodocida	Hesionidae
<i>Heteromastus</i> spp.	genus	Annelida	Polychaeta	Capitellida	Capitellidae
<i>Heterophoxus</i> spp.	genus	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae
<i>Kurtiella tumida</i>	species	Mollusca	Bivalvia	Venerida	Lasaeidae
<i>Laonice</i> spp.	genus	Annelida	Polychaeta	Spionida	Spionidae
<i>Leitoscoloplos pugettensis</i>	species	Annelida	Polychaeta	Orbiniida	Orbiniidae
<i>Levinsenia gracilis</i>	species	Annelida	Polychaeta	Orbiniida	Paraonidae
<i>Lucinoma annulatum</i>	species	Mollusca	Bivalvia	Lucinida	Lucinidae
Lumbrineridae	family	Annelida	Polychaeta	Eunicida	Lumbrineridae
<i>Macoma</i> spp.	genus	Mollusca	Bivalvia	Venerida	Tellinidae
<i>Macoma yoldiformis</i>	species	Mollusca	Bivalvia	Venerida	Tellinidae
<i>Malmgreniella</i> spp.	genus	Annelida	Polychaeta	Phyllodocida	Polynoidae
<i>Mediomastus</i> spp.	genus	Annelida	Polychaeta	Capitellida	Capitellidae
Nemertea	phylum	Nemertea	Nemertea	Nemertea	Nemertea
<i>Nephtys ferruginea</i>	species	Annelida	Polychaeta	Phyllodocida	Nephtyidae
<i>Nephtys</i> spp.	genus	Annelida	Polychaeta	Phyllodocida	Nephtyidae

Taxon	Level	Phylum	Class	Order	Family
<i>Nutricula lordi</i>	species	Mollusca	Bivalvia	Venerida	Veneridae
<i>Odostomia</i> spp.	genus	Mollusca	Gastropoda	Heterobranchia	Pyramidellidae
Oligochaeta	subclass	Annelida	Clitellata	Oligochaeta	Oligochaeta
<i>Ophelina</i> spp.	genus	Annelida	Polychaeta	Opheliida	Opheliidae
<i>Paraprionospio</i> spp.	genus	Annelida	Polychaeta	Spionida	Spionidae
<i>Parvilucina tenuisculpta</i>	species	Mollusca	Bivalvia	Lucinida	Lucinidae
<i>Pectinaria</i> spp.	genus	Annelida	Polychaeta	Terebellida	Pectinariidae
<i>Pholoe</i> spp.	genus	Annelida	Polychaeta	Phyllodocida	Pholoidae
<i>Phyllodoce</i> spp.	genus	Annelida	Polychaeta	Phyllodocida	Phyllodocidae
<i>Pinnixa</i> spp.	genus	Arthropoda	Malacostraca	Decapoda	Pinnotheridae
<i>Pista</i> spp.	genus	Annelida	Polychaeta	Terebellida	Terebellidae
<i>Polycirrus</i> spp.	genus	Annelida	Polychaeta	Terebellida	Terebellidae
Polynoidae	family	Annelida	Polychaeta	Phyllodocida	Polynoidae
<i>Prionospio</i> spp.	genus	Annelida	Polychaeta	Spionida	Spionidae
<i>Scoletoma</i> spp.	genus	Annelida	Polychaeta	Eunicida	Lumbrineridae
<i>Spiochaetopterus costarum</i> Cmplx	species complex	Annelida	Polychaeta	Sedentaria	Chaetopteridae
<i>Spiophanes</i> spp.	genus	Annelida	Polychaeta	Spionida	Spionidae
<i>Terebellides</i> spp.	genus	Annelida	Polychaeta	Terebellida	Trichobranchidae
<i>Turbonilla</i> spp.	genus	Mollusca	Gastropoda	Heterobranchia	Pyramidellidae
<i>Westwoodilla tone</i>	species	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae
<i>Yoldia</i> spp.	genus	Mollusca	Bivalvia	Nuculanida	Yoldiidae

Occurrence (number of samples) of common taxa, by station.

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Mollusca	<i>Acila castrensis</i>	8	61	18	2	59	74	11	1	15	0
Mollusca	<i>Alvania compacta</i>	0	8	66	62	5	27	3	39	56	1
Arthropoda	<i>Ampelisca</i> spp.	1	2	31	14	6	17	17	25	62	7
Annelida	Ampharetidae	9	18	47	62	50	32	29	69	73	14
Echinodermata	Amphiuridae	2	77	48	37	9	77	28	72	77	18

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Arthropoda	<i>Aoroides</i> spp.	2	1	27	2	2	3	2	9	38	0
Annelida	<i>Aphelochaeta</i> spp.	1	69	21	74	9	78	2	73	55	52
Annelida	<i>Aricidea</i> spp.	1	72	15	12	13	5	18	10	39	0
Mollusca	<i>Astyris gausapata</i>	44	23	57	55	6	45	2	54	57	34
Mollusca	<i>Axinopsida serricata</i>	30	73	66	81	73	75	74	74	70	7
Annelida	<i>Bipalponephtys cornuta</i>	43	45	9	59	54	68	19	25	32	69
Annelida	<i>Chaetozone</i> spp.	3	8	20	2	13	14	7	50	28	0
Mollusca	<i>Compsomyax</i> spp.	0	21	22	51	4	26	6	45	11	6
Arthropoda	Corophiidae	55	64	61	8	31	14	47	23	58	3
Annelida	<i>Cossura</i> spp.	73	72	3	34	58	67	68	29	8	0
Mollusca	Cylichnidae	5	49	32	41	6	3	9	22	31	14
Arthropoda	<i>Diastylis</i> spp.	12	0	32	8	72	4	50	17	26	9
Annelida	<i>Dipolydora</i> spp.	15	22	56	47	6	68	3	59	63	3
Mollusca	<i>Ennucula tenuis</i>	4	70	45	77	52	2	24	61	21	0
Annelida	<i>Eteone</i> spp.	4	31	38	60	2	41	2	36	37	34
Annelida	Euclymeninae	5	48	61	76	12	20	1	69	69	0
Arthropoda	<i>Eudorella pacifica</i>	9	67	14	8	78	78	80	26	54	14
Arthropoda	<i>Euphilomedes carcharodonta</i>	0	3	66	81	4	5	4	74	77	4
Arthropoda	<i>Euphilomedes producta</i>	5	21	50	81	81	2	79	71	15	1
Annelida	Flabelligeridae	2	22	6	1	21	1	32	1	9	0
Annelida	<i>Glycera nana</i>	49	64	15	81	49	2	65	72	67	0
Annelida	<i>Glycinde armigera</i>	9	44	27	48	23	12	17	52	65	2
Annelida	<i>Glycinde picta</i>	20	8	52	38	4	32	3	14	21	45
Annelida	Hesionidae	2	27	30	14	17	68	22	17	53	66
Annelida	<i>Heteromastus</i> spp.	40	65	18	70	38	12	11	6	4	8
Arthropoda	<i>Heterophoxus</i> spp.	40	76	11	2	58	33	75	2	68	7
Mollusca	<i>Kurtiella tumida</i>	11	73	63	81	22	52	15	62	74	35
Annelida	<i>Laonice</i> spp.	1	74	17	3	3	6	44	29	30	0
Annelida	<i>Leitoscoloplos pugettensis</i>	6	11	66	65	5	12	10	64	77	0
Annelida	<i>Levinsenia gracilis</i>	4	75	0	36	53	39	75	58	48	0
Mollusca	<i>Lucinoma annulatum</i>	1	1	7	28	35	0	14	25	32	0

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Annelida	Lumbrineridae	4	71	23	31	2	77	0	73	72	35
Mollusca	<i>Macoma</i> spp.	77	70	62	81	81	43	75	74	64	68
Mollusca	<i>Macoma yoldiformis</i>	0	1	16	8	0	3	1	64	67	1
Annelida	<i>Malmgreniella</i> spp.	4	11	4	47	22	8	5	5	10	1
Annelida	<i>Mediomastus</i> spp.	16	41	65	52	30	20	28	72	73	3
Nemertea	Nemertea	30	66	63	71	58	65	63	69	74	69
Annelida	<i>Nephtys ferruginea</i>	11	32	56	80	61	36	42	62	65	21
Annelida	<i>Nephtys</i> spp.	46	12	48	20	36	3	10	29	36	0
Mollusca	<i>Nutricula lordi</i>	1	12	66	77	2	49	1	39	40	16
Mollusca	<i>Odostomia</i> spp.	7	54	51	22	17	58	10	37	36	57
Annelida	Oligochaeta	53	61	15	6	4	1	2	17	9	1
Annelida	<i>Ophelina</i> spp.	1	27	14	52	4	3	1	15	6	0
Annelida	<i>Paraprionospio</i> spp.	0	76	20	70	48	78	78	51	76	78
Mollusca	<i>Parvilucina tenuisculpta</i>	5	37	56	73	70	26	58	68	73	31
Annelida	<i>Pectinaria</i> spp.	3	2	47	63	52	6	63	64	52	2
Annelida	<i>Pholoe</i> spp.	74	58	54	35	52	63	16	66	63	11
Annelida	<i>Phyllodoce</i> spp.	5	8	58	58	6	15	6	46	39	3
Arthropoda	<i>Pinnixa</i> spp.	74	34	55	12	32	69	18	71	67	70
Annelida	<i>Pista</i> spp.	0	5	24	22	4	4	1	57	52	0
Annelida	<i>Polycirrus</i> spp.	15	46	49	77	3	34	0	54	34	1
Annelida	Polynoidae	13	14	31	3	11	6	25	3	19	9
Annelida	<i>Prionospio</i> spp.	77	66	56	79	70	70	73	73	77	70
Annelida	<i>Scoletoma</i> spp.	1	39	66	81	7	78	3	71	70	0
Annelida	<i>Spiochaetopterus costarum</i> Cmplx	0	3	46	22	1	29	2	38	67	6
Annelida	<i>Spiophanes</i> spp.	39	58	27	17	37	66	37	57	50	65
Annelida	<i>Terebellides</i> spp.	0	51	9	54	1	57	0	56	45	15
Mollusca	<i>Turbonilla</i> spp.	1	19	33	71	1	12	1	60	54	4
Arthropoda	<i>Westwoodilla tone</i>	2	3	51	22	2	5	0	17	68	2
Mollusca	<i>Yoldia</i> spp.	74	29	14	2	6	1	14	9	4	0

Occurrence (number of samples) of common taxa, by year.

Phylum	Taxon	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mollusca	<i>Acila castrensis</i>	9	11	12	10	11	14	10	1	14	11	8	8	7	9
Mollusca	<i>Alvania compacta</i>	10	10	14	8	7	9	6	0	8	11	14	14	10	13
Arthropoda	<i>Ampelisca</i> spp.	9	9	13	10	5	7	5	3	7	4	6	4	6	6
Annelida	Ampharetidae	14	14	17	19	13	17	15	4	16	14	17	20	13	13
Echinodermata	Amphiuridae	17	16	15	14	19	17	20	6	19	18	17	16	14	14
Arthropoda	<i>Aoroides</i> spp.	5	3	5	2	3	4	4	0	5	2	1	6	1	4
Annelida	<i>Aphelochoeta</i> spp.	20	16	13	14	18	18	17	3	17	19	18	16	15	19
Annelida	<i>Aricidea</i> spp.	7	7	7	7	6	10	12	1	14	11	10	11	8	11
Mollusca	<i>Astyris gausapata</i>	15	6	10	12	13	12	12	2	13	14	14	18	18	15
Mollusca	<i>Axinopsida serricata</i>	23	20	20	24	24	19	17	7	24	24	25	27	25	23
Annelida	<i>Bipalponephtys cornuta</i>	17	19	8	8	19	11	12	6	14	21	19	19	11	20
Annelida	<i>Chaetozone</i> spp.	11	7	8	6	6	6	5	0	5	8	10	10	8	5
Mollusca	<i>Compsomyax</i> spp.	9	5	6	7	9	9	7	1	7	6	12	7	5	6
Arthropoda	Corophiidae	13	16	18	17	14	17	14	4	15	13	8	15	13	15
Annelida	<i>Cossura</i> spp.	10	14	11	11	11	13	18	7	17	14	20	19	15	15
Mollusca	Cylichnidae	5	6	8	10	2	4	8	0	3	4	10	9	10	7
Arthropoda	<i>Diastylis</i> spp.	5	3	6	8	6	4	5	4	6	6	8	14	8	8
Annelida	<i>Dipolydora</i> spp.	10	8	10	12	9	8	11	4	11	18	14	16	17	11
Mollusca	<i>Ennucula tenuis</i>	17	11	14	14	17	13	15	7	16	12	12	17	14	11
Annelida	<i>Eteone</i> spp.	14	6	10	9	5	10	4	2	14	14	4	13	8	12
Annelida	Euclymeninae	17	12	18	13	11	13	12	1	11	13	14	16	11	13
Arthropoda	<i>Eudorella pacifica</i>	19	19	13	18	20	17	19	6	18	14	14	24	16	13
Arthropoda	<i>Euphilomedes carcharodonta</i>	13	9	12	9	10	10	11	4	13	12	12	12	11	13
Arthropoda	<i>Euphilomedes producta</i>	17	15	18	14	16	17	15	9	15	16	16	17	14	16
Annelida	Flabelligeridae	6	5	6	5	2	5	2	1	3	4	1	7	3	1
Annelida	<i>Glycera nana</i>	15	13	14	18	17	15	19	6	15	12	17	17	16	18
Annelida	<i>Glycinde armigera</i>	5	12	9	13	13	5	10	1	10	9	10	12	10	13
Annelida	<i>Glycinde picta</i>	15	10	7	10	7	11	7	0	11	7	7	15	7	7
Annelida	Hesionidae	13	13	11	8	11	15	11	2	16	16	10	10	7	14
Annelida	<i>Heteromastus</i> spp.	7	6	6	9	5	11	8	4	11	9	8	11	10	7
Arthropoda	<i>Heterophoxus</i> spp.	19	16	20	16	15	17	17	6	13	15	14	17	11	11

Phylum	Taxon	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mollusca	<i>Kurtiella tumida</i>	16	11	19	16	13	17	15	4	20	18	21	20	18	21
Annelida	<i>Laonice</i> spp.	7	9	10	9	7	7	9	0	12	8	4	12	9	6
Annelida	<i>Leitoscoloplos pugettensis</i>	16	10	14	7	8	11	9	1	12	11	13	17	14	13
Annelida	<i>Levinsenia gracilis</i>	14	14	13	14	13	14	16	3	18	15	15	15	13	15
Mollusca	<i>Lucinoma annulatum</i>	4	5	6	4	4	5	7	2	8	7	5	7	6	6
Annelida	Lumbrineridae	17	15	15	18	15	19	12	3	17	15	13	16	15	13
Mollusca	<i>Macoma</i> spp.	27	26	26	26	20	24	23	9	27	29	27	29	27	28
Mollusca	<i>Macoma yoldiformis</i>	6	6	5	8	4	3	7	2	8	7	9	6	7	3
Annelida	<i>Malmgreniella</i> spp.	6	5	7	5	2	6	4	4	6	3	4	3	3	3
Annelida	<i>Mediomastus</i> spp.	22	13	13	11	13	12	12	1	14	13	18	17	19	11
Nemertea	Nemertea	25	17	17	21	25	19	22	6	23	24	26	26	25	23
Annelida	<i>Nephtys ferruginea</i>	18	16	21	14	14	16	16	8	22	14	18	22	14	20
Annelida	<i>Nephtys</i> spp.	16	4	10	6	10	7	6	2	12	12	7	9	5	13
Mollusca	<i>Nutricola lordi</i>	16	14	15	10	6	7	6	3	9	10	11	11	9	10
Mollusca	<i>Odostomia</i> spp.	16	12	18	11	9	8	11	1	8	9	13	17	8	12
Annelida	Oligochaeta	4	4	5	2	6	5	6	0	5	10	5	7	6	6
Annelida	<i>Ophelina</i> spp.	6	5	6	1	0	3	1	1	1	5	4	6	9	4
Annelida	<i>Paraprionospio</i> spp.	20	15	19	20	21	21	23	9	21	23	22	21	22	24
Mollusca	<i>Parvilucina tenuisculpta</i>	11	15	15	12	9	9	15	7	18	22	21	24	17	20
Annelida	<i>Pectinaria</i> spp.	15	12	14	15	15	9	11	6	15	14	8	18	11	11
Annelida	<i>Pholoe</i> spp.	17	14	16	13	15	11	14	3	19	16	17	20	18	21
Annelida	<i>Phyllodoce</i> spp.	5	6	8	9	8	6	11	4	5	13	7	17	12	10
Arthropoda	<i>Pinnixa</i> spp.	17	16	20	15	16	16	17	1	20	20	16	18	18	22
Annelida	<i>Pista</i> spp.	6	6	4	6	4	5	3	1	6	8	4	7	6	11
Annelida	<i>Polycirrus</i> spp.	18	12	13	11	9	13	10	3	10	11	9	12	11	10
Annelida	Polynoidae	3	8	4	6	4	4	7	1	4	6	2	11	13	3
Annelida	<i>Prionospio</i> spp.	27	25	24	22	22	26	26	8	28	30	29	30	26	28
Annelida	<i>Scoletoma</i> spp.	15	14	16	11	15	13	17	3	16	17	14	16	15	18
Annelida	<i>Spiochaetopterus costarum</i> Cmplx	7	7	11	10	14	8	12	3	13	11	6	7	6	6
Annelida	<i>Spiophanes</i> spp.	21	21	21	21	15	15	22	4	10	25	15	23	17	16
Annelida	<i>Terebellides</i> spp.	10	11	14	12	15	13	12	1	6	7	12	12	2	8
Mollusca	<i>Turbonilla</i> spp.	8	11	10	10	10	5	10	1	11	11	6	11	9	10
Arthropoda	<i>Westwoodilla tone</i>	6	4	8	7	4	9	5	1	9	7	4	10	5	8

Phylum	Taxon	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Mollusca	<i>Yoldia</i> spp.	8	9	10	5	5	4	2	2	6	7	6	6	6	5

Phylum	Taxon	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mollusca	<i>Acila castrensis</i>	6	7	8	8	9	10	12	9	12	13	10	5	5
Mollusca	<i>Alvania compacta</i>	13	9	8	11	8	11	8	14	8	8	13	11	11
Arthropoda	<i>Ampelisca</i> spp.	11	9	7	9	3	3	6	5	6	8	6	8	7
Annelida	Ampharetidae	15	17	15	15	15	14	22	17	7	16	21	15	8
Echinodermata	Amphiuridae	18	17	15	17	20	20	17	16	14	19	16	15	19
Arthropoda	<i>Aoroides</i> spp.	4	4	4	3	3	2	2	4	2	3	1	4	5
Annelida	<i>Aphelochaeta</i> spp.	13	13	10	18	17	19	17	16	17	19	19	14	19
Annelida	<i>Aricidea</i> spp.	6	4	4	3	4	5	6	3	6	6	6	6	4
Mollusca	<i>Astyris gausapata</i>	16	11	17	18	16	16	18	18	12	12	16	15	18
Mollusca	<i>Axinopsida serricata</i>	24	22	25	24	24	27	23	26	26	27	27	24	22
Annelida	<i>Bipalponephtys cornuta</i>	15	17	20	14	17	18	23	20	16	15	14	18	12
Annelida	<i>Chaetozone</i> spp.	6	7	3	4	2	2	3	1	1	7	5	6	3
Mollusca	<i>Compsomyax</i> spp.	2	1	6	6	16	6	10	9	7	8	8	9	8
Arthropoda	Corophiidae	8	15	17	13	12	16	17	13	12	15	15	14	5
Annelida	<i>Cossura</i> spp.	14	16	17	14	19	16	20	18	16	19	19	17	12
Mollusca	Cylichnidae	8	4	5	10	4	14	10	11	9	14	12	11	14
Arthropoda	<i>Diastylis</i> spp.	9	12	12	7	8	11	14	8	10	15	15	7	11
Annelida	<i>Dipolydora</i> spp.	14	19	17	12	18	14	15	15	9	12	14	9	15
Mollusca	<i>Ennucula tenuis</i>	12	10	13	14	15	13	15	12	11	14	15	12	10
Annelida	<i>Eteone</i> spp.	9	11	14	12	14	15	15	9	10	15	14	15	7
Annelida	Euclymeninae	14	13	15	15	15	16	15	16	12	15	13	13	14
Arthropoda	<i>Eudorella pacifica</i>	15	20	18	16	14	17	16	16	14	15	14	13	10
Arthropoda	<i>Euphilomedes carcharodonta</i>	13	14	12	13	12	12	14	14	13	13	13	12	12
Arthropoda	<i>Euphilomedes producta</i>	15	15	15	14	17	14	18	14	10	15	15	17	12
Annelida	Flabelligeridae	3	5	3	2	1	4	5	3	5	4	2	6	1
Annelida	<i>Glycera nana</i>	17	19	23	23	17	20	21	17	16	18	19	19	23
Annelida	<i>Glycinde armigera</i>	15	12	14	15	10	12	14	12	12	13	11	11	16
Annelida	<i>Glycinde picta</i>	10	7	10	4	11	9	9	9	9	9	9	8	12
Annelida	Hesionidae	13	10	12	9	14	16	16	10	9	12	15	12	11
Annelida	<i>Heteromastus</i> spp.	10	13	11	11	9	8	10	13	14	13	14	16	18

Phylum	Taxon	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Arthropoda	<i>Heterophoxus</i> spp.	13	13	16	14	11	13	15	13	12	12	12	10	11
Mollusca	<i>Kurtiella tumida</i>	21	17	19	18	18	22	22	20	24	21	19	20	18
Annelida	<i>Laonice</i> spp.	9	5	7	8	10	9	8	9	6	8	4	5	10
Annelida	<i>Leitoscoloplos pugettensis</i>	15	11	13	12	13	12	12	12	12	11	11	12	14
Annelida	<i>Levinsenia gracilis</i>	13	15	17	14	17	17	16	15	16	14	15	15	12
Mollusca	<i>Lucinoma annulatum</i>	6	4	3	1	3	5	6	7	8	7	7	5	5
Annelida	Lumbrineridae	15	11	14	12	15	13	14	16	16	15	18	13	13
Mollusca	<i>Macoma</i> spp.	26	26	24	22	30	28	27	28	30	28	26	28	24
Mollusca	<i>Macoma yoldiformis</i>	6	6	6	8	10	7	6	6	4	6	6	6	3
Annelida	<i>Malmgreniella</i> spp.	3	3	6	8	4	8	7	5	2	3	4	2	1
Annelida	<i>Mediomastus</i> spp.	11	14	18	16	19	18	18	17	16	12	17	17	18
Nemertea	Nemertea	23	25	25	25	24	25	27	23	25	27	26	27	27
Annelida	<i>Nephtys ferruginea</i>	20	19	20	18	16	17	15	20	17	18	18	20	15
Annelida	<i>Nephtys</i> spp.	6	7	8	9	11	8	16	6	9	13	11	7	10
Mollusca	<i>Nutricula lordi</i>	11	10	13	13	13	11	13	15	13	17	13	13	11
Mollusca	<i>Odostomia</i> spp.	15	12	18	19	12	20	15	16	11	15	13	16	14
Annelida	Oligochaeta	8	7	6	6	7	10	9	9	7	6	5	8	10
Annelida	<i>Ophelina</i> spp.	4	5	6	4	4	5	8	5	3	6	5	10	6
Annelida	<i>Paraprionospio</i> spp.	24	22	26	25	23	21	24	21	18	22	21	24	23
Mollusca	<i>Parvilucina tenuisculpta</i>	21	19	21	23	24	22	21	20	20	22	22	24	23
Annelida	<i>Pectinaria</i> spp.	16	14	11	13	14	17	14	16	11	13	14	13	14
Annelida	<i>Pholoe</i> spp.	24	22	24	20	19	23	25	25	21	18	18	20	19
Annelida	<i>Phyllodoce</i> spp.	9	12	11	7	13	6	13	11	8	9	9	6	9
Arthropoda	<i>Pinnixa</i> spp.	23	21	21	23	18	22	21	21	17	21	20	20	22
Annelida	<i>Pista</i> spp.	8	5	10	10	9	7	6	7	4	8	6	7	5
Annelida	<i>Polycirrus</i> spp.	10	10	17	11	16	14	13	10	9	14	15	12	10
Annelida	Polynoidae	2	3	7	2	5	8	7	4	3	6	5	2	4
Annelida	<i>Prionospio</i> spp.	26	29	29	26	30	29	27	27	25	30	27	28	27
Annelida	<i>Scoletoma</i> spp.	17	15	15	17	16	17	18	17	15	17	17	17	18
Annelida	<i>Spiochaetopterus costarum</i> Cmplx	5	8	6	8	8	9	6	8	7	6	7	7	8
Annelida	<i>Spiophanes</i> spp.	13	15	20	11	21	18	18	13	14	18	15	18	13
Annelida	<i>Terebellides</i> spp.	11	12	12	10	13	14	12	12	9	14	15	11	8
Mollusca	<i>Turbonilla</i> spp.	5	8	13	14	8	10	8	10	12	10	12	12	11

Phylum	Taxon	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Arthropoda	<i>Westwoodilla tone</i>	10	7	6	10	4	8	9	6	6	3	4	5	7
Mollusca	<i>Yoldia</i> spp.	4	4	5	5	8	6	6	6	5	6	6	6	5

Mean abundance (number of animals per 0.1 m²) of common taxa, by station. Taxa are sorted by decreasing overall mean abundance.

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss W'way	44, Anderson Island	49, Inner Budd Inlet	Overall Mean
Mollusca	<i>Nutricula lordi</i>	0.0	0.4	631.3	10.5	0.0	10.6	0.0	1.0	1.2	1.3	65.6
Mollusca	<i>Axinopsida serricata</i>	1.1	48.7	45.7	267.5	12.8	7.9	36.3	143.6	9.4	0.1	57.3
Mollusca	<i>Macoma</i> spp.	63.8	4.2	10.4	91.5	206.3	1.0	51.3	37.4	4.5	3.2	47.4
Arthropoda	<i>Euphilomedes carcharodonta</i>	0.0	0.0	135.9	78.6	0.1	0.1	0.1	33.9	72.4	0.1	32.1
Annelida	<i>Aphelochaeta</i> spp.	0.0	33.4	0.5	4.9	0.2	110.7	0.0	39.8	3.6	21.1	21.4
Echinodermata	Amphiuridae	0.0	45.7	1.7	1.1	0.1	14.2	0.5	71.6	67.1	0.8	20.3
Annelida	<i>Prionospio</i> spp.	55.6	4.9	4.2	12.0	8.1	27.7	4.7	40.0	41.8	3.1	20.2
Arthropoda	<i>Eudorella pacifica</i>	0.1	8.6	0.4	0.2	12.4	92.5	10.4	0.6	1.9	0.2	12.7
Annelida	<i>Scoletoma</i> spp.	0.0	1.4	6.6	59.3	0.1	23.5	0.0	19.6	11.3	0.0	12.2
Mollusca	<i>Alvania compacta</i>	0.0	0.1	100.5	3.8	0.1	2.7	0.0	4.0	8.2	0.0	11.9
Arthropoda	<i>Euphilomedes producta</i>	0.1	1.9	3.9	44.7	24.3	0.0	11.9	21.3	0.2	0.0	10.8
Annelida	<i>Mediomastus</i> spp.	0.6	2.0	35.7	34.9	0.6	0.9	0.6	16.3	11.5	0.0	10.3
Annelida	<i>Paraprionospio</i> spp.	0.0	7.3	0.4	5.0	0.9	42.8	4.6	1.8	6.6	33.4	10.3
Arthropoda	<i>Pinnixa</i> spp.	21.2	2.2	4.4	0.2	0.7	13.1	0.3	17.3	20.2	8.3	8.8
Mollusca	<i>Kurtiella tumida</i>	0.3	11.9	19.7	16.9	1.0	4.5	0.3	17.2	6.5	0.8	7.9
Mollusca	<i>Parvilucina tenuisculpta</i>	0.1	0.8	3.7	17.6	12.2	0.5	2.5	7.2	31.4	0.5	7.6
Annelida	<i>Pholoe</i> spp.	34.0	5.3	5.8	0.9	1.3	11.9	0.3	5.2	5.2	0.4	7.0
Arthropoda	Corophiidae	34.0	9.6	8.0	0.1	1.9	0.6	2.4	0.6	4.2	0.1	6.2
Annelida	Lumbrineridae	0.1	8.1	0.9	2.3	0.0	26.9	0.0	9.8	9.3	1.0	5.8
Annelida	<i>Dipolydora</i> spp.	0.3	0.6	15.0	13.3	0.3	11.4	0.2	9.4	5.9	0.1	5.6
Annelida	<i>Heteromastus</i> spp.	1.2	12.3	0.7	33.6	1.0	0.2	0.2	0.1	0.2	0.1	5.0
Annelida	<i>Cossura</i> spp.	19.5	14.7	0.0	1.2	1.6	4.4	4.0	0.8	0.1	0.0	4.6
Annelida	Euclymeninae	0.1	2.2	12.1	8.0	0.2	0.6	0.0	11.8	10.1	0.0	4.5

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss W'way	44, Anderson Island	49, Inner Budd Inlet	Overall Mean
Annelida	<i>Levinsenia gracilis</i>	0.1	28.9	0.0	0.9	2.4	1.0	5.7	4.5	1.5	0.0	4.5
Nemertea	Nemertea	0.6	2.3	12.4	3.6	1.4	2.7	1.8	6.7	8.2	3.0	4.3
Mollusca	<i>Odostomia</i> spp.	0.1	2.3	15.6	0.4	0.3	9.9	0.2	1.2	1.2	4.4	3.6
Arthropoda	<i>Heterophoxus</i> spp.	1.1	10.9	0.4	0.0	2.5	9.7	5.4	0.0	5.3	0.1	3.5
Annelida	<i>Spiophanes</i> spp.	2.0	5.2	1.2	0.3	1.2	4.2	0.9	5.9	7.0	7.2	3.5
Mollusca	<i>Astyris gausapata</i>	1.2	0.6	6.9	4.8	0.1	3.1	0.0	8.6	5.5	1.0	3.2
Annelida	<i>Leitoscoloplos pugettensis</i>	0.1	0.2	10.0	5.5	0.1	0.2	0.2	3.3	11.4	0.0	3.1
Annelida	<i>Polycirrus</i> spp.	0.2	4.5	2.0	18.5	0.0	0.9	0.0	2.5	1.4	0.0	3.0
Annelida	<i>Glycera nana</i>	1.2	2.6	0.3	7.9	1.0	0.0	1.7	9.8	3.0	0.0	2.7
Annelida	Ampharetidae	0.3	0.3	2.8	1.9	4.4	0.9	1.1	5.9	7.0	0.2	2.5
Annelida	<i>Nephtys ferruginea</i>	0.2	0.7	2.9	9.0	2.2	0.6	0.9	3.3	3.7	0.4	2.4
Annelida	<i>Spiochaetopterus costarum</i> Cmplx	0.0	0.1	4.1	0.5	0.0	2.5	0.0	3.1	13.4	0.1	2.4
Annelida	<i>Phyllodoce</i> spp.	0.1	0.1	17.1	2.8	0.1	0.2	0.1	2.1	1.3	0.0	2.4
Mollusca	<i>Yoldia</i> spp.	18.7	0.6	0.2	0.0	0.1	0.0	0.2	0.1	0.1	0.0	2.0
Annelida	<i>Pectinaria</i> spp.	0.0	0.0	2.9	3.0	3.3	0.1	3.3	5.1	1.9	0.0	2.0
Annelida	<i>Terebellides</i> spp.	0.0	5.8	0.2	2.0	0.0	5.1	0.0	4.2	1.7	0.4	1.9
Annelida	<i>Bipalponephtys cornuta</i>	2.1	1.6	0.2	3.0	1.5	3.9	0.3	0.5	0.7	4.5	1.8
Mollusca	<i>Ennucula tenuis</i>	0.1	6.1	1.7	5.3	1.2	0.1	0.4	2.6	0.5	0.0	1.8
Annelida	Oligochaeta	6.1	6.2	0.5	0.1	0.0	0.0	0.0	0.4	0.1	0.0	1.4
Mollusca	<i>Acila castrensis</i>	0.1	5.8	0.4	0.0	1.5	4.9	0.1	0.0	0.4	0.0	1.3
Mollusca	<i>Macoma yoldiformis</i>	0.0	0.0	0.4	0.1	0.0	0.0	0.0	6.6	4.9	0.1	1.2
Mollusca	<i>Turbonilla</i> spp.	0.0	0.4	1.1	4.8	0.0	0.6	0.0	2.8	2.2	0.1	1.2
Annelida	<i>Aricidea</i> spp.	0.0	8.4	0.3	0.1	0.2	0.1	0.3	0.1	2.0	0.0	1.2
Annelida	Hesionidae	0.0	0.6	0.8	0.2	0.2	2.7	0.3	0.3	1.6	2.7	1.0
Annelida	<i>Eteone</i> spp.	0.1	0.7	1.7	2.5	0.0	0.9	0.0	1.6	0.8	0.8	0.9
Arthropoda	<i>Diastylis</i> spp.	0.2	0.0	0.8	0.2	4.3	0.1	1.8	0.3	0.5	0.1	0.8
Mollusca	Cylichnidae	0.1	2.0	1.2	1.9	0.1	0.0	0.1	0.7	0.8	1.0	0.8
Annelida	<i>Pista</i> spp.	0.0	0.1	0.8	0.4	0.0	0.1	0.0	3.3	3.0	0.0	0.8
Annelida	<i>Glycinde armigera</i>	0.1	0.9	0.6	1.9	0.4	0.2	0.3	1.6	1.6	0.0	0.8
Annelida	<i>Laonice</i> spp.	0.0	4.8	0.3	0.0	0.0	0.1	0.9	0.6	0.6	0.0	0.7
Arthropoda	<i>Westwoodilla tone</i>	0.0	0.1	3.0	0.4	0.0	0.1	0.0	0.3	2.9	0.0	0.7

Phylum	Taxon	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss W'way	44, Anderson Island	49, Inner Budd Inlet	Overall Mean
Annelida	<i>Nephtys</i> spp.	0.9	0.2	2.6	0.7	0.6	0.0	0.2	0.7	0.6	0.0	0.6
Annelida	<i>Glycinde picta</i>	0.7	0.2	2.0	0.9	0.0	0.5	0.0	0.4	0.5	1.1	0.6
Arthropoda	<i>Ampelisca</i> spp.	0.0	0.0	1.0	0.2	0.1	0.4	0.2	0.6	2.5	0.2	0.5
Annelida	<i>Chaetozone</i> spp.	0.1	0.1	0.5	0.0	0.2	0.3	0.1	3.1	0.6	0.0	0.5
Annelida	Polynoidae	0.3	0.3	3.0	0.1	0.1	0.2	0.4	0.0	0.4	0.2	0.5
Mollusca	<i>Compsomyax</i> spp.	0.0	0.4	0.4	1.5	0.0	0.4	0.1	1.8	0.2	0.1	0.5
Annelida	<i>Ophelina</i> spp.	0.0	1.2	0.3	1.7	0.0	0.0	0.0	0.3	0.1	0.0	0.4
Annelida	<i>Malmgreniella</i> spp.	0.1	0.3	0.1	2.4	0.4	0.1	0.1	0.1	0.1	0.0	0.4
Mollusca	<i>Lucinoma annulatum</i>	0.0	0.0	0.2	0.4	1.0	0.0	0.2	0.5	1.0	0.0	0.3
Arthropoda	<i>Aoroides</i> spp.	0.1	0.0	1.2	0.0	0.1	0.0	0.1	0.1	1.4	0.0	0.3
Annelida	Flabelligeridae	0.0	0.5	0.1	0.0	0.4	0.0	0.7	0.0	0.2	0.0	0.2

Functional feeding guilds

Taxa were grouped into functional feeding guilds established by Macdonald et al. (2010, 2012). Functional feeding guilds integrate what, where, and how organisms eat.

Summary statistics of functional feeding guild abundance by station.

Feeding Guild	Station	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
(# organisms / 0.1 m ²)	N Years	26	26	22	27	27	26	27	26	26	26
	N Samples	78	78	66	81	81	78	81	75	77	78
Benthic Carnivore	Mean	37.6	13.2	66.8	17.4	6.4	33.7	6.6	23.8	39.6	22.4
	Std. Dev.	42.2	9.6	84.4	9.4	3.3	20.0	4.3	10.2	19.5	9.8
	Median	27	11.5	38.5	17	6	28	6	23	37	21
	Minimum	0	0	6	1	1	6	0	2	7	6
	Maximum	266	43	576	40	16	91	21	49	103	60
Facultative Carnivore	Mean	8.4	32.4	47.8	103.4	15.3	70.3	15.3	61.3	72.4	10.2
	Std. Dev.	5.4	17.8	27.0	40.9	7.8	33.5	7.2	24.7	22.8	6.5
	Median	7	30	42	101	15	67	15	58	70	9
	Minimum	1	5	9	41	2	14	4	11	32	0
	Maximum	33	114	135	216	53	156	38	119	126	36
Facultative Detritivore	Mean	178.3	162.3	998.2	572.7	274.4	332.0	118.4	438.5	323.3	51.2
	Std. Dev.	171.1	66.3	712.6	186.8	110.6	423.4	82.7	238.6	140.3	31.3
	Median	123.5	146.5	873	545	258	133	96	386	305	44.5
	Minimum	8	15	143	246	7	57	18	21	77	11
	Maximum	745	382	4020	1083	583	2072	318	1289	647	194
Surface Deposit Feeder	Mean	22.8	96.1	123.8	47.6	31.9	227.8	35.3	96.6	61.2	31.5
	Std. Dev.	21.8	74.6	120.5	32.2	16.3	152.4	12.1	59.2	44.1	74.2
	Median	17	83	91.5	39	28	182.5	34	83	51	11.5
	Minimum	0	5	5	8	10	34	14	7	7	1
	Maximum	129	444	774	232	95	768	70	294	220	556

Feeding Guild	Station	3, Strait of Georgia	4, Bellingham Bay	13, North Hood Canal	21, Port Gardner	29, Shilshole	34, Sinclair Inlet	38, Point Pully	40, Thea Foss Waterway	44, Anderson Island	49, Inner Budd Inlet
Subsurface Deposit Feeder	Mean	28.0	70.9	83.9	93.1	9.2	7.3	11.2	71.0	42.9	0.2
	Std. Dev.	28.7	116.0	51.8	82.0	7.4	6.1	5.6	31.7	21.5	0.5
	Median	20.5	45	77.5	60	7	5.5	10	74	40	0
	Minimum	0	2	9	12	0	0	1	9	5	0
	Maximum	155	767	258	354	43	30	26	134	118	2
Other	Mean	0.8	1.8	29.1	2.8	1.3	13.8	1.0	8.2	14.8	0.3
	Std. Dev.	1.1	1.5	32.2	2.3	1.8	25.0	1.5	5.1	9.0	0.9
	Median	0	2	20	2	1	7	1	7	14	0
	Minimum	0	0	0	0	0	0	0	0	2	0
	Maximum	4	8	208	12	13	169	10	21	37	5

Summary statistics of functional feeding guild abundance by year.

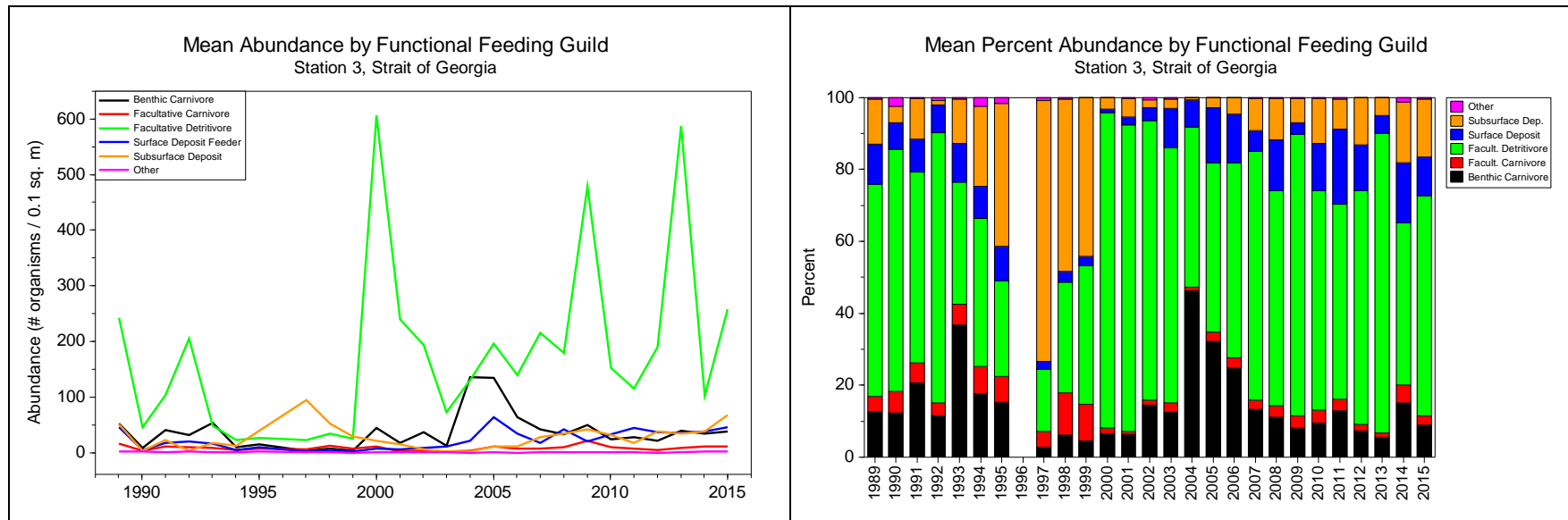
Feeding Guild	Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
(# organisms / 0.1 m ²)	N Stations	10	9	10	9	9	10	9	3	10	10	10	10	10	10
	N Samples	30	27	30	27	27	28	27	9	30	30	30	30	28	30
Benthic Carnivore	Mean	20.5	18.7	18.6	20.5	22.1	18.3	21.0	4.8	21.8	19.0	13.6	27.5	23.8	50.2
	Std. Dev.	20.7	24.6	21.9	15.0	23.1	14.0	15.6	2.9	18.4	17.3	10.0	20.9	24.1	110.2
	Median	14	9	13	22	16	13.5	19	6	18	15	10.5	22.5	18	20.5
	Minimum	2	0	0	1	2	1	3	1	1	1	0	3	3	2
	Maximum	91	103	100	63	98	64	59	9	78	74	39	82	101	576
Facultative Carnivore	Mean	38.8	45.1	42.8	42.5	41.4	40.2	50.0	36.1	40.8	39.6	35.5	40.6	42.7	42.7
	Std. Dev.	32.8	38.0	38.0	33.4	38.8	34.3	43.6	34.0	31.2	34.2	36.3	27.0	38.7	42.3
	Median	29.5	37	33.5	36	21	25	46	16	35	32	21.5	41	23.5	31.5
	Minimum	4	1	4	5	5	1	0	7	3	4	5	6	1	1
	Maximum	137	137	135	117	156	112	160	93	118	117	134	111	151	168
Facultative Detritivore	Mean	332.5	211.4	289.6	312.6	247.4	328.6	361.6	296.4	550.7	580.7	286.6	443.2	371.3	361.3
	Std. Dev.	363.0	204.3	247.5	297.7	132.8	362.9	458.3	222.5	745.9	950.0	245.6	283.9	362.0	357.1

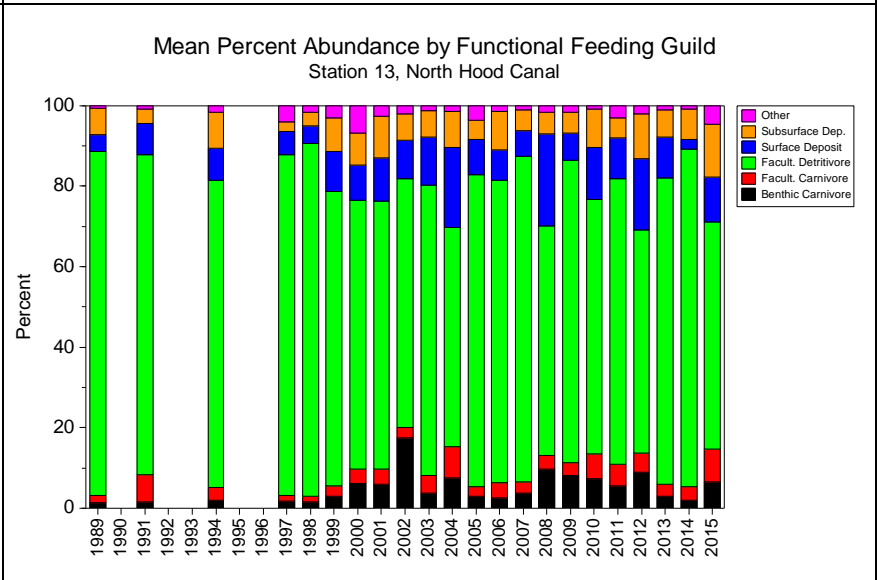
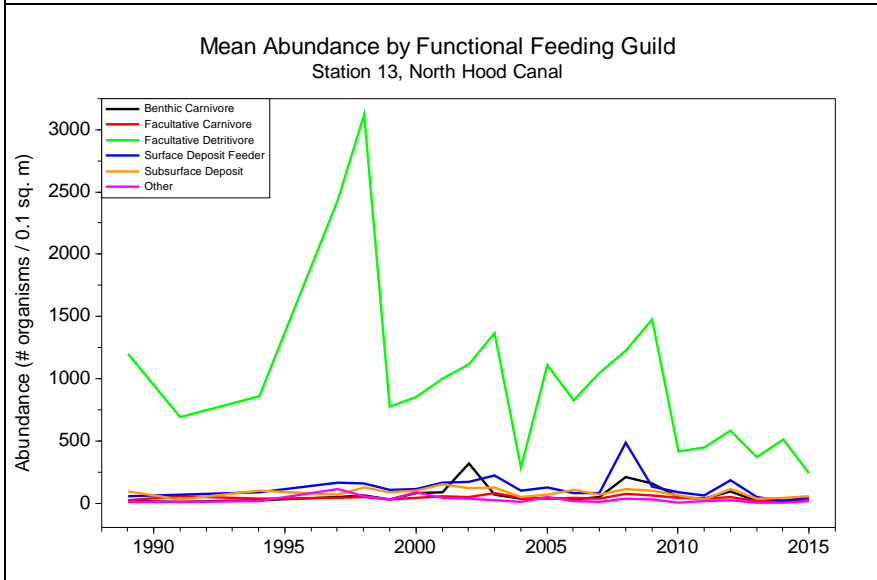
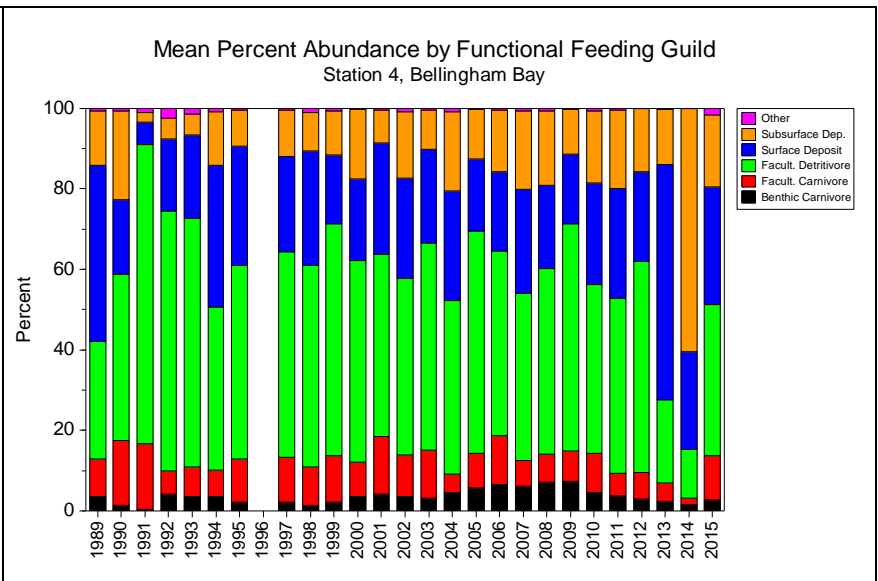
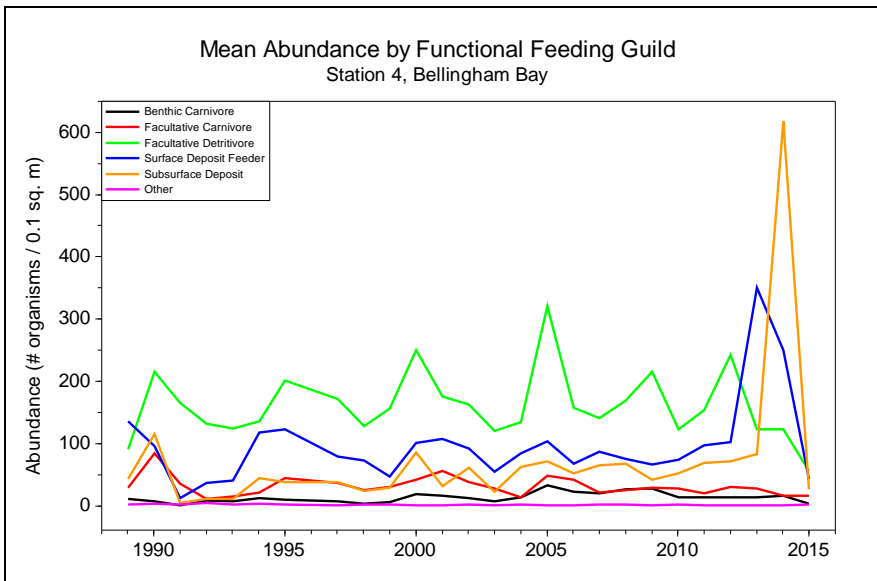
Feeding Guild	Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	Median	185	158	219.5	226	315	188.5	202	256	244.5	142.5	185.5	400.5	210	193
	Minimum	7	8	42	34	32	10	18	60	12	21	13	18	47	35
	Maximum	1327	777	1076	1083	433	1212	2072	656	2737	4020	818	1058	1130	1166
Surface Deposit Feeder	Mean	82.3	68.1	54.9	68.5	68.2	78.1	78.5	32.9	126.8	73.0	46.3	81.2	69.5	60.1
	Std. Dev.	67.2	62.6	50.8	72.1	95.1	65.6	80.4	9.4	166.0	61.5	40.6	70.3	54.6	64.9
	Median	60	52	35.5	33	39	53.5	43	34	70.5	56	38	62.5	54	37
	Minimum	3	1	5	9	6	3	2	18	0	1	0	1	1	2
	Maximum	231	269	218	273	374	234	345	50	768	245	178	294	214	239
Subsurface Deposit Feeder	Mean	34.8	32.6	25.9	30.5	27.0	44.3	38.8	21.3	48.0	35.7	30.8	43.8	36.7	32.6
	Std. Dev.	32.3	39.8	26.0	33.1	28.5	53.8	38.9	16.9	40.9	44.5	28.0	38.3	51.9	36.5
	Median	31.5	9	10.5	16	19	18	20	19	41	20	23.5	24.5	13.5	19.5
	Minimum	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	Maximum	165	145	93	112	102	189	123	50	148	190	94	122	221	127
Other	Mean	5.4	5.9	6.5	11.3	5.6	8.8	13.0	0.2	16.9	8.6	6.3	15.1	6.8	5.5
	Std. Dev.	7.0	9.4	11.9	26.5	6.6	11.6	32.7	0.4	40.9	15.9	9.7	25.7	13.1	10.9
	Median	3	2	1	3	2	2.5	2	0	2	3	2	4	1.5	2
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Maximum	26	35	53	137	21	37	169	1	208	67	37	96	55	43

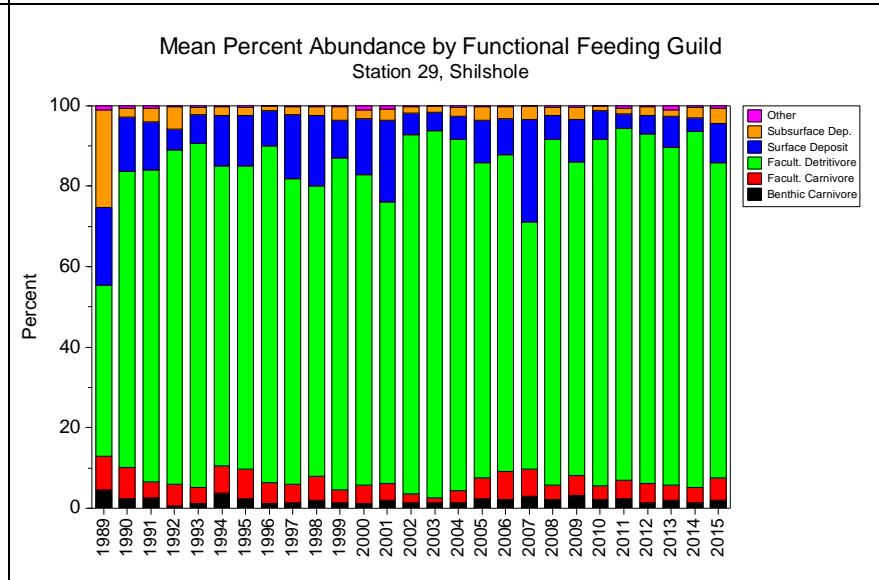
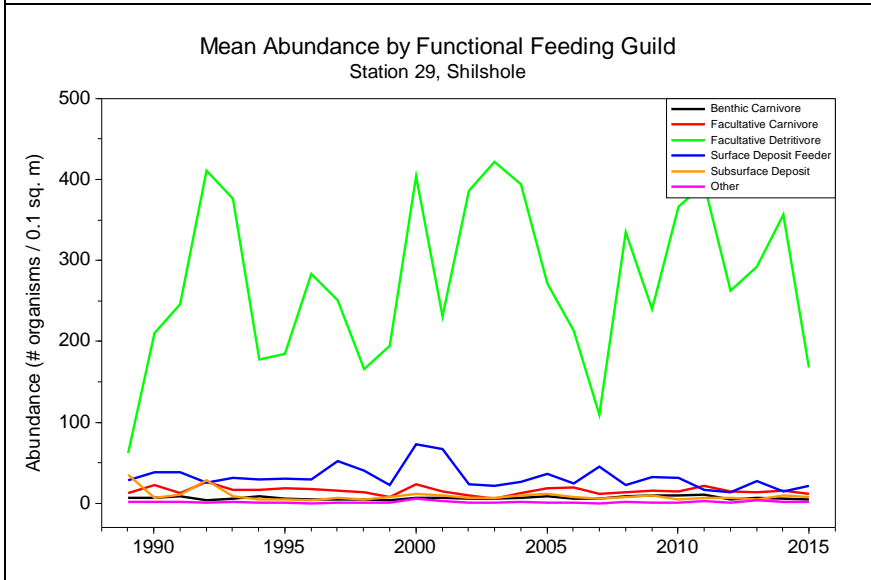
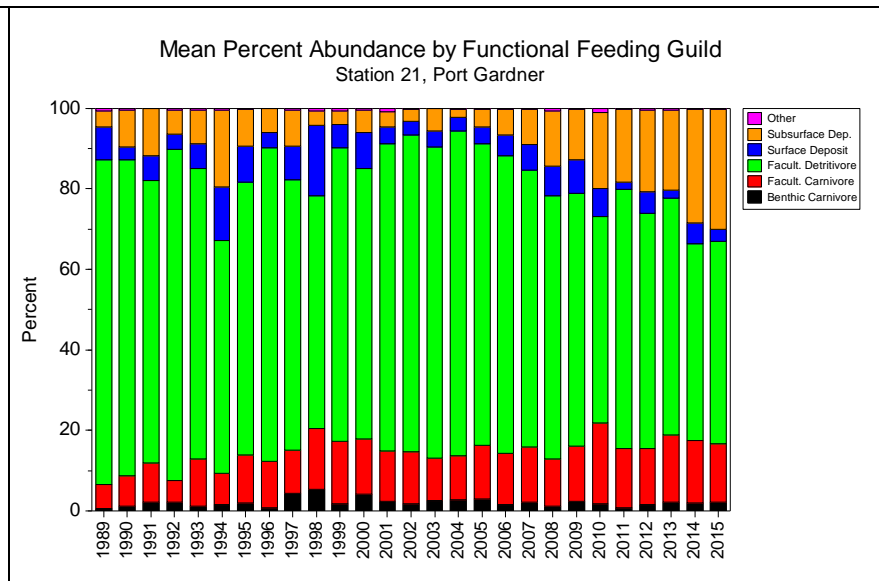
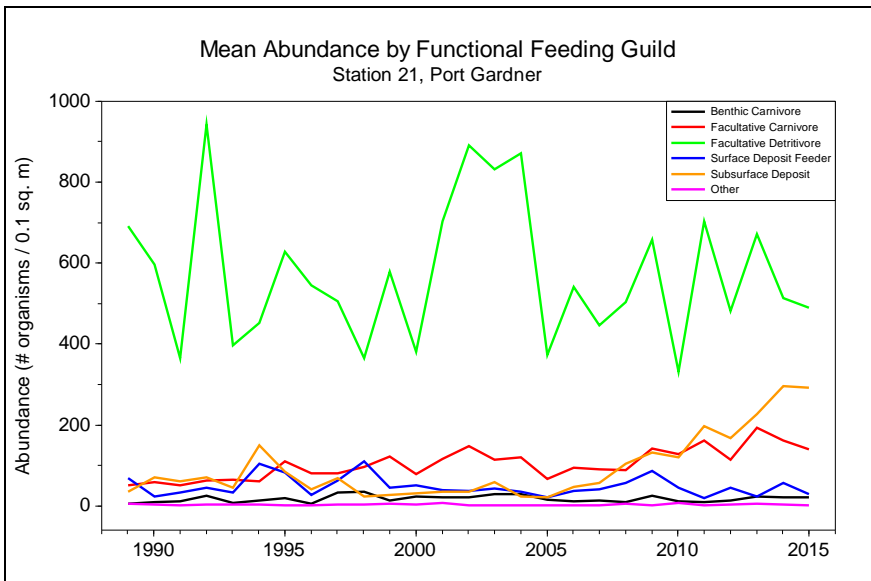
Feeding Guild	Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# organisms / 0.1 m ²	N Stations	10	10	10	10	10	10	10	10	10	10	10	10	10
	N Samples	30	30	30	30	30	30	30	30	30	30	30	30	30
Benthic Carnivore	Mean	20.7	31.9	38.2	28.8	26.5	41.3	39.7	25.0	22.1	31.2	28.5	25.5	22.9
	Std. Dev.	19.6	47.6	39.9	24.3	18.8	58.7	41.0	19.1	16.0	31.4	23.3	19.3	16.9
	Median	16	20	30.5	22.5	22	19	25.5	17.5	17.5	20	21	19.5	18.5
	Minimum	2	3	4	4	3	2	4	2	4	1	3	4	1
	Maximum	101	266	197	96	78	253	185	72	69	139	91	80	56
Facultative Carnivore	Mean	39.4	39.8	40.8	43.6	40.1	45.1	57.5	47.3	42.6	43.6	51.2	49.2	51.9
	Std. Dev.	37.2	35.7	26.9	34.5	31.8	32.7	44.2	40.0	47.9	39.3	57.4	50.8	48.6
	Median	25	29.5	42.5	35	24.5	29	52	36	22	30	19.5	19.5	26.5
	Minimum	1	2	4	3	5	8	8	5	4	3	6	3	3

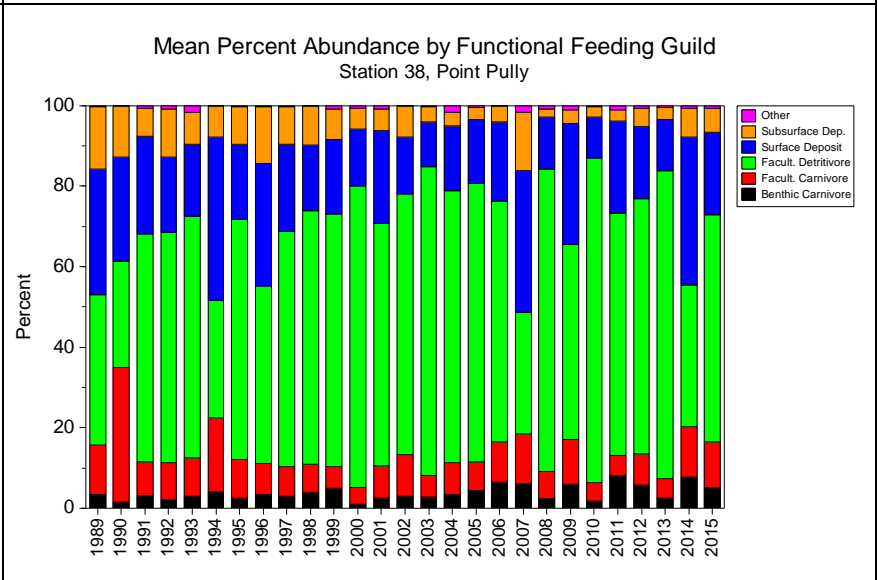
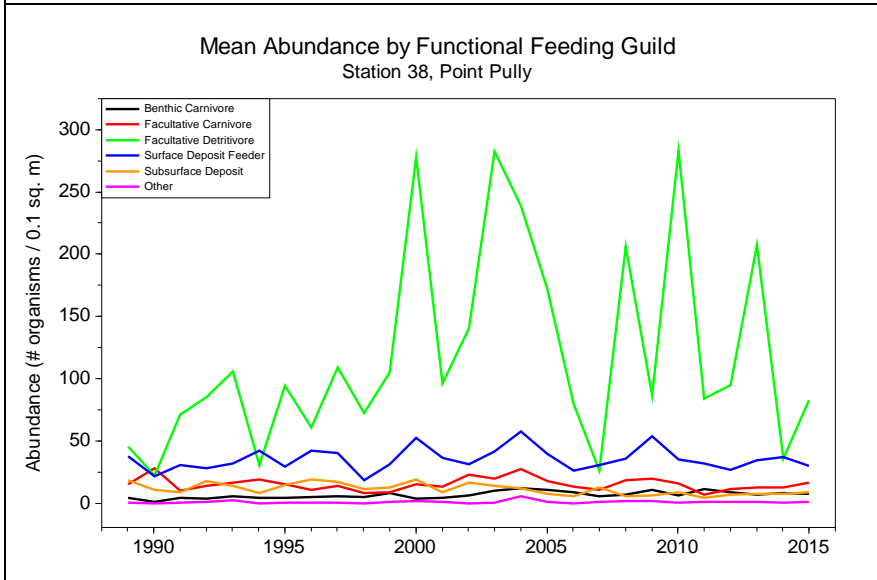
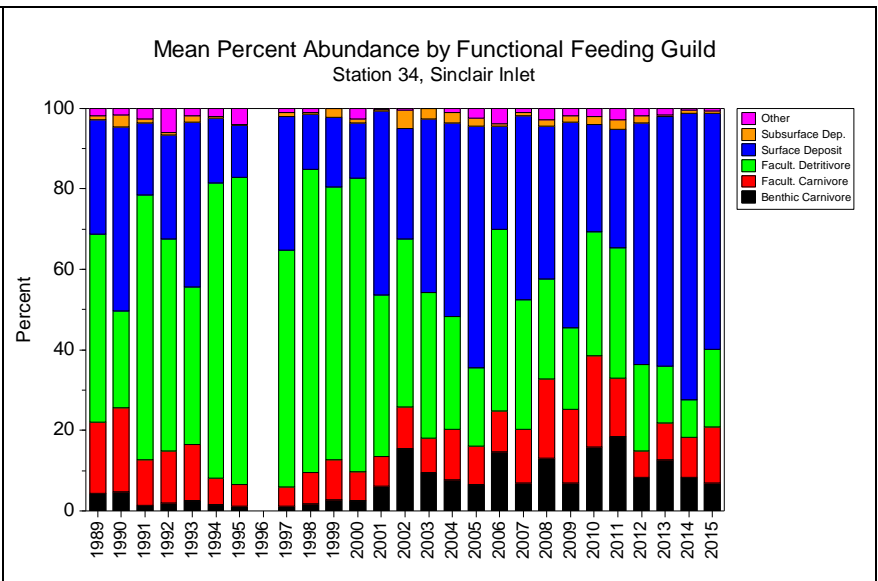
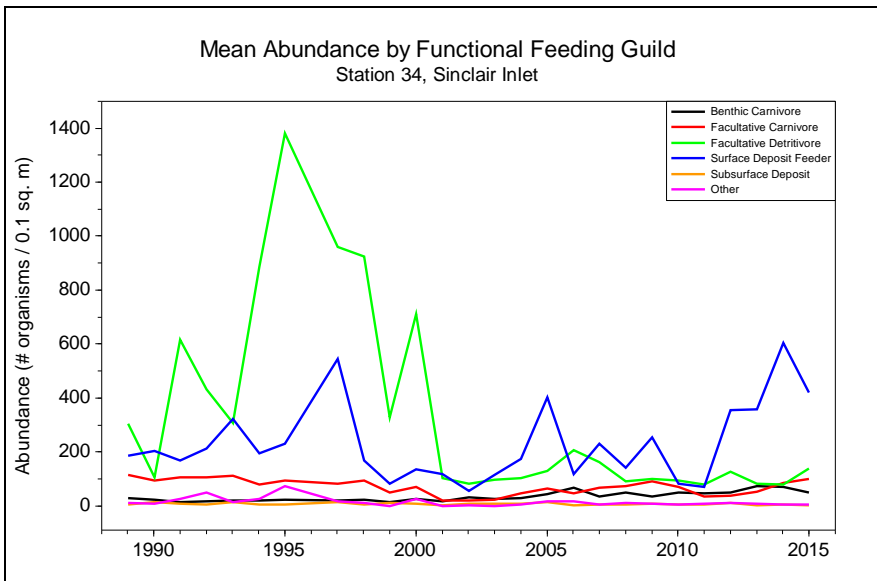
Feeding Guild	Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Facultative Detritivore	Maximum	122	126	91	119	101	108	158	139	180	126	216	193	156
	Mean	386.2	286.9	342.4	303.4	329.5	365.3	434.4	271.3	255.7	289.8	321.3	224.3	193.5
	Std. Dev.	420.8	235.9	297.6	258.2	321.7	348.0	411.7	198.4	214.5	192.8	217.5	234.9	141.6
	Median	202.5	262	256	216.5	178.5	277.5	292	277.5	170.5	275.5	338	134.5	162
	Minimum	30	39	31	21	16	30	47	34	21	51	11	22	15
	Maximum	1691	1012	1247	1200	1262	1554	1598	949	756	855	703	1171	545
Surface Deposit Feeder	Mean	63.0	69.4	86.7	47.9	69.7	100.3	80.0	47.9	47.2	100.6	136.0	112.4	75.8
	Std. Dev.	72.3	61.7	122.7	34.4	61.9	152.0	69.6	29.1	43.7	112.8	157.5	183.1	121.1
	Median	38	37	41.5	41	47	50.5	61	41	30.5	48.5	45.5	45	38
	Minimum	2	6	7	3	11	4	4	7	1	10	7	2	3
	Maximum	321	215	534	149	261	774	274	137	193	391	556	642	510
	Maximum	202	82	95	155	113	182	176	128	250	258	242	767	354
Subsurface Deposit Feeder	Mean	29.0	24.5	29.3	36.5	37.6	44.2	47.1	40.0	42.8	54.1	51.4	113.6	55.9
	Std. Dev.	42.0	24.5	28.4	41.7	32.6	44.4	48.9	40.4	60.6	63.2	67.4	194.8	88.8
	Median	12.5	15	20	25.5	38.5	29	39.5	30.5	15.5	36	28.5	31.5	22
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
	Maximum	202	82	95	155	113	182	176	128	250	258	242	767	354
Other	Mean	4.5	3.4	9.4	4.8	5.8	7.3	7.1	4.1	4.4	6.4	4.8	2.8	4.3
	Std. Dev.	7.2	3.5	16.6	6.5	8.3	10.5	12.3	5.0	6.4	9.1	4.7	2.7	6.5
	Median	1	3	2	1	2	3	2	2.5	2	2	2.5	2	2
	Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
	Maximum	25	11	66	23	33	46	60	19	28	41	15	9	31

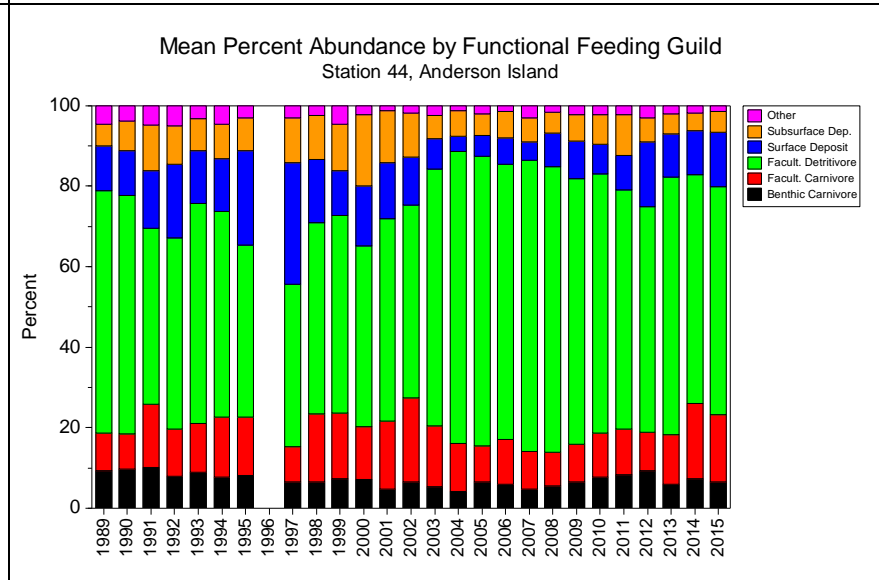
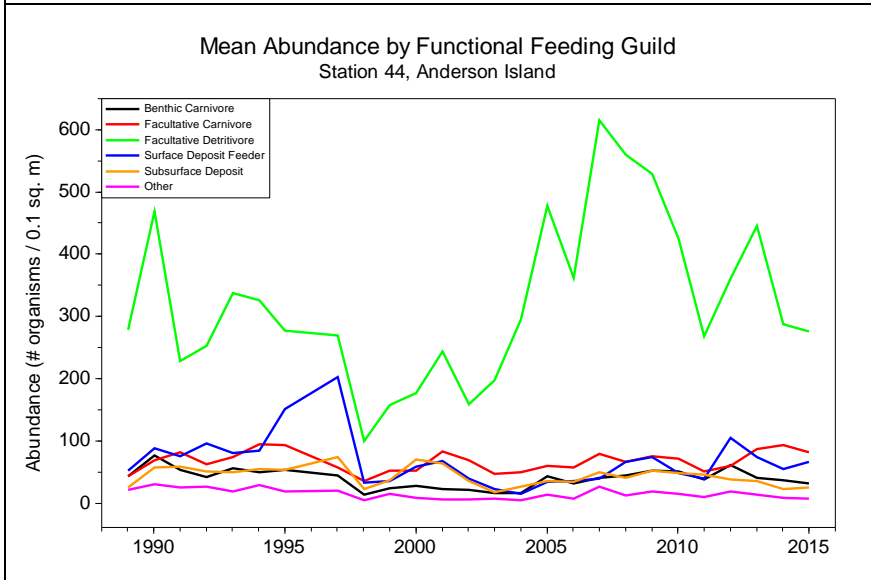
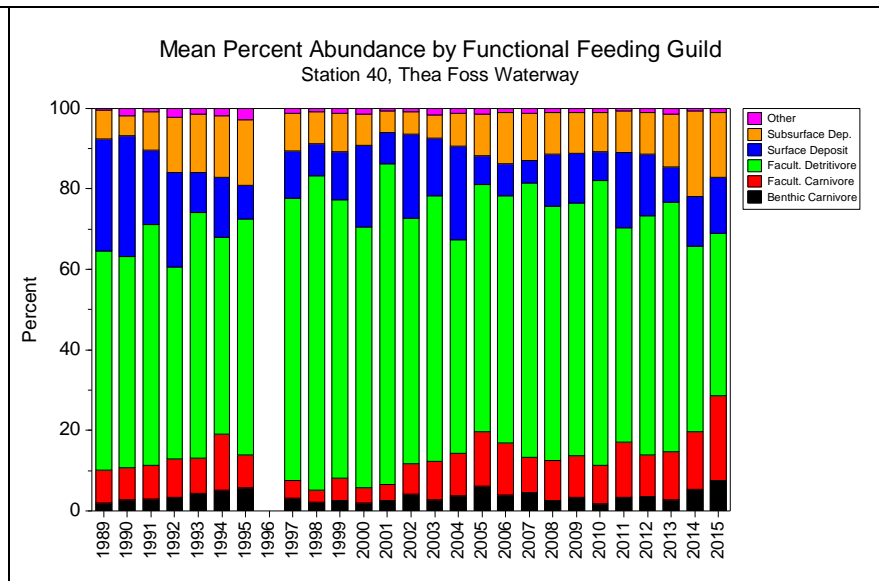
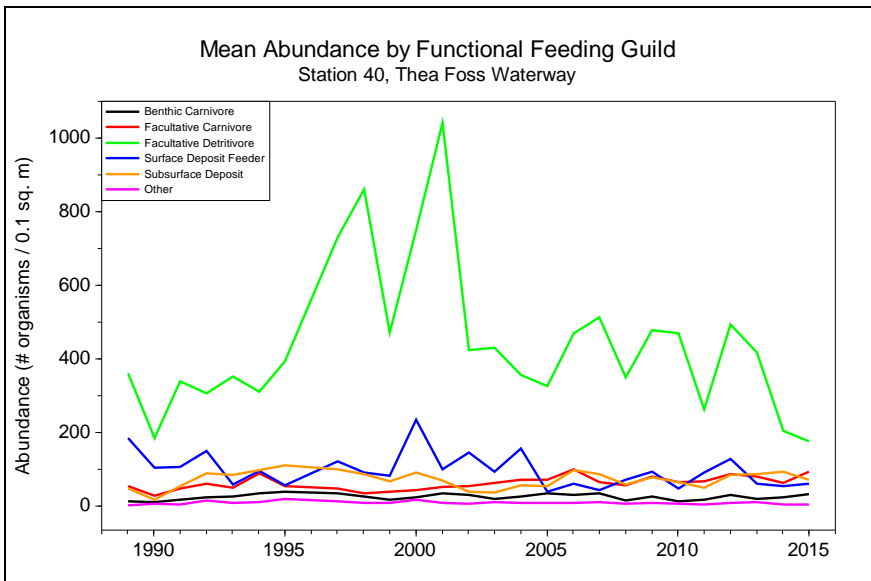
Mean abundance and percent abundance of functional feeding guilds, by station.



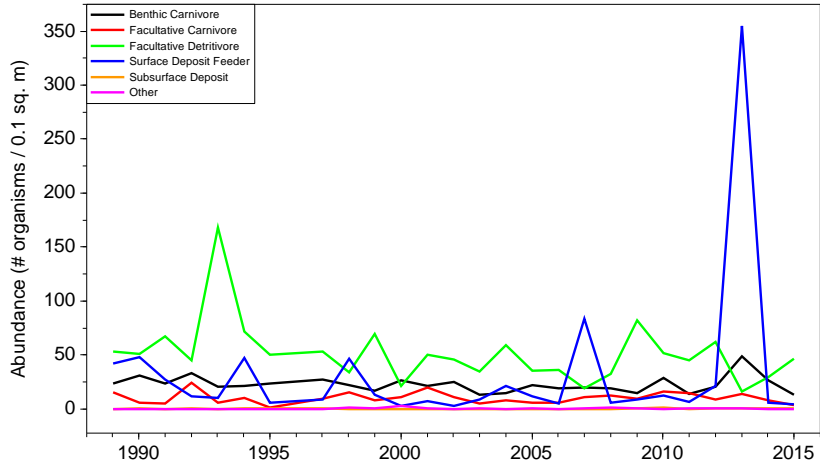




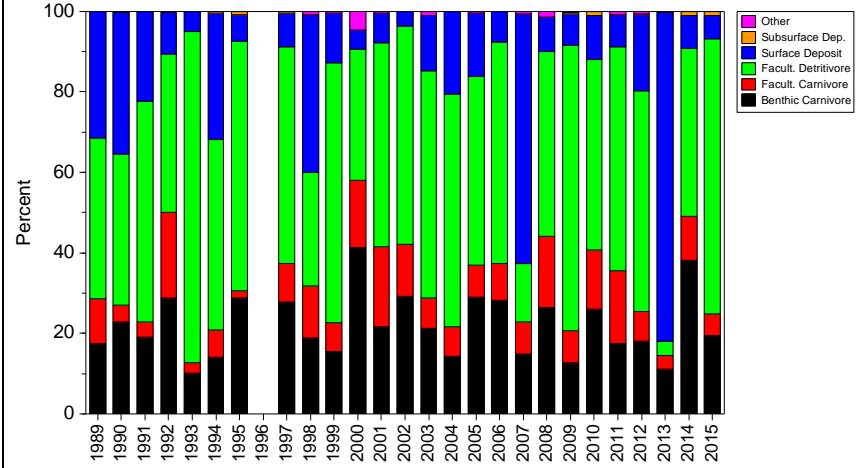




Mean Abundance by Functional Feeding Guild
Station 49, Inner Budd Inlet



Mean Percent Abundance by Functional Feeding Guild
Station 49, Inner Budd Inlet



Correlations with physical and chemical variables

Multivariate correlations between the benthic invertebrate assemblages and suites of habitat-related and chemical contaminant concentrations were calculated as Spearman correlations between similarity matrices for the benthic samples (Bray-Curtis similarities calculated on 4th-root-transformed abundances, all taxa) and distance matrices for the environmental samples (Euclidean distances calculated on normalized variables) using the BioEnv routine in PRIMER v.7. The correlations were run for all stations combined and for individual stations for each of multiple scenarios, including:

- different treatments of nondetects in the chemistry data.
- inclusion/exclusion of 1994-1996 chemistry data.
- inclusion/exclusion of salinity, temperature, and grab penetration depth.
- variance-stabilizing transformations of the environmental-variable data.

The BioEnv routine determines the selection of variables resulting in the highest correlations for each of one, two, up to specified maximum number of variables. When inclusion of additional variables improved the correlation by less than 10% over correlations with fewer variables, the smaller set of variables was used.

The variables considered and the collated and summarized results are depicted in the tables below.

Correlation method: Spearman rank

Method: BIOENV

Analyse between: Samples

Years included: 1989-1996, 2000, 2005, 2010

Resemblance measure: D1 Euclidean distance

** Some resemblances adjusted for missing values in data **

Variables	Units	Abbreviation
Date of sampling	Julian date	Julian
Salinity of overlying water	ppt	Sal
Sediment temperature	deg C	Temp
Grab penetration depth	cm	Pen
Total organic carbon	%	TOC
Percent fines	% silt+clay	Fines
Arsenic concentration*	ug/g dry wt	As

Cadmium concentration*	ug/g dry wt	Cd
Chromium concentration*	ug/g dry wt	Cr
Copper concentration*	ug/g dry wt	Cu
Lead concentration*	ug/g dry wt	Pb
Mercury concentration*	ug/g dry wt	Hg
Silver concentration*	ug/g dry wt	Ag
Zinc concentration*	ug/g dry wt	Zn
Total Metals concentration*	ug/g dry wt	Metals
Total HPAHs concentration*	ng/g dry wt	HPAH
Total LPAHs concentration*	ng/g dry wt	LPAH
Total Aroclors concentration*	ng/g dry wt	TAroclor

* Nondetects set to zero or RL or excluded (different scenarios tested)

Results

All stations and years together

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.451	TOC, Fines

Additional parameters (usually a metal) add only 1% to correlation

Treatment of nondetects: exclusion of ND -> different chem in some cases (3-5 variables)

Excluding Sal, Temp, Pen: no change

Excluding 1994-1996: Fines more important than TOC; correlations 7% higher for 1 variable, <2% for 2-5 variables

All stations within years

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.448	TOC, Cd
3	0.474	Cd, Ag, Zn

Overall: Cd, Ag, Zn, As combos sometimes have higher correlations than TOC + metals

Lower correlations with additional variables (TOC or metal)

Treatment of nondetects: correlations may be slightly lower when ND excluded

Excluding Sal, Temp, Pen: no change

Excluding 1994-1996: no correlation gain beyond 2 variables; correlations 4-5% lower for 3-4 variables

All years within stations

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.329	Julian, Temp, Pen

Additional parameters (usually an organics total) add <1% to correlation; penetration adds only 7.9%

Treatment of nondetects: chem in 4-5 variables may differ

Excluding Sal, Temp, Pen: TOC, Fines become important; correlations 15-18% lower for 2-5 variables, but 10-11% lower for 2-5 variables when 1994-1996 excluded

Excluding 1994-1996: correlations 21% higher for 1 variable; 8-12% higher for 2-5 variables; LPAH more important than TAroclor

Station 3, Strait of Georgia

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.527	Fines, Temp

Additional parameters (usually a metal) add 3.6-6.5% to correlation

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: TOC, HPAH become more important; correlations 37-39% lower for 2-5 variables

Excluding 1994-1996: TOC instead of Ag; correlations 25% higher for 1 variable; 4-8% higher for 2-5 variables, but 11-13% higher when Sal, Temp, Pen excluded

Station 4, Bellingham Bay

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.377	Julian, Temp, Pen

Next parameter (salinity) adds 3.7% to correlation; additional parameters add nothing

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: TOC, Fines become important; correlations 23-25% lower for 2 variables, 34-37% lower for 3-5 variables

Excluding 1994-1996: correlations 6-10% higher; may include different chem

Station 13, North Hood Canal

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.103 (not significant)	Fines, HPAH

Additional parameters (usually a metal) add <5% to correlation

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: may include different chem

Excluding 1994-1996: may include different chem; correlations 6% higher for 1 variable

Station 21, Port Gardner

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.312	Julian, Temp

Next parameter (penetration depth) adds 4.8% to correlation; additional parameters (chemical) add 4.3%

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: Fines, TAroclor become important; correlations 26% lower for 2 variables, 30-32% lower for 3-5 variables, but 13-15% lower for 2-5 variables when 1994-1996 excluded

Excluding 1994-1996: correlations 15-19% higher

Station 29, Shilshole

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.397	Julian, Temp, Pen

Additional parameters (chemical) add at most 3.5% to correlation

Treatment of nondetects: TOC more important when nondetects excluded; may include different chem

Excluding Sal, Temp, Pen: Ag, TOC instead of Temp, Pen; correlations 26% lower for 2 variables, 30-32% lower for 3-5 variables, but correlations 16-21% lower for 2-5 variables when 1994-1996 excluded

Excluding 1994-1996: Ag before LPAH; correlations 32% higher for 1 variable, 13% higher for 2 variables, 5-7% higher for 3-5 variables, but 28% higher for 2 variables, 22-24% higher for 3-5 variables when Sal, Temp, Pen excluded

Station 34, Sinclair Inlet

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.488	Julian, TOC, Sal

Additional parameters (chemical) add at most 3.5% to correlation

Treatment of nondetects: no change

Excluding Sal, Temp, Pen: Hg, Fines become more important; correlations 7% lower for 3-5 variables

Excluding 1994-1996: Ag, Cr instead of Sal; correlations 25% higher for 1 variable, 16% higher for 2 variables, 5-7% higher for 3-5 variables, but 12-16% higher for 2-5 variables when Sal, Temp, Pen excluded

Station 38, Point Pully

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.420	Julian, Sal, Pen

Additional parameters (chemical) add about 1% to correlation; penetration adds 8.8%

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: TAroclor, TOC, Fines become more important; correlations 30-34% lower for 2-5 variables, 17-22% lower for 2-5 variables when 1994-1996 excluded

Excluding 1994-1996: Pen before Sal; As before TAroclor; correlations 32% higher for 1 variable, 10% higher for 2 variables, 4-5% higher for 3-5 variables, but correlations 29-32% higher when Sal, Temp, Pen excluded

Station 40, Thea Foss Waterway

Best result for each number of variables

No.Vars	Corr.	Selections
4	0.365	Julian, TOC, Fines, Pb

Additional parameters (chemical or sediment temp) add 2.2% to correlation; Pb adds only 6.1%

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: may include different chem

Excluding 1994-1996: Fines become more important than TOC; correlations 9-13% higher

Station 44, Anderson Island

Best result for each number of variables

No.Vars	Corr.	Selections
2	0.507	Julian, Pen

Additional parameters (metal, salinity) add at most 6.5% to correlation

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: Fines becomes more important; correlations 12-16% lower for 2-5 variables, 8-12% lower when 1994-1996 excluded

Excluding 1994-1996: Sal, LPAH become more important; correlations 13-20% higher

Station 49, Inner Budd Inlet

Best result for each number of variables

No.Vars	Corr.	Selections
3	0.145 (not significant)	TOC, Pen, Hg

Additional parameters (metal) add at most 2.1% to correlation

Treatment of nondetects: may include different chem

Excluding Sal, Temp, Pen: no Pen; correlations 12% lower for 2 variables (but 19% lower when 1994-1996 excluded), 21-25% lower for 3-5 variables

Excluding 1994-1996: may include different metal; correlations 8-11% higher for 1-2 variables, 3-6% higher for 3-5 variables, but only 8% higher for 1 variable when Sal, Temp, Pen excluded

Data Quality Control Narrative

Taxonomic standardization changes applied by lead taxonomist to historical data and reflected in the current data.

Species	Comment	Action
Annelida		
Ampharete cf crassiseta	not distinguished from Ampharete finmarchica before 1995	combine with A. finmarchica as Ampharete finmarchica Cmplx
Ampharete finmarchica	not distinguished from Ampharete cf crassiseta before 1995	combine with A. cf crassiseta as Ampharete finmarchica Cmplx
Aphelochaeta glandaria Cmplx	called (by) many names over the years	combine as Aphelochaeta sp
Aphelochaeta monilaris	confused with Aphelochaeta sp N5 in early years	combine as Aphelochaeta sp
Aphelochaeta sp	mostly damaged A. glandaria Cmplx with a smattering of other species	combine as Aphelochaeta sp
Aphelochaeta sp N5	not recognized as a separate species before 2008	combine as Aphelochaeta sp
Aphelochaeta tigrina	not described until 1996	very few in data - so ignore, or can combine as Aphelochaeta sp
Axiothella rubrocincta	only 1 species in Puget Sound	combine with Axiothella sp as Axiothella rubrocincta
Axiothella sp	only 1 species in Puget Sound	combine with Axiothella rubrocincta as Axiothella rubrocincta
Boccardiella hamata	one species in Puget Sound	combine with Boccardiella sp as Boccardiella hamata
Boccardiella sp		combine with Boccardiella hamata as Boccardiella hamata
Chone bimaculata	taxonomic update from SCAMIT	combine with Chone duneri and Paradialychone bimaculata as Paradialychone bimaculata
Chone duneri	Puget Sound species is Paradialychone. bimaculata, not Chone duneri	combine with Chone bimaculata and Paradialychone bimaculata as Paradialychone bimaculata
Clymenura gracilis	only 1 species in Puget Sound	combine with Clymenura sp as Clymenura gracilis
Clymenura sp	only 1 species in Puget Sound	combine with Clymenura gracilis as Clymenura gracilis
Demonax medius	one species in Puget Sound	combine with Demonax sp as Demonax medius
Demonax sp		combine with Demonax medius as Demonax medius
Diopatra ornata	only 1 species in Puget Sound	combine with Diopatra sp as Diopatra ornata
Diopatra sp	only 1 species in Puget Sound	combine with Diopatra ornata as Diopatra ornata

Species	Comment	Action
Eteone californica	not separated out until after 1996	combine to Eteone sp
Eteone columbiensis	not separated out until after 1996	combine to Eteone sp
Eteone fauchaldi	not separated out until after 1996	combine to Eteone sp
Eteone leptotes	not separated out until after 1996	combine to Eteone sp
Eteone sp		combine to Eteone sp
Eupolymnia heterobranchia	one species in Puget Sound	combine with Eupolymnia sp as Eupolymnia heterobranchia
Eupolymnia sp		combine with Eupolymnia heterobranchia as Eupolymnia heterobranchia
Exogone molesta	taxonomic update from SCAMIT	combine with Parexogone molesta as Parexogone molesta
Heteromastus sp	ids of earlier years probably okay	restore species-level ids from raw data (1989-1994)
Laonome kroeyeri	one species in Puget Sound	combine with Laonome sp as Laonome kroeyeri
Laonome sp		combine with Laonome kroeyeri as Laonome kroeyeri
Mediomastus ambiseta	hard to assign to species if posterior is missing	combine all as Mediomastus sp
Mediomastus californiensis	hard to assign to species if posterior is missing	combine all as Mediomastus sp
Mediomastus sp	hard to assign to species if posterior is missing	combine all as Mediomastus sp
Mesochaetopterus sp	all the same species, just not sure which one	combine with M. taylori as Mesochaetopterus sp
Mesochaetopterus taylori	all the same species, just not sure which one	combine with M. sp as Mesochaetopterus sp
Nicolea sp		combine with Nicolea zostericola as Nicolea zostericola
Nicolea zostericola	one species in Puget Sound	combine with Nicolea sp as Nicolea zostericola
Notomastus hemipodus	ids of 1989 can be treated the same as ids from 1990-1994	change Notomastus tenuis from 1989 to Notomastus hemipodus
Notomastus latericeus	ids of 1989 can be treated the same as ids from 1990-1994	keep the 1989 Notomastus latericeus as N. latericeus
Notomastus lineatus	ids of 1989 can be treated the same as ids from 1990-1994	change the 1989 Notomastus lineatus to Notomastus hemipodus
Notomastus sp	ok except for 1989	restore species-level ids from 1989 raw data
Owenia fusiformis	combined with O. johnsoni before 2000	combine with Owenia johnsoni an Owenia sp
Owenia johnsoni	not described until 2000	combine with Owenia fusiformis an Owenia sp
Paradialychone bimaculata	taxonomic update from SCAMIT	combine with Chone duneri and Chone bimaculata as Paradialychone bimaculata

Species	Comment	Action
<i>Paraprionospio alata</i>	one species in Puget Sound	combine with <i>Paraprionospio</i> sp as <i>Paraprionospio alata</i>
<i>Paraprionospio</i> sp		combine with <i>Paraprionospio alata</i> as <i>Paraprionospio alata</i>
<i>Parexogone molesta</i>	taxonomic update from SCAMIT	combine with <i>Exogone molesta</i> as <i>Parexogone molesta</i>
<i>Pholoe glabra</i>	not separated out until after 2000	combine to <i>Pholoe</i> sp Cmplx
<i>Pholoe minuta</i>		combine to <i>Pholoe</i> sp Cmplx
<i>Pholoe</i> sp		combine to <i>Pholoe</i> sp Cmplx
<i>Pholoe</i> sp Cmplx		combine to <i>Pholoe</i> sp Cmplx
<i>Pholoe</i> sp N1	not separated out until after 2000	combine to <i>Pholoe</i> sp Cmplx
<i>Phyllochaetopterus claparedii</i>	not recognized as a separate species before 1997	combine with <i>Phyllochaetopterus prolifica</i> and <i>Phyllochaetopterus</i> sp as <i>Phyllochaetopterus</i> sp
<i>Phyllochaetopterus prolifica</i>	in early years, may include <i>P. claparedii</i>	combine with <i>Phyllochaetopterus claparedii</i> and <i>Phyllochaetopterus</i> sp as <i>Phyllochaetopterus</i> sp
<i>Phyllochaetopterus</i> sp		combine with <i>Phyllochaetopterus prolifica</i> and <i>Phyllochaetopterus claparedii</i> as <i>Phyllochaetopterus</i> sp
<i>Pilargis berkeleyae</i>	now is <i>Pilargis maculata</i> in Puget Sound	combine to <i>Pilargis maculata</i>
<i>Pilargis maculata</i>		combine to <i>Pilargis maculata</i>
<i>Pista brevibranchiata</i>		combine with <i>Pista percyi</i> as <i>Pista brevibranchiata</i>
<i>Pista percyi</i>		combine with <i>Pista brevibranchiata</i> as <i>Pista brevibranchiata</i>
<i>Podarkeopsis perkinsi</i>	not recognized as a separate species until 1996	combine with <i>Podarkeopsis glabrus</i> as <i>Podarkeopsis</i> sp
<i>Pterocirrus montereyensis</i>	now is <i>Sige montereyensis</i>	combine to <i>Sige montereyensis</i>
<i>Serpula</i> sp	subgenera of <i>Serpula</i> have been elevated to genus status and <i>Serpula</i> no longer exists as a genus	combine with <i>Serpulidae</i> as <i>Serpulidae</i>
<i>Serpulidae</i>		combine with <i>Serpula</i> sp as <i>Serpulidae</i>
<i>Sige montereyensis</i>		combine to <i>Sige montereyensis</i>
<i>Spiochaetopterus costarum</i> Cmplx	current combination includes <i>costarum</i> and <i>pottsi</i>	combine with <i>Spiochaetopterus pottsi</i> as <i>Spiochaetopterus costarum</i> Cmplx
<i>Spiochaetopterus pottsi</i>		combine with <i>Spiochaetopterus costarum</i> Cmplx as <i>Spiochaetopterus costarum</i> Cmplx
<i>Spiophanes berkeleyorum</i>		combine with <i>Spiophanes duplex</i> as <i>Spiophanes berkeleyorum</i>
<i>Spiophanes duplex</i>	California species most likely misidentified	combine with <i>Spiophanes berkeleyorum</i> as <i>Spiophanes berkeleyorum</i>

Species	Comment	Action
<i>Sternaspis fossor</i>	one species in Puget Sound	combine with <i>Sternaspis</i> sp as <i>Sternaspis fossor</i>
<i>Sternaspis</i> sp		combine with <i>Sternaspis fossor</i> as <i>Sternaspis fossor</i>
<i>Streblosoma bairdi</i>	one species in Puget Sound	combine with <i>Streblosoma</i> sp as <i>Streblosoma bairdi</i>
<i>Streblosoma</i> sp		combine with <i>Streblosoma bairdi</i> as <i>Streblosoma bairdi</i>
<i>Thelepus setosus</i>	one species in Puget Sound	combine with <i>Thelepus</i> sp as <i>Thelepus setosus</i>
<i>Thelepus</i> sp		combine with <i>Thelepus setosus</i> as <i>Thelepus setosus</i>
<i>Trochochaeta multisetosa</i>	one species in Puget Sound	combine with <i>Trochochaeta</i> sp as <i>Trochochaeta multisetosa</i>
<i>Trochochaeta</i> sp		combine with <i>Trochochaeta multisetosa</i> as <i>Trochochaeta multisetosa</i>
Arthropoda		
<i>Acartia longiremis</i>	incidental	delete
<i>Anonyx</i> cf <i>liljeborgi</i>		combine with <i>Anonyx liljeborgi</i> as <i>Anonyx</i> cf <i>liljeborgi</i>
<i>Anonyx liljeborgi</i>		combine with <i>Anonyx</i> cf <i>liljeborgi</i> as <i>Anonyx</i> cf <i>liljeborgi</i>
<i>Aoroides intermedia</i>	orthographic error	update spelling
<i>Balanomorpha</i>	incidental	delete
<i>Balanus crenatus</i>	incidental	delete
<i>Balanus</i> sp	incidental	delete
Bopyridae	fish ectoparasite	delete
Brachyura	zoea and megalopae	delete
Calanoida	incidental	delete
<i>Calanus</i> sp	incidental	delete
Caligidae	incidental	delete
<i>Cancer branneri</i>	taxonomic update from SCAMIT	change to <i>Romaleon branneri</i>
<i>Cancer gracilis</i>	taxonomic update from SCAMIT	change to <i>Metacarcinus gracilis</i>
<i>Centropages abdominalis</i>	incidental	delete
Cirripedia	incidental	delete
Decapoda	zoea and megalopae	delete
<i>Dulichia rhabdoplastis</i>		combine with <i>Dulichia</i> sp as <i>Dulichia</i> sp
<i>Dulichia</i> sp		combine with <i>Dulichia rhabdoplastis</i> as <i>Dulichia</i> sp

Species	Comment	Action
Eogammarus confervicolus Cmplx		combine with Eogammarus sp as Eogammarus confervicolus Cmplx
Eogammarus sp		combine with Eogammarus confervicolus Cmplx as Eogammarus confervicolus Cmplx
Epilabidocera longipedata	incidental	delete
Erichthonius brasiliensis	taxonomic update from WoRMS	change to Erichthonius punctatus
Eucalanus bungii	incidental	delete
Eucalanus sp	incidental	delete
Euphausia pacifica	planktonic	delete
Euphausia sp	planktonic	delete
Euphausiacea	planktonic	delete
Hesperibalanus hesperius	incidental	delete
Heterophoxus affinis		combine with Heterophoxus oculatus group as Heterophoxus oculatus
Heterophoxus oculatus group		combine with Heterophoxus affinis as Heterophoxus oculatus
Hippomedon cf coecus		combine with Hippomedon coecus as Hippomedon coecus
Hippomedon coecus		combine with Hippomedon cf coecus as Hippomedon coecus
Hyperiidae	incidental	delete
Joeropsis dubia	taxonomic update from SCAMIT	change to Joeropsis dubia and combine with Joeropsis dubia dubia as Joeropsis dubia
Joeropsis dubia dubia		combine with Joeropsis dubia as Joeropsis dubia
Melphidippa borealis		combine with Melphidippa sp as Melphidippa sp
Melphidippa sp		combine with Melphidippa borealis as Melphidippa sp
Munna ubiquita	taxonomic update from SCAMIT	change to Uromunna ubiquita
Nebalia pugettensis Cmplx		combine with Nebalia sp as Nebalia pugettensis Cmplx
Nebalia sp		combine with Nebalia pugettensis Cmplx as Nebalia pugettensis Cmplx
Orchomene decipiens	taxonomic update from SCAMIT	change to Orchomenella decipiens
Orchomene pacificus	taxonomic update from SCAMIT	change to Orchomenella pacifica
Orchomene pinguis	taxonomic update from SCAMIT	change to Orchomenella pinguis
Orchomene sp	taxonomic update from SCAMIT	change to Orchomenella sp

Species	Comment	Action
Pachynus barnardi		combine with Pachynus cf barnardi as Pachynus barnardi
Pachynus cf barnardi		combine with Pachynus barnardi as Pachynus barnardi
Paracalanus sp	incidental	delete
Pontogeneia inermis		change family
Pontogeneia rostrata		change family
Pugettia gracilis		combine with Pugettia sp as Pugettia sp
Pugettia sp		combine with Pugettia gracilis as Pugettia sp
Stenula modosa	only 1 species in Puget Sound	combine with Stenula sp to Stenula modosa
Stenula sp	only 1 species in Puget Sound	combine with Stenula modosa to Stenula modosa
Themisto pacifica	incidental	delete
Thysanoessa cf longipes	planktonic	delete
Thysanoessa raschii	planktonic	delete
Thysanoessa sp	planktonic	delete
Trachypleustes trevori Cmplx		change to Trachypleustes trevori
Chordata		
Cottidae	incidental	delete
Porichthys notatus	incidental	delete
Cnidaria		
Actiniaria		combine with Anthozoa and Athenaria to Anthozoa
Anthozoa		combine with Actiniaria and Athenaria to Anthozoa
Athecatae		combine with Hydrozoa to Hydrozoa
Athenaria		combine with Anthozoa and Actiniaria to Anthozoa
Ceriantharia	only 1 species in Puget Sound	combine with Cerianthidae, Pachycerianthus sp, and Pachycerianthus fimbriatus to Pachycerianthus fimbriatus
Cerianthidae	only 1 species in Puget Sound	combine with Ceriantharia, Pachycerianthus sp, and Pachycerianthus fimbriatus to Pachycerianthus fimbriatus
Halcampoides purpurea Cmplx	taxonomic update from SCAMIT	change to Halcampoides purpurea
Hydrozoa		combine with Athecatae to Hydrozoa
Metridium senile		combine with Metridium sp to Metridium sp

Species	Comment	Action
Metridium sp		combine with Metridium senile to Metridium sp
Pachycerianthus fimbriatus	only 1 species in Puget Sound	combine with Ceriantharia, Cerianthidae, and Pachycerianthus sp to Pachycerianthus fimbriatus
Pachycerianthus sp	only 1 species in Puget Sound	combine with Ceriantharia, Cerianthidae, and Pachycerianthus fimbriatus to Pachycerianthus fimbriatus
Thenaria		combine to Anthozoa
Echinodermata		
Amphiodia sp		combine with Amphiodia urtica/periercta to Amphiodia sp
Amphiodia urtica/periercta		combine with Amphiodia sp to Amphiodia sp
Brisaster latifrons		combine with Brisaster sp and Heart Urchin to Brisaster latifrons
Brisaster sp		combine with Brisaster latifrons and Heart Urchin to Brisaster latifrons
Heart Urchin		combine with Brisaster latifrons and Brisaster sp as Brisaster latifrons
Molpadia intermedia		combine with Molpadia sp to Molpadia intermedia
Molpadia sp		combine with Molpadia intermedia to Molpadia intermedia
Pseudocnus lubricus		combine with Pseudocnus sp to Pseudocnus lubricus
Pseudocnus sp		combine with Pseudocnus lubricus to Pseudocnus lubricus
Mollusca		
Balcis oldroydae		combine with Balcis sp as Balcis sp
Balcis sp		combine with Balcis oldroydae as Balcis sp
Diaphana californica		combine with Diaphana sp to Diaphana californica
Diaphana sp		combine with Diaphana californica to Diaphana californica
Doto columbiana		combine with Doto sp as Doto sp
Doto sp		combine with Doto columbiana as Doto sp
Epitonium sawinae		combine with Epitonium sp as Epitonium sp
Epitonium sp		combine with Epitonium sawinae as Epitonium sp
Haminaea sp		change to Haminoea sp
Haminaea vesicula		change to Haminoea vesicula
Lirobittium attenuatum		combine all Lirobittium to Lirobittium sp

Species	Comment	Action
Lirobittium eschrichtii		combine all Lirobittium to Lirobittium sp
Lirobittium sp		combine all Lirobittium to Lirobittium sp
Lyonsia californica	only 1 species in Puget Sound	combine with Lyonsia sp as Lyonsia californica
Lyonsia sp	only 1 species in Puget Sound	combine with Lyonsia californica as Lyonsia californica
Mya arenaria	only 1 species in Puget Sound	combine with Mya sp as Mya arenaria
Mya sp	only 1 species in Puget Sound	combine with Mya arenaria as Mya arenaria
Nassarius mendicus	taxonomic update from SCAMIT	change to Hima mendica
Nematoda		
Nematoda	incidental	delete
Phoronida		
Phoronida		combine to Phoronidae
Phoronidae		combine to Phoronidae
Sipuncula		
Golfingia sp		combine with Golfingia vulgaris as Golfingia sp
Golfingia vulgaris		combine with Golfingia sp as Golfingia sp
Thysanocardia nigra	only 1 species in Puget Sound	combine with Thysanocardia sp as Thysanocardia nigra
Thysanocardia sp	only 1 species in Puget Sound	combine with Thysanocardia nigra as Thysanocardia nigra

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Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1989	3	1	TRUE	TRUE	TRUE	TRUE	R. Llanso 1995: Some data may be missing; some data may not belong to Sta. 3, but I don't know. For example, reps 2 & 4 have more crustaceans (112 and 59, respectively) than reps 1, 3 & 5 (0, 6, and 4 respectively) (89-93 MSMP Infaunal data problems.DOC)
1989	3	2	TRUE	TRUE	TRUE	TRUE	R. Llanso 1995: Some data may be missing; some data may not belong to Sta. 3, but I don't know. For example, reps 2 & 4 have more crustaceans (112 and 59, respectively) than reps 1, 3 & 5 (0, 6, and 4 respectively) (89-93 MSMP Infaunal data problems.DOC)
1989	3	3	TRUE	TRUE	TRUE	TRUE	R. Llanso 1995: Some data may be missing; some data may not belong to Sta. 3, but I don't know. For example, reps 2 & 4 have more crustaceans (112 and 59, respectively) than reps 1, 3 & 5 (0, 6, and 4 respectively) (89-93 MSMP Infaunal data problems.DOC)
1989	3	4	TRUE	TRUE	FALSE	FALSE	R. Llanso 1995: Some data may be missing; some data may not belong to Sta. 3, but I don't know. For example, reps 2 & 4 have more crustaceans (112 and 59, respectively) than reps 1, 3 & 5 (0, 6, and 4 respectively) (89-93 MSMP Infaunal data problems.DOC)
1989	3	5	TRUE	TRUE	FALSE	FALSE	R. Llanso 1995: Some data may be missing; some data may not belong to Sta. 3, but I don't know. For example, reps 2 & 4 have more crustaceans (112 and 59, respectively) than reps 1, 3 & 5 (0, 6, and 4 respectively) (89-93 MSMP Infaunal data problems.DOC)
1989	4	1	TRUE	TRUE	TRUE	TRUE	
1989	4	2	TRUE	TRUE	TRUE	TRUE	
1989	4	3	TRUE	TRUE	TRUE	TRUE	
1989	4	4	TRUE	TRUE	FALSE	FALSE	
1989	4	5	TRUE	TRUE	FALSE	FALSE	
1989	13	1	TRUE	TRUE	TRUE	TRUE	
1989	13	2	TRUE	TRUE	TRUE	TRUE	
1989	13	3	TRUE	TRUE	TRUE	TRUE	
1989	13	4	TRUE	TRUE	FALSE	FALSE	
1989	13	5	TRUE	TRUE	FALSE	FALSE	
1989	21	1	TRUE	TRUE	TRUE	TRUE	
1989	21	2	TRUE	TRUE	TRUE	TRUE	
1989	21	3	TRUE	TRUE	TRUE	TRUE	
1989	21	4	TRUE	TRUE	FALSE	FALSE	
1989	21	5	TRUE	TRUE	FALSE	FALSE	
1989	29	1	TRUE	TRUE	TRUE	TRUE	
1989	29	2	TRUE	TRUE	TRUE	TRUE	
1989	29	3	TRUE	TRUE	TRUE	TRUE	
1989	29	4	TRUE	TRUE	FALSE	FALSE	
1989	29	5	TRUE	TRUE	FALSE	FALSE	
1989	34	1	TRUE	TRUE	TRUE	TRUE	
1989	34	2	TRUE	TRUE	TRUE	TRUE	
1989	34	3	TRUE	TRUE	TRUE	TRUE	
1989	34	4	TRUE	TRUE	FALSE	FALSE	
1989	34	5	TRUE	TRUE	FALSE	FALSE	
1989	38	1	TRUE	TRUE	TRUE	TRUE	
1989	38	2	TRUE	TRUE	TRUE	TRUE	
1989	38	3	TRUE	TRUE	TRUE	TRUE	
1989	38	4	TRUE	TRUE	FALSE	FALSE	
1989	38	5	TRUE	TRUE	FALSE	FALSE	
1989	40	1	TRUE	TRUE	TRUE	TRUE	
1989	40	2	TRUE	TRUE	TRUE	TRUE	
1989	40	3	TRUE	TRUE	TRUE	TRUE	
1989	40	4	TRUE	TRUE	FALSE	FALSE	
1989	40	5	TRUE	TRUE	FALSE	FALSE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1989	44	1	TRUE	TRUE	TRUE	TRUE	
1989	44	2	TRUE	TRUE	TRUE	TRUE	
1989	44	3	TRUE	TRUE	TRUE	TRUE	
1989	44	4	TRUE	TRUE	FALSE	FALSE	
1989	44	5	TRUE	TRUE	FALSE	FALSE	
1989	49	1	TRUE	TRUE	TRUE	TRUE	
1989	49	2	TRUE	TRUE	TRUE	TRUE	
1989	49	3	TRUE	TRUE	TRUE	TRUE	
1989	49	4	TRUE	TRUE	FALSE	FALSE	
1989	49	5	TRUE	TRUE	FALSE	FALSE	
1990	3	1	TRUE	TRUE	TRUE	TRUE	
1990	3	2	TRUE	TRUE	TRUE	TRUE	
1990	3	3	TRUE	TRUE	TRUE	TRUE	
1990	3	4	TRUE	TRUE	FALSE	FALSE	
1990	3	5	TRUE	TRUE	FALSE	FALSE	
1990	4	1	TRUE	TRUE	TRUE	TRUE	
1990	4	2	TRUE	TRUE	TRUE	TRUE	
1990	4	3	TRUE	TRUE	TRUE	TRUE	
1990	4	4	TRUE	TRUE	FALSE	FALSE	
1990	4	5	TRUE	TRUE	FALSE	FALSE	
1990	21	1	TRUE	TRUE	TRUE	TRUE	
1990	21	2	TRUE	TRUE	TRUE	TRUE	
1990	21	3	TRUE	TRUE	TRUE	TRUE	
1990	21	4	TRUE	TRUE	FALSE	FALSE	
1990	21	5	TRUE	TRUE	FALSE	FALSE	
1990	29	1	TRUE	TRUE	TRUE	TRUE	
1990	29	2	TRUE	TRUE	TRUE	TRUE	
1990	29	3	TRUE	TRUE	TRUE	TRUE	
1990	29	4	FALSE	FALSE	FALSE	FALSE	R. Llansó 1995: Rep 4 missing arthropods (data missing)
1990	29	5	TRUE	TRUE	FALSE	FALSE	
1990	34	1	TRUE	TRUE	TRUE	TRUE	
1990	34	2	TRUE	TRUE	TRUE	TRUE	
1990	34	3	TRUE	TRUE	TRUE	TRUE	
1990	34	4	TRUE	TRUE	FALSE	FALSE	
1990	34	5	TRUE	TRUE	FALSE	FALSE	
1990	38	1	TRUE	TRUE	TRUE	TRUE	
1990	38	2	TRUE	TRUE	TRUE	TRUE	
1990	38	3	TRUE	TRUE	TRUE	TRUE	
1990	38	4	TRUE	TRUE	FALSE	FALSE	
1990	38	5	TRUE	TRUE	FALSE	FALSE	
1990	40	1	TRUE	TRUE	TRUE	TRUE	abundance low
1990	40	2	TRUE	TRUE	TRUE	TRUE	abundance low
1990	40	3	TRUE	TRUE	TRUE	TRUE	abundance low
1990	40	4	TRUE	TRUE	FALSE	FALSE	abundance low
1990	40	5	TRUE	TRUE	FALSE	FALSE	abundance low
1990	44	1	TRUE	TRUE	TRUE	TRUE	
1990	44	2	TRUE	TRUE	TRUE	TRUE	
1990	44	3	TRUE	TRUE	TRUE	TRUE	
1990	44	4	TRUE	TRUE	FALSE	FALSE	
1990	44	5	TRUE	TRUE	FALSE	FALSE	
1990	49	1	TRUE	TRUE	TRUE	TRUE	
1990	49	2	TRUE	TRUE	TRUE	TRUE	
1990	49	3	TRUE	TRUE	TRUE	TRUE	
1990	49	4	TRUE	TRUE	FALSE	FALSE	
1990	49	5	TRUE	TRUE	FALSE	FALSE	
1991	3	1	TRUE	TRUE	TRUE	TRUE	
1991	3	2	TRUE	TRUE	TRUE	TRUE	
1991	3	3	TRUE	TRUE	TRUE	TRUE	
1991	3	4	TRUE	TRUE	FALSE	FALSE	
1991	3	5	TRUE	TRUE	FALSE	FALSE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1991	4	1	TRUE	TRUE	TRUE	TRUE	
1991	4	2	TRUE	TRUE	TRUE	TRUE	
1991	4	3	TRUE	TRUE	TRUE	TRUE	
1991	4	4	TRUE	TRUE	FALSE	FALSE	
1991	4	5	TRUE	TRUE	FALSE	FALSE	
1991	13	1	TRUE	TRUE	TRUE	TRUE	
1991	13	2	TRUE	TRUE	TRUE	TRUE	
1991	13	3	TRUE	TRUE	TRUE	TRUE	
1991	13	4	TRUE	TRUE	FALSE	FALSE	
1991	13	5	TRUE	TRUE	FALSE	FALSE	
1991	21	1	TRUE	TRUE	TRUE	TRUE	
1991	21	2	TRUE	TRUE	TRUE	TRUE	
1991	21	3	TRUE	TRUE	TRUE	TRUE	
1991	21	4	TRUE	TRUE	FALSE	FALSE	
1991	21	5	TRUE	TRUE	FALSE	FALSE	
1991	29	1	TRUE	TRUE	TRUE	TRUE	
1991	29	2	TRUE	TRUE	TRUE	TRUE	
1991	29	3	TRUE	TRUE	TRUE	TRUE	
1991	29	4	TRUE	TRUE	FALSE	FALSE	
1991	29	5	TRUE	TRUE	FALSE	FALSE	
1991	34	1	TRUE	TRUE	TRUE	TRUE	
1991	34	2	TRUE	TRUE	TRUE	TRUE	
1991	34	3	TRUE	TRUE	TRUE	TRUE	
1991	34	4	TRUE	TRUE	FALSE	FALSE	
1991	34	5	TRUE	TRUE	FALSE	FALSE	
1991	38	1	TRUE	TRUE	TRUE	TRUE	
1991	38	2	TRUE	TRUE	TRUE	TRUE	
1991	38	3	TRUE	TRUE	TRUE	TRUE	
1991	38	4	TRUE	TRUE	FALSE	FALSE	
1991	38	5	TRUE	TRUE	FALSE	FALSE	
1991	40	1	TRUE	TRUE	TRUE	TRUE	
1991	40	2	TRUE	TRUE	TRUE	TRUE	
1991	40	3	TRUE	TRUE	TRUE	TRUE	
1991	40	4	TRUE	TRUE	FALSE	FALSE	
1991	40	5	TRUE	TRUE	FALSE	FALSE	
1991	44	1	TRUE	TRUE	TRUE	TRUE	
1991	44	2	TRUE	TRUE	TRUE	TRUE	
1991	44	3	TRUE	TRUE	TRUE	TRUE	
1991	44	4	TRUE	TRUE	FALSE	FALSE	
1991	44	5	TRUE	TRUE	FALSE	FALSE	
1991	49	1	TRUE	TRUE	TRUE	TRUE	
1991	49	2	TRUE	TRUE	TRUE	TRUE	
1991	49	3	TRUE	TRUE	TRUE	TRUE	
1991	49	4	TRUE	TRUE	FALSE	FALSE	
1991	49	5	TRUE	TRUE	FALSE	FALSE	
1992	3	1	TRUE	TRUE	TRUE	TRUE	
1992	3	2	TRUE	TRUE	TRUE	TRUE	
1992	3	3	TRUE	TRUE	TRUE	TRUE	
1992	3	4	TRUE	TRUE	FALSE	FALSE	
1992	3	5	TRUE	TRUE	FALSE	FALSE	
1992	4	1	TRUE	TRUE	TRUE	TRUE	
1992	4	2	TRUE	TRUE	TRUE	TRUE	
1992	4	3	TRUE	TRUE	TRUE	TRUE	
1992	4	4	TRUE	TRUE	FALSE	FALSE	
1992	4	5	TRUE	TRUE	FALSE	FALSE	
1992	21	1	TRUE	TRUE	TRUE	TRUE	
1992	21	2	TRUE	TRUE	TRUE	TRUE	
1992	21	3	TRUE	TRUE	TRUE	TRUE	
1992	21	4	TRUE	TRUE	FALSE	FALSE	
1992	21	5	TRUE	TRUE	FALSE	FALSE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1992	29	1	TRUE	TRUE	TRUE	TRUE	
1992	29	2	TRUE	TRUE	TRUE	TRUE	
1992	29	3	TRUE	TRUE	TRUE	TRUE	
1992	29	4	TRUE	TRUE	FALSE	FALSE	
1992	29	5	TRUE	TRUE	FALSE	FALSE	
1992	34	1	TRUE	TRUE	TRUE	TRUE	
1992	34	2	TRUE	TRUE	TRUE	TRUE	
1992	34	3	TRUE	TRUE	TRUE	TRUE	
1992	34	4	TRUE	TRUE	FALSE	FALSE	
1992	34	5	TRUE	TRUE	FALSE	FALSE	
1992	38	1	TRUE	TRUE	TRUE	TRUE	
1992	38	2	TRUE	TRUE	TRUE	TRUE	
1992	38	3	TRUE	TRUE	TRUE	TRUE	
1992	38	4	TRUE	TRUE	FALSE	FALSE	
1992	38	5	TRUE	TRUE	FALSE	FALSE	
1992	40	1	TRUE	TRUE	TRUE	TRUE	
1992	40	2	TRUE	TRUE	TRUE	TRUE	
1992	40	3	TRUE	TRUE	TRUE	TRUE	
1992	40	4	TRUE	TRUE	FALSE	FALSE	
1992	40	5	TRUE	TRUE	FALSE	FALSE	
1992	44	1	TRUE	TRUE	TRUE	TRUE	
1992	44	2	TRUE	TRUE	TRUE	TRUE	
1992	44	3	TRUE	TRUE	TRUE	TRUE	
1992	44	4	TRUE	TRUE	FALSE	FALSE	
1992	44	5	TRUE	TRUE	FALSE	FALSE	
1992	49	1	TRUE	TRUE	TRUE	TRUE	
1992	49	2	TRUE	TRUE	TRUE	TRUE	
1992	49	3	TRUE	TRUE	TRUE	TRUE	
1992	49	4	TRUE	TRUE	FALSE	FALSE	
1992	49	5	TRUE	TRUE	FALSE	FALSE	
1993	3	1	TRUE	TRUE	TRUE	TRUE	
1993	3	2	TRUE	TRUE	TRUE	TRUE	
1993	3	3	TRUE	TRUE	TRUE	TRUE	
1993	3	4	TRUE	TRUE	FALSE	FALSE	
1993	3	5	TRUE	TRUE	FALSE	FALSE	
1993	4	1	TRUE	TRUE	TRUE	TRUE	
1993	4	2	TRUE	TRUE	TRUE	TRUE	
1993	4	3	TRUE	TRUE	TRUE	TRUE	
1993	4	4	TRUE	TRUE	FALSE	FALSE	
1993	4	5	TRUE	TRUE	FALSE	FALSE	
1993	21	1	TRUE	TRUE	TRUE	TRUE	
1993	21	2	TRUE	TRUE	TRUE	TRUE	
1993	21	3	TRUE	TRUE	TRUE	TRUE	
1993	21	4	TRUE	TRUE	FALSE	FALSE	
1993	21	5	TRUE	TRUE	FALSE	FALSE	
1993	29	1	FALSE	FALSE	FALSE	FALSE	R. Llansó 1995: rep 1 probably missing data because of preservation: no formalin was added to the sample
1993	29	2	TRUE	TRUE	TRUE	TRUE	
1993	29	3	TRUE	TRUE	TRUE	TRUE	
1993	29	4	TRUE	TRUE	TRUE	TRUE	
1993	29	5	TRUE	TRUE	FALSE	FALSE	
1993	34	1	TRUE	TRUE	TRUE	TRUE	
1993	34	2	TRUE	TRUE	TRUE	TRUE	
1993	34	3	TRUE	TRUE	TRUE	TRUE	
1993	34	4	TRUE	TRUE	FALSE	FALSE	
1993	34	5	TRUE	TRUE	FALSE	FALSE	
1993	38	1	TRUE	TRUE	TRUE	TRUE	
1993	38	2	TRUE	TRUE	TRUE	TRUE	
1993	38	3	TRUE	TRUE	TRUE	TRUE	
1993	38	4	TRUE	TRUE	FALSE	FALSE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1993	38	5	TRUE	TRUE	FALSE	FALSE	
1993	40	1	TRUE	TRUE	TRUE	TRUE	
1993	40	2	TRUE	TRUE	TRUE	TRUE	
1993	40	3	TRUE	TRUE	TRUE	TRUE	
1993	40	4	TRUE	TRUE	FALSE	FALSE	
1993	40	5	TRUE	TRUE	FALSE	FALSE	
1993	44	1	TRUE	TRUE	TRUE	TRUE	
1993	44	2	TRUE	TRUE	TRUE	TRUE	
1993	44	3	TRUE	TRUE	TRUE	TRUE	
1993	44	4	TRUE	TRUE	FALSE	FALSE	
1993	44	5	TRUE	TRUE	FALSE	FALSE	
1993	49	1	TRUE	TRUE	TRUE	TRUE	
1993	49	2	TRUE	TRUE	TRUE	TRUE	
1993	49	3	TRUE	TRUE	TRUE	TRUE	
1993	49	4	TRUE	TRUE	FALSE	FALSE	
1993	49	5	TRUE	TRUE	FALSE	FALSE	
1994	3	1	TRUE	TRUE	TRUE	TRUE	
1994	3	2	TRUE	TRUE	TRUE	TRUE	
1994	3	3	TRUE	TRUE	TRUE	TRUE	
1994	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	4	1	TRUE	TRUE	TRUE	TRUE	
1994	4	2	TRUE	TRUE	TRUE	TRUE	
1994	4	3	TRUE	TRUE	TRUE	TRUE	
1994	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	13	1	TRUE	TRUE	TRUE	TRUE	
1994	13	2	TRUE	TRUE	TRUE	TRUE	
1994	13	3	TRUE	TRUE	TRUE	TRUE	
1994	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	21	1	TRUE	TRUE	TRUE	TRUE	
1994	21	2	TRUE	TRUE	TRUE	TRUE	
1994	21	3	TRUE	TRUE	TRUE	TRUE	
1994	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	29	1	TRUE	TRUE	TRUE	TRUE	
1994	29	2	TRUE	TRUE	TRUE	TRUE	
1994	29	3	TRUE	TRUE	TRUE	TRUE	
1994	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	34	1	TRUE	TRUE	TRUE	TRUE	
1994	34	2	TRUE	TRUE	TRUE	TRUE	
1994	34	3	TRUE	TRUE	TRUE	TRUE	
1994	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	38	1	TRUE	TRUE	TRUE	TRUE	
1994	38	2	TRUE	TRUE	TRUE	TRUE	
1994	38	3	TRUE	TRUE	TRUE	TRUE	
1994	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	40	1	TRUE	FALSE	TRUE	FALSE	Mollusca may be damaged; sat in formalin too long; most (73%) Bivalvia unidentified
1994	40	2	TRUE	TRUE	TRUE	FALSE	Mollusca may be damaged; sat in formalin too long; many (16%) Bivalvia unidentified
1994	40	3	TRUE	FALSE	TRUE	FALSE	Mollusca may be damaged; sat in formalin too long; most (72%) Bivalvia unidentified
1994	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	44	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1994	44	2	TRUE	TRUE	TRUE	TRUE	
1994	44	3	TRUE	TRUE	TRUE	TRUE	
1994	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	49	1	TRUE	TRUE	TRUE	TRUE	
1994	49	2	TRUE	TRUE	TRUE	TRUE	
1994	49	3	TRUE	TRUE	TRUE	TRUE	
1994	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1994	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	3	1	TRUE	TRUE	TRUE	TRUE	
1995	3	2	TRUE	TRUE	TRUE	TRUE	
1995	3	3	TRUE	TRUE	TRUE	TRUE	
1995	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	4	1	TRUE	TRUE	TRUE	TRUE	
1995	4	2	TRUE	TRUE	TRUE	TRUE	
1995	4	3	TRUE	TRUE	TRUE	TRUE	
1995	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	21	1	TRUE	TRUE	TRUE	TRUE	
1995	21	2	TRUE	TRUE	TRUE	TRUE	
1995	21	3	TRUE	TRUE	TRUE	TRUE	
1995	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	29	1	TRUE	TRUE	TRUE	TRUE	
1995	29	2	TRUE	TRUE	TRUE	TRUE	
1995	29	3	TRUE	TRUE	TRUE	TRUE	
1995	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	34	1	TRUE	TRUE	TRUE	TRUE	
1995	34	2	TRUE	TRUE	TRUE	TRUE	
1995	34	3	TRUE	TRUE	TRUE	TRUE	
1995	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	38	1	TRUE	TRUE	TRUE	TRUE	
1995	38	2	TRUE	TRUE	TRUE	TRUE	
1995	38	3	TRUE	TRUE	TRUE	TRUE	
1995	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	40	1	TRUE	TRUE	TRUE	TRUE	
1995	40	2	TRUE	TRUE	TRUE	TRUE	
1995	40	3	TRUE	TRUE	TRUE	TRUE	
1995	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	44	1	TRUE	TRUE	TRUE	TRUE	
1995	44	2	TRUE	TRUE	TRUE	TRUE	
1995	44	3	TRUE	TRUE	TRUE	TRUE	
1995	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	49	1	TRUE	TRUE	TRUE	TRUE	
1995	49	2	TRUE	TRUE	TRUE	TRUE	
1995	49	3	TRUE	TRUE	TRUE	TRUE	
1995	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1995	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	21	1	TRUE	TRUE	TRUE	TRUE	
1996	21	2	TRUE	TRUE	TRUE	TRUE	
1996	21	3	TRUE	TRUE	TRUE	TRUE	
1996	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	29	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1996	29	2	TRUE	TRUE	TRUE	TRUE	
1996	29	3	TRUE	TRUE	TRUE	TRUE	
1996	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	34	1	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	34	2	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	34	3	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	34	4	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	34	5	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	38	1	TRUE	TRUE	TRUE	TRUE	
1996	38	2	TRUE	TRUE	TRUE	TRUE	
1996	38	3	TRUE	TRUE	TRUE	TRUE	
1996	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1996	40	1	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	40	2	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	40	3	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	40	4	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	40	5	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	44	1	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	44	2	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	44	3	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	44	4	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1996	44	5	FALSE	FALSE	FALSE	FALSE	not sampled for benthos
1997	3	1	TRUE	TRUE	TRUE	TRUE	
1997	3	2	TRUE	TRUE	TRUE	TRUE	
1997	3	3	TRUE	TRUE	TRUE	TRUE	
1997	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	4	1	TRUE	TRUE	TRUE	TRUE	
1997	4	2	TRUE	TRUE	TRUE	TRUE	
1997	4	3	TRUE	TRUE	TRUE	TRUE	
1997	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	13	1	TRUE	TRUE	TRUE	TRUE	
1997	13	2	TRUE	TRUE	TRUE	TRUE	
1997	13	3	TRUE	TRUE	TRUE	TRUE	
1997	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	21	1	TRUE	TRUE	TRUE	TRUE	
1997	21	2	TRUE	TRUE	TRUE	TRUE	
1997	21	3	TRUE	TRUE	TRUE	TRUE	
1997	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	29	1	TRUE	TRUE	TRUE	TRUE	
1997	29	2	TRUE	TRUE	TRUE	TRUE	
1997	29	3	TRUE	TRUE	TRUE	TRUE	
1997	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	34	1	TRUE	TRUE	TRUE	TRUE	
1997	34	2	TRUE	TRUE	TRUE	TRUE	
1997	34	3	TRUE	TRUE	TRUE	TRUE	
1997	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	38	1	TRUE	TRUE	TRUE	TRUE	
1997	38	2	TRUE	TRUE	TRUE	TRUE	
1997	38	3	TRUE	TRUE	TRUE	TRUE	
1997	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	40	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1997	40	2	TRUE	TRUE	TRUE	TRUE	
1997	40	3	TRUE	TRUE	TRUE	TRUE	
1997	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	44	1	TRUE	TRUE	TRUE	TRUE	
1997	44	2	TRUE	TRUE	TRUE	TRUE	
1997	44	3	TRUE	TRUE	TRUE	TRUE	
1997	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	49	1	TRUE	TRUE	TRUE	TRUE	
1997	49	2	TRUE	TRUE	TRUE	TRUE	
1997	49	3	TRUE	TRUE	TRUE	TRUE	
1997	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1997	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	3	1	TRUE	TRUE	TRUE	TRUE	
1998	3	2	TRUE	TRUE	TRUE	TRUE	
1998	3	3	TRUE	TRUE	TRUE	TRUE	
1998	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	4	1	TRUE	TRUE	TRUE	TRUE	
1998	4	2	TRUE	TRUE	TRUE	TRUE	
1998	4	3	TRUE	TRUE	TRUE	TRUE	
1998	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	13	1	TRUE	TRUE	TRUE	TRUE	
1998	13	2	TRUE	TRUE	TRUE	TRUE	
1998	13	3	TRUE	TRUE	TRUE	TRUE	
1998	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	21	1	TRUE	TRUE	TRUE	TRUE	
1998	21	2	TRUE	TRUE	TRUE	TRUE	
1998	21	3	TRUE	TRUE	TRUE	TRUE	
1998	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	29	1	TRUE	TRUE	TRUE	TRUE	
1998	29	2	TRUE	TRUE	TRUE	TRUE	
1998	29	3	TRUE	TRUE	TRUE	TRUE	
1998	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	34	1	TRUE	TRUE	TRUE	TRUE	
1998	34	2	TRUE	TRUE	TRUE	TRUE	
1998	34	3	TRUE	TRUE	TRUE	TRUE	
1998	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	38	1	TRUE	TRUE	TRUE	TRUE	
1998	38	2	TRUE	TRUE	TRUE	TRUE	
1998	38	3	TRUE	TRUE	TRUE	TRUE	
1998	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	40	1	TRUE	TRUE	TRUE	TRUE	
1998	40	2	TRUE	TRUE	TRUE	TRUE	
1998	40	3	TRUE	TRUE	TRUE	TRUE	
1998	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	44	1	TRUE	TRUE	TRUE	TRUE	
1998	44	2	TRUE	TRUE	TRUE	TRUE	
1998	44	3	TRUE	TRUE	TRUE	TRUE	
1998	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	49	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
1998	49	2	TRUE	TRUE	TRUE	TRUE	
1998	49	3	TRUE	TRUE	TRUE	TRUE	
1998	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1998	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	3	1	TRUE	TRUE	TRUE	TRUE	
1999	3	2	TRUE	TRUE	TRUE	TRUE	
1999	3	3	TRUE	TRUE	TRUE	TRUE	
1999	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	4	1	TRUE	TRUE	TRUE	TRUE	
1999	4	2	TRUE	TRUE	TRUE	TRUE	
1999	4	3	TRUE	TRUE	TRUE	TRUE	
1999	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	13	1	TRUE	TRUE	TRUE	TRUE	
1999	13	2	TRUE	TRUE	TRUE	TRUE	
1999	13	3	TRUE	TRUE	TRUE	TRUE	
1999	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	21	1	TRUE	TRUE	TRUE	TRUE	
1999	21	2	TRUE	TRUE	TRUE	TRUE	
1999	21	3	TRUE	TRUE	TRUE	TRUE	
1999	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	29	1	TRUE	TRUE	TRUE	TRUE	
1999	29	2	TRUE	TRUE	TRUE	TRUE	
1999	29	3	TRUE	TRUE	TRUE	TRUE	
1999	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	34	1	TRUE	TRUE	TRUE	TRUE	
1999	34	2	TRUE	TRUE	TRUE	TRUE	
1999	34	3	TRUE	TRUE	TRUE	TRUE	
1999	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	38	1	TRUE	TRUE	TRUE	TRUE	
1999	38	2	TRUE	TRUE	TRUE	TRUE	
1999	38	3	TRUE	TRUE	TRUE	TRUE	
1999	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	40	1	TRUE	TRUE	TRUE	TRUE	
1999	40	2	TRUE	TRUE	TRUE	TRUE	
1999	40	3	TRUE	TRUE	TRUE	TRUE	
1999	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	44	1	TRUE	TRUE	TRUE	TRUE	
1999	44	2	TRUE	TRUE	TRUE	TRUE	
1999	44	3	TRUE	TRUE	TRUE	TRUE	
1999	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	49	1	TRUE	TRUE	TRUE	TRUE	
1999	49	2	TRUE	TRUE	TRUE	TRUE	
1999	49	3	TRUE	TRUE	TRUE	TRUE	
1999	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
1999	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	3	1	TRUE	TRUE	TRUE	TRUE	
2000	3	2	TRUE	TRUE	TRUE	TRUE	
2000	3	3	TRUE	TRUE	TRUE	TRUE	
2000	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	4	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2000	4	2	TRUE	TRUE	TRUE	TRUE	
2000	4	3	TRUE	TRUE	TRUE	TRUE	
2000	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	13	1	TRUE	TRUE	TRUE	TRUE	
2000	13	2	TRUE	TRUE	TRUE	TRUE	
2000	13	3	TRUE	TRUE	TRUE	TRUE	
2000	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	21	1	TRUE	TRUE	TRUE	TRUE	
2000	21	2	TRUE	TRUE	TRUE	TRUE	
2000	21	3	TRUE	TRUE	TRUE	TRUE	
2000	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	29	1	TRUE	TRUE	TRUE	TRUE	
2000	29	2	TRUE	TRUE	TRUE	TRUE	
2000	29	3	TRUE	TRUE	TRUE	TRUE	
2000	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	34	1	TRUE	TRUE	TRUE	TRUE	
2000	34	2	TRUE	TRUE	TRUE	TRUE	
2000	34	3	TRUE	TRUE	TRUE	TRUE	
2000	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	38	1	TRUE	TRUE	TRUE	TRUE	
2000	38	2	TRUE	TRUE	TRUE	TRUE	
2000	38	3	TRUE	TRUE	TRUE	TRUE	
2000	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	40	1	TRUE	TRUE	TRUE	TRUE	
2000	40	2	TRUE	TRUE	TRUE	TRUE	
2000	40	3	TRUE	TRUE	TRUE	TRUE	
2000	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	44	1	TRUE	TRUE	TRUE	TRUE	
2000	44	2	TRUE	TRUE	TRUE	TRUE	
2000	44	3	TRUE	TRUE	TRUE	TRUE	
2000	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	49	1	TRUE	TRUE	TRUE	TRUE	
2000	49	2	TRUE	TRUE	TRUE	TRUE	
2000	49	3	TRUE	TRUE	TRUE	TRUE	
2000	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2000	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	3	1	TRUE	TRUE	TRUE	TRUE	
2001	3	2	TRUE	TRUE	TRUE	TRUE	
2001	3	3	TRUE	TRUE	TRUE	TRUE	
2001	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	4	1	TRUE	TRUE	TRUE	TRUE	
2001	4	2	TRUE	TRUE	TRUE	TRUE	
2001	4	3	TRUE	TRUE	TRUE	TRUE	
2001	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	13	1	TRUE	TRUE	TRUE	TRUE	
2001	13	2	TRUE	TRUE	TRUE	TRUE	
2001	13	3	TRUE	TRUE	TRUE	TRUE	
2001	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	21	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2001	21	2	TRUE	TRUE	TRUE	TRUE	
2001	21	3	TRUE	TRUE	TRUE	TRUE	
2001	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	29	1	TRUE	TRUE	TRUE	TRUE	
2001	29	2	TRUE	TRUE	TRUE	TRUE	
2001	29	3	TRUE	TRUE	TRUE	TRUE	
2001	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	34	1	TRUE	TRUE	TRUE	TRUE	
2001	34	2	TRUE	TRUE	TRUE	TRUE	
2001	34	3	TRUE	TRUE	TRUE	TRUE	
2001	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	38	1	TRUE	TRUE	TRUE	TRUE	
2001	38	2	TRUE	TRUE	TRUE	TRUE	
2001	38	3	TRUE	TRUE	TRUE	TRUE	
2001	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	40	1	TRUE	TRUE	TRUE	TRUE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	40	2	TRUE	TRUE	TRUE	TRUE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	40	3	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	40	4	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	40	5	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	44	1	TRUE	TRUE	TRUE	TRUE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	44	2	TRUE	TRUE	TRUE	TRUE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	44	3	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	44	4	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	44	5	FALSE	FALSE	FALSE	FALSE	reps 1-3 of stations 40 and 44 confused during sorting; reps 4 and 5 used and renumbered as 1 and 2 in the data
2001	49	1	TRUE	TRUE	TRUE	TRUE	
2001	49	2	TRUE	TRUE	TRUE	TRUE	
2001	49	3	TRUE	TRUE	TRUE	TRUE	
2001	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2001	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	3	1	TRUE	TRUE	TRUE	TRUE	
2002	3	2	TRUE	TRUE	TRUE	TRUE	
2002	3	3	TRUE	TRUE	TRUE	TRUE	
2002	3	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	3	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	4	1	TRUE	TRUE	TRUE	TRUE	
2002	4	2	TRUE	TRUE	TRUE	TRUE	
2002	4	3	TRUE	TRUE	TRUE	TRUE	
2002	4	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	4	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	13	1	TRUE	TRUE	TRUE	TRUE	
2002	13	2	TRUE	TRUE	TRUE	TRUE	
2002	13	3	TRUE	TRUE	TRUE	TRUE	
2002	13	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	13	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	21	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2002	21	2	TRUE	TRUE	TRUE	TRUE	
2002	21	3	TRUE	TRUE	TRUE	TRUE	
2002	21	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	21	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	29	1	TRUE	TRUE	TRUE	TRUE	
2002	29	2	TRUE	TRUE	TRUE	TRUE	
2002	29	3	TRUE	TRUE	TRUE	TRUE	
2002	29	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	29	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	34	1	TRUE	TRUE	TRUE	TRUE	
2002	34	2	TRUE	TRUE	TRUE	TRUE	
2002	34	3	TRUE	TRUE	TRUE	TRUE	
2002	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	38	1	TRUE	TRUE	TRUE	TRUE	
2002	38	2	TRUE	TRUE	TRUE	TRUE	
2002	38	3	TRUE	TRUE	TRUE	TRUE	
2002	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	40	1	TRUE	TRUE	TRUE	TRUE	
2002	40	2	TRUE	TRUE	TRUE	TRUE	
2002	40	3	TRUE	TRUE	TRUE	TRUE	
2002	40	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	40	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	44	1	TRUE	TRUE	TRUE	TRUE	
2002	44	2	TRUE	TRUE	TRUE	TRUE	
2002	44	3	TRUE	TRUE	TRUE	TRUE	
2002	44	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	44	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	49	1	TRUE	TRUE	TRUE	TRUE	
2002	49	2	TRUE	TRUE	TRUE	TRUE	
2002	49	3	TRUE	TRUE	TRUE	TRUE	
2002	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2002	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	3	1	TRUE	TRUE	TRUE	TRUE	
2003	3	2	TRUE	TRUE	TRUE	TRUE	
2003	3	3	TRUE	TRUE	TRUE	TRUE	
2003	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2003	4	1	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	4	2	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	4	3	FALSE	FALSE	FALSE	FALSE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	4	4	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	13	1	TRUE	TRUE	TRUE	TRUE	
2003	13	2	TRUE	TRUE	TRUE	TRUE	
2003	13	3	TRUE	TRUE	TRUE	TRUE	
2003	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2003	21	1	TRUE	TRUE	TRUE	TRUE	
2003	21	2	TRUE	TRUE	TRUE	TRUE	
2003	21	3	TRUE	TRUE	TRUE	TRUE	
2003	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2003	29	1	TRUE	TRUE	TRUE	TRUE	reps 1, 3, and 4 sent to taxonomists; rep 2 marked as archive in rescreening; something wrong with rep 2
2003	29	2	FALSE	FALSE	FALSE	FALSE	reps 1, 3, and 4 sent to taxonomists; rep 2 marked as archive in rescreening; 1-2 each of 5 polychaetes identified for rep 2

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2003	29	3	TRUE	TRUE	TRUE	TRUE	reps 1, 3, and 4 sent to taxonomists; rep 2 marked as archive in rescreening; something wrong with rep 2
2003	29	4	TRUE	TRUE	TRUE	TRUE	reps 1, 3, and 4 sent to taxonomists; rep 2 marked as archive in rescreening; something wrong with rep 2
2003	34	1	TRUE	TRUE	TRUE	TRUE	
2003	34	2	TRUE	TRUE	TRUE	TRUE	
2003	34	3	TRUE	TRUE	TRUE	TRUE	
2003	34	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	34	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	38	1	TRUE	TRUE	TRUE	TRUE	
2003	38	2	TRUE	TRUE	TRUE	TRUE	
2003	38	3	TRUE	TRUE	TRUE	TRUE	
2003	38	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	38	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	40	1	FALSE	FALSE	FALSE	FALSE	reps 2, 3, and 4 sent to taxonomists; rep 1 marked as archive in rescreening (not identified)
2003	40	2	TRUE	TRUE	TRUE	TRUE	reps 2, 3, and 4 sent to taxonomists; rep 1 marked as archive in rescreening (not identified)
2003	40	3	TRUE	TRUE	TRUE	TRUE	reps 2, 3, and 4 sent to taxonomists; rep 1 marked as archive in rescreening (not identified)
2003	40	4	TRUE	TRUE	TRUE	TRUE	reps 2, 3, and 4 sent to taxonomists; rep 1 marked as archive in rescreening (not identified)
2003	40	5	FALSE	FALSE	FALSE	FALSE	rep 5 not identified
2003	44	1	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	44	2	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	44	3	FALSE	FALSE	FALSE	FALSE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	44	4	TRUE	TRUE	TRUE	TRUE	reps 1, 2, and 4 sent to taxonomists; rep 3 marked as archive in rescreening (not identified)
2003	44	5	FALSE	FALSE	FALSE	FALSE	rep 5 not identified
2003	49	1	TRUE	TRUE	TRUE	TRUE	
2003	49	2	TRUE	TRUE	TRUE	TRUE	
2003	49	3	TRUE	TRUE	TRUE	TRUE	
2003	49	4	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2003	49	5	FALSE	FALSE	FALSE	FALSE	reps 4,5 not identified
2004	3	1	TRUE	TRUE	TRUE	TRUE	
2004	3	2	TRUE	TRUE	TRUE	TRUE	
2004	3	3	TRUE	TRUE	TRUE	TRUE	
2004	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	4	1	TRUE	TRUE	TRUE	TRUE	
2004	4	2	TRUE	TRUE	TRUE	TRUE	
2004	4	3	TRUE	TRUE	TRUE	TRUE	
2004	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	13	1	TRUE	TRUE	TRUE	TRUE	
2004	13	2	TRUE	TRUE	TRUE	TRUE	
2004	13	3	TRUE	TRUE	TRUE	TRUE	
2004	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	21	1	TRUE	TRUE	TRUE	TRUE	
2004	21	2	TRUE	TRUE	TRUE	TRUE	
2004	21	3	TRUE	TRUE	TRUE	TRUE	
2004	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	29	1	TRUE	TRUE	TRUE	TRUE	
2004	29	2	TRUE	TRUE	TRUE	TRUE	
2004	29	3	TRUE	TRUE	TRUE	TRUE	
2004	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	34	1	TRUE	TRUE	TRUE	TRUE	
2004	34	2	TRUE	TRUE	TRUE	TRUE	
2004	34	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2004	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	38	1	TRUE	TRUE	TRUE	TRUE	
2004	38	2	TRUE	TRUE	TRUE	TRUE	
2004	38	3	TRUE	TRUE	TRUE	TRUE	
2004	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	40	1	TRUE	TRUE	TRUE	TRUE	
2004	40	2	TRUE	TRUE	TRUE	TRUE	
2004	40	3	TRUE	TRUE	TRUE	TRUE	
2004	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	44	1	TRUE	TRUE	TRUE	TRUE	
2004	44	2	TRUE	TRUE	TRUE	TRUE	
2004	44	3	TRUE	TRUE	TRUE	TRUE	
2004	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2004	49	1	TRUE	TRUE	TRUE	TRUE	
2004	49	2	TRUE	TRUE	TRUE	TRUE	
2004	49	3	TRUE	TRUE	TRUE	TRUE	
2004	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	3	1	TRUE	TRUE	TRUE	TRUE	
2005	3	2	TRUE	TRUE	TRUE	TRUE	
2005	3	3	TRUE	TRUE	TRUE	TRUE	
2005	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	4	1	TRUE	TRUE	TRUE	TRUE	
2005	4	2	TRUE	TRUE	TRUE	TRUE	
2005	4	3	TRUE	TRUE	TRUE	TRUE	
2005	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	13	1	TRUE	TRUE	TRUE	TRUE	
2005	13	2	TRUE	TRUE	TRUE	TRUE	
2005	13	3	TRUE	TRUE	TRUE	TRUE	
2005	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	21	1	TRUE	TRUE	TRUE	TRUE	
2005	21	2	TRUE	TRUE	TRUE	TRUE	
2005	21	3	TRUE	TRUE	TRUE	TRUE	
2005	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	29	1	TRUE	TRUE	TRUE	TRUE	
2005	29	2	TRUE	TRUE	TRUE	TRUE	
2005	29	3	TRUE	TRUE	TRUE	TRUE	
2005	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	34	1	TRUE	TRUE	TRUE	TRUE	
2005	34	2	TRUE	TRUE	TRUE	TRUE	
2005	34	3	TRUE	TRUE	TRUE	TRUE	
2005	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	38	1	TRUE	TRUE	TRUE	TRUE	
2005	38	2	TRUE	TRUE	TRUE	TRUE	
2005	38	3	TRUE	TRUE	TRUE	TRUE	
2005	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	40	1	TRUE	TRUE	TRUE	TRUE	
2005	40	2	TRUE	TRUE	TRUE	TRUE	
2005	40	3	TRUE	TRUE	TRUE	TRUE	
2005	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	44	1	TRUE	TRUE	TRUE	TRUE	
2005	44	2	TRUE	TRUE	TRUE	TRUE	
2005	44	3	TRUE	TRUE	TRUE	TRUE	
2005	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2005	49	1	TRUE	TRUE	TRUE	TRUE	
2005	49	2	TRUE	TRUE	TRUE	TRUE	
2005	49	3	TRUE	TRUE	TRUE	TRUE	
2005	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	3	1	TRUE	TRUE	TRUE	TRUE	
2006	3	2	TRUE	TRUE	TRUE	TRUE	
2006	3	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2006	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	4	1	TRUE	TRUE	TRUE	TRUE	
2006	4	2	TRUE	TRUE	TRUE	TRUE	
2006	4	3	TRUE	TRUE	TRUE	TRUE	
2006	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	13	1	TRUE	TRUE	TRUE	TRUE	
2006	13	2	TRUE	TRUE	TRUE	TRUE	
2006	13	3	TRUE	TRUE	TRUE	TRUE	
2006	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	21	1	TRUE	TRUE	TRUE	TRUE	
2006	21	2	TRUE	TRUE	TRUE	TRUE	
2006	21	3	TRUE	TRUE	TRUE	TRUE	
2006	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	29	1	TRUE	TRUE	TRUE	TRUE	
2006	29	2	TRUE	TRUE	TRUE	TRUE	
2006	29	3	TRUE	TRUE	TRUE	TRUE	
2006	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	34	1	TRUE	TRUE	TRUE	TRUE	
2006	34	2	TRUE	TRUE	TRUE	TRUE	
2006	34	3	TRUE	TRUE	TRUE	TRUE	
2006	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	38	1	TRUE	TRUE	TRUE	TRUE	
2006	38	2	TRUE	TRUE	TRUE	TRUE	
2006	38	3	TRUE	TRUE	TRUE	TRUE	
2006	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	40	1	TRUE	TRUE	TRUE	TRUE	
2006	40	2	TRUE	TRUE	TRUE	TRUE	
2006	40	3	TRUE	TRUE	TRUE	TRUE	
2006	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	44	1	TRUE	TRUE	TRUE	TRUE	
2006	44	2	TRUE	TRUE	TRUE	TRUE	
2006	44	3	TRUE	TRUE	TRUE	TRUE	
2006	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2006	49	1	TRUE	TRUE	TRUE	TRUE	
2006	49	2	TRUE	TRUE	TRUE	TRUE	
2006	49	3	TRUE	TRUE	TRUE	TRUE	
2006	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	3	1	TRUE	TRUE	TRUE	TRUE	
2007	3	2	TRUE	TRUE	TRUE	TRUE	
2007	3	3	TRUE	TRUE	TRUE	TRUE	
2007	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	4	1	TRUE	TRUE	TRUE	TRUE	
2007	4	2	TRUE	TRUE	TRUE	TRUE	
2007	4	3	TRUE	TRUE	TRUE	TRUE	
2007	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	13	1	TRUE	TRUE	TRUE	TRUE	
2007	13	2	TRUE	TRUE	TRUE	TRUE	
2007	13	3	TRUE	TRUE	TRUE	TRUE	
2007	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	21	1	TRUE	TRUE	TRUE	TRUE	
2007	21	2	TRUE	TRUE	TRUE	TRUE	
2007	21	3	TRUE	TRUE	TRUE	TRUE	
2007	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	29	1	TRUE	TRUE	TRUE	TRUE	
2007	29	2	TRUE	TRUE	TRUE	TRUE	
2007	29	3	TRUE	TRUE	TRUE	TRUE	
2007	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	34	1	TRUE	TRUE	TRUE	TRUE	
2007	34	2	TRUE	TRUE	TRUE	TRUE	
2007	34	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2007	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	38	1	TRUE	TRUE	TRUE	TRUE	
2007	38	2	TRUE	TRUE	TRUE	TRUE	
2007	38	3	TRUE	TRUE	TRUE	TRUE	
2007	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	40	1	TRUE	TRUE	TRUE	TRUE	
2007	40	2	TRUE	TRUE	TRUE	TRUE	
2007	40	3	TRUE	TRUE	TRUE	TRUE	
2007	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	44	1	TRUE	TRUE	TRUE	TRUE	
2007	44	2	TRUE	TRUE	TRUE	TRUE	
2007	44	3	TRUE	TRUE	TRUE	TRUE	
2007	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2007	49	1	TRUE	TRUE	TRUE	TRUE	
2007	49	2	TRUE	TRUE	TRUE	TRUE	
2007	49	3	TRUE	TRUE	TRUE	TRUE	
2007	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2008	3	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	3	2	TRUE	TRUE	TRUE	TRUE	
2008	3	3	TRUE	TRUE	TRUE	TRUE	
2008	3	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	4	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	4	2	TRUE	TRUE	TRUE	TRUE	
2008	4	3	TRUE	TRUE	TRUE	TRUE	
2008	4	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	13	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	13	2	TRUE	TRUE	TRUE	TRUE	
2008	13	3	TRUE	TRUE	TRUE	TRUE	
2008	13	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	21	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	21	2	TRUE	TRUE	TRUE	TRUE	
2008	21	3	TRUE	TRUE	TRUE	TRUE	
2008	21	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	29	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	29	2	TRUE	TRUE	TRUE	TRUE	
2008	29	3	TRUE	TRUE	TRUE	TRUE	
2008	29	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	34	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	34	2	TRUE	TRUE	TRUE	TRUE	
2008	34	3	TRUE	TRUE	TRUE	TRUE	
2008	34	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	38	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	38	2	TRUE	TRUE	TRUE	TRUE	
2008	38	3	TRUE	TRUE	TRUE	TRUE	
2008	38	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	40	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	40	2	TRUE	TRUE	TRUE	TRUE	
2008	40	3	TRUE	TRUE	TRUE	TRUE	
2008	40	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	44	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	44	2	TRUE	TRUE	TRUE	TRUE	
2008	44	3	TRUE	TRUE	TRUE	TRUE	
2008	44	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2008	49	1	FALSE	FALSE	FALSE	FALSE	rep 1 polychaetes lost, replaced with rep 4
2008	49	2	TRUE	TRUE	TRUE	TRUE	
2008	49	3	TRUE	TRUE	TRUE	TRUE	
2008	49	4	TRUE	TRUE	TRUE	TRUE	rep 1 polychaetes lost, replaced with rep 4
2009	3	1	TRUE	TRUE	TRUE	TRUE	
2009	3	2	TRUE	TRUE	TRUE	TRUE	
2009	3	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2009	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	4	1	TRUE	TRUE	TRUE	TRUE	
2009	4	2	TRUE	TRUE	TRUE	TRUE	
2009	4	3	TRUE	TRUE	TRUE	TRUE	
2009	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	13	1	TRUE	TRUE	TRUE	TRUE	
2009	13	2	TRUE	TRUE	TRUE	TRUE	
2009	13	3	TRUE	TRUE	TRUE	TRUE	
2009	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	21	1	TRUE	TRUE	TRUE	TRUE	
2009	21	2	TRUE	TRUE	TRUE	TRUE	
2009	21	3	TRUE	TRUE	TRUE	TRUE	
2009	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	29	1	TRUE	TRUE	TRUE	TRUE	
2009	29	2	TRUE	TRUE	TRUE	TRUE	
2009	29	3	TRUE	TRUE	TRUE	TRUE	
2009	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2009	34	1	TRUE	TRUE	TRUE	TRUE	
2009	34	2	TRUE	TRUE	TRUE	TRUE	
2009	34	3	TRUE	TRUE	TRUE	TRUE	
2009	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	38	1	TRUE	TRUE	TRUE	TRUE	
2009	38	2	TRUE	TRUE	TRUE	TRUE	
2009	38	3	TRUE	TRUE	TRUE	TRUE	
2009	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	40	1	TRUE	TRUE	TRUE	TRUE	
2009	40	2	TRUE	TRUE	TRUE	TRUE	
2009	40	3	TRUE	TRUE	TRUE	TRUE	
2009	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	44	1	TRUE	TRUE	TRUE	TRUE	
2009	44	2	TRUE	TRUE	TRUE	TRUE	
2009	44	3	TRUE	TRUE	TRUE	TRUE	
2009	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2009	49	1	TRUE	TRUE	TRUE	TRUE	
2009	49	2	TRUE	TRUE	TRUE	TRUE	
2009	49	3	TRUE	TRUE	TRUE	TRUE	
2009	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2010	3	1	TRUE	TRUE	TRUE	TRUE	
2010	3	2	TRUE	TRUE	TRUE	TRUE	
2010	3	3	TRUE	TRUE	TRUE	TRUE	
2010	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2010	4	1	TRUE	TRUE	TRUE	TRUE	
2010	4	2	TRUE	TRUE	TRUE	TRUE	
2010	4	3	TRUE	TRUE	TRUE	TRUE	
2010	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2010	13	1	TRUE	TRUE	TRUE	TRUE	
2010	13	2	TRUE	TRUE	TRUE	TRUE	
2010	13	3	TRUE	TRUE	TRUE	TRUE	
2010	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2010	21	1	TRUE	TRUE	TRUE	TRUE	
2010	21	2	TRUE	TRUE	TRUE	TRUE	
2010	21	3	TRUE	TRUE	TRUE	TRUE	
2010	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2010	29	1	TRUE	TRUE	TRUE	TRUE	
2010	29	2	TRUE	TRUE	TRUE	TRUE	
2010	29	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2010	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2010	34	1	TRUE	TRUE	TRUE	TRUE	
2010	34	2	TRUE	TRUE	TRUE	TRUE	
2010	34	3	TRUE	TRUE	TRUE	TRUE	
2010	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2010	38	1	TRUE	TRUE	TRUE	TRUE	
2010	38	2	TRUE	TRUE	TRUE	TRUE	
2010	38	3	TRUE	TRUE	TRUE	TRUE	
2010	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2010	40	1	TRUE	TRUE	TRUE	TRUE	
2010	40	2	TRUE	TRUE	TRUE	TRUE	
2010	40	3	TRUE	TRUE	TRUE	TRUE	
2010	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2010	44	1	TRUE	TRUE	TRUE	TRUE	
2010	44	2	TRUE	TRUE	TRUE	TRUE	
2010	44	3	TRUE	TRUE	TRUE	TRUE	
2010	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2010	49	1	TRUE	TRUE	TRUE	TRUE	
2010	49	2	TRUE	TRUE	TRUE	TRUE	
2010	49	3	TRUE	TRUE	TRUE	TRUE	
2010	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	3	1	TRUE	TRUE	TRUE	TRUE	
2011	3	2	TRUE	TRUE	TRUE	TRUE	
2011	3	3	TRUE	TRUE	TRUE	TRUE	
2011	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	4	1	TRUE	TRUE	TRUE	TRUE	
2011	4	2	TRUE	TRUE	TRUE	TRUE	
2011	4	3	TRUE	TRUE	TRUE	TRUE	
2011	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	13	1	TRUE	TRUE	TRUE	TRUE	
2011	13	2	TRUE	TRUE	TRUE	TRUE	
2011	13	3	TRUE	TRUE	TRUE	TRUE	
2011	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	21	1	TRUE	TRUE	TRUE	TRUE	
2011	21	2	TRUE	TRUE	TRUE	TRUE	
2011	21	3	TRUE	TRUE	TRUE	TRUE	
2011	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	29	1	TRUE	TRUE	TRUE	TRUE	
2011	29	2	TRUE	TRUE	TRUE	TRUE	
2011	29	3	TRUE	TRUE	TRUE	TRUE	
2011	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2011	34	1	TRUE	TRUE	TRUE	TRUE	
2011	34	2	TRUE	TRUE	TRUE	TRUE	
2011	34	3	TRUE	TRUE	TRUE	TRUE	
2011	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	38	1	TRUE	TRUE	TRUE	TRUE	
2011	38	2	TRUE	TRUE	TRUE	TRUE	
2011	38	3	TRUE	TRUE	TRUE	TRUE	
2011	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2011	40	1	TRUE	TRUE	TRUE	TRUE	
2011	40	2	TRUE	TRUE	TRUE	TRUE	
2011	40	3	TRUE	TRUE	TRUE	TRUE	
2011	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	44	1	TRUE	TRUE	TRUE	TRUE	
2011	44	2	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2011	44	3	TRUE	TRUE	TRUE	TRUE	
2011	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2011	49	1	TRUE	TRUE	TRUE	TRUE	
2011	49	2	TRUE	TRUE	TRUE	TRUE	
2011	49	3	TRUE	TRUE	TRUE	TRUE	
2011	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2012	3	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	3	2	TRUE	TRUE	TRUE	TRUE	
2012	3	3	TRUE	TRUE	TRUE	TRUE	
2012	3	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	4	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	4	2	TRUE	TRUE	TRUE	TRUE	
2012	4	3	TRUE	TRUE	TRUE	TRUE	
2012	4	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	13	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	13	2	TRUE	TRUE	TRUE	TRUE	
2012	13	3	TRUE	TRUE	TRUE	TRUE	
2012	13	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	21	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	21	2	TRUE	TRUE	TRUE	TRUE	
2012	21	3	TRUE	TRUE	TRUE	TRUE	
2012	21	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	29	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	29	2	TRUE	TRUE	TRUE	TRUE	
2012	29	3	TRUE	TRUE	TRUE	TRUE	
2012	29	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	34	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	34	2	TRUE	TRUE	TRUE	TRUE	
2012	34	3	TRUE	TRUE	TRUE	TRUE	
2012	34	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	38	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1; however, database has field ID'ed animals for rep 4 -- need to combine?
2012	38	2	TRUE	TRUE	TRUE	TRUE	
2012	38	3	TRUE	TRUE	TRUE	TRUE	
2012	38	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1; however, database has field ID'ed animals for rep 4 -- need to combine?
2012	40	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	40	2	TRUE	TRUE	TRUE	TRUE	
2012	40	3	TRUE	TRUE	TRUE	TRUE	
2012	40	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	44	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	44	2	TRUE	TRUE	TRUE	TRUE	
2012	44	3	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2012	44	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	49	1	TRUE	TRUE	TRUE	TRUE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2012	49	2	TRUE	TRUE	TRUE	TRUE	
2012	49	3	TRUE	TRUE	TRUE	TRUE	
2012	49	4	FALSE	FALSE	FALSE	FALSE	rep 1 not preserved well in ethanol (no formalin); rep 4 identified instead renamed as rep 1
2013	3	1	TRUE	TRUE	TRUE	TRUE	
2013	3	2	TRUE	TRUE	TRUE	TRUE	
2013	3	3	TRUE	TRUE	TRUE	TRUE	
2013	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	4	1	TRUE	TRUE	TRUE	TRUE	
2013	4	2	TRUE	TRUE	TRUE	TRUE	
2013	4	3	TRUE	TRUE	TRUE	TRUE	
2013	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	13	1	TRUE	TRUE	TRUE	TRUE	
2013	13	2	TRUE	TRUE	TRUE	TRUE	
2013	13	3	TRUE	TRUE	TRUE	TRUE	
2013	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	21	1	TRUE	TRUE	TRUE	TRUE	
2013	21	2	TRUE	TRUE	TRUE	TRUE	
2013	21	3	TRUE	TRUE	TRUE	TRUE	
2013	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	29	1	TRUE	TRUE	TRUE	TRUE	
2013	29	2	TRUE	TRUE	TRUE	TRUE	
2013	29	3	TRUE	TRUE	TRUE	TRUE	
2013	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2013	34	1	TRUE	TRUE	TRUE	TRUE	
2013	34	2	TRUE	TRUE	TRUE	TRUE	
2013	34	3	TRUE	TRUE	TRUE	TRUE	
2013	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	38	1	TRUE	TRUE	TRUE	TRUE	
2013	38	2	TRUE	TRUE	TRUE	TRUE	
2013	38	3	TRUE	TRUE	TRUE	TRUE	
2013	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2013	40	1	TRUE	TRUE	TRUE	TRUE	
2013	40	2	TRUE	TRUE	TRUE	TRUE	
2013	40	3	TRUE	TRUE	TRUE	TRUE	
2013	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	44	1	TRUE	TRUE	TRUE	TRUE	
2013	44	2	TRUE	TRUE	TRUE	TRUE	
2013	44	3	TRUE	TRUE	TRUE	TRUE	
2013	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2013	49	1	TRUE	TRUE	TRUE	TRUE	
2013	49	2	TRUE	TRUE	TRUE	TRUE	
2013	49	3	TRUE	TRUE	TRUE	TRUE	
2013	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	3	1	TRUE	TRUE	TRUE	TRUE	
2014	3	2	TRUE	TRUE	TRUE	TRUE	
2014	3	3	TRUE	TRUE	TRUE	TRUE	
2014	3	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	4	1	TRUE	TRUE	TRUE	TRUE	
2014	4	2	TRUE	TRUE	TRUE	TRUE	
2014	4	3	TRUE	TRUE	TRUE	TRUE	
2014	4	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	13	1	TRUE	TRUE	TRUE	TRUE	
2014	13	2	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2014	13	3	TRUE	TRUE	TRUE	TRUE	
2014	13	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	21	1	TRUE	TRUE	TRUE	TRUE	
2014	21	2	TRUE	TRUE	TRUE	TRUE	
2014	21	3	TRUE	TRUE	TRUE	TRUE	
2014	21	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	29	1	TRUE	TRUE	TRUE	TRUE	
2014	29	2	TRUE	TRUE	TRUE	TRUE	
2014	29	3	TRUE	TRUE	TRUE	TRUE	
2014	29	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2014	34	1	TRUE	TRUE	TRUE	TRUE	
2014	34	2	TRUE	TRUE	TRUE	TRUE	
2014	34	3	TRUE	TRUE	TRUE	TRUE	
2014	34	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	38	1	TRUE	TRUE	TRUE	TRUE	
2014	38	2	TRUE	TRUE	TRUE	TRUE	
2014	38	3	TRUE	TRUE	TRUE	TRUE	
2014	38	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified; however, database has field ID'ed animals
2014	40	1	TRUE	TRUE	TRUE	TRUE	
2014	40	2	TRUE	TRUE	TRUE	TRUE	
2014	40	3	TRUE	TRUE	TRUE	TRUE	
2014	40	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	44	1	TRUE	TRUE	TRUE	TRUE	
2014	44	2	TRUE	TRUE	TRUE	TRUE	
2014	44	3	TRUE	TRUE	TRUE	TRUE	
2014	44	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2014	49	1	TRUE	TRUE	TRUE	TRUE	
2014	49	2	TRUE	TRUE	TRUE	TRUE	
2014	49	3	TRUE	TRUE	TRUE	TRUE	
2014	49	4	FALSE	FALSE	FALSE	FALSE	rep 4 not identified
2015	3	1	TRUE	TRUE	TRUE	TRUE	
2015	3	2	TRUE	TRUE	TRUE	TRUE	
2015	3	3	TRUE	TRUE	TRUE	TRUE	
2015	4	1	TRUE	TRUE	TRUE	TRUE	
2015	4	2	TRUE	TRUE	TRUE	TRUE	
2015	4	3	TRUE	TRUE	TRUE	TRUE	
2015	13	1	TRUE	TRUE	TRUE	TRUE	
2015	13	2	TRUE	TRUE	TRUE	TRUE	
2015	13	3	TRUE	TRUE	TRUE	TRUE	
2015	21	1	TRUE	TRUE	TRUE	TRUE	
2015	21	2	TRUE	TRUE	TRUE	TRUE	
2015	21	3	TRUE	TRUE	TRUE	TRUE	
2015	29	1	TRUE	TRUE	TRUE	TRUE	
2015	29	2	TRUE	TRUE	TRUE	TRUE	
2015	29	3	TRUE	TRUE	TRUE	TRUE	
2015	34	1	TRUE	TRUE	TRUE	TRUE	
2015	34	2	TRUE	TRUE	TRUE	TRUE	
2015	34	3	TRUE	TRUE	TRUE	TRUE	
2015	38	1	TRUE	TRUE	TRUE	TRUE	
2015	38	2	TRUE	TRUE	TRUE	TRUE	
2015	38	3	TRUE	TRUE	TRUE	TRUE	
2015	40	1	TRUE	TRUE	TRUE	TRUE	
2015	40	2	TRUE	TRUE	TRUE	TRUE	
2015	40	3	TRUE	TRUE	TRUE	TRUE	
2015	44	1	TRUE	TRUE	TRUE	TRUE	
2015	44	2	TRUE	TRUE	TRUE	TRUE	
2015	44	3	TRUE	TRUE	TRUE	TRUE	
2015	49	1	TRUE	TRUE	TRUE	TRUE	

Benthos Sample Usability Table

Year	Station	Replicate	Usable for phylum-level analyses	Usable for species- or feeding-guild-level analyses	Selected for 3 reps/stn for phylum-level analyses	Selected for 3 reps/stn for species- or feeding-guild-level analyses	Comments
2015	49	2	TRUE	TRUE	TRUE	TRUE	
2015	49	3	TRUE	TRUE	TRUE	TRUE	

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations	
						3	4	13	21	29	34	38	40	44	49	All	
Annelida	Citellata	#	#	Hirudinea	Hirudinea			1	1								3
				Oligochaeta	Oligochaeta	477	487	33	7	4	2	2	27	10	1		1050
	Polychaeta	#	Chaetopteridae	Chaetopteridae	delete								2	7			9
				Mesochaetopterus sp	Mesochaetopterus sp			14					2				16
				Mesochaetopterus taylori	Mesochaetopterus sp			63					58				488
				Mesochaetopterus taylori	Mesochaetopterus taylori				12					355			
				Phyllochaetopterus claparedii	Phyllochaetopterus claparedii			19			3		2	12	1		
				Phyllochaetopterus sp	Phyllochaetopterus sp				5								42
				Phyllochaetopterus prolifica	Phyllochaetopterus prolifica			1331			15198			1162			17691
				Phyllochaetopterus sp	delete			4									
				Phyllochaetopterus sp	Phyllochaetopterus sp				2								6
				Spiochaetopterus costarum Cmplx	Spiochaetopterus costarum Cmplx		9	270	42	1	192	2	233	1032	8		1789
			Scalibregmatidae	Asclerocheilus beringianus	Asclerocheilus beringianus					1				6			7
				Scalibregma californicum	Scalibregma californicum	1	1851	17	12		46		13	4			1944
				Travisia brevis	Travisia brevis				1				18	1			20
				Travisia pupa	Travisia pupa		8			2		5					15
		Capitellida	Capitellidae	Barantolla nr americana	Barantolla nr americana	9		96	81	35	2	20	26				269
				Capitella capitata Cmplx	Capitella capitata Cmplx	13			21		1						
				Capitella sp	Capitella sp			41					23	32			131
				Capitella teleta	Capitella sp			5					1	4			10
				Capitellidae	Capitellidae		8										
				delete	delete			1	4				10	1			24
				Decamastus gracilis	Capitellidae		1										
				Decamastus gracilis	Decamastus gracilis			941	1	1				5			949
				Heteromastus filiformis Cmplx	Heteromastus sp			26	49		1		2				78
				Heteromastus filobranchus	Heteromastus filobranchus									12	10		
				Heteromastus sp	Heteromastus sp	90	957	18	2475	78	12	15	2				3669
				Heteromastus sp	Heteromastus sp	1	4	4	195	7		1	3				215
				Mediomastus ambiseta	Mediomastus sp		1		745	1		3	18	6			774
				Mediomastus californiensis	Mediomastus sp	28	22	1305	1328	16	1	14	477	259	1		3451
				Mediomastus sp	Mediomastus sp	15	131	1048	755	32	72	28	710	624	2		3417
				Notomastus hemipodus	Capitellidae			1									
				Notomastus hemipodus	Notomastus hemipodus					2	1	1					
				Notomastus sp	Notomastus sp			21	68				1446	154			1694
				Notomastus latericeus	Notomastus sp			14	2				14	81			111
				Notomastus lineatus	Notomastus sp			2					2	14			18
				Notomastus sp	Notomastus sp			2	7				7	6			22
			Maldanidae	Asychis similis	Maldaninae							1	98				99
				Axiothella rubrocincta	Euclymeninae			8					1	1			10
				Axiothella sp	Euclymeninae		1										1
				Chirimia nr biceps	Maldaninae							1					1
				Chirimia sp	Maldaninae								5				5
				Clymenura gracilis	Euclymeninae			3	5				125	124			257
				Clymenura sp	Euclymeninae								10	24			34
				Euclymene cf zonalis	Euclymeninae	4		609	425	2			71	350			1461
				Euclymeninae	Euclymeninae	2	107	169	164	3	2		350	192			989
				Isocirrus longiceps	Isocirrus longiceps								2	27			29
				Maldane sarsi	Maldane sarsi			1						14			
				Maldane sarsi	Maldaninae								8				23
				Maldanidae	delete			3	10		1			7			
				Maldanidae	Maldanidae	1	4			2			34				62
				Metasychis disparidentatus	Maldaninae								3				3
				Microclymene caudata	Euclymeninae				11								11

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations
						3	4	13	21	29	34	38	40	44	49
				Nicomache lumbricalis	Nicomachinae								2	5	7
				Nicomache personata	Nicomache personata	7									
					Nicomachinae									4	11
					Nicomachinae									2	2
				Petaloproctus borealis	Nicomachinae								1		1
				Praxillella gracilis	Euclymeninae			1	9				197	21	228
				Praxillella pacifica	Euclymeninae		46	1	25	5	14		70	14	175
				Praxillella sp	Euclymeninae		17	6	10	6	28	1	50	50	168
				Rhodine bitorquata	Rhodine bitorquata				8				370	66	444
		Cossurida	Cossuridae	Cossura bansei	Cossura bansei		1	1							
					Cossura sp					47		295			344
					Cossura pygodactylata	1518	1146	2	99		347		59	9	
					Cossura sp					85		19			3284
					Cossura sp					1		11			12
		Echiuroidea	#	Echiurida	Echiurida				1						1
			Bonelliidae	Bonellia sp	Bonellia sp								1		
					Bonelliidae										1
					Bonelliidae							4			4
				Nellobia eusoma	Bonelliidae							10			11
					Nellobia eusoma					1					
			Echiuridae	Arhynchite pugettensis	Arhynchite pugettensis								2		
					Echiurida				1						3
					Echiuridae				1						1
				Echiurus echiurus alaskanus	Echiurida				15						18
					Echiurus echiurus alaskanus	1							1	1	
		Eunicida	Dorvilleidae	Dorvillea (Schistomeringos) annulata	Dorvillea (Schistomeringos) annulata			2			1				
					Dorvilleidae		30								33
				Dorvillea (Schistomeringos) longicornis	Dorvilleidae		17								17
				Dorvillea pseudorubrovittata	Dorvillea pseudorubrovittata						1				
					Dorvillea sp									2	
					Dorvilleidae										3
				Dorvillea sp	Dorvillea sp									1	
					Dorvilleidae		1								2
				Dorvilleidae	Dorvilleidae		1		1						2
				Ophryotrocha sp	Dorvilleidae		1								1
				Parougia caeca	Dorvilleidae		3								8
					Parougia caeca						2	2	1		
				Protodorvillea gracilis	Dorvilleidae										23
					Protodorvillea gracilis				9					14	
			Lumbrineridae	Eranno bicirrata	Eranno bicirrata	10	3							14	
					Eranno sp								2		30
					Lumbrineridae				1						
				Eranno lagunae	Eranno sp								1		1
				Lumbrineridae	delete		13				34		41		
					Lumbrineridae				29	134	1		51	1	304
				Lumbrineris californiensis	Lumbrineridae							382			936
					Lumbrineris sp		1		28		6		519		2680
				Lumbrineris cruzensis	Lumbrineridae							48			
					Lumbrineris sp	1	604	1	2		1943		81		
				Lumbrineris latreilli	Lumbrineridae								90		91
					Lumbrineris sp									1	
				Lumbrineris limicola	Lumbrineridae								2		7
					Lumbrineris sp									5	
				Lumbrineris sp	Lumbrineridae							150		5	408

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Ninoe gemmea	Lumbrineris sp	4	11	3	49	2	113			71		
				Scoletoma luti	Lumbrineridae				1						70	
					Scoletoma luti	1		437		7		3	1453	873		
					Scoletoma sp		105		4787		1834				9500	
			Oeononidae	Scoletoma sp	Scoletoma sp		2		15		1				18	
				Drilonereis falcata	Drilonereis falcata								1			
				Drilonereis sp	Drilonereis sp						1			8	10	
				Drilonereis longa	Drilonereis longa								9			
					Drilonereis sp						4			18	31	
				Drilonereis nuda	Drilonereis sp						1				1	
				Drilonereis sp	Drilonereis sp						1			4	5	
				Notocirrus californiensis	Notocirrus californiensis				2				2	12	16	
			Onuphidae	Diopatra ornata	Diopatra sp	2		142	2				18	400	564	
				Diopatra sp	Diopatra sp	1		47	4			1	39	122	214	
				Onuphidae	delete			24				1		34		
				Onuphidae	Onuphidae		1		2				14		76	
				Onuphis elegans	Onuphis elegans					4						
					Onuphis sp			130				1	20	173	328	
				Onuphis geophiliformis	Onuphis geophiliformis					1						
					Onuphis sp			4	4				1	16	26	
				Onuphis iridescens	Onuphis iridescens					101						
					Onuphis sp			47	22			91	27	113	401	
				Onuphis sp	Onuphis sp			26	6			1	18	10	61	
		Opheliida	Opheliidae	Armandia brevis	Armandia brevis	3	296	9	4		6			7	325	
				Ophelia assimilis	Ophelia sp			2							2	
				Ophelia limacina	Ophelia limacina									1		
					Ophelia sp			11							12	
				Ophelia sp	Ophelia sp			2			1				3	
				Opheliidae	Opheliidae			7							7	
				Ophelina acuminata	Ophelina acuminata	1	94		134	4	3	1	25	6		
					Ophelina sp			18							286	
				Ophelina sp	Ophelina sp			1							1	
		Orbiniida	Orbiniidae	Leitoscoloplos pugettensis	Leitoscoloplos pugettensis	9	18	659	443	5	13	13	245	879	2284	
				Naineris uncinata	Naineris uncinata			1						2	3	
				Phylo felix	Phylo felix			52	1		1		8	44	106	
				Scoloplos acmeceps	Scoloplos sp								29		29	
				Scoloplos armiger Cmplx	Scoloplos armiger Cmplx	2		43								
					Scoloplos sp										45	
				Scoloplos sp	Scoloplos sp				5				3	1	9	
			Paraonidae	Aricidea (Acmira) catherinae	Aricidea sp			11						1	12	
				Aricidea (Acmira) lopezi	Aricidea sp	1	652	5	12	14		22	8	2	716	
				Aricidea (Allia) ramosa	Aricidea sp		1	1			10		3	153	168	
				Aricidea sp	Aricidea sp		2							1	3	
				Levinsenia gracilis	Levinsenia gracilis	4	2251		73	196	75	463	330	117	3509	
				Levinsenia oculata	Levinsenia oculata		44			200	3	334			581	
				Paradoneis lyra	Paradoneis lyra									2	2	
		Phyllodocida	Aphroditidae	Aphrodita parva	Aphrodita parva								1			
					Aphrodita sp										1	
				Aphrodita sp	Aphrodita sp									1	1	
			Chrysopetalidae	Paleanotus bellis	Paleanotus bellis			16			2		4	8	30	
			Glyceridae	Glycera americana	Glycera americana			15			1	9	6	82	2	
				Glycera nana	Glycera nana	95	199	19	642	84	2	134	728	228	2131	
				Glycera robusta	Glycera robusta					1		4			5	

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Glycera sp	delete		1									1
			Goniadidae	Glycinde armigera	Glycinde armigera	9	68	37	157		13	23	119	126	2	586
				Glycinde sp	Glycinde sp					32						
				Glycinde picta	Glycinde picta	51	14	131	75		41	3	30	40	82	471
				Glycinde sp	Glycinde sp					4						
				Glycinde sp	delete		6	5					1	1		17
				Glycinde sp	Glycinde sp					4						
			Goniada brunnea	Goniada brunnea	Goniada brunnea		24		1	12		23		6		72
				Goniada sp	Goniada sp								6			
			Goniada maculata	Goniada maculata	Goniada maculata		5	2	2			2		7		45
				Goniada sp	Goniada sp								27			
				Goniada sp	delete											1
				Goniada sp	Goniada sp								1			
			Hesionidae	Amphiduros sp	Amphiduros sp							1				1
				Gyptis sp	Hesionidae							1				
				Gyptis sp	Hesionidae							1				
				Hesionidae	Hesionidae		1	1					1	9		12
				Heteropodarke heteromorpha	Hesionidae									1		1
				Microphthalmus sczelkowi	Hesionidae			2						4		8
				Microphthalmus sczelkowi	Microphthalmus sczelkowi	1										
				Microphthalmus sp	Microphthalmus sp							1				
				Microphthalmus sp	Hesionidae											6
				Microphthalmus sp	Microphthalmus sp							6				
			Micropodarke dubia	Micropodarke dubia	Hesionidae											34
				Micropodarke dubia	Micropodarke dubia			26						8		
			Oxydromus pugettensis	Oxydromus pugettensis	Hesionidae								6			95
				Oxydromus pugettensis	Oxydromus pugettensis			13	8	1	3	1		61	2	
			Podarkeopsis glabrus	Podarkeopsis glabrus	Hesionidae		48						16			564
				Podarkeopsis glabrus	Podarkeopsis glabrus			9	11	11	197	22		42	208	
				Podarkeopsis perkinsi	Hesionidae											11
				Podarkeopsis perkinsi	Podarkeopsis perkinsi	1				8		2				
			Nephtyidae	Bipalponephtys cornuta	Bipalponephtys cornuta	166	122	12	240	125	301	27	39	52	353	1437
				Nephtyidae	delete									1		1
				Nephtys assignis	Nephtys assignis									1		
				Nephtys sp	Nephtys sp											1
				Nephtys caeca	Nephtys caeca					7				28		
				Nephtys sp	Nephtys sp	10		120			1	1	2			169
				Nephtys caecoides	Nephtys caecoides				32					15		
				Nephtys sp	Nephtys sp		9	11				2	18			87
				Nephtys californiensis	Nephtys californiensis				5							
				Nephtys sp	Nephtys sp			12				2				19
				Nephtys ciliata	Nephtys sp	2										2
				Nephtys discors	Nephtys discors					3				2		
				Nephtys sp	Nephtys sp	29										34
				Nephtys ferruginea	Nephtys ferruginea	17	56	192	733	181	47	73	244	285	28	1856
				Nephtys glabra	Nephtys glabra				3							
				Nephtys sp	Nephtys sp											3
				Nephtys punctata	Nephtys punctata				6	40				2		
				Nephtys sp	Nephtys sp	23	4					5	1			81
				Nephtys sp	delete				7	1				11		11
				Nephtys sp	Nephtys sp	5	2	29			2	4	30			80
			Nereididae	Alitta virens	Alitta virens										2	
				Nereididae	Nereididae											2

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations	
						3	4	13	21	29	34	38	40	44	49	All	
				Cheilonereis cyclurus	Cheilonereis cyclurus										2		
				Nereididae	Nereididae	3										5	
				Nereididae	delete										8		
				Nereis procera	Nereididae	1							1			10	
				Nereis procera	Nereididae			67	2		2		35		73	1	237
				Nereis sp	Nereis sp		57										
				Nereis sp	Nereididae								1			3	
				Nereis sp	Nereis sp		2										
				Platynereis bicanaliculata	Nereididae	1							5			479	
				Platynereis bicanaliculata	Platynereis bicanaliculata			3	93	1		19			357		
			Pholoidae	Pholoe glabra	Pholoe sp										3	3	
				Pholoe minuta	Pholoe sp	1810	2	226	25	21			26	4		2114	
				Pholoe sp	Pholoe sp	23	1	2	11		19	1	13	2		72	
				Pholoe sp Cmplx	Pholoe sp	800	110	153	12	56	120		173	89	30	1543	
				Pholoe sp N1	Pholoe sp	22	302	3	21	26	793	22	175	302	2	1668	
			Phyllodocidae	Eteone californica	Eteone sp		15	17	101		21	1	55	15	9	234	
				Eteone columbiensis	Eteone sp										1	1	
				Eteone leptotes	Eteone sp			3					2	1		6	
				Eteone pacifica	Eteone sp										7	7	
				Eteone sp	Eteone sp	3	17	75	94	2	38	1	49	32	22	333	
				Eteone spilotus	Eteone sp	3	23	14	4		12		10	7	31	104	
				Eulalia californiensis	Eulalia californiensis				1					1	15		
				Eulalia sp	Eulalia sp											17	
				Eulalia quadriculata	Eulalia quadriculata				2								
				Eulalia sp	Eulalia sp						1					2	
				Eulalia sp N1	Eulalia sp					4						5	
				Eulalia sp N1	Eulalia sp N1									1			
				Eumida longicornuta	Eumida longicornuta		17		5				69	305			
				Eumida sp	Eumida sp			103			175					674	
				Eumida sp	Eumida sp			2		13	1					16	
				Hypereteone fauchaldi	Hypereteone fauchaldi				1							1	
				Nereiphylla castanea	Nereiphylla castanea								1			1	
				Notophyllum sp	Notophyllum sp									3		3	
				Paranaitis polynoides	Paranaitis polynoides			2	2							4	
				Phyllodoce cuspidata	Phyllodoce cuspidata								1				
				Phyllodoce sp	Phyllodoce sp	1	1	1	14	4				6		28	
				Phyllodoce groenlandica	Phyllodoce groenlandica			705	64		1	1	24	11			
				Phyllodoce sp	Phyllodoce sp	3	1									810	
				Phyllodoce hartmanae	Phyllodoce hartmanae			10	10		5	5	50	15	3		
				Phyllodoce sp	Phyllodoce sp		5									103	
				Phyllodoce longipes	Phyllodoce longipes			22	2						2		
				Phyllodoce sp	Phyllodoce sp											26	
				Phyllodoce maculata	Phyllodoce sp			2			1					3	
				Phyllodoce mucosa	Phyllodoce sp			19	35		1		3	1		59	
				Phyllodoce sp	Phyllodoce sp	1	1	369	99	3	6		69	69		617	
				Phyllodoce williamsi	Phyllodoce sp			1			4					5	
				Phyllodocidae	delete			1					1	1		3	
				Sige montereyensis	Sige montereyensis	1		1					1	5		8	
			Pilargidae	Hermundura fauveli	Hermundura fauveli			14			4		39	52		109	
				Hermundura ocularis	Hermundura ocularis									1		1	
				Pilargis berkeleyae	Pilargis sp		3				1	1	13	2		20	
				Pilargis maculata	Pilargis sp		78	1	5		10	2	51	32	2	181	

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Sigambra bassi	Sigambra bassi					65	17	175	4	9	673	943
			Polynoidae	Arcteobia cf anticostiensis	Polynoidae									1		1
				Bylgides macrolepidus	Polynoidae	7				4		3				15
				Eunoe sp	Polynoidae			1				1				1
				Gattyana ciliata	Gattyana sp				21							21
				Gattyana cirrhosa	Gattyana sp				48				1			62
				Gattyana sp	Polynoidae							2				20
				Gattyana sp	Gattyana sp				17				1		11	
				Gattyana sp	Polynoidae											20
				Gattyana treadwelli	Polynoidae		1								1	
				Gattyana treadwelli	Gattyana sp				3							
				Gattyana treadwelli	Gattyana treadwelli					2						
				Gattyana treadwelli	Polynoidae					3		18				44
				Gattyana treadwelli	Polynoidae		10					1			7	
				Grubeopolynoe tuta	Grubeopolynoe tuta		1	1				4				6
				Harmothoe extenuata	Harmothoe extenuata				14							15
				Harmothoe imbricata	Polynoidae										1	
				Harmothoe imbricata	Harmothoe imbricata				16							
				Harmothoe sp	Harmothoe sp										3	
				Harmothoe sp	Polynoidae	1										39
				Harmothoe multisetosa	Polynoidae		1					9			9	
				Harmothoe sp	Polynoidae	2										2
				Harmothoe sp	Harmothoe sp										1	
				Harmothoe sp	Polynoidae	1										10
				Harmothoe sp	Polynoidae		8									
				Hesperonoe complanata	Hesperonoe complanata							1			1	
				Hesperonoe sp	Hesperonoe sp		5					5				12
				Hesperonoe laevis	Hesperonoe laevis				1							10
				Hesperonoe sp	Hesperonoe sp		2					7				2
				Hesperonoe sp	Hesperonoe sp	1						1				
				Lepidasthenia berkeleyae	Lepidasthenia berkeleyae		3	1	2		8	2	13			
				Lepidasthenia sp	Lepidasthenia sp										6	35
				Lepidasthenia longicirrata	Lepidasthenia longicirrata				1				1			12
				Lepidasthenia sp	Lepidasthenia sp									10		1
				Lepidasthenia sp	Lepidasthenia sp										1	3
				Lepidonotus spiculus	Lepidonotus spiculus									3		70
				Malmgreniella bansei	Malmgreniella sp		5	2	53	2			1	7		114
				Malmgreniella liei	Malmgreniella sp		15		92		7					5
				Malmgreniella macginitiei	Malmgreniella sp	2		1		1			1			1
				Malmgreniella nigralba	Malmgreniella sp							1				25
				Malmgreniella scriptoria	Malmgreniella sp			1		18		4	1	1		72
				Malmgreniella sp	Malmgreniella sp	2	1		48	14	2		2	2	1	
				Polynoidae	delete				1		2			2		
				Polynoidae	Polynoidae	2				2		8	1			18
				Polynoidae	Polynoidae	7				2		2				109
				Polynoidae	Polynoidae		3	80	7		1			6	1	
				Tenonia priops	Tenonia priops		8	30	18	1	9		7	55		128
			Sigalionidae	Pholoides asperus	Pholoides asperus			53		1	2		20	208		284
				Sihnelais berkeleyi	Sihnelais berkeleyi		2			1						

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations
						3	4	13	21	29	34	38	40	44	49
				Sihenelais fusca	Sihenelais sp			8					1	20	32
				Sihenelais sp	Sihenelais sp			1						3	4
				Sihenelais sp	delete										1
				Sihenelais tertiolabris	Sihenelais sp			1					5	3	8
				Sihenelais tertiolabris	Sihenelais sp								35	30	76
				Sihenelais tertiolabris	Sihenelais tertiolabris				2			9			
			Sphaerodoridae	Sphaerodoropsis sphaerulifer	Sphaerodoropsis sphaerulifer			23	164	3	1		22	16	229
			Syllidae	Autolytinae	Autolytinae			5							5
				Eusyllinae	Eusyllinae			1							1
				Eusyllis blomstrandii	Eusyllinae			48							51
					Eusyllis blomstrandii						2				
					Eusyllis sp									1	
				Eusyllis lamelligera	Eusyllinae			31							42
					Eusyllis lamelligera						3				
					Eusyllis sp									8	
				Eusyllis sp	Eusyllis sp									4	
					Eusyllinae										4
				Exogone dwisula	Exogone dwisula				92	1				97	
					Exogone sp										190
				Exogone lourei	Exogone lourei			2	283	3			2	47	
					Exogone sp										337
				Exogone molesta	Exogone molesta				3	7			11	3	
					Exogone sp										24
				Exogone sp	delete									1	
					Exogone sp										2
				Myrianida sp	Autolytinae			6							6
				Odontosyllis phosphorea	Eusyllinae			1							21
					Odontosyllis phosphorea									20	
				Opisthodonta uraga	Eusyllinae			1							1
				Pionosyllis gigantea	Eusyllinae										8
					Pionosyllis sp									8	
				Pionosyllis magnifica	Eusyllinae										19
					Pionosyllis magnifica						1				
					Pionosyllis sp				18						
				Pionosyllis sp	Eusyllinae										7
					Pionosyllis sp			2	3					2	
				Proceraea cornuta	Autolytinae										50
					Proceraea cornuta			2		2			11		
				Proceraea sp	Proceraea sp				23		7			5	
					Autolytinae										12
				Proceraea sp	Proceraea sp				10		1			1	
				Sphaerosyllis californiensis	Sphaerosyllis sp			2	5				1		8
				Sphaerosyllis ranunculus	Sphaerosyllis ranunculus					12					
					Sphaerosyllis sp				3	11			3	3	32
					Sphaerosyllis sp				2	1				1	4
				Sphaerosyllis sp N1	Sphaerosyllis sp			1	5				1	1	8
				Syllidae	delete				1				1	1	3
				Syllides reishi	Syllides reishi				1						1
				Syllis sp	Syllis sp									4	4
				Typosyllis caeca	Typosyllis sp				91				106	127	324
				Typosyllis cornuta	Typosyllis cornuta			1							
					Typosyllis sp				37				5	103	146
				Typosyllis heterochaeta	Typosyllis sp				8				7	77	92
		Sabellida	Oweniidae	Galathowenia oculata	Galathowenia oculata			4	190	20	7		3	4	252

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations
						3	4	13	21	29	34	38	40	44	49
				Owenia fusiformis	Owenia johnsoni			87	2				1	2	92
				Owenia johnsoni	Owenia johnsoni			133	158				3	5	299
				Oweniidae	delete			1	1						2
			Sabellariidae	Idanthysus saxicavus	Idanthysus saxicavus			1							1
				Neosabellaria cementarium	Neosabellaria cementarium	1		25				2	66		94
			Sabellidae	Chone magna	Chone sp			2					4		6
				Chone sp	Chone sp		1	6	1	1					9
				Euchone incolor	Euchone sp		1	2				9	8		20
				Euchone sp	Euchone sp			1							1
				Eudistylia catharinae	Eudistylia sp		1	11	1		2				15
				Eudistylia sp	Eudistylia sp			6				1	5		12
				Eudistylia vancouveri	Sabellidae									1	1
				Laonome kroyeri	Sabellidae			8							8
				Laonome sp	Sabellidae							1			1
				Megalomma splendida	Megalomma splendida			7	1			3	7		18
				Myxicola infundibulum	Myxicola infundibulum		1	2					4		7
				Paradialychone bimaculata	Sabellidae			46	9						55
				Parasabella media	Sabellidae			1						1	2
				Parasabella sp	Sabellidae									1	1
				Potamethus sp	Sabellidae								4		4
				Potamilla sp	Sabellidae						4				4
				Pseudopotamilla myriops	Sabellidae						3	1	1		5
				Sabellidae	Sabellidae			15	2		1	6	3		27
				Sabellinae	Sabellidae			7			8		1		17
				Sabellinae	Sabellinae	1									
				Schizobranchia insignis	Sabellidae									1	1
			Serpulidae	Circeis armoricana	Circeis sp						165				165
				Circeis sp	Serpulidae										165
				Circeis sp	Circeis sp						212				212
				Circeis spirillum	Serpulidae						56				56
				Pseudochitinopoma occidentalis	Pseudochitinopoma occidentalis			2			102		3		107
				Serpulidae	Serpulidae						6				6
				Spirorbinae	Serpulidae										1
				Spirorbis sp	Spirorbinae				1						8
				Spirorbis sp	Serpulidae						8				8
		Spionida	Apistobranchidae	Apistobranchus tullbergi	Apistobranchus tullbergi			1						1	2
			Magelonidae	Magelona longicornis	Magelona longicornis		2				3		663		663
				Magelona sp	Magelona sp			61	12					606	1347
				Magelona sp	Magelona sp			2	1					3	7
			Spionidae	Boccardia proboscidea	Boccardia proboscidea										1
				Boccardia sp	Boccardia sp									1	1
				Boccardia pugettensis	Boccardia pugettensis		5	3551	10		2		768		4663
				Boccardia sp	Boccardia sp									327	
				Boccardia sp	Boccardia sp									3	
				Boccardiella hamata	delete										3
				Boccardiella hamata	Boccardiella hamata			15				1	586		
				Boccardiella sp	Boccardiella sp									2	3
				Boccardiella sp	Boccardiella sp			1							3
				Dipolydora bidentata	Dipolydora sp						1			1	2
				Dipolydora cardalia	Dipolydora sp	4	30	12	670		115		165	99	1095

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Dipolydora caulleryi	Dipolydora sp			6	4	24	33	19	12	12		110
				Dipolydora quadrilobata	Dipolydora sp									12		12
				Dipolydora socialis	Dipolydora sp	17	13	969	142	2	738	1	514	332	4	2732
				Dipolydora sp	Dipolydora sp	3			261				6			270
				Laonice cirrata	Laonice cirrata	1			3	3						
				Laonice sp	Laonice sp		339	12			5	64	32	45		504
				Laonice sp	Laonice sp		37	7			1	6	10	1		62
				Paraprionospio alata	Paraprionospio alata			28		71	3342	375	134			
				Paraprionospio sp	Paraprionospio sp		569		396					509	2597	8021
				Paraprionospio sp	Paraprionospio sp		2		6					2	12	22
				Polydora cornuta	Polydora sp						3			6		9
				Polydora limicola	Polydora limicola			7								
				Polydora sp	Polydora sp						45		2	15		69
				Polydora sp	Polydora sp	1			2		9		3	3		18
				Prionospio lighti	Prionospio lighti	3645	375		68	603	1704	360	633	714	220	
				Prionospio sp	Prionospio sp			31								8353
				Prionospio multibranchiata	Prionospio multibranchiata	76				19	16	2	5	57		
				Prionospio sp	Prionospio sp			3								178
				Prionospio pygmaea	Prionospio pygmaea	1										
				Prionospio sp	delete										1	
				Prionospio sp	Prionospio sp			1								2
				Prionospio steenstrupi	Prionospio sp			239								7056
				Prionospio sp	Prionospio steenstrupi	615	11		905	33	442	16	2325	2447	23	
				Pygospio elegans	Pygospio elegans			1								1
				Spio cirrifera	Spio cirrifera					2						
				Spio sp	Spio sp			264	34				7	1		308
				Spio filicornis	Spio sp			3					1			4
				Spio limicola	Spio sp			382	2				10	1		395
				Spio sp	Spio sp	1										1
				Spionidae	delete				4		1					5
				Spiophanes berkeleyorum	Spiophanes berkeleyorum		404	52		99	328	69	436		562	
				Spiophanes sp	Spiophanes sp	149			21					539		2659
				Spiophanes duplex	Spiophanes sp	4								1		5
				Spiophanes norrisi	Spiophanes norrisi			28								
				Spiophanes sp	Spiophanes sp									1		29
				Spiophanes sp	Spiophanes sp	2			1							3
				Streblospio benedicti	Streblospio benedicti	1	1									2
			Trochochaetidae	Trochochaeta multisetosa	Trochochaeta multisetosa	1	4				1					
				Trochochaeta sp	Trochochaeta sp								38			44
				Trochochaeta sp	Trochochaeta sp								2			2
		Terebellida	Ampharetidae	Amage anops	Amage anops				9		5		67	69		150
				Ampharete acutifrons	Ampharete sp	17	2	6	6				17	4		
				Ampharete cf crassisetula	Ampharete sp		1	24			1		12	6		
				Ampharete cf goesi	Ampharete sp					228		75				347
				Ampharete finmarchica	Ampharete sp	1										1
				Ampharete finmarchica	Ampharete sp	1	2	2	51		2		91	3		
				Ampharete labrops	Ampharete sp			1			16		2		7	
				Ampharete sp	Ampharete sp	3	1	2	31		1		44	7	6	

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Ampharete sp N1	Ampharetidae			1		24		4				123
					Ampharetidae											1
				Ampharetidae	Ampharetidae	3	2	39	22	4	8	1	73	13	1	166
				Amphicteis mucronata	Ampharetidae											1
				Amphicteis scaphobranchiata	Amphicteis sp						1					
					Amphicteis sp									2		
					Ampharetidae											39
				Amphicteis sp	Amphicteis sp		14		1		20				2	
					Ampharetidae											12
				Amphicteis sp	Amphicteis sp		3		1		7				1	
				Anobothrus gracilis	Ampharetidae											547
					Anobothrus gracilis			10	17		6		98	416		
				Asabellides lineata	Ampharetidae	1			2		3		24	4	2	90
					Asabellides sp			54								
				Asabellides sibirica	Ampharetidae											3
					Asabellides sp			3								
				Asabellides sp	Ampharetidae											1
					Asabellides sp			1								
				Lysippe labiata	Ampharetidae				12							12
				Melinna oculata	Ampharetidae	1			2				9			68
					Melinna oculata			45								
					Melinna sp									11		
				Melinna sp	Ampharetidae											2
					Melinna sp										2	
				Schistocomus hiltoni	Ampharetidae										3	3
			Cirratulidae	Aphelochaeta glandaria Cmplx	Aphelochaeta sp		61	27	299	3	8344	1	2571	83	1595	12984
				Aphelochaeta monilaris	Aphelochaeta sp		479	1		2	197	1	124	16		820
				Aphelochaeta sp	Aphelochaeta sp	1	52	5	97	14	50	1	44	109	52	425
				Aphelochaeta sp N5	Aphelochaeta sp		2017				29		206	69		2321
				Aphelochaeta sp N6	Aphelochaeta sp						14					14
				Cauleriella pacifica	Cauleriella pacifica			11						78		89
				Chaetozone acuta	Chaetozone sp			9					1	1		11
				Chaetozone columbiana	Chaetozone sp									2		2
				Chaetozone commonalis	Chaetozone sp					14		10				24
				Chaetozone pugettensis	Chaetozone sp								3			3
				Chaetozone setosa Cmplx	Chaetozone sp	7	5	2	1		24		197	5		241
				Chaetozone sp	Chaetozone sp		3	4	1	2	2		21	29		62
				Chaetozone sp N2	Chaetozone sp			17					5	9		31
				Cirratulidae	Cirratulidae	3				2						121
					delete		6	3	6		60		25	16		
				Cirratulus robustus	Cirratulus sp		6	11						2		19
				Cirratulus sp	Cirratulus sp		9						1			10
				Cirratulus spectabilis	Cirratulus sp	3	45	1					2	5		56
				Monticellina secunda	Monticellina sp		7						1	1		9
				Monticellina serratiseta	Monticellina sp		22		2		1		8	27	3	63
				Monticellina sp	Monticellina sp		15	1					1	5	77	99
				Monticellina sp N1	Monticellina sp								4	3		7
				Monticellina tessellata	Monticellina sp								3			4
			Flabelligeridae	Brada sachalina	Brada sachalina	1		1	1							
					Brada sp		13			27						
					Flabelligeridae								56			99
				Brada sp	Brada sp		6			4						
					Flabelligeridae								1			11

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations	
						3	4	13	21	29	34	38	40	44	49	All	
				Brada villosa	Brada sp		22			1							
				Brada villosa	Brada villosa												26
				Flabelligera affinis	Flabelligera affinis	2			3								
				Flabelligera sp	Flabelligeridae											12	17
				Flabelligeridae	Flabelligeridae											1	1
				Flabelligeridae	Flabelligeridae							2				1	3
				Pherusa plumosa	Flabelligeridae											1	5
				Pherusa plumosa	Pherusa plumosa						1		2				
			Pectinariidae	Pectinaria californiensis	Pectinaria californiensis	2	2	3	203	269	6		165	54	2		
				Pectinaria granulata	Pectinaria granulata	1		188	43			263	211	95			969
				Pectinaria sp	Pectinaria sp												538
				Pectinaria sp	delete				2	1						1	
				Pectinaria sp	Pectinaria sp								2				6
			Sternaspidae	Sternaspis affinis	Sternaspis affinis				1	37			120	8			
				Sternaspis sp	Sternaspis sp												496
				Sternaspis sp	Sternaspis sp		330										5
			Terebellidae	Amphitrite cirrata	Amphitrite sp							1	2	5			8
				Amphitrite edwardsii	Amphitrite sp												1
				Amphitrite robusta	Amphitrite sp		6	1				5	3	5			20
				Amphitrite sp	Amphitrite sp		2										2
				Artacama coniferi	Artacama coniferi		25	1	4	1	1		28	5			65
				Eupolymnia heterobranchia	Terebellidae											5	10
				Lanassa nordenskioldi	Lanassa sp								40	6			51
				Lanassa sp	Lanassa sp								12	3			108
				Lanassa venusta	Lanassa sp				52	997			100	45			1201
				Lanassa venusta	Lanassa venusta		7										
				Laphania boeckii	Terebellidae											1	4
				Nicolea sp	Nicolea sp								1				4
				Nicolea zostericola	Nicolea sp												10
				Nicolea zostericola	Nicolea zostericola											1	
				Pista agassizi	Pista agassizi								1				
				Pista agassizi	Pista sp												2
				Pista brevibranchiata	Pista sp					4			28	1			33
				Pista elongata	Pista sp		1	3			1		2	2			9
				Pista estevanica	Pista sp				43	7		2	84	34			170
				Pista sp	Pista sp		2	2	5				12	8			29
				Pista wui	Pista sp		2	8	18		1		119	189			337
				Polycirrinae	delete												
				Polycirrus californicus	Terebellidae												1
				Polycirrus californicus	Polycirrus sp	6	10	31	223		7		47	18			342
				Polycirrus sp	Polycirrus sp	10	94	96	787	2	46		125	84	1		1245
				Polycirrus sp A	Polycirrus sp												3
				Polycirrus sp I	Polycirrus sp		189	4	489		14		9				705
				Polycirrus sp III	Polycirrus sp		43	2		1			1	1			48
				Polycirrus sp IV	Polycirrus sp		13										13
				Polycirrus sp V	Polycirrus sp		5	1	1				1	4			12
				Proclea graffii	Terebellidae								83	8			92
				Scionella japonica	Terebellidae											1	6
				Streblosoma bairdi	Streblosoma sp				1	7			12	12			32
				Streblosoma sp	Streblosoma sp				1	2	1		4	16			24
				Terebellidae	delete												
				Terebellidae	Terebellidae		5	65			5		133	40			286
				Terebellinae	delete												

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations	
						3	4	13	21	29	34	38	40	44	49	All
				Thelepus setosus	Terebellidae			8			1		5	11		28
				Thelepus sp	Thelepus setosus									1		
				Thelepus sp	Thelepus sp	1										1
			Trichobranchidae	Terebellides californica	Terebellides californica					2						
				Terebellides horikoshii	Terebellides sp		181	1	70		321		167	9	22	773
				Terebellides kobei	Terebellides sp				6							6
				Terebellides reishi	Terebellides sp									1		1
				Terebellides sp	Terebellides sp		2	1	11				37	74		125
				Terebellides stroemii	Terebellides sp		234	11	77		75		109	44	9	559
Arthropoda	#	#	#	Crustacea	delete	1										35
	Malacostraca	Amphipoda	#	Amphipoda	delete							2				1
				Gammaridea	delete	1		1								2
			Ampeliscidae	Ampelisca agassizi	Ampelisca sp										1	1
				Ampelisca brevisimulata	Ampelisca sp			1				6		2		9
				Ampelisca careyi	Ampelisca careyi	1	2			6						
				Ampelisca hancocki	Ampelisca sp			10			26	12	1	5	6	69
				Ampelisca lobata	Ampelisca hancocki				1							
				Ampelisca pacifica	Ampelisca sp			31	10		1		28	123		194
				Ampelisca pugetica	Ampelisca sp			4					11	55		66
				Ampelisca sp	Ampelisca sp			7							5	12
				Byblis millsii	Ampelisca sp			10	8		3	1	6	10	1	39
				Byblis sp	Byblis millsii					1						
				Byblis sp	Byblis sp			79	2				28	215		325
				Gitanopsis sp	Byblis sp			16	1				1	58		76
			Amphilochidae	Eogammarus confervicolus	Gitanopsis sp			1								1
			Anisogammaridae	Eogammarus sp	Eogammarus sp				2							2
				Aoroides inermis	Eogammarus sp				1							1
				Aoroides intermedius	Aoroides sp			42			2		1	21		66
				Aoroides sp	Aoroides sp			1					2	18		21
				Argissa hamatipes	Aoroides sp	6	1	33	2	5	1	5	7	65		125
			Argissidae	Calliopius columbianus	Argissa hamatipes	4		4		7	3	3		3		24
			Calliopiidae	Calliopius pacificus	Calliopius sp	1	1									1
				Calliopius sp	Calliopius sp			1								2
				Caprella equilibra	Calliopius sp					1						2
			Caprellidae	Caprella mendax	Caprella sp				121							1
				Caprella sp	Caprellidae						66					187
				Caprella sp	Caprella sp			19	1						1	
				Caprellidae	Caprellidae						22					43
				Caprellidae	Caprellidae						44					45
				Tritella pilimana	delete			1								
				Americorophium salmonis	Caprellidae											3
				Cheirimedeia cf macrodactyla	Tritella pilimana				3							
				Cheirimedeia macrocarpa	Americorophium salmonis								1			
				Cheirimedeia macrocarpa	Corophiidae											1
				Cheirimedeia macrocarpa	Cheirimedeia sp				23							23
				Cheirimedeia macrocarpa	Corophiidae											
				Cheirimedeia macrocarpa	Cheirimedeia sp				201							
				Cheirimedeia macrocarpa	Corophiidae											201

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations	
						3	4	13	21	29	34	38	40	44	49	All
				Cheirimeдея macrocarpa americana	Cheirimeдея sp			64								64
				Cheirimeдея zotea	Cheirimeдея sp			49								
					Cheirimeдея zotea	1					5					
					Corophiidae											55
				Corophiidae	Corophiidae			9			16			64	1	90
				Crassicorophium crassicorne	Corophiidae									1		1
				Laticorophium baconi	Corophiidae											47
					Laticorophium baconi			27						20		
				Monocorophium acherusicum	Corophiidae						11					11
				Monocorophium insidiosum	Corophiidae											1
					Monocorophium insidiosum					1						
				Monocorophium sp	Corophiidae											5
					Monocorophium sp			5								
				Protomeдея grandimana	Corophiidae										3	674
				Protomeдея prudens	Protomeдея sp	25	596	19	2	1	2	5	1	20		
					Protomeдея sp	2517	1	29	5	106	17	120	29	137		
					Corophiidae										1	577
					Protomeдея sp	108	154	103	3	46	4	65	10	83		
			Dulichidae	Dulichia rhabdoplastis	Dulichia rhabdoplastis			3								
					Dulichia sp						1	1				5
				Dulichia sp	Dulichia sp						6	1		2		9
				Dyopedos arcticus	Dyopedos sp			3	2		33					38
				Dyopedos monacanthus	Dyopedos sp				1							1
				Dyopedos sp	Dyopedos sp			2	4	23	34	19		1		83
			Eusiridae	Eusiridae	Eusiridae	1				2		1				4
				Eusirus columbianus	Eusiridae					10		5				15
				Eusirus sp	Eusiridae	1				7						8
				Rhachotropis barnardi	Eusiridae					18		32				57
					Rhachotropis barnardi						7					
				Rhachotropis oculata	Eusiridae	8										11
					Rhachotropis oculata				1							
					Rhachotropis sp			2								
				Rhachotropis sp	Eusiridae	1										5
					Rhachotropis sp			1						3		
			Hyalidae	Hyalе sp	Hyalе sp						1					1
			Iphimediidae	Iphimedia rickettsi	Iphimediidae			10								10
					Iphimediidae			1								1
			Isaeidae	Isaeidae	Isaeidae			1								1
			Ischyroceridae	Erichthonius brasiliensis	Erichthonius brasiliensis			2			34					
					Erichthonius sp									30		66
				Erichthonius rubricornis	Erichthonius rubricornis			35								
					Erichthonius sp									44		79
				Erichthonius sp	Erichthonius sp	1								5		6
				Ischyrocerus anguipes	Ischyrocerus sp			2								2
				Ischyrocerus sp	Ischyrocerus sp			2								2
				Microjassa litotes	Microjassa litotes						2					
					Microjassa sp			3						2		7
				Microjassa sp	Microjassa sp			1	1					2		4
			Lysianassidae	Hippomedon cf coecus	Hippomedon cf coecus					1						
					Hippomedon sp								27	5		33
				Hippomedon coecus	Hippomedon sp			2								2
				Hippomedon sp	Hippomedon sp			30					1	10		41

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations
						3	4	13	21	29	34	38	40	44	49
				Orchomene obtusa	Orchomene obtusa									2	
				Orchomene sp	Orchomene sp					3					5
				Orchomene sp	Orchomene sp			7		7					14
				Orchomenella decipiens	Orchomenella decipiens			1		5		2		3	11
				Orchomenella pacifica	Orchomenella pacifica			63	1	52		3			119
				Orchomenella pinguis	Orchomenella pinguis			1	2	9		13		2	27
			Maeridae	Maera danae	Maera danae					18					18
			Melitidae	Desdimelita californica	Desdimelita californica	1				1					2
				Desdimelita cf barnardi	Desdimelita cf barnardi					1					1
				Desdimelita desdichada	Desdimelita desdichada	10		78	1	45		13		15	162
				Melita sulca	Melita sulca							1			1
			Melphidippidae	Melphidippa borealis	Melphidippa sp					6		3			9
				Melphidippa cf borealis	Melphidippa sp					6		4			10
				Melphidippa sp	Melphidippa sp	11				1		3		3	18
				Melphisana bola	Melphisana bola				1					1	2
			Oedicerotidae	Americhelidium millsii	Americhelidium millsii										1
				Americhelidium sp	Americhelidium sp									2	1
				Americhelidium pectinatum	Americhelidium sp									2	2
				Americhelidium rectipalmum	Americhelidium sp				1	12	2		1	6	22
				Americhelidium shoemakeri	Americhelidium sp			2	19	2		6	1		32
				Americhelidium sp	Americhelidium sp	1	1	2	12	1			1	2	20
				Americhelidium variabilum	Americhelidium sp				4				1	2	7
				Arrhis sp	Arrhis sp					1					1
				Bathymedon pumilus	Bathymedon pumilus					15					
				Bathymedon sp	Bathymedon sp							43			58
				Bathymedon sp	Bathymedon sp							6			6
				Deflexilodes enigmaticus	Deflexilodes sp			12							12
				Deflexilodes similis	Deflexilodes similis									1	1
				Deflexilodes sp	Deflexilodes sp										1
				Deflexilodes sp	Deflexilodes sp			1							1
				Kroyera sp	Kroyera sp									3	3
				Monoculodes sp	Monoculodes sp	1	7							10	18
				Oedicerotidae	delete				1						1
				Pacifoculodes zernovi	Pacifoculodes zernovi			10						1	11
				Westwoodilla tone	Westwoodilla tone	2	4	198	35	2	6		24	222	2
			Opisidae	Opisa tridentata	Opisa tridentata			3		2					5
			Pachynidae	Pachynus barnardi	Pachynus sp									2	2
				Pachynus cf barnardi	Pachynus cf barnardi					1					
				Pachynus sp	Pachynus sp									1	2
				Prachynella lodo	Prachynella lodo				2				10	4	16
			Pardaliscidae	Pardalisca tenuipes	Pardalisca tenuipes					1					
				Pardaliscidae	Pardaliscidae										1
				Pardaliscidae	Pardaliscidae									1	1
				Rhynohalicella halona	Pardaliscidae										1
				Rhynohalicella halona	Rhynohalicella halona							1			
			Photidae	Gammaropsis ellisi	Gammaropsis ellisi				1					4	5
				Gammaropsis thompsoni	Gammaropsis thompsoni	6		45						24	75
				Photis bifurcata	Photis sp			3		2					5
				Photis brevipes	Photis sp	6	74	4						1	85
				Photis lacia	Photis sp					1					1
				Photis macinerneyi	Photis sp		3								3
				Photis oligochaeta	Photis sp			1							1
				Photis parvidons	Photis sp		1	2							3
				Photis sp	Photis sp	1	18	30	2	3	2			3	59

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
			Phoxocephalidae	Eobrolgus chumashi	Eobrolgus chumashi	4		1				2				7
				Foxiphalus similis	Foxiphalus similis								2	10		
				Foxiphalus sp	Foxiphalus sp	3		2								17
				Foxiphalus sp	Foxiphalus sp	1		1								2
				Harpiniopsis fulgens	Harpiniopsis fulgens	1				133		87				221
				Heterophoxus affinis	Heterophoxus sp	53	596	3		137	84	303		13		1189
				Heterophoxus conlanae	Heterophoxus conlanae								1			
				Heterophoxus sp	Heterophoxus sp	18		3		19	284	13		131		469
				Heterophoxus ellisi	Heterophoxus ellisi								1			
				Heterophoxus sp	Heterophoxus sp				15		1	14		133		164
				Heterophoxus oculus	Heterophoxus sp									28		28
				Heterophoxus sp	Heterophoxus sp	11	252	3	3	48	389	105		101	7	919
				Metaphoxus frequens	Metaphoxus frequens				1							1
				Paraphoxus cf gracilis	Paraphoxus cf gracilis								1			
				Paraphoxus sp	Paraphoxus sp					22		14				37
				Paraphoxus communis	Paraphoxus sp					30		61				91
				Paraphoxus oculus	Paraphoxus oculus								1			
				Paraphoxus sp	Paraphoxus sp			1		38		45				85
				Paraphoxus sp	Paraphoxus sp			1		40		59		3		103
			Phoxocephalidae	delete	delete		4					2		1		7
				Pseudharpinia sp	Pseudharpinia sp	1										1
				Rhepoxynius abronius	Rhepoxynius abronius	1		1	1	1						4
				Rhepoxynius barnardi	Rhepoxynius barnardi			1	567	23	1					592
				Rhepoxynius boreovariatus	Rhepoxynius boreovariatus			3	15				2	559	1	580
				Rhepoxynius daboius	Rhepoxynius daboius			4	10					1		15
				Rhepoxynius tridentatus	Rhepoxynius tridentatus				1							1
			Pleustidae	Gnathopleustes pugettensis	Gnathopleustes pugettensis	1										
				Parapleustinae	Parapleustinae			2								3
				Parapleustes americanus	Parapleustes americanus				1							
				Parapleustes sp	Parapleustes sp	1										1
				Parapleustinae	Parapleustinae											1
				Parapleustinae	Parapleustinae			3								3
				Pleusymtes sp	Pleusymtes sp			3		9						12
				Pleusymtes subglaber	Pleusymtes sp			3		1						5
				Pleusymtes subglaber	Pleusymtes subglaber								1			
				Thorlaksonius brevisrostris	Thorlaksonius sp			1								1
				Thorlaksonius depressus	Thorlaksonius sp			1								1
				Thorlaksonius sp	Thorlaksonius sp			3								3
				Thorlaksonius truncatus	Thorlaksonius sp			2								2
				Trachypleustes trevori	Parapleustinae			14								14
				Trachypleustes vancouverensis	Parapleustinae			3								3
			Podoceridae	Podoceridae	Podoceridae					6		2		1		9
			Pontogeneiidae	Accedomoera vagor	Accedomoera vagor			2		1						3
				Pontogeneia rostrata	Pontogeneia rostrata			2			15					17
			Stenothoidae	Metopa sp	Stenothoidae			5								5
				Metopella sp	Stenothoidae			2								2
				Parametopella sp	Stenothoidae			1								1
				Stenothoe sp	Stenothoidae				1							1
				Stenothoidae	Stenothoidae			22	2		1					25
				Stenula modosa	Stenothoidae			4								4
				Stenula sp	Stenothoidae						1					2
				Stenula sp	Stenula sp									1		
			Synopiidae	Bruzelia tuberculata	Bruzelia tuberculata					16		18				34

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						3	4	13	21	29	34	38	40	44	49	All
				Syrhoe longifrons	Syrhoe longifrons							1				1
				Tiron biocellata	Tiron biocellata			2								2
			Uristidae	Anonyx cf lilljeborgi	Anonyx sp							11				11
				Anonyx lilljeborgi	Anonyx sp			7		4		10				21
		Cumacea	Diastylidae	Diastylis bidentata	Diastylis sp							1				1
				Diastylis pellucida	Diastylis sp	9		3	10	309		138				469
				Diastylis santamariensis	Diastylis sp	7		45	1		4		21	36	9	123
				Diastylis sp	Diastylis sp	1		1	6	42	1	11	1	3	2	68
				Leptostylis sp	Leptostylis sp				1			1				2
				Leptostylis villosa	Leptostylis sp							2				2
			Lampropidae	Hemilamprops californicus	Hemilamprops californicus				1							1
				Lamprops carinatus	Lamprops sp	2										2
				Lamprops quadriplicatus	Lamprops quadriplicatus				1							1
				Lamprops sp	Lamprops sp	2										2
			Leuconidae	Eudorella emarginata	Eudorella emarginata							22				22
				Eudorella pacifica	Eudorella pacifica	10	667	27	13	1002	7212	844	45	148	18	9986
				Eudorellopsis integra	Eudorellopsis integra	1			1	14	3	477				496
				Eudorellopsis longirostris	Eudorellopsis longirostris				1	17	1		1			20
				Leucon magnadentata	Leucon sp	3										3
				Leucon sp	Leucon sp	2			1	3		1				7
				Leucon subnasica	Leucon sp	8			15	1		6				30
				Leuconidae	delete							1				1
				Nippoleucon hinumensis	Nippoleucon hinumensis				4	11		58				73
			Nannastacidae	Campylaspis hartae	Campylaspis sp											31
				Campylaspis rubromaculata	Campylaspis rubromaculata					2						2
				Campylaspis sp	Campylaspis sp				1							3
				Campylaspis rufa	Campylaspis rufa					2						2
				Campylaspis sp	Campylaspis sp				1							3
				Campylaspis sp	Campylaspis sp				4							4
		Decapoda	#	Brachyura	delete			5		1						6
				Caridea	delete	1	2					3		1	1	9
				Decapoda	delete										4	4
				Dendrobranchiata	Dendrobranchiata							2				2
			Axiidae	Calocarides spinulicauda	Calocarides spinulicauda				1	1		7				9
			Callianassidae	Neotrypaea californiensis	Neotrypaea sp				13				4	1		18
				Neotrypaea gigas	Neotrypaea gigas										1	1
				Neotrypaea sp	Neotrypaea sp				40	1		1	104	9		156
				Neotrypaea sp	Neotrypaea sp				75	1		1	23	10		110
			Cancriidae	Cancer sp	Metacarcinus gracilis									1		1
				Metacarcinus gracilis	Metacarcinus gracilis				8			1	3	11	2	25
				Romaleon branneri	Romaleon branneri				1							1
			Crangonidae	Crangon alaskensis	Crangon alaskensis	2	1						1	3		6
				Crangon sp	Crangon sp										55	55
				Crangonidae	Crangonidae							56				118
				Crangon sp	Crangon sp										25	25
				Crangonidae	Crangonidae				6			22				53
				Crangonidae	Crangonidae				2			1				3
				Mesocrangon munitella	Crangonidae							7				9
				Mesocrangon munitella	Mesocrangon munitella								1	1		2
				Neocrangon communis	Crangonidae											5
				Neocrangon communis	Neocrangon communis	5										5
			Diogenidae	Paguristes turgidus	Paguristes turgidus								1			1
			Epialtidae	Pugettia gracilis	Pugettia gracilis				5							5

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						3	4	13	21	29	34	38	40	44	49	All
				Pugettia sp	Pugettia sp											5
			Hippolytidae	Eualus avinus	Eualus avinus		1				2					2
				Eualus sp	Hippolytidae					1						7
				Eualus pusiolus	Eualus sp	5				1						
				Eualus sp	Hippolytidae								10			11
				Eualus subtilis	Eualus subtilis					1				3		4
				Eualus suckleyi	Hippolytidae										1	13
				Heptacarpus brevisrostris	Hippolytidae						6					6
				Heptacarpus sp	Heptacarpus sp		1				7					7
				Heptacarpus stimpsoni	Hippolytidae						1				1	3
				Hippolytidae	Hippolytidae						4			1		6
				Spirontocaris ochotensis	Hippolytidae	1		3			12			11		27
				Spirontocaris prionota	Hippolytidae									1		1
				Spirontocaris snyderi	Hippolytidae				2		10			2		14
				Spirontocaris sp	Hippolytidae				9					4		13
			Oregoniidae	Oregonia gracilis	Oregonia gracilis	2		18			4				6	4
				Oregonia sp	Oregonia sp											26
			Paguridae	Pagurus aleuticus	Pagurus sp						1					1
				Pagurus armatus	Pagurus sp	2										2
				Pagurus beringanus	Pagurus sp	4		5				2	1			12
				Pagurus capillatus	Pagurus sp			5								5
				Pagurus caurinus	Pagurus sp							1	1			2
				Pagurus ochotensis	Pagurus sp	1							1			1
				Pagurus setosus	Pagurus sp	2								2		4
				Pagurus sp	Pagurus sp	7		10			1		6	7		31
			Pandalidae	Pandalus sp	Pandalus sp					1						1
				Pandalus tridens	Pandalus sp											4
				Pandalus tridens	Pandalus tridens						2				2	
			Panopeidae	Lophopanopeus bellus	Lophopanopeus bellus									21		21
			Pasiphaeidae	Pasiphaea pacifica	Pasiphaea pacifica					10		7				17
			Pinnotheridae	Fabia subquadrata	Fabia subquadrata				1			1	1	1		4
				Pinnixa occidentalis Cmplx	Pinnixa sp	1280	6	133	7	32	13	11	114	56	27	1679
				Pinnixa schmitti	Pinnixa sp	21	151	62	4	4	359	2	353	801	475	2232
				Pinnixa sp	Pinnixa sp	354	17	95	5	19	649	8	814	697	147	2805
			Pinnotheridae	delete	delete			1							1	2
				Scleroplax granulata	Scleroplax granulata			4						1		5
			Varunidae	Hemigrapsus oregonensis	Hemigrapsus oregonensis			1								1
		Isopoda	Aegidae	Aegiochus symmetrica	Aegiochus symmetrica							1				1
				Rocinela americana	Rocinela americana					1						1
				Rocinela propodialis	Rocinela propodialis	1										1
			Anthuridae	Haliophasma geminatum	Haliophasma geminatum			77	4					46		127
			Idoteidae	Edotia sublittoralis	Edotia sublittoralis				1							1
				Synidotea consolidata	Synidotea sp			1								1
				Synidotea nodulosa	Synidotea sp			2								2
				Synidotea sp	Synidotea sp	1		2								3
			Janiridae	Janiridae	Janiridae			2								2

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						3	4	13	21	29	34	38	40	44	49	All
			Joeropsididae	Joeropsis dubia	Joeropsis sp			1								1
				Joeropsis dubia dubia	Joeropsis sp			4								4
				Joeropsis sp	Joeropsis sp			4								4
			Munnidae	Munna fernaldi	Munna sp						1					1
					Munnidae											1
				Munna sp	Munna sp						3					3
					Munnidae											3
			Munnidae	Munnidae	Munnidae								1			1
			Paramunnidae	Munnogonium sp	Munnogonium sp				1							1
				Pleurogonium rubicundum	Pleurogonium rubicundum								1			1
		Leptostraca	Nebaliidae	Nebalia pugettensis Cmplx	Nebalia sp			14							1	15
				Nebalia sp	Nebalia sp			3							1	4
		Mysida	#	Mysida	delete											3
					Mysida						1				2	
			Mysidae	Alienacanthomysis macropsis	Alienacanthomysis macropsis											8
					Mysida						2				6	
				Disacanthomysis dybowskii	Disacanthomysis dybowskii			1								1
				Holmesiella anomala	Holmesiella anomala					1		2				3
				Inusitatomysis insolita	Inusitatomysis insolita			2								2
				Mysidella americana	Mysidella americana							2				2
				Neomysis kadiakensis	Mysida						1				3	4
					Neomysis kadiakensis											4
				Neomysis rayii	Mysida						2					2
					Neomysis rayii											2
				Pacifacanthomysis nephrophthalma	Pacifacanthomysis nephrophthalma				2							2
				Pseudomma berkeleyi	Pseudomma sp							3				3
				Pseudomma sp	Pseudomma sp	4				10		21				35
				Pseudomma truncatum	Pseudomma sp	2				11		25				38
		Tanaidacea	Anarthruridae	Anarthruridae	Tanaidacea		1		1							2
			Leptocheliidae	Leptochelia savignyi	Tanaidacea			314	1			1	70	51		437
			Tanaellidae	Araphura breviarua	Tanaidacea								1			1
			Tanaididae	Tanaididae	Tanaidacea								2			2
	Maxillopoda	Harpacticoida	#	Harpacticoida	Harpacticoida	1		2	2						1	7
				Harpacticidae	Harpacticus uniremis											1
					Harpacticus uniremis										1	
	Ostracoda	#	#	Ostracoda	delete			2	2	1					1	6
		Myodocopida	Cylindroleberididae	Bathyleberis sp	Cylindroleberididae			2	2							4
				Cylindroleberididae	Cylindroleberididae			12	20	5		1	5			43
				Postasterope barnesi	Cylindroleberididae											1
					Postasterope barnesi	1										
				Postasterope sp	Cylindroleberididae				1							1
			Philomedidae	Euphilomedes carcharodonta	Euphilomedes carcharodonta		3	8970	6364	5	7	7	2509	5577	5	23447
				Euphilomedes producta	Euphilomedes producta	5	152	255	3619	1968	2	966	1577	19	1	8564
				Philomedes sp A	Philomedes sp A					1						1
			Rutidermatidae	Rutiderma lomae	Rutiderma lomae			51					1	5		57
		Podocopida	Cyprididae	Cyprididae	Cyprididae	1	1									2
	Pycnogonida	#	#	Pycnogonida	Pycnogonida										1	1
		Pantopoda	Amotheidae	Achelia sp	Achelia sp				1							1
					Pycnogonida											1
			Callipallenidae	Callipallene pacifica	Callipallene pacifica				2							2
					Pycnogonida											2
			Nymphonidae	Nymphon heterodenticulatum	Pycnogonida									1		1
				Nymphon pixellae	Nymphon sp				1							1
					Pycnogonida									1		2

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						3	4	13	21	29	34	38	40	44	49	All
				Nymphon sp	Nymphon sp			1								
					Pycnogonida											1
			Phoxichilidiidae	Anoplodactylus erectus	Anoplodactylus erectus				1							1
					Pycnogonida											1
				Anoplodactylus viridintestinalis	Anoplodactylus viridintestinalis				2							2
					Pycnogonida											2
			Pycnogonidae	Pycnogonum rickettsi	Pycnogonum rickettsi											1
					Pycnogonum rickettsi	1										
Brachiopoda	Rhynchonellata	Terebratulida	Cancellothyrididae	Terebratulina sp	Terebratulina sp										2	2
				Terebratulina unguicula	Terebratulina sp										2	2
			Dallinidae	Terebratalia transversa	Terebratalia transversa										3	3
Bryozoa	#	#	#	Bryozoa	delete	1										1
	Gymnolaemata	Cheilostomatida	Bugulidae	Bugulidae	delete			1								1
				Caulibugula ciliata	delete			1								1
				Caulibugula occidentalis	delete	1										1
				Dendrobeania curvirostrata	delete			4								4
				Dendrobeania murrayana	delete			8		1						9
				Dendrobeania sp	delete			1								1
			Calloporidae	Tegella sp	delete	1										1
			Candidae	Caberea ellisii	delete									2		2
				Scrupocellaria sp	delete	1								2		3
			Cellariidae	Cellaria diffusa	delete	1										1
			Celleporidae	Celleporina robertsoniae	delete			1								1
			Hippothoidae	Celleporella hyalina	delete	1		19		6		2	4			32
			Teuchoporidae	Lagenicella neosocialis	delete			8								8
				Lagenicella punctulata	delete			2								2
				Lagenicella sp	delete			1								1
				Lagenicella spinulosa	delete			1								1
		Ctenostomatida	Alcyoniidae	Alcyonidium sp	delete			17		6		3	14	1		41
			Buskiidae	Buskia nitens	delete			1								1
			Nolellidae	Nolella sp	delete							1	3			4
			Vesiculariidae	Bowerbankia gracilis	delete			1					1			2
	Stenolaemata	Cyclostomatida	#	Cyclostomatida	delete					1						1
			Crisiidae	Bicrisia sp	delete					1						1
				Crisia sp	delete			2		1			1			4
				Filicrisia sp	delete					2						2
			Lichenoporidae	Disporella fimbriata	delete			1								1
				Lichenoporidae	delete			1		1						2
			Tubuliporidae	Tubulipora sp	delete					4						4
Cephalorhyncha	Priapulida	#	Priapulidae	Priapululus caudatus	delete			15	6				1			22
Chaetognatha	Sagittoidea	Aphragmophora	Sagittidae	Parasagitta sp	delete			1								1
				Sagitta sp	delete	2		1	17	1	8					29
Chordata	Asciacea	#	#	Asciacea	Asciacea			1		2				2		5
		Aplousobranchia	#	Aplousobranchia	delete			1								1
			Holozoidae	Distaplia sp	delete								1			1
			Polyclinidae	Aplidium sp	delete			1								1
		Phlebobranchia	Asciidae	Ascidia paratropa	Asciacea									1		1
			Cionidae	Ciona intestinalis	Asciacea					6						6
			Corellidae	Chelyosoma columbianum	Asciacea			1								1
				Chelyosoma productum	Asciacea					1						1
				Corella willmeriana	Asciacea					8						8
		Stolidobranchia	#	Stolidobranchia	Asciacea					9				2		11
			Molgulidae	Molgula pugetiensis	Asciacea			5								5
			Pyuridae	Boltenia sp	Asciacea					1						1

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						3	4	13	21	29	34	38	40	44	49
				Boltenia villosa	Asciaceae			3			2			1	6
				Pyura haustor	Asciaceae						1				1
				Pyuridae	Asciaceae			1							1
			Styelidae	Styela gibbsii	Asciaceae			3			5			1	9
				Styela sp	Asciaceae			3			2			1	6
Cnidaria	Anthozoa	#	#	Anthozoa	delete		6	1					4	2	13
		Actiniaria	#	Actiniaria	delete	1		2							3
				Athenaria	delete							2	1		3
				Nynantheae	delete		1								1
				Thenaria	delete			1				1			2
				Urticina sp	Urticina sp			1							1
				Edwardsiidae	Edwardsia juliae										9
				Edwardsia sp	Edwardsia sp			4	6				14	205	238
				Edwardsia sp	Edwardsia sp			9	2				5	94	110
			Halcampidae	Halcampa crypta	Halcampa sp							1			1
				Halcampa decementaculata	Halcampa decementaculata	4			1						18
				Halcampa sp	Halcampa sp										7
				Halcampidae	Halcampidae								1	4	16
			Halcampoididae	Halcampoides purpurea	Halcampoides purpurea				1				2	13	5
			Haloclavidae	Peachia quinquecapitata	Peachia quinquecapitata								2		2
			Metridiidae	Metridium dianthus	Metridium sp										1
				Metridium sp	Metridium sp			4			2			1	3
		Pennatulacea	Pennatulidae	Ptilosarcus gurneyi	Ptilosarcus gurneyi				5				1	1	7
			Virgulariidae	Acanthoptilum gracile	Acanthoptilum gracile			2							9
				Virgulariidae	Virgulariidae						7				6
				Stylatula elongata	Virgulariidae						144				144
				Stylatula sp	Stylatula sp									1	1
				Virgulariidae	Virgulariidae						88				90
				Stylatula sp A	Stylatula sp									1	1
				Stylatula sp A	Stylatula sp A			1							1
				Virgulariidae	Virgulariidae						4				6
				Virgularia agassizi	Virgularia agassizi		5	1							6
				Virgulariidae	Virgulariidae										6
				Virgularia sp	Virgulariidae						5				5
				Virgulariidae	Virgulariidae						3		1		4
		Spirularia	Cerianthidae	Cerianthidae	Cerianthidae				3	3					25
				Pachycerianthus fimbriatus	Cerianthidae			92			14			1	107
				Pachycerianthus sp	Cerianthidae			3			6				9
	Hydrozoa	#	#	Hydrozoa	delete			1							1
		Anthoathecata	#	Anthoathecata	delete			1							1
				Bougainvilliidae	Bougainvillia sp					4				1	5
				Bougainvilliidae	Bougainvillia sp			4			1			1	6
				Halitholus cirratus	delete					1					1
				Leuckartiara octona	delete			1	1		1		2	1	7
			Corymorphidae	Euphysa ruthae	delete						1		1		2
				Euphysa sp	Euphysa sp										2
				Euphysa sp	delete			1			2		1	1	1
				Euphysa sp	Euphysa sp										6
			Corynidae	Sarsia sp	delete			1							1
			Eudendriidae	Eudendrium sp	delete			2						1	3
			Hydractiniidae	Stylactaria sp	delete									1	1

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						3	4	13	21	29	34	38	40	44	49	All
			Pandeidae	Pandeidae	delete			2			1			1		4
			Tubulariidae	Ectopleura marina	delete			4								4
				Ectopleura sp	delete			5								5
			Tubulariidae		delete	1								1		2
		Leptothecata	Aglaopheniidae	Aglaophenia sp	delete	2		1								3
			Bonneviellidae	Bonneviella sp	delete			1								1
			Campanulariidae	Campanularia sp	delete			2			1					3
			Campanulariidae		delete			3						2		5
				Clytia sp	delete			21			6			7	1	35
				Obelia dichotoma	delete			2	1		2		1		1	7
				Obelia sp	delete			7			1					8
				Orthopyxis sp	delete			5			1					6
			Campanulinidae	Calycella syringa	delete			1								1
			Campanulinidae		delete						1			2		3
			Haleciidae	Halecium sp	delete			5								5
			Lafoeidae	Lafoea sp	delete			9						1		10
			Lafoeidae		delete	1										1
			Mitrocomidae	Mitrocomella polydiademata	delete						1					1
			Sertulariidae	Abietinaria sp	delete			2								2
				Hydrallmania distans	delete			1								1
				Hydrallmania sp	delete			1								1
				Selaginopsis pinnata	delete			1								1
				Selaginopsis sp	delete	2		1								3
				Sertularella sp	delete			6								6
				Sertularia sp	delete			1								1
				Symplectoscyphus sp	delete			6								6
				Thuiaria sp	delete	1		1								2
Echinodermata	Asteroidea	Valvatida	Solasteridae	Crossaster papposus	Crossaster papposus										1	1
	Echinoidea	Clypeasteroidea	Dendrasteridae	Dendraster excentricus	Dendraster excentricus										1	1
		Spatangoida	Schizasteridae	Brisaster latifrons	Brisaster latifrons					30		9				39
	Holothuroidea	#	#	Holothuroidea	delete					1			3	1		5
		Apodida	Chiridotidae	Chiridota sp	Chiridota sp										1	1
			Synaptidae	Leptosynapta sp	Leptosynapta sp										2	2
		Dendrochirotida	#	Dendrochirotida	delete										1	1
			Cucumariidae	Cucumaria piperata	Cucumaria piperata						3					3
				Cucumariidae												3
				Cucumaria sp	Cucumaria sp					1				3		4
				Cucumariidae									2			6
			Cucumariidae	Cucumariidae									1			1
			Pseudocnus lubricus	Cucumariidae												1
				Pseudocnus lubricus						1						1
				Pseudocnus sp	Cucumariidae											3
				Pseudocnus sp											3	3
			Phylloporidae	Havelockia benti	Havelockia benti										1	1
				Pentamera lissoplaca	Pentamera sp			5							7	12
				Pentamera pediparva	Pentamera sp										1	1
				Pentamera populifera	Pentamera populifera				4							4
				Pentamera sp				2			1		6	1		14
				Pentamera pseudocalcigera	Pentamera pseudocalcigera											2
				Pentamera sp							3		1	5		11
				Pentamera rigida	Pentamera sp								4	2		6
				Pentamera sp	Pentamera sp				2		2		2	12		18
			Sclerodactylidae	Eupentacta quinquesemita	Eupentacta sp						1			1		2
				Eupentacta sp	Eupentacta sp				2		1			8		11

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations	
						3	4	13	21	29	34	38	40	44	49	All
		Molpadida	Molpadiidae	Molpadia intermedia	Molpadia intermedia		4			109		203	2			318
	Ophiuroidea	Ophiurida	#	Ophiurida	delete						1		27	2		277
			Amphiuridae	Amphiodia sp	Ophiurida		86	1				160				
				Amphiodia sp	Amphiodia sp	1	2811	74		9	776	3824	4074			
				Amphiodia sp	Amphiuridae				79			42			55	11745
				Amphiodia urtica/periercta	Amphiodia sp		112	4		1	300	831	941			
				Amphiodia sp	Amphiuridae				5					2		2196
				Amphioplus stronglyoplax	Amphiuridae							1				1
				Amphipholis sp	Amphiuridae			15				5	4			24
				Amphipholis squamata	Amphipholis sp	1										
				Amphiura sp	Amphiuridae			3					19			23
				Amphiuridae	Amphiuridae		8				4	45				57
				Ophiactidae	Ophiopholis sp		634	16	6		27	2	593	130	4	1412
			Ophiuridae	Ophiura luetkenii	Ophiopholis sp	7										7
				Ophiura sp	Ophiura luetkenii									2		
				Ophiura sarsii	Ophiura sp	17		3					3			25
				Ophiura sp	Ophiura sp	85										85
Entoprocta	#	#	Barentsiidae	Barentsia benedeni	Ophiura sp	22		1	3			2	3			31
				Barentsia sp	delete											1
				Enteropneusta	delete			1			7		1	3		12
Hemichordata	Enteropneusta	#	#	Ptychoderidae	Glossobalanus sp							10				10
					delete							10				10
Mollusca	Bivalvia	#	#	Bivalvia	delete	5	1	1	9	4	2	5	8	3	1	39
				Cuspidariidae	Cardiomya pectinata								3			3
				Lyonsiidae	Lyonsia californica		5				8		130		1	
					Lyonsia sp			191	31					138		504
					Lyonsia sp			15	4					4		23
					Mytilimeria nuttallii				1							1
				Pandoridae	Pandora bilirata				2							
					Pandora sp					3			2			7
					Pandora filosa				7		2					
					Pandora sp			2		53			64	4		132
					Pandora glacialis							1				
					Pandora sp											1
					Pandora sp		4		13	7			1	1		26
				Thraciidae	Thracia trapezoides				2				15	1		18
			Adapedonta	Hiatellidae	Hiatella arctica				9			3	4	15		36
					Hiatellidae								5			
					delete											1
					Hiatellidae									1		
					Panomya ampla									1		
					Panomya ampla				2							3
					Panopea generosa				3					1		4
					Saxicavella pacifica							1				1
				Pharidae	Siliqua sp	1		4								5
				Solenidae	Solen sicarius				67	7			36	20		130
		Cardiida	Cardiidae	Clinocardium nuttallii	Clinocardium nuttallii										3	
					Clinocardium sp				45	25			5	8		86
					Clinocardium sp				12	10	2	1	1	3		29
					Keenaea centifilosa				1	59	13	2	1	73	2	151
					Keenocardium blandum				1							1
		Carditida	Carditidae	Cyclocardia ventricosa	Cyclocardia ventricosa				1							1
		Lucinida	Lucinidae	Lucinoma annulatum	Lucinoma annulatum	1	1	10	33	79		16	40	75		255
				Parvilucina tenuisculpta	Parvilucina tenuisculpta	5	62	241	1422	992	36	204	533	2421	41	5957

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations	
						3	4	13	21	29	34	38	40	44	49	All
			Thyasiridae	Adontorhina cyclia	Adontorhina cyclia				1	1			17			19
				Axinopsida serricata	Axinopsida serricata	82	3797	3014	21664	1040	614	2939	10626	724	11	44511
				Thyasira flexuosa	Thyasira flexuosa				9				14	2		25
		Myida	Myidae	Cryptomya californica	Cryptomya californica				8							8
				Mya arenaria	Mya arenaria				22		2		14			38
				Platyodon sp	Platyodon sp									1		1
			Teredinidae	Bankia setacea	Bankia setacea					1						1
					Teredinidae											1
					Teredinidae				1							1
					Teredo sp											2
					Teredo sp								2			2
		Mytilida	Mytilidae	Crenella decussata	Crenella decussata									1		1
				Modiolus modiolus	Mytilidae						4			3		7
				Modiolus rectus	Modiolus rectus								1			1
					Mytilidae						4			4		26
				Modiolus sp	Mytilidae	1			10	1	7			10		29
				Musculus discors	Mytilidae				13							13
				Musculus sp	Mytilidae				3					5		8
				Musculus taylori	Mytilidae				2					3		5
				Mytilidae	Mytilidae	7			6	2	3	2		11		31
				Mytilus sp	Mytilidae				11	1						14
					Mytilus sp								2			2
				Solamen columbianum	Solamen columbianum				20	1			209	122		352
		Nuculanida	Nuculanidae	Nuculana minuta	Nuculana minuta				1				2			3
					Nuculana sp											37
				Nuculana pernula	Nuculana pernula								1			1
					Nuculana sp											3
				Nuculana sp	Nuculana sp	3	2		3							8
			Yoldiidae	Megayoldia thraciaformis	Megayoldia thraciaformis	5	23			24		7				59
				Yoldia hyperborea	Yoldia hyperborea						1					1
				Yoldia sp	Yoldia sp	1351	9									1361
				Yoldia seminuda	Yoldia seminuda				2					4		4
					Yoldia sp					9		11	9			190
				Yoldia sp	Yoldia sp	3	3	1		2		4	2			15
		Nuculida	Nuculidae	Acila castrensis	Acila castrensis	8	450	26	2	120	382	12	1	29		1030
				Ennucula tenuis	Ennucula tenuis	4	472	111	431	101	5	29	189	38		1380
		Pectinida	Pectinidae	Chlamys hastata	Pectinidae				8			30		3		41
				Chlamys rubida	Pectinidae									1		1
				Chlamys sp	Pectinidae						18			6		24
				Delectopecten vancouverensis	Pectinidae	1		77								78
				Pectinidae	Pectinidae						1			1		2
		Solemyida	Solemyidae	Solemya pervernicosa	Solemya pervernicosa				6							6
		Venerida	Cardiidae	Cardiidae	Cardiidae					1			1	1		3
			Lasaeidae	Kurtiella sp D	Kurtiella sp D									6		6
				Kurtiella tumida	Kurtiella tumida	20	925	1298	1371	84	351	25	1274	503	60	5911
				Mysella coani	Mysella coani									8		8
				Neaeromya rugifera	Neaeromya rugifera	3			1							4
			Maclridae	Maclridae	Maclridae											10
				Mactromeris polynyma	Maclridae											20
			Tellinidae	Macoma calcarea	Macoma sp	3304		11	20	86			2	1		3424
				Macoma carlottensis	Macoma sp	1330	259	126	4957	14632	36	3711	1179	93	3	26326
				Macoma elimata	Macoma sp	8	3	34	422	9		2	800	56		1334
				Macoma golikovi	Macoma sp	1	6	243	97		1		190	29		567
				Macoma indentata	Macoma sp						1					1

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Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station									Between stations	
						3	4	13	21	29	34	38	40	44	49	All
				Macoma inquinata	Macoma sp			7								7
				Macoma moesta	Macoma sp				2							2
				Macoma nasuta	Macoma sp		16	99	148	1	25		75	17	228	609
				Macoma sp	Macoma sp	332	45	167	1767	1983	18	442	524	151	20	5449
				Macoma yoldiformis	Macoma yoldiformis		1	26	10		3	1	485	380	4	910
				Tellina carpenteri	Tellina sp			1								1
				Tellina modesta	Tellina modesta			456		3		3			1	637
				Tellina sp	Tellina sp				81				14	79		
				Tellina nuculoides	Tellina sp			1								1
				Tellina sp	Tellina sp			10	3				2	2		17
			Ungulinidae	Diplodonta sp	Diplodonta sp				1							1
			Veneridae	Compsomyax sp	Compsomyax sp						4					4
				Compsomyax subdiaphana	Compsomyax sp											376
				Compsomyax subdiaphana	Compsomyax subdiaphana		33	29	125	4	28	6	132	13	6	
				Leukoma staminea	Leukoma staminea			59	6		1			3	2	71
				Nutricula lordi	Nutricula lordi	1	28	41663	848	2	829	1	76	90	98	43636
				Petricola carditoides	Petricola carditoides			3								3
				Saxidomus gigantea	Saxidomus gigantea			80	2				1			83
				Venerupis philippinarum	Venerupis philippinarum			1								1
	Caudofoveata	Chaetodermatida	Chaetodermatidae	Chaetoderma argenteum	Chaetodermatidae							5				5
				Chaetoderma sp	Chaetoderma sp	1	4	1		6			30			
				Chaetodermatidae	Chaetodermatidae							81		15		138
				Chaetodermatidae	Chaetodermatidae							12		2		14
	Gastropoda	#	#	Gastropoda	delete	1	1	1	2	2	4		3	5	1	20
				Opisthobranchia	delete						1					1
			Acteonidae	Rictaxis punctocaelatus	Rictaxis punctocaelatus				16				19			35
			Aplustridae	Parvaplustrum sp A	Parvaplustrum sp A		1									1
			Cerithiidae	Lirobittium attenuatum	Lirobittium sp					110		8				118
				Lirobittium sp	Lirobittium sp	1		7		164	1	161		1		335
				Stylidium eschrichtii	Stylidium eschrichtii					3						3
			Colloniidae	Spiromoelleria quadrae	Spiromoelleria quadrae			4								4
			Epitoniidae	Epitonium sawinae	Epitonium sawinae		1									1
				Epitonium sp	Epitonium sp							1				1
			Margaritidae	Margarites pupillus	Margarites pupillus	6		1								
				Margarites sp	Margarites sp									17		24
				Margarites sp	Margarites sp									1		1
			Pyramidellidae	Cyclostremella cf concordia	Cyclostremella cf concordia			7	1							8
				Odostomia sp	Odostomia sp	10	176	1027	36	22	774	14	90	93	345	2587
				Turbonilla sp	Turbonilla sp	1	35	74	389	1	45	1	206	172	5	929
			Solariellidae	Solariella sp	Solariella sp	1								2		3
			Trochidae	Halistylus pupoideus	Halistylus pupoideus			2								
				Trochidae	Trochidae											2
				Lirularia lirulata	Lirularia lirulata			91								
				Trochidae	Trochidae											91
				Trochidae	Trochidae				1							1
		Cephalaspidea	#	Cephalaspidea	delete		1	1	1				1	1		5
			Aglajidae	Aglaja ocelligera	Aglajidae							1	1			2
				Aglajidae	Aglajidae		1	1	2	4		3	6	2		19
				Melanochlamys diomedea	Aglajidae			3		4		4	6			17
			Cylichnidae	Acteocina culcitella	Cylichnidae	1	9	10	9				1	5		35
				Acteocina eximia	Cylichnidae	2	95	35	124	2			8	6	25	297
				Acteocina harpa	Cylichnidae			1								1
				Acteocina sp	Cylichnidae		1									1
				Cylichna attonsa	Cylichna attonsa						3					

Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
				Cylichna diegensis	Cylichnidae		40	27	10	4		9	42	40	1	176
				Cylichnidae	Cylichnidae	2	13	3	9	1		1	3	6	49	87
			Diaphanidae	Diaphana californica	Diaphana californica				2					3		5
			Gastropteridae	Gastropteron pacificum	Gastropteron pacificum		1									1
			Haminoeidae	Haminoea sp	Haminoea sp							1	1			2
				Haminoea vesicula	Haminoea sp											22
				Haminoea vesicula	Haminoea vesicula		6							2	14	
			Philinidae	Philine bakeri	Philine bakeri					1						1
				Philine sp	Philine sp											1
				Philine sp	Philine sp			1								1
			Scaphandridae	Scaphander sp	Scaphander sp		9			2		4	1			16
		Littorinimorpha	Calyptraeidae	Crepidula adunca	Calyptraeidae							1				1
				Crepidula sp	Calyptraeidae											1
				Crepidatella lingulata	Calyptraeidae							2		14		16
			Capulidae	Trichotropis cancellata	Trichotropis cancellata	1		1								2
			Eulimidae	Balcis oldroydae	Eulimidae								4	2		6
				Balcis sp	Eulimidae									2		2
				Eulimidae	Eulimidae									2		2
				Melanella sp	Eulimidae									3		3
			Littorinidae	Lacuna vincta	Lacuna vincta								1	1		2
			Naticidae	Cryptonatica affinis	Cryptonatica affinis	53		6					2			61
				Euspira pallida	Euspira pallida	65		7	3				12			87
				Euspira sp	Euspira sp	27		1								28
				Neverita lewisii	Neverita lewisii	17		1					1	1		20
				Polinices sp	Polinices sp								1			1
			Rissoidae	Alvania compacta	Alvania compacta		10	6636	304	5	213	3	298	629	1	8099
			Vermetidae	Petalconchus compactus	Petalconchus compactus							2				2
		Neogastropoda	Buccinidae	Buccinum plectrum	Buccinum sp	4										4
				Buccinum sp	Buccinum sp	1										1
				Neptunea phoenicea	Neptunea phoenicea	1										1
			Cancellariidae	Admete gracilior	Admete gracilior	2										2
			Columbellidae	Alia carinata	Alia carinata				1					2		3
				Amphissa columbiana	Amphissa columbiana	2		8				1				11
				Astyris gausapata	Astyris gausapata	93	44	457	390	7	240	2	638	421	80	2372
			Mangeliidae	Kurtzia arteaga	Mangeliidae			1	1			1	8	108		119
				Kurtziella crebricostata	Mangeliidae			3					2	2		7
				Kurtziella plumbea	Mangeliidae			13					1	3		17
				Kurtziella sp	Mangeliidae									3		3
				Propebela sp	Mangeliidae							1				1
			Muricidae	Ocinebrina sp	Ocinebrina sp	1								1	8	10
			Nassariidae	Nassarius mendicus	Nassarius mendicus	1		19	93		71		18	178	140	520
			Olivellidae	Olivella baetica	Olivella baetica			2	1					35		38
				Olivella biplicata	Olivella biplicata									1		1
			Turridae	Turridae	Mangeliidae										1	1
		Nudibranchia	#	Aeolidacea	Aeolidacea	1			1		2		1	1		1
					delete											36
					Nudibranchia				30							14
					delete											
					Nudibranchia				14							
			Aeolidiidae	Aeolidia papillosa	Aeolidia papillosa					1						1
				Aeolidia sp	Aeolidia sp											1
				Aeolidia sp	Aeolidacea						1					1
					Aeolidia sp											1

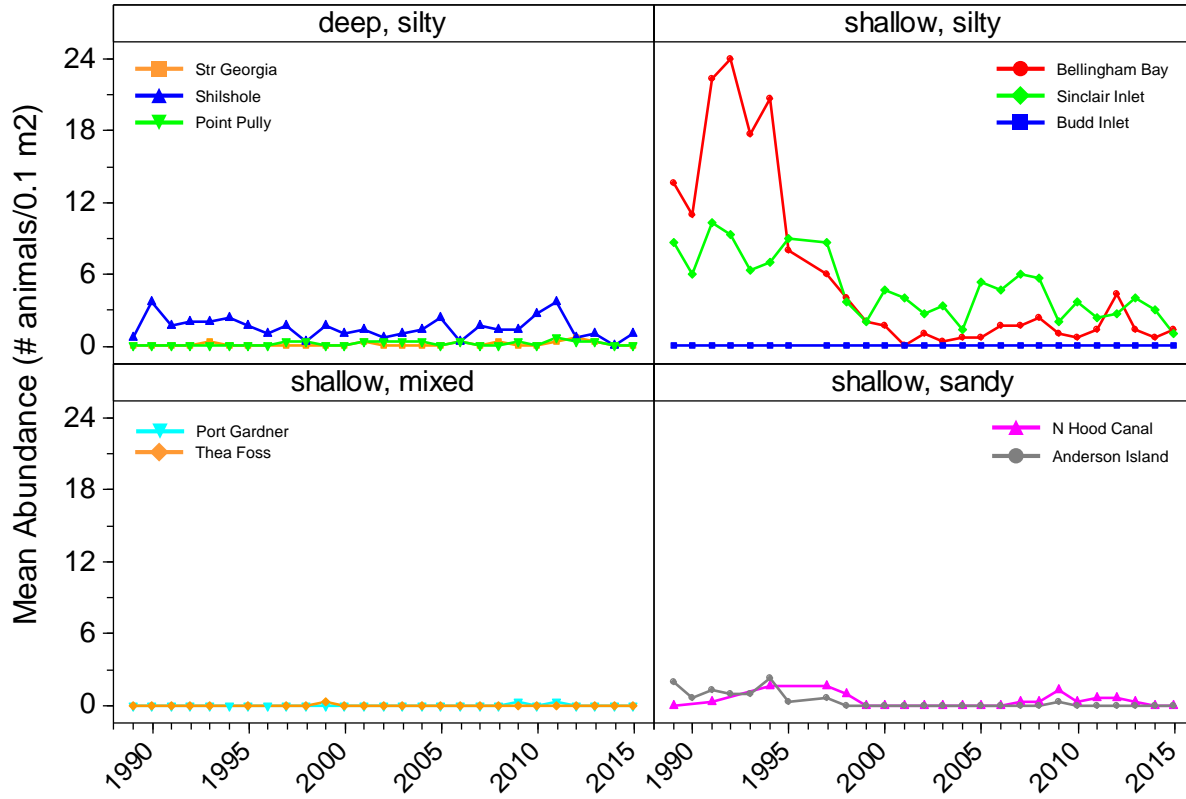
Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations	
						3	4	13	21	29	34	38	40	44	49	All	
			Arminidae	Armina californica	Aeolidacea				1		1						
					Armina californica												2
			Dendronotidae	Dendronotus frondosus	Aeolidacea									1			1
					Dendronotus frondosus												1
			Dotidae	Doto columbiana	Doto sp												1
					Nudibranchia			1									2
				Doto sp	Doto sp												2
					Nudibranchia			2									1
			Flabellinidae	Flabellina sp	Flabellina sp												1
					Nudibranchia				1								
			Goniodorididae	Ancula pacifica	Aeolidacea						2						2
					Ancula sp												2
					Ancula sp						1						1
					Ancula sp												1
			Onchidorididae	Corambe pacifica	Aeolidacea				1		3		1				8
					Corambe pacifica			2									1
				Loy thompsoni	Loy thompsoni					1							1
	Scaphopoda	#	#	Scaphopoda	Scaphopoda			6									6
		Dentaliida	Dentaliidae	Dentalium sp	Scaphopoda			6									6
			Rhabdidae	Rhabdus rectius	Scaphopoda			1									1
		Gadilida	Pulsellidae	Pulsellum salishorum	Pulsellum salishorum				1								2
					Scaphopoda			1									2
Nemertea	#	#	#	Nemertea	Nemertea	6	22	21	26	15	14	8	44	153	53		362
	Anopla	#	#	Anopla	Nemertea			5			2		6	4			17
				Heteronemertea	Nemertea			5						1			6
			Lineidae	Cerebratulus sp	Nemertea	6	22	9	17	22	17	19	25	30	27		194
				Lineidae	Nemertea	3	11	74	22	3	6	5	33	68	27		252
				Lineus sp	Nemertea	1		16	1				1	2			21
				Micrura alaskensis	Nemertea		2		1				5				8
				Micrura sp	Nemertea	10	44	562	137	7	144	10	182	197	102		1395
	Enopla	#	#	Enopla	Nemertea			1		3		1	1	6			12
				Hoplonemertea	Nemertea			8					1	3			12
		Monostilifera	#	Monostilifera	Nemertea			1									1
			Amphiporidae	Amphiporus sp	Nemertea			5	1			1	3	14	2		26
			Cratenemertidae	Nipponnemertes pacificus	Nemertea									1			1
			Emplectonematidae	Paranemertes californica	Nemertea	3	5	7		6		7	6	2			36
				Paranemertes sp	Nemertea	1					3			1			5
			Prosorhochmidae	Prosorhochmidae	Nemertea							6	1				7
			Tetrastemmatidae	Tetrastemma bilineatum	Nemertea					3							3
				Tetrastemma nigrifrons	Nemertea			7						1			8
				Tetrastemma reticulatum	Nemertea					6							6
				Tetrastemma sp	Nemertea	1		9	1					9			20
				Tetrastemma sp C	Nemertea					1							1
	Palaeonemertea	#	#	Palaeonemertea	Nemertea				1				1	1			3
			Carinomidae	Carinoma mutabilis	Nemertea		2	13					2	5			22
			Tubulanidae	Tubulanus capistratus	Nemertea									1			1
				Tubulanus cingulatus	Nemertea			1					4	1			6
				Tubulanus nothus	Nemertea								2	2			4
				Tubulanus nr nothus	Nemertea								3	3			6
				Tubulanus polymorphus	Nemertea	12	59	47	68	41	20	75	135	91	11		559
				Tubulanus sp	Nemertea		10	18	16	3	3	12	39	35	7		143
				Tubulanus sp A	Nemertea		1	12					2	1	7		23
Phoronida	#	#	#	Phoronida	Phoronida		1	237	3					9			250
			Phoronidae	Phoronis sp	Phoronida			399									402

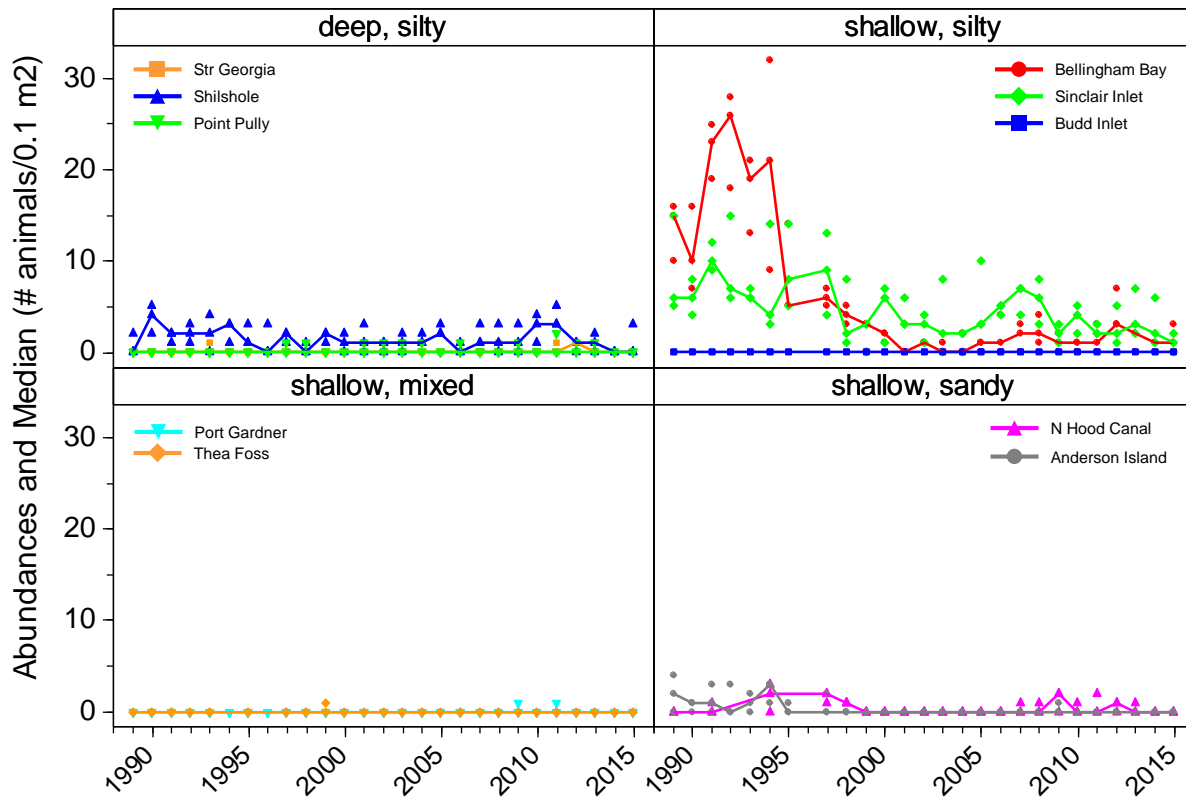
Final Taxonomic Standardization

Phylum	Class	Order	Family	Taxon identified	Taxon standardized	Within station										Between stations
						3	4	13	21	29	34	38	40	44	49	All
					Phoronis sp									3		
					Phoronida			109	2						12	126
Platyhelminthes	#	#	#	Platyhelminthes	Phoronis sp									3		
	Rhabditophora	Polycladida	#	Polycladida	Platyhelminthes		3							2	1	1
					Platyhelminthes									1		2
					Polycladida							1				
				Callioplanidae	Kaburakia excelsa					1	4					
					Platyhelminthes		1							2	2	2
				Euryleptidae	Euryleptodes insularis				1							
					Platyhelminthes											1
				Leptoplanidae	Leptoplanidae				13	2	16					
					Platyhelminthes		1							6	3	43
					Polycladida								2			
				Stylochidae	Stylochus exiguus									4	17	52
					Polycladida								1			
					Stylochus exiguus				4	3						
					Stylochus sp						18					
					Platyhelminthes		1							1		4
					Polycladida								1			
					Stylochus sp						1					
	Turbellaria	#	#	Turbellaria	Platyhelminthes											1
					Turbellaria				1							
				Neorhabdoceola	Neorhabdoceola											1
					Platyhelminthes											
					Turbellaria											1
Porifera	Calcarea	#	#	Calcarea	delete											1
	Demospongiae	#	#	Demospongiae	delete											7
Sipuncula	#	#	#	Sipuncula	Sipuncula		3	2	1					16	27	49
	Sipunculidea	Golfingiida	Golfingiidae	Golfingia sp	Sipuncula									1	4	17
				Golfingia vulgaris	Golfingia vulgaris											
					Sipuncula										4	5
					Sipuncula		1							2	1	4
				Golfingiidae	Sipuncula									2	6	8
				Nephasoma diaphanes	Sipuncula									3	6	12
				Nephasoma sp	Sipuncula				3							
				Thysanocardia nigra	Sipuncula		34	95	14					137	301	587
					Thysanocardia nigra											4
				Thysanocardia sp	Sipuncula			4								4

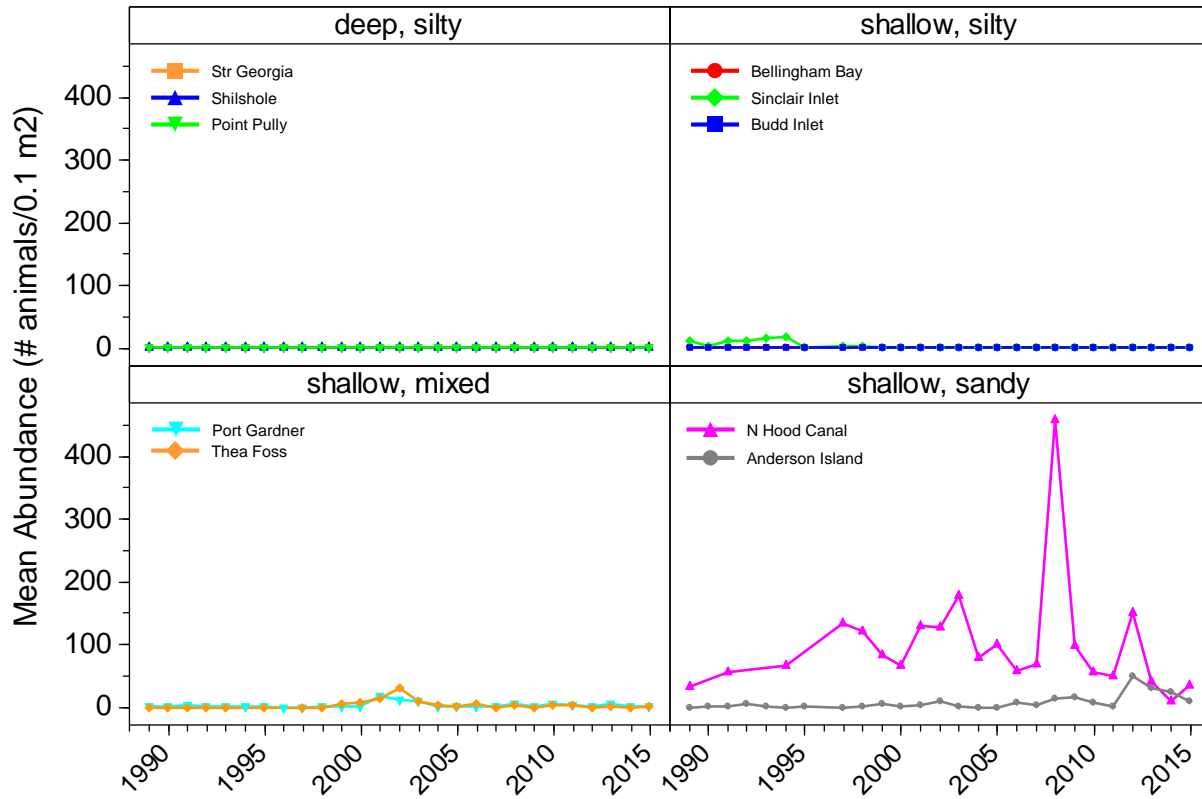
Acila castrensis



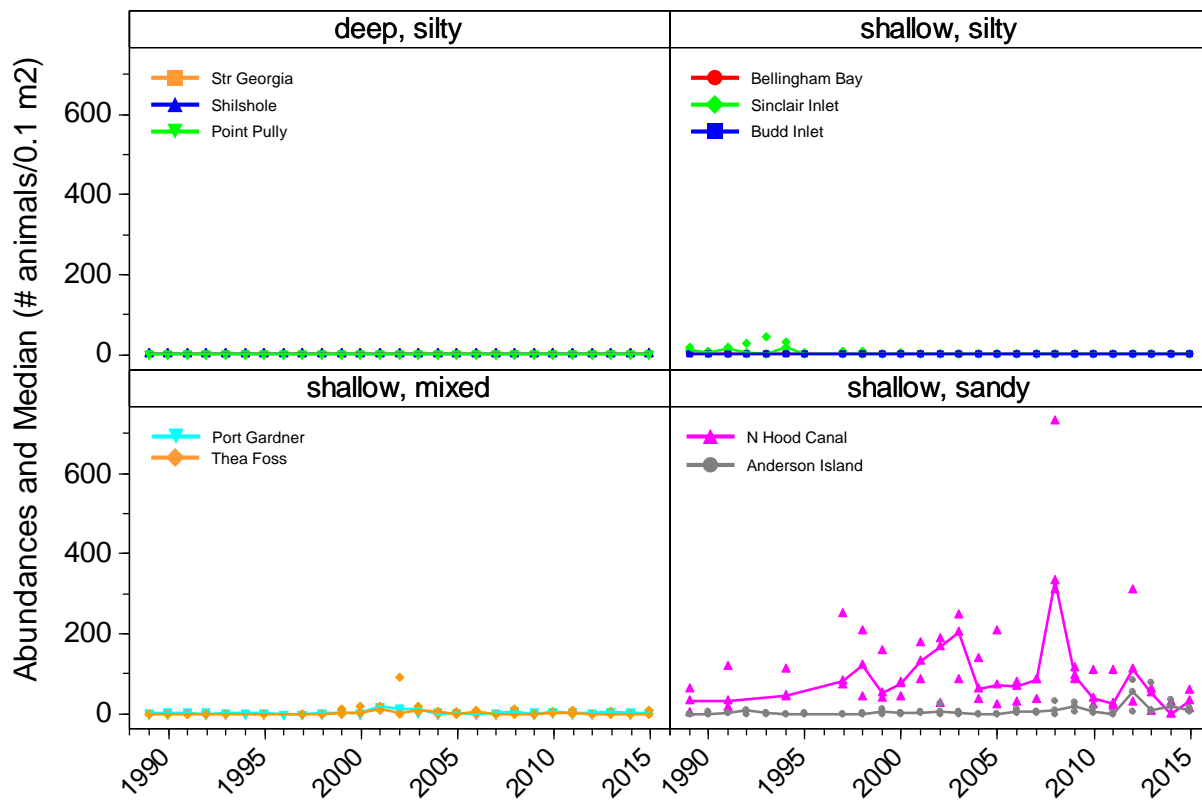
Acila castrensis



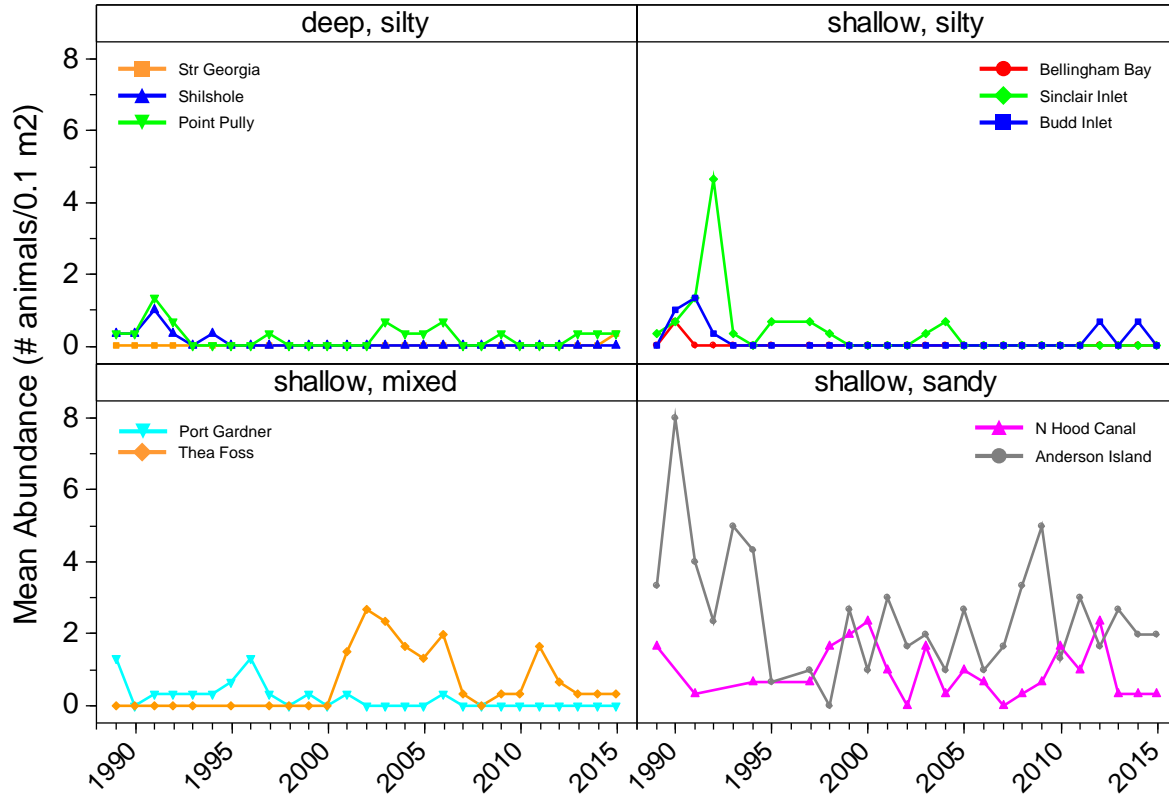
Alvania compacta



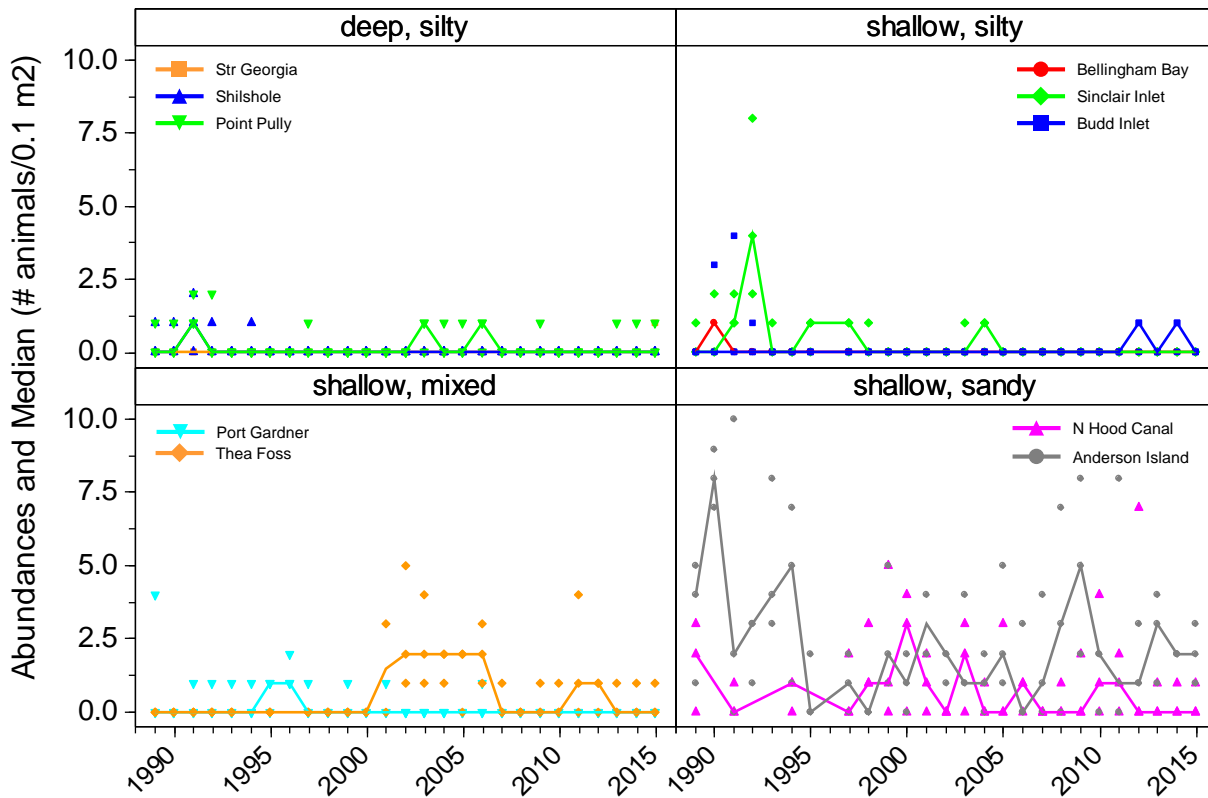
Alvania compacta



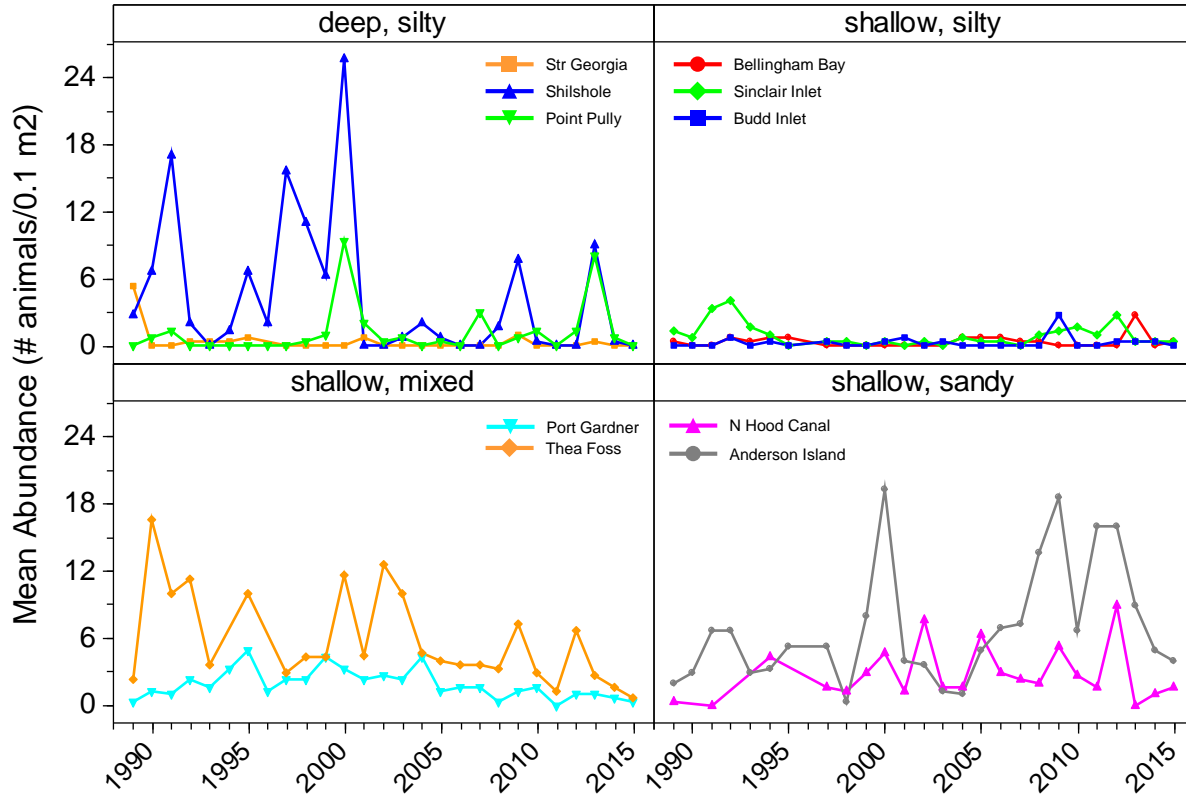
Ampelisca spp.



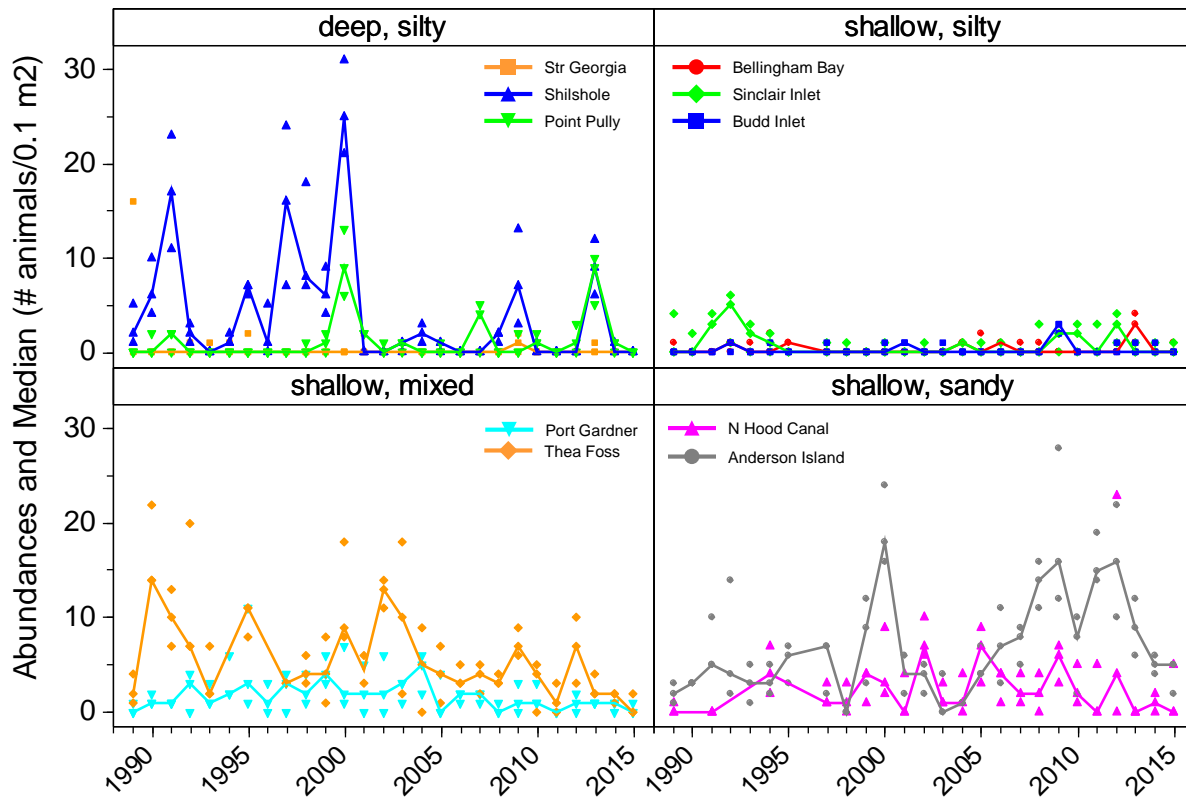
Ampelisca spp.



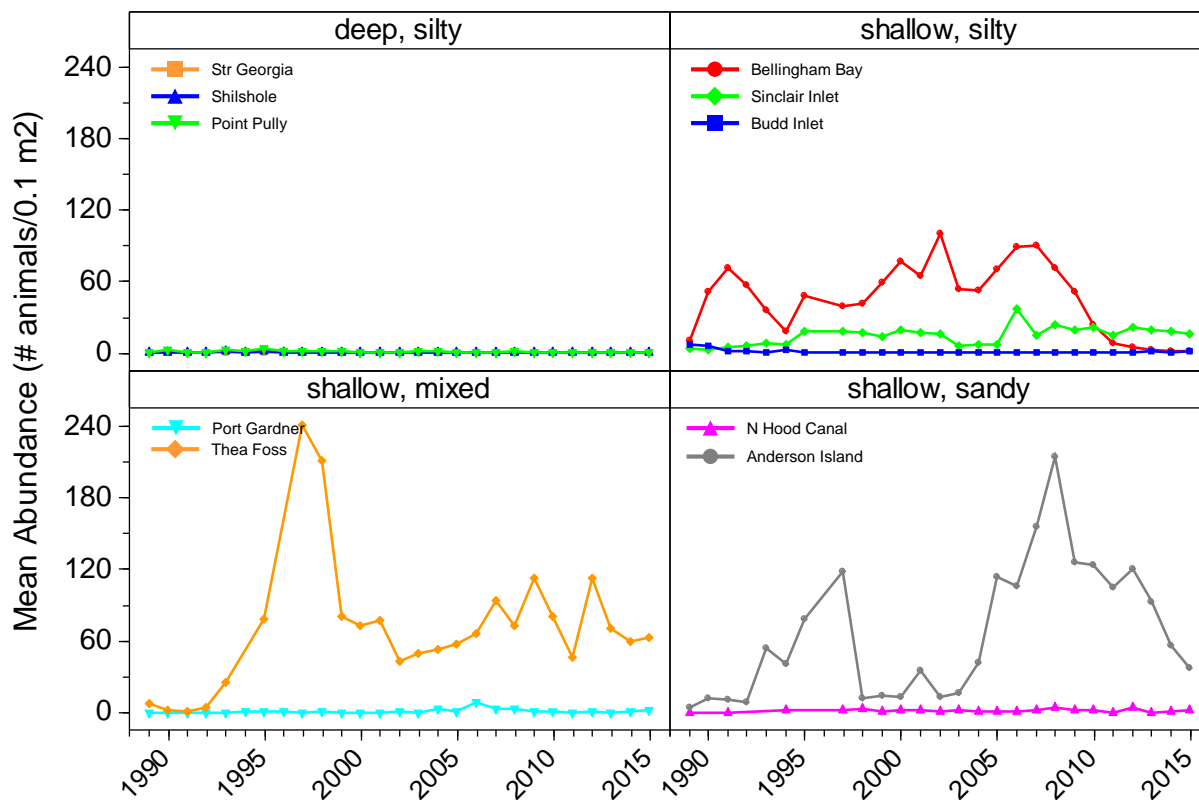
Ampharetidae



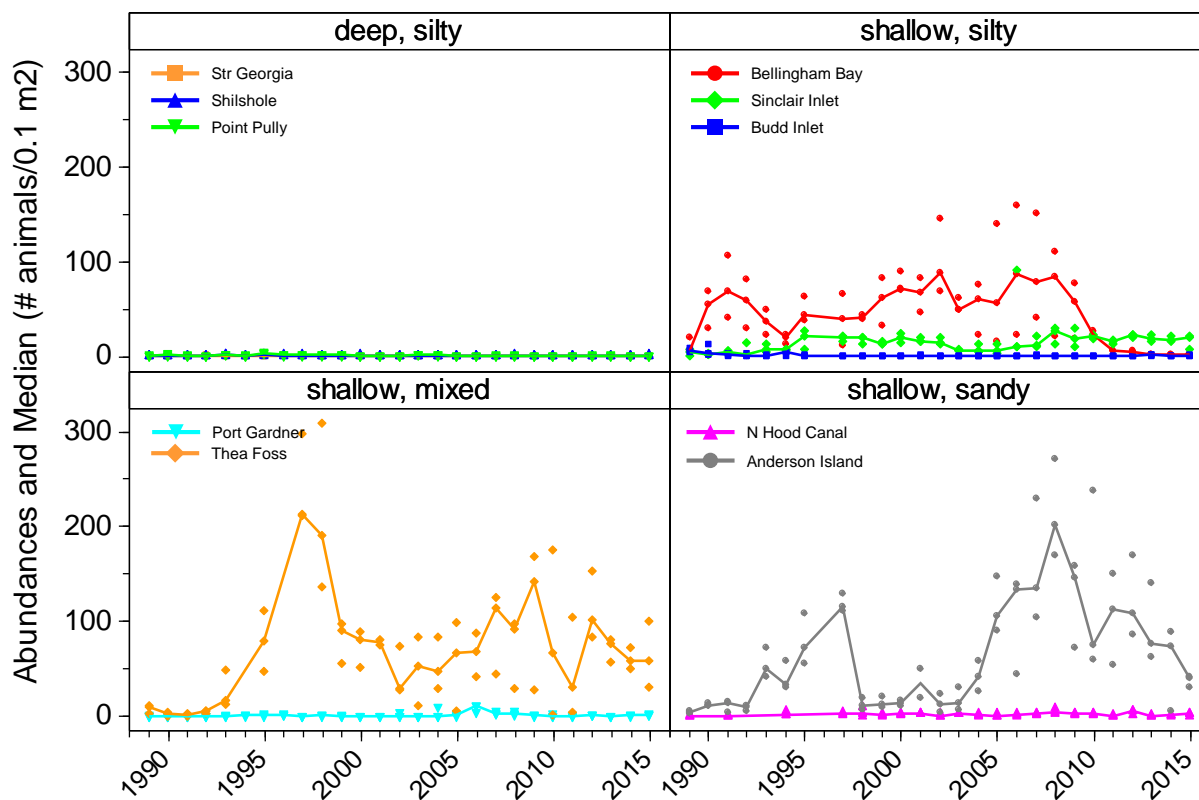
Ampharetidae



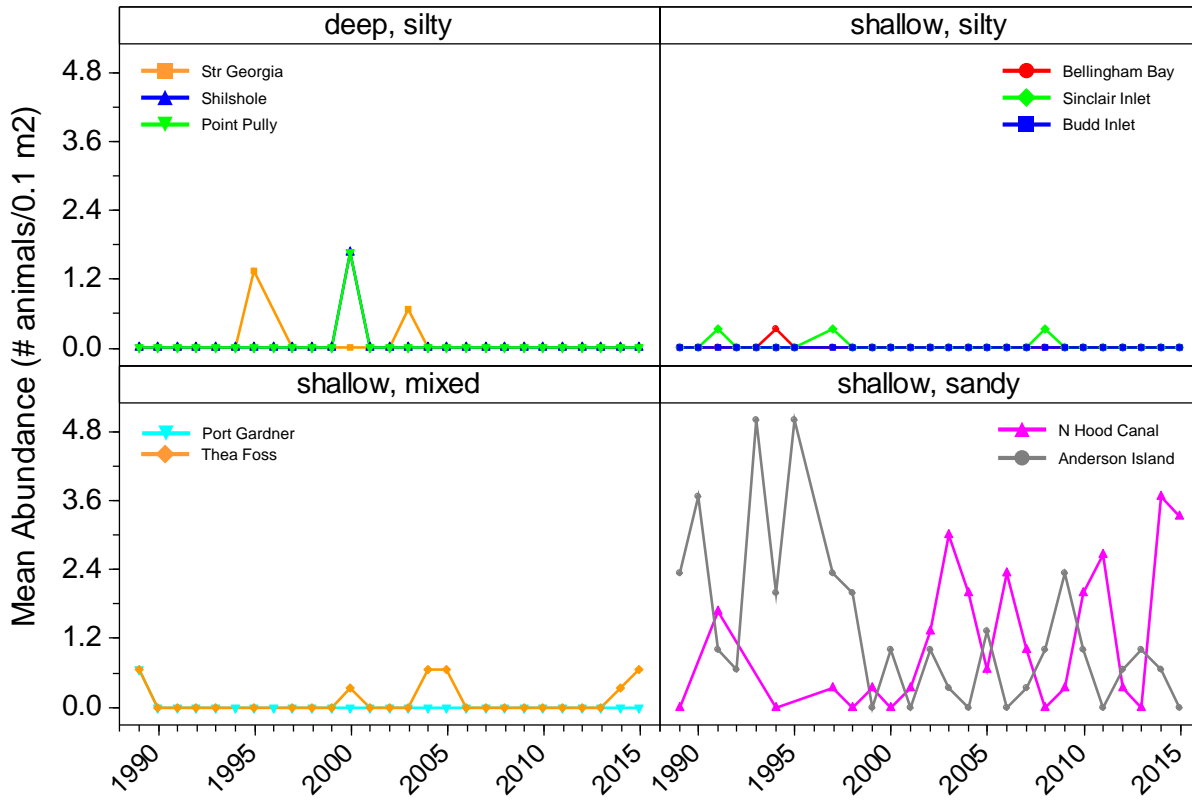
Amphiuridae



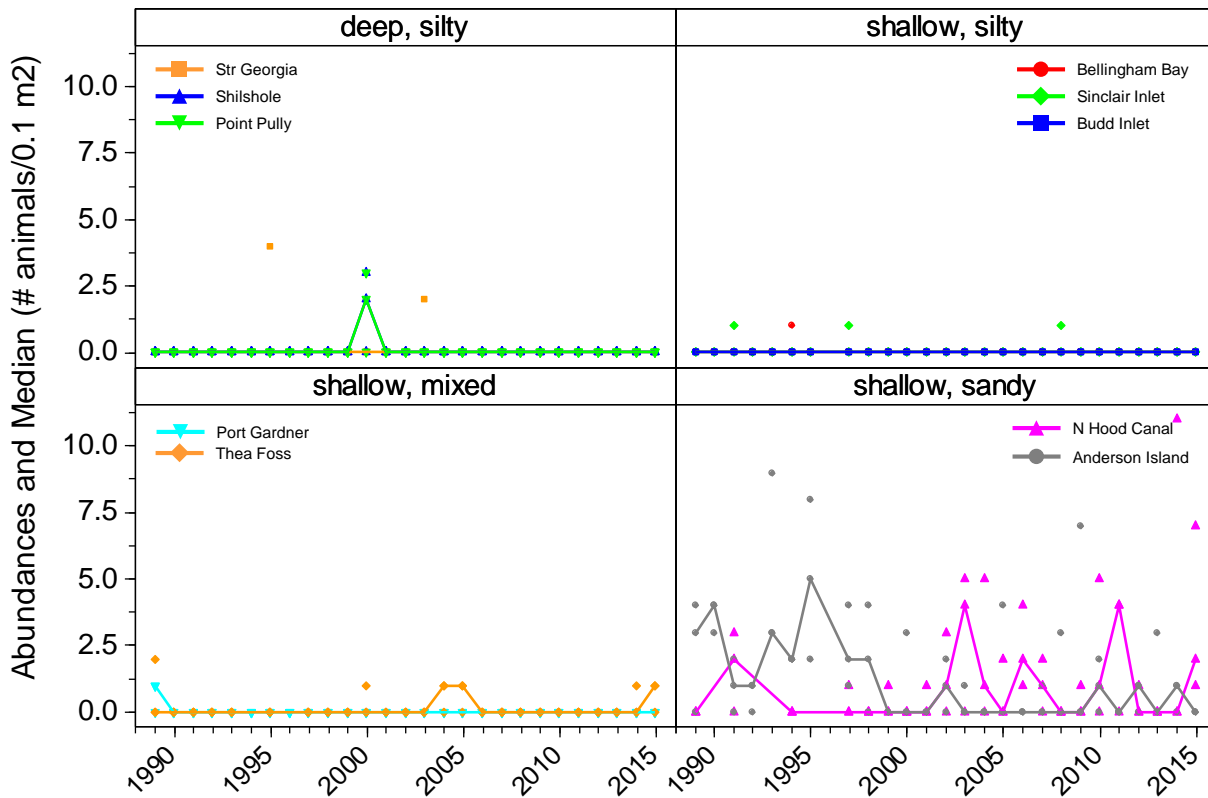
Amphiuridae



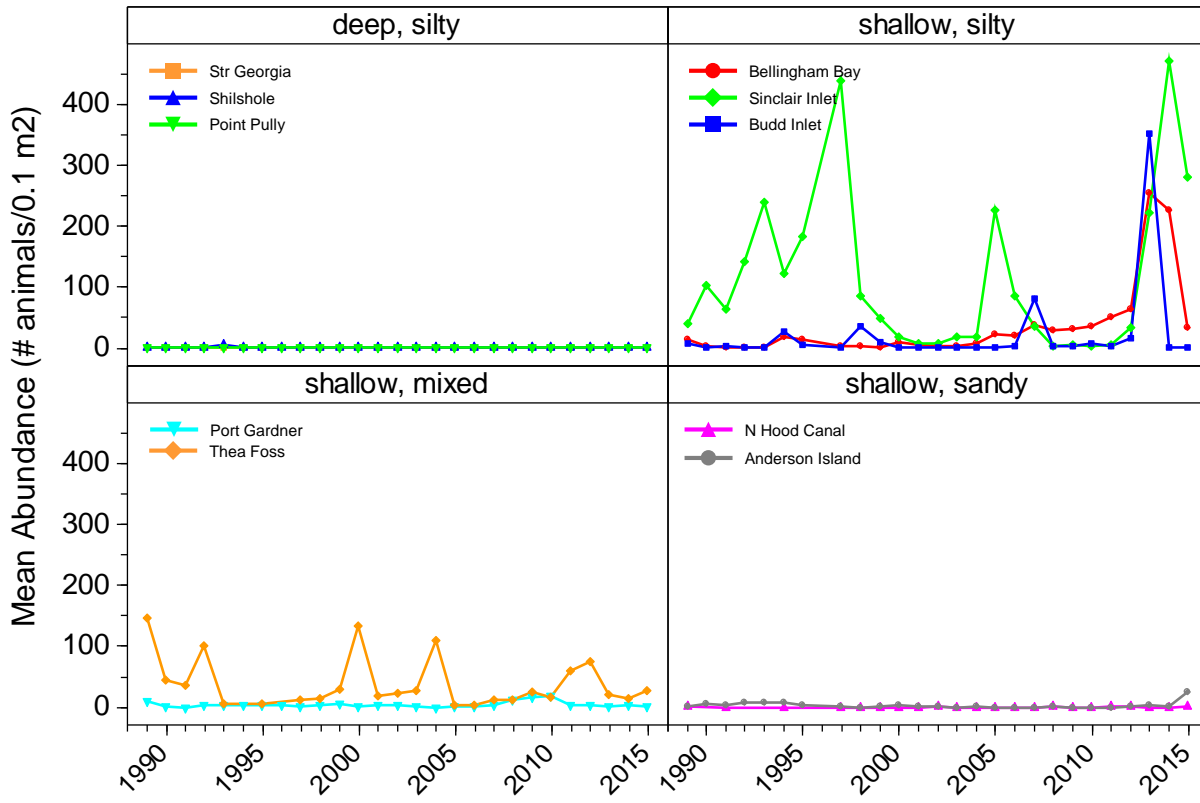
Aoroides spp.



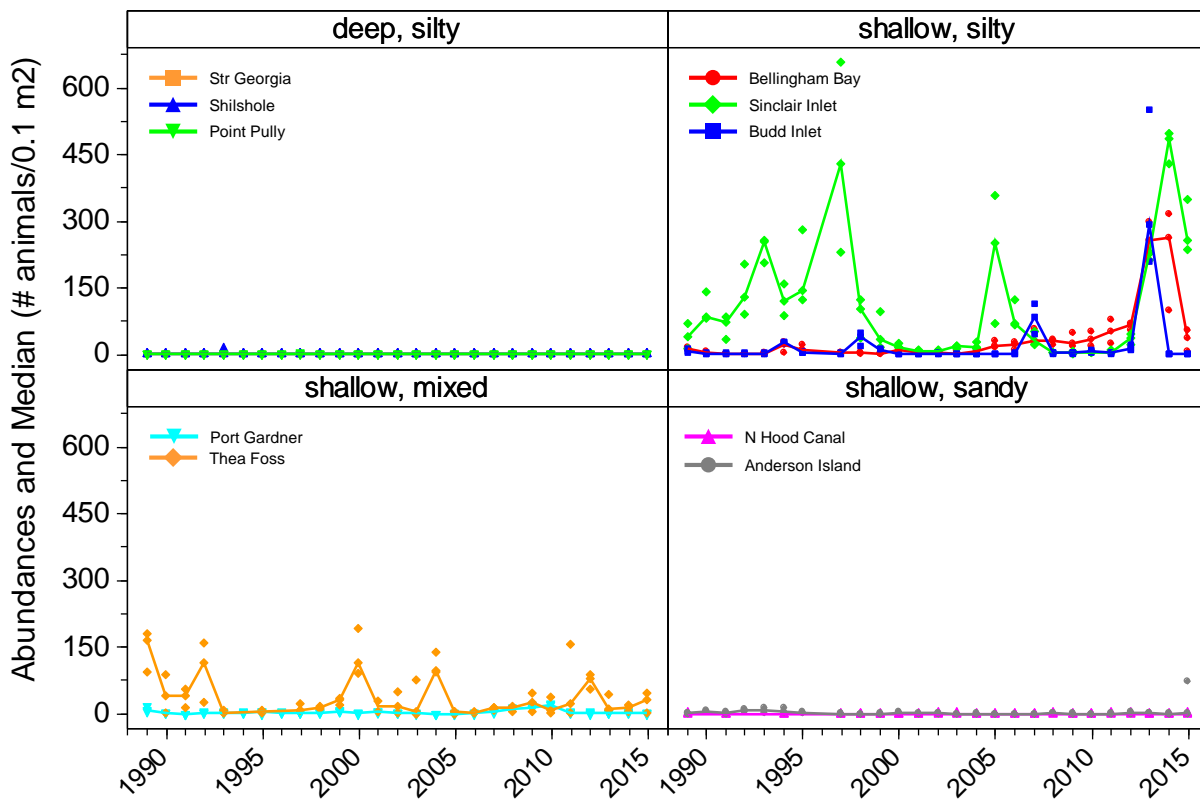
Aoroides spp.



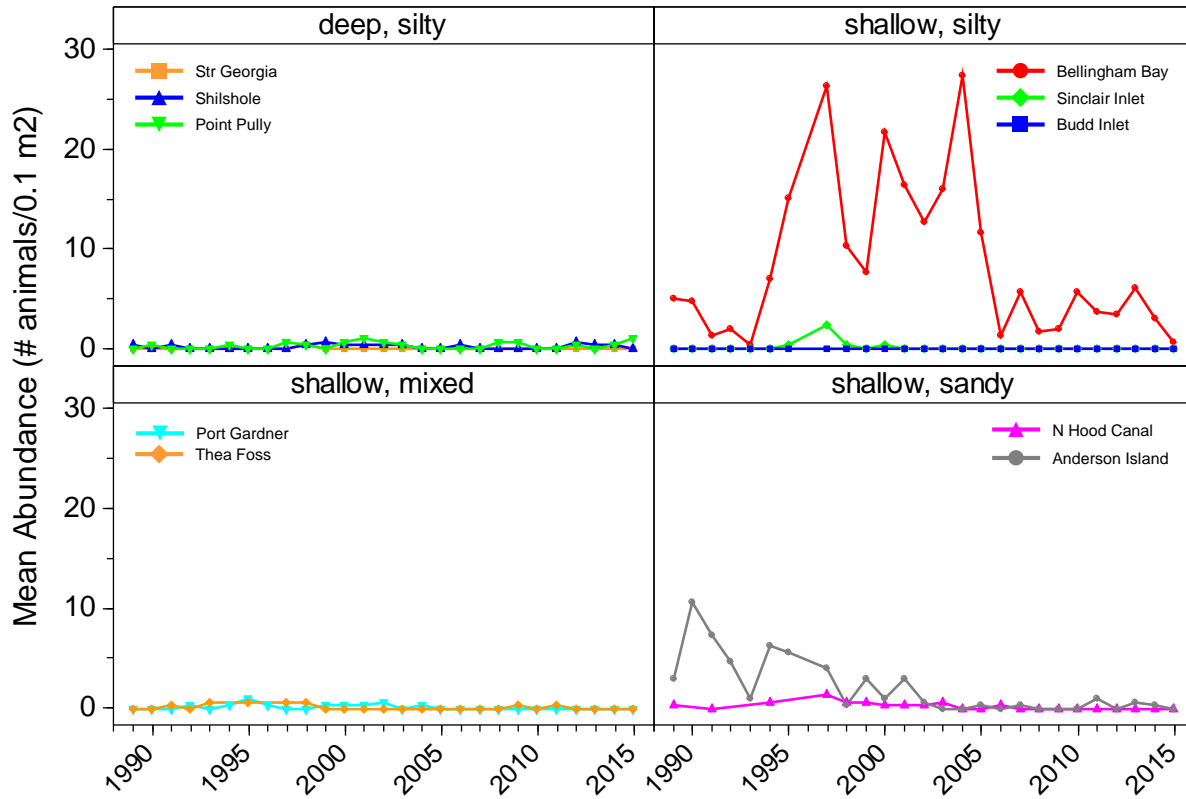
Aphelochaeta spp.



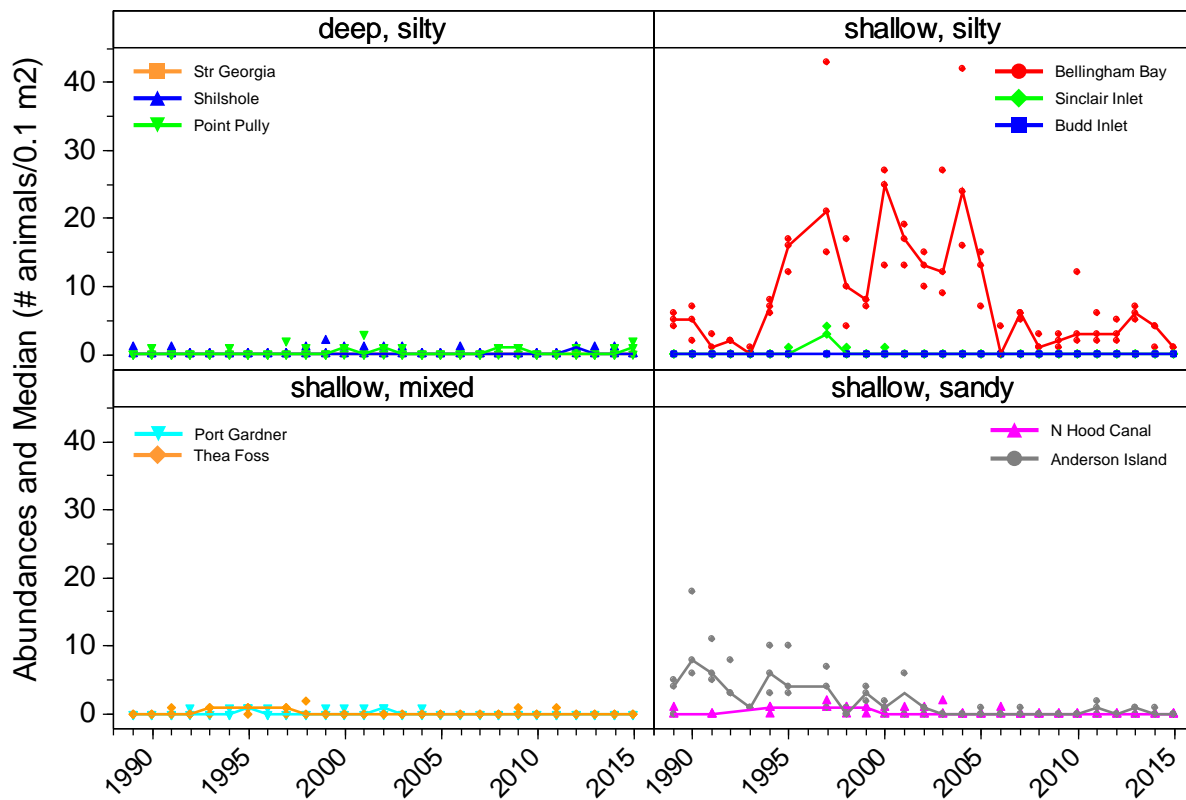
Aphelochaeta spp.



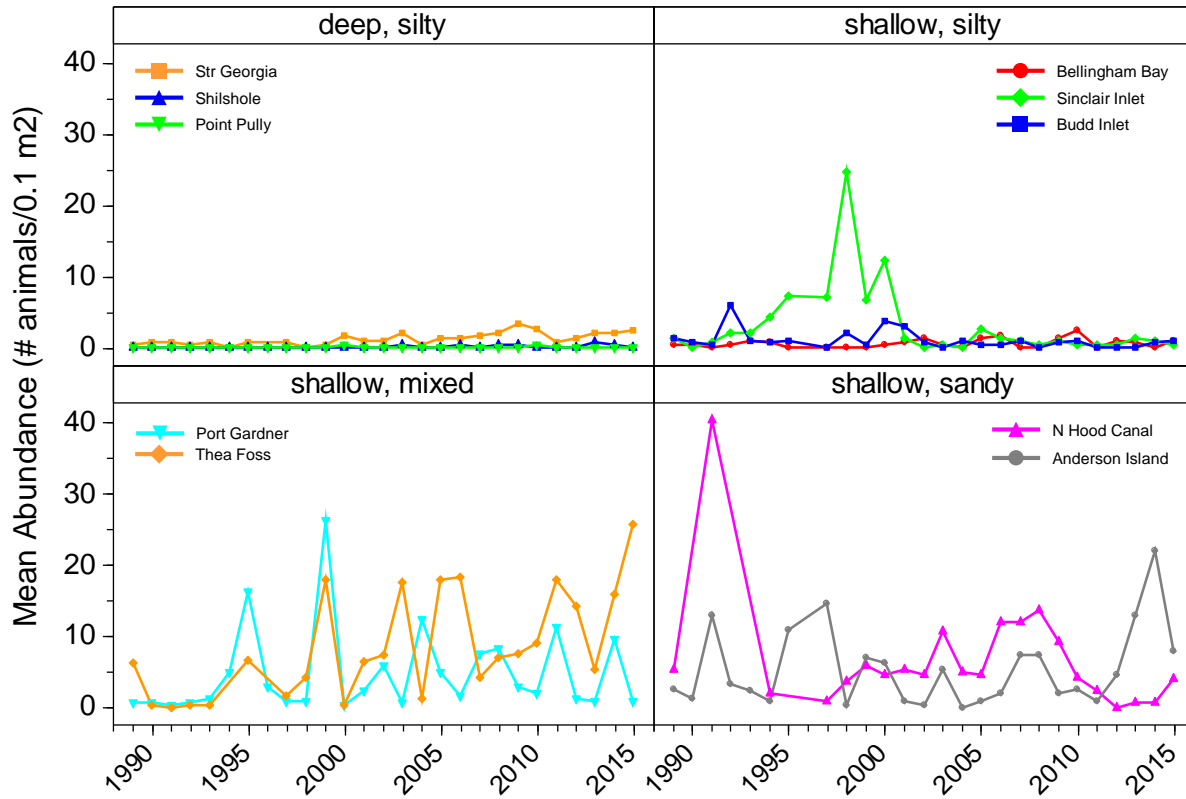
Aricidea spp.



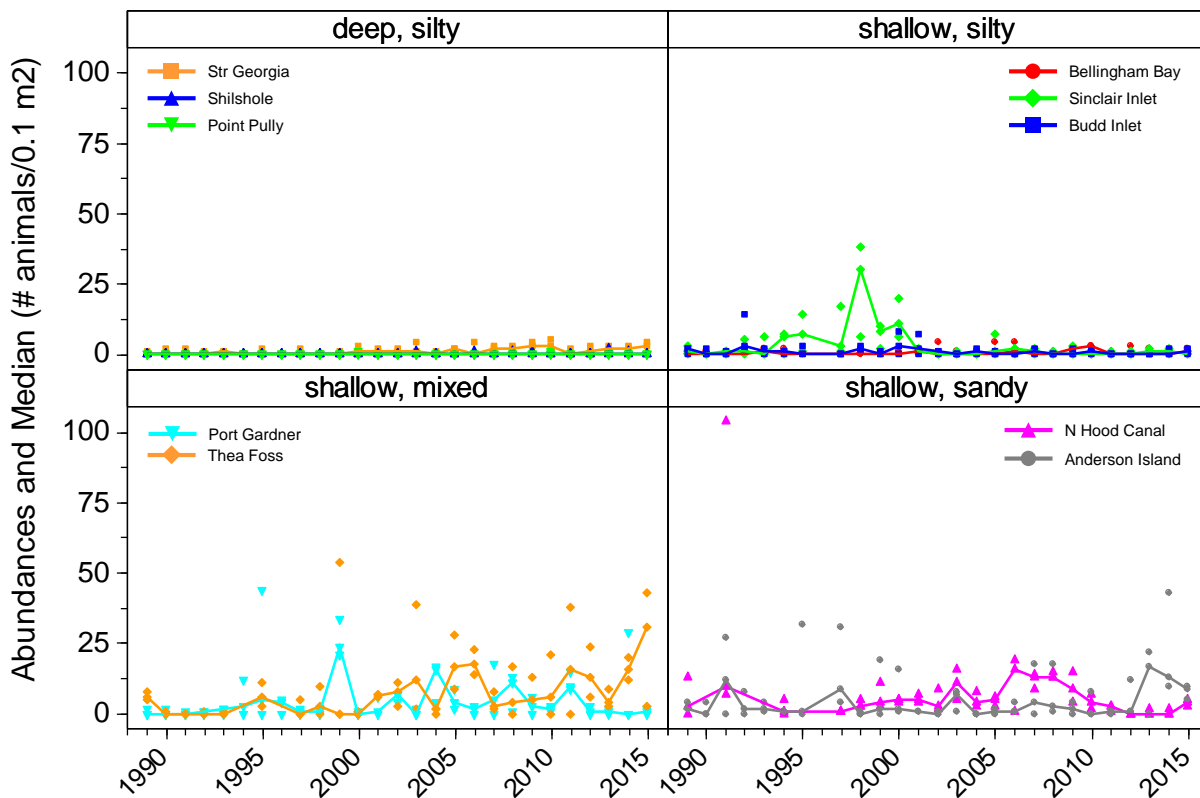
Aricidea spp.



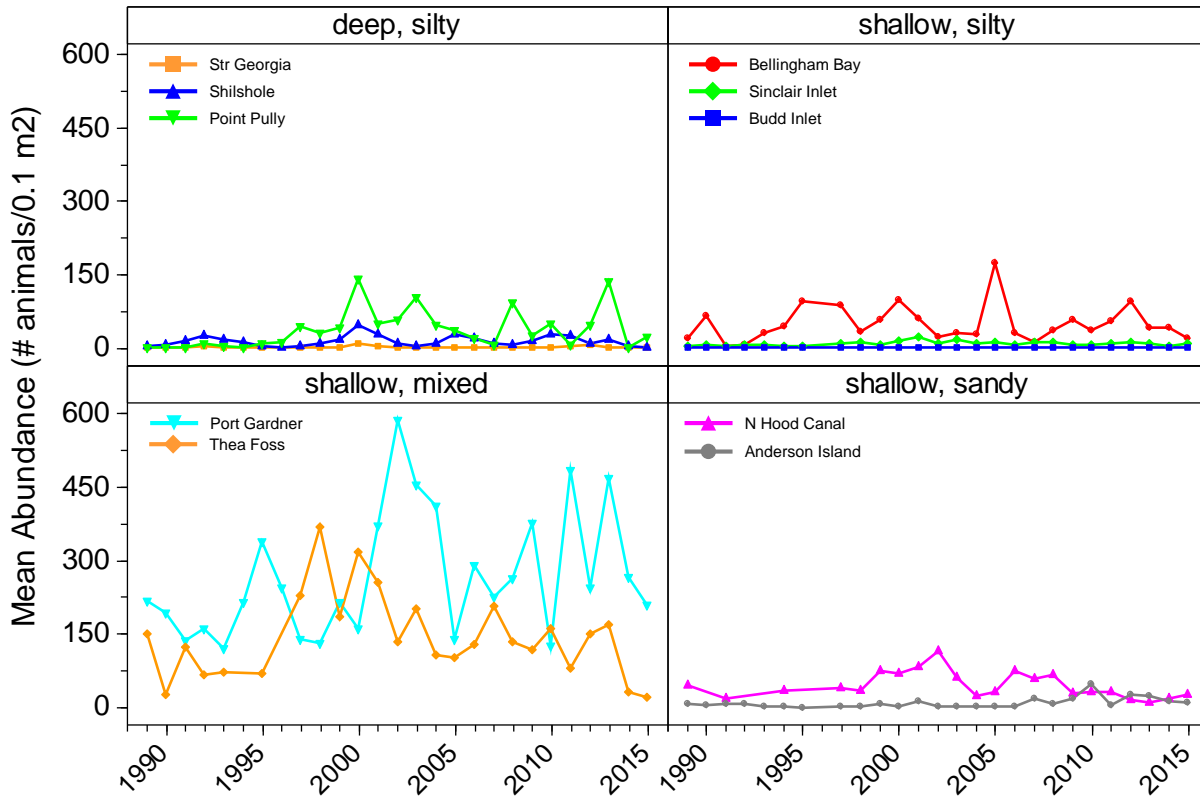
Astyris gausapata



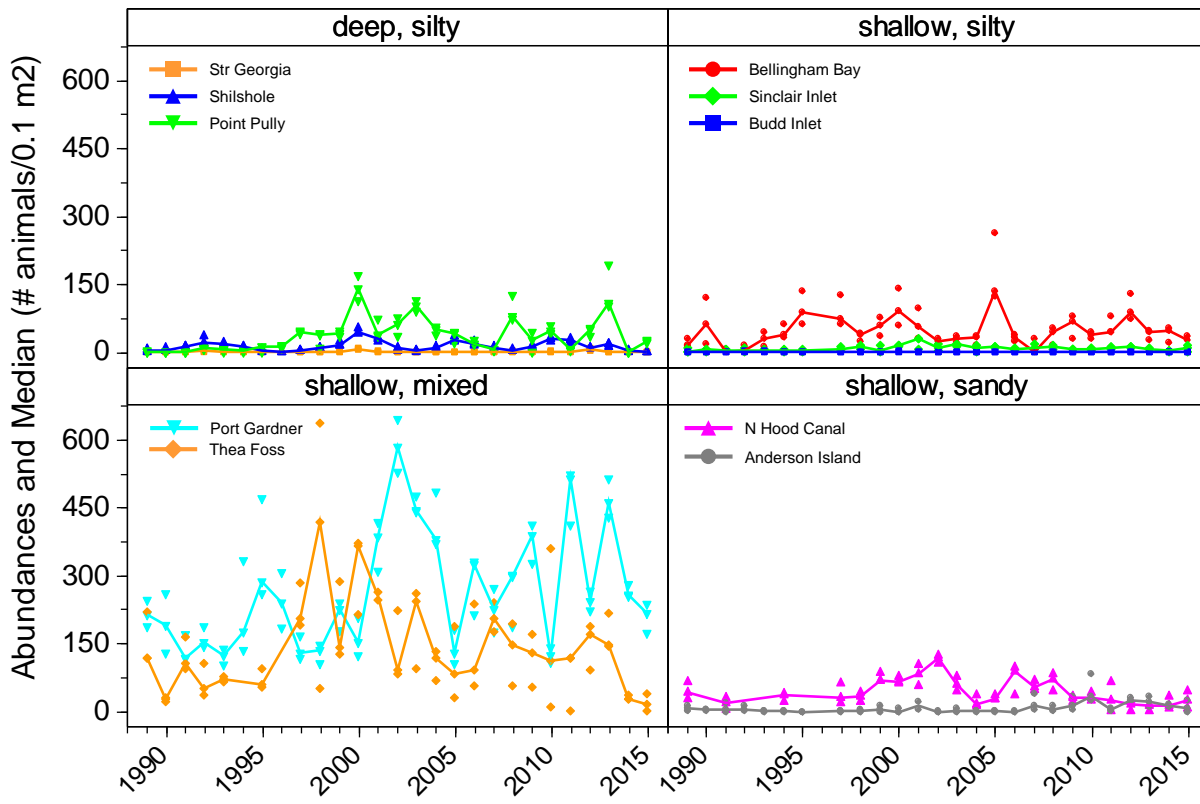
Astyris gausapata



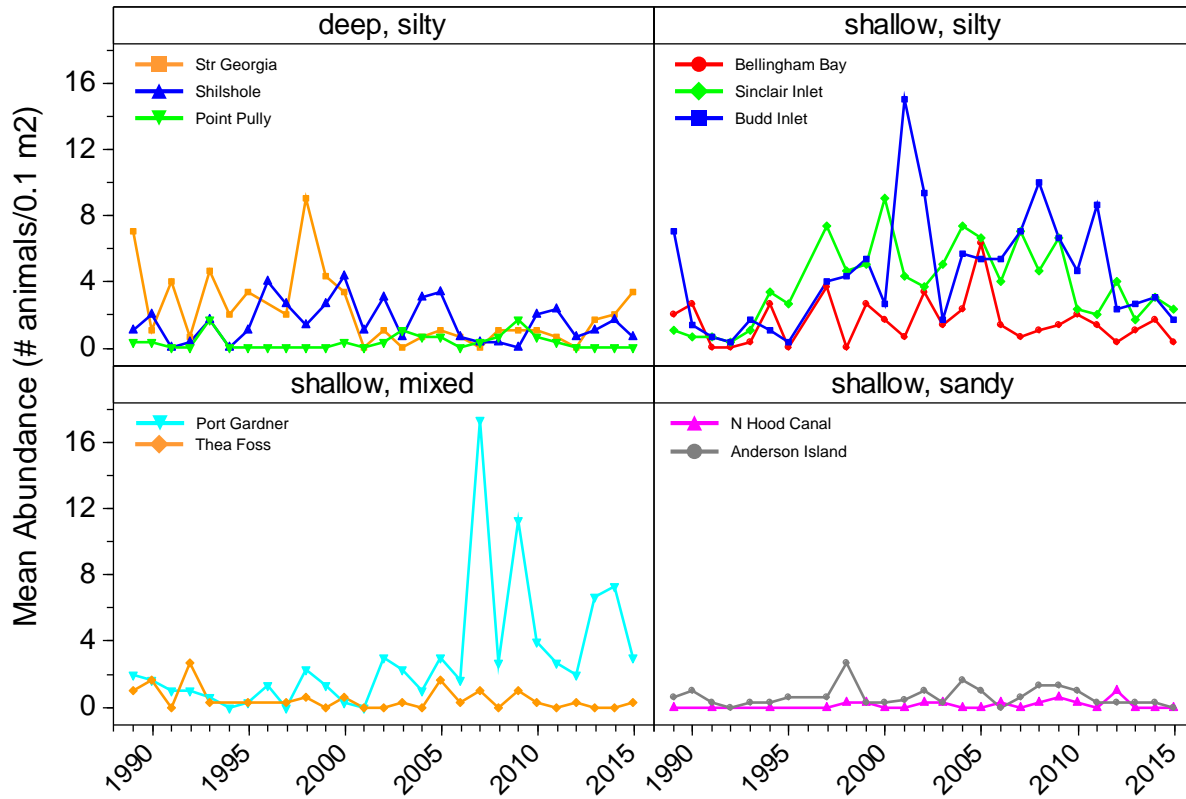
Axinopsida serricata



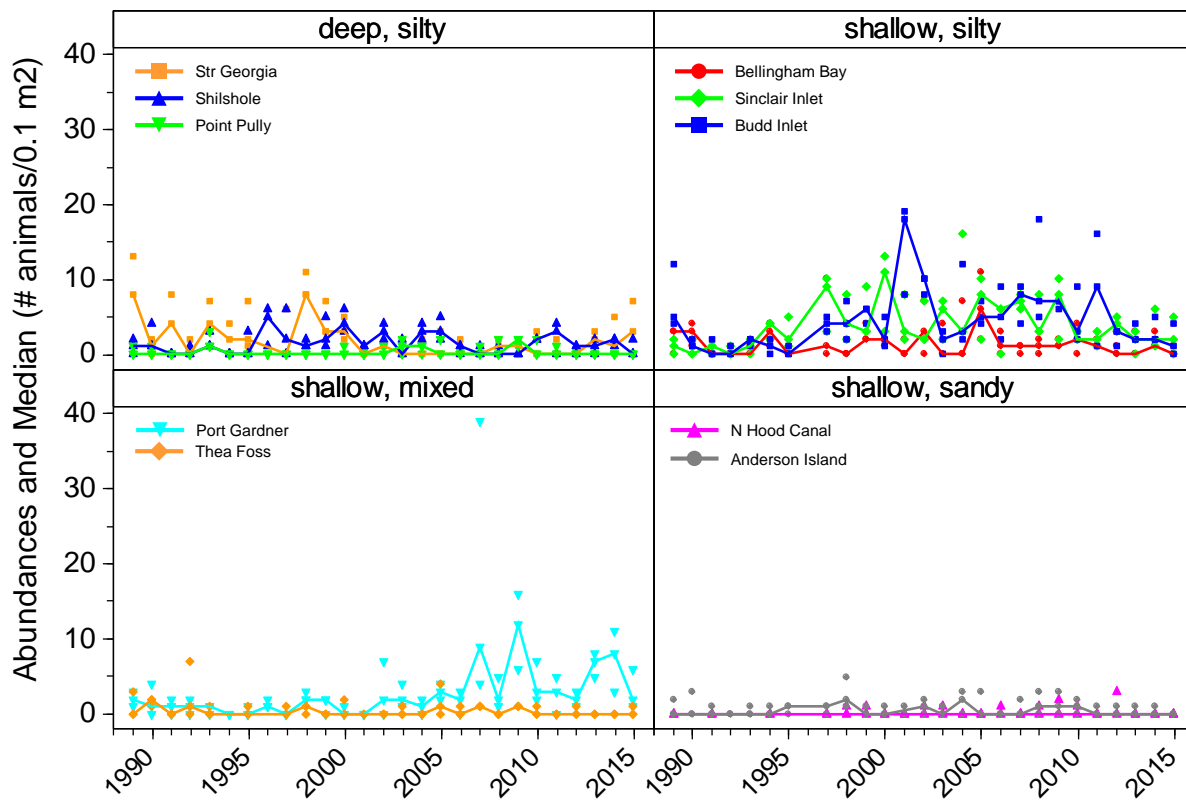
Axinopsida serricata



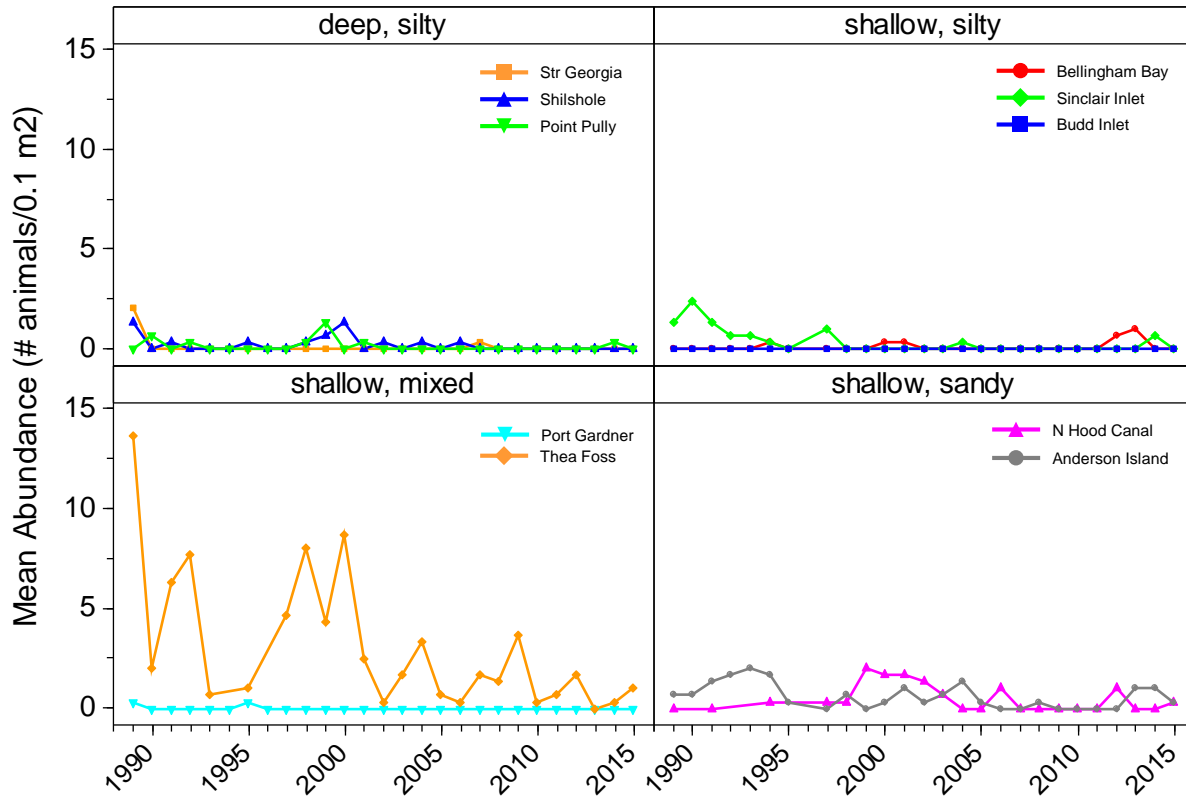
Bipalponephytys cornuta



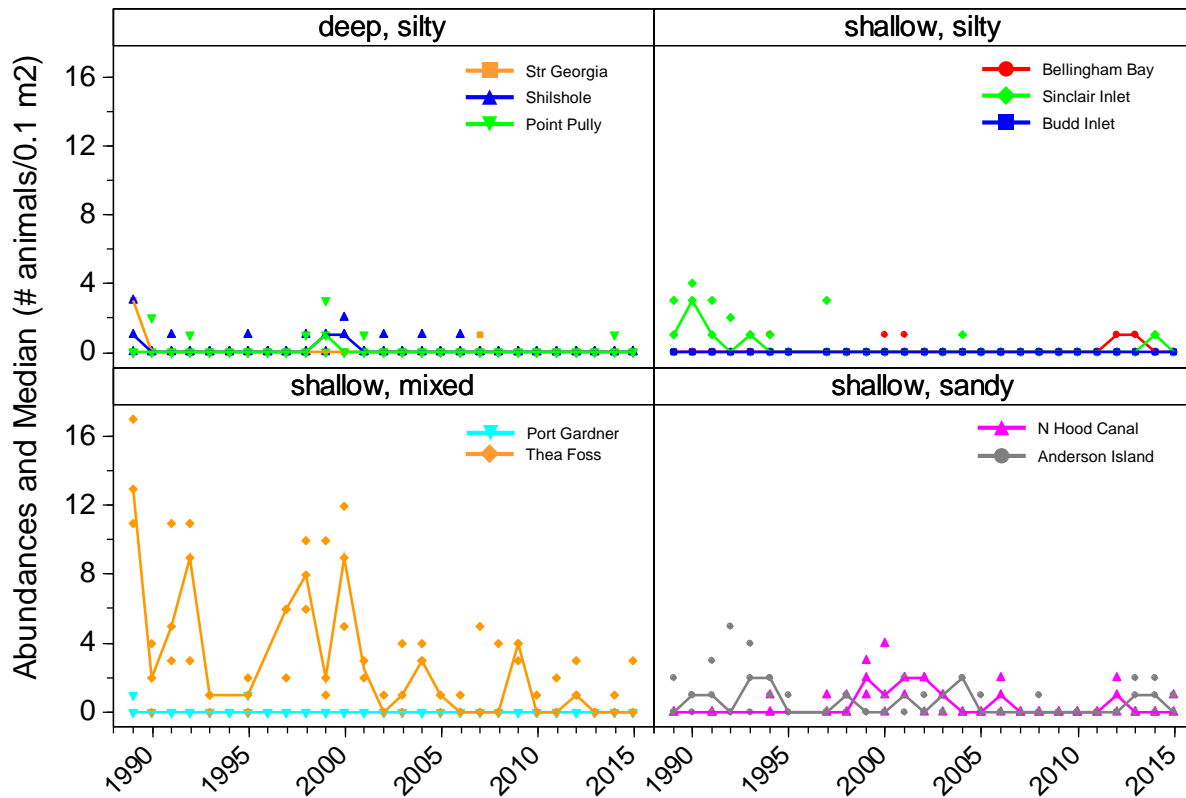
Bipalponephytys cornuta



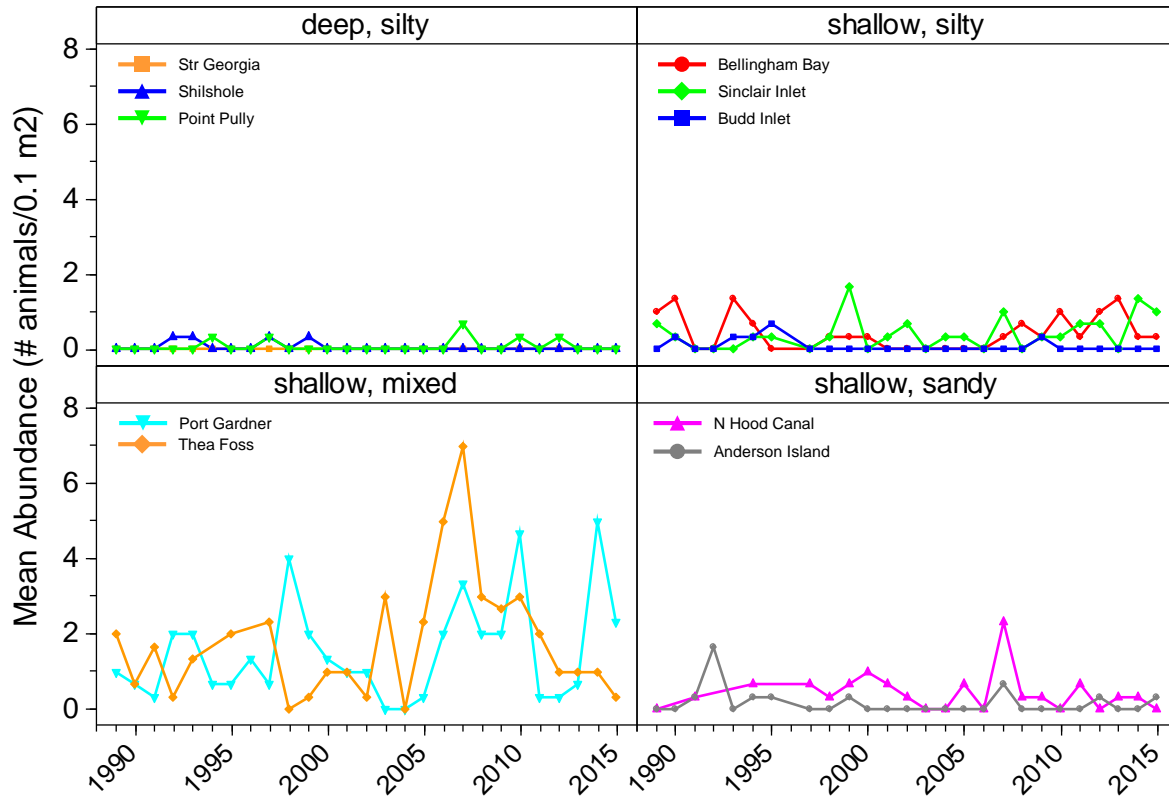
Chaetozone spp.



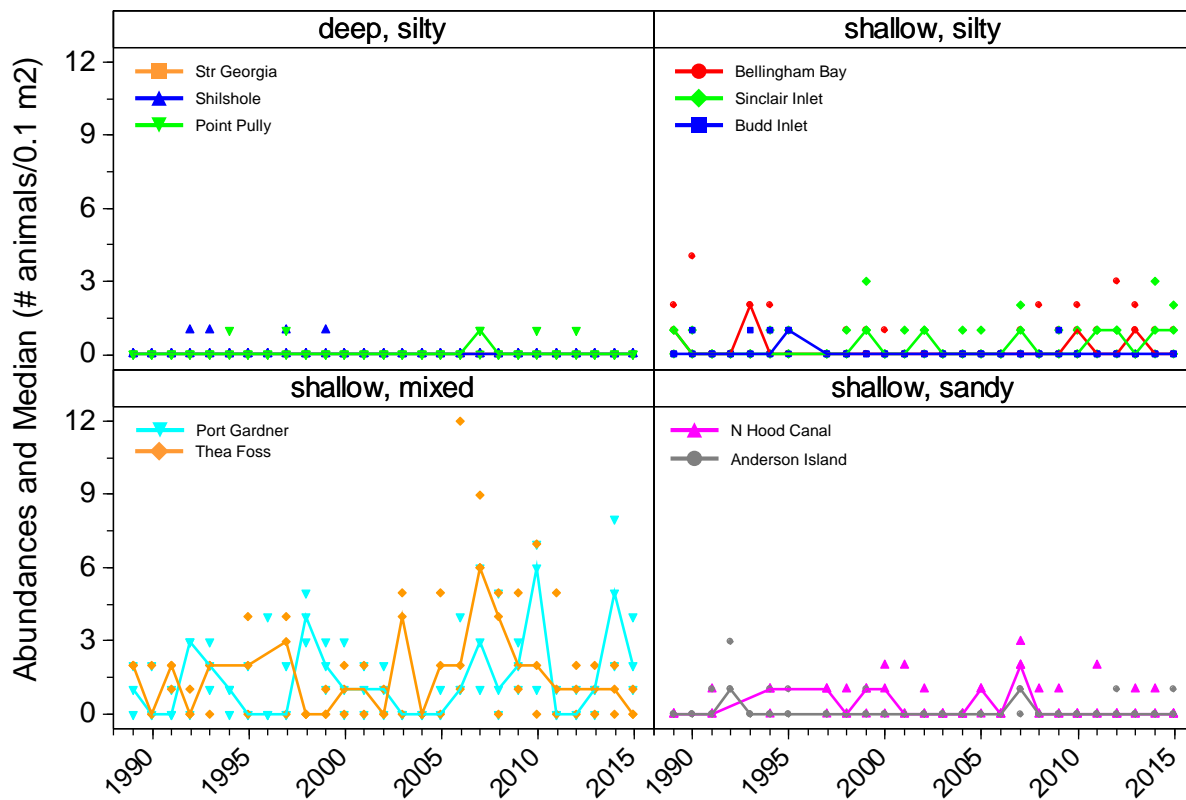
Chaetozone spp.



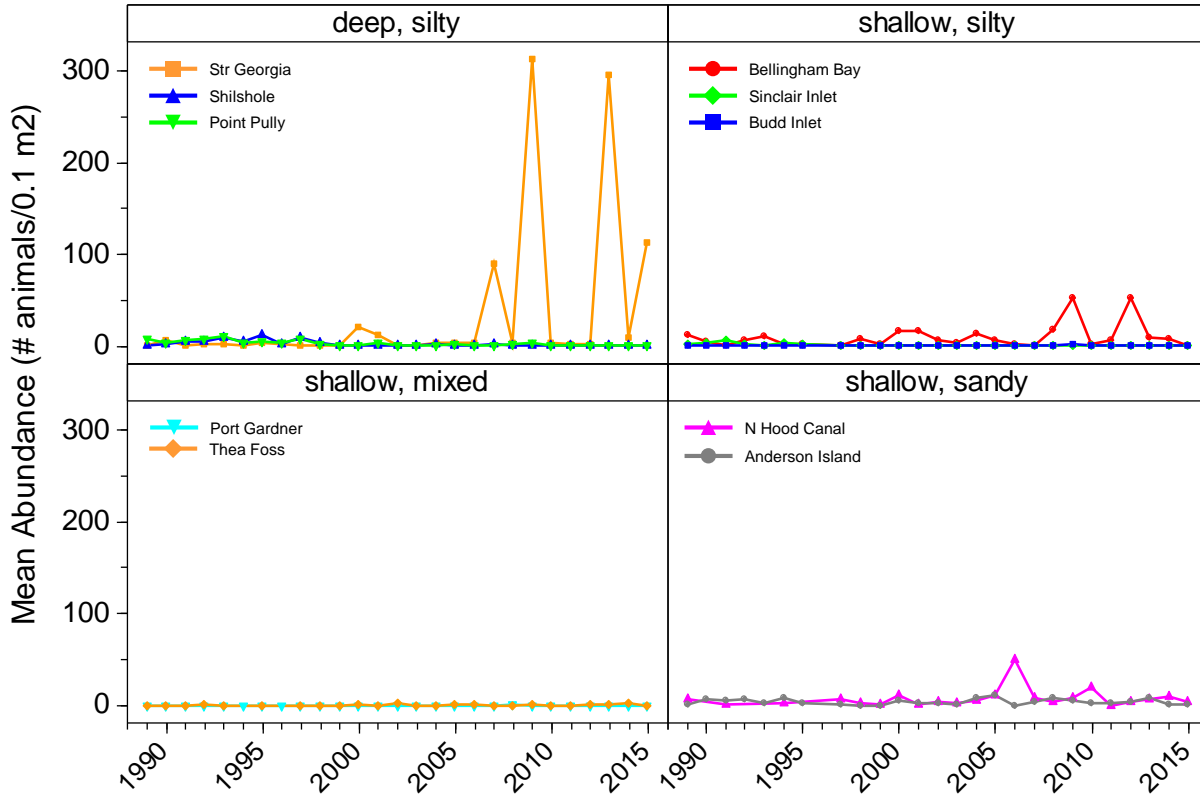
Compsomyax spp.



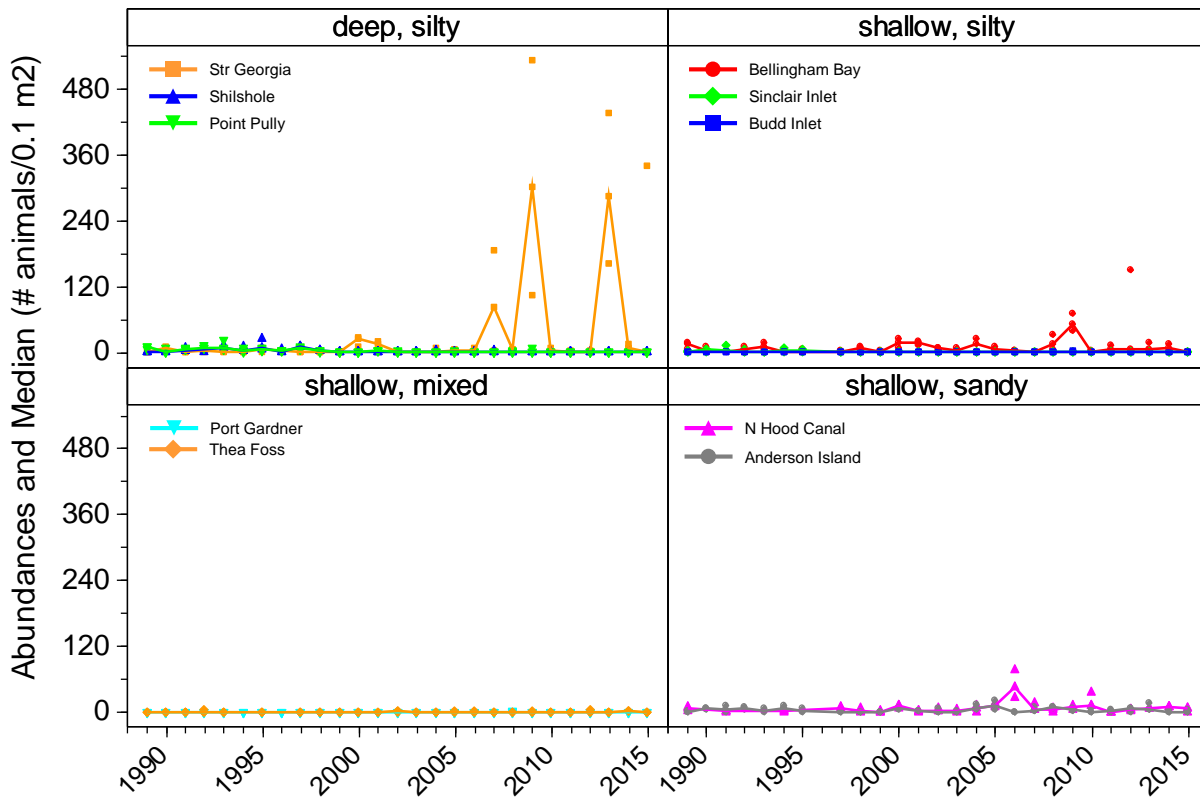
Compsomyax spp.



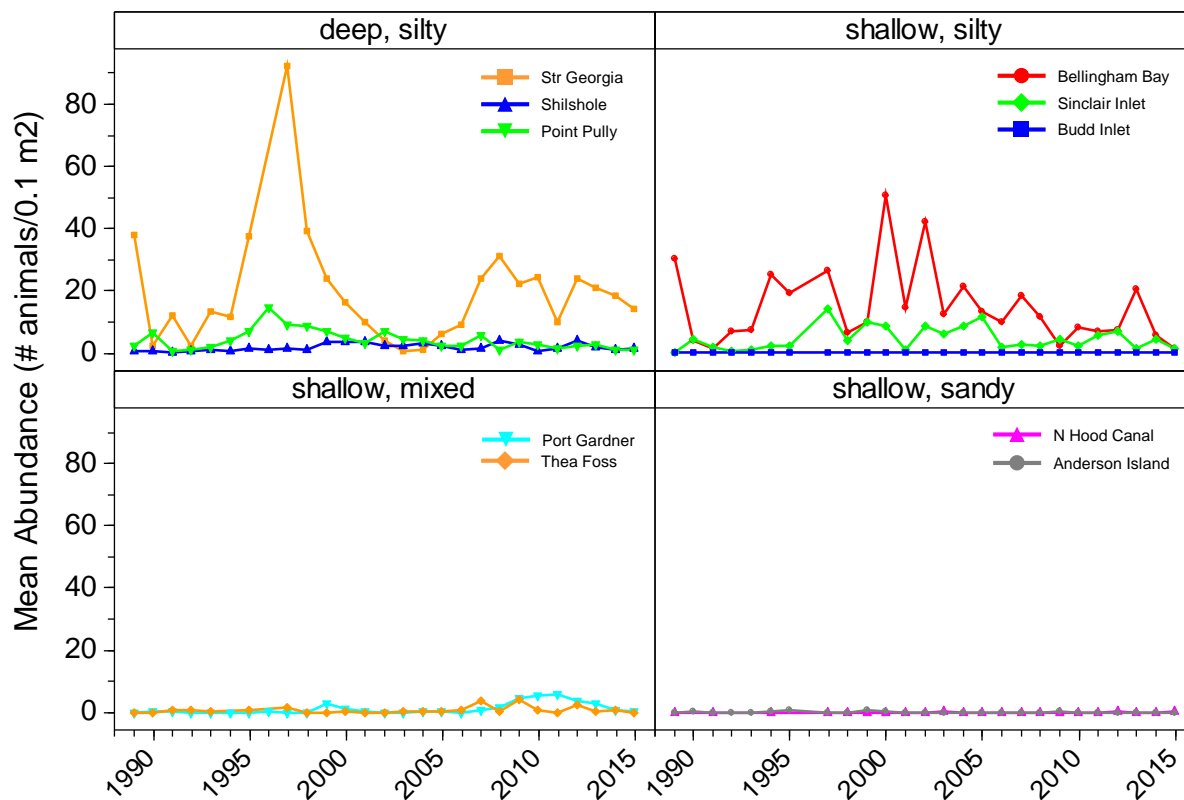
Corophiidae



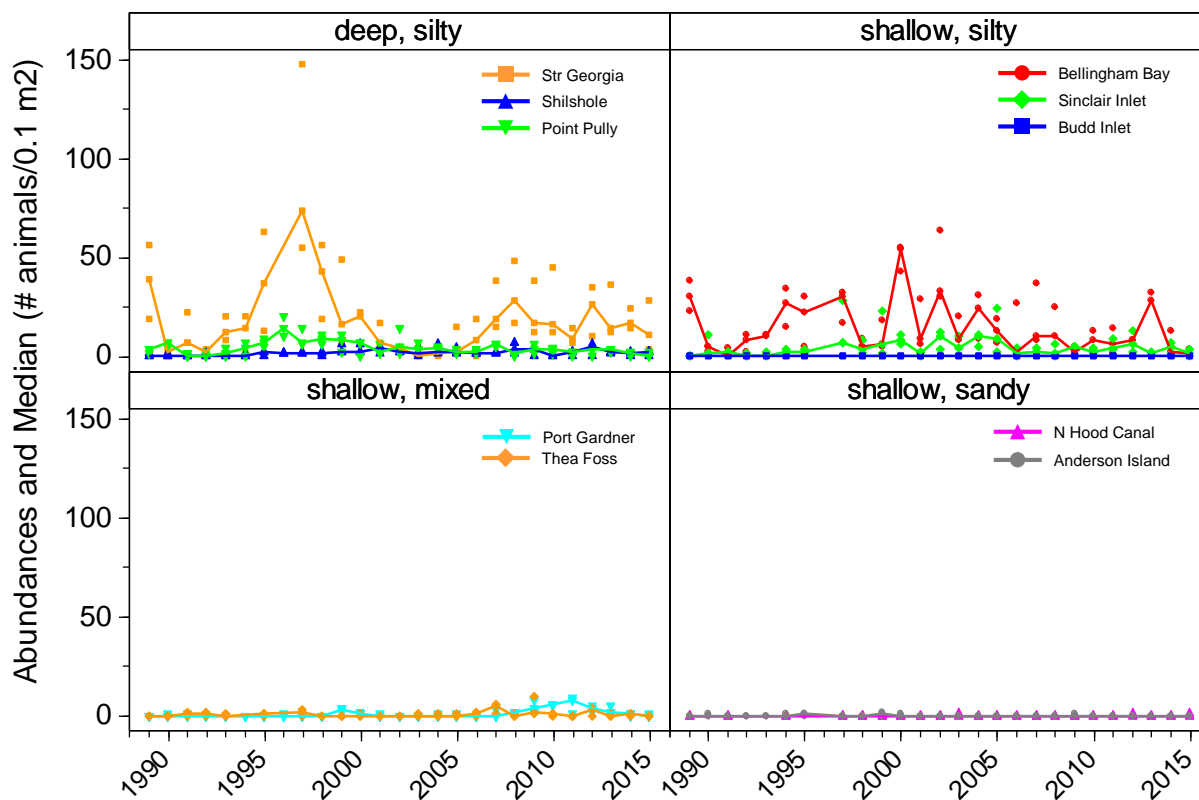
Corophiidae



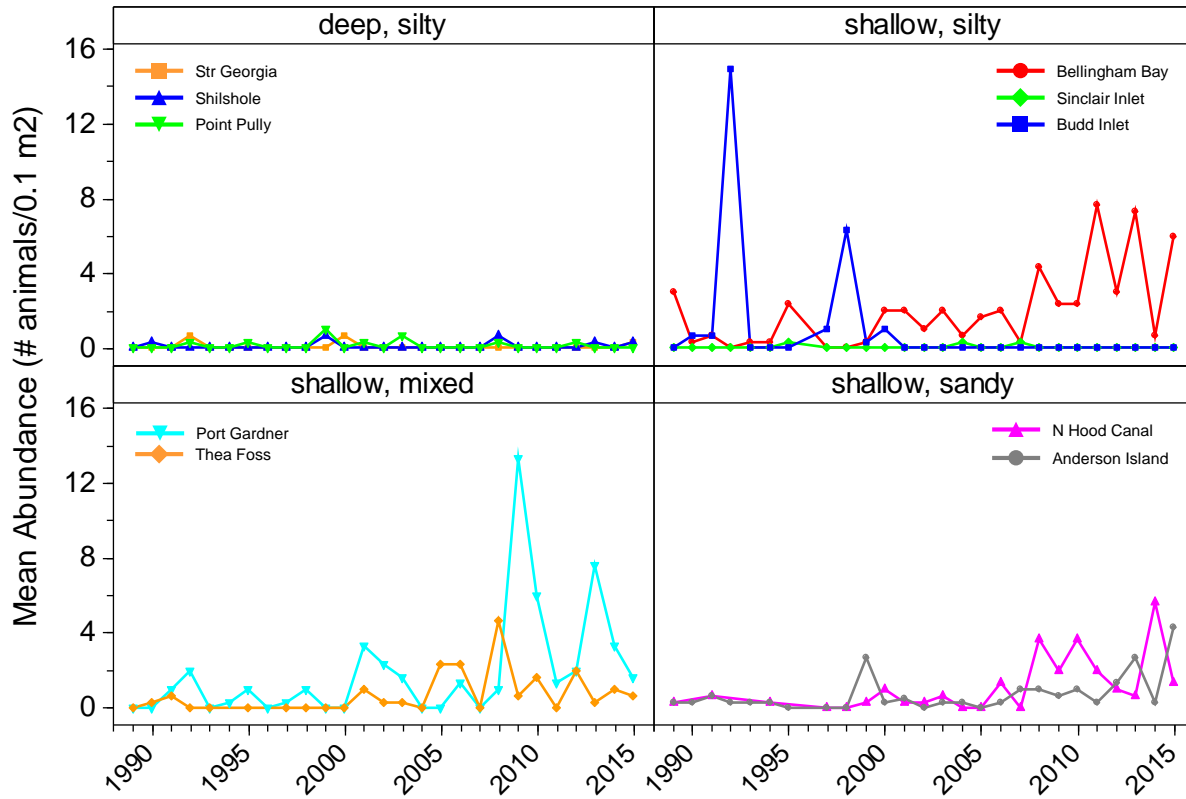
Cossura spp.



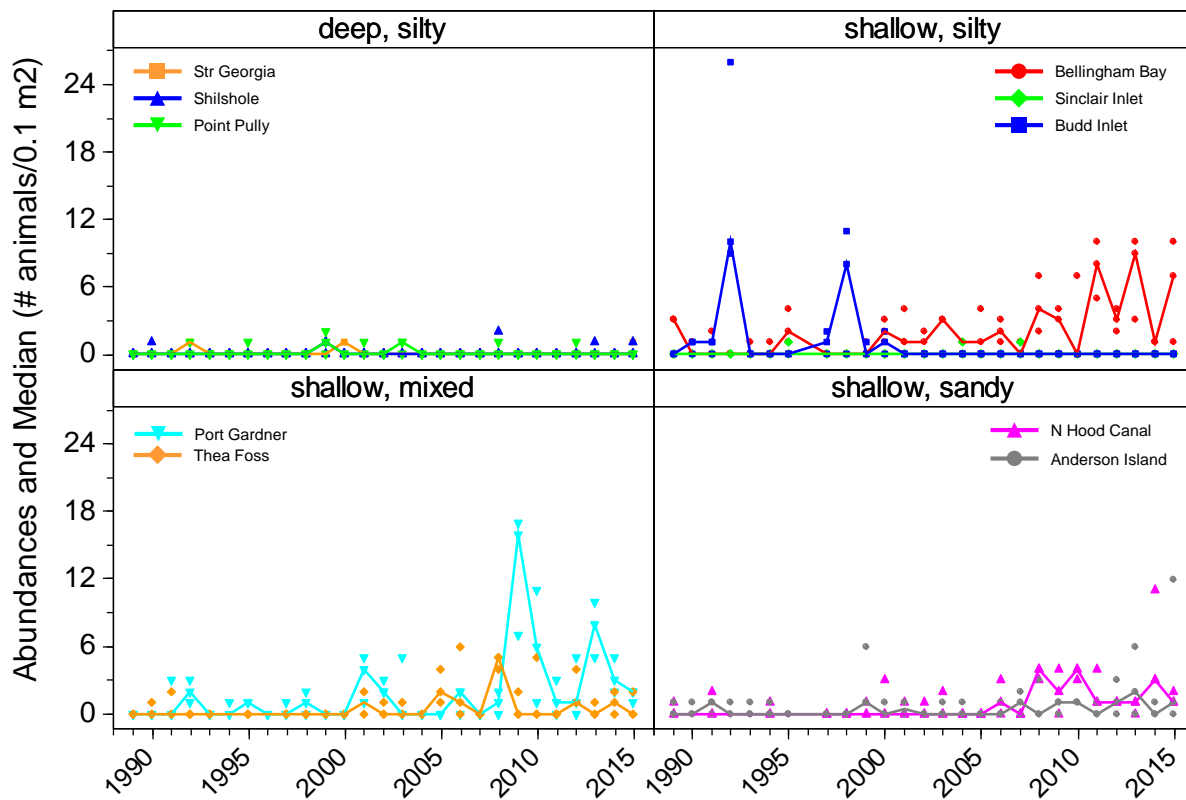
Cossura spp.



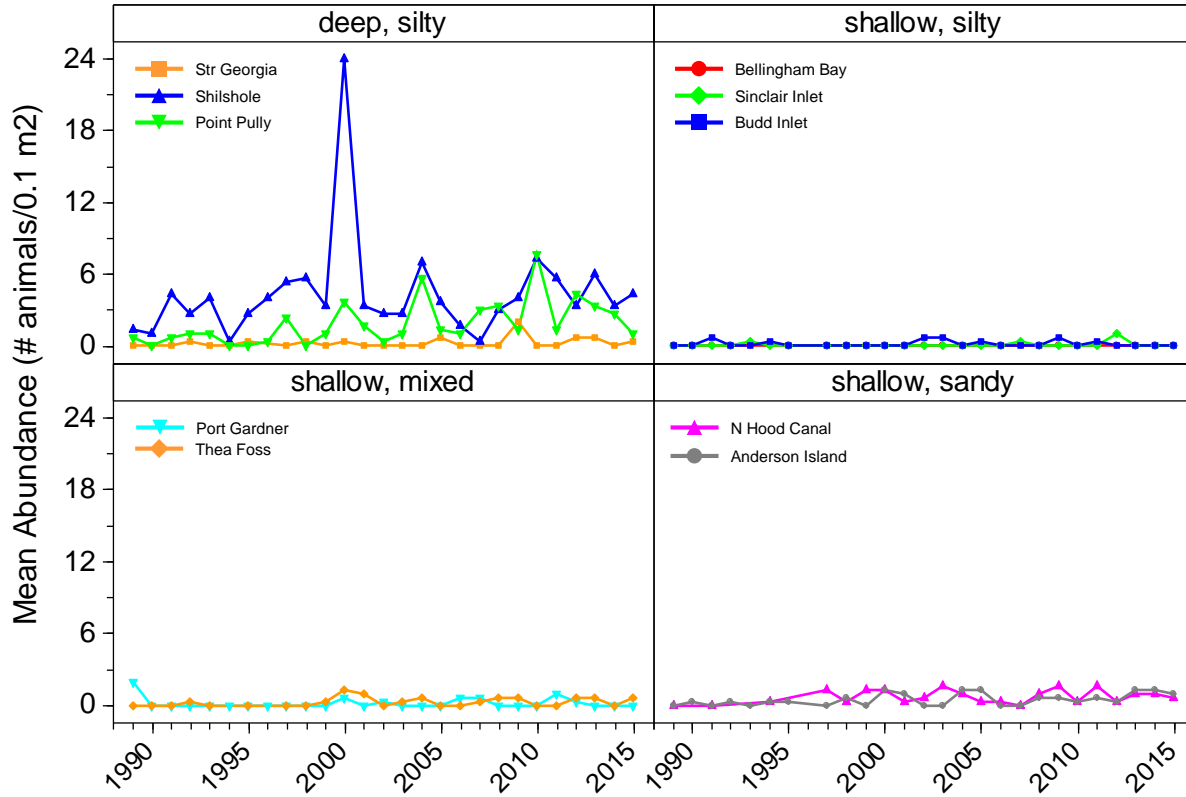
Cyllichnidae



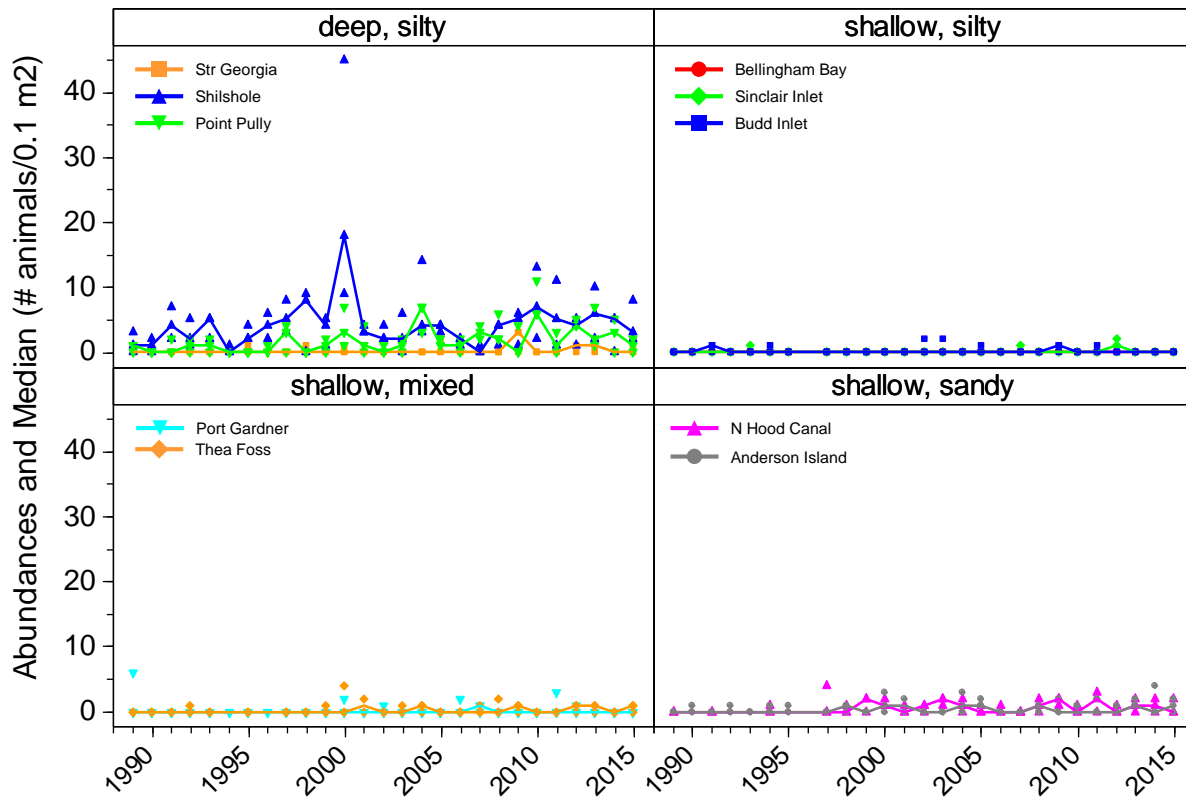
Cyllichnidae



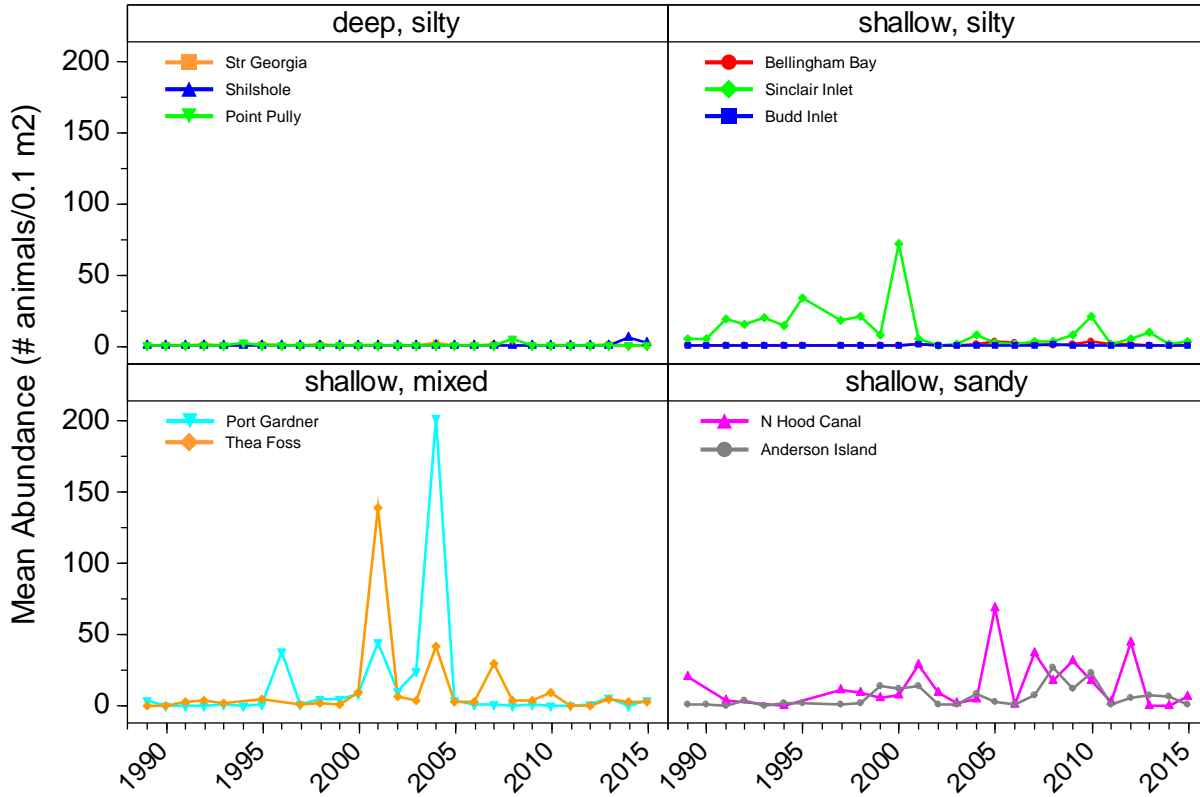
Diastylis spp.



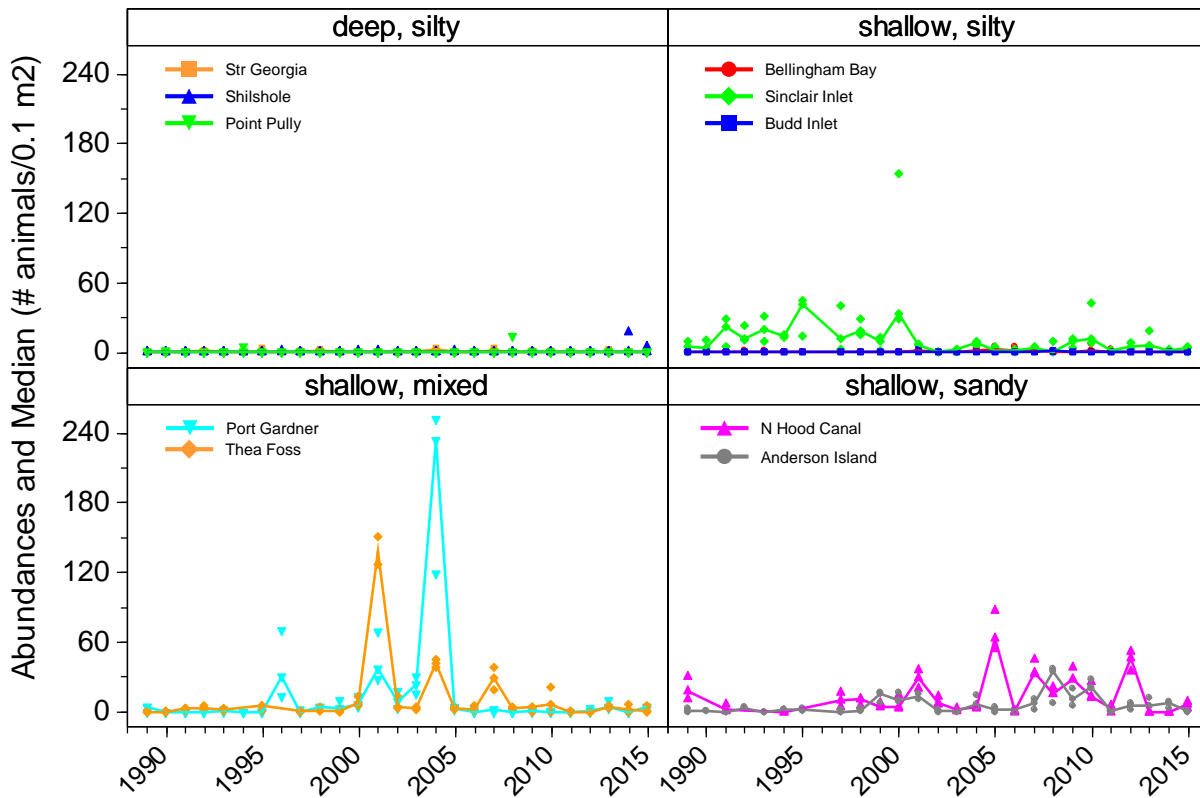
Diastylis spp.



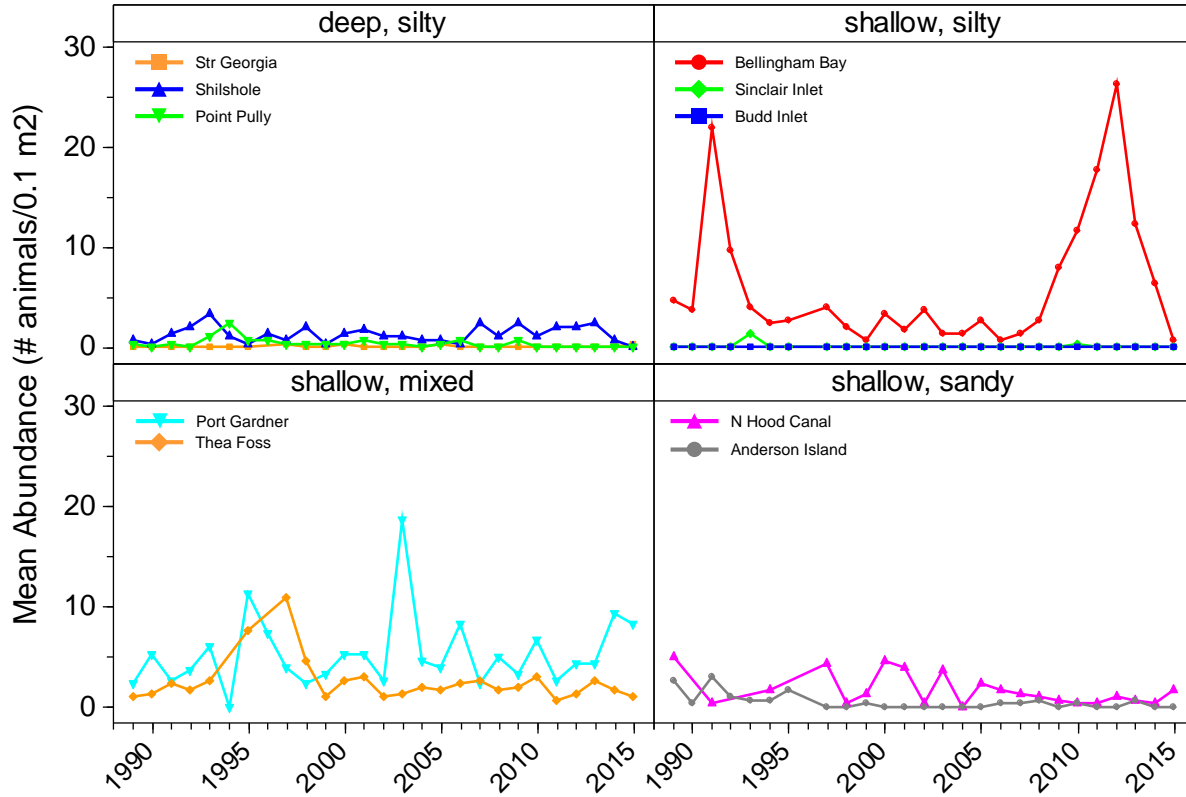
Dipolydora spp.



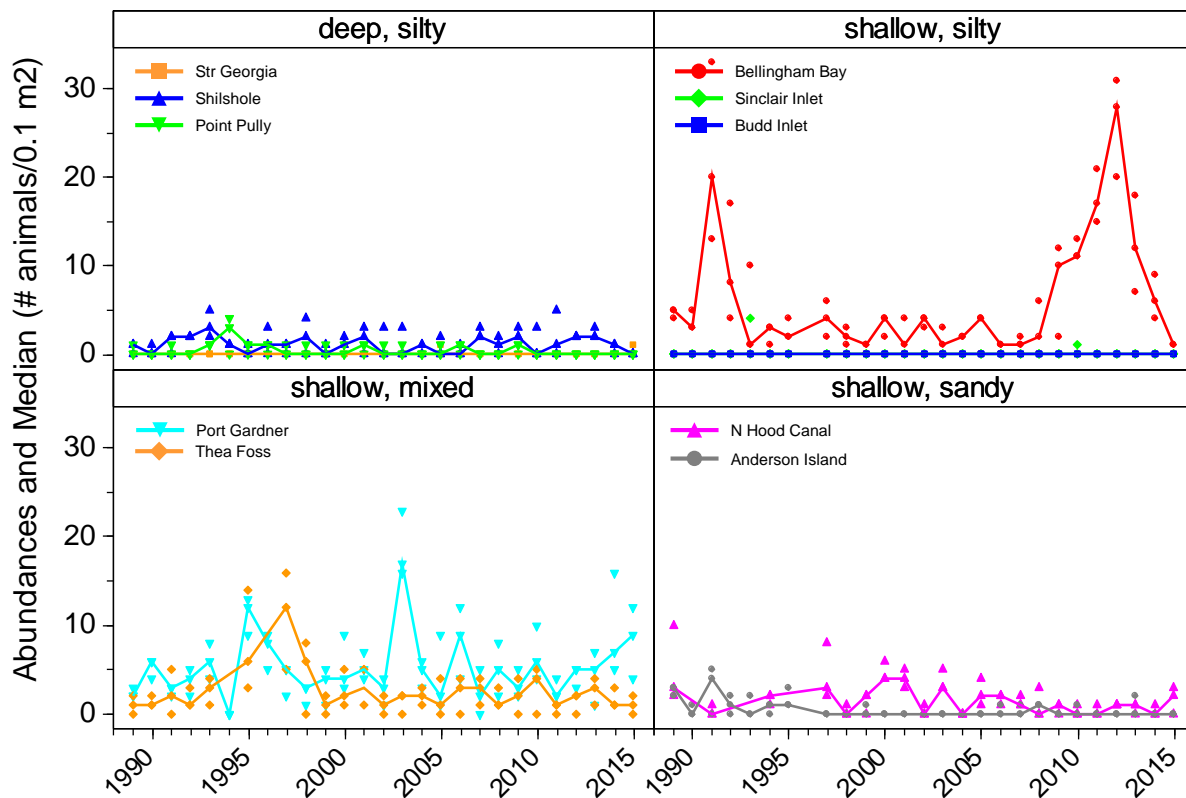
Dipolydora spp.



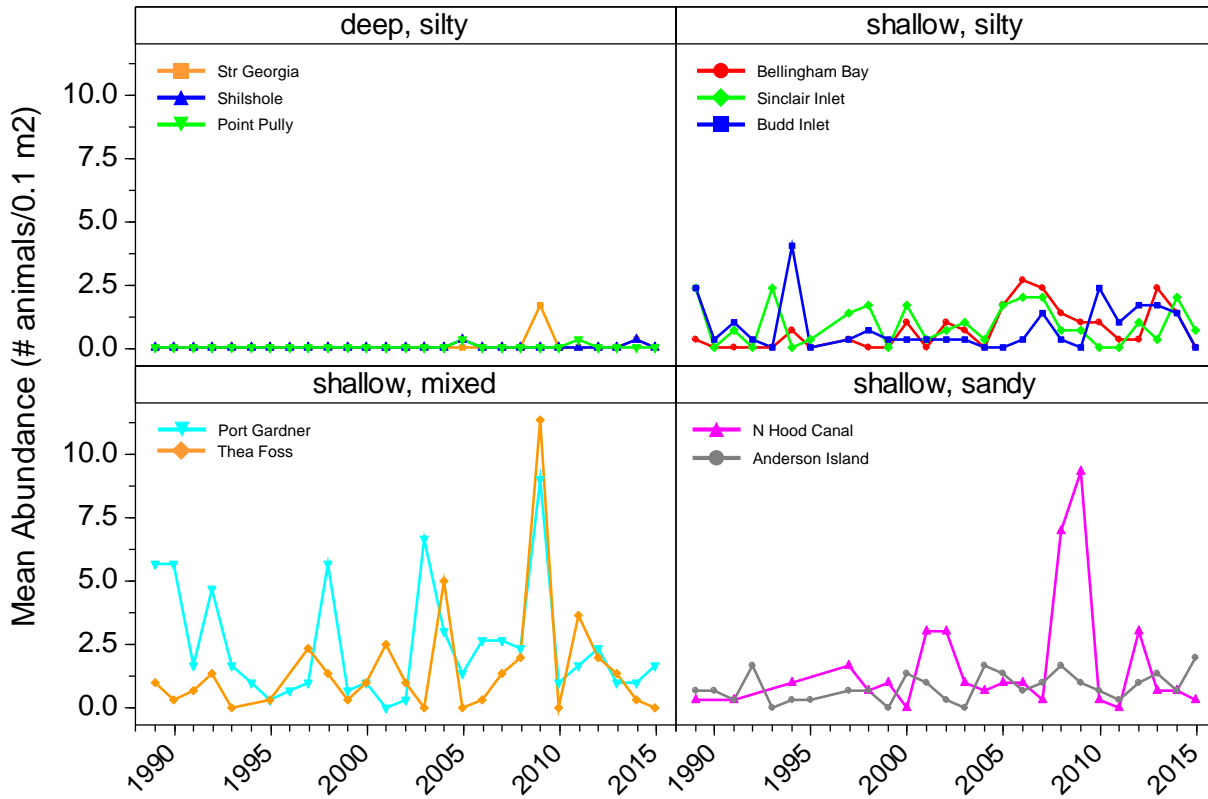
Ennucula tenuis



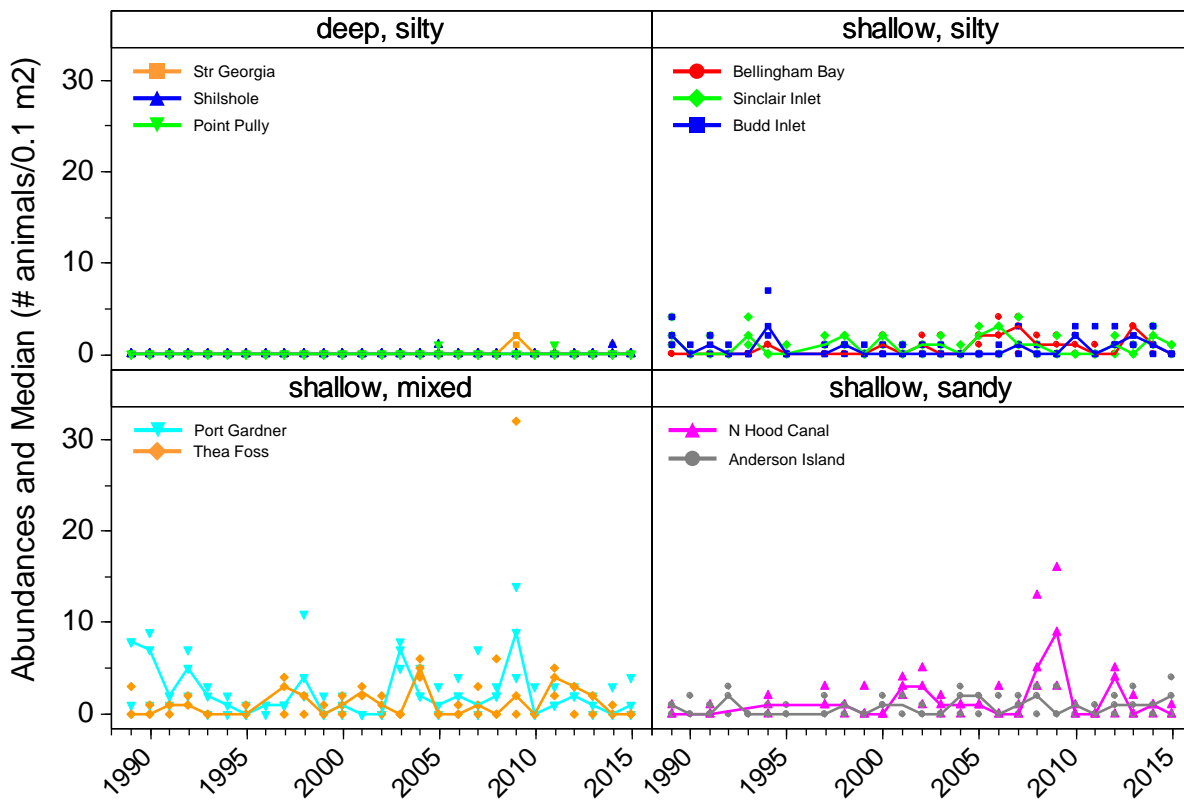
Ennucula tenuis



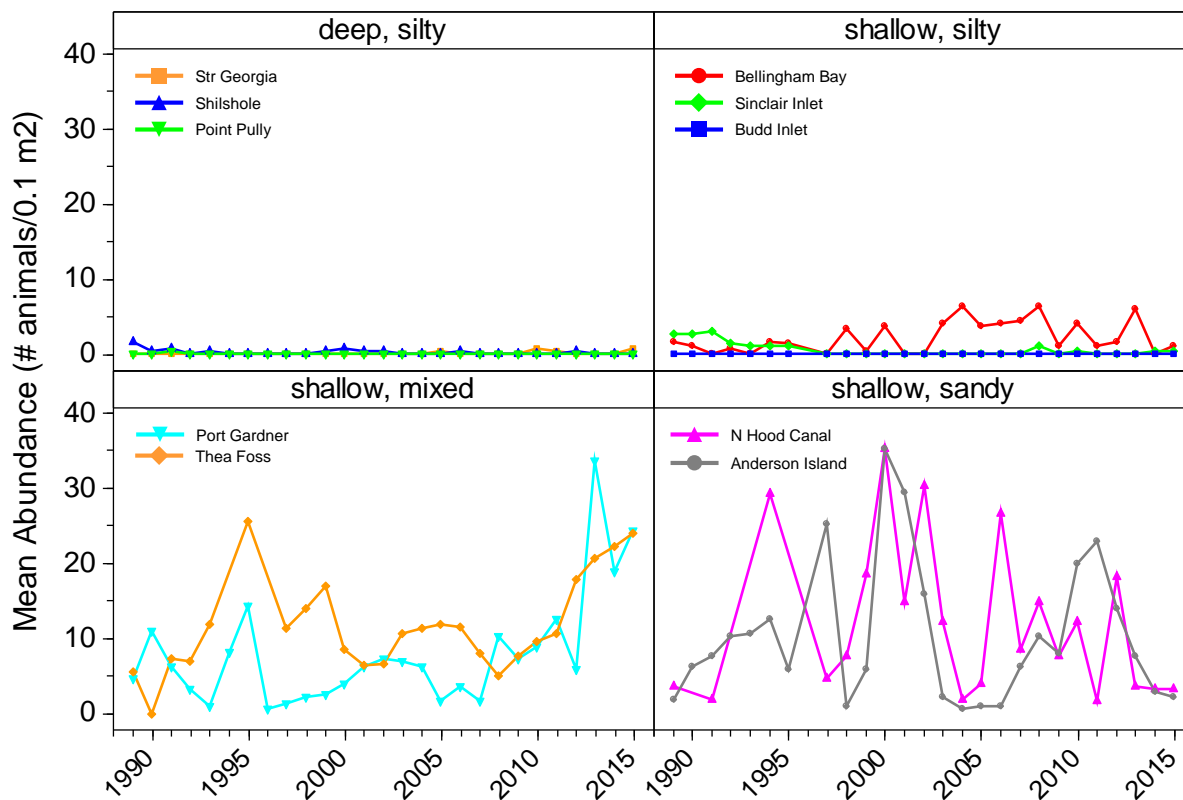
Eteone spp.



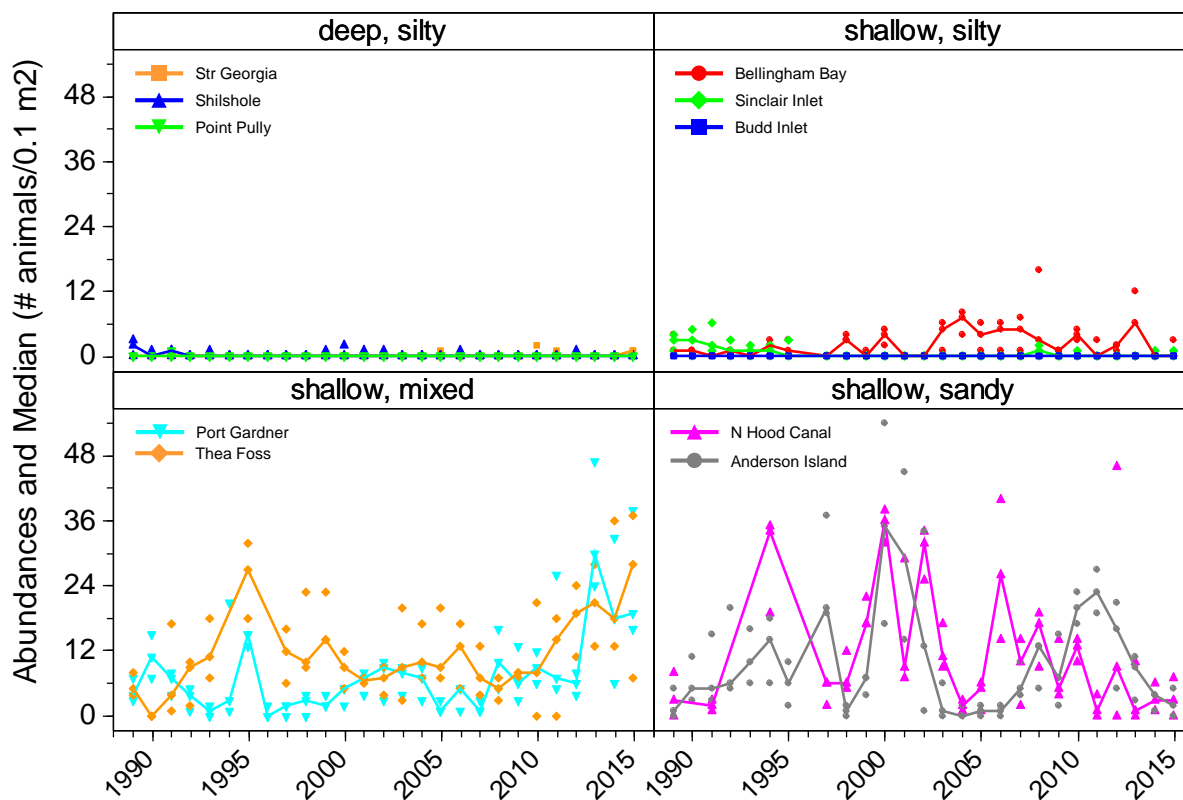
Eteone spp.



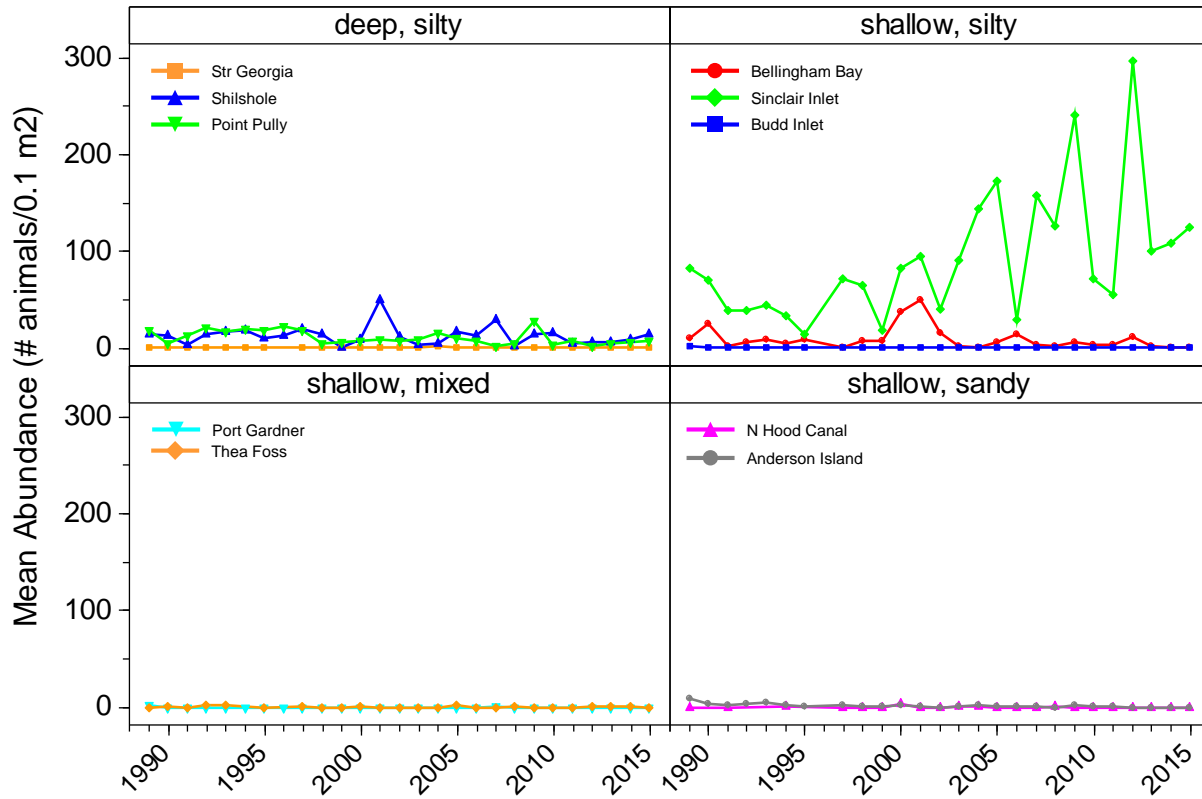
Euclymeninae



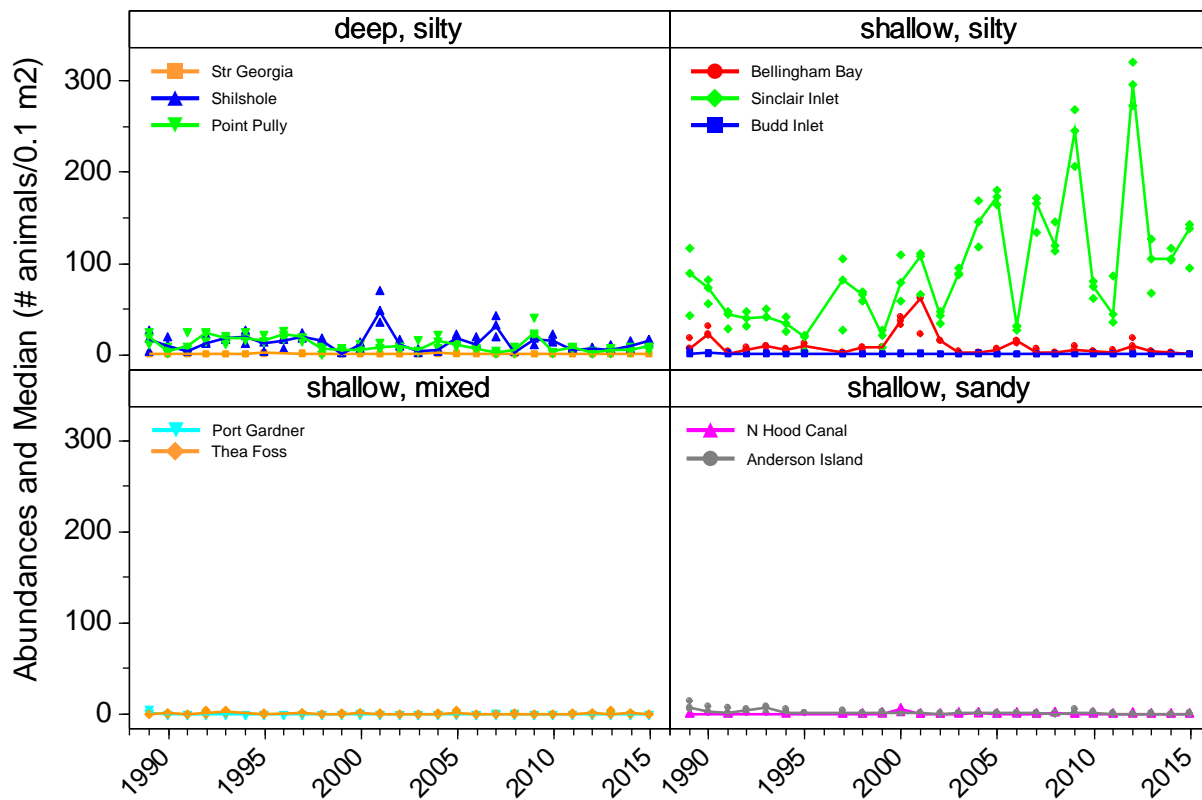
Euclymeninae



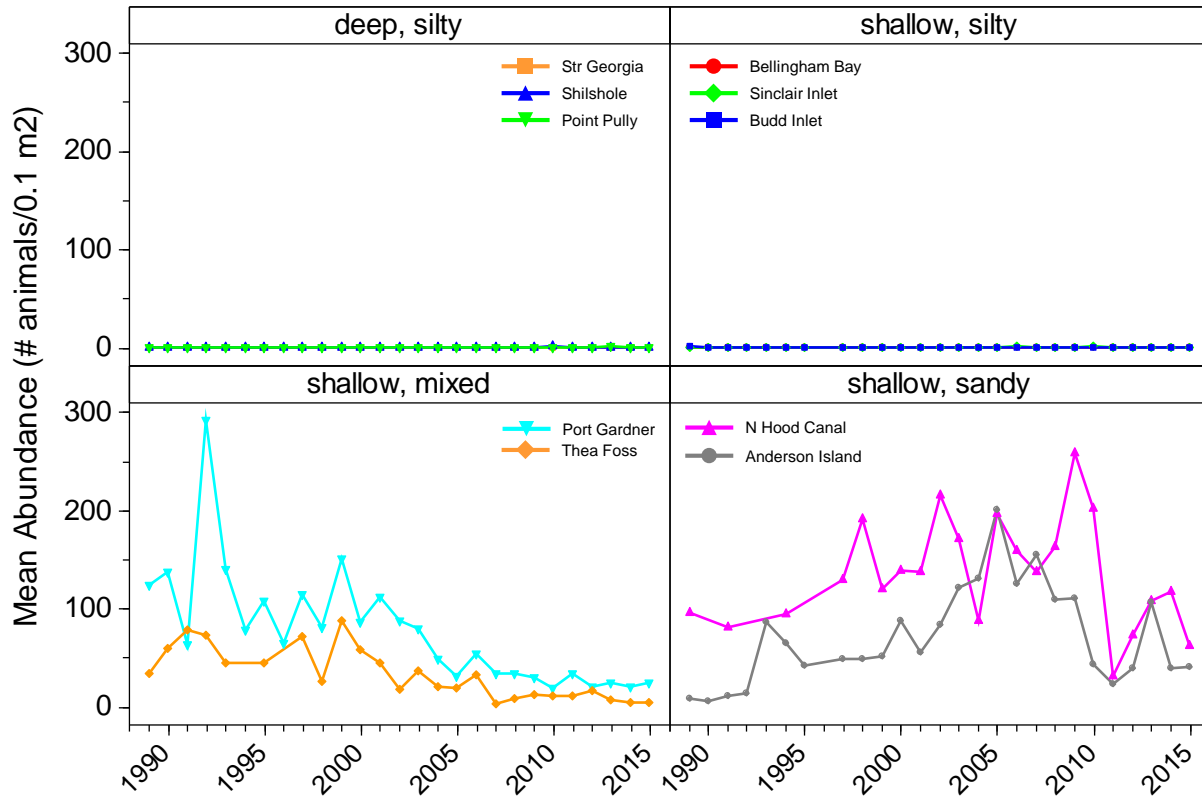
Eudorella pacifica



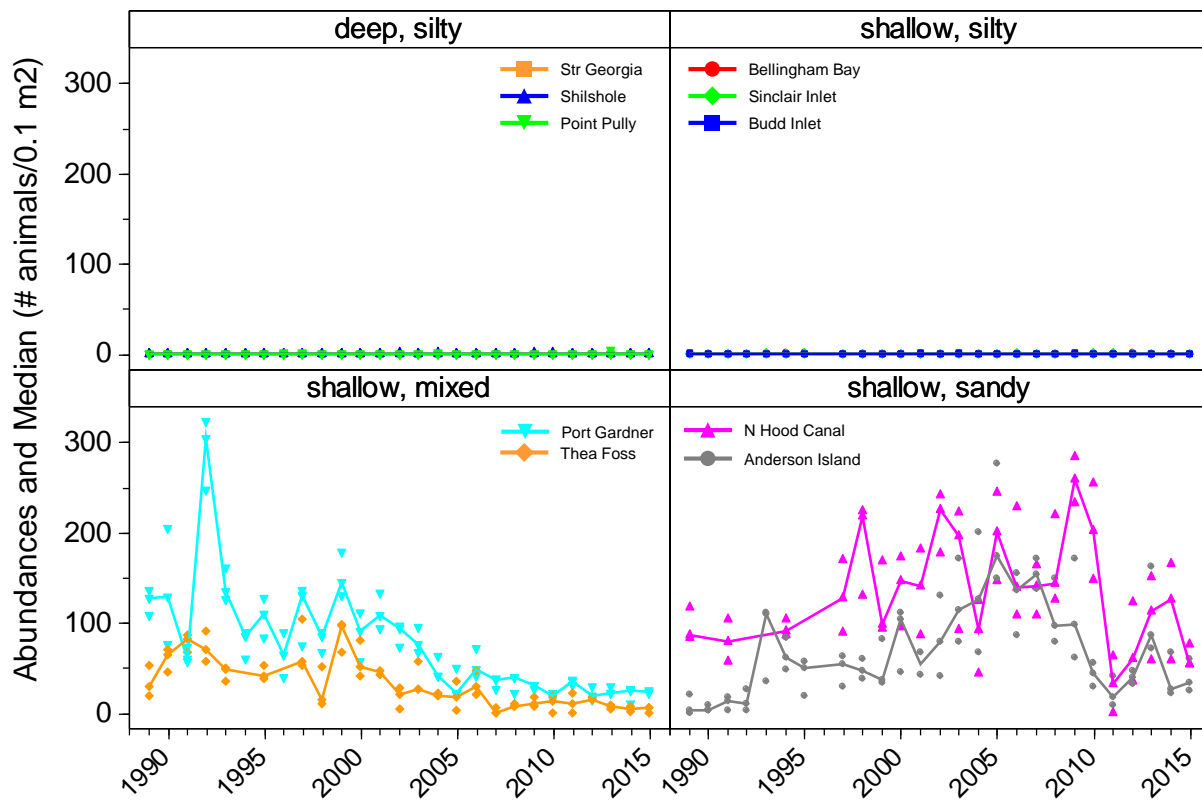
Eudorella pacifica



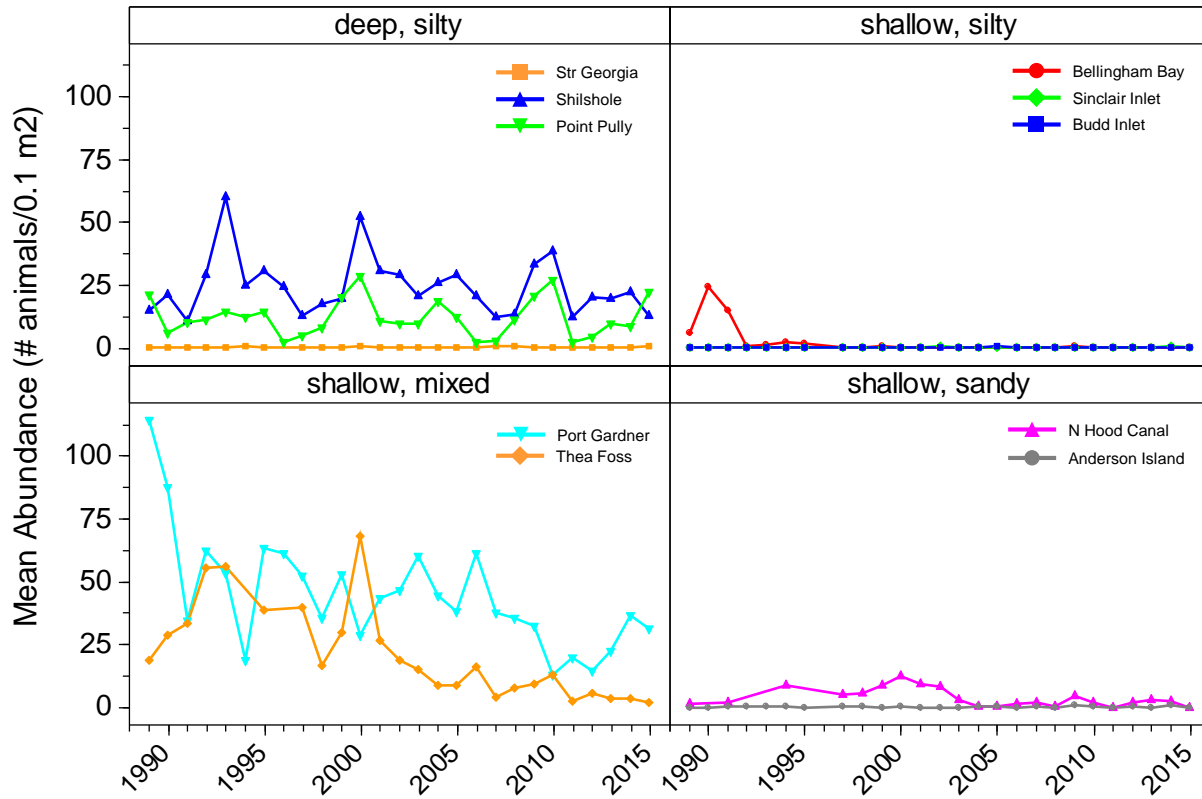
Euphilomedes carcharodonta



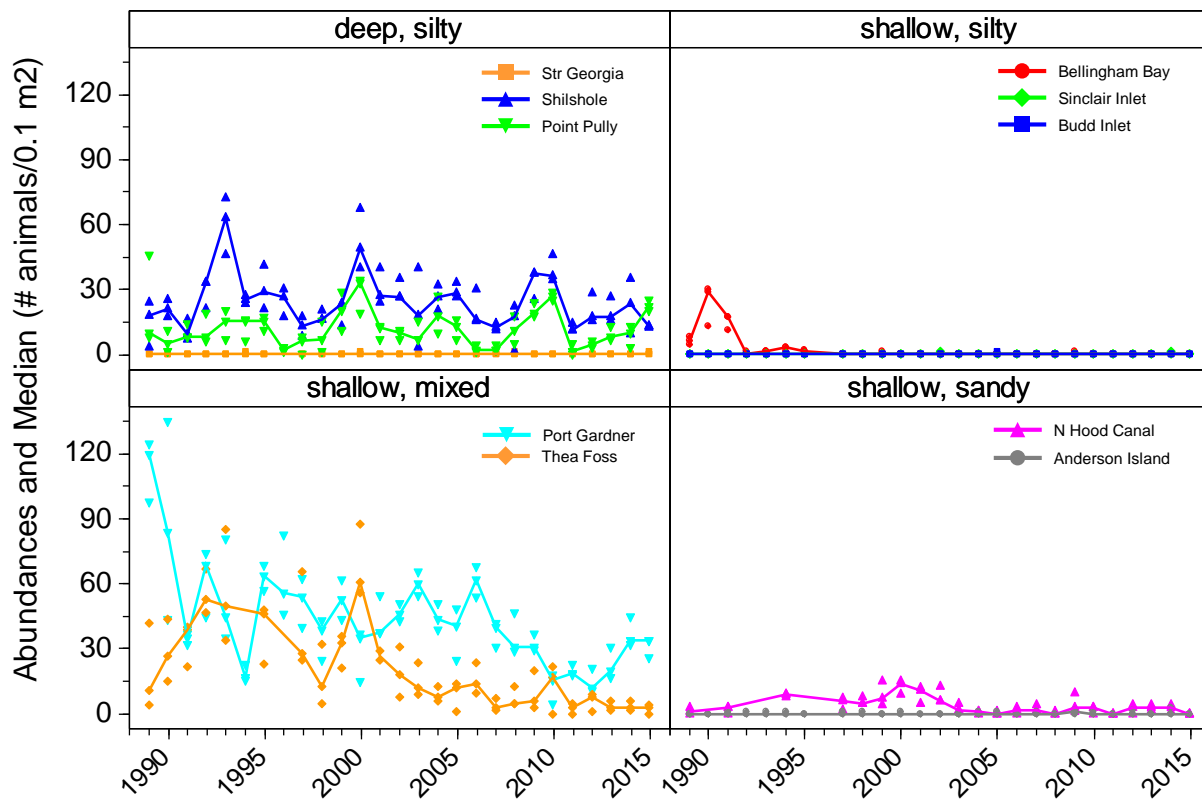
Euphilomedes carcharodonta



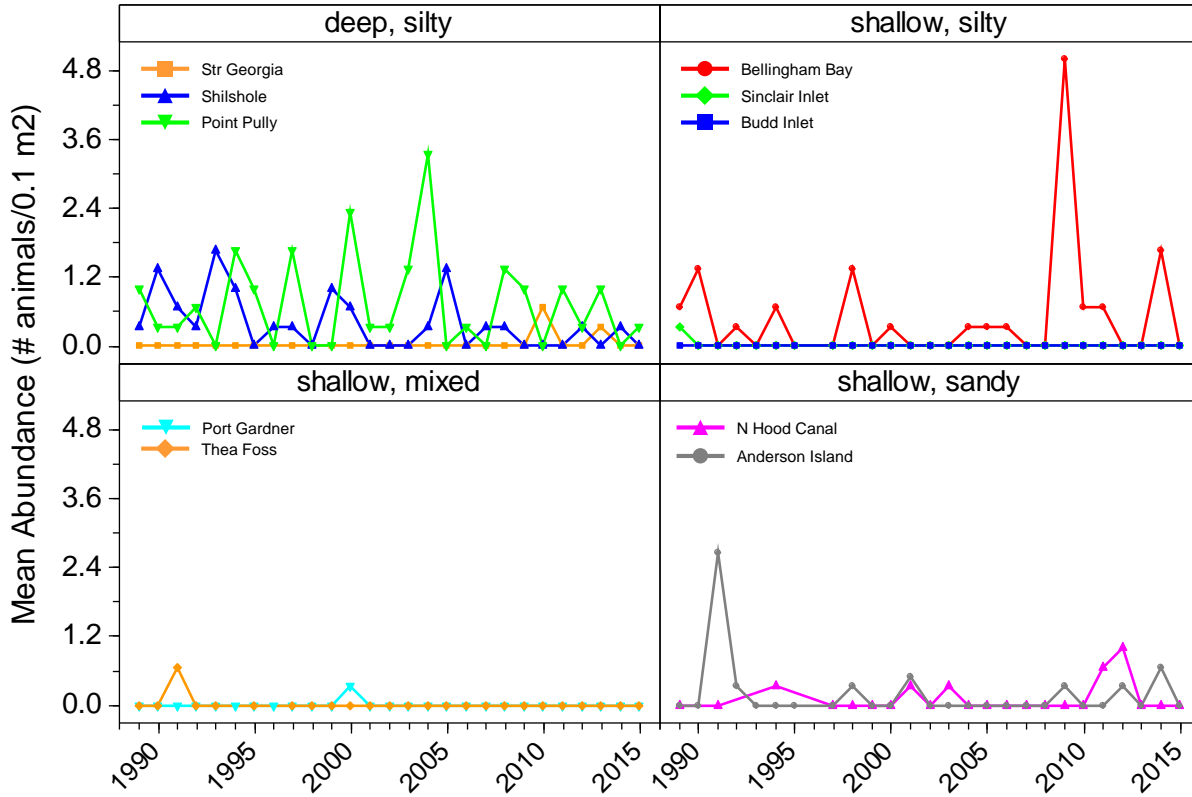
Euphilomedes producta



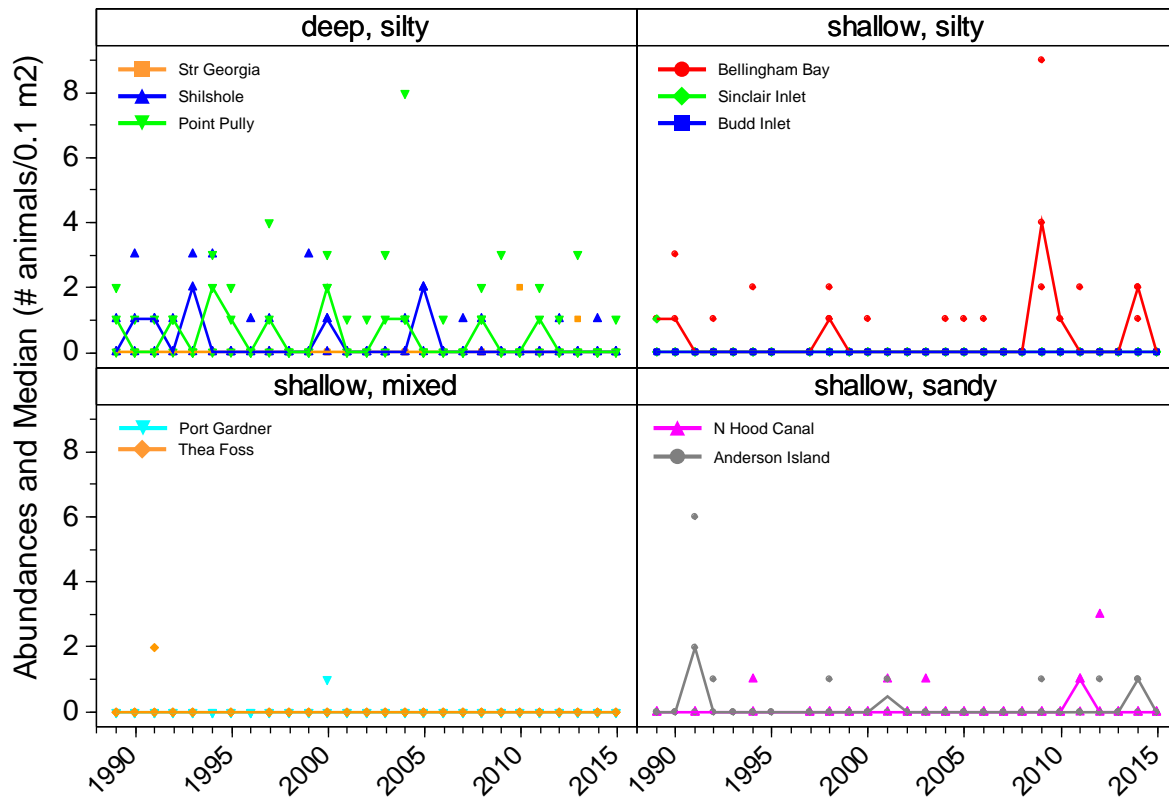
Euphilomedes producta



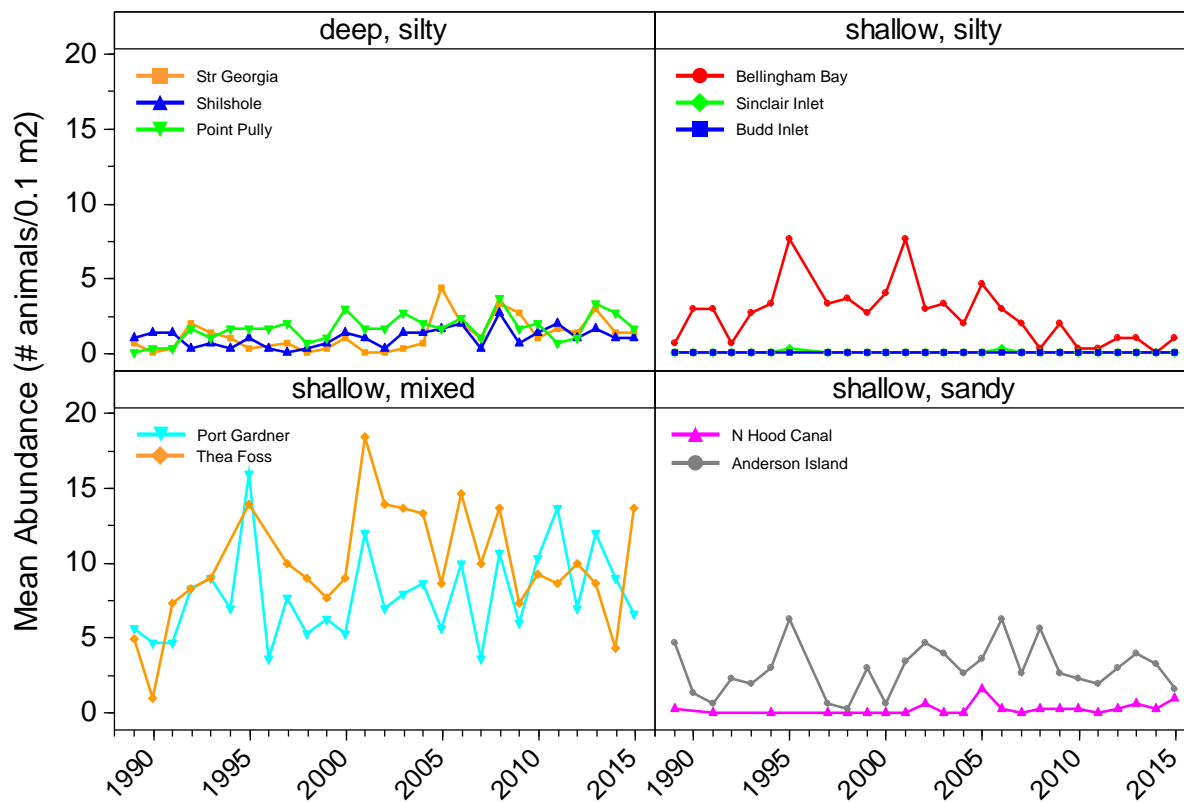
Flabelligeridae



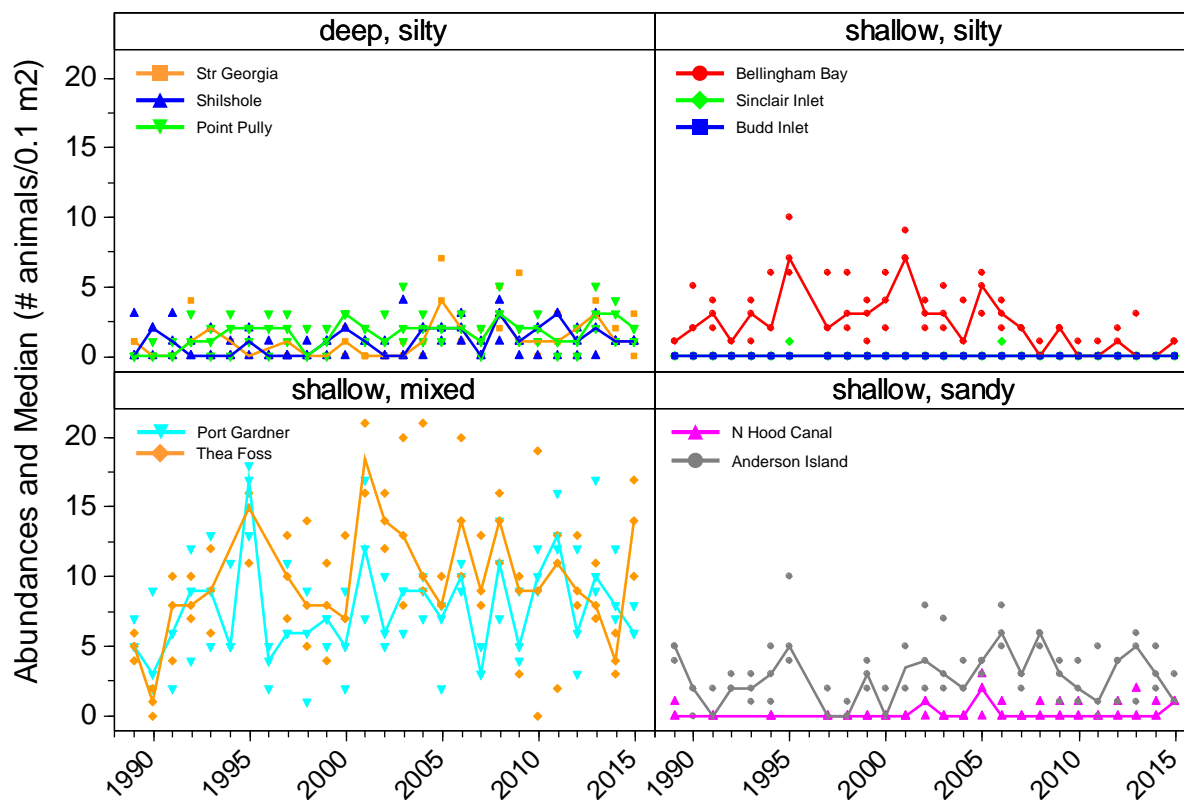
Flabelligeridae



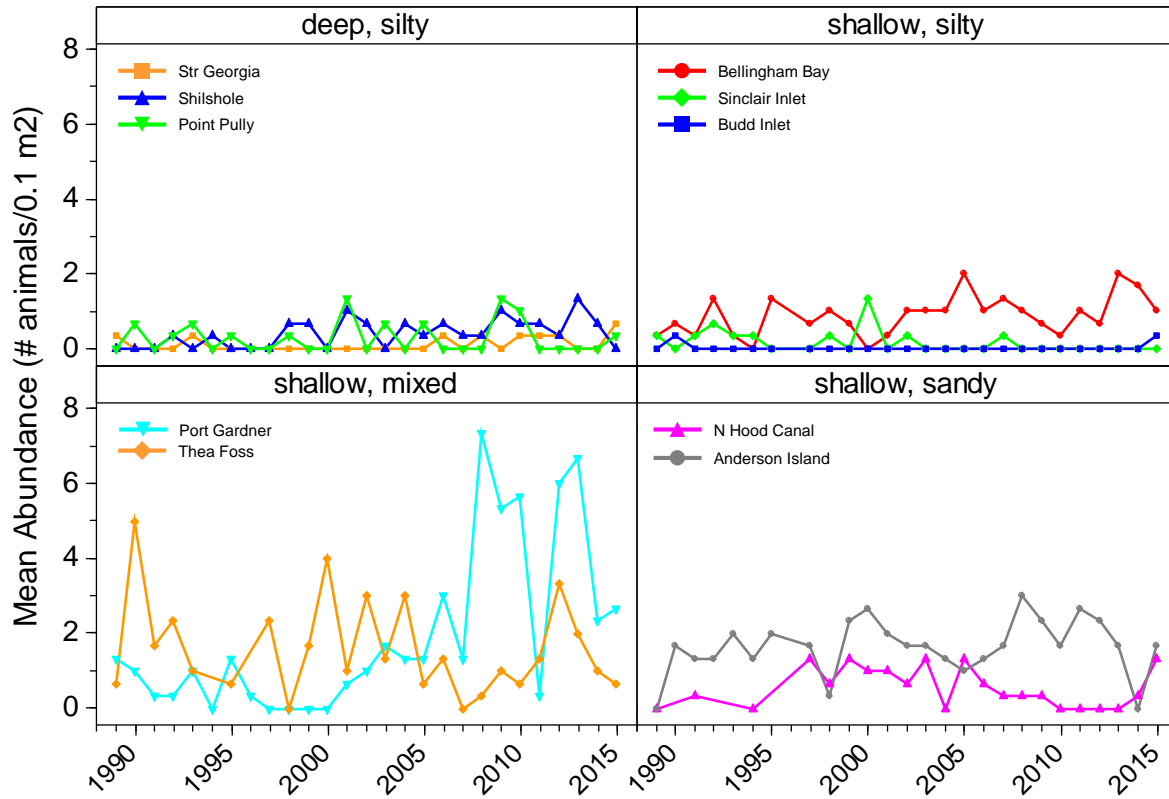
Glycera nana



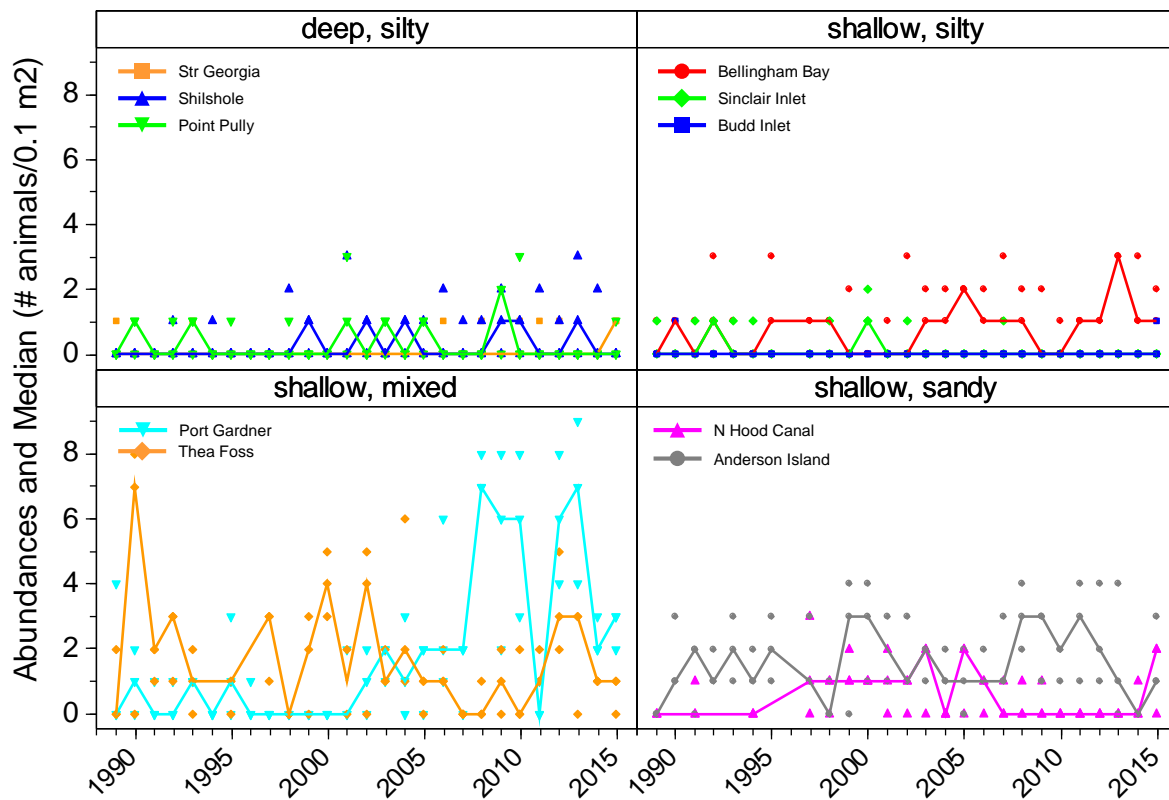
Glycera nana



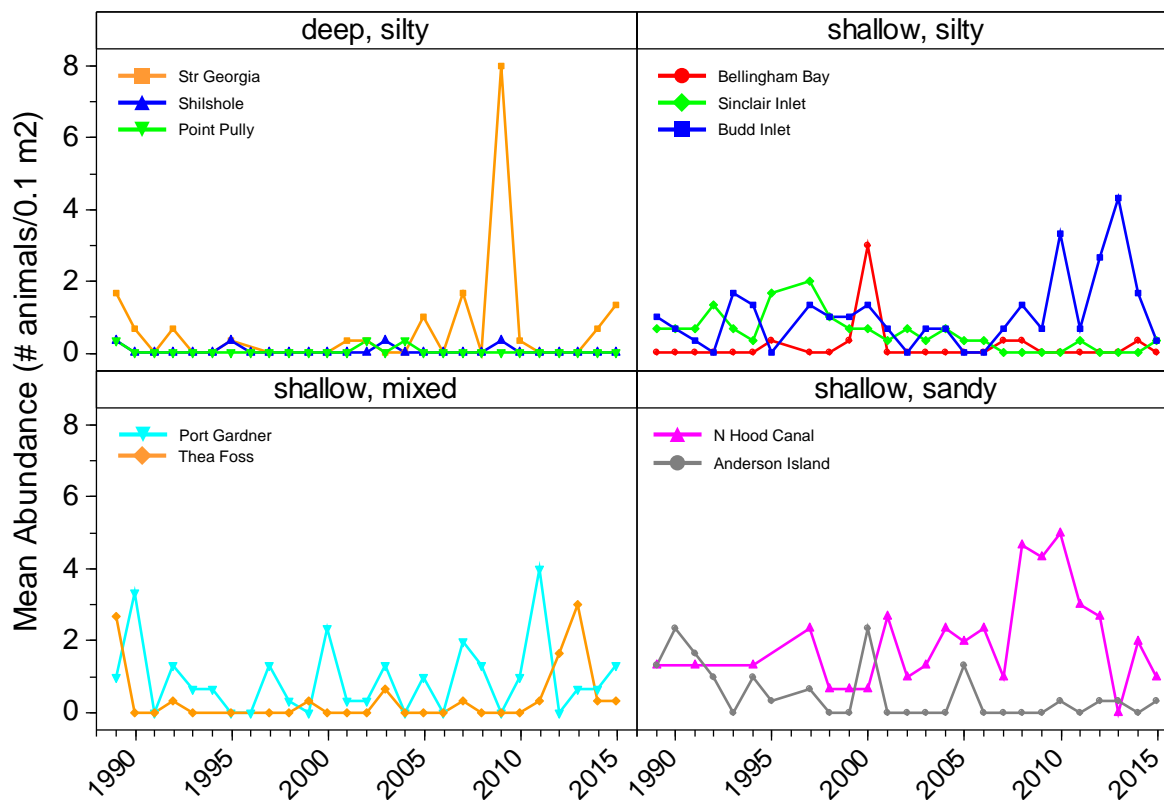
Glycinde armigera



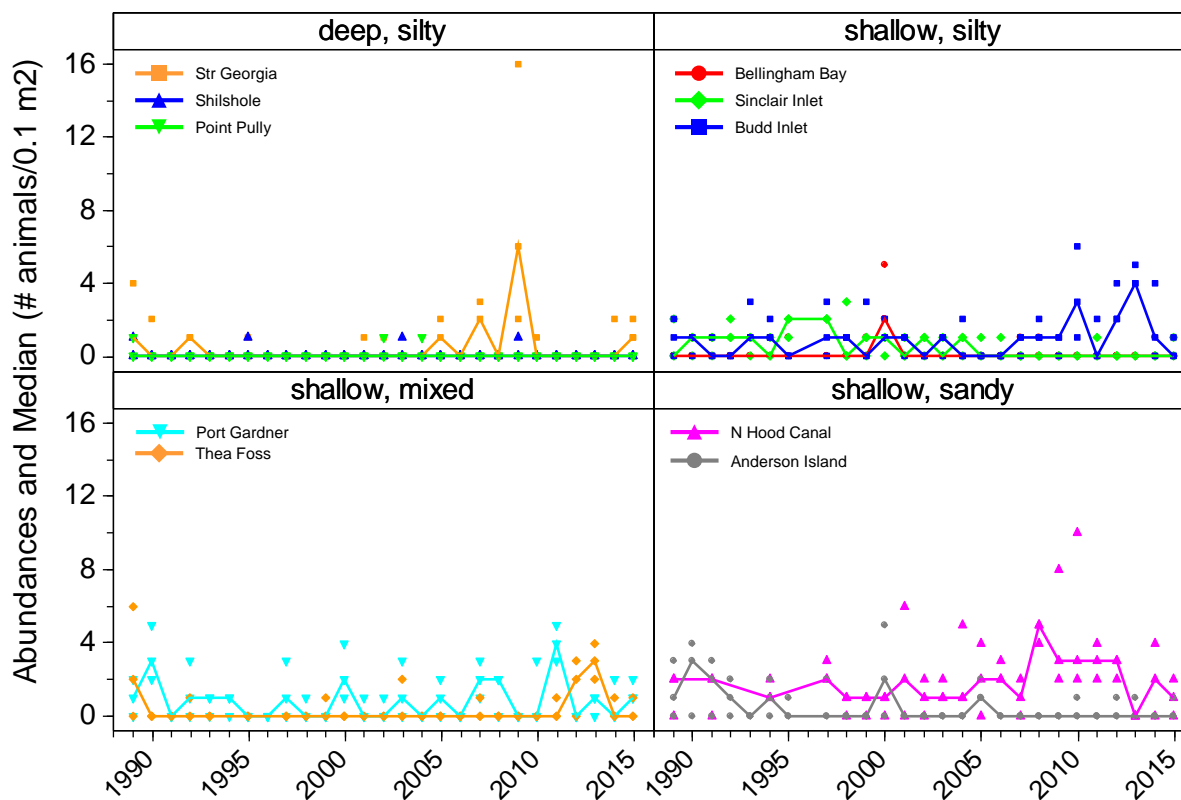
Glycinde armigera



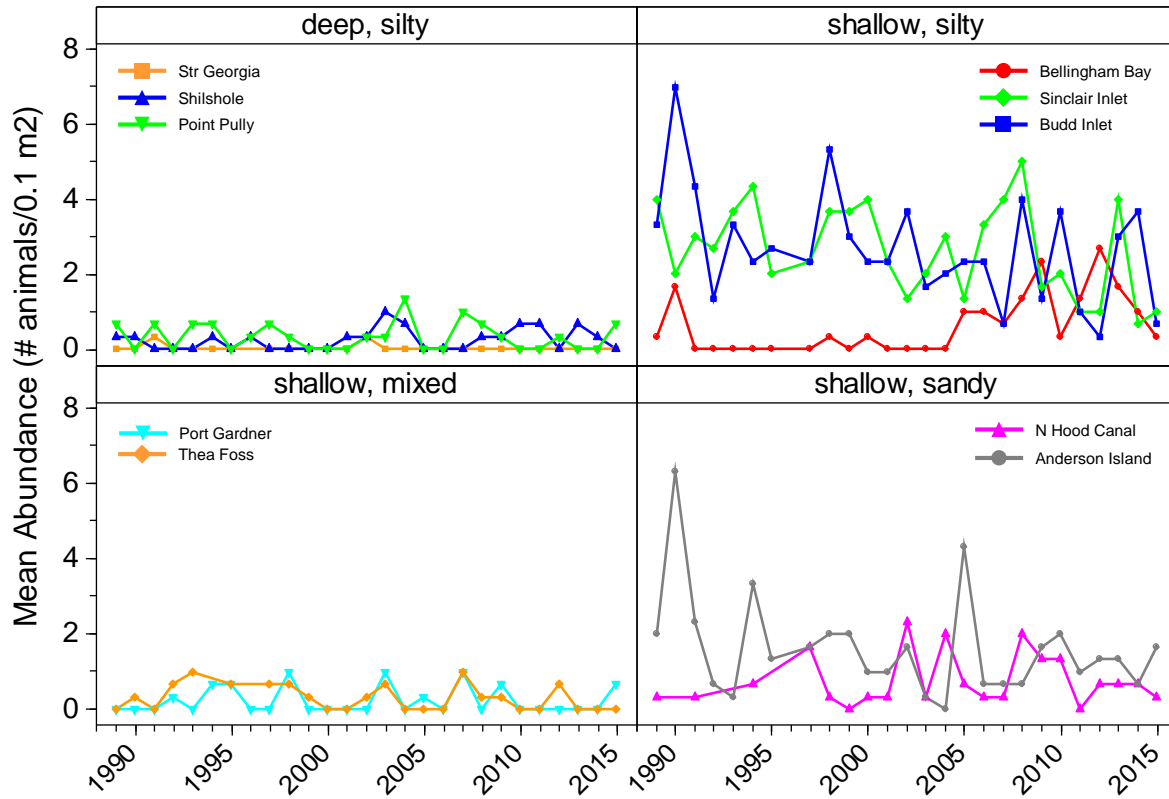
Glycinde picta



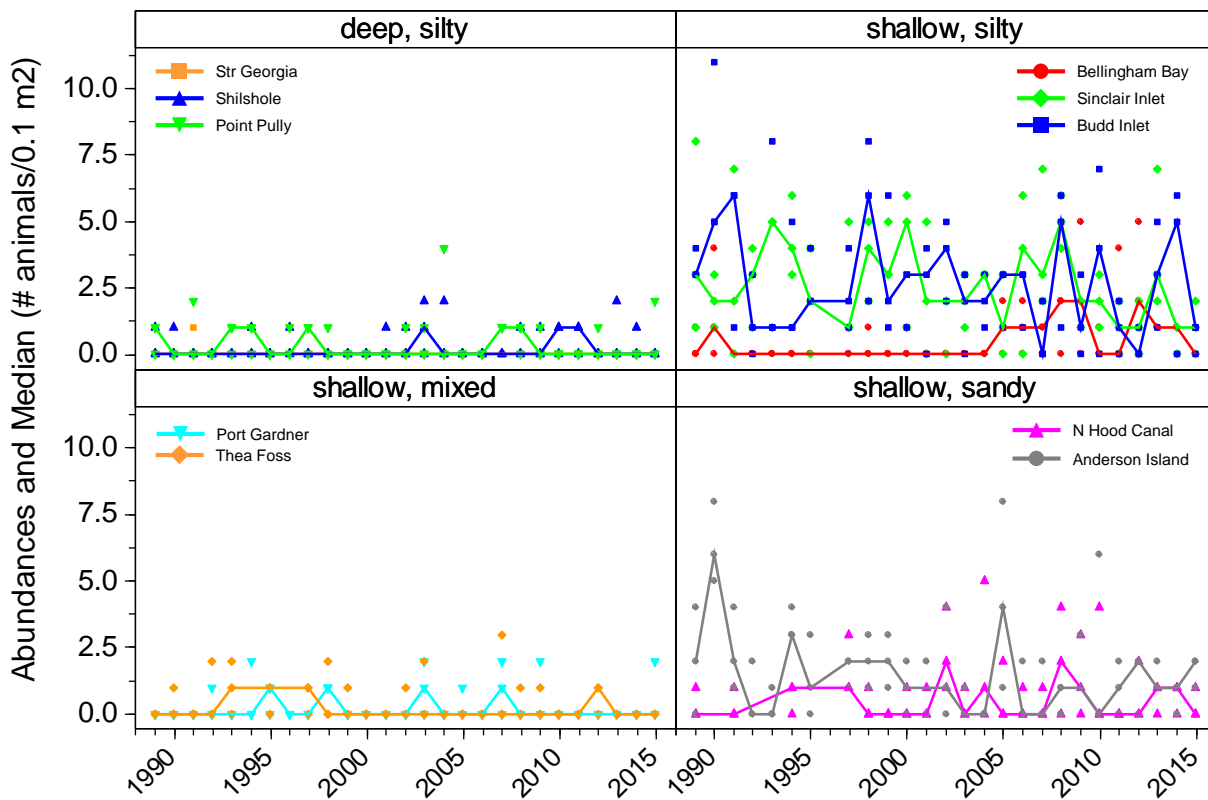
Glycinde picta



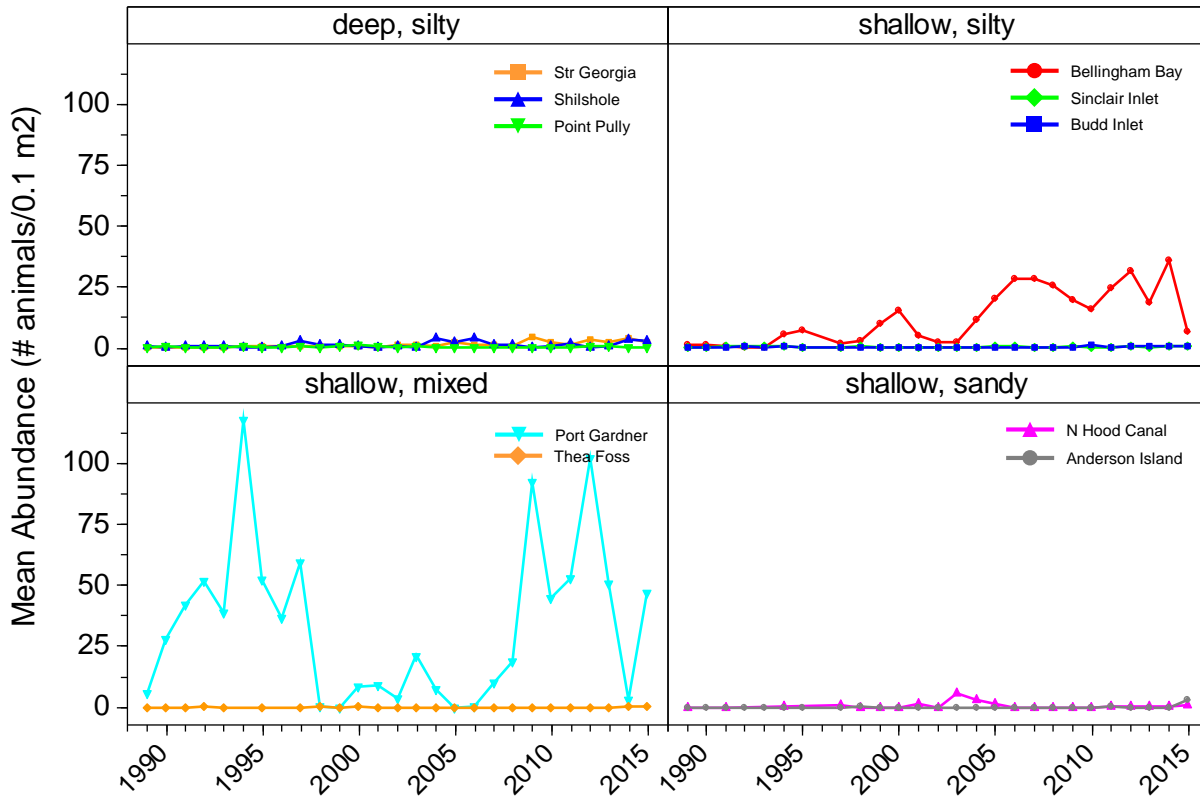
Hesionidae



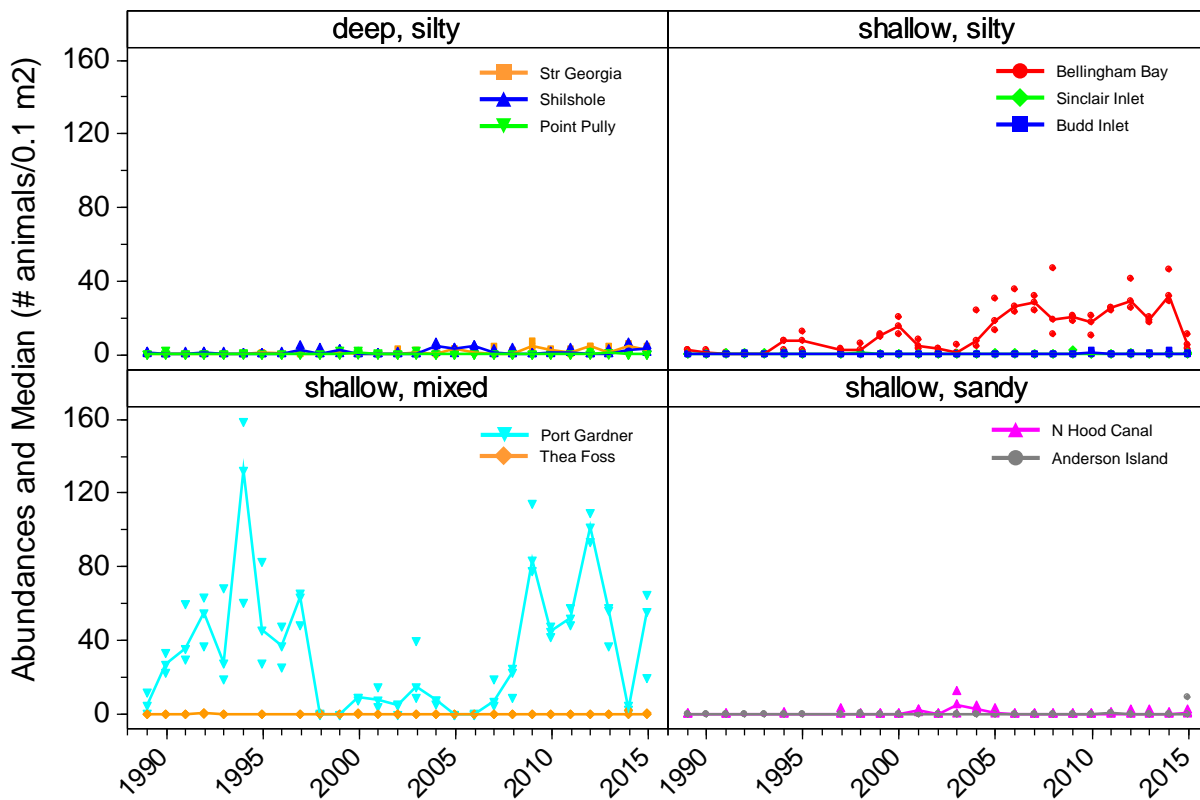
Hesionidae



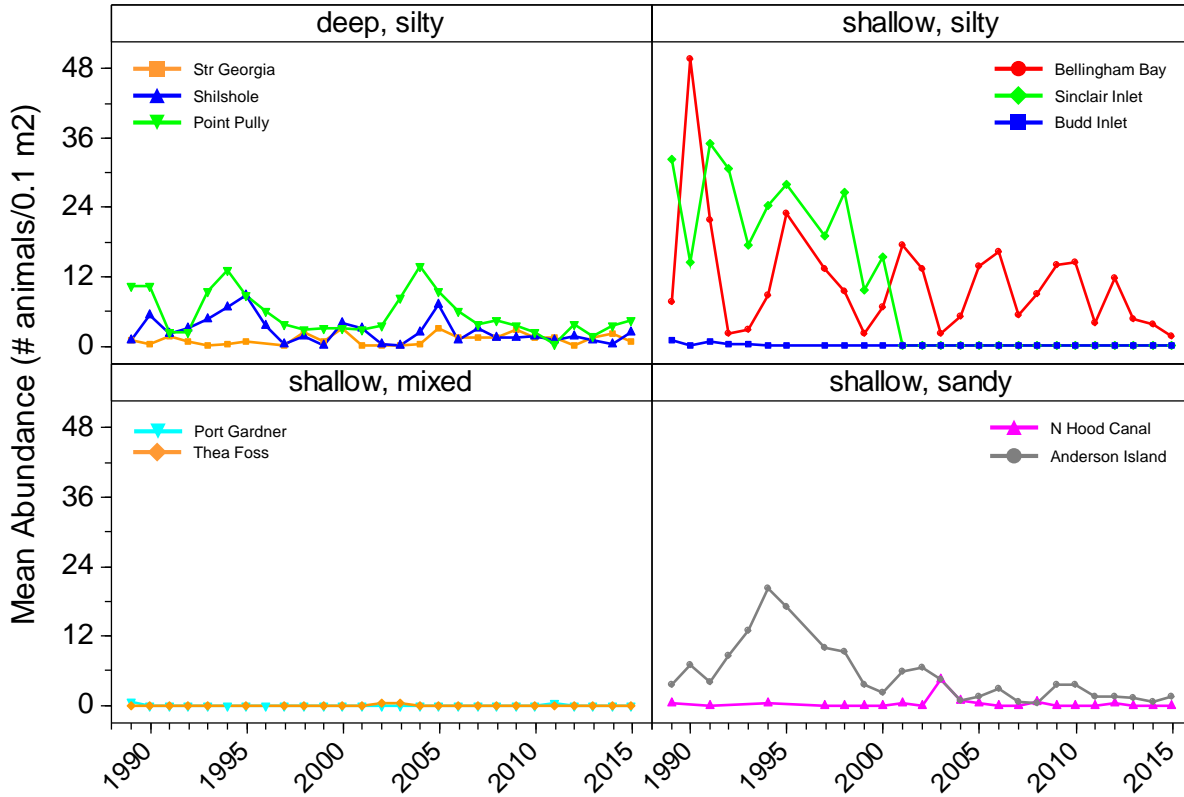
Heteromastus spp.



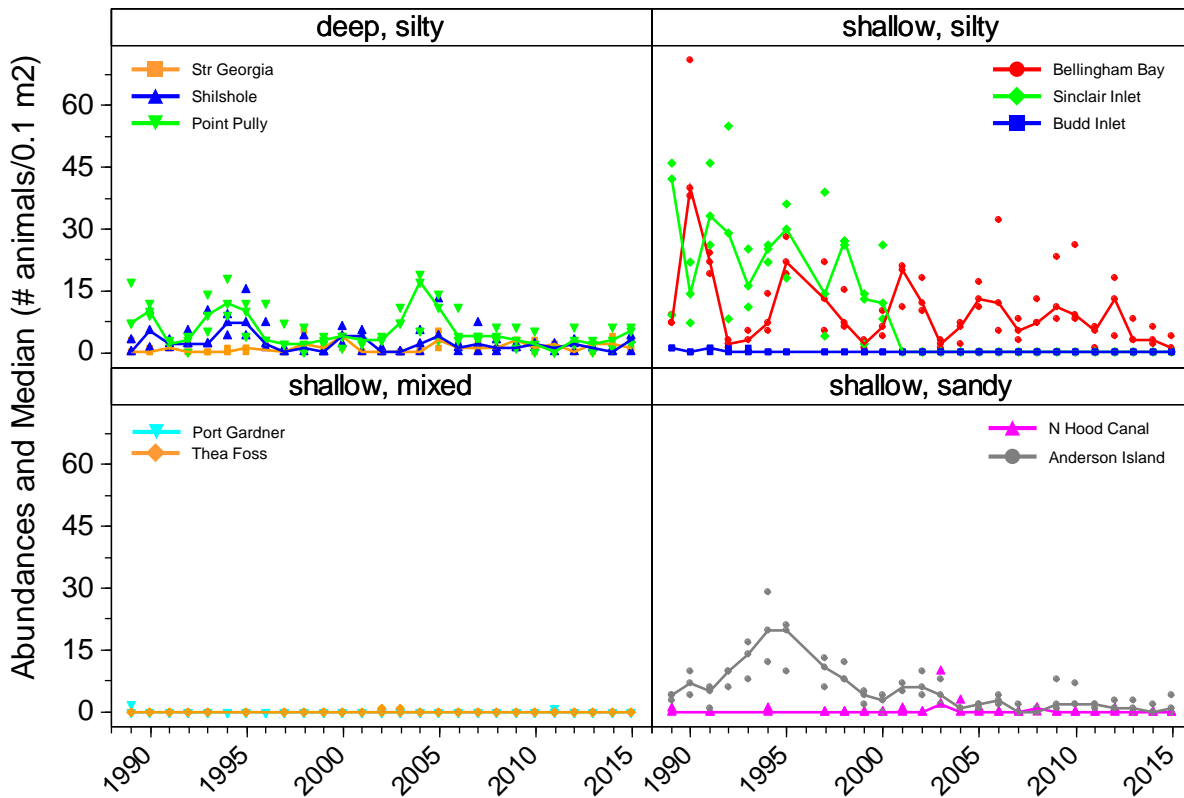
Heteromastus spp.



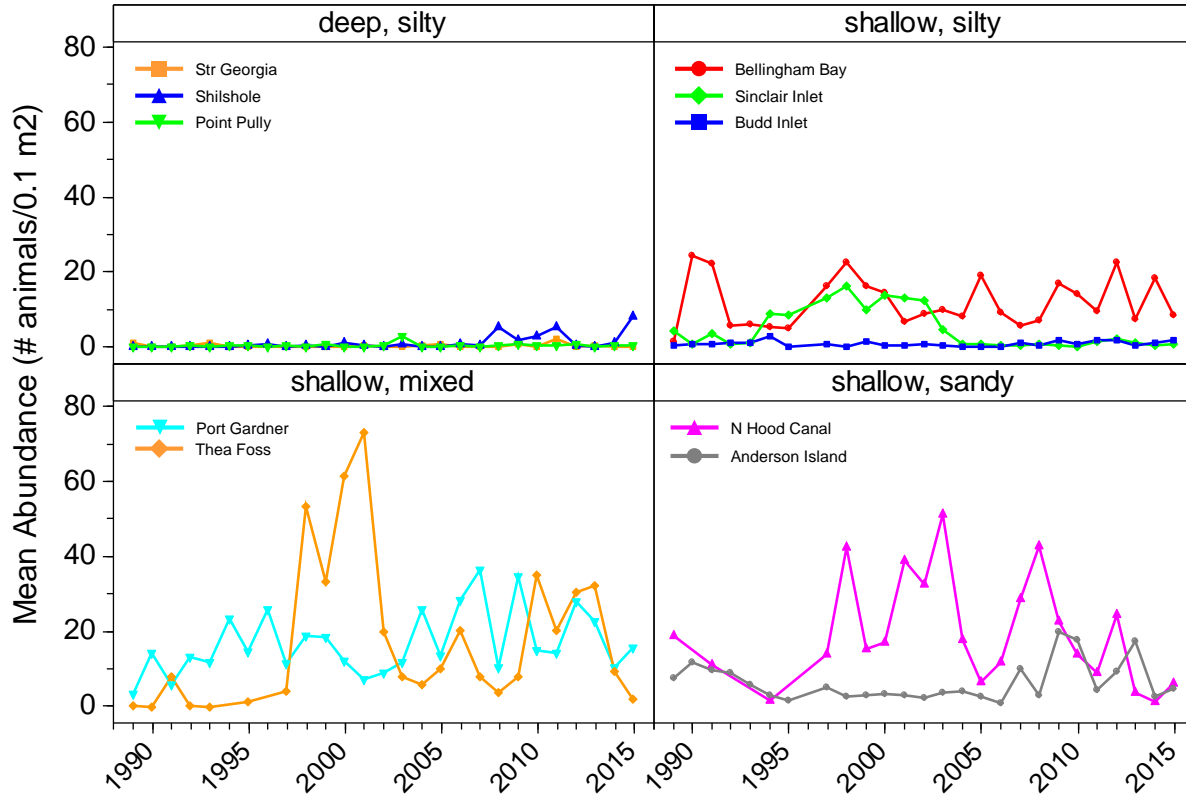
Heterophoxus spp.



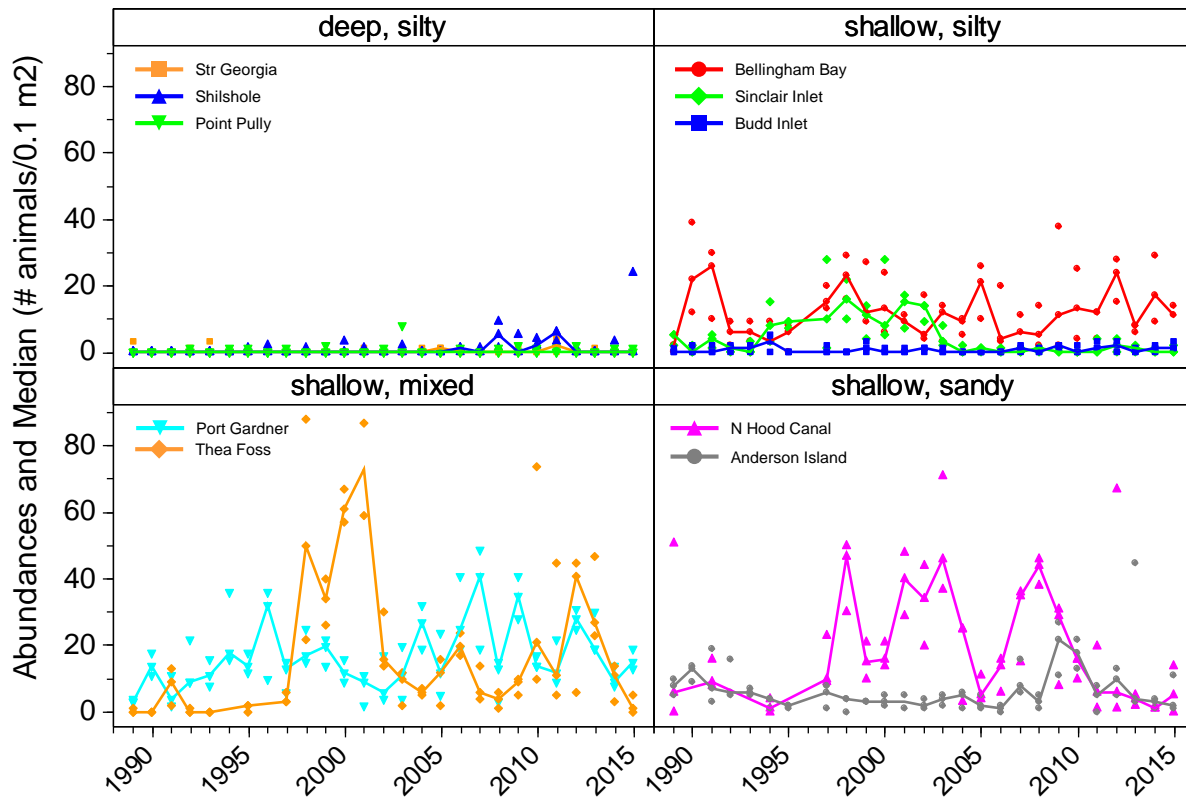
Heterophoxus spp.



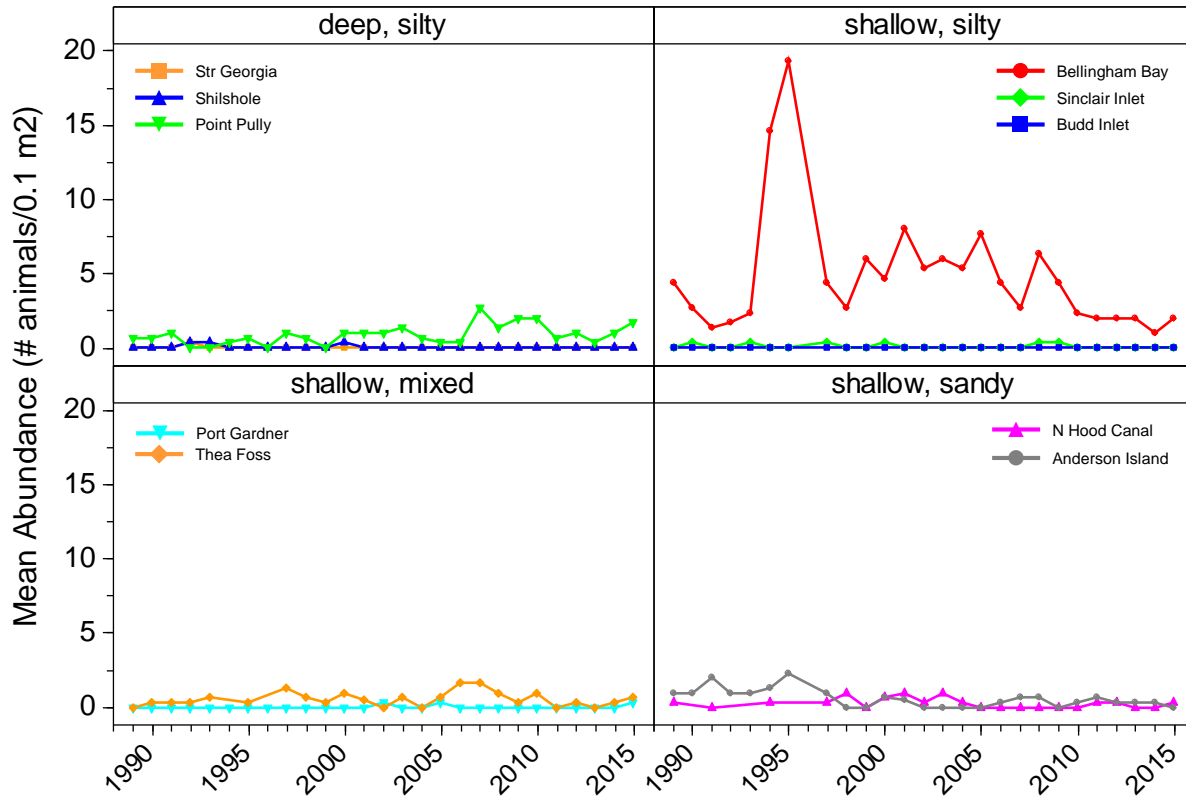
Kurtiella tumida



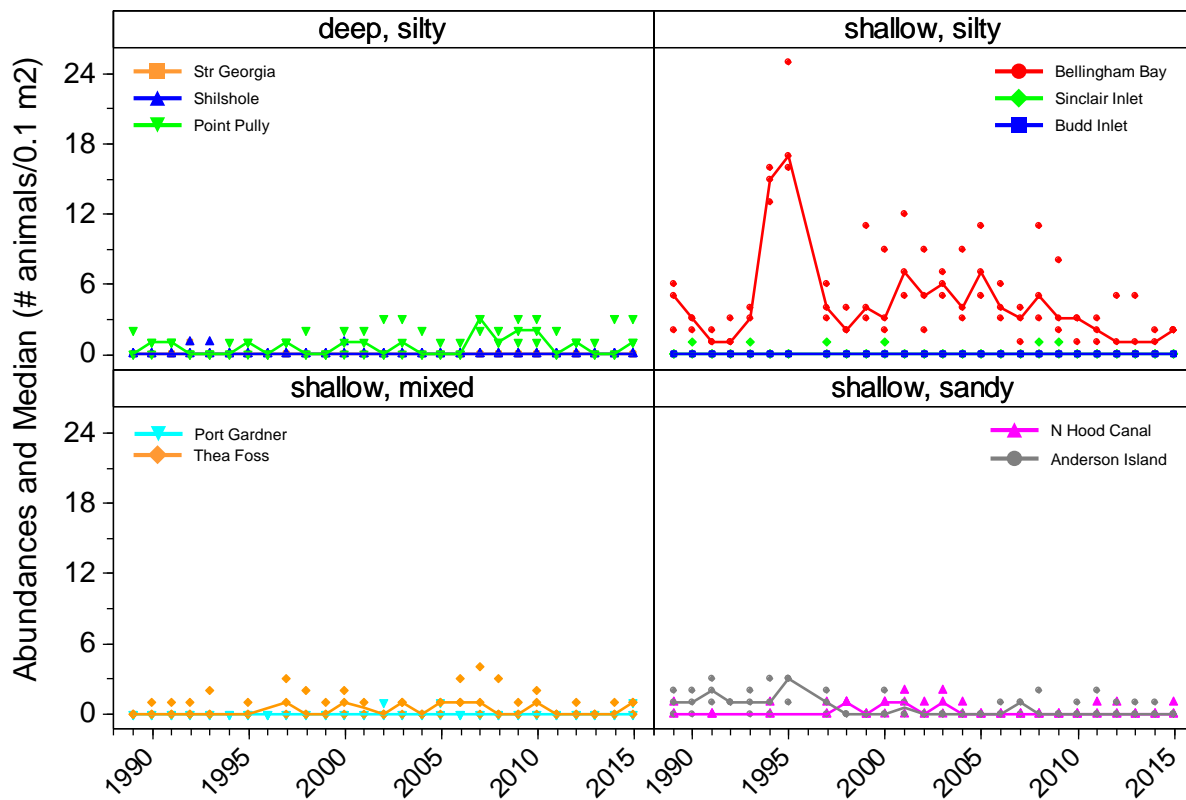
Kurtiella tumida



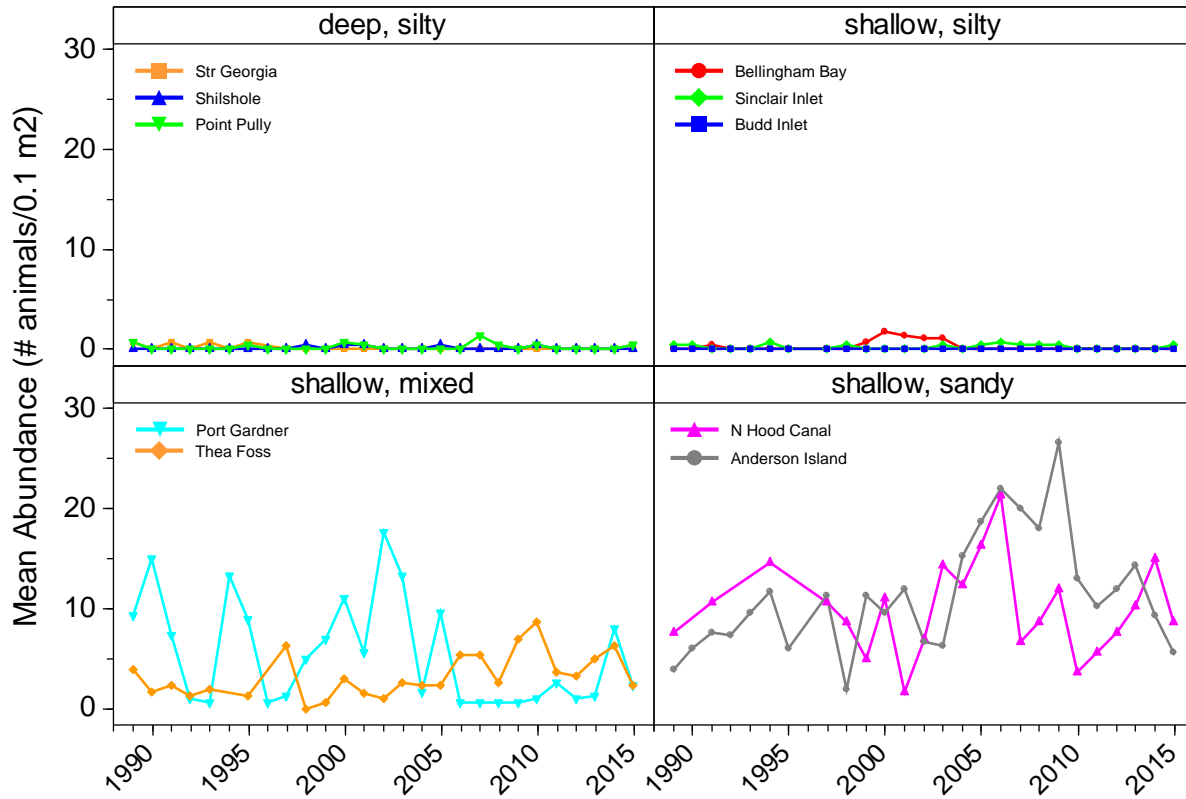
Laonice spp.



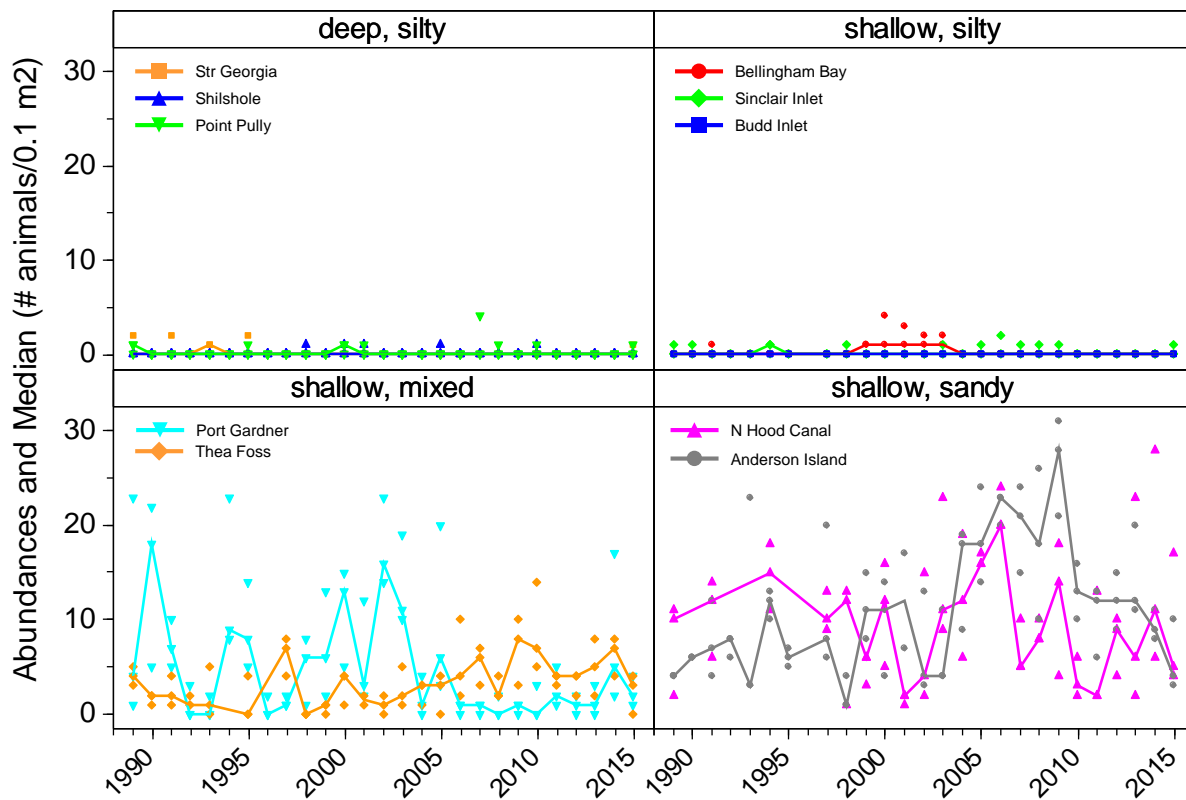
Laonice spp.



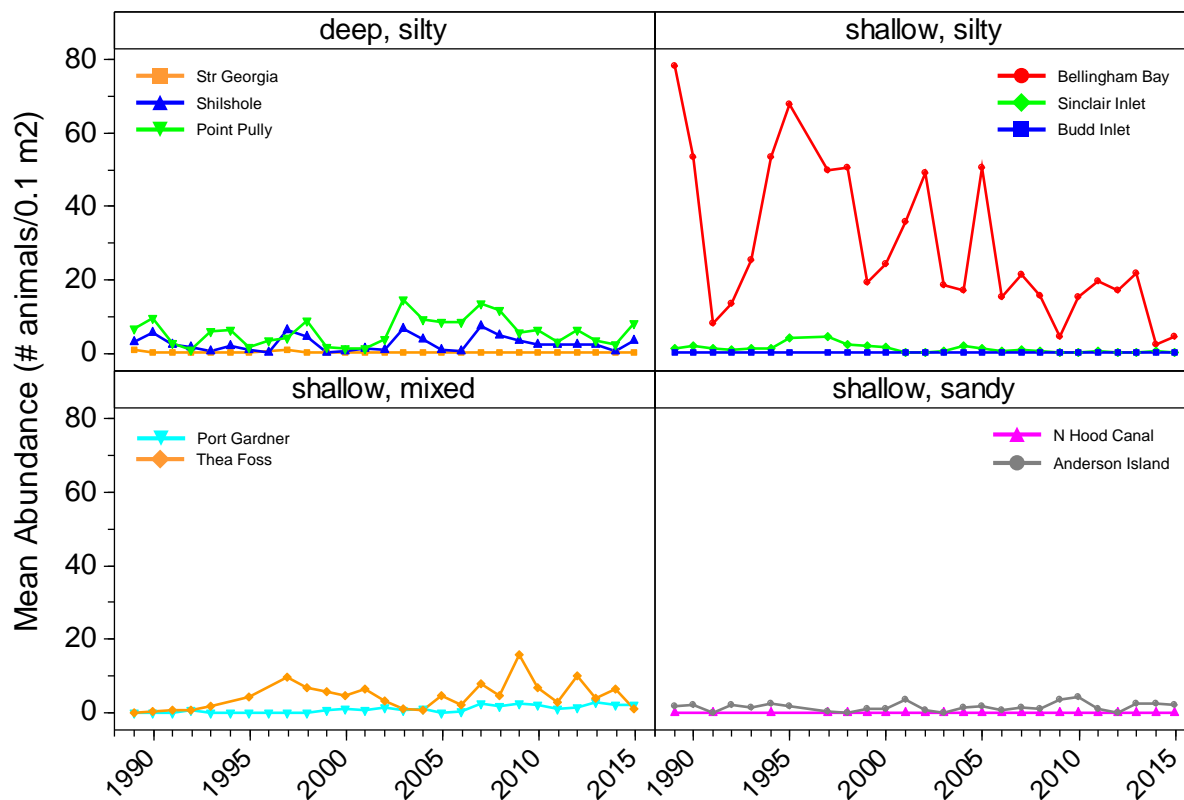
Leitoscoloplos pugettensis



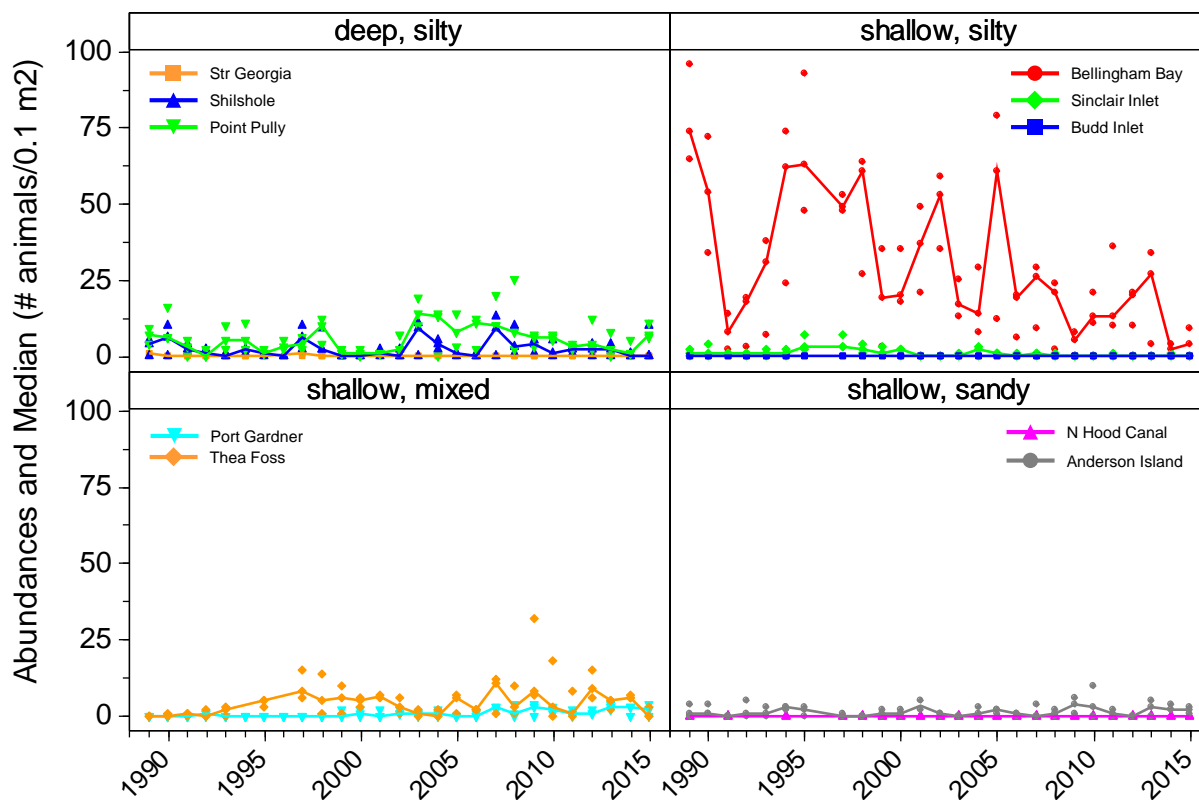
Leitoscoloplos pugettensis



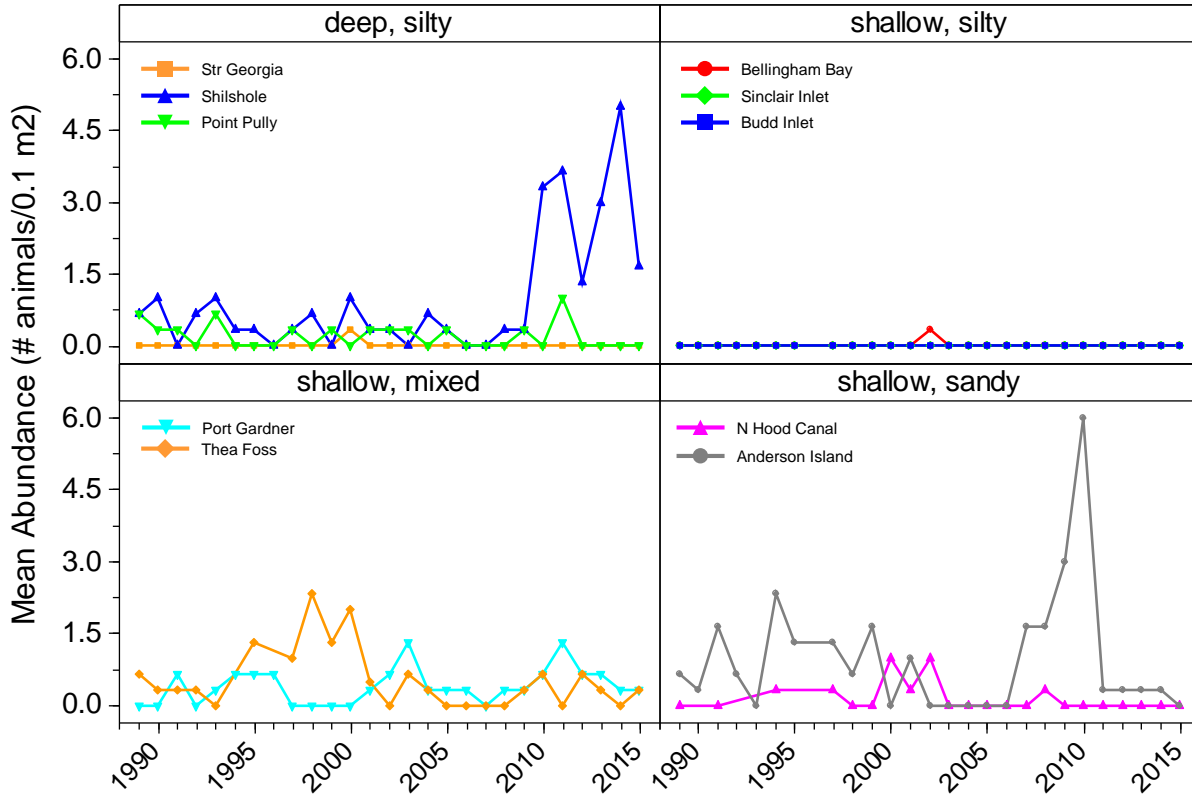
Levinsenia gracilis



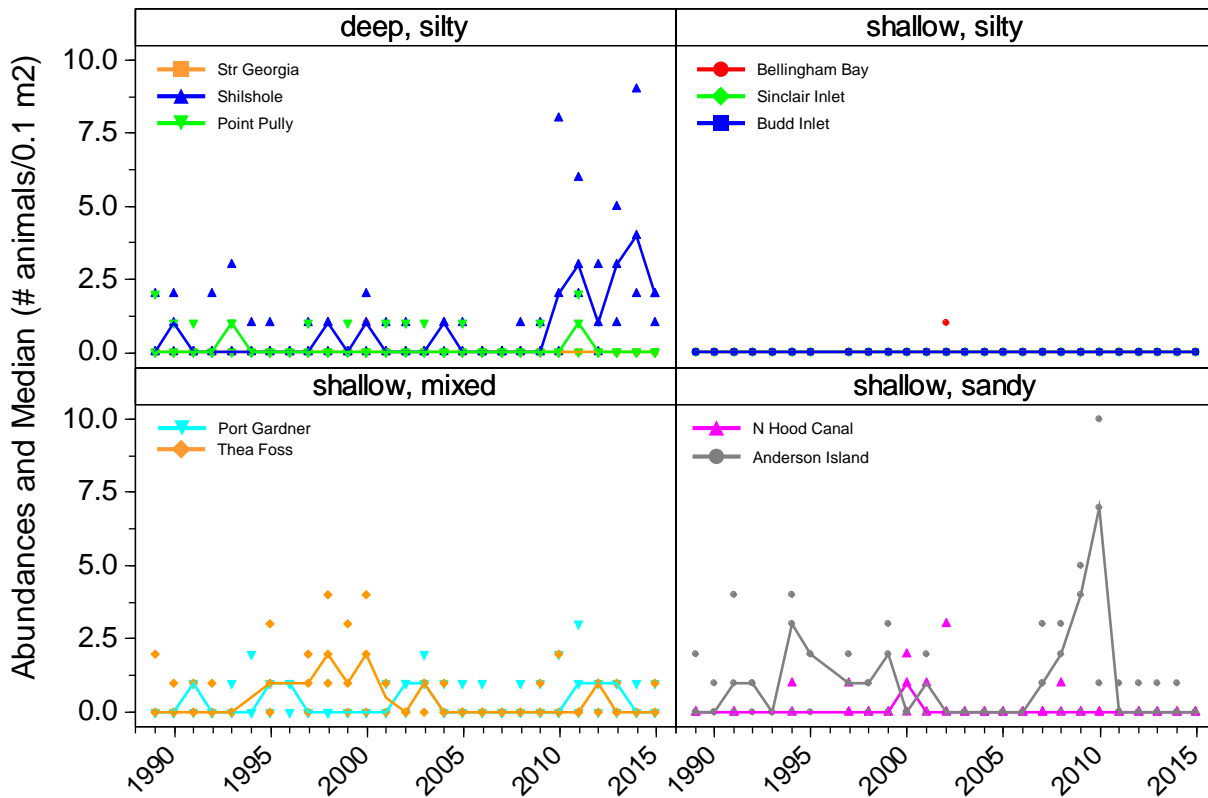
Levinsenia gracilis



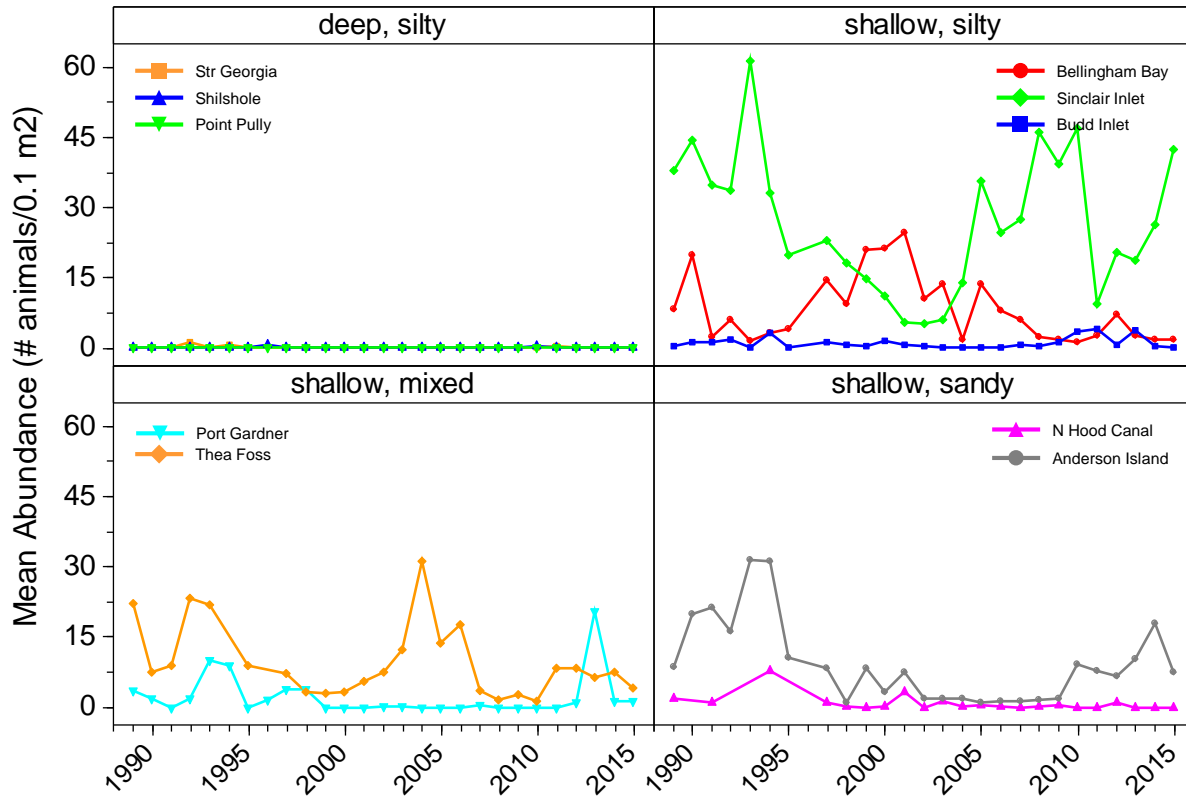
Lucinoma annulatum



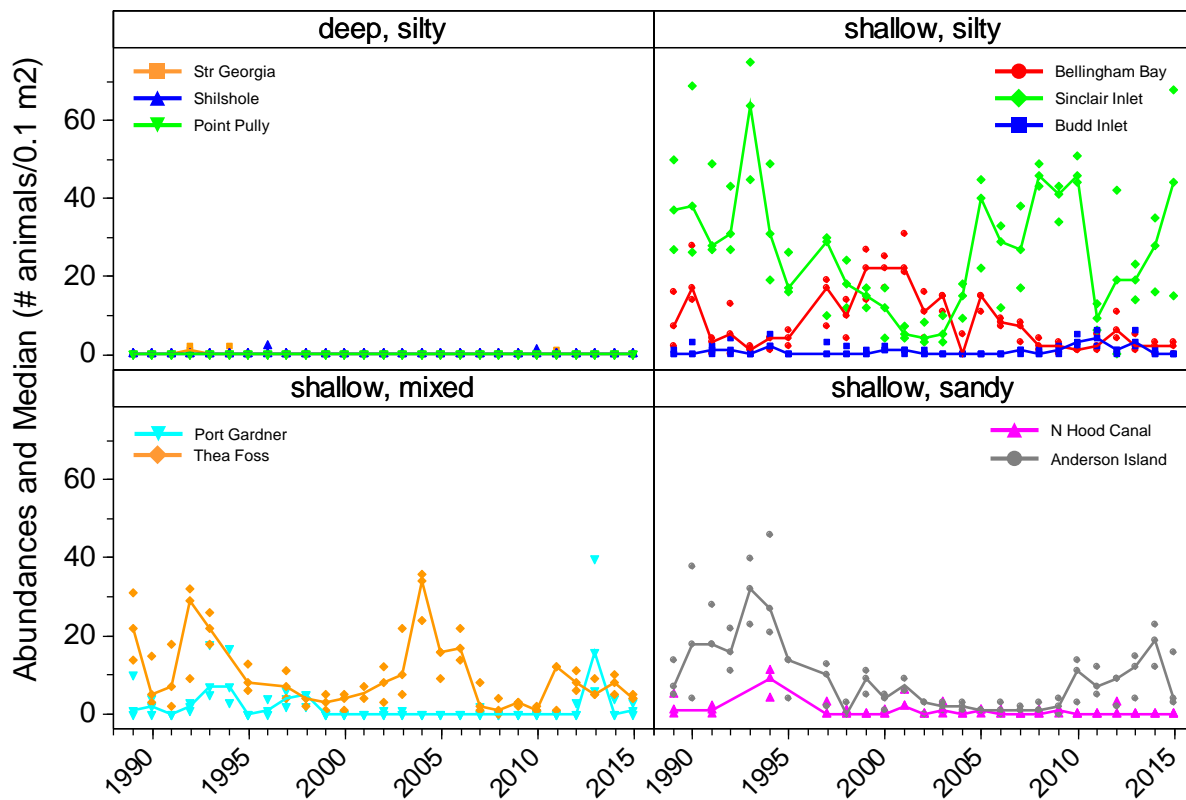
Lucinoma annulatum



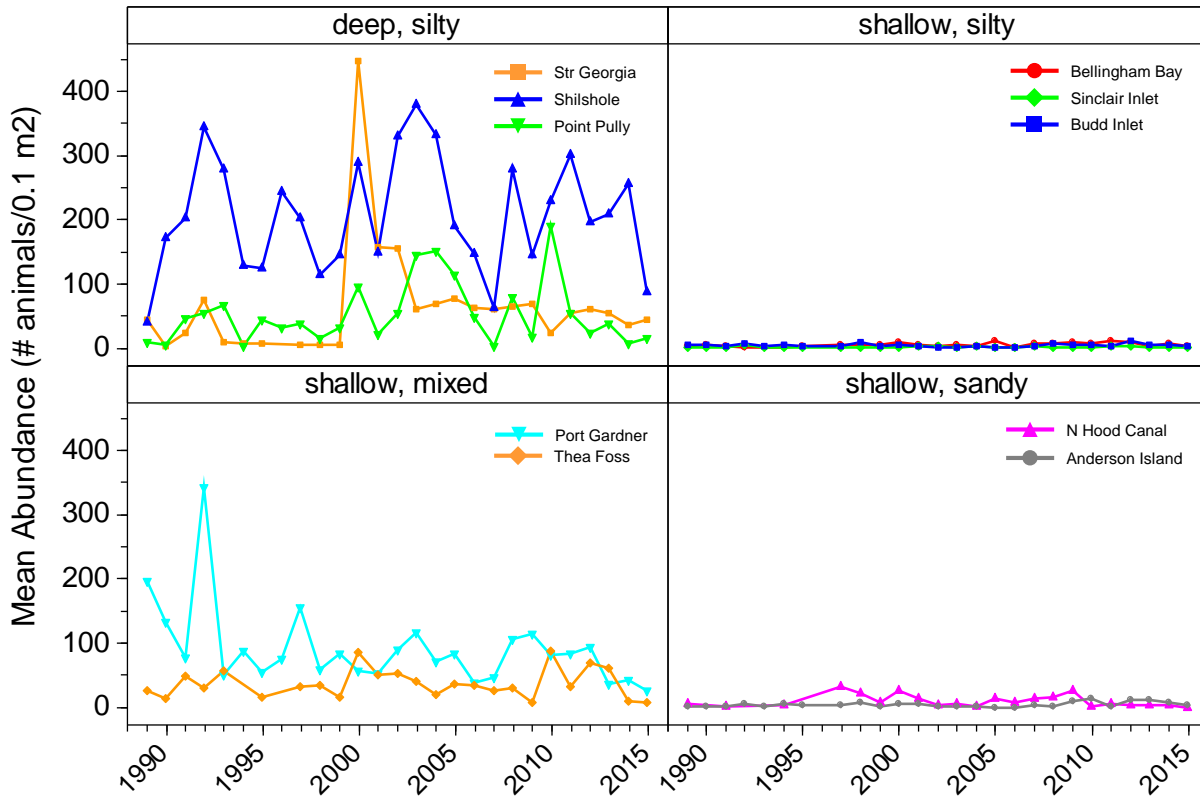
Lumbrineridae



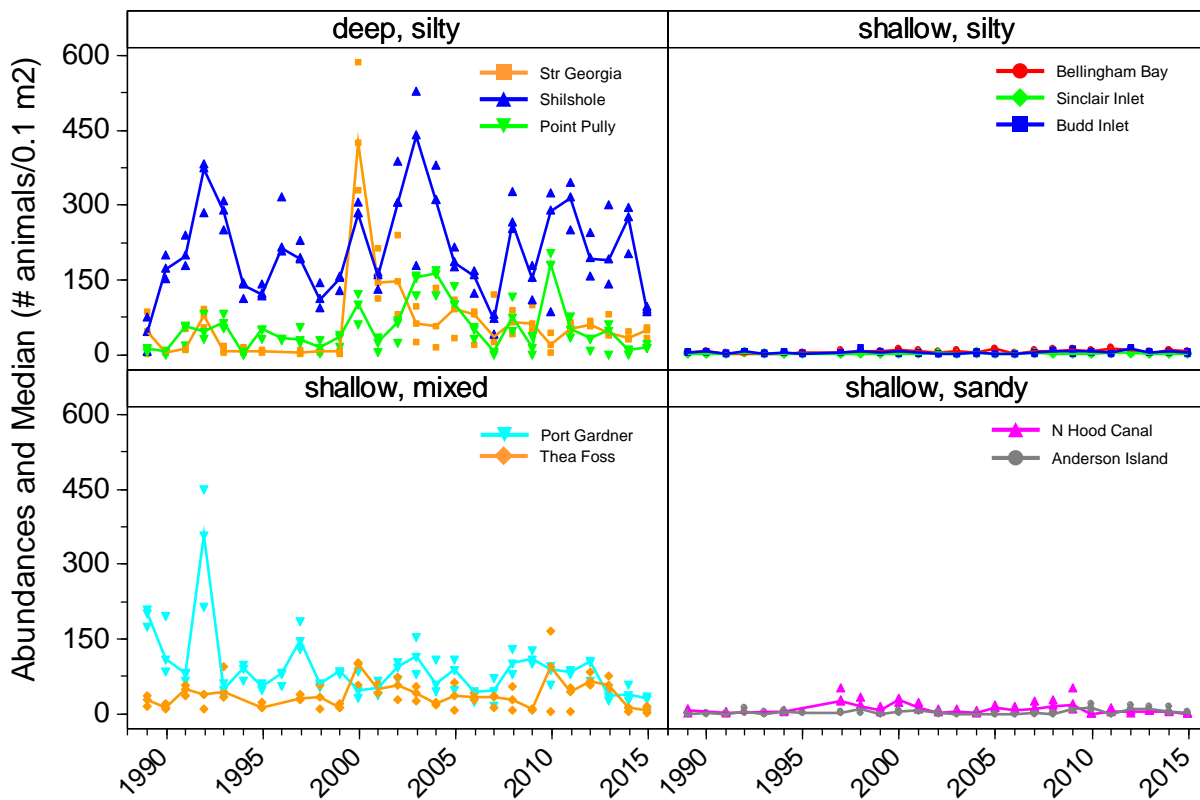
Lumbrineridae



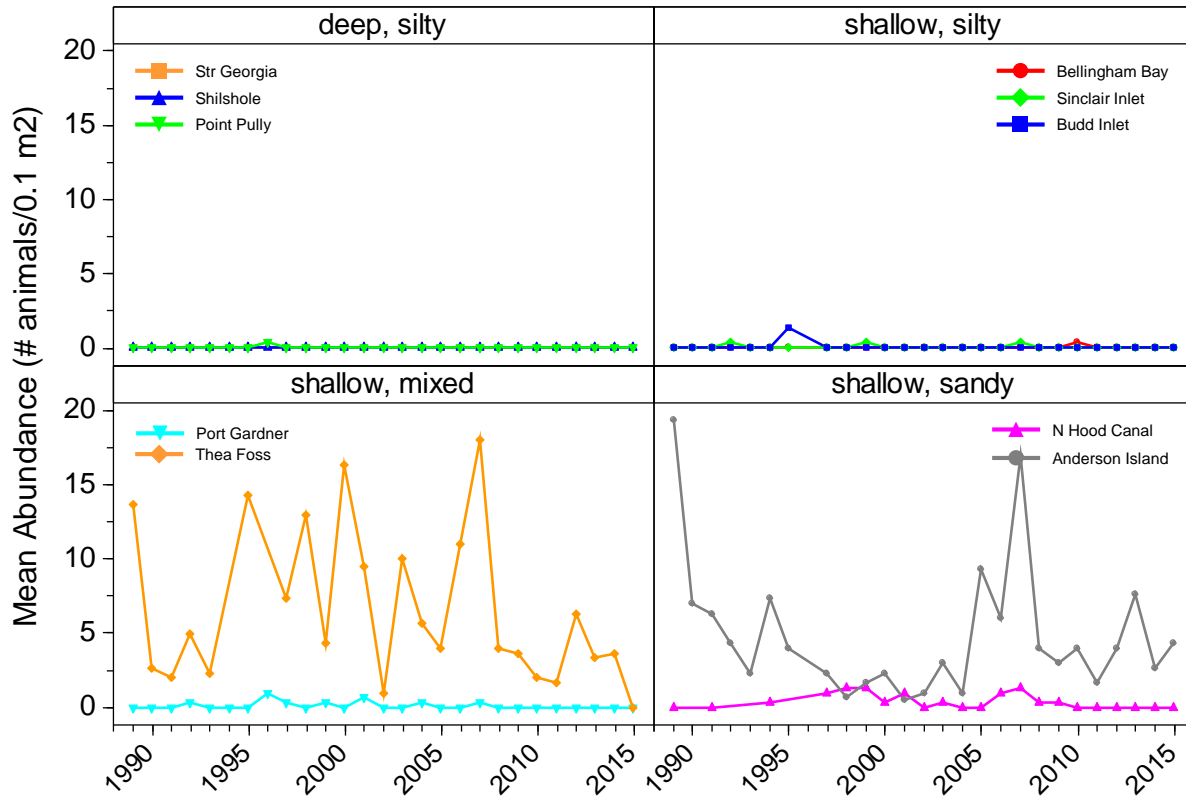
Macoma spp.



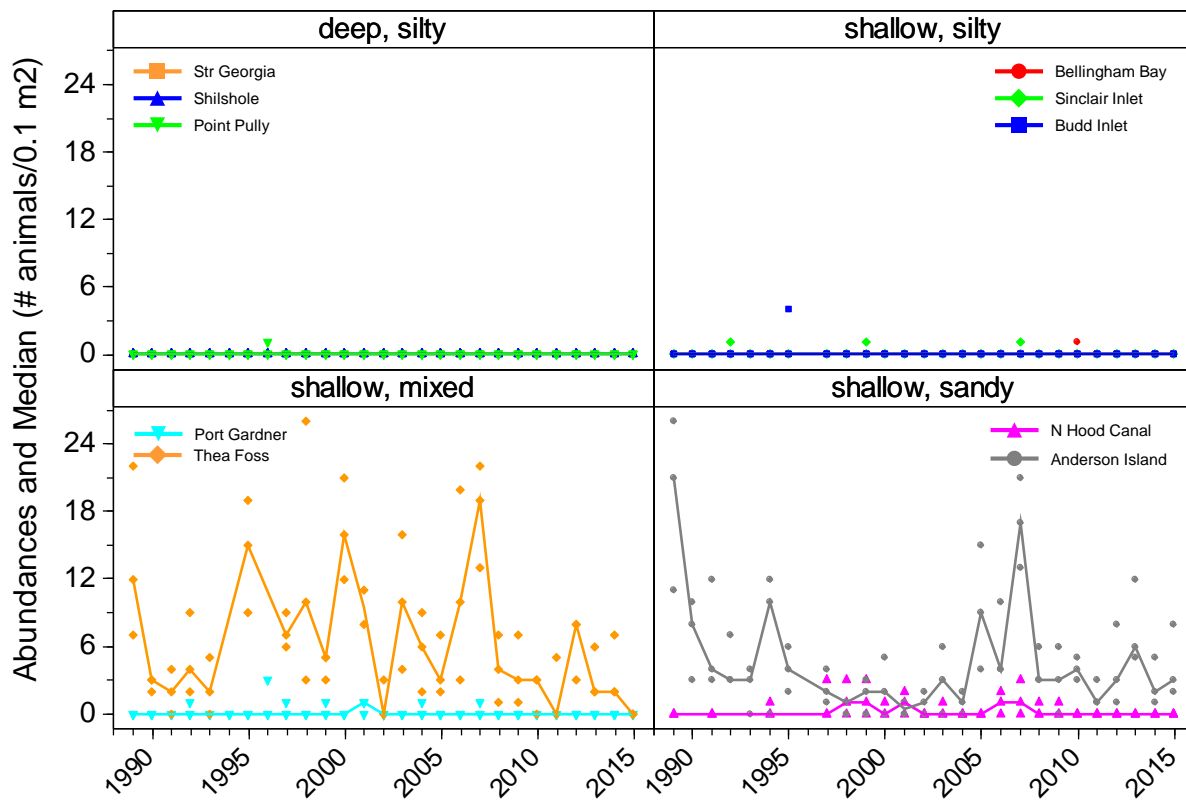
Macoma spp.



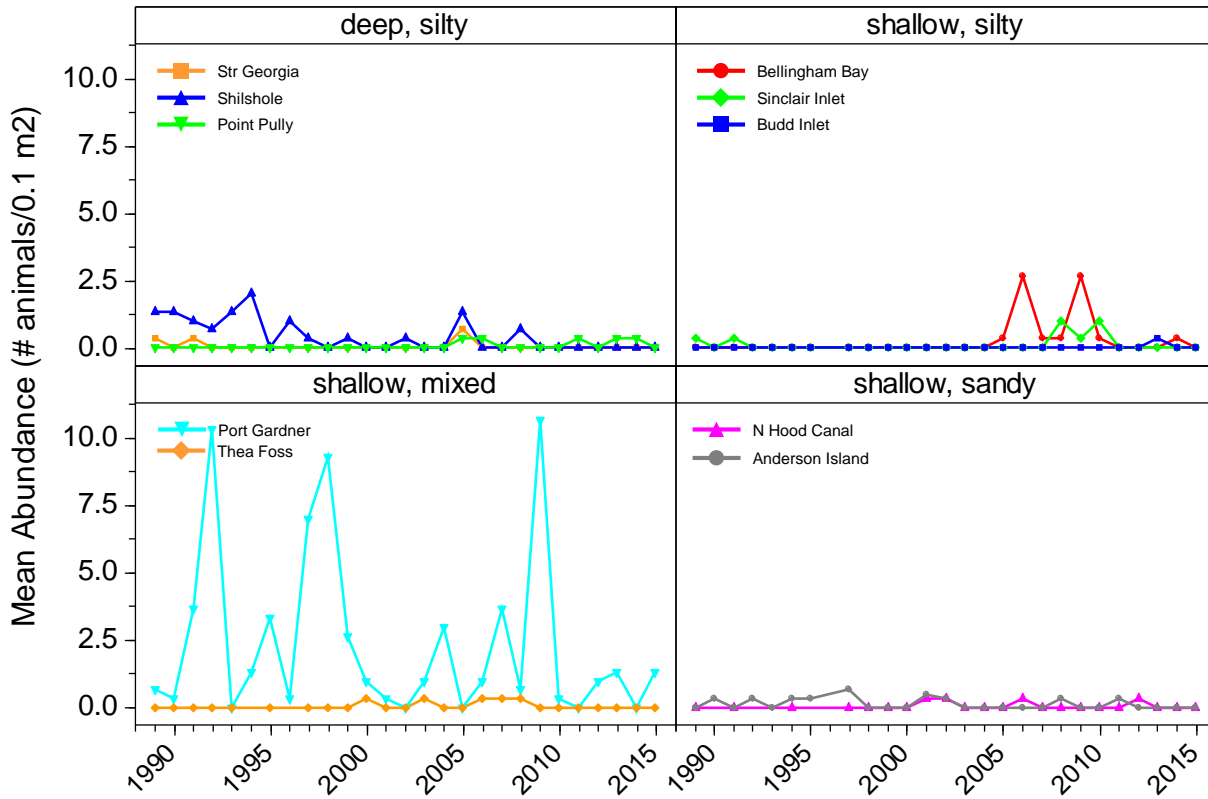
Macoma yoldiformis



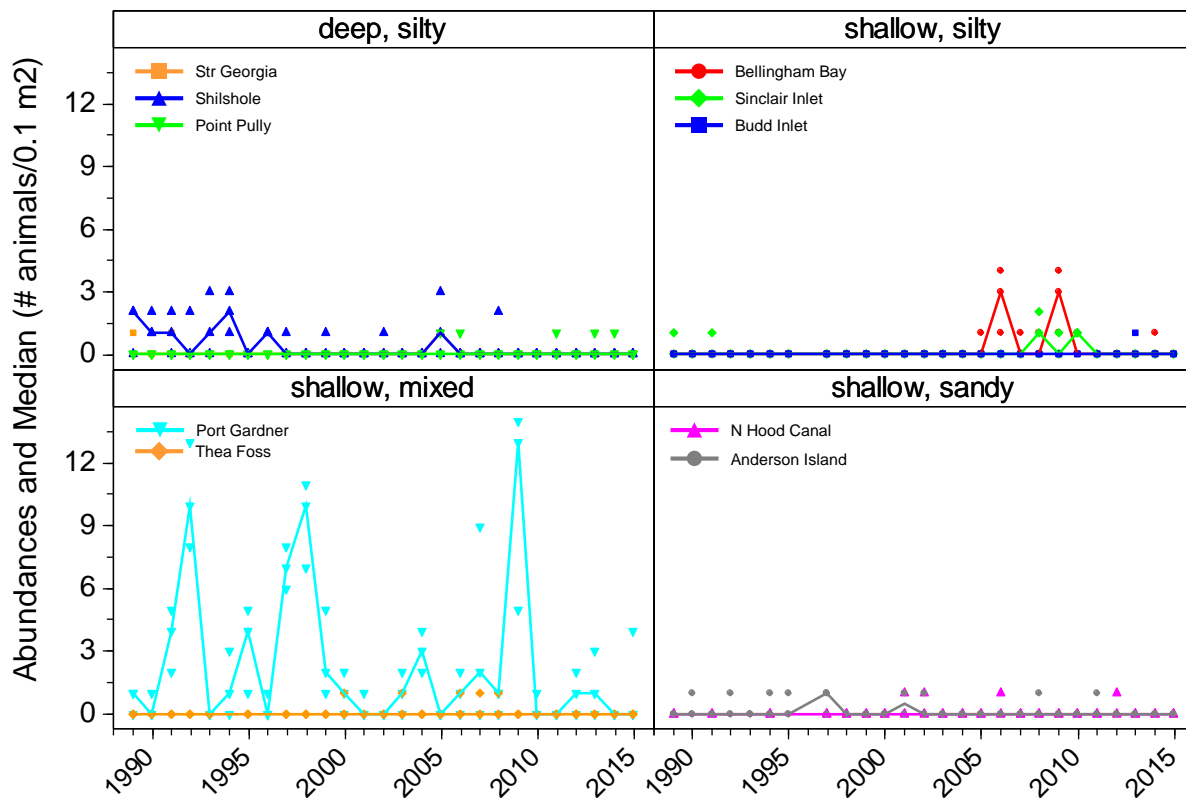
Macoma yoldiformis



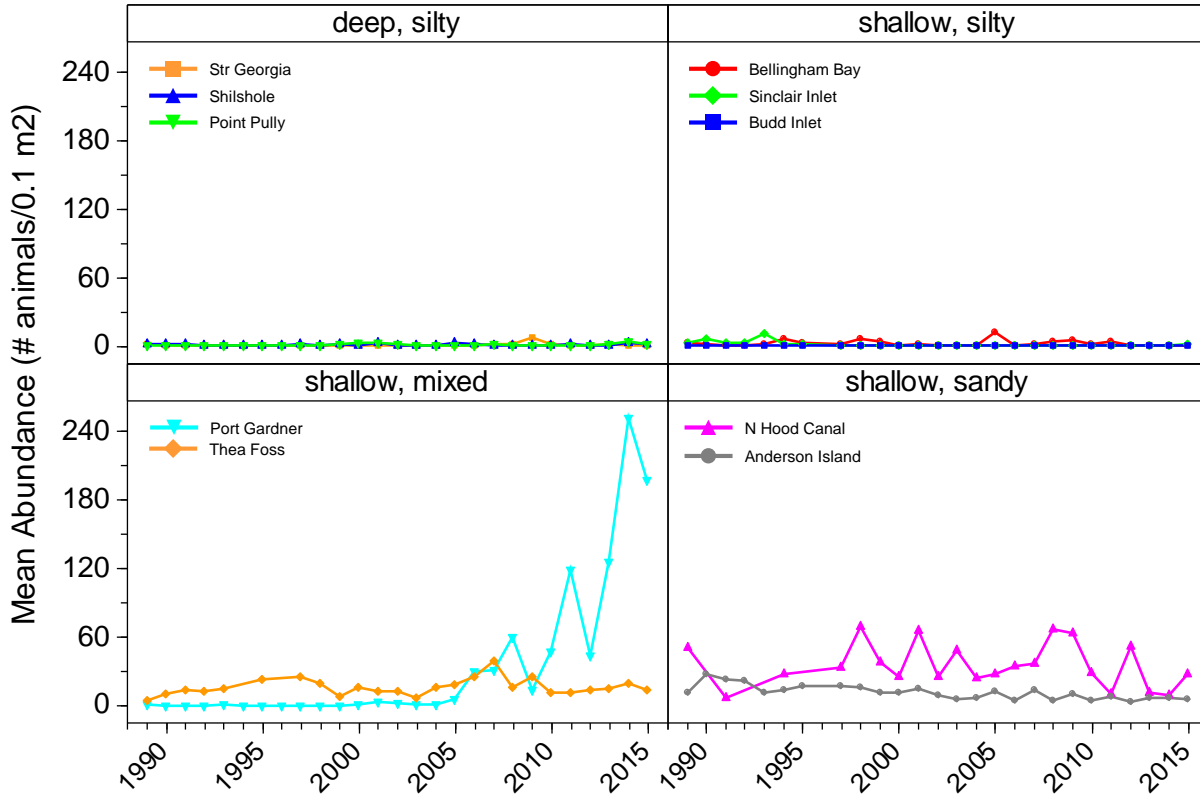
Malmgreniella spp.



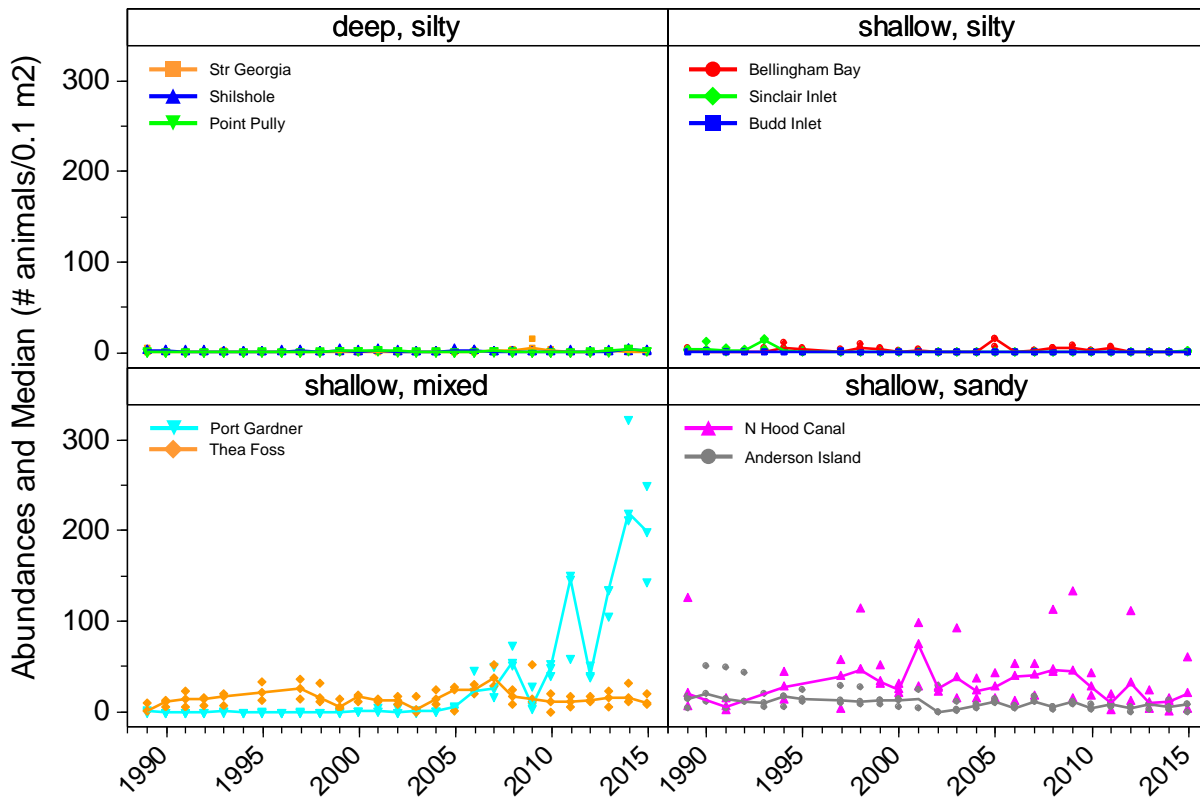
Malmgreniella spp.



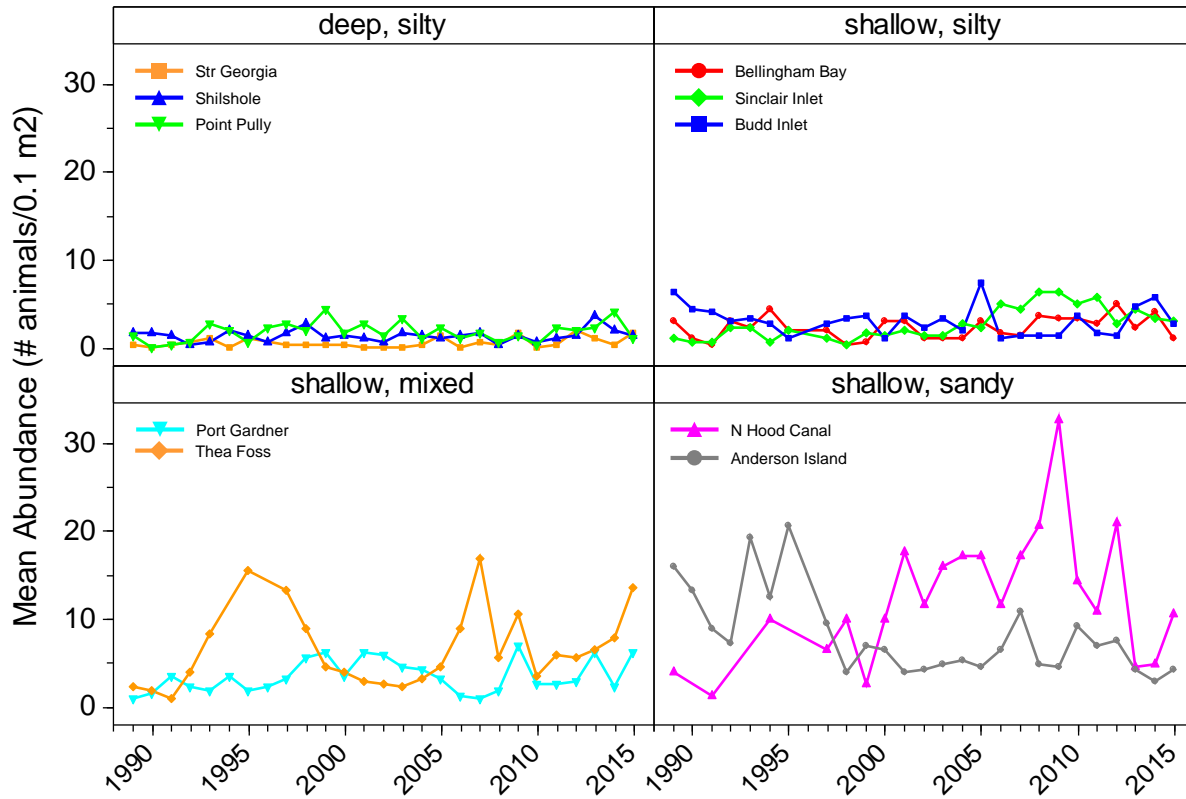
Mediomastus spp.



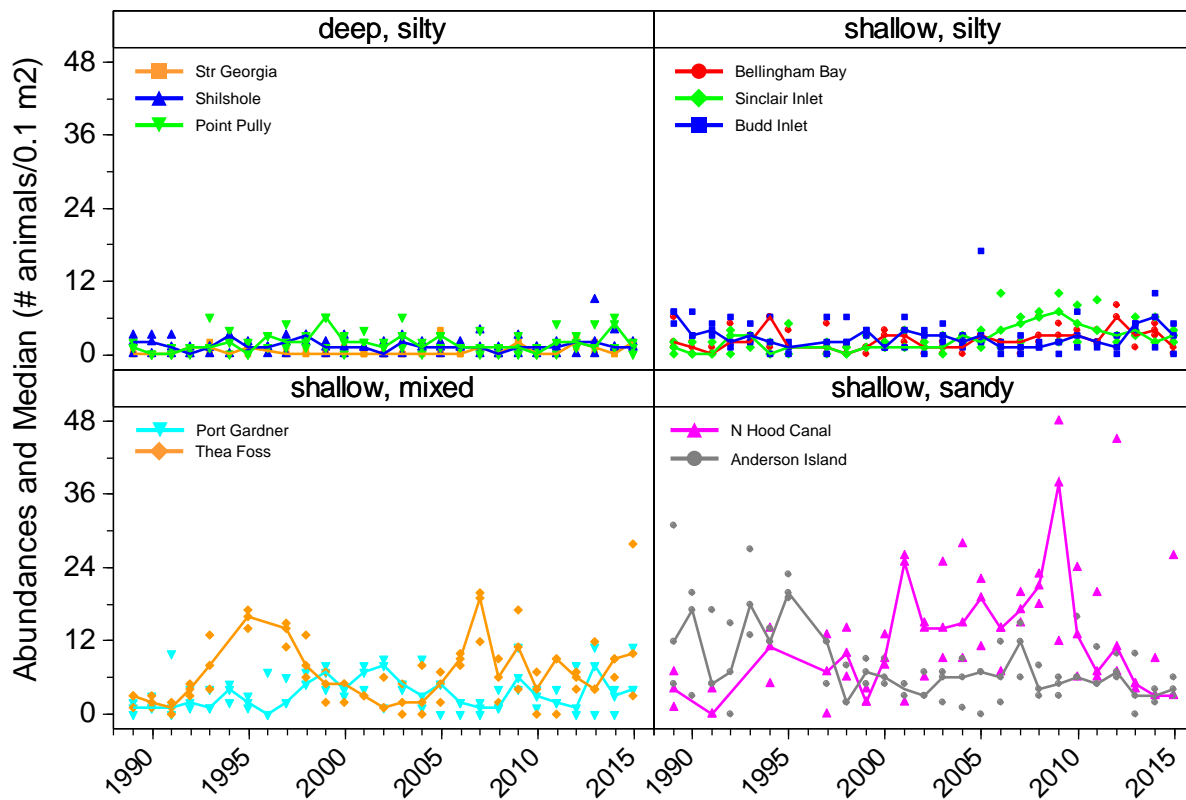
Mediomastus spp.



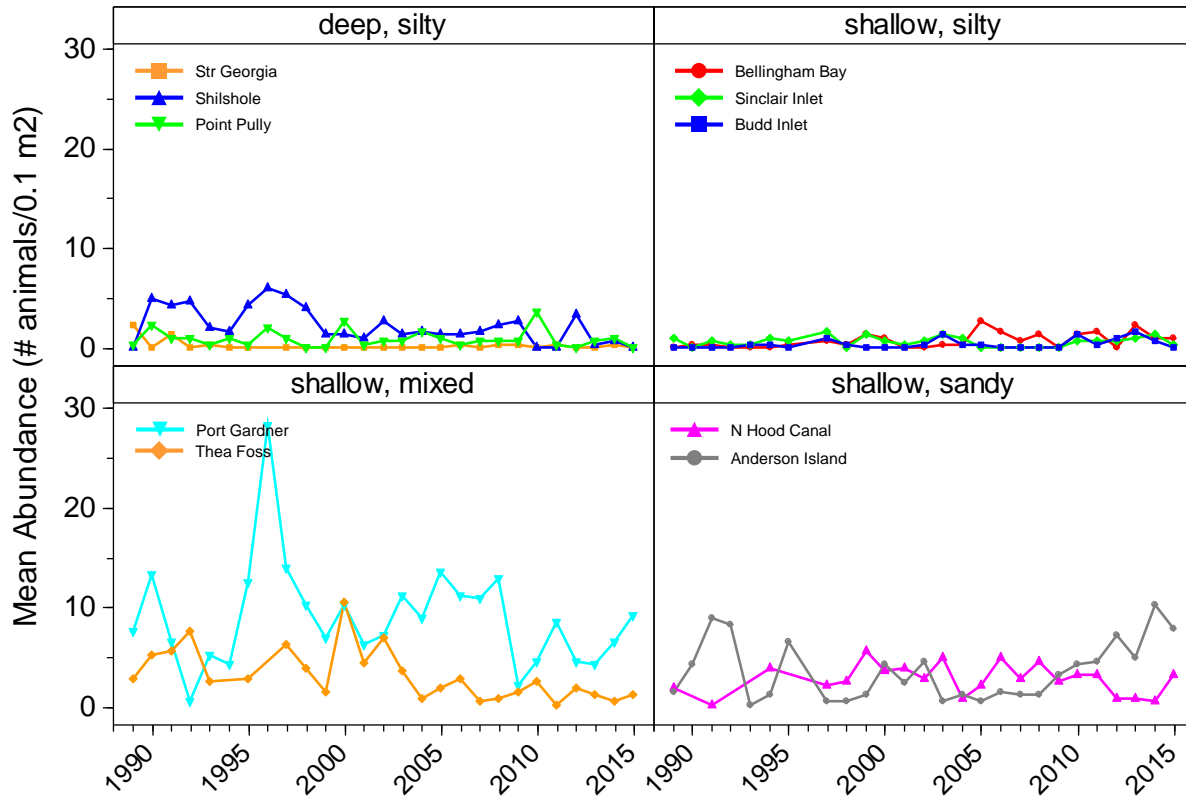
Nemertea



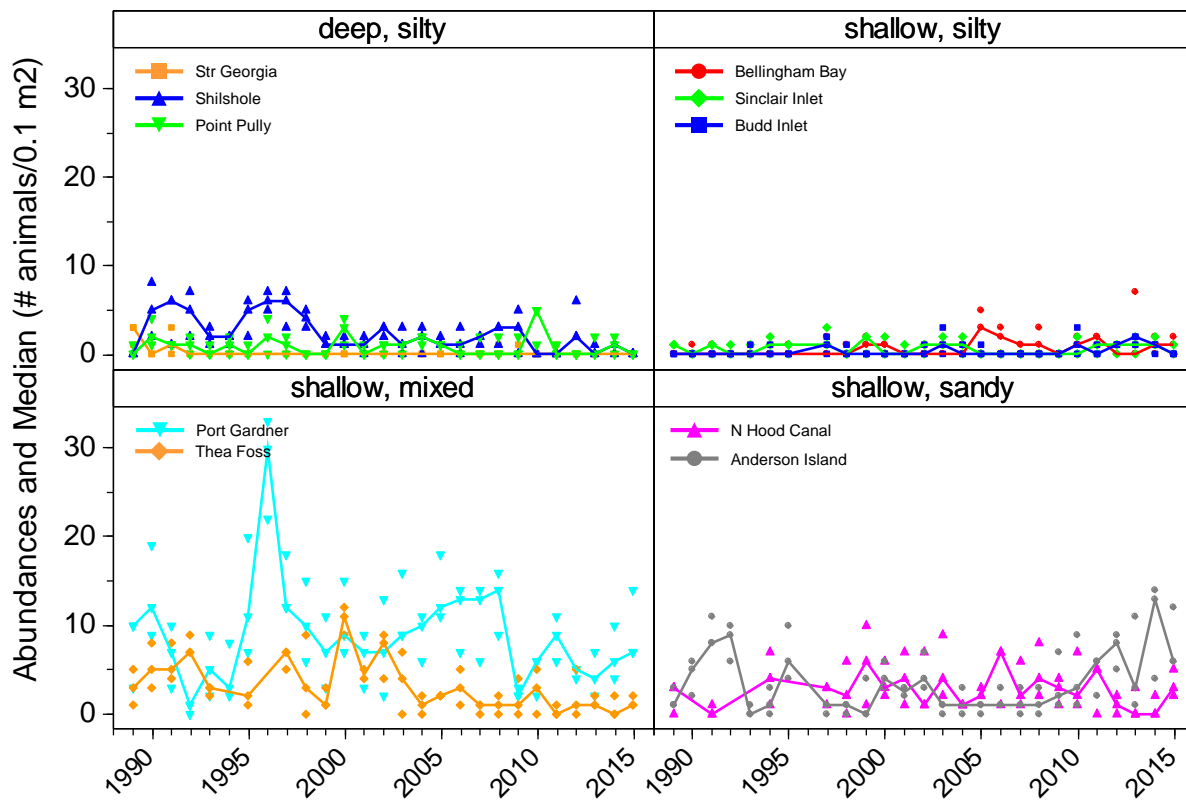
Nemertea



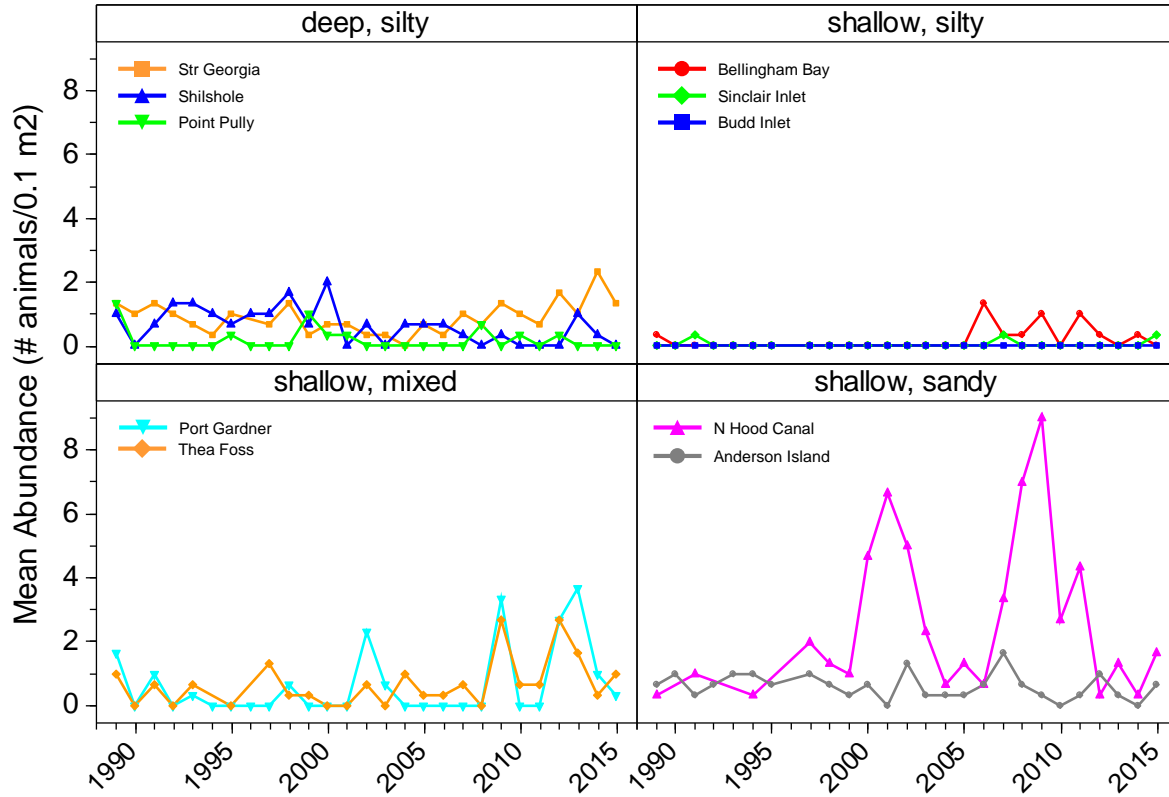
Nephtys ferruginea



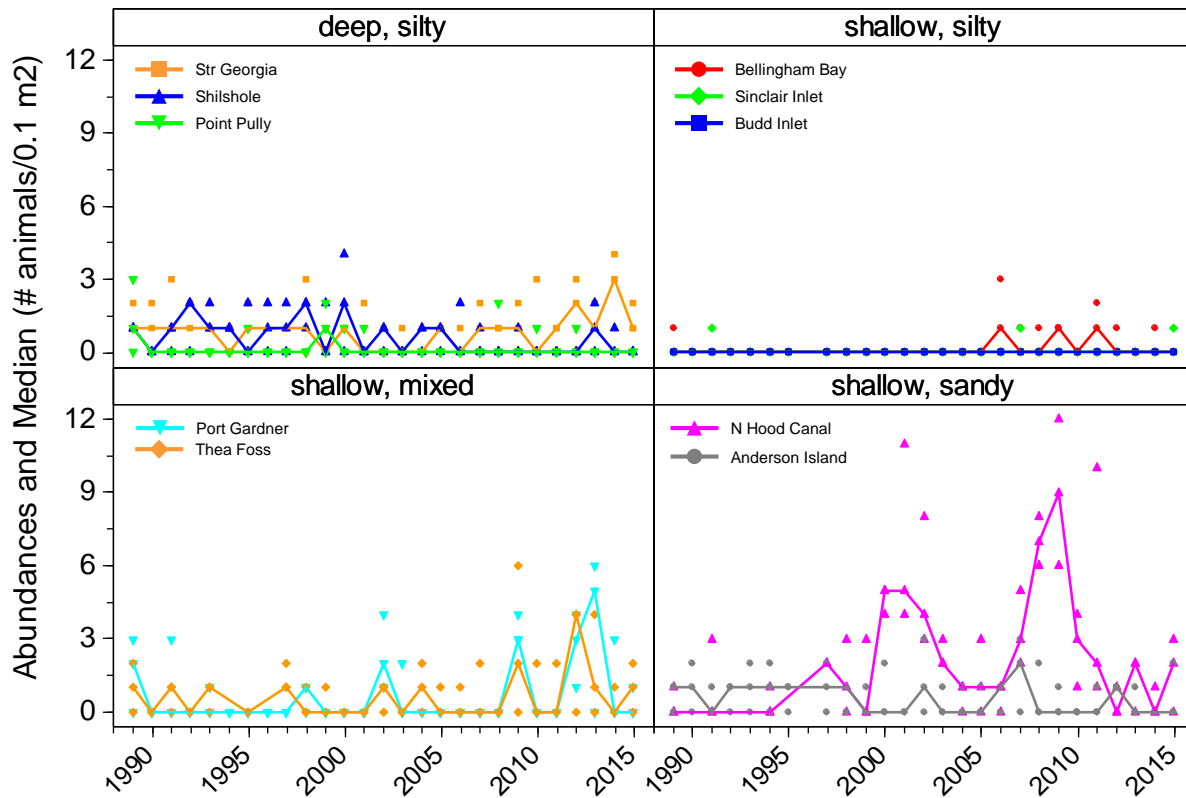
Nephtys ferruginea



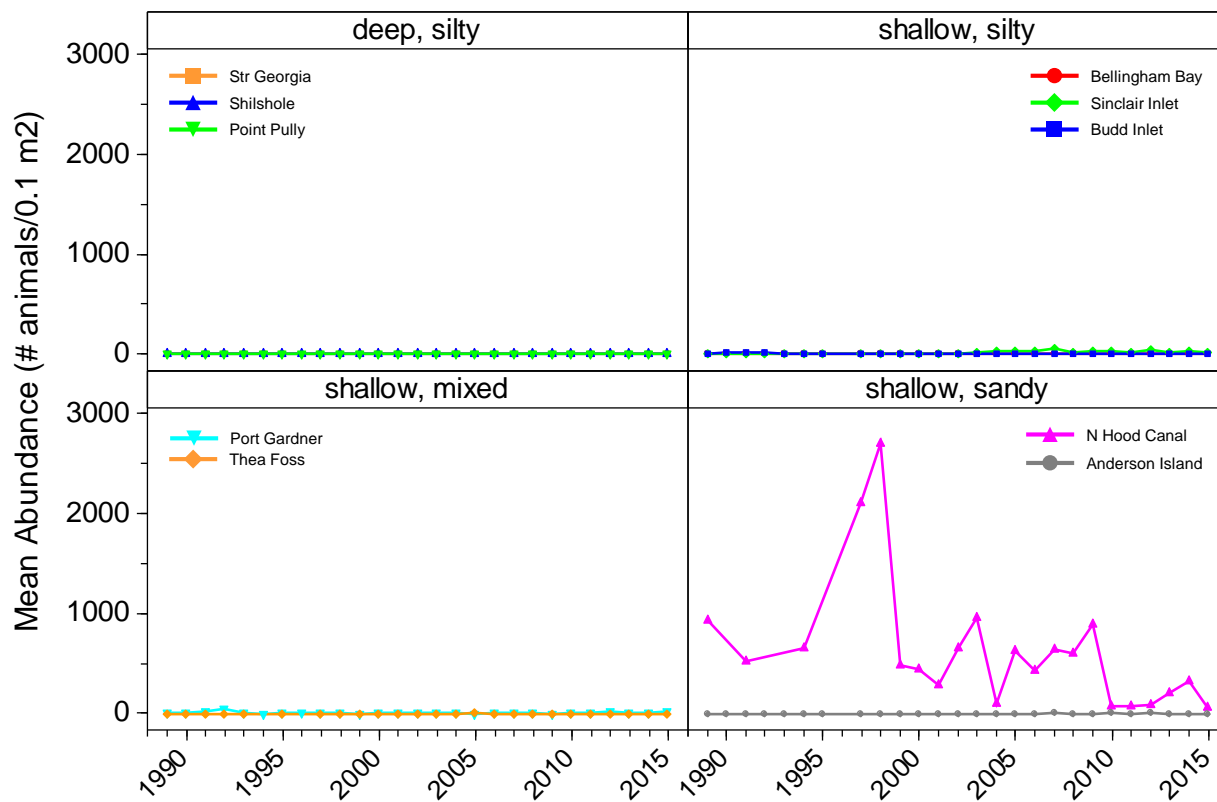
Nephtys spp.



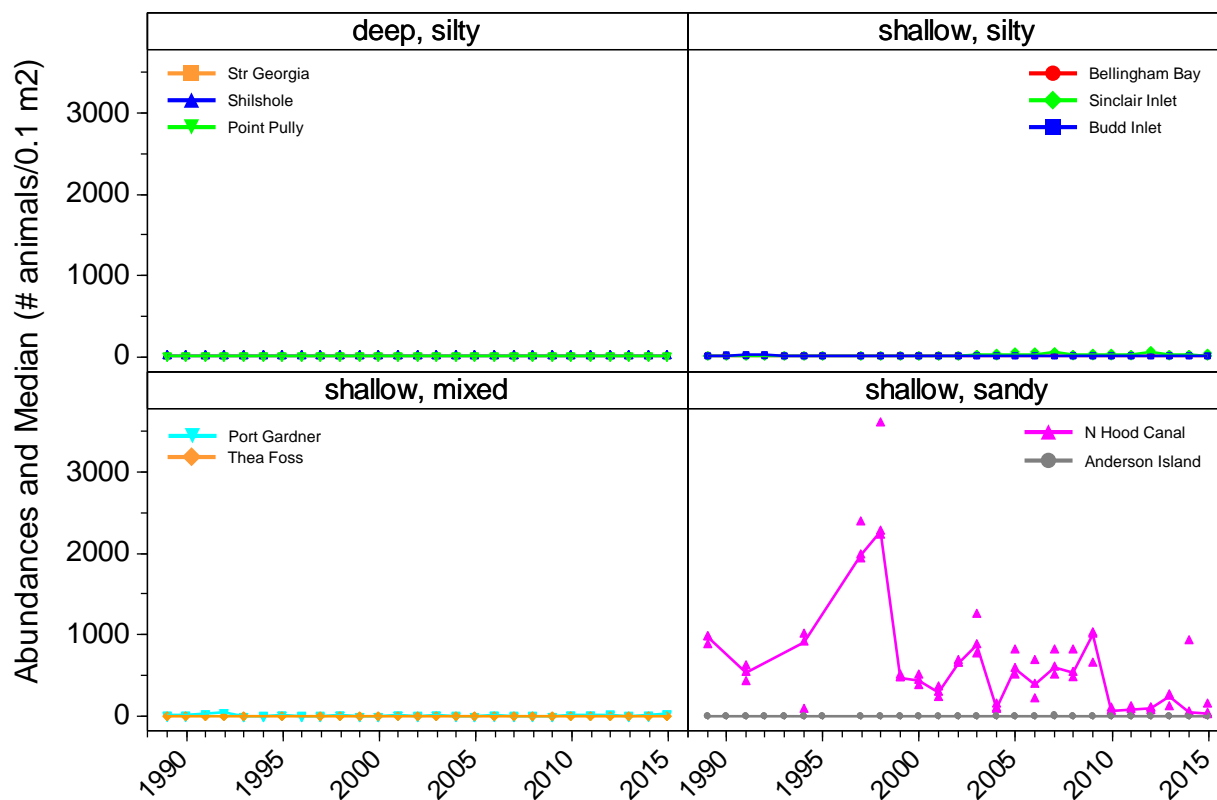
Nephtys spp.



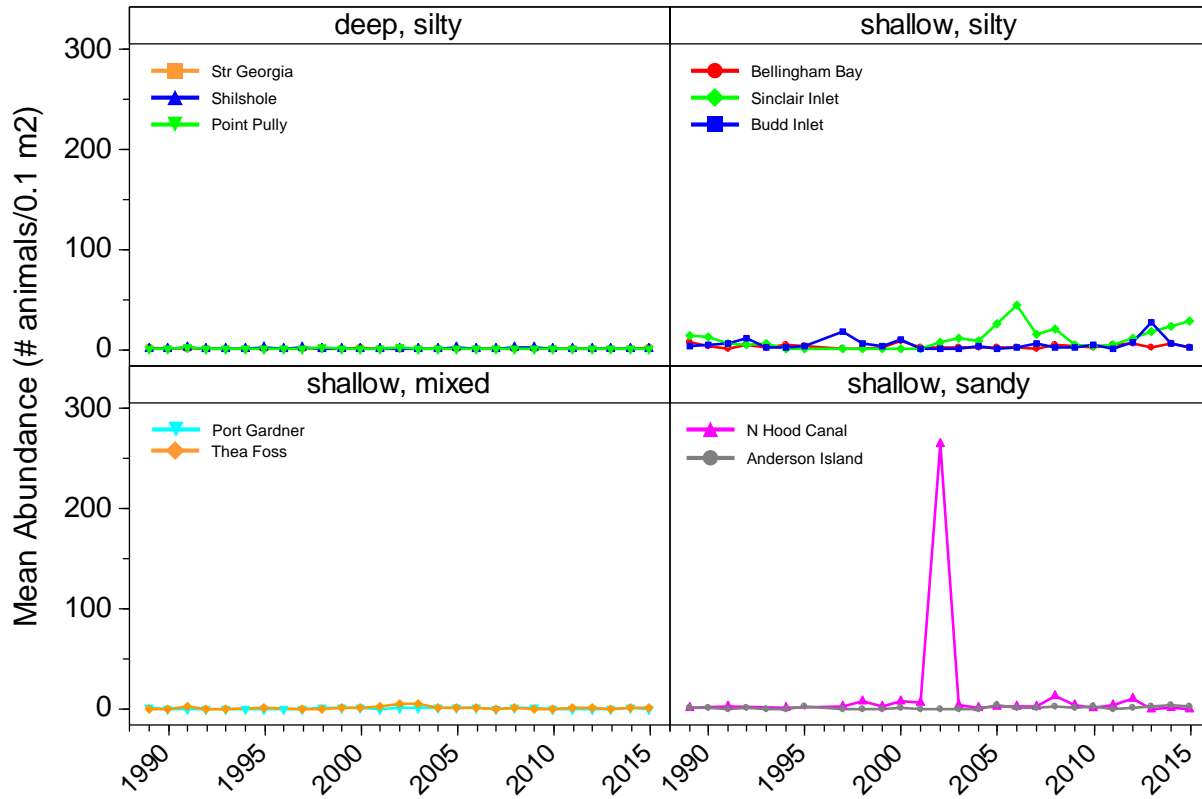
Nutricola lordi



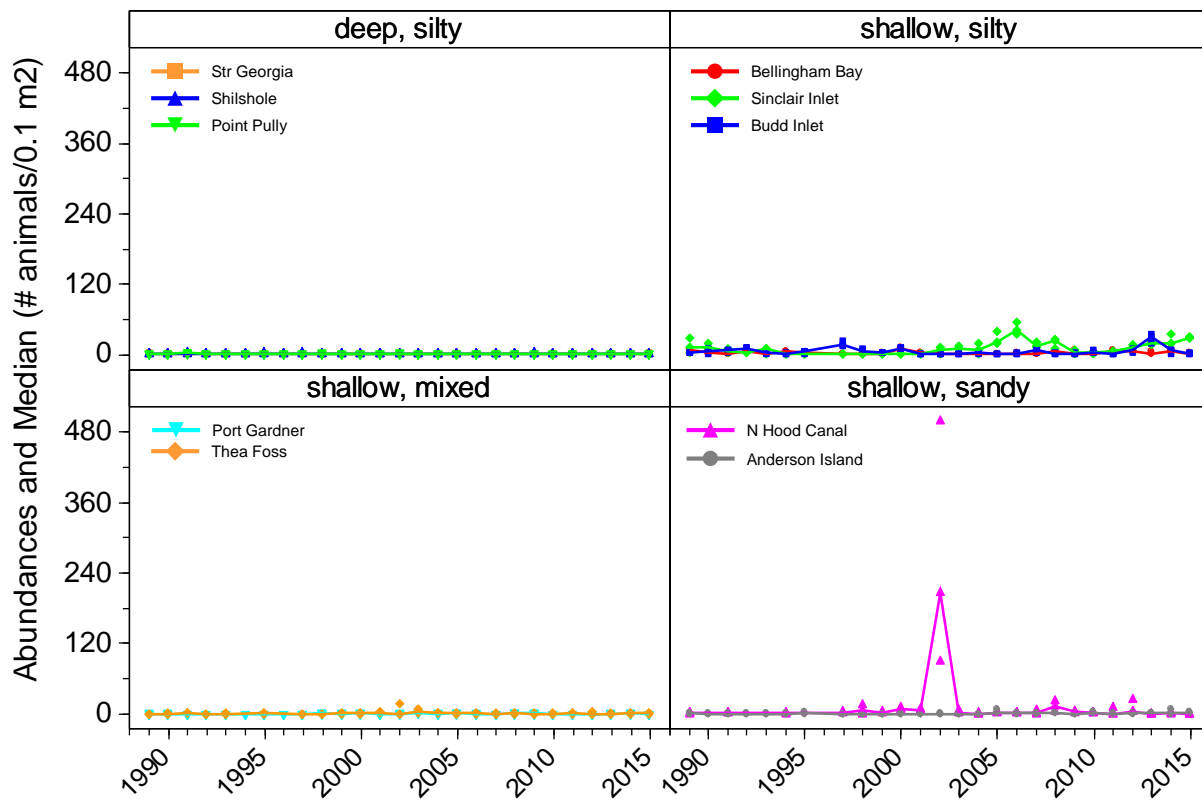
Nutricola lordi



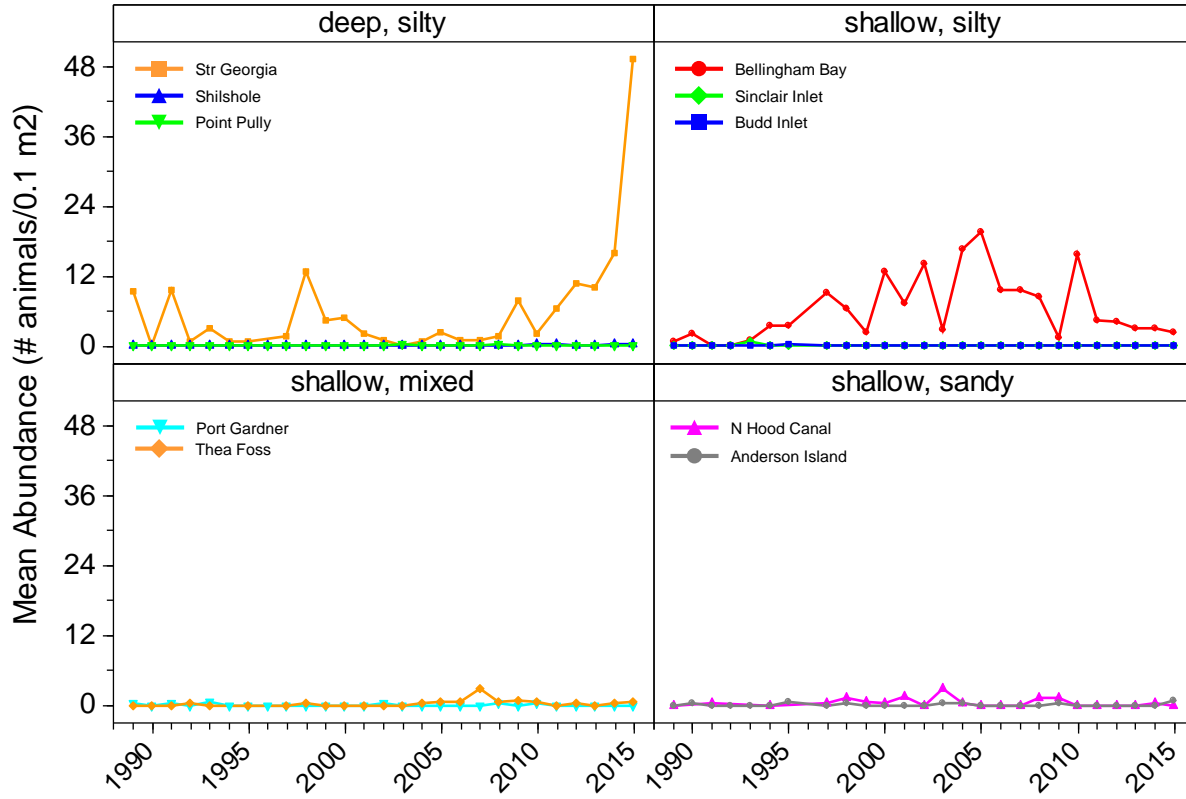
Odostomia spp.



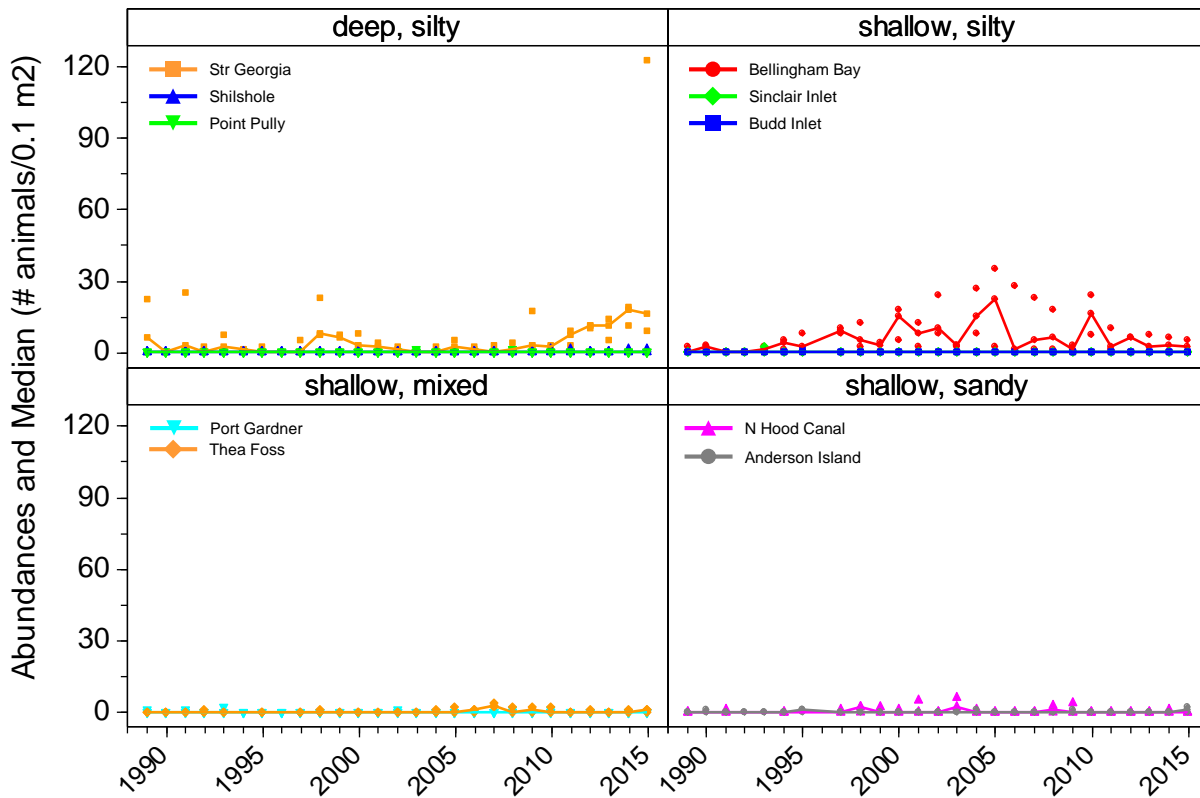
Odostomia spp.



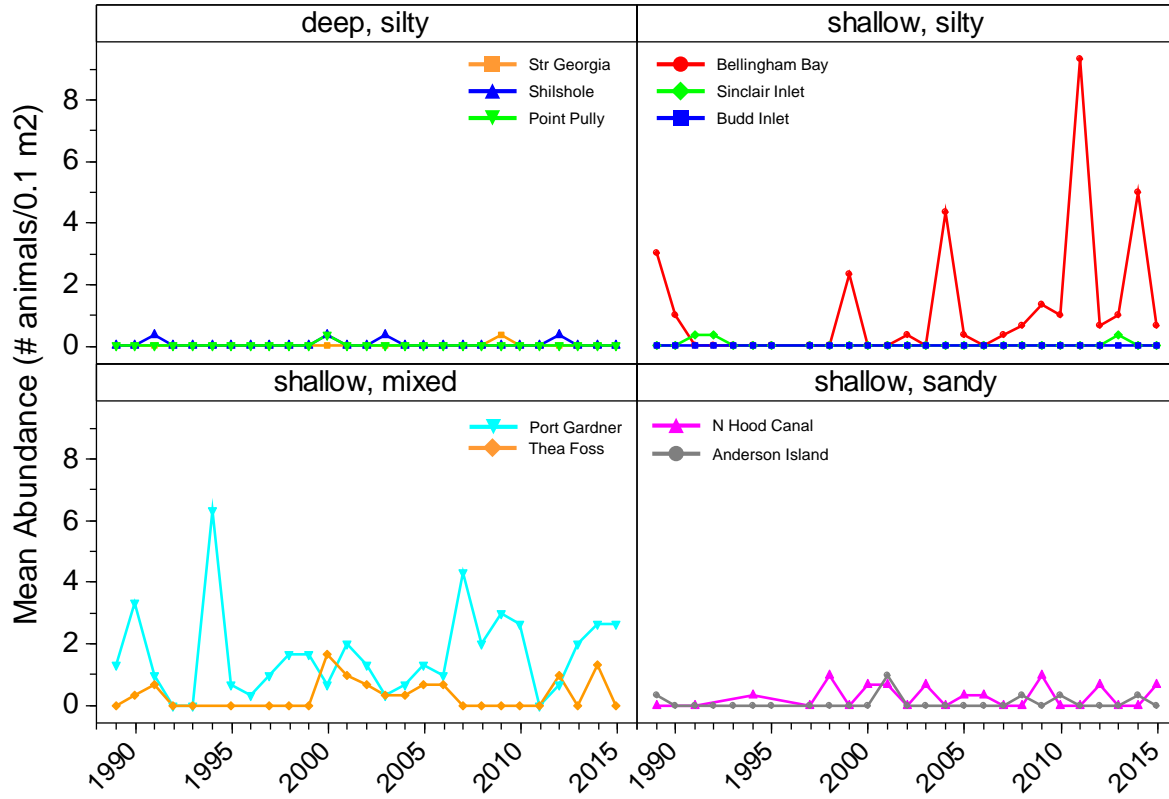
Oligochaeta



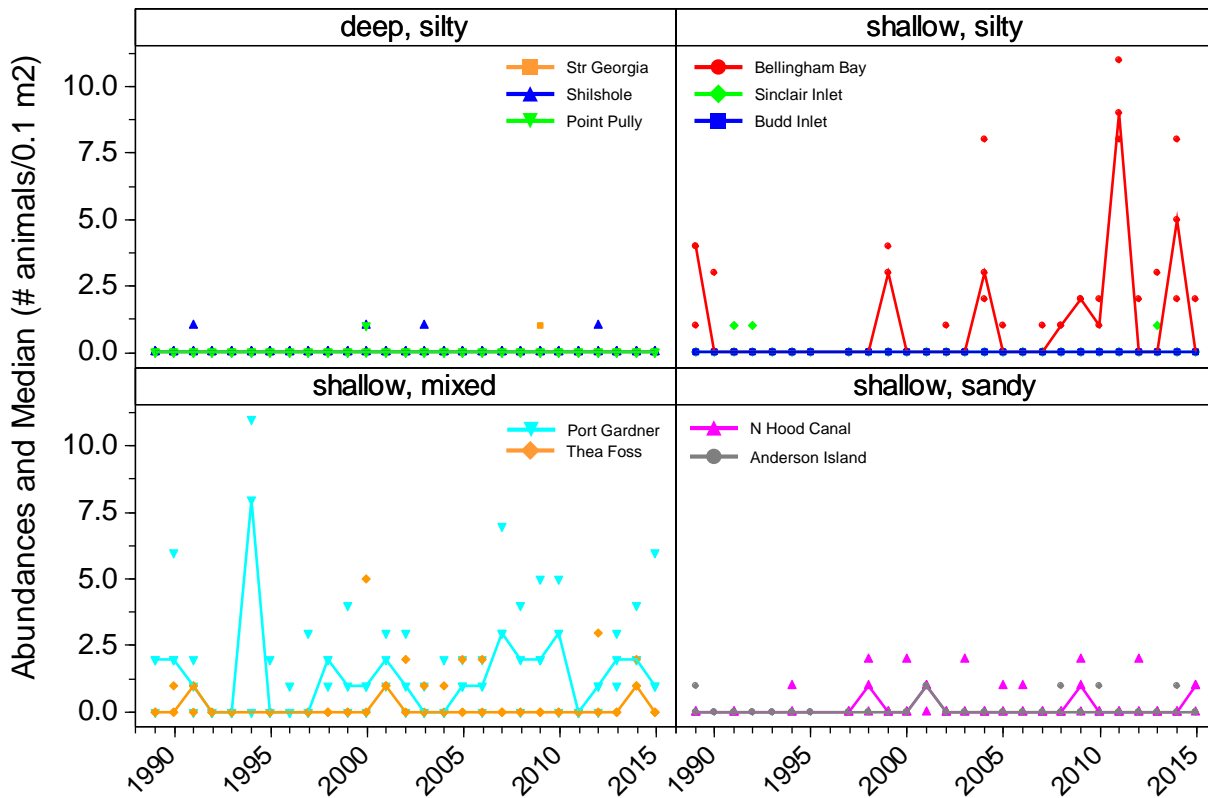
Oligochaeta



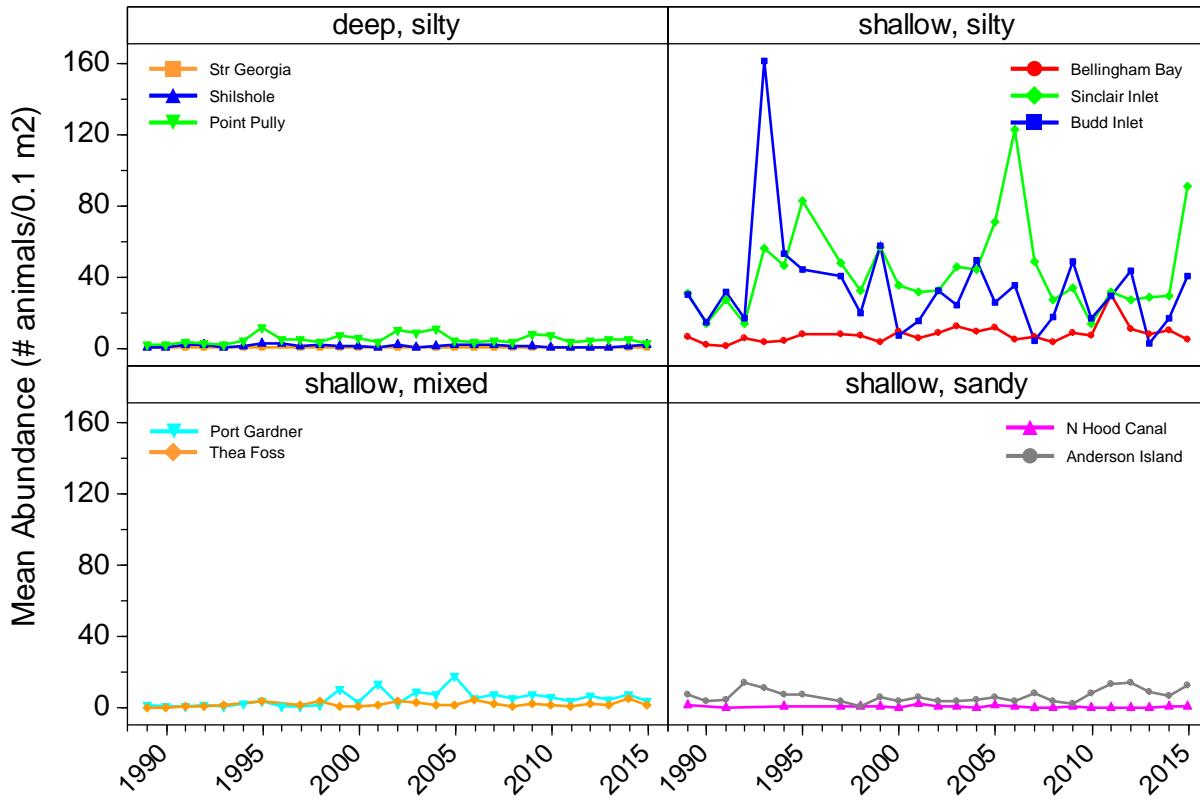
Ophelina spp.



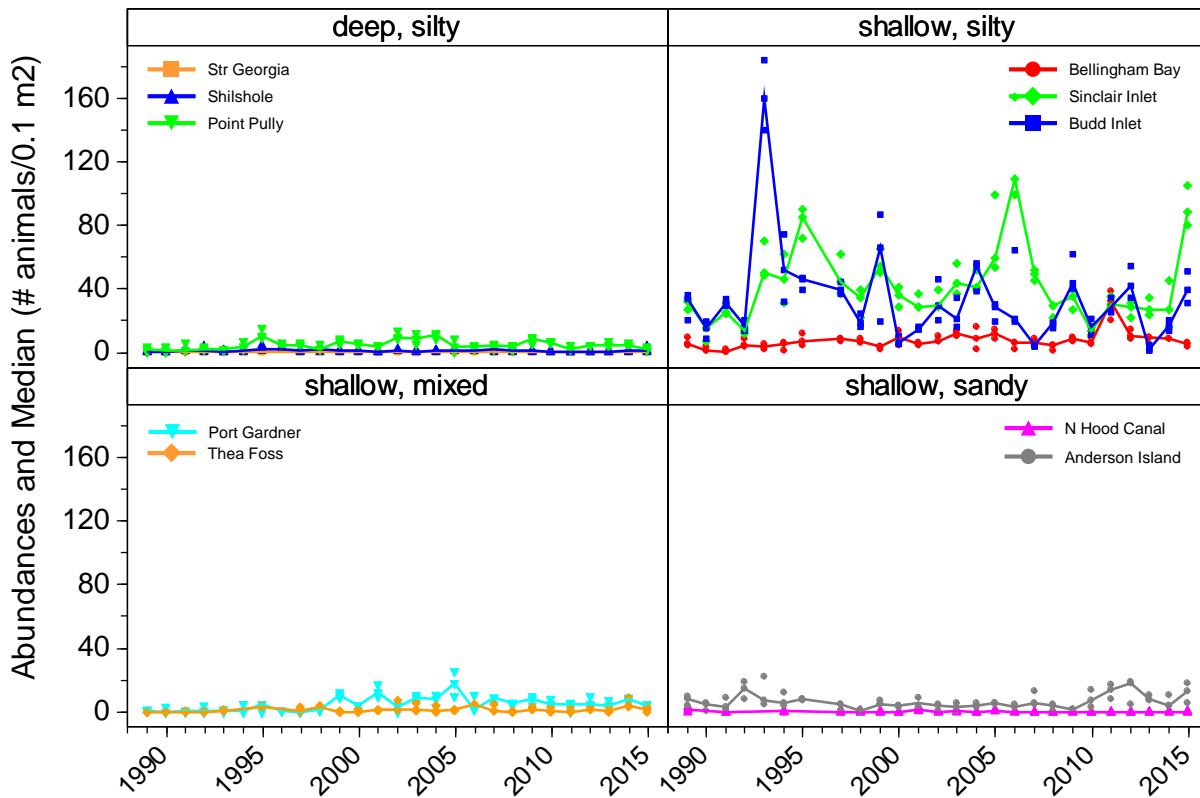
Ophelina spp.



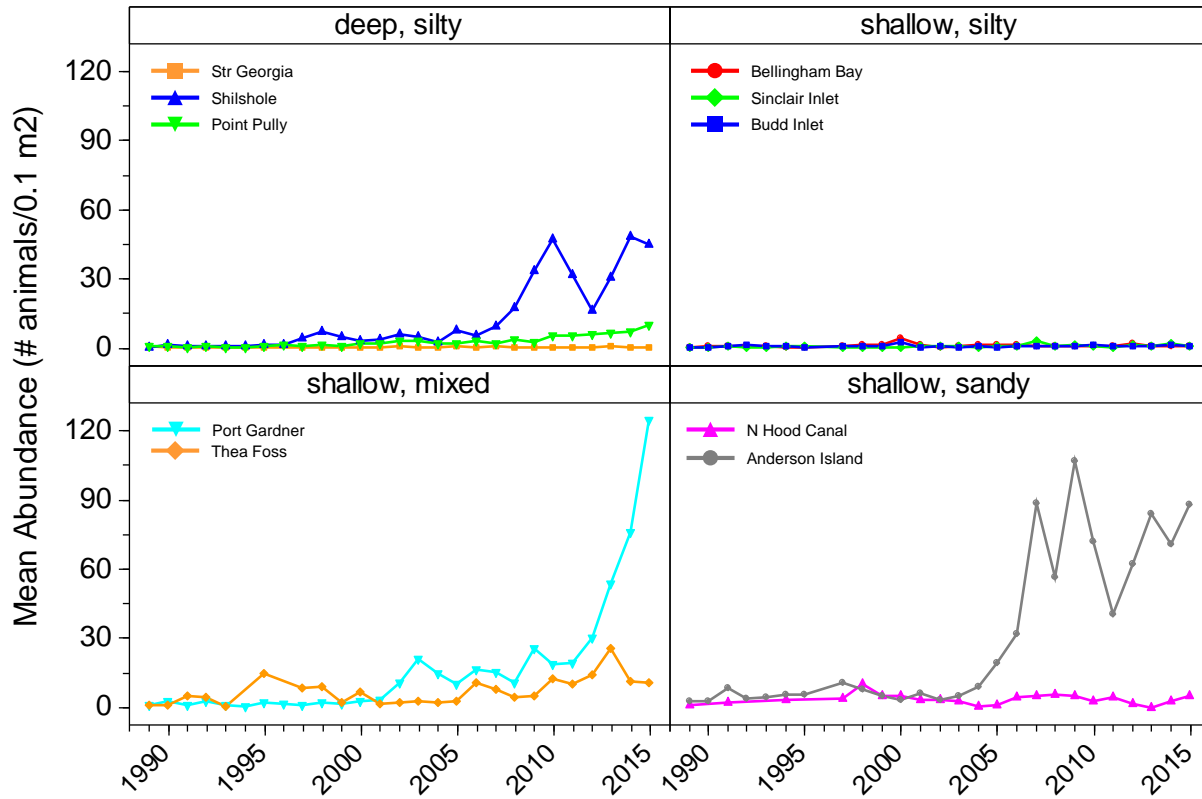
Paraprionospio spp.



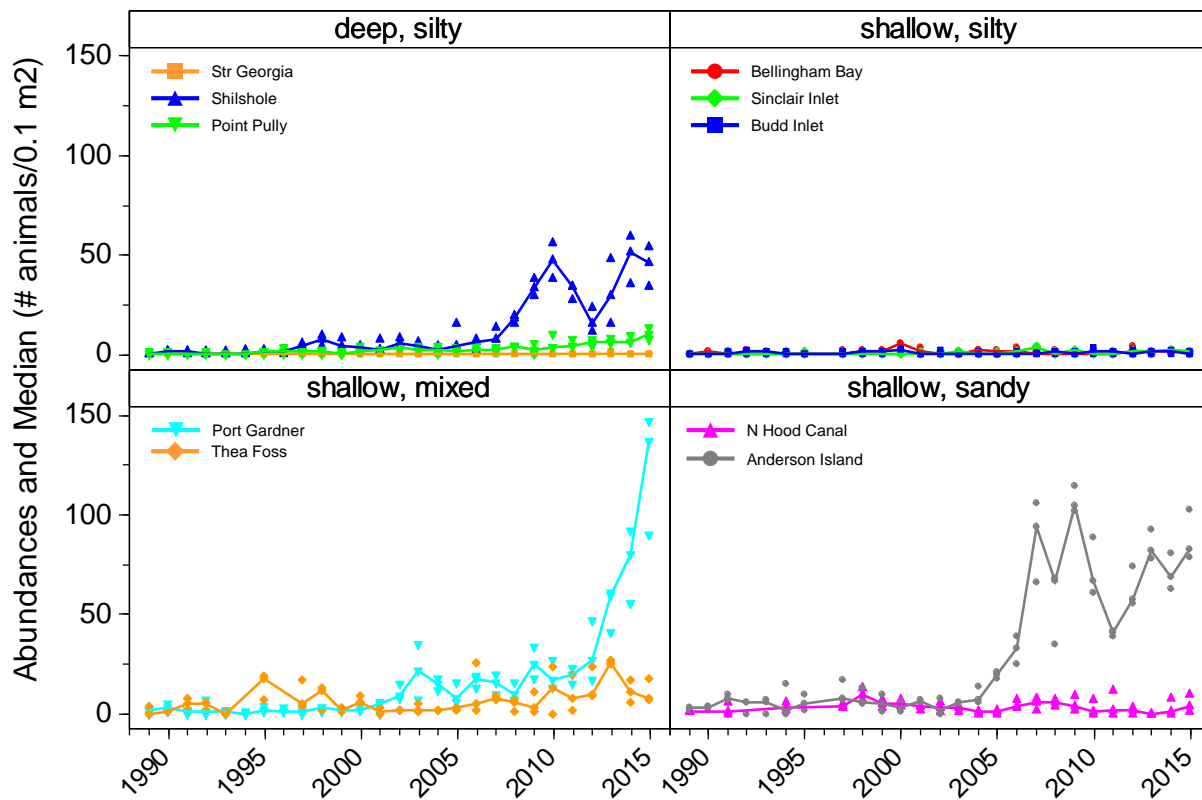
Paraprionospio spp.



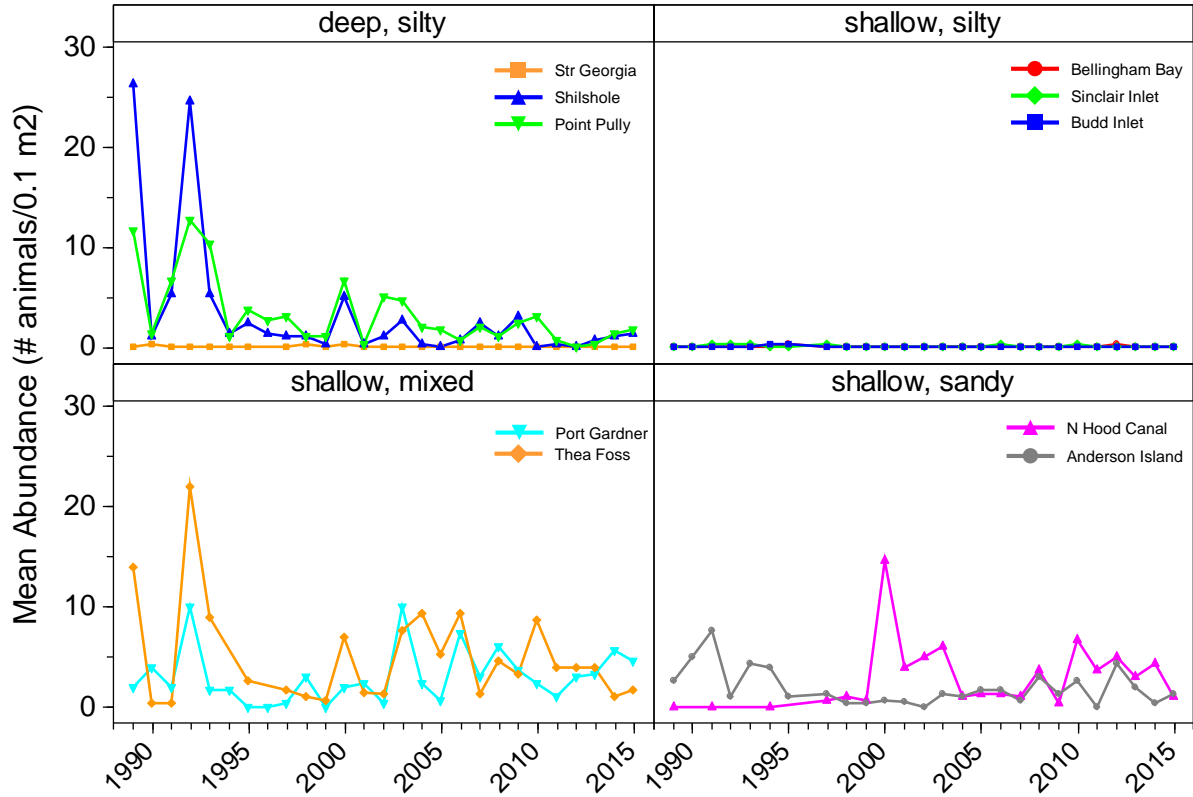
Parvilucina tenuisculpta



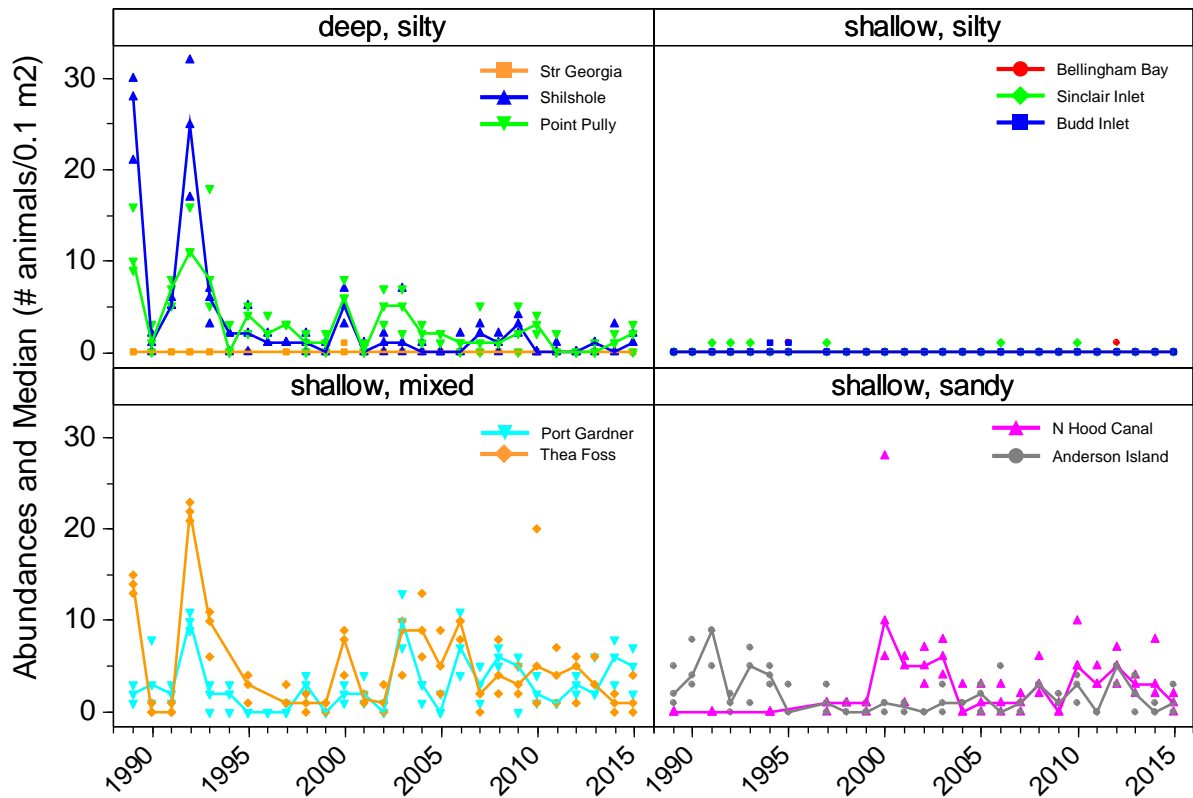
Parvilucina tenuisculpta



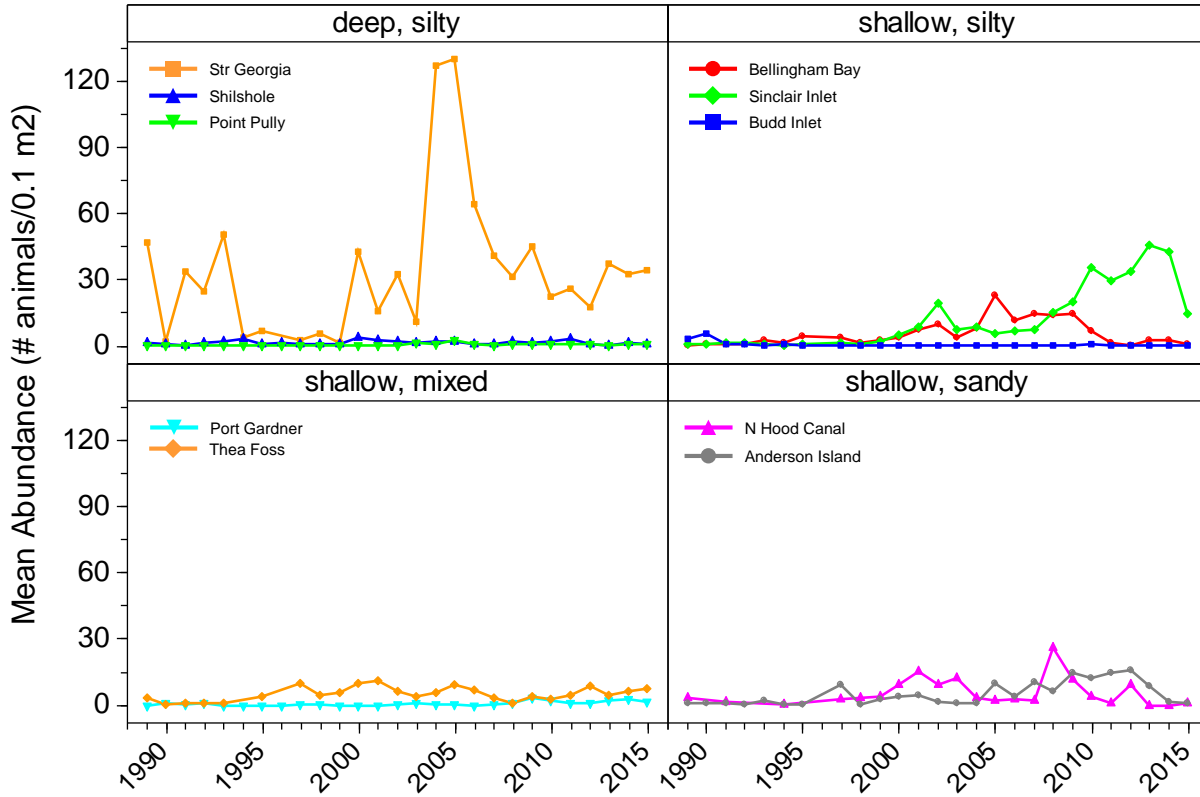
Pectinaria spp.



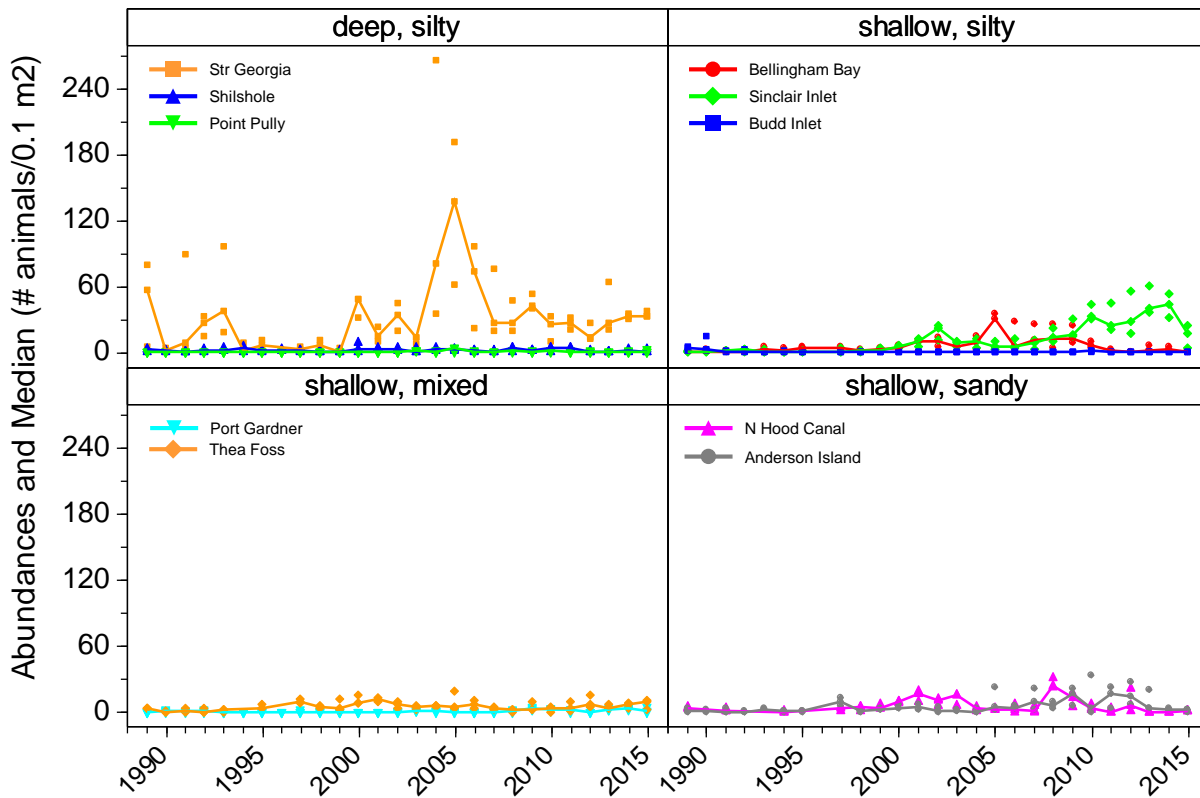
Pectinaria spp.



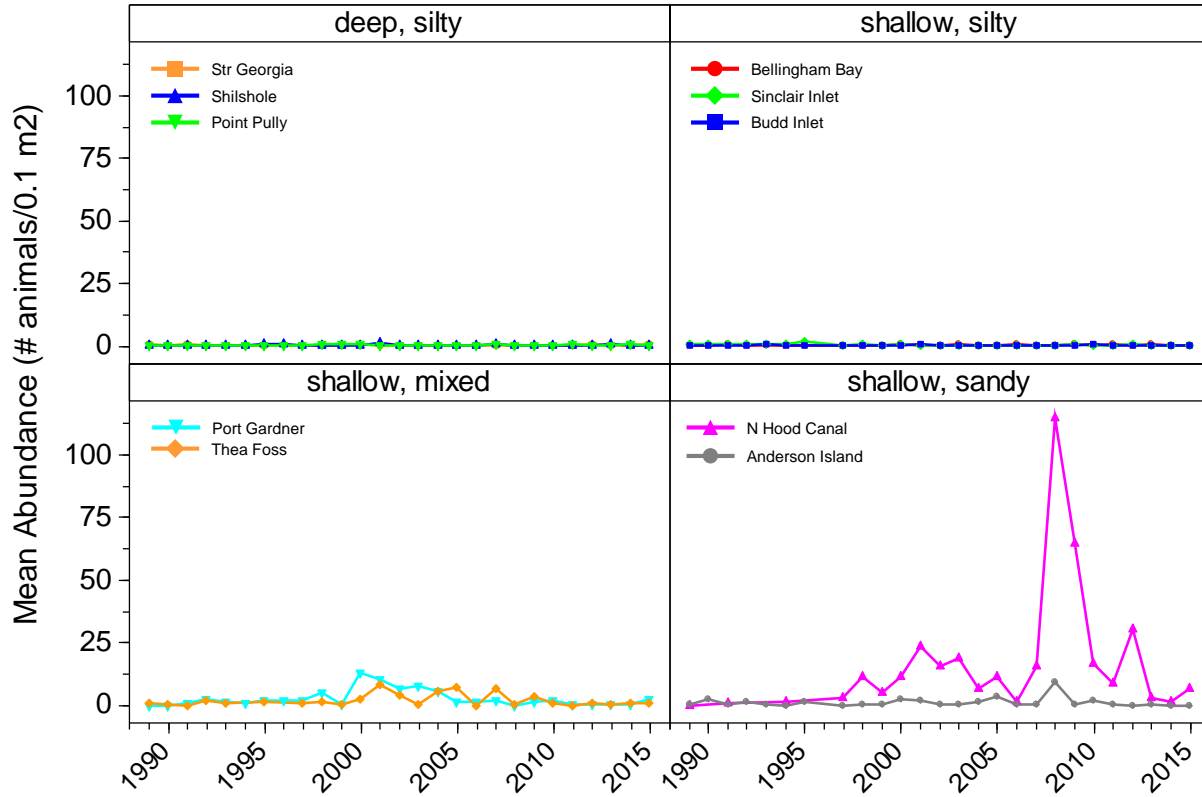
Pholoe spp.



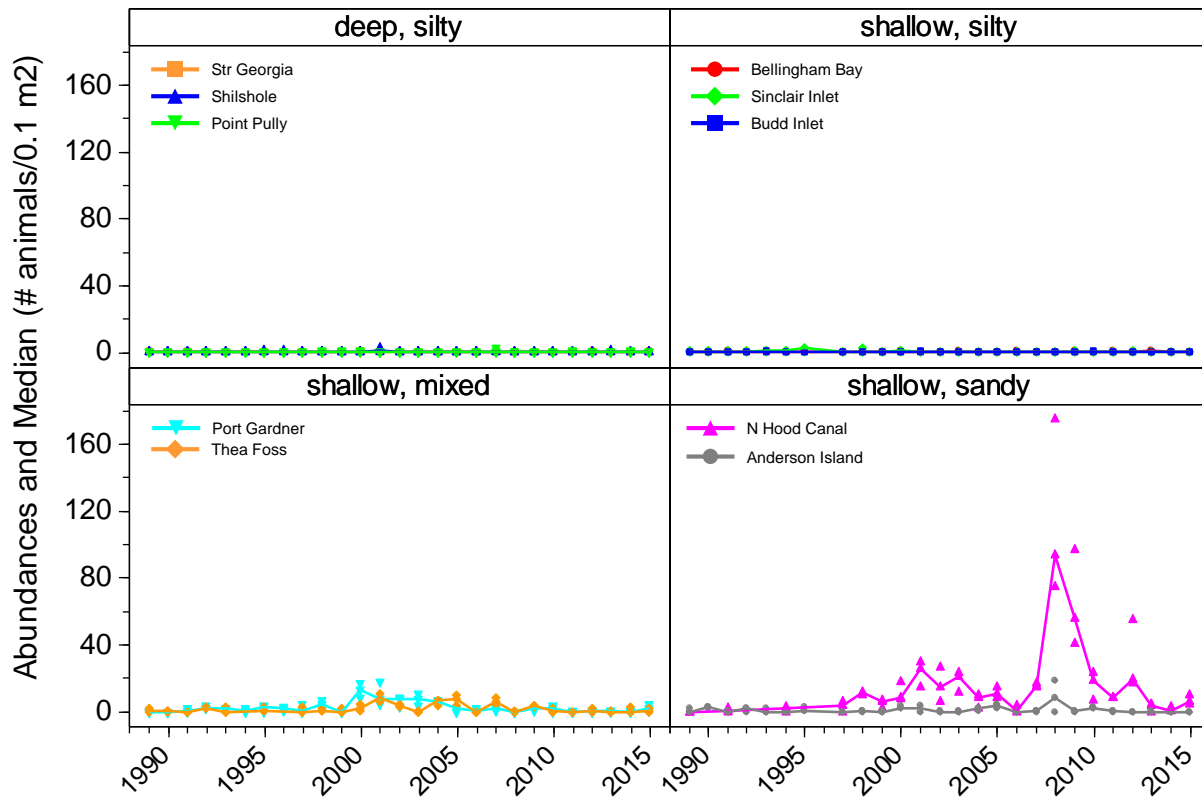
Pholoe spp.



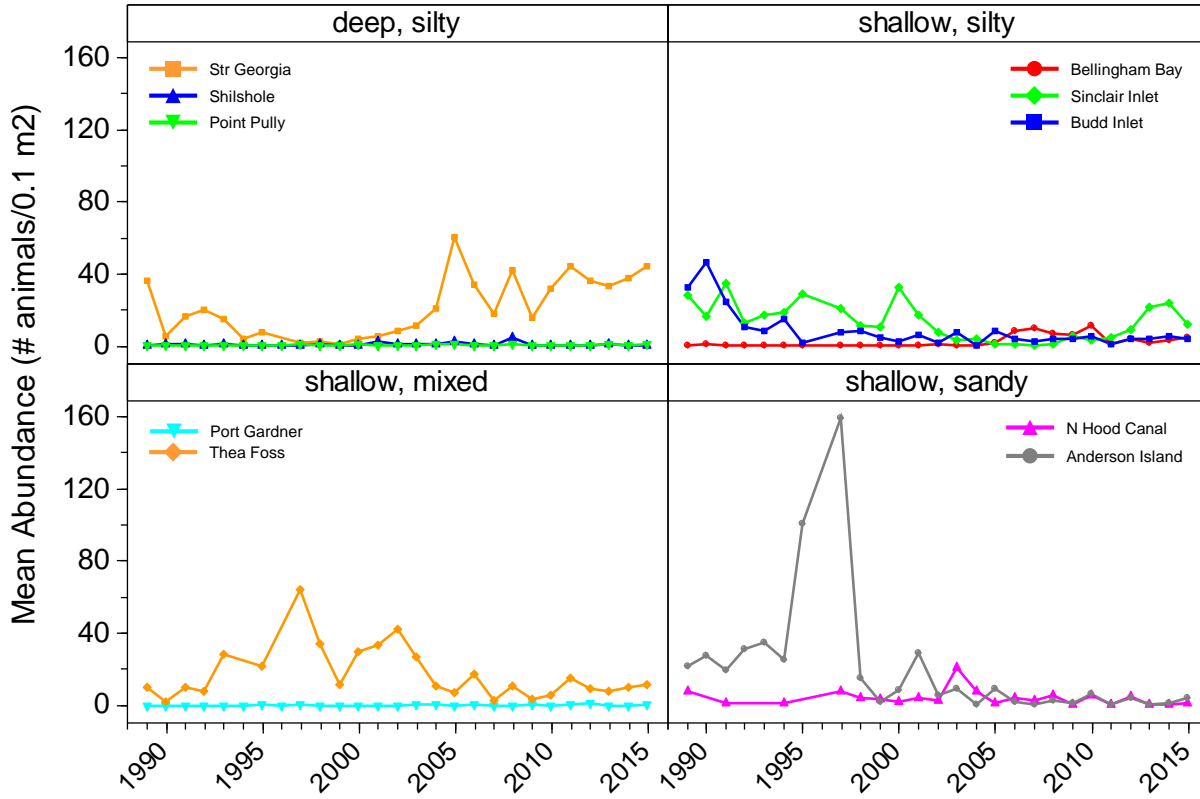
Phyllodoce spp.



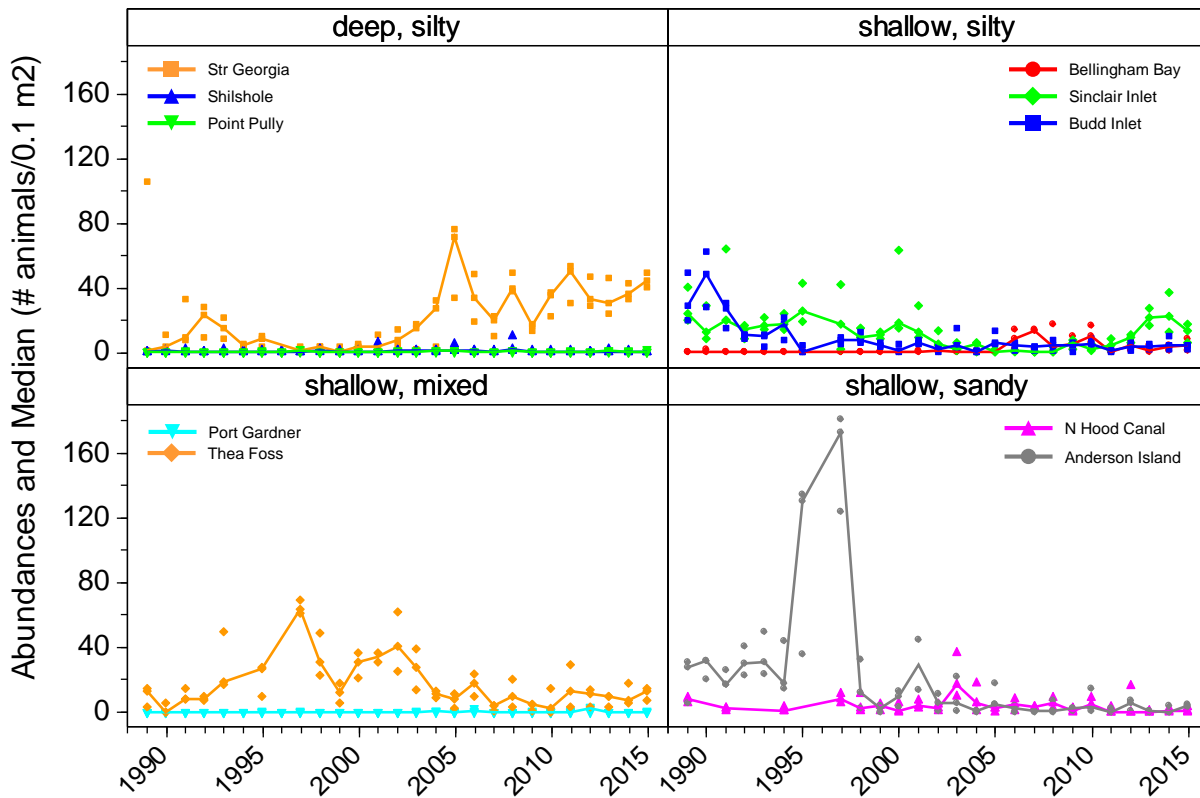
Phyllodoce spp.



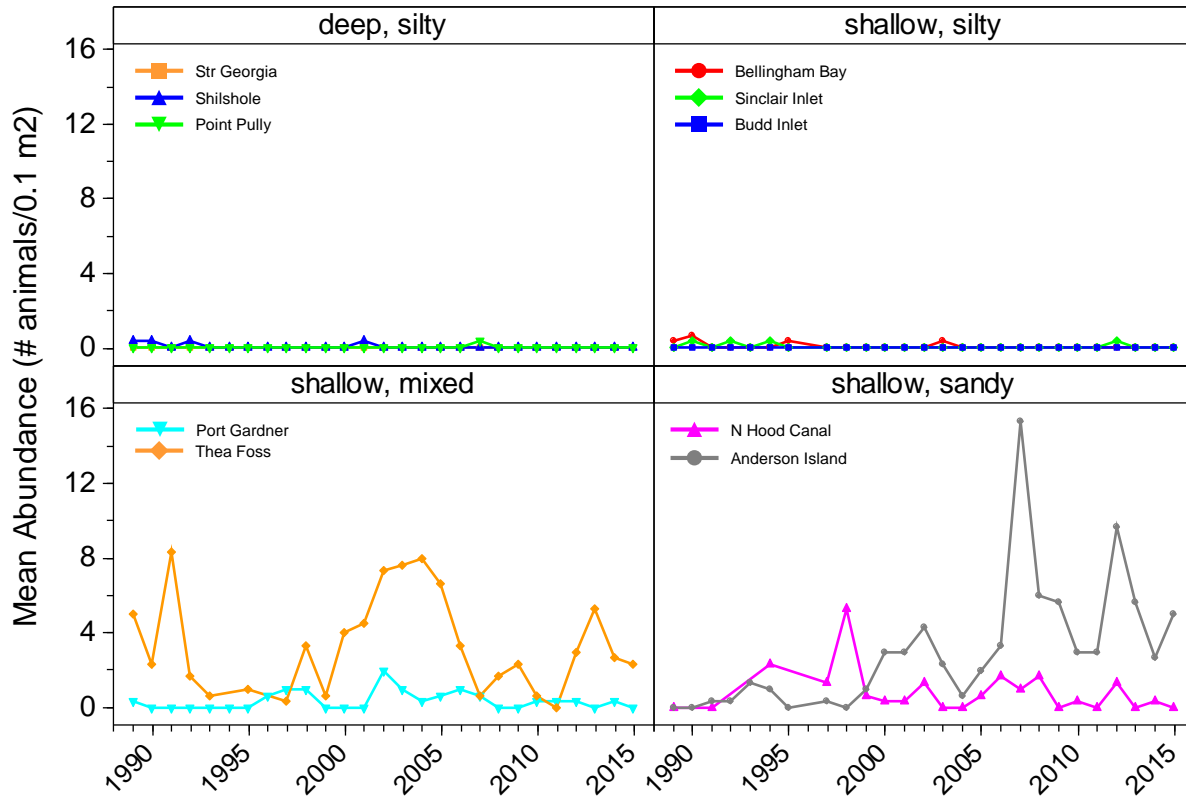
Pinnixa spp.



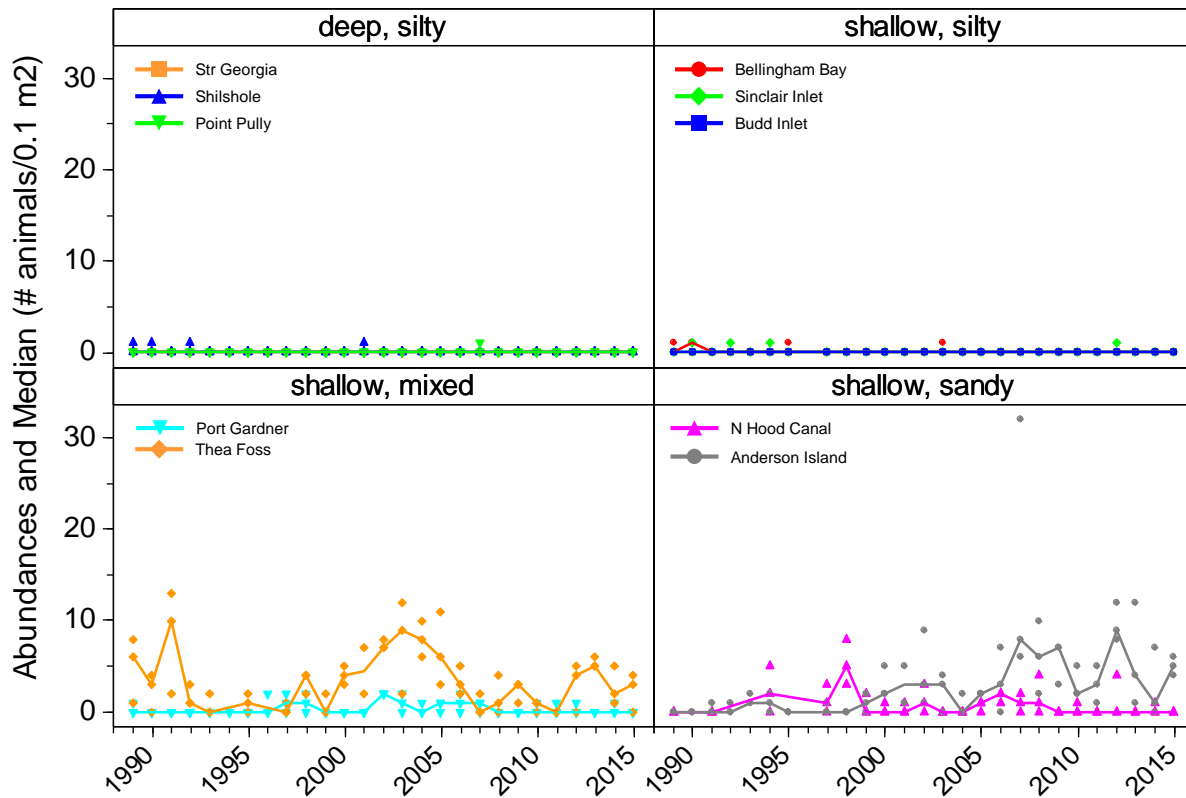
Pinnixa spp.



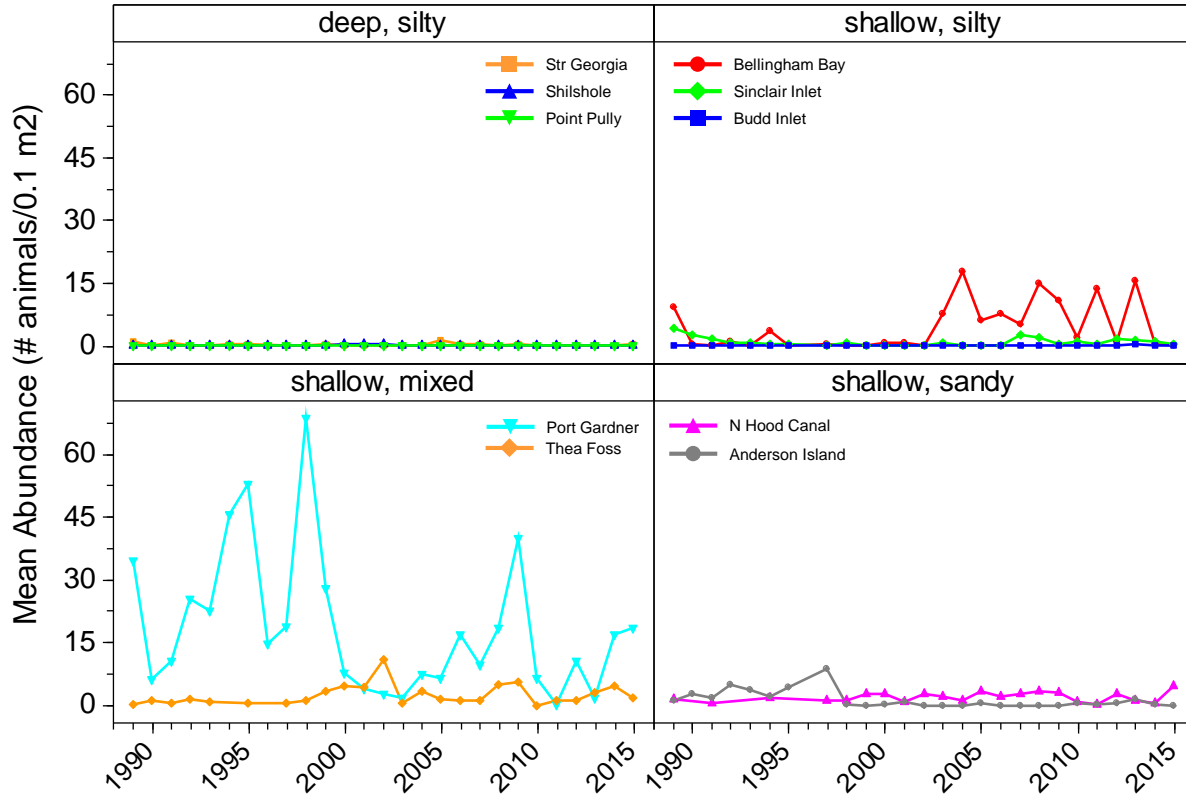
Pista spp.



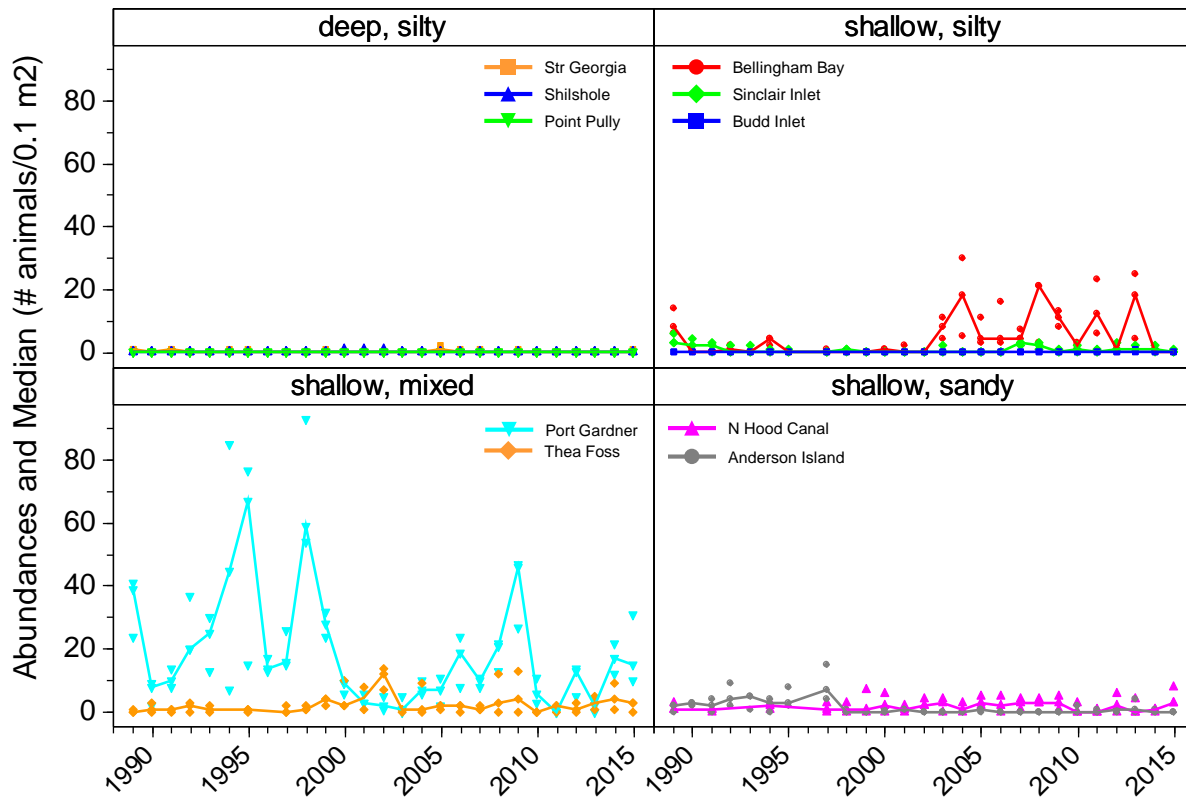
Pista spp.



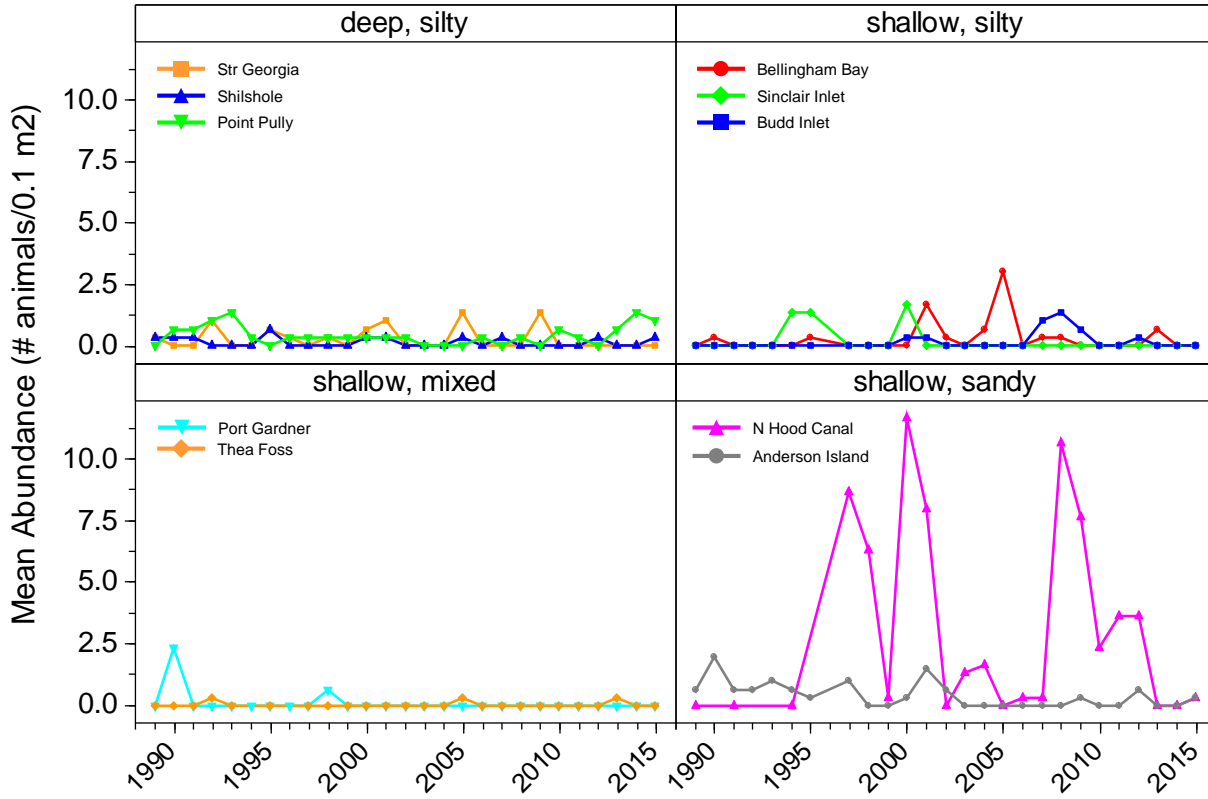
Polycirrus spp.



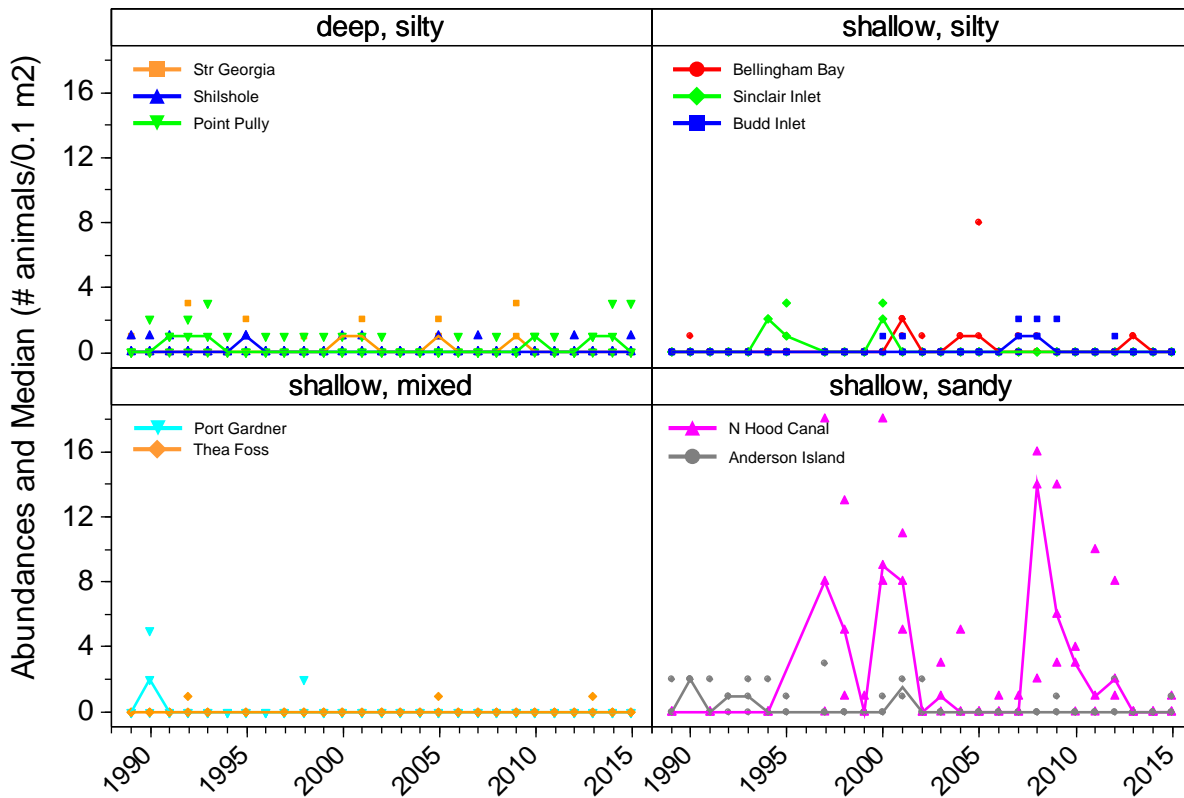
Polycirrus spp.



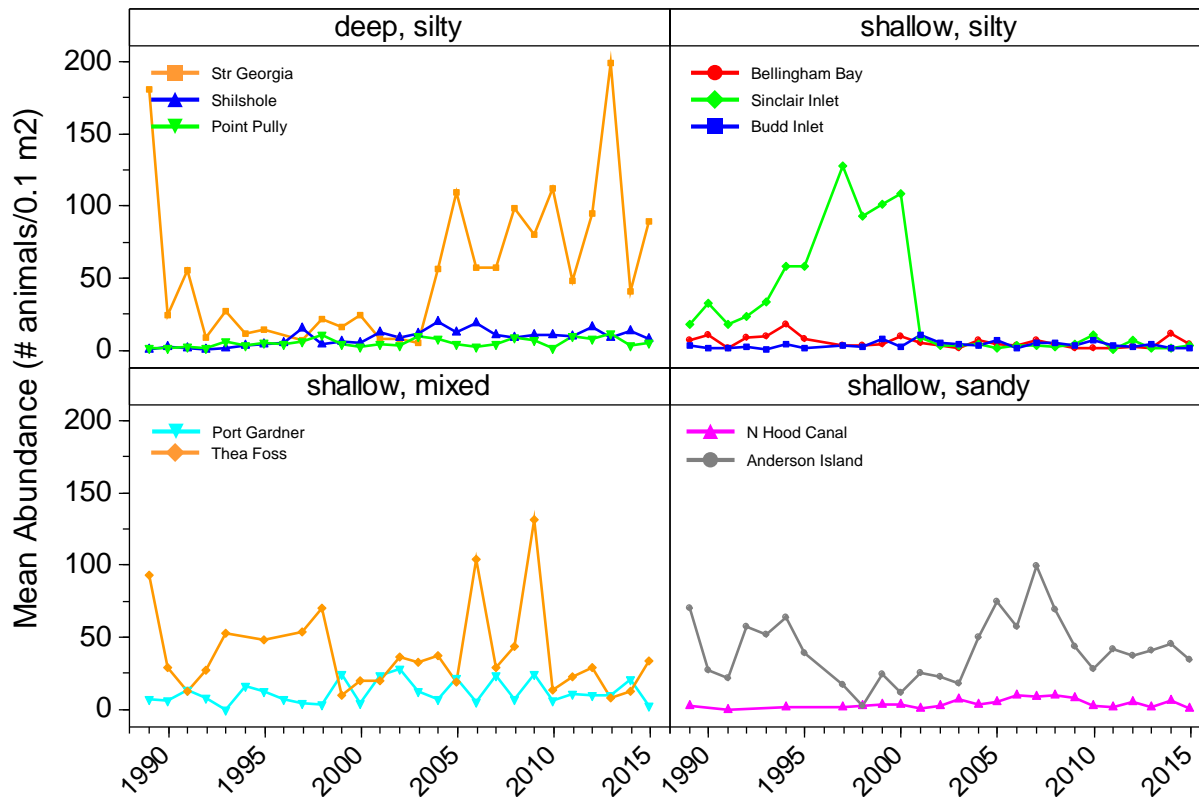
Polynoidae



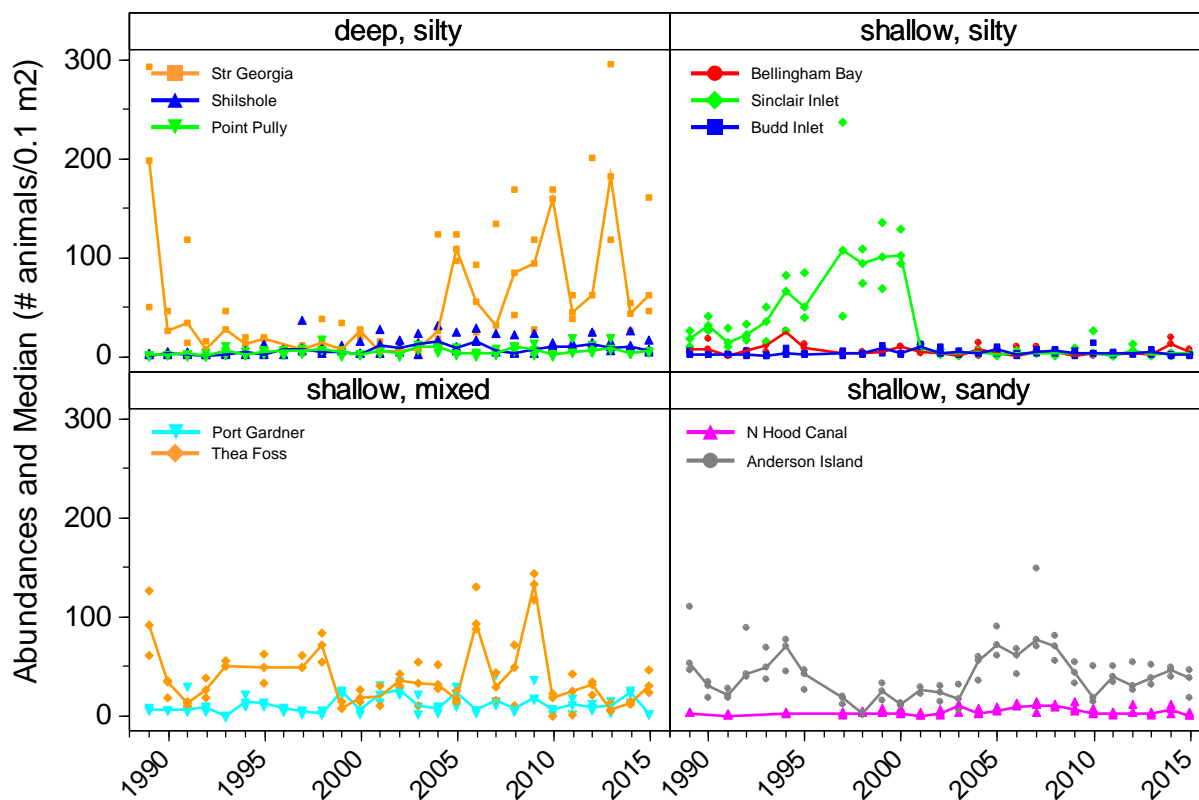
Polynoidae



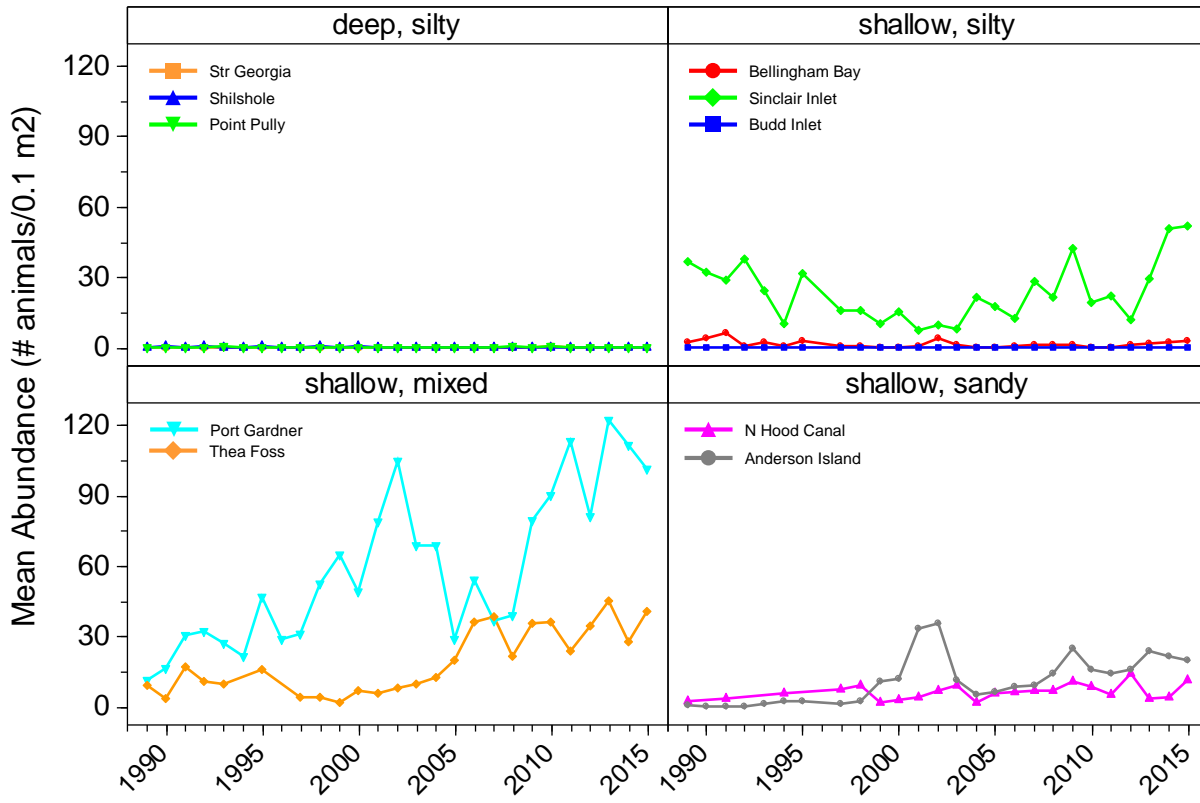
Prionospio spp.



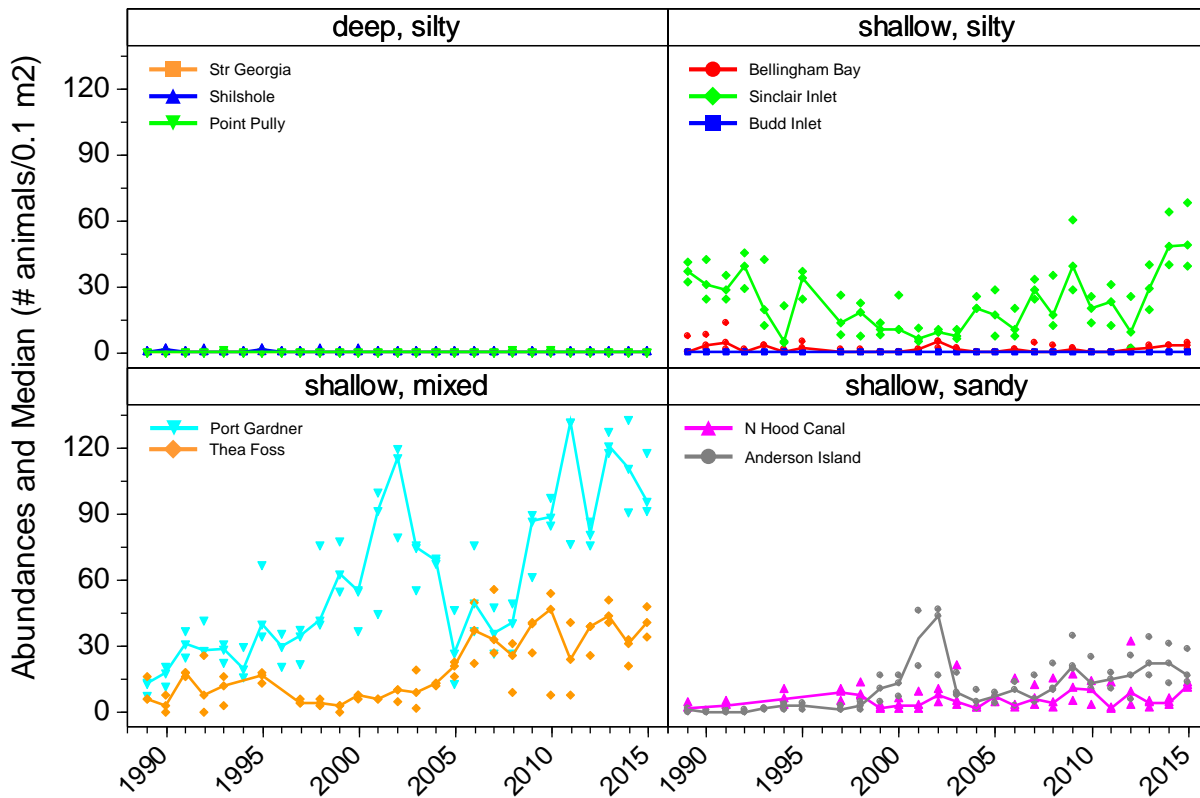
Prionospio spp.



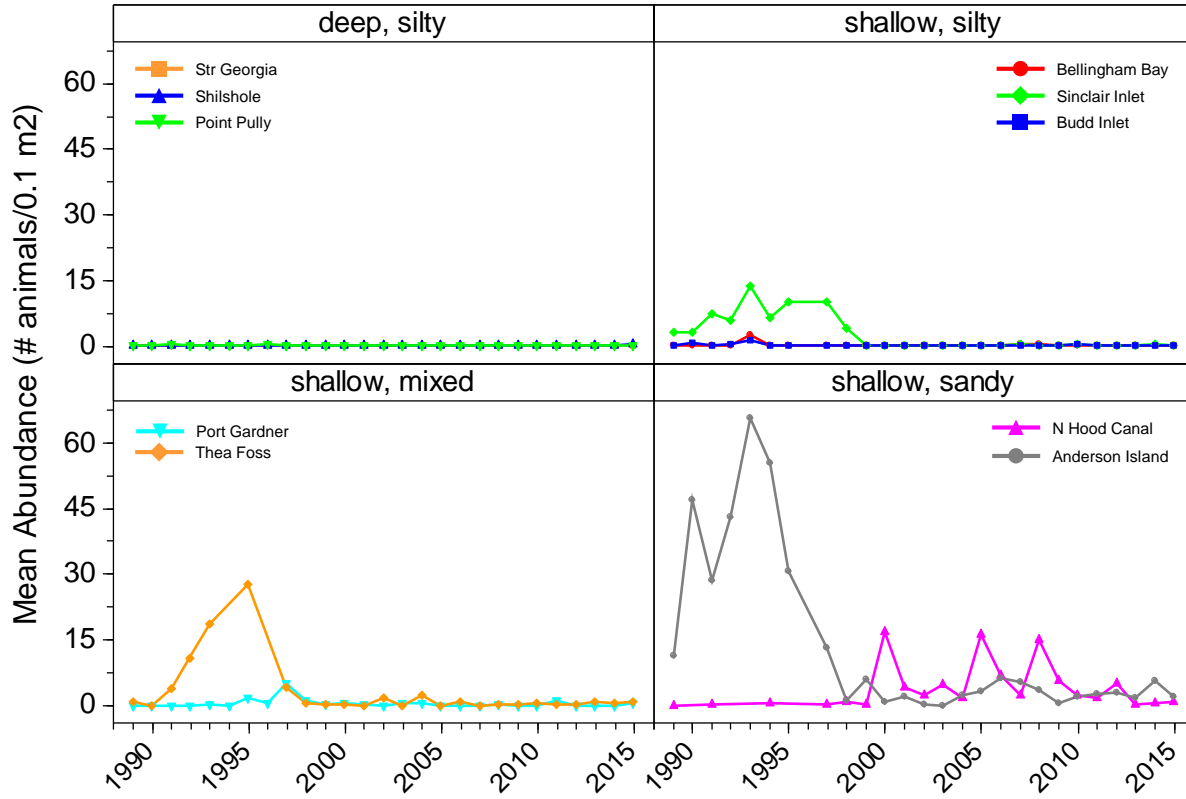
Scoletoma spp.



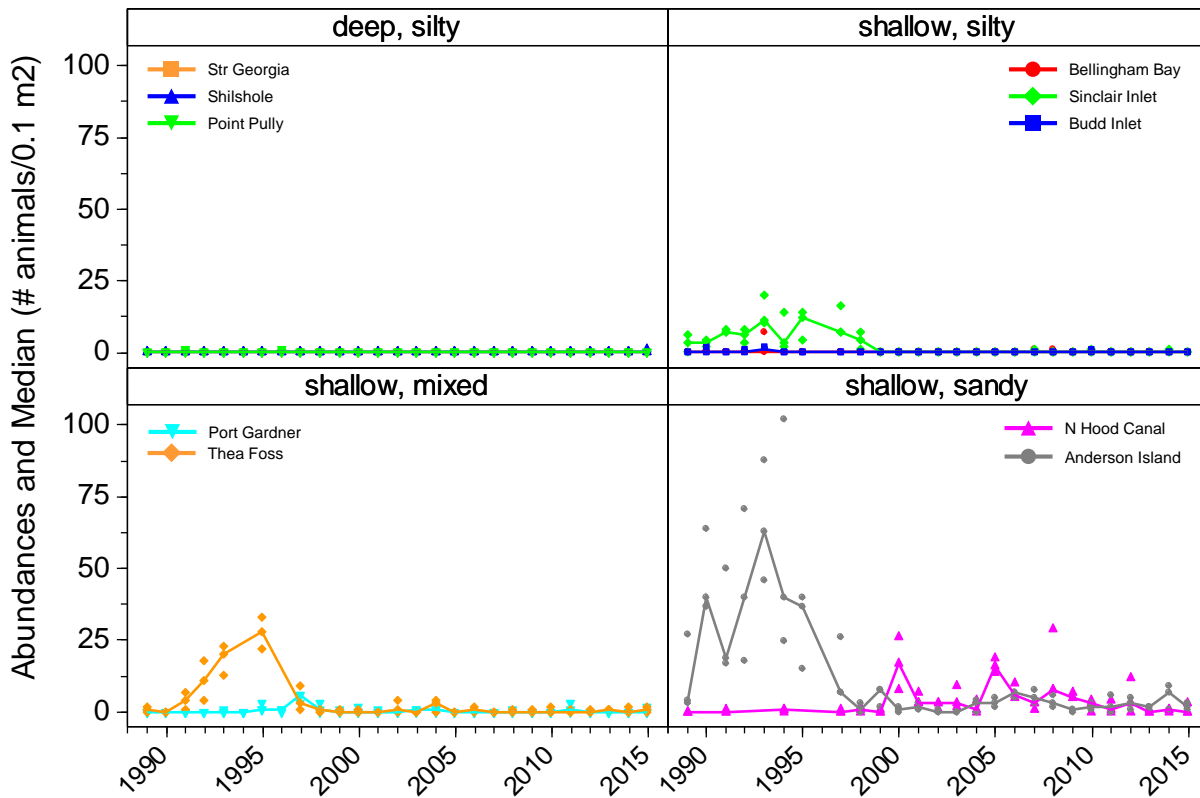
Scoletoma spp.



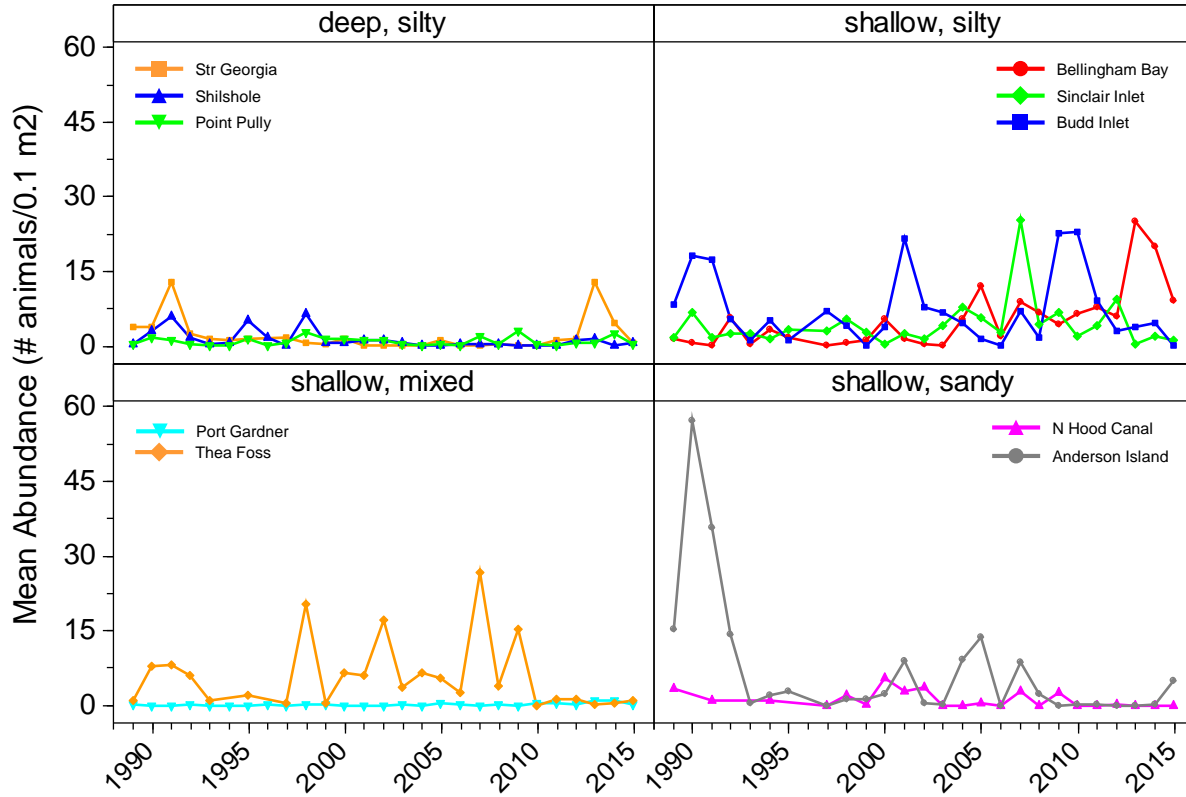
Spiochaetopterus costarum Cmplx



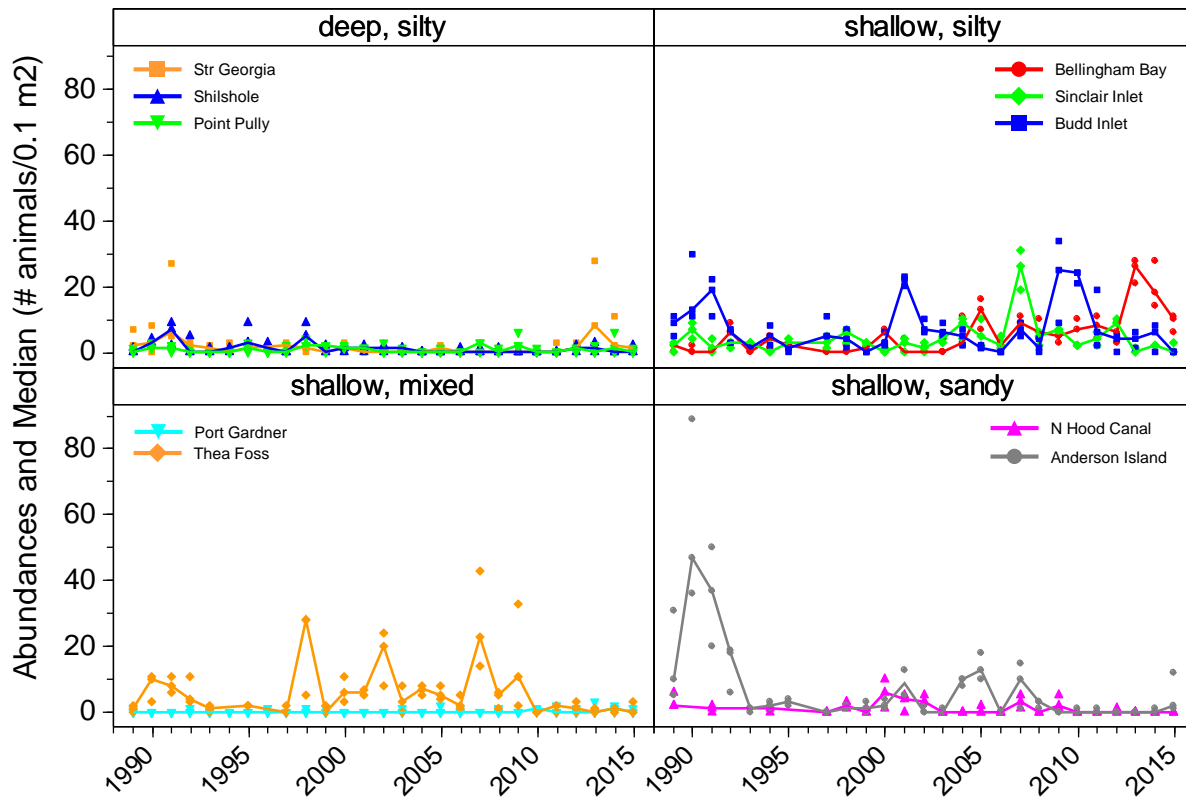
Spiochaetopterus costarum Cmplx



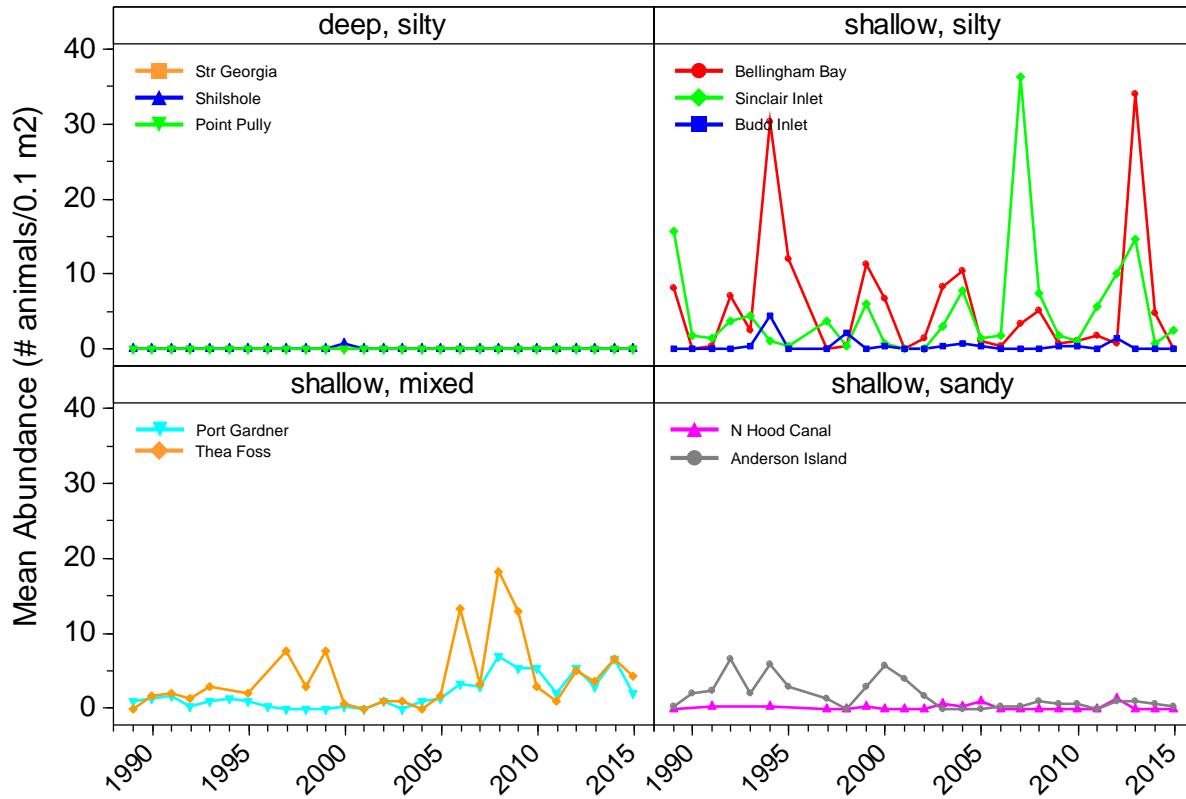
Spiophanes spp.



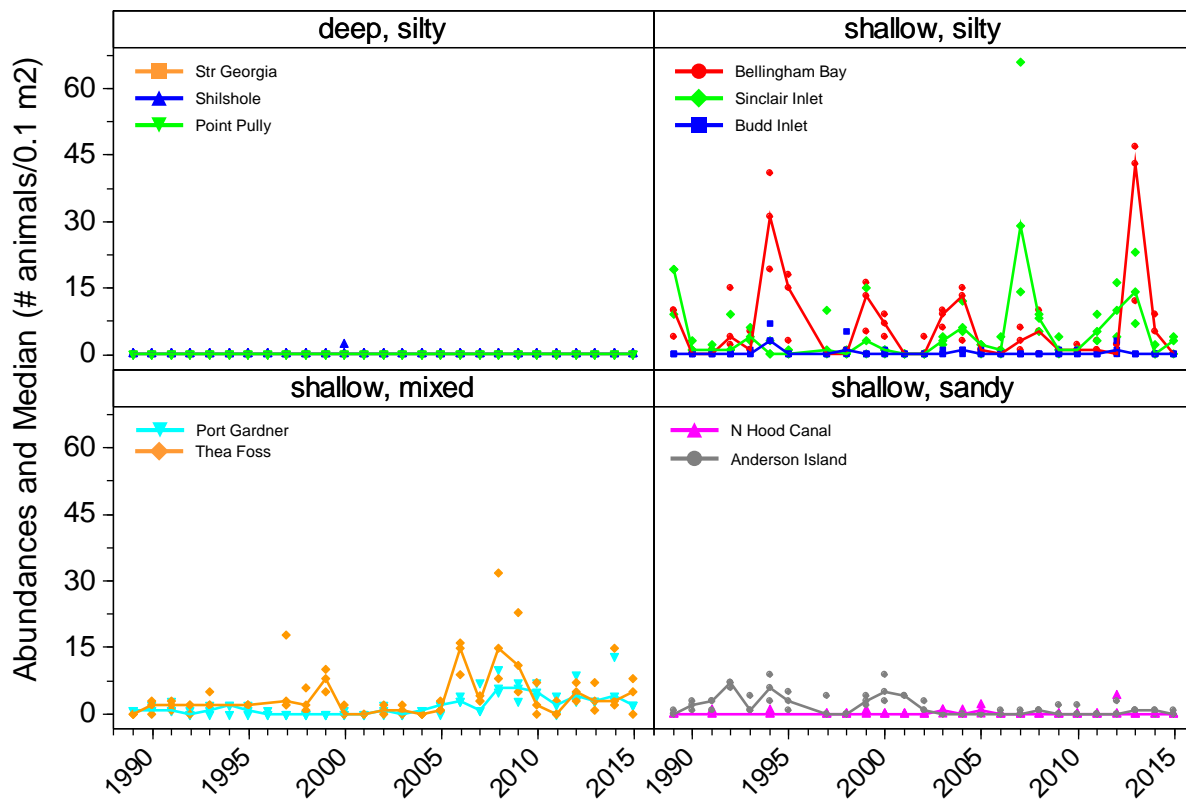
Spiophanes spp.



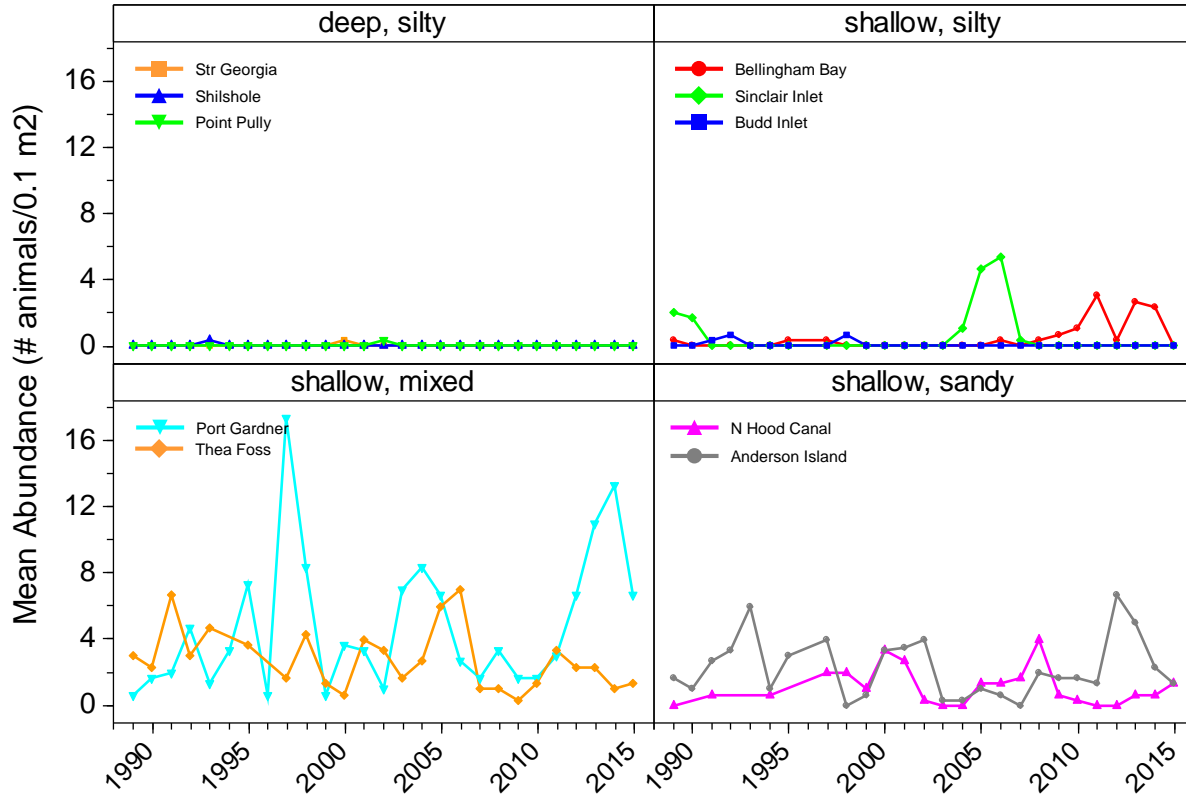
Terebellides spp.



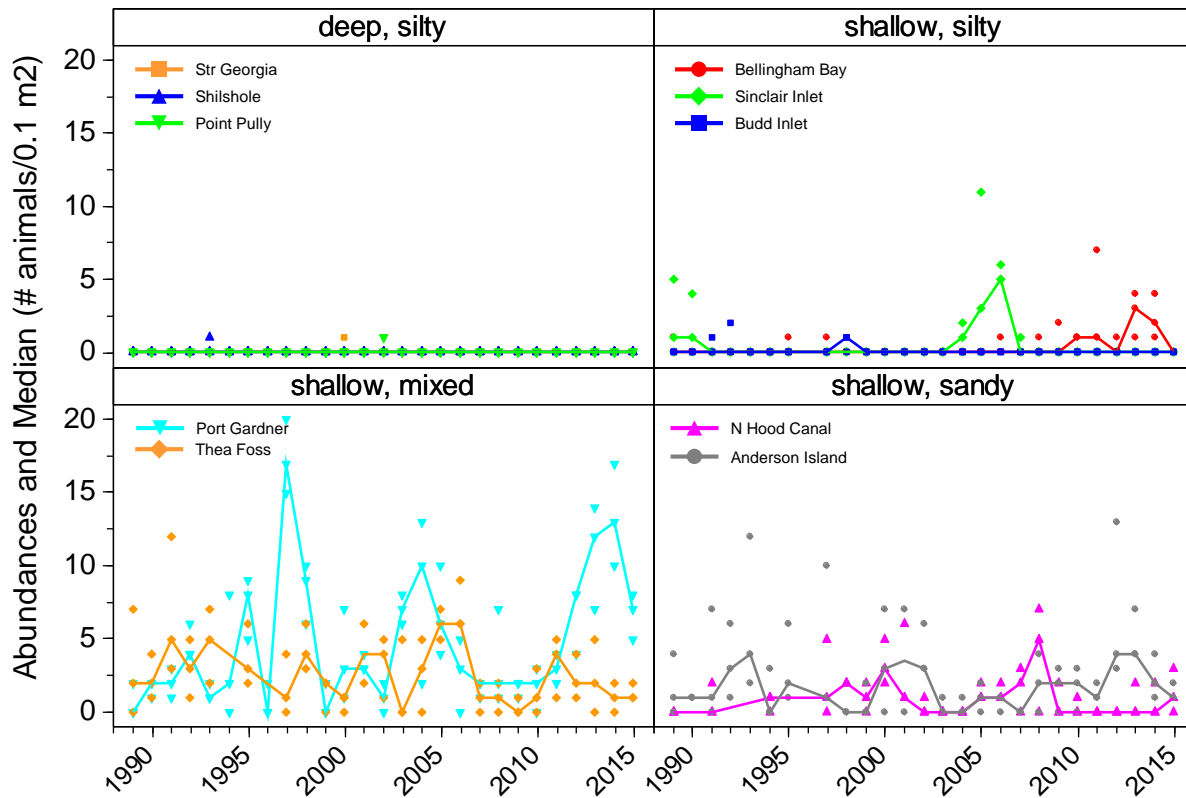
Terebellides spp.



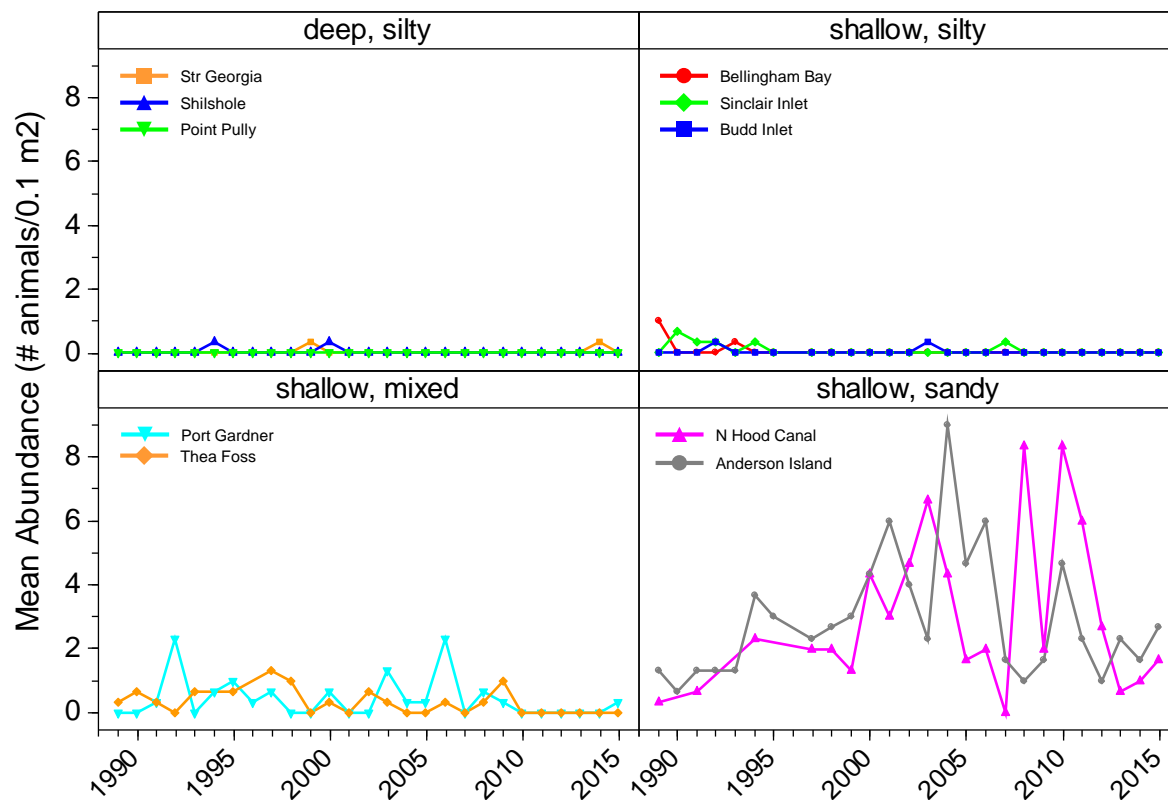
Turbonilla spp.



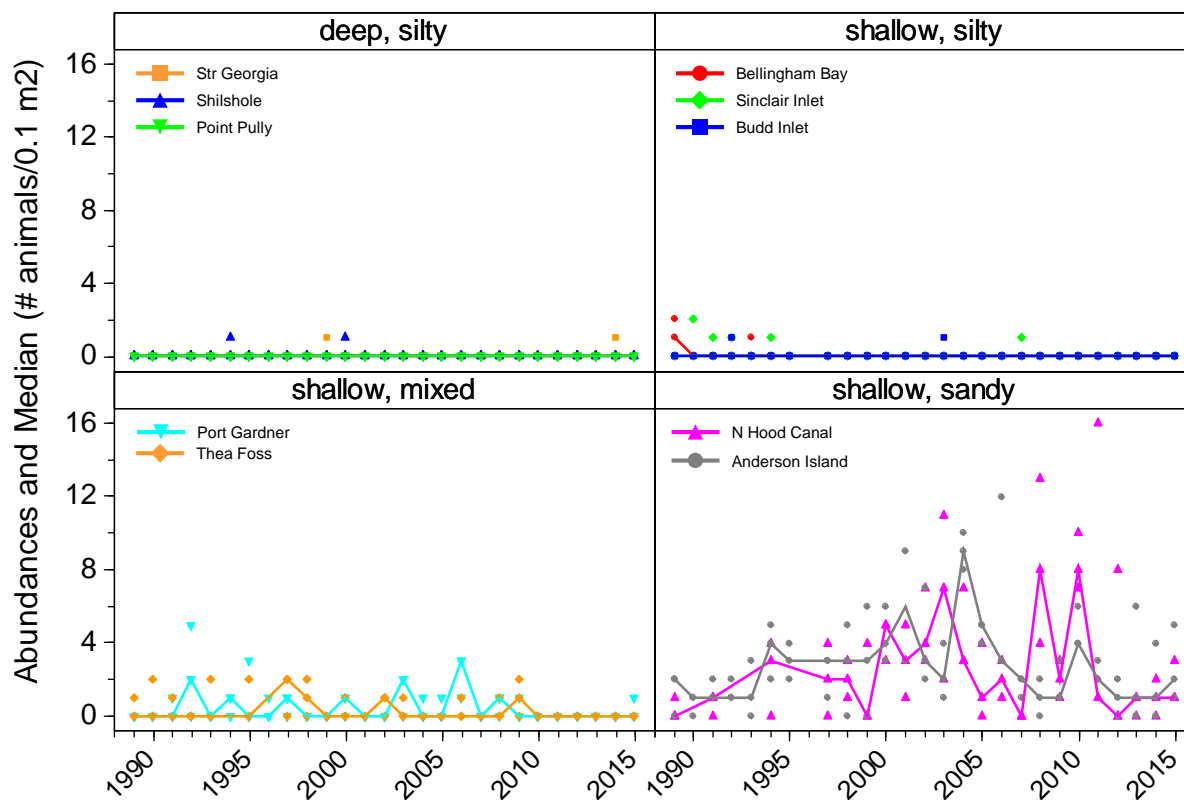
Turbonilla spp.



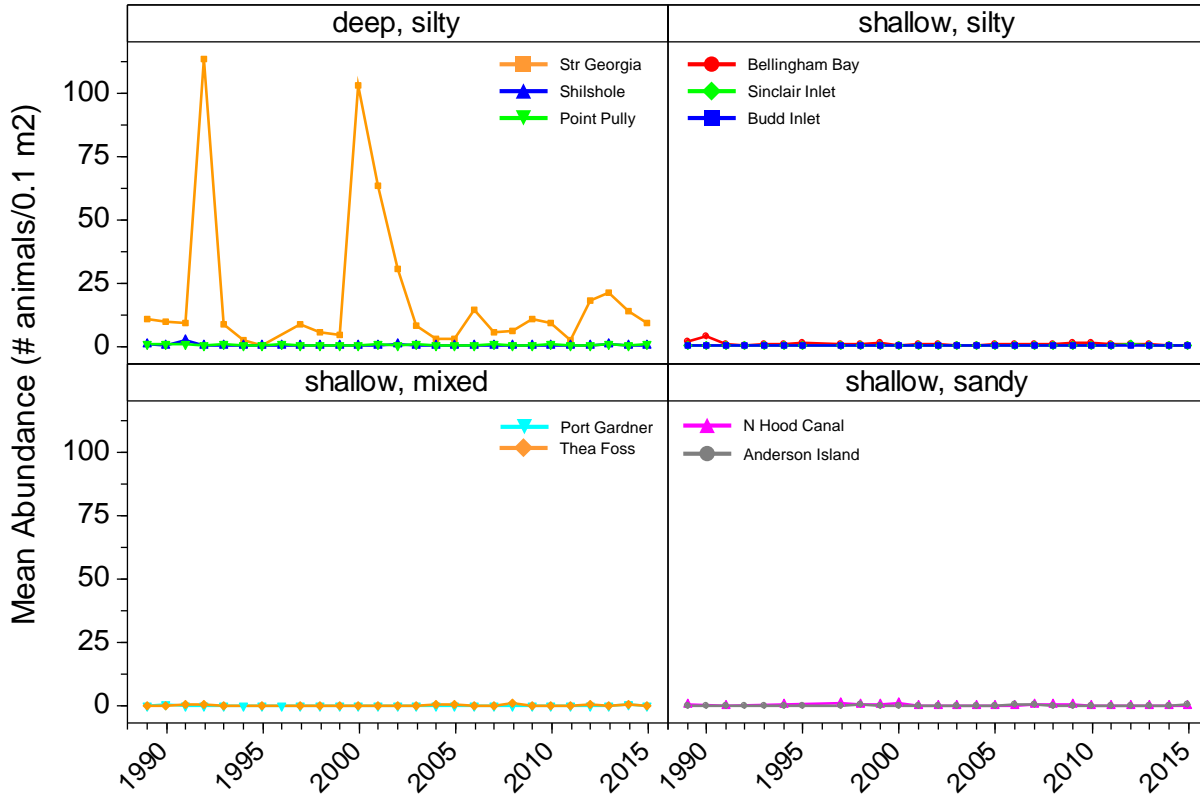
Westwoodilla tone



Westwoodilla tone



Yoldia spp.



Yoldia spp.

