2010 Bellingham Bay Marine Sediment Monitoring

Infaunal Community Data Summary

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Results and Statistical Summaries

Benthic infaunal results for the 2010 Bellingham Bay survey.

Benthic infaunal species identified in the 2010 Bellingham Bay survey.

Phylum	Taxononomy level reported	Authorship
Cnidaria		
Anthozoa		
Actiniaria		
Cerianthidae		
Edwardsiidae		
	Edwardsia sp	
	Edwardsia juliae	Daly and Ljubenkov, 2008
Platyhelminthes		
Turbellaria		
Polycladida		
Stylochidae		
	Imogine exiguus	(Hyman 1953)
Nemertea		
Anopla		
Paleonemertea		
Tubulanidae		
	Tubulanus sp	
	Tubulanus polymorphus	Renier 1804
	Tubulanus sp A	
Heteronemertea		
Lineidae		
	Lineidae	
	Micrura sp	
Annelida		
Polychaeta		
Aciculata		
Capitellidae		
	Capitella capitata Cmplx	(Fabricius 1780)
	Heteromastus filobranchus	Berkeley & Berkeley 1932
	Mediomastus californiensis	Hartman 1944
	Notomastus sp	

Phylum	Taxononomy level reported	Authorship
	Chrysopetalidae	
	Paleanotus bellis	(Johnson 1897)
	Cossuridae	
	Cossura pygodactylata	Jones 1956
	Dorvilleidae	
	Dorvillea (Schistomeringos) longicornis	(Ehlers 1901)
	Glyceridae	
	Glycera nana	Johnson 1901
	Goniadidae	
	Glycinde armigera	Moore 1911
	Glycinde picta	Berkeley 1927
	Hesionidae	
	Ophiodromus pugettensis	Johnson 1901
	Hesionidae	
	Podarkeopsis glabrus	(Hartman 1961)
	Lumbrineridae	
	Lumbrineris californiensis	Hartman 1944
	Lumbrineris sp	
	Scoletoma luti	(Berkeley and Berkeley 1945)
	Maldanidae	
	Euclymeninae	
	Euclymeninae sp A	
	Nephtyidae	
	Bipalponephtys cornuta	Berkeley & Berkeley 1945
	Nephtys caeca	(Fabricius 1780)
	Nephtys caecoides	Hartman 1938
	Nephtys ferruginea	Hartman 1940
	Nereididae	
	Nereis procera	Ehlers 1868
	Orbiniidae	
	Scoloplos armiger Cmplx	(Muller)
	Paraonidae	
	Aricidea (Acmira) lopezi	Berkeley & Berkeley 1956
	Pholoidae	
	Pholoe minuta	(FABRICIUS)
	Pholoe sp N1	
	Pholoides asperus	(Johnson 1897)

Phylum	Taxonomy level reported	Authorship
	Phyllodocidae	
	Eteone californica	
	Eteone sp	
	Pilargidae	
	Pilargis maculata	Hartman 1947
	Sigambra bassi	(Hartman 1945)
	Polynoidae	
	Gattyana treadwelli	Pettibone, 1949
Canalipalpata		
	Ampharetidae	
	Ampharete acutifrons	(Grube 1860)
	Ampharetidae	
	Amphicteis scaphobranchiata	Moore 1906
	Melinna oculata	Hartman 1969
	Cirratulidae	
	Aphelochaeta glandaria Cmplx	Blake 1996
	Aphelochaeta monilaris	(Hartman 1960)
	Aphelochaeta sp	
	Aphelochaeta sp N5	
	Chaetozone sp	
	Cirratulus sp	
	Cirratulus spectabilis	(Kinberg 1866)
	Monticellina serratiseta	(Banse & Hobson 1968)
	Monticellina tesselata	(Hartman 1960)
	Magelonidae	
	Magelona longicornis	Johnson 1901
	Magelona sp	
	Oweniidae	
	Owenia johnsoni	Blake 2000
	Owenia sp	
	Pectinariidae	
	Pectinaria californiensis	Hartman 1941
	Pectinaria granulata	(Linnaeus 1767)
	Pectinaria sp	
	Spionidae	
	Dipolydora socialis	(Schmarda 1861)
	Dipolydora sp	
	Paraprionospio alata	(Moore 1923)

Phylum	Taxonomy level reported	Authorship
	Prionospio (Minuspio) lighti	Maciolek 1985
	Prionospio (Minuspio) multibranchiata	E. Berkeley 1927
	Prionospio (Prionospio) steenstrupi	Malmgren 1867
	Spiophanes berkeleyorum	Pettibone 1962
	Spiophanes norrisi	Meißner & Blank, 2009
	Sternaspidae	
	Sternaspis fossor	
	Terebellidae	
	Amphitritinae	
	Polycirrus sp	
	Trichobranchidae	
	Terebellides horikoshii	Imajima & Williams 1985
	Terebellides sp	
	Trochochaetidae	
	Trochochaeta multisetosa	(Ørsted 1844)
	Phyllodocida	
	Pholoidae	
	Pholoe sp	
	Oligochaeta	
	Oligochaeta	
Mollusca		
	Gastropoda	
	Archaeotgastropoda	
	Turbiniidae	
	Spiromoellaria quadrae	(DALL, 1897)
	Neotaenioglossa	
	Rissoidae	
	Alvania compacta	Carpenter, 1864
	Columbellidae	
	Astyris gausapata	(Gould, 1850)
	Nassariidae	
	Nassarius mendicus	(Gould 1849)
	Conidae	
	Kurtziella plumbea	(Hinds 1843)
	Ophiodermella inermis	(Reeve 1843)
	Heterostropha	
	Pyramidellidae	

Phylum	Taxononomy level reported	Authorship
	Turbonilla sp	
	Odostomia sp	
Cephalaspidea		
Cylichnidae		
	Acteocina eximia	(Baird 1863)
	Cylichna attonsa	Carpenter 1865
	Scaphander sp	
Aglajidae		
	Aglaja ocelligera	(Bergh 1893)
Nudibranchia		
Aeolidiidae		
	Aeolidia papillosa	(Linnaeus 1761)
Bivalvia		
Nuculoida		
	Bivalvia	Linnaeus,1758
Nuculidae		
	Acila castrensis	(Hinds 1843)
	Ennucula tenuis	(Montagu 1808)
Yoldiidae		
	Yoldia sp	
	Yoldia hyperborea	(A. A. Gould, 1841)
	Yoldia seminuda	Dall 1871
Mytiloida		
Mytilidae		
	Mytilidae	Rafinesque, 1815
	Mytilus sp	
Veneroida		
Lucinidae		
	Parvilucina tenuisculpta	(Carpenter 1864)
Thyasiridae		
	Axinopsida serricata	(Carpenter 1864)
Lasaeidae		
	Rochefortia tumida	(Carpenter 1864)
Cardiidae		
	Clinocardium nuttallii	(Conrad 1837)
Solenidae		

Phylum	Taxononomy level reported	Authorship
	Solen sicarius	Gould 1850
	Tellinidae	
	Macoma sp	
	Macoma elimata	Dunnill & Coan,1968
	Macoma carlottensis	Whiteaves 1880
	Macoma nasuta	(Conrad 1837)
	Tellina modesta	(Carpenter 1864)
	Veneridae	
	Compsomyax subdiaphana	(Carpenter 1864)
	Nutricola lordi	(Baird,1863)
	Leukoma staminea	(Conrad 1837)
Myoida		
	Myidae	
	Cryptomya californica	(Conrad 1837)
Pholadomyoida		
	Pandoridae	
	Pandora sp	
	Pandora filosa	(Carpenter 1864)
	Lyonsiidae	
	Lyonsia californica	Conrad 1837
Arthropoda		
Ostracoda		
Myodocopida		
	Philomedidae	
	Euphilomedes carcharodonta	(Smith 1952)
	Euphilomedes producta	Poulsen 1962
Maxillipoda		
Cyclopoida		
	Lichomolgidae	
	Lichomolgidae	HUMES & STOCK, 1972
Caligoida		
	Caligoida	
Cirripidea		
Thoracica		
	Balanidae	
	Balanus crenatus	Bruguière 1789
Malacostraca		
Mysida		

Phylum	Taxononomy level reported	Authorship
	Mysidae	
	Alienacanthomysis macropsis	(W. Tattersall 1932)
Cumacea		
	Lampropidae	
	Lamprops augustinensis	
Decapoda		
	Leuconiidae	
	Nippoleucon hinumensis	Gamo 1967
Cumacea		
	Diastylidae	
	Diastylis santamariensis	Watling & McCann 1997
Tanaidacea		
	Pseudozeuxidae	
	Leptochelia dubia Cmplx	
Amphipoda		
	Ampeliscidae	
	Ampelisca hancocki	
	Haustoriidae	
	Eohaustorius washingtonianus	Thorsteinson, 1941
	Isaeidae	
	Protomedeia articulata Cmplx	J. L. Barnard 1962
	Cheirimedeia macrocarpa	
	Phoxocephalidae	
	Rhepoxynius boreovariatus	Jarrett and Bousfield 1994
	Caprellidae	
	Deutella californica	Mayer 1890
Decapoda		
	Hippolytidae	
	Hippolytidae	Bate, 1888
	Crangonidae	
	Crangon sp	
	Brachyura	Latreille, 1803
	Pinnotheridae	
	Pinnotheridae	
	Pinnixa sp	
	Pinnixa schmitti	Rathbun 1918

Phylum	Taxononomy level reported	Authorship
Sipuncula		
Sipunculidea		
Golfingiformes		
Golfingiidae		
	Thysanocardia nigra	(Ikeda 1904)
Priapula		
Priapulidae		
	Priapulus caudatus	
Phoronida		
Phoronidae		
	Phoronidae	
	Phoronopsis harmeri	
Echinodermata		
Stelleroidea		
Ophiurida		
	Ophiurida	Muller & Troschel, 1940
Amphiuridae		
	Amphiuridae	Ljungman, 1867
	Amphiodia sp	
	Amphiodia urtica/periercta	
Holothuroidea		
Dendrochirotida		
Cucumariidae		
	Pentamera populifera	(Stimpson 1857)
	Pentamera rigida	

Statistical Summaries of 9 Benthic Indices

Benthic infaunal indices calculated to characterize the infaunal invertebrate assemblages identified for the 2010 Bellingham Bay survey.

Infaunal 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	Sum 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 $H' = -\sum_{i=1}^{S} p_i \log p_i$, where p_i = the proportion of the assemblage that belongs to the ith species ($p_i = n_i/N$, where n_i=the number of individuals in the ith species and N= total number of individuals) and S = the total number of species (H' is the Shannon-Wiener diversity index)
Swartz Dominance Index (SDI) (Swartz et al., 1985)	The minimum number of taxa whose combined abundance accounted for 75 percent of the total abundance in each sample	Sum of the minimum number of taxa whose combined abundance accounted for 75 percent of the total abundance in each sample

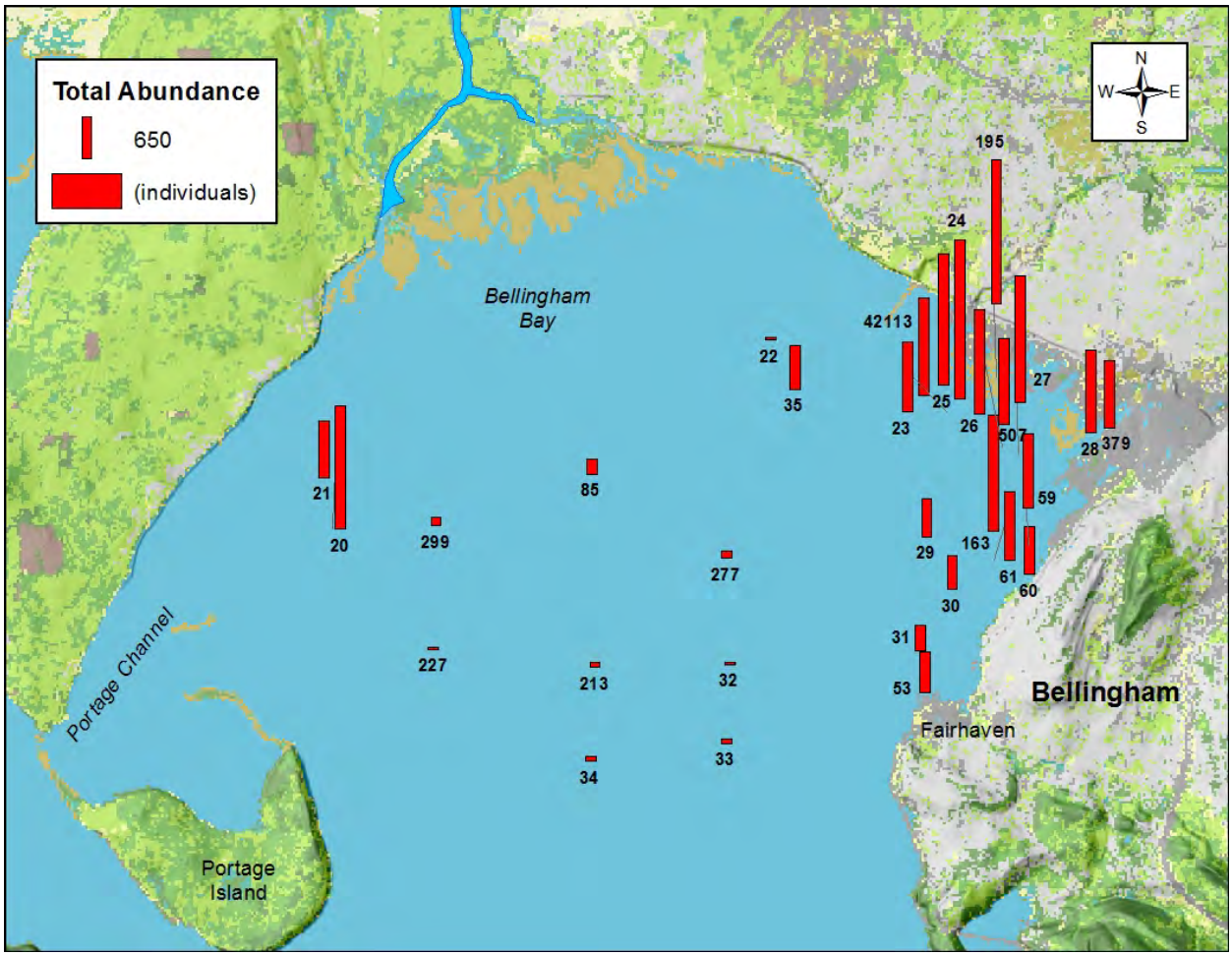
Total abundance, major taxa abundance, and major taxa percent abundance calculated for the 2010 Bellingham Bay survey.

Station	Total abundance	Annelida	Annelida % of total abundance	Arthropoda	Arthropoda % of total abundance	Echino-dermata	Echinodermata% of total abundance	Mollusca	Mollusca % of total abundance	Misc. taxa	Misc. taxa % of total abundance
20	1971	1814	92.03	66	3.35	31	1.57	35	1.78	25	1.27
21	906	824	90.95	26	2.87	0	0.00	36	3.97	20	2.21
22	45	21	46.67	23	51.11	0	0.00	1	2.22	0	0.00
23	1107	1040	93.95	1	0.09	1	0.09	59	5.33	6	0.54
24	2523	2321	91.99	109	4.32	3	0.12	68	2.70	22	0.87
25	2086	2029	97.27	15	0.72	6	0.29	18	0.86	18	0.86
26	1670	1628	97.49	3	0.18	0	0.00	31	1.86	8	0.48
27	2000	1908	95.40	1	0.05	5	0.25	76	3.80	10	0.50
28	1310	1101	84.05	21	1.60	14	1.07	171	13.05	3	0.23
29	595	573	96.30	2	0.34	0	0.00	20	3.36	0	0.00
30	533	509	95.50	0	0.00	1	0.19	22	4.13	1	0.19
31	396	369	93.18	0	0.00	0	0.00	25	6.31	2	0.51
32	35	33	94.29	0	0.00	0	0.00	2	5.71	0	0.00
33	65	50	76.92	0	0.00	0	0.00	15	23.08	0	0.00
34	77	70	90.91	3	3.90	0	0.00	4	5.19	0	0.00
35	703	683	97.16	2	0.28	0	0.00	18	2.56	0	0.00
53	644	465	72.20	18	2.80	0	0.00	160	24.84	1	0.16
59	1166	1140	97.77	2	0.17	0	0.00	24	2.06	0	0.00
60	775	695	89.68	28	3.61	1	0.13	46	5.94	5	0.65
61	1100	1053	95.73	0	0.00	0	0.00	47	4.27	0	0.00
85	240	230	95.83	2	0.83	0	0.00	8	3.33	0	0.00
163	1860	1815	97.58	0	0.00	0	0.00	44	2.37	1	0.05

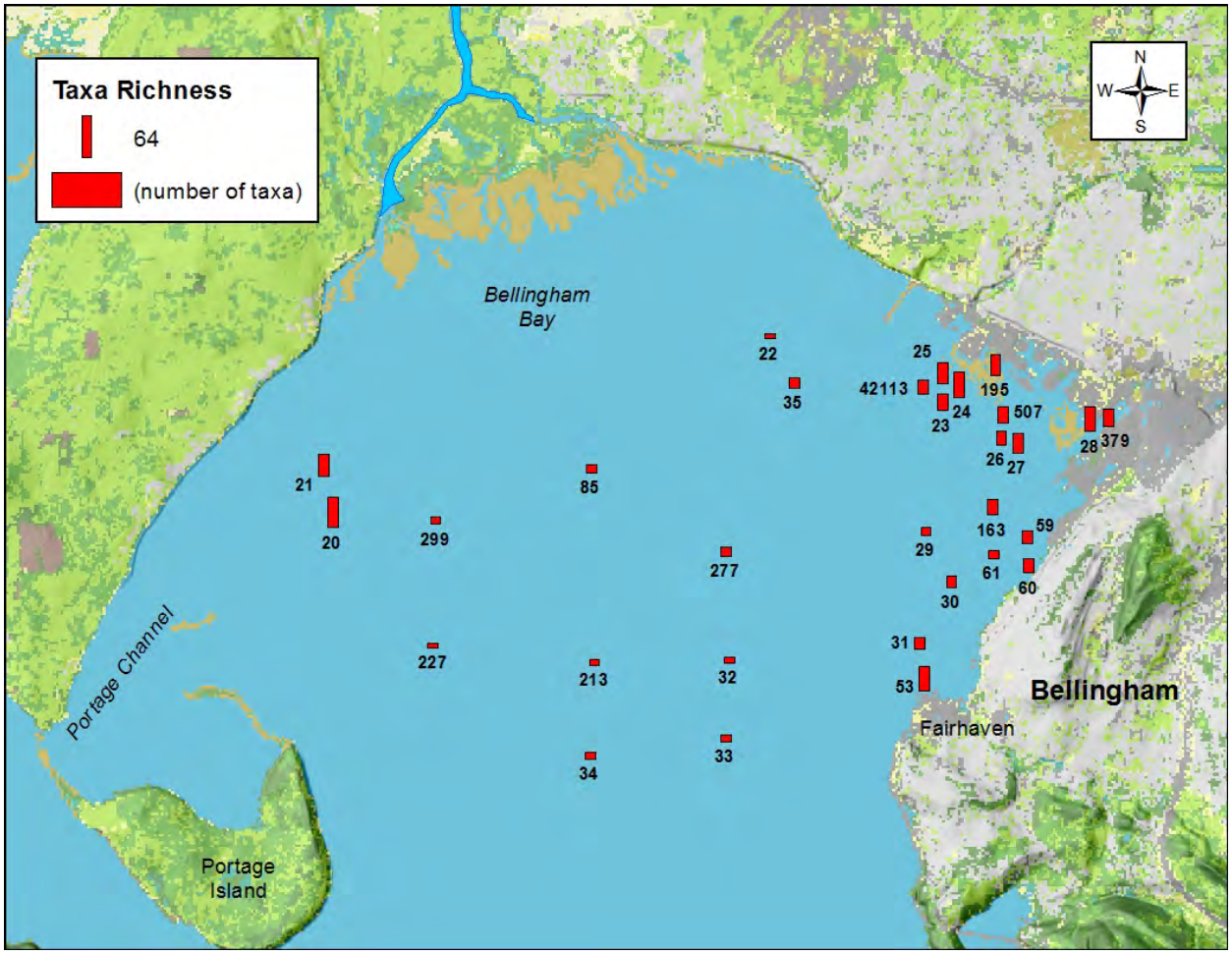
Station	Total abundance	Annelida	Annelida % of total abundance	Arthropoda	Arthropoda % of total abundance	Echino-dermata	Echinodermata% of total abundance	Mollusca	Mollusca % of total abundance	Misc. taxa	Misc. taxa % of total abundance
195	2283	2073	90.80	5	0.22	0	0.00	205	8.98	0	0.00
213	71	68	95.77	1	1.41	0	0.00	2	2.82	0	0.00
227	39	34	87.18	0	0.00	0	0.00	5	12.82	0	0.00
277	117	108	92.31	1	0.85	0	0.00	6	5.13	2	1.71
299	139	132	94.96	0	0.00	0	0.00	6	4.32	1	0.72
379	1066	1030	96.62	8	0.75	0	0.00	21	1.97	7	0.66
507	1358	1306	96.17	9	0.66	3	0.22	22	1.62	18	1.33
42113	1546	1488	96.25	5	0.32	0	0.00	37	2.39	16	1.03
Mean	947.53	887	91.10	12	2.68	2.17	0.13	41	5.63	5.53	0.47
Median	840.5	760	94.62	2	0.33	0	0.00	23	3.89	1	0.21
Min	35	21	46.67	0	0.00	0	0.00	1	0.86	0	0.00
Max	2523	2321	97.77	109	51.11	31	1.57	205	24.84	25	2.21
Range	2488	2300	51.10	109	51.11	31	1.57	204	23.98	25	2.21

Total abundance, taxa richness, Pielou's evenness, and Swartz Dominance Index calculated for the 2010 Bellingham Bay survey.

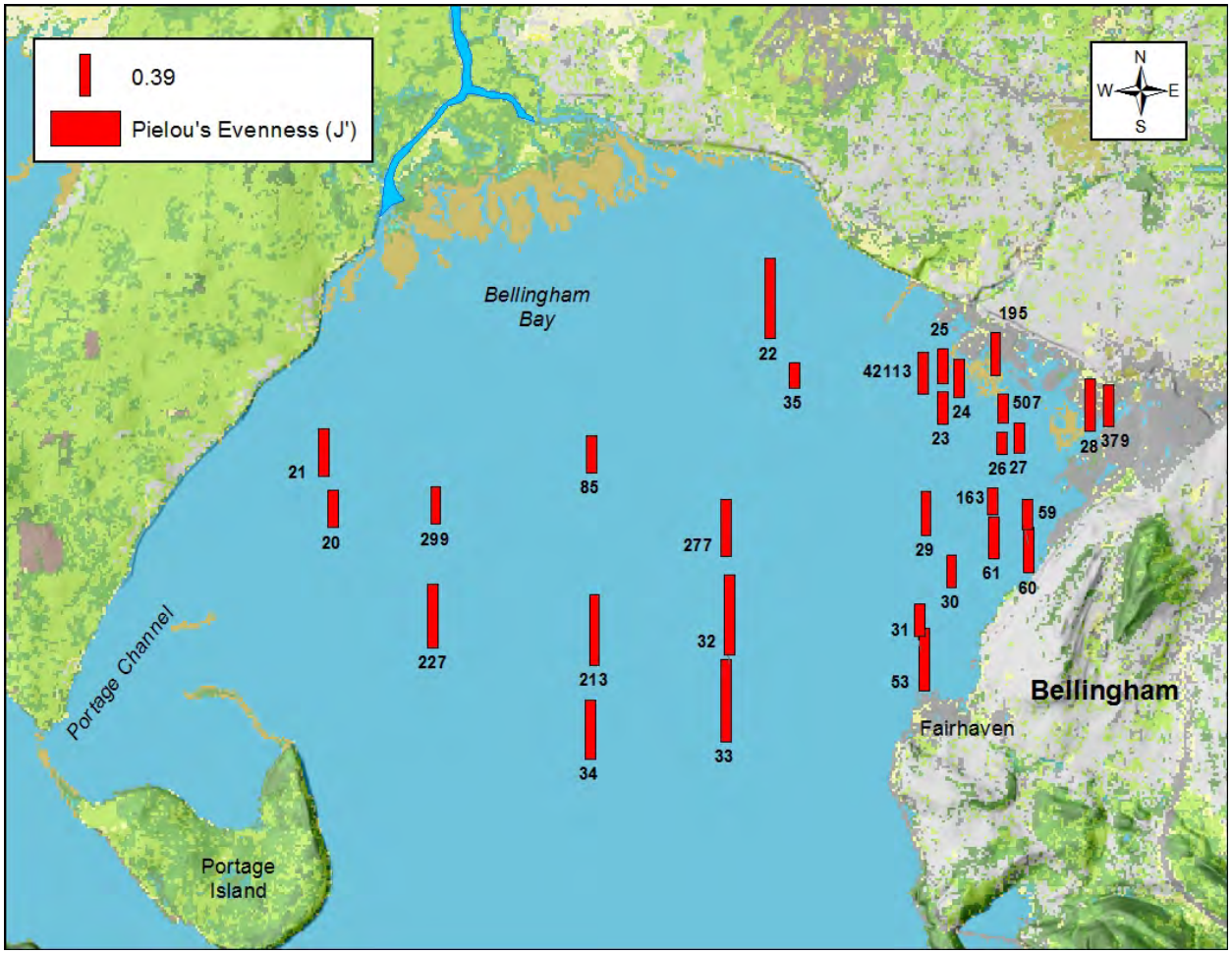
Station	Location	Total abundance	Taxa richness	Pielou's evenness (J')	Swartz Dominance Index
20	Northern Bellingham Bay	1971	47	0.35	2
21	Northern Bellingham Bay	906	34	0.44	2
22	Bellingham Bay	45	7	0.75	3
23	Bellingham Bay, off Squalicum Hbr.	1107	26	0.30	1
24	Bellingham Bay, off Squalicum Hbr.	2523	39	0.36	2
25	Bellingham Bay, off Squalicum Hbr.	2086	34	0.33	2
26	Bellingham Bay, off Squalicum Hbr.	1670	22	0.20	1
27	Bellingham Bay, off Squalicum Hbr.	2000	32	0.28	1
28	Bellingham Bay, Whatcom Waterway	1310	38	0.49	3
29	Bellingham Bay, South Bellingham	595	12	0.41	2
30	Bellingham Bay, South Bellingham	533	19	0.31	1
31	Bellingham Bay, South Bellingham	396	18	0.31	1
32	Bellingham Bay	35	8	0.75	3
33	Bellingham Bay	65	11	0.77	4
34	Bellingham Bay	77	12	0.56	3
35	Bellingham Bay (central)	703	15	0.24	1
53	Bellingham Bay	644	38	0.59	6
59	Bellingham Bay, South Bellingham	1166	19	0.28	1
60	Bellingham Bay, South Bellingham	775	23	0.43	2
61	Bellingham Bay, South Bellingham	1100	13	0.39	2
85	Bellingham Bay (central)	240	13	0.34	1
163	Bellingham Bay	1860	24	0.25	1
195	Bellingham Bay	2283	32	0.40	2
213	Bellingham Bay (central)	71	10	0.67	3
227	Bellingham Bay (central)	39	8	0.60	2
277	Bellingham Bay (central)	117	14	0.53	2
299	Bellingham Bay (central)	139	11	0.35	1
379	Bellingham Bay	1066	27	0.39	2
507	Bellingham Bay	1358	25	0.27	1
42113	Bellingham Bay	1546	21	0.39	2
	Mean	947.53	21.733	0.42	2
	Median	840.5	20	0.39	2
	Min	35	7	0.20	1
	Max	2523	47	0.77	6
	Range	2488	40	0.57	5



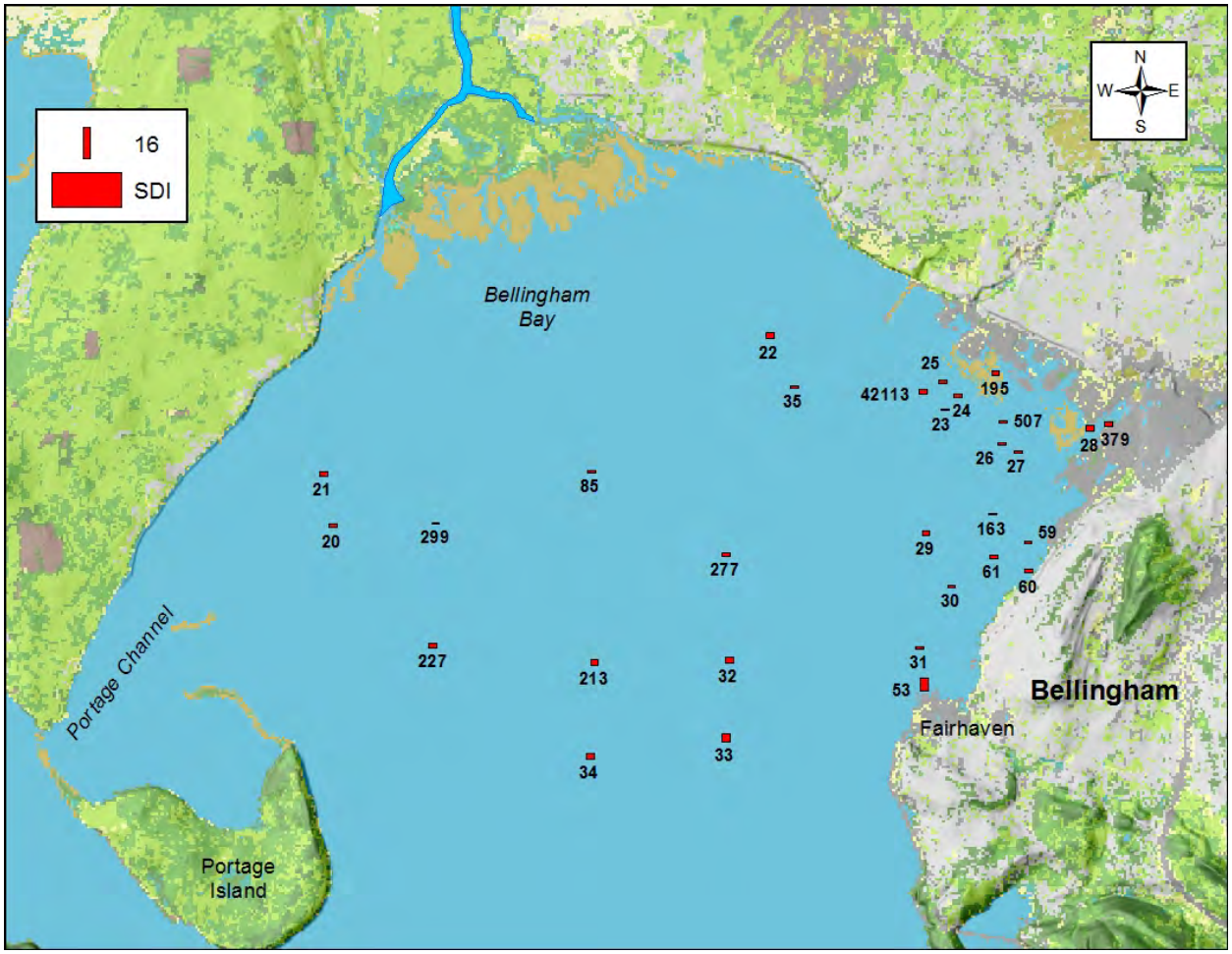
Spatial patterns in total benthic invertebrate abundance in the 2010 Bellingham Bay survey. *The numbers on the map are the station identifications.*



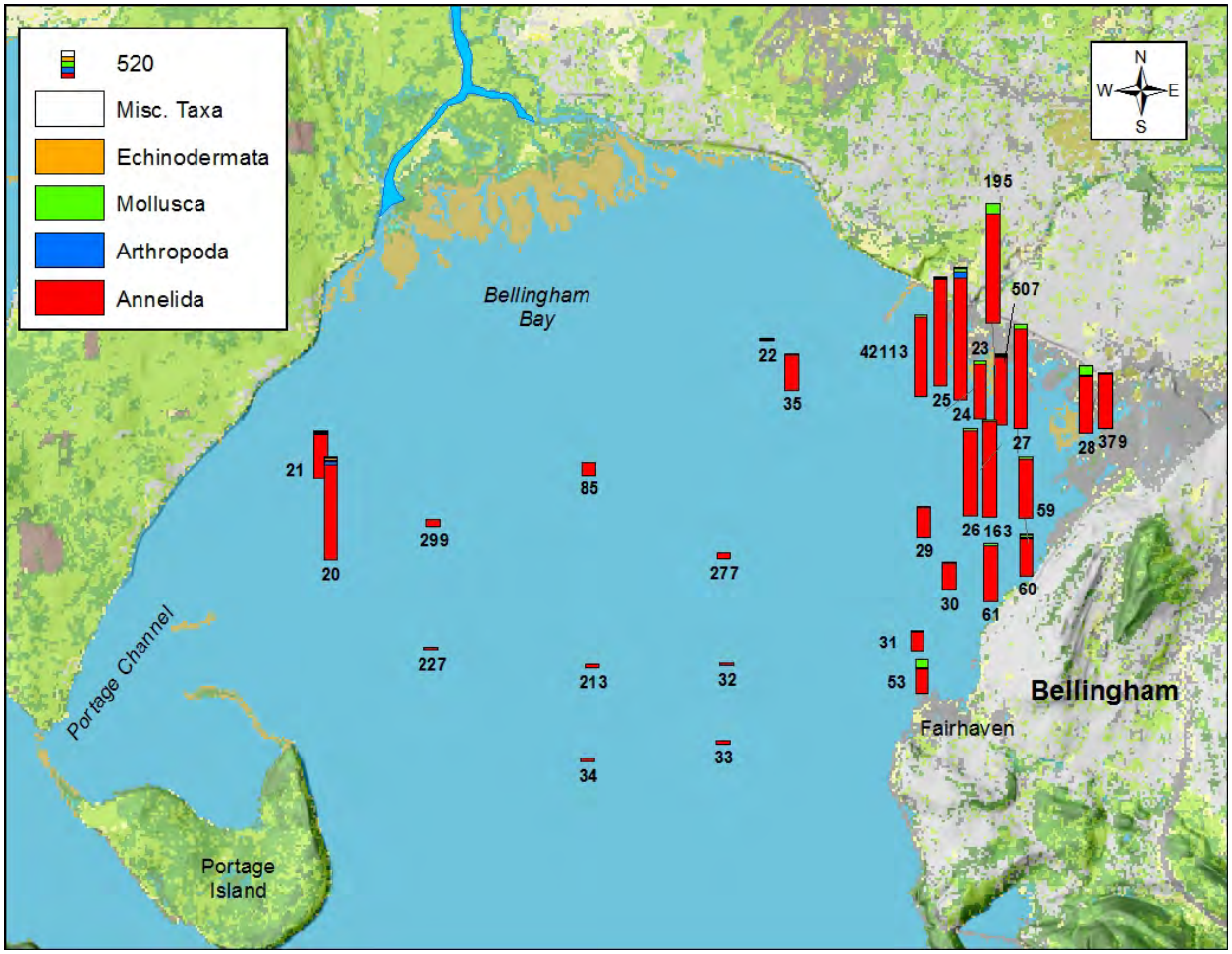
Spatial patterns in taxa richness in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.



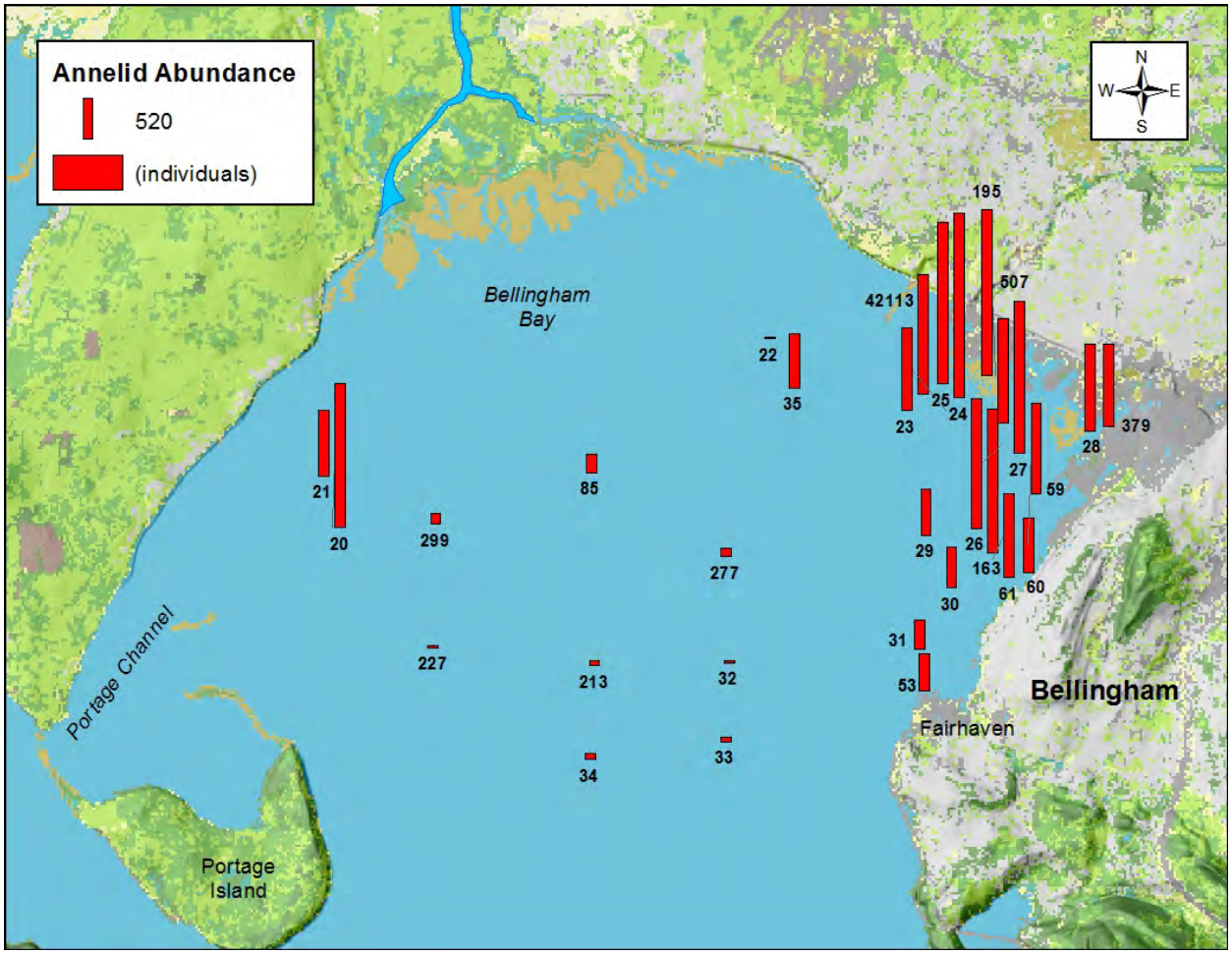
Spatial patterns in Pielou's Evenness (J') in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.



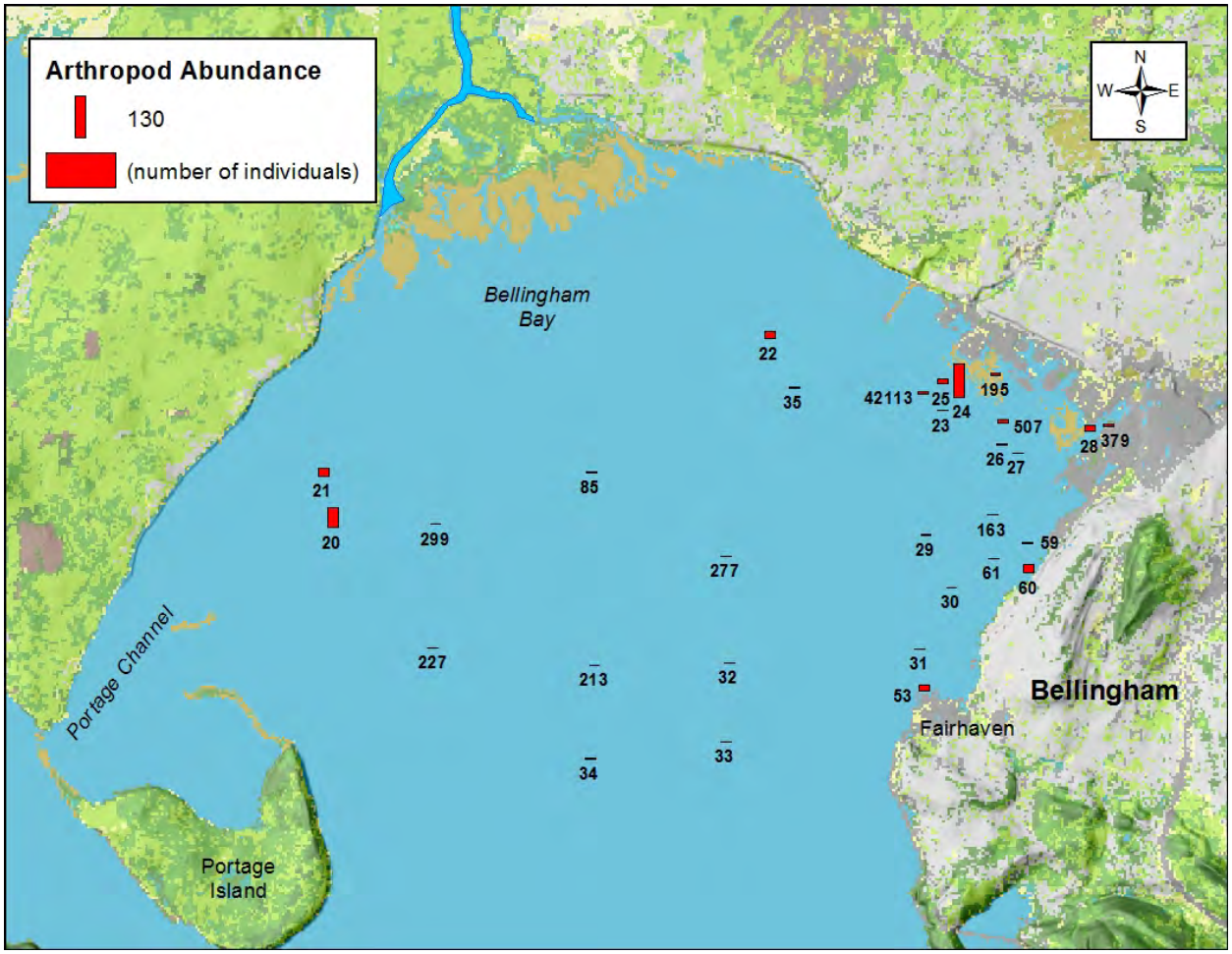
Spatial patterns in Swartz Dominance Index in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.



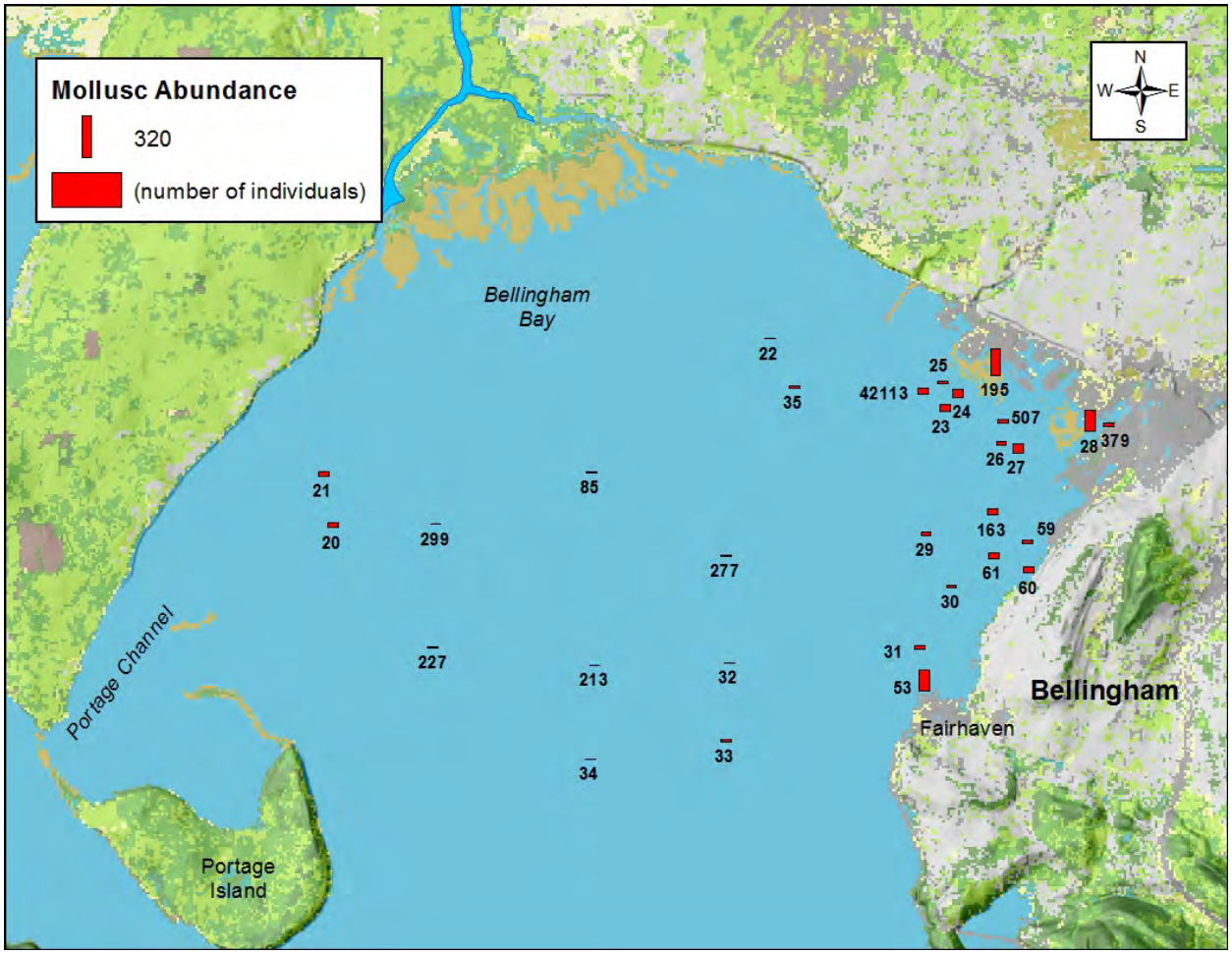
Spatial patterns in major taxa relative abundance (percent) in the 2010 Bellingham Bay survey. *The numbers on the map are the station identifications.*



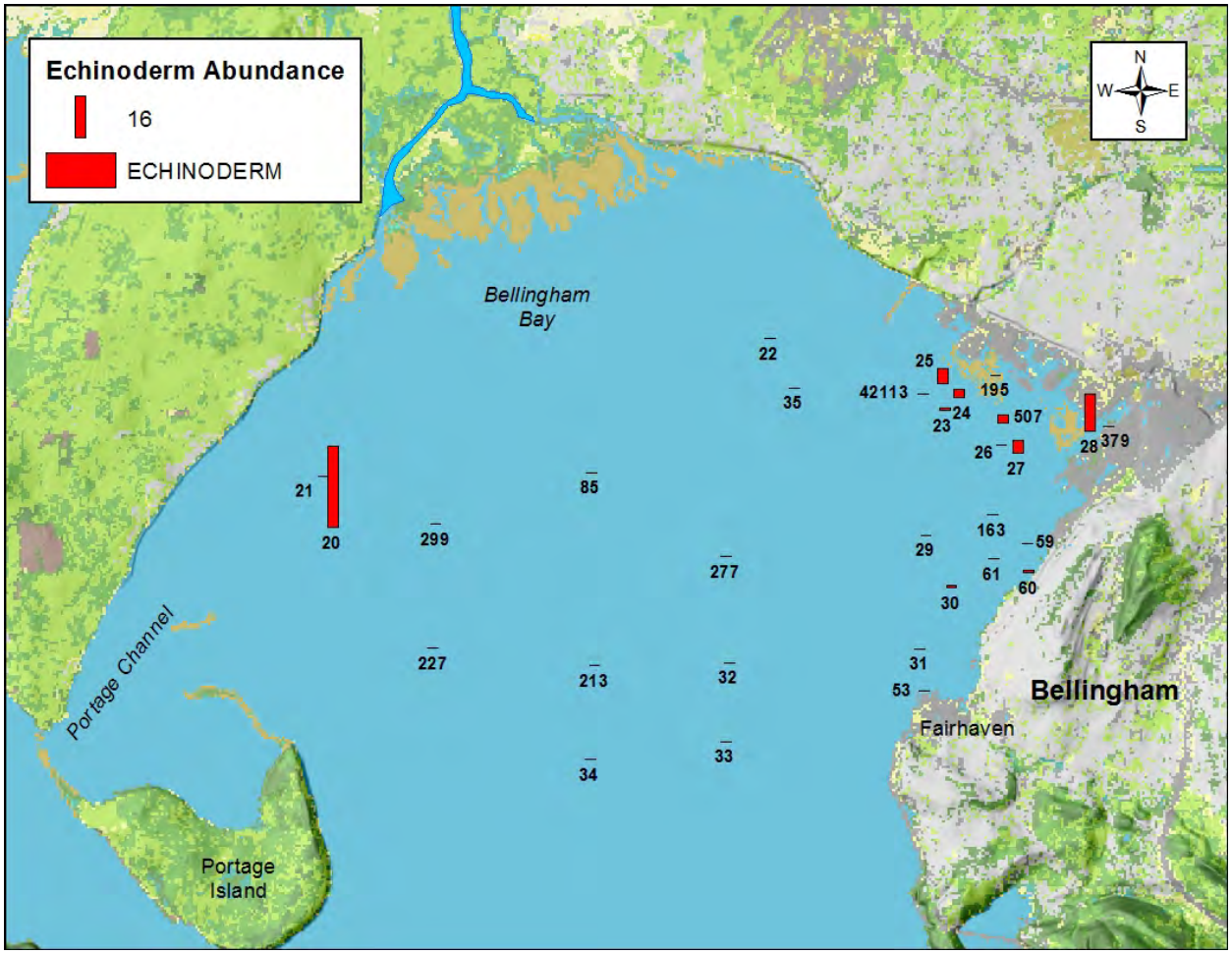
Spatial patterns in annelid abundance in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.



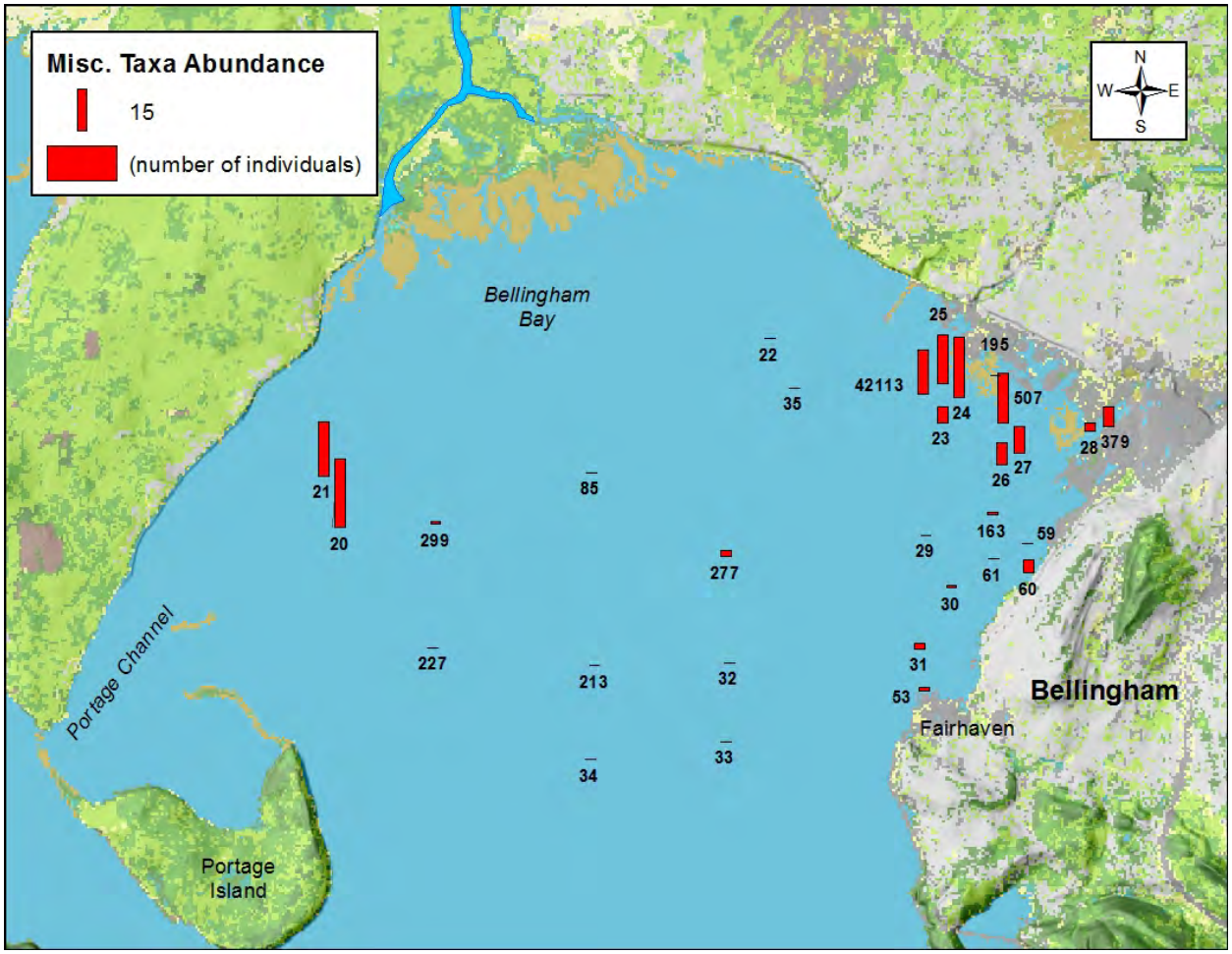
Spatial patterns in arthropod abundance in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.



Spatial patterns in mollusc abundance in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.

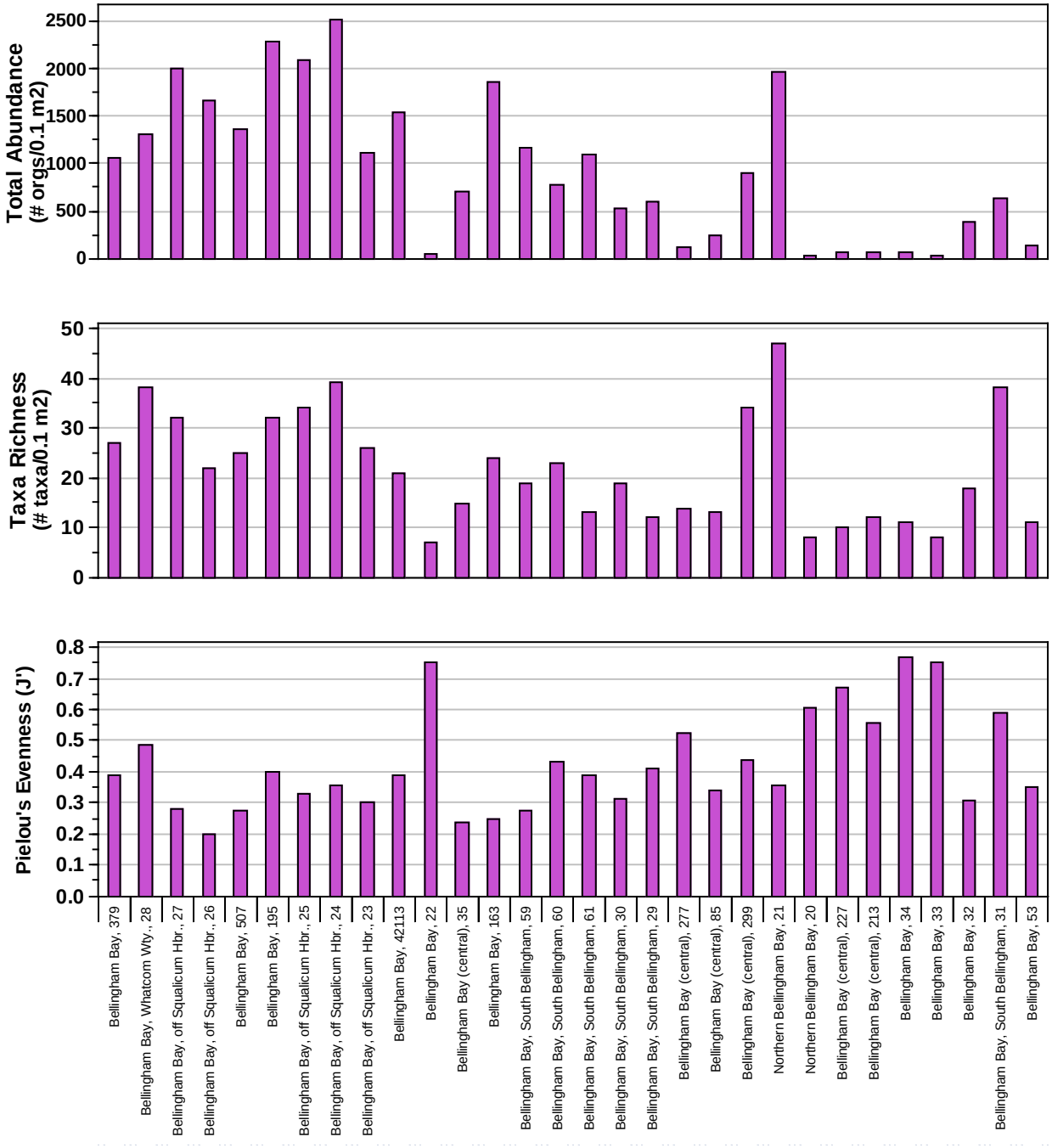


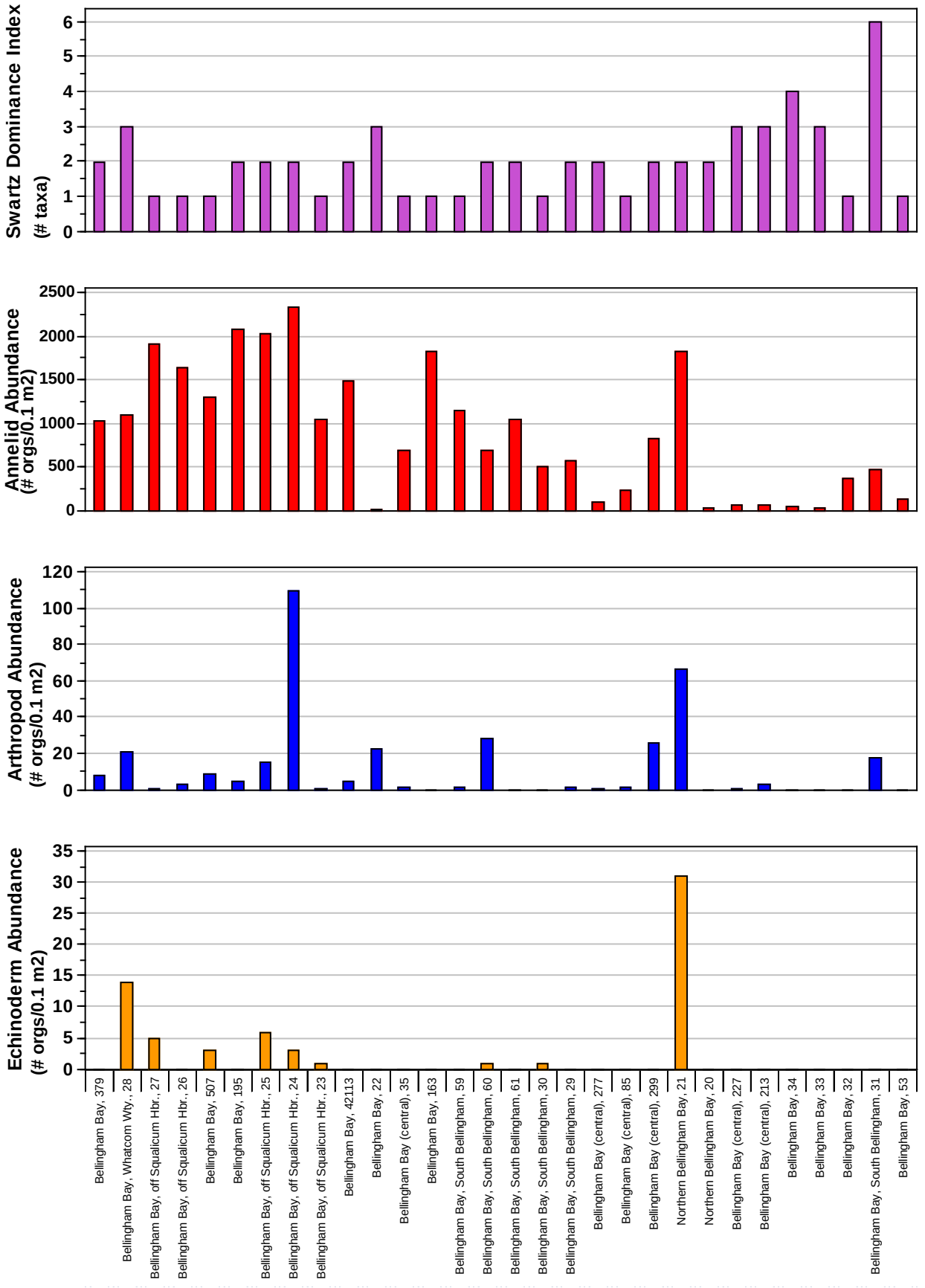
Spatial patterns in echinoderm abundance in the 2010 Bellingham Bay survey.
The numbers on the map are the station identifications.

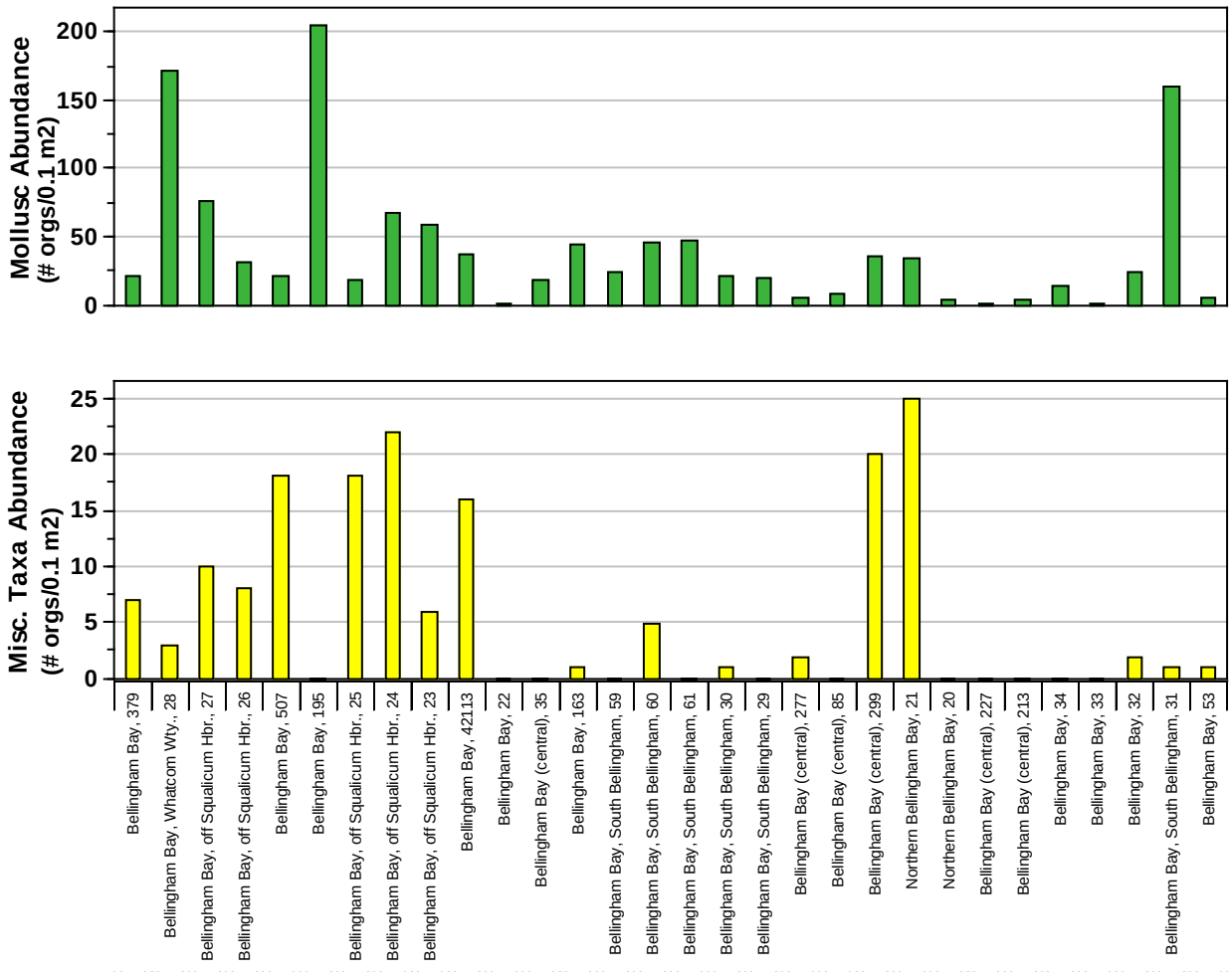


Spatial patterns in miscellaneous taxa abundance in the 2010 Bellingham Bay survey. *The numbers on the map are the station identifications.*

Benthic invertebrate measures calculated for sediment samples collected in the 2010 Bellingham Bay survey.

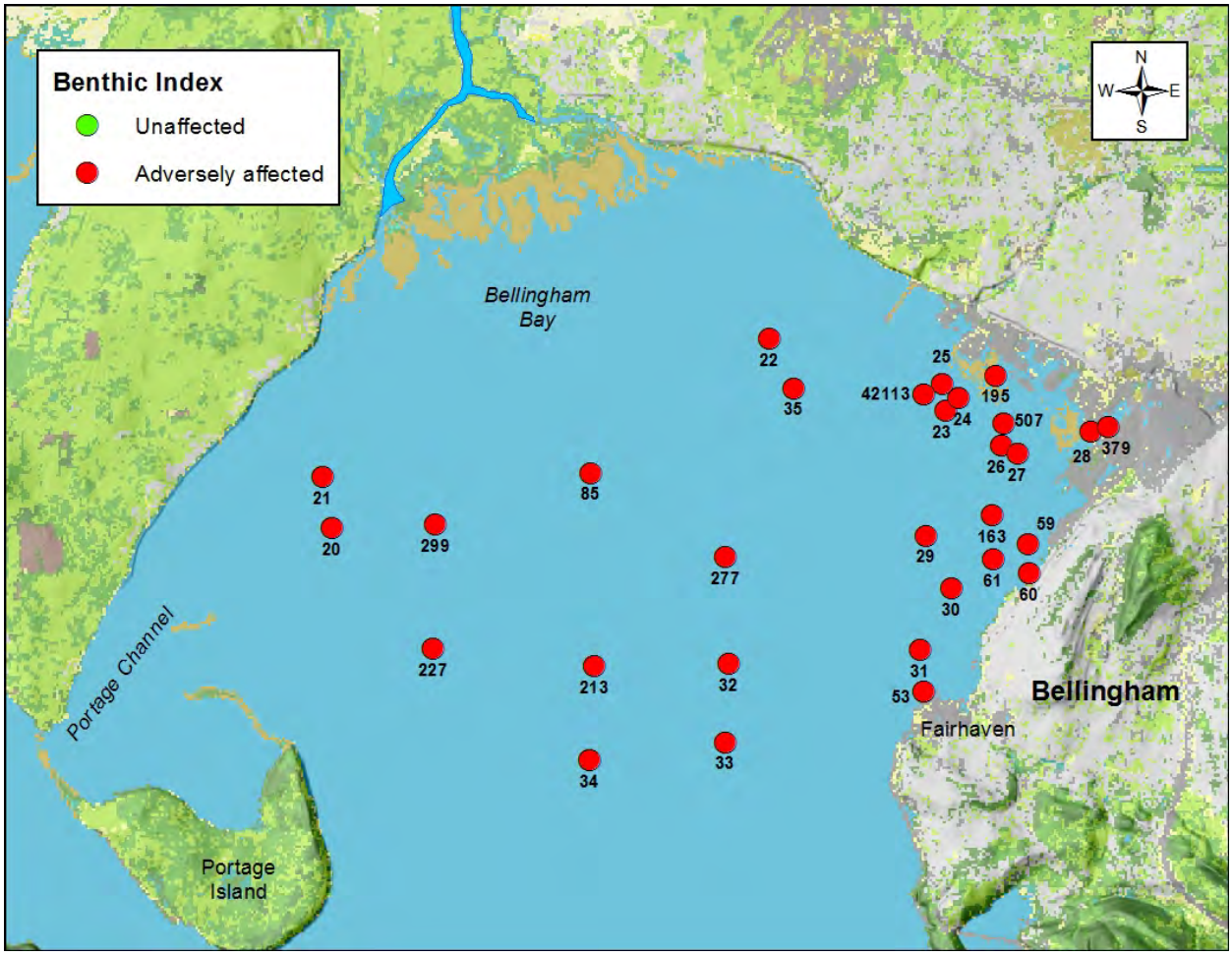



Swartz Dominance Index
(# taxa)
0
1
2
3
4
5
6
Annelid Abundance
(# orgs/0.1 m2)
0
500
1000
1500
2000
2500
Arthropod Abundance
(# orgs/0.1 m2)
0
20
40
60
80
100
120
Echinoderm Abundance
(# orgs/0.1 m2)
0
5
10
15
20
25
30
35
Bellingham Bay, 379
Bellingham Bay, Whatcom Wty., 28
Bellingham Bay, off Squalicum Hbr., 27
Bellingham Bay, off Squalicum Hbr., 26
Bellingham Bay, 507
Bellingham Bay, 195
Bellingham Bay, off Squalicum Hbr., 25
Bellingham Bay, off Squalicum Hbr., 24
Bellingham Bay, off Squalicum Hbr., 23
Bellingham Bay, 42113
Bellingham Bay, 22
Bellingham Bay (central), 35
Bellingham Bay, 163
Bellingham Bay, South Bellingham, 59
Bellingham Bay, South Bellingham, 60
Bellingham Bay, South Bellingham, 61
Bellingham Bay, South Bellingham, 30
Bellingham Bay, South Bellingham, 29
Bellingham Bay (central), 277
Bellingham Bay (central), 85
Bellingham Bay (central), 299
Northern Bellingham Bay, 21
Northern Bellingham Bay, 20
Bellingham Bay (central), 227
Bellingham Bay (central), 213
Bellingham Bay, 34
Bellingham Bay, 33
Bellingham Bay, 32
Bellingham Bay, South Bellingham, 31
Bellingham Bay, 53

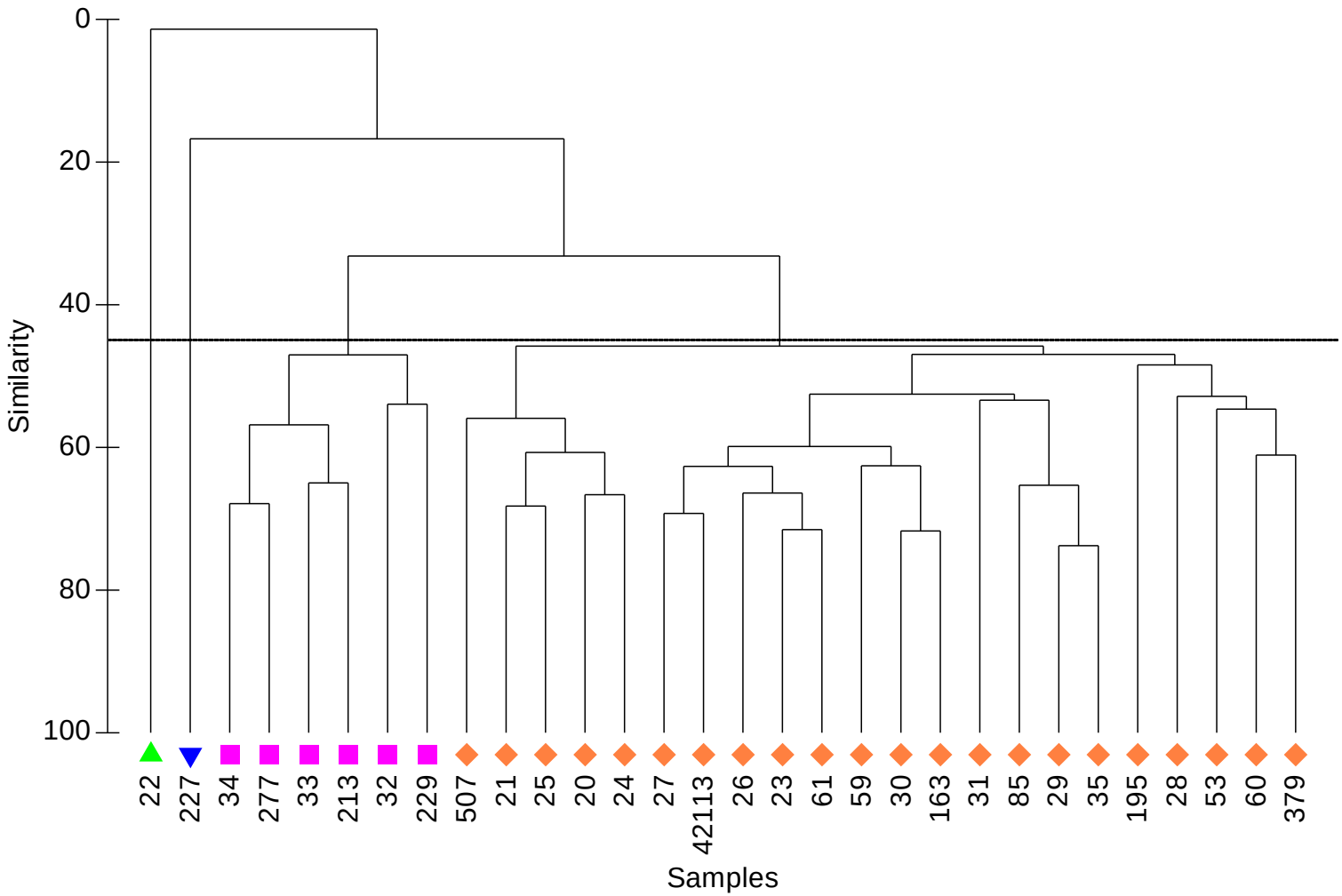

Mollusc Abundance
(# orgs/0.1 m2)
200
150
100
50
0
Misc. Taxa Abundance
(# orgs/0.1 m2)
25
20
15
10
5
0
Bellingham Bay, 379
Bellingham Bay, Whatcom Wty., 28
Bellingham Bay, off Squalicum Hbr., 27
Bellingham Bay, off Squalicum Hbr., 26
Bellingham Bay, 507
Bellingham Bay, 195
Bellingham Bay, off Squalicum Hbr., 25
Bellingham Bay, off Squalicum Hbr., 24
Bellingham Bay, off Squalicum Hbr., 23
Bellingham Bay, 42113
Bellingham Bay, 22
Bellingham Bay (central), 35
Bellingham Bay, 163
Bellingham Bay, South Bellingham, 59
Bellingham Bay, South Bellingham, 60
Bellingham Bay, South Bellingham, 61
Bellingham Bay, South Bellingham, 30
Bellingham Bay, South Bellingham, 29
Bellingham Bay (central), 277
Bellingham Bay (central), 85
Bellingham Bay (central), 299
Northern Bellingham Bay, 21
Northern Bellingham Bay, 20
Bellingham Bay (central), 227
Bellingham Bay (central), 213
Bellingham Bay, 34
Bellingham Bay, 33
Bellingham Bay, 32
Bellingham Bay, South Bellingham, 31
Bellingham Bay, 53

Adversely Affected Benthic Communities

All samples from the 2010 Bellingham Bay survey had adversely affected benthos, representing 100% of the study area.

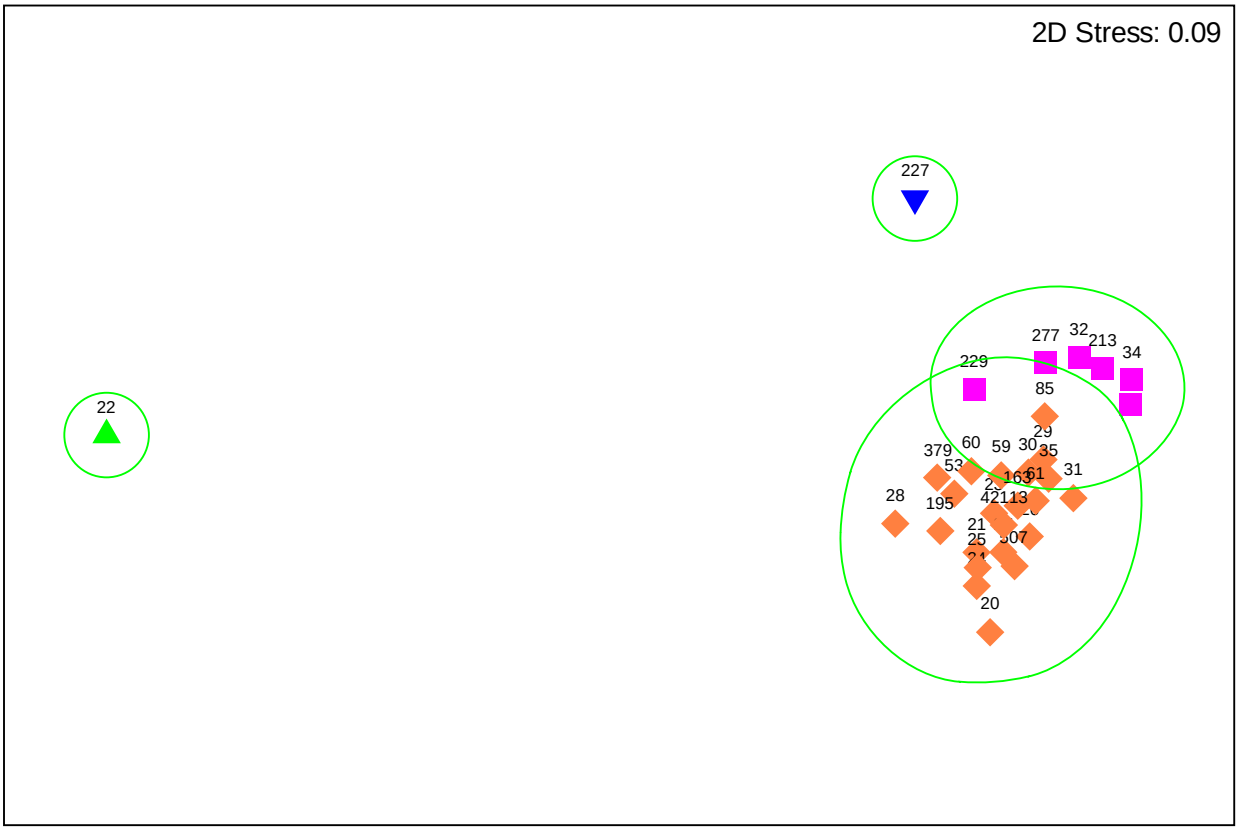


Spatial patterns in adversely affected benthic invertebrate assemblages in the 2010 Bellingham Bay survey. *The numbers on the map are the station identifications.*



Cluster dendrogram of benthic invertebrate assemblages in the 2010 Bellingham Bay survey (Bray-Curtis similarities of 4th-root-transformed abundances, all species). The dendrogram is sliced at 45% similarity.

The numbers on the diagram are station identifications. Groups of assemblages of similarity 45% or higher are distinguished by symbols.



Nonmetric multidimensional scaling (MDS) diagram indicating relative similarities of benthic invertebrate assemblages in the 2010 Bellingham Bay Urban Waters sediment survey (Bray-Curtis similarities of 4th-root-transformed abundances, all species; 2D stress=0.09). The closer the symbols are in the diagram, the more similar their assemblages are. Ellipses and symbol types/colors indicate groups of assemblages with 45% (or higher) similarity.

The numbers on the diagram are the station identifications.

Comparison to the Region

Incidence and spatial extent of adversely affected benthos for the urban embayment, the region it is nested in and all of Puget Sound.

Monitoring Region	Year(s) sampled	Numbers of Samples	Percent of Stations with Adversely Affected Benthos	Percent of Area with Adversely Affected Benthos
Bellingham Bay	2010	30	100	100
Strait of Georgia	1997	61	16.4	15.4
	2006	40	47.5	44.1
All of Puget Sound	1997-2003	381	39.4	34.5

Data Quality Control Narrative

Infauna sediment sample sorting quality assurance and quality control for the 2010 Bellingham Bay survey.

StationID	Location	Date Sampled	Sorted by	QA/QC Sorter	25% QA/QC Pass/Fail	Action Taken
20	Northern Bellingham Bay	6/8/2010	S. Weeks	S. Weakland	Pass	none
21	Northern Bellingham Bay	6/8/2010	S. Weeks	S. Weakland	Pass	none
22	Bellingham Bay	6/10/2010	S. Weeks	S. Weakland	Pass	none
23	Bellingham Bay, off Squalicum Harbor	6/14/2010	S. Weeks	S. Weakland	Pass	none
24	Bellingham Bay, off Squalicum Harbor	6/14/2010	S. Weeks	S. Weakland	Pass	none
25	Bellingham Bay, off Squalicum Harbor	6/15/2010	S. Weeks	S. Weakland	Pass	none
26	Bellingham Bay, off Squalicum Harbor	6/15/2010	S. Weeks	S. Weakland	Pass	none
27	Bellingham Bay, off Squalicum Harbor	6/15/2010	S. Weeks	S. Weakland	Pass	none
28	Bellingham Bay, Whatcom Waterway	6/11/2010	S. Weeks	S. Weakland	Pass	none
29	Bellingham Bay, South Bellingham	6/9/2010	S. Weeks	S. Weakland	Pass	none
30	Bellingham Bay, South Bellingham	6/9/2010	S. Weakland	K. Welch	Pass	none
31	Bellingham Bay, South Bellingham	6/9/2010	S. Weakland	K. Welch	Pass	none
32	Bellingham Bay	6/10/2010	S. Weakland	K. Welch	Pass	none
33	Bellingham Bay	6/9/2010	S. Weeks	S. Weakland	Pass	none
34	Bellingham Bay	6/8/2010	S. Weeks	S. Weakland	Pass	none
35	Bellingham Bay (central)	6/11/2010	S. Weeks	S. Weakland	Pass	none
53	Bellingham Bay	6/10/2010	S. Weeks	S. Weakland	Pass	none
59	Bellingham Bay, South Bellingham	6/11/2010	S. Weeks	S. Weakland	Pass	none
60	Bellingham Bay, South Bellingham	6/10/2010	S. Weeks	S. Weakland	Pass	none
61	Bellingham Bay, South Bellingham	6/10/2010	S. Weeks	S. Weakland	Pass	none

StationID	Location	Date Sampled	Sorted by	QA/QC Sorter	25% QA/QC Pass/Fail	Action Taken
85	Bellingham Bay (central)	6/9/2010	S. Weeks	S. Weakland	Pass	none
163	Bellingham Bay	6/11/2010	S. Weeks	S. Weakland	Pass	none
195	Bellingham Bay	6/14/2010	S. Weeks	S. Weakland	Pass	none
213	Bellingham Bay (central)	6/8/2010	S. Weeks	S. Weakland	Pass	none
227	Bellingham Bay (central)	6/8/2010	S. Weeks	S. Weakland	Pass	none
277	Bellingham Bay (central)	6/9/2010	S. Weeks	S. Weakland	Pass	none
299	Bellingham Bay (central)	6/8/2010	S. Weeks	S. Weakland	Pass	none
379	Bellingham Bay	6/9/2010	S. Weeks	S. Weakland	Pass	none
507	Bellingham Bay	6/15/2010	S. Weeks	S. Weakland	Pass	none
42113	Bellingham Bay	6/15/2010	S. Weeks	S. Weakland	Pass	none

Infauna sediment sample taxonomy quality assurance and quality control for the 2010 Bellingham Bay survey.

	Crustacea	Misc. Taxa	Echinodermata	Annelida	Mollusca
Primary Taxonomist	Jeffery Cordell	Steven Hulsman	Steven Hulsman	Eugene Ruff	Susan Weeks
QA Taxonomist		Scott McKuen	Scott McKuen	Kathy Welch	Allan Fukuyama
Number of Bulk Samples QAed	0	1	1	1	1
Identifications confirmed	NA	100%	100%	100%	100%
Identifications changed (includes species-level changes)	NA	0	0	0	0
Species-level changes	NA	0	0	0	0
Number of Voucher Specimens QAed	0	0	0	5	0
Voucher Specimens confirmed	NA	NA	NA	5	NA