APPENDIX D

Subtidal Taxa: Annual Mean Abundances

D1 Algae

D2 Invertebrates

D3 Fishes

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) Fields Cove FC 1-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	2	4	2	3	3	1	1	4	4	4	4	2
Coverage Based on # of Contact Points																											
Ahnfeltiopsis leptophylla													-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-
Ahnfeltiopsis linearis													<1	<1	<.1	0.3	<1	<.1	<.1	<.1	2.0	0.5	0.1	0.6	0.4	0.5	0.8
Bryopsis spp													-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Calliarthron/Bossiella spp -complex													50.8	56.3	59.1	64.0	64.6	76.3	64.3	56.8	56.0	65.5	60.5	53.0	53.9	43.8	45.8
Callithamnion spp./*Pleonosporium* spp													-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Callophyllis firma													<.1	<.1	<1	<1	<.1	<.1	-	<.1	<.1	-	-	-	0.1	-	<1
Callophyllis flabellulata													<1	<1	<.1	<.1	0.1	<.1	<.1	<1	0.5	-	<1	<1	0.4	<.1	<1
Callophyllis spp													2.8	4.1	5.3	3.3	5.5	3.0	0.8	1.3	1.0	<1	0.4	0.3	0.3	0.3	<.1
Chondracanthus corymbiferus													31.5	26.6	29.0	28.8	28.1	38.3	31.2	23.7	26.5	21.5	20.5	20.3	9.3	9.3	13.8
Chrysophyta unid.													-	-	-	-	-	-	-	4.0	2.0	-	3.3	-	-	-	-
Corallina officinalis													0.3	0.1	<1	<.1	0.1	<1	<.1	<.1	<1	<1	<1	0.3	<1	-	-
Cryptopleura ruprechtiana													65.8	49.8	45.6	59.0	52.9	56.3	41.7	28.0	19.5	24.5	15.4	22.3	11.6	7.9	12.5
Cryptopleura violacea													0.3	0.1	0.5	0.3	0.8	1.8	-	0.3	-	-	0.8	<1	-	0.4	-
Cystoseira osmundacea													-	<1	-	<.1	<.1	-	-	-	-	0.5	-	0.1	0.4	1.1	0.8
Delesseria decipiens													-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Delesseriaceae (juv)													-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Desmarestia spp													-	<.1	0.1	-	-	<.1	8.3	20.3	0.5	-	14.3	2.5	3.4	0.5	<.1
Dictyoneurum californicum													<1	<1	0.1	<1	<.1	<1	<.1	0.2	<.1	-	-	-	-	-	-
Egregia menziesii													-	-	-	-	-	-	<1	<1	-	-	<1	<1	-	<1	-
Erythrophyllum delesserioides													2.8	3.3	2.9	2.8	1.0	1.0	0.7	<.1	<1	<1	0.5	-	-	-	<.1
Farlowia/Pikea spp.-complex													0.5	0.8	0.6	0.8	1.5	3.0	1.0	1.8	6.0	<.1	1.0	0.6	0.4	2.9	3.5
Fauchea laciniata													-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Gastroclonium subarticulatum													-	-	-	0.5	-	-	<1	-	-	-	-	-	-	-	-
Gelidium robustum													<1	<.1	<.1	<.1	0.3	0.5	0.2	0.3	<1	0.5	0.3	0.8	0.9	1.4	0.8
Gelidium spp.													-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Halicystis ovalis													-	-	-	-	-	-	-	<.1	<.1	-	<.1	-	-	-	-
Halymenia/Schizymenia spp.-complex													0.5	0.3	0.8	<.1	1.0	<1	0.7	1.3	4.5	-	3.4	<1	0.9	-	0.5
Hymenena spp													-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Laminaria setchellii													0.8	2.5	1.9	1.5	0.5	0.3	0.7	0.5	0.5	5.0	2.3	3.0	7.5	8.5	8.0
Lammariales													-	-	-	-	-	-	-	<.1	<1	-	<.1	<1	1.3	<.1	<.1
Macrocystis spp.													-	-	-	-	-	-	-	-	-	-	<1	0.4	-	-	-
Mazzaella lilacina													31.8	20.5	20.3	16.0	10.8	8.8	5.7	2.0	3.5	1.5	2.3	1.3	-	0.3	<1
Mazzaella rosea													<.1	<1	<.1	<1	<.1	<.1	<1	<.1	<1	-	0.6	<1	-	-	-
Microcladia coulteri													0.8	1.8	3.8	0.8	<.1	4.0	1.2	0.3	1.5	<.1	0.4	3.0	0.3	<1	3.3
Neoptilota densa													-	<1	<1	<1	<1	0.3	0.3	0.2	0.5	<1	0.1	1.3	1.8	1.4	2.0
Nereocystis luetkeana													-	-	0.1	-	-	-	<1	0.5	0.5	0.5	1.1	1.8	1.5	<1	0.5
Non-coralline crust													1.5	6.0	3.8	7.0	3.4	2.0	2.7	3.2	1.5	2.0	1.3	2.6	3.9	5.1	3.8
Opuntiella californica													-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1
Osmundea spp													0.3	0.6	1.1	<1	1.4	1.0	<1	0.3	0.5	<1	0.1	0.3	0.8	0.1	<1
Pikea robusta													0.5	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-
Plocamium cartilagineum													-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyneura latissima													-	<1	<.1	-	<1	-	-	0.2	-	-	<.1	<.1	-	-	<1
Porphyra spp.													-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-
Prionitis australis													<1	0.1	<.1	<.1	0.9	0.3	<1	0.5	0.5	-	<.1	1.5	1.1	2.6	3.5
Prionitis spp													10.5	12.0	16.5	1.5	14.6	12.5	13.3	8.5	10.0	7.0	9.9	7.3	8.3	4.9	7.3
Pterocladia caloglossoides													<1	<.1	<1	<.1	-	<1	<1	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea													<.1	-	-	-	-	-	-	-	-	-	<1	0.1	-	<1	-
Pterygophora californica													<1	<.1	0.1	-	-	-	-	<1	-	-	2.9	1.4	0.6	0.8	<1
Rhodymenia spp.													4.5	3.0	4.4	8.0	7.3	4.3	3.7	4.2	14.5	2.5	5.9	5.3	4.8	5.9	8.3
Sarcodiotheca gaudichaudii													<.1	0.1	<.1	-	0.4	<1	<1	<1	0.5	<1	<1	<.1	-	-	-
Scinaia confusa													<1	-	-	-	-	-	-	-	-	-	0.1	-	<1	<1	<1
Ulva/Enteromorpha spp													-	<1	<1	<1	<.1	<.1	<1	<1	<1	-	0.1	<1	<.1	<1	<1
Weeksia spp													<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
coralline crust													55.0	56.4	56.0	64.8	54.0	52.8	42.8	39.8	55.5	35.0	47.4	43.8	47.6	66.8	66.0
filamentous red algae-complex													-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 2-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Coverage Based on # of Contact Points																											
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	0.3	0.3	2.0
Ahnfeltiopsis leptophylla	-	-	<.1	<1	-	-	-	-	-	<1	-	<1	-	-	-	-	<1	-	-	-				-	-	-	-
Ahnfeltiopsis linearis	-	-	-	-	-	-	<1	-	-	<1	<1	<1	<.1	0.1	0.1	0.3	0.8	0.6	<.1	0.3				0.8	-	<1	0.3
Antithamnion/Platytham. spp -complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<.1				-	0.3	-	-
Bryopsis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	<1	<1
Cullilarthron/Bossiella spp -complex	39.5	42.0	44.5	39.9	43.2	47.0	46.5	38.7	36.1	35.6	35.0	35.6	23.3	23.3	31.1	29.7	31.3	37.0	32.0	28.0				29.8	32.1	29.8	27.3
Callophyllis firma	-	-	<.1	-	-	-	-	-	-	-	<1	-	<1	<1	<1	-	-	-	-	-				-	-	-	-
Callophyllis flabellulata	-	-	-	-	<1	-	<1	<1	-	<1	<1	<1	-	<1	0.1	<1	0.1	-	<.1	-				<1	0.1	<1	0.5
Callophyllis spp.	-	0.2	0.4	0.1	0.5	1.0	1.8	0.8	0.6	0.1	<1	0.4	0.3	0.9	0.9	0.8	<1	0.3	0.6	-				2.0	1.0	0.1	0.5
Chondracanthus canaliculatus	-	-	-	-	-	<1	-	-	-	<1	<1	0.2	0.3	0.3	<1	<1	-	<1	<1	<.1				-	-	-	-
Chondracanthus corymbiferus	5.5	7.8	7.4	5.9	9.3	7.8	15.0	12.3	15.1	11.4	18.5	15.1	14.5	10.3	14.8	12.3	13.3	10.9	2.8	2.3				1.5	2.1	1.6	3.5
Chondracanthus harveyanus/spinosus	-	-	-	-	-	<1	0.2	<1	0.1	<1	-	<.1	-	0.1	0.6	0.8	1.4	3.3	2.6	1.5				0.7	-	<1	-
Chrysophyta unid.	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	1.9	3.2	2.5	1.4	2.9	3.3				19.7	0.5	9.3	3.0
Cladophora spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	<1	<1	-
Clathromorphum parcum	-	-	-	-	-	-	<1	-	<1	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Coilodesme californica	-	-	-	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Colpomenia spp.	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	<1	0.1	0.1	0.3	<1				<.1	-	<.1	<1
Corallina officinalis	2.0	3.3	4.8	3.0	3.3	3.2	1.5	2.7	1.5	1.5	3.4	0.6	5.2	<1	<1	1.0	0.5	<1	0.1	<.1				<1	<.1	<1	-
Cryptopleura ruprechtiana	-	18.0	30.8	29.1	26.3	36.3	36.8	38.8	48.4	40.2	23.8	30.2	4.2	6.6	2.3	2.5	-	-	-	-				-	-	-	-
Cryptopleura violacea	-	0.7	0.3	1.5	0.5	1.0	0.5	3.3	13.9	3.8	9.4	37.8	75.8	59.5	61.0	44.8	42.9	37.4	23.6	11.5				3.8	3.9	4.0	7.5
Cystoseira osmundacea	4.0	4.8	4.3	4.5	4.3	5.8	9.7	7.3	7.4	7.8	3.3	1.8	1.0	<.1	<1	<1	0.5	0.9	0.9	0.3				2.5	2.0	2.0	4.5
Delesseriaceae (juv)	24.0	6.3	-	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Derbesia marina (filamentous)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.3	<1				-	-	-	-
Desmarestia spp.	-	2.0	-	<1	0.3	-	<1	2.7	-	-	-	0.3	-	0.1	1.8	0.7	0.1	0.3	5.6	0.5				3.3	1.5	8.5	1.0
Dictyoneurum californicum	-	0.2	-	<1	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Dictyota binghamiae	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Egregia menziesii	1.0	0.3	0.3	0.1	0.2	<.1	-	<1	<1	<1	-	-	-	-	-	-	-	<1	-	-				-	-	-	-
Erythrophyllum delesserioides	-	0.3	0.4	<1	0.7	0.3	0.5	0.2	0.3	<1	0.1	-	-	-	-	-	-	-	-	-				-	-	-	-
Farlowia/Pikea spp.-complex	-	0.2	<1	0.3	0.2	0.2	0.2	<1	0.4	1.4	0.5	2.6	1.3	2.8	1.5	1.5	4.8	15.4	20.3	14.0				8.3	12.8	13.0	10.3
Gastroclonium subarticulatum	-	-	-	-	-	-	<1	<1	<1	<1	<1	0.2	0.2	0.8	1.3	1.7	0.1	0.5	0.1	-				<1	<1	-	-
Gelidium coulteri	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-				-	-	-	<1
Gelidium pusillum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-				-	-	-	-
Gelidium robustum	-	<1	<.1	0.3	<1	-	<1	<1	<1	0.2	<.1	0.4	0.3	1.0	0.6	1.2	3.4	6.8	9.4	7.5				2.7	5.0	4.3	2.8
Gelidium spp	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1	-	-				-	-	-	-
Gloiosiphonia californica	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	<1	<.1	<1				-	1.3	-	-
Grateloupia doryphora	-	-	-	-	-	-	-	-	-	-	<1	0.3	0.3	-	-	-	-	-	-	-				-	-	-	<1
Halicystis ovalis (=Derbesia marina)	-	<1	-	-	-	<1	<1	<1	<1	<1	<1	<.1	<1	<.1	-	-	<1	<1	-	-				<1	-	-	<1
Halymenia/Schizymenia spp -complex	<1	<1	<1	-	0.3	<1	0.5	0.3	0.1	0.6	3.5	1.5	6.3	1.3	1.5	1.5	0.1	0.1	<1	<1				<1	0.1	-	0.8
Laminaria setchellii	1.0	0.7	1.0	1.9	0.5	1.2	0.3	0.2	0.1	0.4	<.1	-	-	-	<1	<.1	-	-	<1	-				-	-	<1	<.1
Laminariales	-	0.2	-	<1	0.3	-	-	-	-	<1	-	<1	-	-	<1	-	-	-	<1	-				<1	0.1	-	<1
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.6	1.5	7.1	3.0				7.7	7.3	3.4	4.3
Mazzaella affinis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-				-	-	-	-
Mazzaella heterocarpa	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Mazzaella lilacina	4.0	1.8	1.0	4.5	6.0	10.5	7.8	11.5	15.4	15.3	14.0	6.9	1.5	1.0	0.4	0.2	<1	<1	-	-				-	-	-	-
Mazzaella rosea	-	-	-	-	-	<.1	<1	0.2	0.1	0.1	0.4	0.6	1.2	1.4	0.5	0.5	1.6	0.1	0.3	<1				<1	0.1	<1	-
Melobesia mediocris	-	-	<1	0.1	<1	<1	<1	<1	<1	<.1	<1	-	-	-	-	-	-	-	-	-				<.1	-	-	-
Microcladia coulteri	2.5	2.2	1.1	2.1	1.2	1.0	1.3	6.0	2.5	2.1	<1	2.6	0.7	2.6	2.6	7.8	0.1	<1	0.1	-				<1	-	-	-
Neoptilota densa	0.5	-	-	<1	-	0.2	<1	0.2	<1	<1	-	-	-	-	-	0.8	-	-	-	-				-	-	-	-
Nereocystis luetkeana	-	<1	0.1	<1	0.3	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-				<1	-	-	1.8
Nienburgia andersoniana	-	-	-	-	-	-	-	<1	0.4	0.1	-	-	-	-	-	<1	1.4	3.1	1.3	0.8				-	0.1	0.3	-
Non-coralline crust	12.0	8.3	2.4	5.3	2.7	1.0	1	6.2	7.6	6.6	5.9	8.9	10.5	8.6	8.4	8.8	4.0	3.9	2.8	4.0				1.7	2.9	1.1	0.5
Opuntiella californica	-	-	<.1	-	<1	<1	<1	<1	-	<1	<1	0.2	-	<1	-	<1	-	-	-	-				-	-	-	-
Osmundea spp	0.5	1.5	2.4	2.6	2.8	4.2	3.2	0.7	0.1	2.9	2.6	3.3	3.0	6.0	13.5	20.0	2.3	3.0	1.9	0.5				0.2	<1	0.1	<1
Phaeophyta (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-				-	-	-	-
Phycodrys spp	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Phyllospadix spp	12.0	7.7	10.8	9.1	7.7	8.0	8.5	3.7	3.3	1.5	0.4	0.1	-	-	-	-	-	-	-	-				-	-	-	-

(continued)

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 2-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Coverage Based on # of Contact Points																											
Plocamium cartilagineum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-				-	-	-	-
Polyneura latissima	-	0.5	-	0.1	-	-	<.1	<1	0.1	<.1	<.1	<1	-	<.1	-	<1	-	<1	<1	-				-	-	-	-
Porphyra spp	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Prionitis australis	<1	-	-	-	-	0.2	<.1	0.2	<1	0.1	-	0.1	-	<.1	<.1	0.2	0.3	0.1	-	-				<.1	0.3	0.4	0.5
Prionitis spp.	-	0.5	0.6	1.4	1.7	1.7	0.7	0.7	1.6	2.4	5.4	9.5	10.3	18.9	17.4	22.8	20.9	20.8	15.0	7.3				6.0	6.6	4.6	2.3
Pterochondria woodii	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Pterocladia caloglossoides	0.5	0.7	0.3	0.5	0.2	0.5	0.2	<1	0.1	<1	<1	0.1	0.2	0.3	<1	<1	<.1	-	<1	-				-	-	-	-
Pterosiphonia baileyi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-				-	-	-	-
Pterosiphonia dendroidea	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	<.1	<1	0.1	0.3	<1				0.2	2.1	<.1	0.8
Pterygophora californica	3.0	1.3	1.9	2.6	2.3	0.5	1.0	0.7	0.3	0.4	<1	-	-	-	-	-	-	-	-	-				-	-	-	-
Rhodophyta (juv. blades)	1.0	-	0.1	0.1	-	-	-	<.1	-	0.3	-	-	0.2	-	-	-	-	-	-	-				-	-	-	-
Rhodymenia spp.	-	-	-	0.1	<1	0.2	0.3	<1	<1	0.3	0.8	0.2	0.2	1.4	2.9	3.8	3.0	2.5	1.9	2.3				0.2	0.9	0.8	0.8
Sarcodiotheca gaudichaudii	-	0.3	0.8	0.4	0.5	0.2	0.3	0.2	0.8	1.0	3.1	3.5	1.8	3.0	2.0	1.3	0.3	0.4	<1	0.5				<.1	-	<1	0.3
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.3	1.3	0.6	1.8
Scinaia confusa	-	<1	-	<.1	<1	-	-	<.1	<1	<.1	-	<1	-	<1	-	<1	<1	-	-	<1				-	-	<1	-
Smithora naiadum	-	1.0	<1	1.4	1.0	1.0	2.5	-	-	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Spongomorpha/Acrosiphonia-complex	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	<1	-	<1
Ulva/Enteromorpha spp	6.5	2.2	<.1	<1	0.7	0.2	0.3	0.8	<1	<1	<1	<1	<1	<1	<.1	0.8	<.1	1.1	0.1	<.1				0.3	<.1	<1	<1
coralline crust	54.0	36.8	37.9	44.0	49.8	38.7	53.8	46.7	57.4	60.6	62	64	62.7	48.9	50.9	59.2	59.5	67.5	58.4	46.0				55.0	64.6	41.5	89.0
filamentous red algae complex	0.5	0.5	0.1	0.1	-	-	<1	-	-	<1	<1	<1	-	<1	3.5	<.1	0.3	1.3	0.5	0.5				<1	0.4	0.3	0.3
juv articulated coralline algae	-	-	0.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 3 -3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	1.1	1.3	2.8
Ahnfeltiopsis leptophylla	-	-	-	-	-	-	<1	-	-	-	<1	<1	-	-	0.1	<1	-	-	-	-	-	-	-	-	-	-	-
Ahnfeltiopsis linearis	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	1.1	1.3	0.3	-	0.3	0.4	1.0	0.3	0.8
Antithamnion/Platytham spp.-complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<.1	<1	<1	<1	-	-	<1	<1	<1	<1
Bryopsis spp	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<1	<1	-	-	<1	-	<1	-	-	<1	-	<1	<1
Calliarthron/Bossiella spp -complex	61.0	47.8	52.5	53.6	49.8	54.8	58.2	38.6	44.6	46.7	43.3	41.9	29.8	29.6	35.0	35.0	29.4	26.3	22.5	15.3	18.5	20.8	18.0	20.8	27.3	19.3	14.0
Callithamnion spp./*Pleonosporium* spp	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Callophyllis firma	-	-	-	-	-	-	-	<.1	-	<.1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
Callophyllis flabellulata	-	<1	0.3	-	<1	<1	<1	<1	<1	<1	<1	-	-	0.3	0.1	<1	<1	-	0.1	<1	-	-	-	<1	0.1	<.1	-
Callophyllis spp	-	2.2	0.6	0.6	1.2	1.7	3.2	0.6	0.1	0.3	0.2	<1	0.3	0.8	0.4	1.3	0.3	0.3	-	0.3	0.8	0.3	-	0.8	1.8	0.5	<1
Chondracanthus canaliculatus	-	-	-	-	-	-	-	-	<1	<1	<.1	<1	<1	<1	0.1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-
Chondracanthus corymbiferus	11.5	14.8	14.8	14.8	19.2	22.5	21.7	22.9	16.4	16.1	16.2	18.1	14.3	18.4	22.0	17.6	11.8	10.1	10.9	7.5	5.8	3.0	4.5	2.1	2.9	2.8	1.3
Chondracanthus harveyanus/spinosus	-	-	-	-	-	-	-	<1	-	<1	<1	0.1	-	0.1	-	0.3	<1	2.0	1.6	1.0	1.8	1.8	0.5	0.1	0.5	-	<1
Chrysophyta unid.	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	1.5	2.1	0.4	0.8	1.1.0	2.8	13.5	7.8	11.8	21.1	11.5	23.8	14.8
Cladophora spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	0.3
Colpomenia spp	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	<1	<.1	<1	<1	<1	<1	-	<1	0.1	<1	<1	0.3
Corallina officinalis	2.5	16.3	11.1	9.6	11.7	10.5	13.0	8.0	6.8	7.7	8.0	2.5	0.7	0.4	1.9	2.6	0.5	1.3	0.8	0.5	1.3	0.5	0.8	2.8	1.6	-	0.3
Corallina vancouveriensis	8.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptopleura ruprechtiana	-	35.8	40.8	43.0	35.3	52.7	44.5	37.3	44.9	38.7	18.5	14.3	0.2	1.3	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-
Cryptopleura violacea	-	0.5	2.4	2.9	1.0	2.0	0.2	2.4	6.8	1.0	13.7	55.5	72.0	69.5	60.6	56.8	55.0	52.0	42.5	33.3	40.8	45.8	2.5	1.3	7.0	10.1	8.0
Cystoseira osmundacea	0.5	0.5	0.3	0.1	0.5	0.3	1.2	0.1	0.5	1.0	0.5	-	-	<1	<1	<1	<1	0.3	0.1	<1	<1	<1	<1	2.0	3.8	4.6	4.8
Delesseria decipiens	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delesseriaceae (juv)	3.9.0	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-
Derbesia marina (filamentous)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-
Desmarestia spp	-	7.5	0.1	-	0.3	0.7	<1	4.8	<1	-	-	-	-	<1	0.4	0.1	-	0.1	<1	<1	-	-	-	0.3	1.3	1.3	0.3
Dictyoneurum californicum	-	-	<1	0.1	<1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dictyota binghamiae	-	-	-	-	-	<1	<1	<1	-	-	<1	<1	-	-	-	-	-	-	-	-	0.3	-	<1	<1	0.1	-	-
Egregia menziesii	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erythrophyllum delesserioides	-	0.5	0.3	<1	0.5	0.3	0.2	0.9	0.1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Farlowia/Pikea spp -complex	-	0.2	<1	0.5	<1	0.3	0.5	<1	0.4	0.6	0.9	2.4	2.8	3.3	1.6	2.0	12.5	23.9	21.6	19.5	16.0	19.3	1.8	6.4	17.0	12.3	9.0
Gastroclonium subarticulatum	-	-	-	-	-	<1	0.2	0.3	0.5	0.2	<1	0.3	1.2	2.0	1.6	0.9	0.1	0.3	0.1	0.3	0.3	<1	-	<1	<1	<1	<1
Gelidium coulteri	-	-	-	-	-	-	-	-	-	-	-	<1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gelidium pusillum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Gelidium robustum	-	0.2	0.4	0.3	0.7	0.3	0.3	0.1	0.3	0.1	0.4	0.3	0.5	0.6	1.6	2.8	5.4	6.3	9.1	10.3	13.8	9.0	11.3	11.9	9.6	6.0	2.0
Gelidium spp	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-
Gloiosiphonia californica	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	-	<1	-	<1	<1	<1	-	-	<.1	-	<.1	-	-
Grateloupia doryphora	-	-	-	-	-	-	-	-	-	-	-	<1	0.2	-	-	<1	-	-	<1	-	-	-	-	-	-	-	0.3
Halicystis ovalis (=Derbesia marina)	-	0.2	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	-	-	-	<.1	-	-	-	-	-	-	-	-
Halymenia/Schizymenia spp -complex	-	0.3	0.4	-	<1	<1	<.1	2.5	0.1	0.2	1.5	2.6	15.7	4.3	0.6	0.8	<1	<1	<1	-	<1	0.3	-	-	<1	0.1	<1
Hymenena spp.	-	-	-	-	-	0.2	-	-	-	-	-	-	<.1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Laminaria setchellii	-	0.7	0.3	1.1	0.3	1.0	<1	0.3	0.3	0.4	0.3	-	-	-	-	<1	-	-	-	-	-	-	-	-	<1	<1	-
Laminariales	-	0.3	<1	-	<1	-	-	<1	<1	<1	-	-	-	<1	-	<1	-	-	<1	-	-	0.3	-	-	<.1	<1	-
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<1	1.1	2.0	3.8	4.3	3.5	14.6	11.4	0.5	<1
Mastocarpus papillatus	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mazzaella affinis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-
Mazzaella leptorhynchos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-
Mazzaella lilacina	8.5	4.0	6.1	7.3	11.3	14.3	14.3	15.0	10.5	13.1	7.3	5.3	4.0	1.0	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Mazzaella rosea	-	0.2	-	-	<1	<.1	<1	0.1	<1	0.1	0.5	0.6	0.8	0.9	0.8	0.9	2.1	<.1	0.5	1.8	0.5	<1	<1	<1	0.1	-	<.1
Melobesia mediocris	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Membranoptera/Branchioglossum spp	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia coulteri	1.0	3.8	3.1	1.8	2.3	4.8	4.7	2.4	4.1	1.5	<1	5.5	0.7	4.9	7.0	4.5	<1	<1	<1	<1	-	-	-	-	-	-	-
Neoptilota densa	0.5	0.7	0.3	<1	0.3	0.3	0.7	0.3	0.6	0.2	<1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoptilota hypnoides	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nereocystis luetkeana	-	0.3	-	<.1	<1	<1	<1	0.1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.8	2.8	7.0	4.3	7.0	2.5	2.3	0.5	0.1	0.6	0.1	-
Non-coralline crust	-	3.7	1.8	2.8	1.0	0.2	3.2	3.4	3.9	6.4	7.1	7.9	10.2	12.4	7.3	5.0	5.8	4.8	3.1	3.0	3.3	3.5	2.3	2.9	1.8	0.8	1.0
Opuntiella californica	-	-	-	-	-	-	-	<1	<1	<1	0.1	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 3-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Osmundea spp	1.0	2.0	2.8	3.4	2.5	3.2	5.0	2.5	2.1	3.4	0.7	3.8	6.5	16.0	7.9	11.0	2.0	0.6	0.3	0.3	3.5	0.8	-	<1	-	<1	-
Phaeophyta (juv)	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phycodrys spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Phyllospadix spp	14.0	8.7	5.0	4.6	4.7	6.5	10.3	3.1	1.6	0.9	0.3	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pikea robusta	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	<1	-	-	-	-	-	-	-
Plocamium cartilagineum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Polyneura latissima	-	-	-	-	<1	0.2	<.1	<1	0.3	<1	<1	<1	-	<.1	<1	0.1	-	-	-	-	-	-	-	<1	1.1	1.3	2.8
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.3	0.5	<1
Prionitis australis	-	0.2	<.1	-	-	<1	-	-	0.1	<1	0.2	<1	0.2	-	0.1	0.4	0.4	<1	0.4	0.8	0.5	-	-	2.8	6.8	5.6	2.3
Prionitis spp	1.0	2.0	0.6	0.9	0.5	0.5	1.7	2.3	2.4	3.1	4.7	11.1	9.2	19.0	23.1	23.5	17.8	13.4	16.6	7.0	7.5	5.5	2.8	6.8	5.6	6.8	2.3
Pterochondria woodii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Pterocladia caloglossoides	<1	1.8	1.6	0.3	0.5	0.5	0.8	0.1	0.1	0.3	0.2	0.1	1.7	0.6	0.3	<1	<1	-	-	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	<.1	<1	1.1	0.6	0.5	0.5	0.5	-	0.9	1.5	1.8	1.3
Pterygophora californica	1.5	0.3	0.6	1.5	0.3	0.2	0.2	2.1	3.5	2.5	0.4	<1	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-
Rhodophyta (juv blades)	-	0.2	0.1	0.4	<1	-	-	<1	<.1	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhodoptilum plumosum	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhodymenia spp	-	-	-	-	<.1	<.1	0.3	0.6	0.3	0.1	0.3	0.3	0.8	4.4	3.9	4.4	4.4	5.1	7.5	7.0	6.0	3.3	1.0	3.1	3.4	2.6	1.3
Sarcodiotheca gaudichaudii	-	1.5	2.1	1.1	0.3	1.7	2.0	0.9	0.9	0.8	1.2	2.0	0.7	2.8	0.4	0.3	<.1	0.1	<1	<1	<.1	<.1	-	<.1	<.1	<1	-
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<.1	0.5	0.6	2.5	4.3
Scinaia confusa	-	-	-	-	-	-	-	<1	<1	<1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smithora naiadum	<.1	-	-	0.3	0.3	0.8	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spongomorpha/Acrosiphonia-complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	<.1
Ulva/Enteromorpha spp.	4.0	1.8	<1	0.3	0.2	0.2	<.1	0.6	<1	<1	<.1	<1	<1	<.1	0.6	<1	<1	0.5	0.3	0.3	<.1	0.3	0.3	<1	<1	<1	2.3
coralline crust	29.5	60.0	34.8	39.4	41.5	45.5	50.5	62.4	62.5	56.3	47.1	58.9	63.8	59.9	54.4	56.8	62.5	54.6	53.8	51.5	49.3	44.0	53.5	54.9	56.8	87.8	69.0
filamentous red algae-complex	-	0.2	<1	-	0.2	<1	-	<1	-	<.1	<1	<1	<1	-	1.4	0.1	0.6	4.0	2.3	6.8	2.8	2.0	8.8	<1	0.1	3.4	0.3
juv articulated coralline algae	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 4-4m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	0.1	1.1	0.6	2.8
Ahnfeltiopsis leptophylla	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Ahnfeltiopsis linearis	-	-	<1	0.3	-	0.3	-	<.1	0.1	0.3	0.4	0.3			0.4	0.9	2.3	0.4	0.9	0.3	0.5	1.0	1.5	0.4	0.8	0.1	0.3
Amplisiphonia pacifica	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	<1	-	-	-	-
Antithamnion/Platytham. spp -complex	-	-	-	-	-	-	-	-	-	-	<1	-			-	<1	0.3	<1	<1	<1	-	-	-	0.3	<1	<1	-
Bryopsis spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	<1	<1	-	-
Calliarthron/Bossiella spp -complex	54.5	57.0	47.5	51.8	49.7	53.7	49.1	40.4	44.4	47.6	43.0	50.5			46.1	42.9	50.6	47.3	46.1	36.8	47.0	39.3	37.0	36.4	37.5	26.4	30.3
Callithamnion spp./*Pleonosporium* spp	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Callophyllis firma	-	-	-	-	-	-	-	<1	-	-	-	<1			-	<1	<1	-	-	-	-	-	-	<1	-	-	-
Callophyllis flabellulata	-	<.1	<1	0.3	<1	0.2	0.9	<1	0.3	0.4	0.1	1.2			0.1	0.3	<1	<1	<1	<1	<1	<1	<1	0.3	2.1	0.4	2.8
Callophyllis spp	3.0	4.5	2.9	3.2	3.5	4.2	7.9	4.3	4.3	3.2	2.1	1.7			3.0	1.4	0.3	0.6	<1	0.8	1.0	<1	-	0.4	1.4	1.6	1.3
Chondracanthus canaliculatus	-	-	-	-	-	-	-	-	-	-	<1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Chondracanthus corymbiferus	4.5	6.0	7.5	5.9	6.5	9.3	10.3	9.5	12.0	12.8	1.5	19.2			18.3	18.8	12.3	9.1	12.0	6.3	3.5	5.0	4.3	4.3	5.0	4.6	6.3
Chondracanthus harveyanus/spinosus	<1	-	-	-	-	-	<1	-	<1	<1	0.1	-			0.1	0.4	1.4	1.8	3.6	1.3	-	1.8	0.8	0.9	0.8	0.4	0.3
Chrysophyta unid	-	-	-	<1	-	-	-	-	-	-	-	-			<1	0.1	3.0	0.5	5.0	0.5	6.5	6.5	6.3	7.4	2.9	6.8	2.3
Cotlodesme californica	-	-	-	<1	-	-	-	-	<1	-	-	-			-	0.1	-	-	-	-	-	-	-	-	-	-	-
Colpomenia spp	-	-	-	-	-	-	-	-	-	-	<1	<1			<1	<1	<1	<1	0.1	<1	-	-	<1	<1	<1	<1	-
Corallina officinalis	-	-	0.4	0.5	0.7	<1	0.1	0.1	0.1	0.3	0.3	0.3			0.1	0.1	0.1	0.1	<.1	<1	-	<1	<1	0.1	<1	-	-
Cryptopleura ruprechtiana	-	31.5	40.3	39.9	42.8	49.8	51.8	44.8	54.5	51.5	43.3	54.7			24.4	14.6	2.5	1.8	0.4	-	0.5	<1	-	-	0.1	<1	-
Cryptopleura violacea	-	-	0.1	0.4	-	-	-	0.3	0.5	0.2	4.1	14.7			34.5	30.9	2.4	28.5	18.8	15.5	27.5	23.8	1.0	1.0	13.6	6.3	4.8
Cystoseira osmundacea	8.0	7.0	5.1	5.8	9.3	10.0	13.0	8.3	9.4	11.2	8.3	8.0			0.4	0.4	2.0	0.6	0.8	1.0	1.5	0.3	0.8	0.6	1.9	4.1	3.8
Delesseriaceae (juv)	33.0	-	0.5	0.2	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	0.3	-	-	-	-	-
Desmarestia spp	-	-	0.3	-	<1	-	-	2.5	0.3	<1	<1	-			2.3	0.4	-	0.1	0.4	3.5	-	<1	<1	<1	7.1	5.0	5.8
Dictyoneurum californicum	6.5	5.0	7.6	6.5	6.5	7.0	6.4	6.9	6.1	5.3	0.6	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Dictyota binghamiae	-	<1	0.1	<1	-	-	-	<1	0.1	-	<1	<1			-	-	-	-	-	-	-	-	-	-	-	-	-
Egregia menziesii	-	-	0.1	<.1	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	-	-
Endarachne/Petalonia-complex	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<.1	-	-	-	-	-	-	-	-
Erythrophyllum delesserioides	<1	-	0.5	0.1	<1	0.2	0.3	0.3	0.5	<1	<1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Farlowia/Pikea spp -complex	<1	<1	<1	0.2	0.2	0.2	<1	0.1	<1	<1	1.3	2.2			1.8	5.0	15.0	16.5	19.5	13.0	12.0	19.3	3.3	6.5	16.3	12.5	17.5
Fauchea laciniata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Gastroclonium subarticulatum	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	<1	-	0.5	-	-	<1	-	0.1	-
Gelidium robustum	-	<1	-	-	<1	0.2	<1	<1	<1	0.2	<1	<1			0.9	1.8	2.6	1.8	2.8	1.5	5.0	1.8	3.5	5.0	2.8	2.1	1.3
Gelidium spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	<1	-	-	-	-	-
Gloiosiphonia californica	-	-	-	-	-	-	-	-	-	-	<1	<1			<1	-	<1	-	<1	<.1	-	-	-	-	<1	-	-
Halicystis ovalis (=Derbesia marina)	-	-	<1	<1	<1	<1	<1	<.1	<.1	<1	<1	<1			<.1	-	<1	-	-	-	-	-	-	-	-	-	-
Halymenia/Schizymenia spp -complex	-	-	0.1	-	0.2	-	-	0.1	<.1	<1	0.6	0.5			0.4	0.1	<1	0.1	<1	0.3	-	<1	-	<1	-	<1	0.3
Hymenena spp	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	0.1	-	-	-	-	-	-	0.1	-
Laminaria setchellii	1.0	1.0	2.5	2.1	1.7	1.0	1.3	0.4	0.9	0.6	0.3	<1			<1	<1	-	<1	<1	<1	<1	-	-	-	<1	0.1	0.3
Laminariales	-	-	<1	<1	<1	-	-	<1	<1	-	0.1	<1			<1	-	<1	<.1	<.1	<1	<1	-	-	<1	-	<1	<1
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	0.6	3.0	3.4	2.8	3.0	2.5	7.5	10.5	7.8	1.3	2.0
Mastocarpus rotata	-	-	0.1	<1	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Mazzaella heterocarpa	-	-	<1	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Mazzaella lilacina	2.0	0.5	0.4	0.8	0.7	0.8	0.9	0.8	2.8	1.3	2.4	3.3			0.3	0.3	-	-	-	-	-	-	-	-	-	-	-
Mazzaella rosea	-	-	-	-	-	-	-	0.3	<1	<1	0.1	<.1			<1	0.1	<1	0.1	<.1	0.5	-	0.5	<1	<1	-	-	-
Membranoptera/Branchioglossum spp	-	-	-	-	-	<1	-	-	-	<1	<1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia coulteri	0.5	0.5	0.3	0.4	0.5	1.3	0.8	0.6	1.1	0.3	0.6	1.5			1.8	4.0	<1	<1	<.1	<1	-	<1	-	<.1	-	-	0.3
Neoptilota densa	-	-	0.1	<1	<1	0.2	0.1	<1	0.1	<1	0.1	-			-	-	-	-	-	-	-	-	-	-	<1	-	-
Neoptilota hypnoides	<1	-	<1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nereocystis luetkeana	0.5	-	<1	<1	<1	<1	<1	<.1	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	0.3	-
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	-	-			<1	0.4	0.3	4.3	2.0	0.8	1.0	2.0	-	0.5	0.4	-	-
Non-coralline crust	2.5	3.0	1.3	1.5	0.2	0.5	<.1	<1	0.6	0.8	2.3	1.7			1.8	1.9	1.4	0.6	0.5	1.3	-	<1	0.5	0.3	0.5	0.8	1.0
Opuntiella californica	1.5	<.1	-	0.3	<1	0.3	0.3	0.3	0.3	0.3	<1	0.2			0.1	<1	-	-	-	-	-	-	-	-	0.3	-	-
Osmundea spp	<.1	<1	0.5	0.8	0.5	0.3	0.4	0.1	0.4	0.6	1.5	2.5			7.5	6.4	1.1	0.1	<1	0.3	3.5	0.5	-	<1	<1	<1	-
Phaeophyta (juv)	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phycodrys spp	-	-	<1	<1	<1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phyllospadix spp	2.0	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pikea robusta	-	-	-	-	-	-	-	-	-	-	0.1	<1			-	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 4-4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Polyneura latissima	-	1.0	3.1	0.9	1.2	1.2	1.1	2.5	2.5	0.9	0.1	0.5			0.1	0.1	<1	0.1	<.1	<1	-	<.1	-	<.1	-	-	-
Prionitis australis	1.5	2.0	0.6	-	-	0.5	0.9	0.6	0.3	0.3	-	0.5			0.8	2.0	2.3	0.8	1.0	1.8	-	0.3	0.3	0.6	0.5	2.5	2.8
Prionitis spp.	0.5	0.5	2.3	1.8	1.7	1.7	0.9	0.8	2.0	2.0	5.3	8.7			19.6	19	16.5	16.8	15.1	8.0	8.5	4.3	7.5	9.8	4.9	3.3	3.8
Pterochondria woodii	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pterocladia caloglossoides	0.5	5.0	0.9	0.2	<.1	<1	0.3	<.1	<1	<.1	<1	<1			<1	<1	<1	1.5	-	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea	1.0	<.1	0.1	<.1	-	-	-	-	-	-	<1	<1			<1	<1	<1	0.1	0.4	0.5	4.5	0.3	0.5	0.3	0.9	1.0	2.5
Pterygophora californica	2.0	-	1.6	2.8	1.8	2.3	1.4	1.3	2.8	1.9	0.5	<1			0.1	-	-	-	-	-	-	-	<1	<1	-	-	-
Rhodophyta (juv blades)	1.0	0.5	0.5	0.5	-	-	-	0.4	<.1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Rhodoptilum plumosum	-	<1	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Rhodymenia spp	-	6.0	1.9	1.5	1.8	2.5	4.5	4.9	4.5	3.8	7.8	7.5			12.0	12.3	14.9	14.3	9.6	8.5	5.5	5.5	5.0	4.5	4.0	5.4	5.3
Sarcodiotheca gaudichaudii	-	1.5	<.1	0.1	<.1	<.1	<.1	0.1	<1	0.2	0.1	1.2			0.4	0.1	<.1	<.1	<.1	-	-	<1	-	-	<1	-	-
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	0.3	<1	-	<1	<1	<1	0.3	<1	0.3
Scinaia confusa	-	-	-	-	<.1	-	-	0.4	<1	-	<1	-			<1	-	<.1	<.1	<1	-	-	-	-	-	-	<1	-
Spongomorpha/Acrosiphonia-complex	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	<1	-	-	-
Ulva/Enteromorpha spp	1.5	-	0.1	<1	<1	<1	<.1	0.8	<1	<1	0.1	<1			<1	<1	0.1	0.1	<1	<.1	<1	<1	<1	-	<1	<1	<1
coralline crust	52.5	60.5	67.8	65.3	61.7	60.0	62.6	52.6	68.3	56.7	67.8	70			63.9	61.1	51.6	47.1	45.1	50.3	58.0	39.3	34.8	40.1	41.8	76.4	76.3
filamentous red algae-complex	6.5	5.0	0.4	0.6	<1	<1	<1	0.9	0.1	<1	<1	<1			0.3	0.5	0.6	1.8	3.0	3.8	-	4.3	2.8	0.5	0.5	0.1	<1

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) South Diablo Cove SDC 2 -3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	6.8	17.8
Ahnfeltiopsis leptophylla	-	0.7	-	<1	<1	-	<1	<1	<1	<.1	<1	<1	0.1	0.5	<.1	-	<1	<1	-	-	<1	-	<1	0.1	-	<.1	-
Ahnfeltiopsis linearis	-	-	-	<1	-	-	0.3	-	<1	0.4	1.1	2.6	3.1	1.3	1.9	1.3	1.3	2.9	6.5	3.5	<1	0.8	2.5	0.4	3.4	0.1	0.3
Amplisiphonia pacifica	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisocladella pacifica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Antithamnion/Platytham spp -complex	-	-	-	0.3	<1	<1	<.1	-	<1	<1	<1	<1	<1	-	<1	<.1	<1	<1	<1	<1	<1	0.3	<1	-	<1	-	<1
Botryocladia pseudodichotoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Bryopsis spp	-	-	-	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-
Calliarthron/Bossiella spp -complex	40.5	41.2	33.4	39.3	36.4	29.4	33.1	21.5	17.6	18.5	11.0	16.8	15.9	22.3	22.3	34.6	24.4	22.5	24.8	16.5	19.5	15.5	11.0	10.4	13.6	10.3	9.0
Callithamnion pikeanum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-
Callithamnion spp /*Pleonosporium* spp	-	<1	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Callophyllis firma	-	-	-	-	-	-	-	-	<1	<1	<1	0.1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Callophyllis flabellulata	-	<1	0.1	0.2	<1	<1	<.1	<.1	<1	<1	0.3	<1	0.5	0.8	0.6	1.4	0.1	0.1	<1	<1	<1	<1	-	0.5	0.1	0.1	-
Callophyllis spp	0.5	1.8	0.1	0.3	0.2	0.1	<1	<1	<1	0.2	0.6	0.1	1.0	1.5	0.1	2.0	0.4	0.1	0.1	-	-	<1	-	-	-	0.5	<1
Chondracanthus canaliculatus	-	-	-	-	-	-	-	-	-	-	-	<1	0.1	<1	-	-	-	<1	<1	-	-	-	-	-	-	-	-
Chondracanthus corymbiferus	1.0	0.2	<.1	2.3	1.8	1.1	1.8	1.5	4.9	11.2	6.5	18.7	21.9	14.9	16.8	12.0	8.3	9.5	11.5	8.8	5.8	1.8	0.8	3.9	1.9	4.3	3.8
Chondracanthus harveyanus/spinosus	-	-	-	-	<1	<1	0.1	0.3	0.3	0.9	0.5	2.3	7.9	1.6	7.3	4.3	0.8	5.5	7.3	10.0	6.0	2.3	<1	1.3	1.8	1.8	2.5
Chondria decipiens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Chrysophyta unid	-	-	-	<1	-	-	-	-	1.3	<1	<1	-	-	-	0.1	0.1	0.3	2.6	3.6	0.8	0.5	1.0	21.3	31.4	13.8	-	3.0
Cladophora spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-
Coilodesme californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Colpomenia spp	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	<1	<1	<1	0.1	<1	-	-	<1	0.1	-	-	-
Corallina officinalis	3.0	2.5	6.3	5.7	5.2	2.5	3.8	1.6	3.4	3.1	0.6	1.7	0.5	<1	0.5	2.6	0.6	2.4	2.5	4.5	1.3	1.5	1.0	1.6	<1	0.1	<1
Cryptopleura ruprechtiana	-	11.3	12.4	28.3	25.9	19.6	23.6	12.3	19.0	45.8	18.9	13.8	18.1	20.9	10.3	12.1	2.5	<1	0.1	-	-	-	-	0.1	0.4	0.1	0.3
Cryptopleura violacea	-	-	0.4	0.5	0.8	0.3	0.8	0.4	1.0	3.6	5.0	15.6	33.0	25.1	37.3	34.4	45.9	45.0	0.5	1.3	43.5	41.0	-	1.9	29.0	22.0	71.0
Cystoseira osmundacea	3.5	3.5	4.3	3.1	3.7	3.0	3.0	2.5	0.4	<1	0.2	<1	-	<1	0.1	2.4	2.3	6.0	4.5	4.3	2.5	1.8	0.5	1.9	8.3	7.6	6.8
Delesseriaceae (juv)	7.5	0.2	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-
Derbesia marina (filamentous)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-
Desmarestia spp	1.0	7.2	31.2	6.3	15.3	12.4	11.1	46.0	17.1	6.9	-	0.1	0.4	<1	0.8	<1	-	<1	0.3	-	-	<1	<1	0.1	5.6	0.1	0.5
Dictyoneurum californicum	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dictyota binghamiae	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Ectocarpales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
Egregia menziesii	<1	-	-	<1	0.2	<1	-	-	-	-	-	-	-	-	0.1	<1	-	0.1	-	-	-	-	-	-	-	-	-
Endarachne/Petalonia-complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	<1	-
Erythrophyllum delesserioides	-	-	-	-	-	-	<1	0.2	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Farlowia/Pikea spp -complex	-	<1	0.1	0.3	<.1	0.1	0.3	<1	0.5	1.0	1.1	1.5	1.6	2.9	0.9	1.0	4.3	6.9	1.9	0.3	9.3	8.8	<1	0.4	1.8	3.3	6.8
Gastroclonium subarticulatum	-	-	-	-	<1	-	<1	<1	-	<1	<1	0.1	-	0.6	1.8	1.1	0.4	0.1	0.1	-	-	-	-	-	-	-	-
Gelidium robustum	-	0.7	0.2	0.2	0.3	<.1	0.1	<1	<1	<1	0.1	0.2	0.5	0.5	1.6	1.5	2.4	1.6	3.6	1.8	1.0	0.8	1	1.8	0.5	1.1	<1
Gelidium spp	-	<1	-	-	-	-	-	-	<1	0.2	<1	0.1	0.1	0.1	0.1	1.1	0.9	1.9	3.9	2.8	3.5	6.0	5.8	5.4	0.5	<1	<1
Gracilariopsis lemaneiformis	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Grateloupia dorvphora	-	-	-	-	-	-	-	-	-	-	-	0.1	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halicystis ovalis (=Derbesia marina)	-	-	-	<1	<1	<1	-	<1	<1	<1	<1	<1	-	-	<1	-	-	<1	<1	-	-	-	-	-	-	-	-
Halymenia/Schizymenia spp -complex	-	-	0.2	-	0.2	<1	<1	0.9	0.7	<1	<1	4.4	2.1	0.1	0.1	-	-	-	-	-	-	0.3	-	-	<1	-	-
Haplogloia andersonii	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hymenena spp	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Laminaria setchellii	<1	0.3	0.5	0.8	0.3	0.6	0.4	0.3	0.3	0.2	<1	-	-	<1	<1	<1	-	-	-	-	<1	-	-	-	0.1	<.1	<1
Laminariales	-	0.7	0.2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<.1	-	<1	-	<1	-	-	<1	<1	-
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	5.4	9.1	6.8	5.3	3.8	10.8	5.9	1.3	0.8	2.0
Mazzaella lilacina	-	<1	0.6	1.7	0.5	0.6	0.6	0.6	1.1	4.6	1.7	8.9	6.0	3.9	2.5	1.3	<1	-	0.1	-	-	-	-	-	0.1	-	-
Mazzaella rosea	-	-	-	-	-	-	<1	<1	<1	<1	<1	0.5	0.8	<1	<1	<1	<1	<1	0.3	<.1	<1	-	-	<1	0.1	-	-
Melobesia mediocris	-	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia borealis	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia coulteri	-	<1	0.1	0.8	0.3	1.0	1.6	0.3	2.2	4.3	1.3	4.6	7.0	4.4	0.3	1.5	<1	<1	<1	<1	-	-	-	-	-	-	<1
Neoptilota densa	-	-	<1	-	<1	-	<1	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nereocystis luetkeana	-	0.3	<1	0.4	0.3	<1	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1	2.0	3.6	6.9	1.1	3.5	11.0	14.0	<1	-	3.0	1.5	9.0
Non-coralline crust	1.5	1.7	2.0	3.3	1.4	0.8	2.3	0.8	4.1	4.5	0.8	8.3	8.9	8.5	9.8	5.5	7.0	1.8	3.6	0.5	1.5	1.5	0.3	0.1	0.8	0.6	0.3

(continued)

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (%Cover for 7m squared) South Diablo Cove SDC 2-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Opuntiella californica	-	-	-	-	-	-	-	<.1	-	<1	01	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Osmundea spp	-	07	<.1	17	04	11	08	04	1.3	100	26	36	78	199	80	64	30	03	<1	<1	<.1	03	-	-	<1	<1	<1
Phaeophyta (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Phaeostrophion irregulare	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phycodrys spp	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	0.1	-	-
Phyllospadix spp	05	38	4.2	36	41	44	44	18	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-
Pikea robusta	-	-	-	-	<.1	-	-	<.1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Plocamium cartilagineum	-	<1	-	<1	-	<1	-	-	<1	-	-	<.1	<1	-	<1	03	-	-	-	-	-	-	-	-	-	-	-
Polyneura latissima	-	-	01	<1	<.1	<1	<.1	01	<.1	<.1	<.1	<1	<1	-	-	-	-	-	-	-	-	-	-	<1	04	-	-
Porphyra spp	-	-	-	-	<.1	-	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prionitis australis	-	-	<1	-	<.1	01	<1	01	<1	<.1	01	01	09	-	<1	1.1	09	04	04	05	-	03	05	19	01	16	-
Prionitus spp	10	02	05	0.5	08	06	14	10	28	31	69	66	163	190	230	220	130	104	19.1	13.5	12.5	48	103	119	145	60	6.3
Pterochondria woodii	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pterocladia caloglossoides	-	-	-	<.1	-	-	-	-	-	<1	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea	-	<.1	-	<1	<1	<1	-	-	-	-	<.1	<1	-	-	<1	<.1	<.1	<.1	<1	05	30	23	-	30	20	69	33
Pterygophora californica	60	48	24	39	1.9	14	26	1.2	13	10	04	<.1	<.1	-	-	<1	01	<.1	-	<1	<1	<.1	-	-	<1	-	-
Rhodophyta (juv. blades)	-	-	03	04	-	-	-	01	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhodoptilum plumosum	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Rhodymenia spp.	-	<1	<.1	06	04	<1	10	05	04	03	06	13	19	25	73	54	64	80	101	108	40	55	65	106	88	110	38
Sarcodiotheca gaudichaudii	-	-	<1	03	0.3	03	08	01	09	2.2	12	49	5.3	18	23	10	<1	01	-	03	<1	<1	-	-	<1	<1	08
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.1	01	13
Scinaia confusa	-	-	<.1	-	<1	-	-	<.1	<.1	-	-	<.1	-	-	-	-	<1	-	<.1	-	<.1	-	-	<.1	-	<1	-
Smithora naladum	-	-	-	<1	-	06	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spongomorpha/Acrosiphonia-complex	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	48	-
Ulva/Enteromorpha spp.	25	2.2	22	29	28	03	1.3	04	200	196	<1	<1	05	<.1	<1	<.1	<.1	<1	<1	<1	<.1	<1	<1	<1	<1	<1	<1
coralline crust	355	363	355	438	345	205	368	279	478	579	212	640	541	615	480	553	583	445	388	348	40.5	44.3	368	243	295	504	338
filamentous red algae-complex	-	-	<1	<.1	02	<1	0.3	10	03	<1	01	01	0.1	-	-	<.1	01	05	09	43	-	-	05	03	<.1	<.1	20

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) South Diablo Cove SDC 3 -4m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Acrosorium uncinatum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	0.5	<1	0.5	5.9	7.0
Ahnfeltiopsis leptophylla	-	-	-	-	-	-	-	-	<1	<1	-	-			-	-	-	-	-	-	-	-	-	-	0.1	-	-
Ahnfeltiopsis linearis	-	-	-	-	-	-	-	-	-	<1	<1	0.1			0.1	0.1	0.1	0.6	2.0	2.3	1.5	<1	1.8	1.5	0.3	1.1	0.3
Amplisiphonia pacifica	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	<1	-	-	-	-	-	-	-
Antithamnion/Platytham spp -complex	-	-	-	-	<1	<1	<1	<.1	<1	-	-	-			-	-	<1	<1	<1	<1	3.5	0.3	0.5	0.5	<1	<1	-
Bryopsis spp	-	-	-	-	-	-	-	-	<1	<1	-	-			-	-	-	-	-	-	-	-	-	<1	-	-	-
Calliarthron/Bossiella spp -complex	30.5	37.2	31.5	30.0	29.5	43.7	48.2	45.8	37.3	34.1	35.4	25.6			22.8	18.4	24.8	27.6	26.5	33.8	39.0	34.3	35.5	29.4	32.1	35.1	19.8
Callophyllis firma	-	-	-	-	-	<1	-	-	-	-	<1	<1			<1	<1	-	-	<1	<1	-	-	-	<1	-	-	-
Callophyllis flabellulata	-	<1	0.2	0.3	0.2	0.2	1.1	0.2	<1	0.4	<1	0.1			<1	0.4	0.9	0.8	<1	1.0	<1	<1	<1	0.1	0.5	1.0	0.5
Callophyllis spp	-	0.7	0.2	0.2	<1	1.2	1.1	0.5	0.4	0.9	1.4	1.1			1.3	3.8	3.1	0.9	0.3	<.1	-	-	-	-	1.4	0.5	1.0
Chondracanthus canaliculatus	-	-	-	-	-	-	-	-	-	-	<1	<1			-	-	-	-	<1	-	-	-	-	-	-	-	-
Chondracanthus corymbiferus	-	-	-	-	0.3	<1	0.7	1.3	4.8	9.1	9.6	9.5			12.9	14.6	16.3	15.8	11.1	11.5	3.5	2.0	2.5	2.5	6.9	8.6	8.8
Chondracanthus harveyanus/spinosus	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	0.3	-	-	-	-	-	-	-	-
Chrysophyta unid.	-	10.0	-	-	-	-	-	-	3.8	-	-	-			<1	<1	<1	1.1	1.0	3.5	12.0	-	1.8	7.1	9.4	2.5	0.8
Cladophora spp	-	-	-	-	-	-	-	-	<1	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Clathromorphum parcum	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Coilodesme californica	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Colpomenia spp	-	-	-	-	-	-	-	-	<1	<1	-	-			-	-	<1	-	<1	0.3	-	-	-	<1	<1	-	<1
Corallina officinalis	-	<1	0.3	-	<1	0.2	0.4	0.3	<1	<1	0.1	0.4			<1	<1	0.3	0.1	0.1	<1	<1	0.8	0.3	<1	<1	<1	-
Cryptopleura ruprechtiana	-	4.7	6.0	8.3	11.3	23.8	31.0	35.5	35.2	70.3	48.1	61.7			59.9	56.0	43.4	39.9	12.6	3.5	1.0	-	-	-	4.1	4.1	4.0
Cryptopleura violacea	-	0.2	<1	-	<1	<1	<1	0.2	0.4	0.5	1.4	27.9			1.0	0.6	3.0	3.9	0.1	<1	0.5	4.3	<1	<1	2.0	10.3	14.0
Cystoseira osmundacea	1.0	0.2	0.7	0.3	0.7	1.2	2.8	2.8	2.3	0.3	0.1	1			1.0	1.1	1.5	2.3	1.6	3.3	2.5	1.0	0.3	0.6	1.9	2.5	5.0
Delesseria decipiens	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Delesseriaceae (juv)	6.0	1.3	<1	<1	<1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	<1	-	-	-
Desmarestia spp.	-	1.0	-	-	1.6	0.8	1.3	18.3	6.3	1.3	39.5	-			9.5	<1	0.3	0.3	<1	1.3	<1	-	<1	<1	22.3	0.5	1.8
Dictyota binghamiae	-	<1	<1	<1	0.2	<.1	0.2	-	<1	-	<1	0.2			<1	<.1	-	-	-	-	-	-	<1	<1	-	-	-
Egregia menziesii	-	-	<1	-	-	-	-	-	-	-	-	-			-	-	0.1	-	-	-	-	-	-	-	-	-	-
Erythrophyllum delesserioides	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Farlowia/Pikea spp -complex	-	<1	<1	<1	<1	<1	0.2	<1	<1	1.2	0.3	0.3			0.5	0.1	1.6	3.3	2.5	0.8	5.0	0.5	<1	<1	1.4	2.1	2.5
Fauchea laciniata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	<1	-	-
Gastroclonium subarticulatum	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Gelidium coulteri	0.5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Gelidium robustum	-	-	<1	-	-	-	<1	-	<1	<1	<1	<1			0.1	<1	0.5	0.4	0.8	0.5	1.0	1.8	1.3	1.0	1.1	0.3	0.8
Gelidium spp	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	<1	<1	<1	<1	<.1	<1	-	<1	-	-	-
Gloiosiphonia californica	-	-	-	-	-	-	-	-	-	-	-	0.1			-	-	-	-	-	-	-	-	-	-	-	-	-
Halicystis ovalis (=Derbesia marina)	-	<1	-	-	<1	-	<1	<1	<1	<1	<1	<1			<1	<.1	<1	<.1	<1	<1	<1	-	-	-	-	-	<.1
Halymenia/Schizymenia spp -complex	-	<.1	-	-	<1	-	-	-	0.2	<1	<1	<1			<1	<1	-	-	-	-	-	-	-	-	-	-	-
Hymenena spp	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Laminaria setchellii	-	-	0.7	0.5	0.4	0.2	0.7	1.5	0.4	0.2	<1	0.1			0.1	0.3	1.4	0.3	0.8	0.3	0.5	<1	-	<1	0.1	0.3	<1
Laminariales	-	-	<1	-	<1	<1	-	-	0.3	-	0.1	-			<1	<1	<1	<1	<1	0.3	0.5	-	<1	<1	<1	<.1	<1
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	2.3	8.3	5.0	6.0	15.8	8.3	5.1	2.9	1.4	3.8
Mazzaella lilacina	-	<1	-	-	<1	<1	<1	<1	0.2	0.3	0.4	1.7			1.8	1.5	1.4	2.3	0.4	<1	-	-	-	-	0.1	-	<1
Mazzaella rosea	-	-	-	-	-	-	<1	-	<1	-	-	0.2			-	<1	<1	<1	-	-	-	-	-	-	-	-	-
Membranoptera/Branchioglossum spp	-	-	-	-	-	-	-	-	-	<1	<1	<1			<1	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia coulteri	-	<1	<1	-	-	<.1	<.1	<1	0.3	0.7	<1	0.1			<1	<1	<1	<1	<1	<1	-	-	-	-	<1	-	-
Neoptilota densa	-	-	<1	<1	<1	-	-	-	<1	0.2	<1	-			<1	-	<1	<1	-	-	-	-	-	-	-	-	-
Nereocystis luetkeana	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	<1	-	-	-	-	-	-	-	-	-
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	-	-			-	0.4	0.6	1.0	0.5	-	-	<1	-	<1	0.4	1.6	1.5
Non-coralline crust	1.0	0.8	0.5	0.4	<1	0.2	0.4	<1	0.5	0.3	0.3	1.6			0.4	1.6	1.6	1.1	1.4	0.5	2.0	3.5	1.8	1.4	1.4	0.4	0.5
Opuntiella californica	-	-	<1	-	<.1	0.2	<.1	<1	0.2	0.3	<1	0.1			<1	<1	-	<1	-	-	-	-	-	-	-	-	-
Osmundea spp	-	0.2	-	-	<1	<1	0.3	<.1	0.2	1.7	2.0	2.4			0.8	2.0	2.9	1.1	<1	-	-	-	-	-	-	-	0.3
Phaeophyta (juv)	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phaeostrophion irregulare	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phycodrys spp	-	-	<1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phyllospadix spp	1.0	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pikea robusta	-	-	-	-	<1	-	-	<1	<1	<1	<1	-			-	-	-	-	<1	-	-	-	-	-	-	-	-
Plocamium cartilagineum	-	-	-	-	<.1	-	<.1	-	-	-	-	<1			-	<1	-	<1	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) South Diablo Cove SDC 3-4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Polyneura latissima	-	0.2	0.3	0.6	1.4	1.8	2.5	6.3	1.5	0.5	0.3	1.4			<1	0.1	-	0.4	-	<1	-	<.1	-	-	<1	-	-
Porphyra spp.	-	-	-	-	-	-	-	-	<.1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Prionitis australis	-	-	-	-	-	-	<.1	-	<1	-	<1	-			0.6	0.6	0.1	<1	1.4	-	-	-	-	0.6	1.3	1.8	<1
Prionitis spp	-	-	-	-	-	-	-	<.1	<1	<.1	<.1	0.1			0.4	2.0	2.1	2.5	3.4	2.5	2.5	0.5	3.5	2.3	2.3	2.4	0.3
Pterocladia caloglossoides	1.0	-	<1	<.1	<.1	0.2	<1	<1	<1	<1	<1	<1			<.1	-	<.1	-	-	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea	-	0.7	<1	0.3	<1	0.2	<.1	<1	<1	<.1	<1	0.2			0.1	<1	<.1	0.1	<.1	0.3	1.5	0.5	<1	3.5	2.1	1.5	1.8
Pterygophora californica	12.5	8.7	9.4	6.9	4.9	4.5	3.6	0.8	1.1	0.3	0.4	0.8			0.8	2.9	2.4	2.4	1.5	3.0	0.5	0.5	<1	<1	<1	0.1	-
Rhodophyta (juv. blades)	-	0.2	-	<.1	<1	-	-	-	<.1	-	-	-			-	-	0.1	-	-	-	-	<.1	-	-	-	-	-
Rhodoptilum plumosum	-	-	-	-	-	-	<1	-	<1	<1	-	<1			-	<.1	-	-	<.1	<.1	-	<1	-	-	<1	-	0.3
Rhodymenia spp.	-	0.2	<.1	0.4	0.3	<1	0.8	1.8	0.7	<.1	0.3	0.9			2.9	1.6	6.0	7.6	10.9	11.0	10.5	5.5	7.8	5.8	10.0	8.6	9.5
Sarcodiotheca gaudichaudii	-	-	-	-	-	-	-	-	<1	<1	<.1	0.3			<1	<.1	0.1	<1	-	-	-	-	-	-	0.1	<1	0.3
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
Scinaia confusa	-	-	-	-	-	-	-	-	<1	-	-	<.1			<1	<.1	<.1	<.1	-	<1	-	-	-	-	-	-	-
Spongomorpha/Acrosiphonia-complex	-	0.2	-	-	-	-	-	-	<.1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ulva/Enteromorpha spp	-	0.5	<1	<1	<.1	<.1	<1	-	9.2	2.0	-	<1			<.1	<1	<.1	-	<.1	<1	-	-	<.1	<1	<1	-	-
Weeksia spp.	-	-	-	-	-	<1	<1	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
coralline crust	53.5	61.8	73.1	67.5	73.4	72.8	72.0	72.0	69.8	76.3	79.4	86.2			78.8	75.4	75.1	69.4	62.3	53.8	52.0	60.3	55.0	57.5	53.8	72.3	92.0
filamentous red algae-complex	-	1.0	0.2	<.1	<.1	0.3	0.6	1.2	0.5	<1	<.1	<1			<1	0.1	0.1	0.3	1.5	4.0	0.5	-	0.3	2.4	0.6	1.6	<.1

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) Patton Cove SC 1-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Coverage Based on # of Contact Points																											
Ahnfeltiopsis leptophylla	-	-	-	<1	<1	-	-	-	<1	<1	-	-	-	-	-	-	<1	0.2	-	-	-	-	-	-	-	-	-
Ahnfeltiopsis linearis	-	-	-	0.1	-	-	-	-	<1	<1	<1	0.3	-	<1	<1	-	<1	0.2	0.3	<1	0.5	0.5	<1	0.1	-	0.1	0.5
Antithamnion/Platytham spp -complex	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brvopsis spp	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Calliarthron/Bossiella spp -complex	68.0	64.3	58.2	62.5	56.3	63.8	70.5	32.2	37.5	44.1	34.3	42.7	35.0	40.8	41.8	47.0	45.0	46.5	45.3	34.8	48.0	48.5	35.8	22.5	14.5	20.3	18.3
Callophyllis firma	-	-	-	-	-	-	<1	<1	<1	-	<1	0.7	<1	<1	<1	<1	<1	-	<1	<1	<.1	-	-	<.1	-	-	-
Callophyllis flabellulata	-	0.8	0.2	<.1	<1	0.3	1.2	0.2	0.2	0.3	0.5	<1	0.3	0.4	<1	0.2	0.4	0.2	<1	<1	0.3	<1	-	<1	-	<1	0.8
Callophyllis spp	1.5	1.3	1.2	1.1	0.8	1.8	2.8	0.3	0.7	1.6	2.3	3.2	3.3	5.8	7.8	4.5	4.0	3.5	3.3	1.3	1.8	0.5	1.3	0.1	1.1	1.9	3.5
Chondracanthus canaliculatus	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chondracanthus corymbiferus	18.5	23.3	20.3	25.0	21.7	23.7	18.5	22.8	26.7	27.8	23.0	17.2	20.7	17.0	17.1	17.5	22.9	21.7	27.0	26.0	29.8	14.0	22.0	11.6	11.3	10.6	10.3
Chondracanthus harveyanus/spinosus	-	-	0.2	0.3	<1	<.1	0.2	0.2	2.0	<1	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-
Chrysophyta unid	-	-	<1	-	-	-	-	1.3	-	-	3.3	-	0.5	<.1	<1	-	-	-	-	-	-	-	-	-	<1	-	-
Corallina officinalis	3.0	1.5	1.2	1.3	1.5	1.2	2.2	2.3	1.2	0.8	1.8	0.2	1.8	2.0	1.9	0.8	0.9	0.7	0.5	0.5	0.3	-	<1	0.1	-	<1	-
Corallina vancouveriensis	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crvptopleura ruprechtiana	24.5	27.5	27.8	38.8	19.3	36.8	33.5	10.0	25.0	28.2	25.0	39.3	31.2	29.6	35.1	37.8	42.9	49.0	50.9	15.8	23.5	26.0	16.8	21.1	11.4	9.4	6.8
Cryptopleura violacea	1.0	-	0.3	0.4	-	0.2	0.7	0.5	3.2	1.5	1.8	3.7	1.8	-	0.3	-	0.3	0.2	-	0.5	0.3	-	0.3	<1	-	-	-
Cystoseira osmundacea	-	0.5	0.2	0.3	<1	1.2	<1	0.2	0.2	0.4	<1	0.7	0.7	1.4	2.9	3.7	6.5	5.8	9.0	11.3	6.5	7.5	1.5	0.8	0.5	0.8	3
Delesseria decipiens	-	-	-	-	-	-	-	-	-	-	<1	-	<1	<1	<1	0.2	<1	-	-	<1	0.3	-	<1	-	<1	-	-
Delesseriaceae (juv)	-	5.0	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Desmarestia spp	-	23.0	1.2	-	0.3	1.7	<1	3.3	0.7	0.1	13.8	0.5	12.8	3.0	1.0	1.2	0.1	0.5	0.6	10.8	0.8	-	12.5	-	8.4	-	2.3
Dictyoneurum californicum	9.0	3.8	3.3	4.4	0.3	0.5	0.8	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<.1	-	-	-	-	0.1	<1
Egregia menziesii	-	-	-	-	-	-	-	-	-	<1	<1	0.2	<1	<1	-	-	-	-	-	-	0.3	-	0.3	<1	0.1	<1	-
Erythrophyllum delesserioides	-	-	-	<1	<1	-	-	<1	0.2	-	-	<1	0.3	0.1	<.1	<1	<1	-	<1	<1	-	-	<1	<1	0.1	0.1	-
Farlowia/Pikea spp -complex	-	<1	0.7	0.3	0.5	<1	0.3	0.3	1.2	0.8	0.3	1.2	0.2	0.1	<1	<1	<1	<1	0.5	<1	1.3	<1	0.3	<1	<1	<1	1.5
Fauchea laciniata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Gastroclonium subarticulatum	-	-	-	-	-	-	-	0.2	<1	0.2	<1	0.2	-	<1	<1	<1	-	-	<1	<1	1.3	0.5	<1	<1	<1	<1	<1
Gelidium robustum	-	0.3	0.2	0.3	0.2	0.2	0.3	<1	<.1	<1	<1	0.2	<1	0.6	0.4	0.8	0.9	1.2	1.5	2.0	1.5	1.0	2.5	0.8	2.8	3.0	3.3
Gelidium spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	<1
Halicystis ovalis (=Derbesia marina)	-	-	<1	-	-	<1	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	<1	-	<1	-	-	-	<1
Halymenia/Schizymenia spp -complex	<1	0.3	<1	<1	0.7	<1	0.2	12.7	0.7	-	0.3	-	0.2	<1	-	0.3	0.3	-	-	2.3	1.0	-	13.5	-	0.4	0.4	-
Haplogloia andersonii	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hymenena spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Laminaria setchellii	2.0	0.5	2.5	2.8	3.2	3.7	5.7	1.3	4.5	5.7	6.0	7.5	3.2	6.0	4.8	6.0	3.6	2.5	1.9	1.3	3.3	6.5	1.3	1.9	3.4	3.3	8.3
Laminariales	0.5	-	<1	0.1	0.2	<1	<.1	0.2	<.1	<1	1.5	0.2	0.8	0.5	<1	<1	<1	-	<.1	<.1	<1	-	5.0	<1	1.8	<1	-
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-
Mazzaella affinis	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mazzaella lilacina	4.4.0	2.0	3.7	0.9	3.2	1.7	2.3	8.7	8.2	2.2	7.3	4.2	2.3	0.4	0.4	1.8	5.0	3.0	2.4	8.0	5.8	7.0	9.8	1.6	2.3	0.3	-
Mazzaella rosea	-	-	-	0.3	-	<1	0.2	1.2	0.3	-	-	<1	<1	0.1	<1	0.3	<1	<.1	-	2.3	<1	-	1.0	0.3	<1	<1	-
Melobesia mediocris	-	-	-	<1	<1	<1	<.1	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Membranoptera/Branchioglossum spp	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia borealis	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microcladia coulteri	1.5	6.0	2.7	2.1	0.5	1.0	0.5	4.7	2.7	0.2	0.8	1.0	2.2	0.9	0.8	0.3	1.4	<1	2.0	3.0	1.0	0.5	1.0	0.6	<1	<1	4.8
Neoptilota densa	-	<1	-	<1	<1	0.3	<1	-	-	<1	<1	<1	<1	-	-	0.2	-	<1	-	<1	<1	-	-	-	<1	<1	1.3
Nereocystis luetkeana	-	-	0.2	0.3	<1	0.3	<1	<1	-	<1	<1	0.2	0.8	0.3	-	<1	<1	<1	<1	0.5	0.3	<1	2.8	0.1	2.3	0.1	<1
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	<1	<1	-	<1	-	-	0.1	-
Non-coralline crust	0.5	0.8	1.3	0.3	1.7	<1	1.3	1.3	1.7	0.9	1.8	0.7	2.3	2.4	1.0	1.3	1.1	1.5	0.9	1.0	0.8	<1	0.8	0.1	0.4	0.1	-
Osmundea spp	3.5	1.8	0.8	0.9	0.7	0.8	1.0	<1	6.5	16.1	2.5	4.2	4.8	4.1	2.1	2.8	3.5	3.7	4.4	1.5	3.5	1.5	0.3	0.3	1.4	0.6	2.0
Phaeophyta (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Phyllospadix spp	2.0	2.5	0.7	2.3	1.5	0.2	0.2	0.2	<1	0.1	0.5	0.2	<1	<.1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1
Pikea robusta	-	-	-	-	-	-	-	0.2	<1	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<1	-
Polyneura latissima	<1	0.5	-	0.4	0.2	<1	<1	0.2	0.2	<1	0.3	0.3	1.5	0.4	0.6	<1	0.5	0.3	0.3	0.8	1.8	-	1.8	0.6	0.8	0.3	-
Porphyra spp	-	-	-	-	-	-	-	0.2	-	-	-	<1	-	-	-	-	-	-	-	-	<.1	-	9.8	-	0.5	-	-
Prionitis australis	-	-	-	-	-	-	<1	0.2	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	<.1	1.3	<1	2.3
Prionitis spp	<1	0.8	1.7	1.8	1.2	1.5	1.0	2.7	2.5	2.8	1.8	6.5	3.7	3.5	1.8	1.2	0.6	1.0	1.4	1.0	1.0	1.0	2.5	1.8	2.5	1.4	1.8
Pterocladia caloglossoides	-	-	-	-	-	-	-	-	<.1	-	-	-	-	<1	-	-	-	<1	-	-	-	-	-	-	-	-	-
Pterosiphonia dendroidea	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	-	-	-	-	-	-	<1	-	0.8	-	<1
Ptervgophora californica	-	-	<1	0.1	0.2	1.2	1.5	1.0	2.7	6.2	8.3	7.2	7.7	8.4	6.4	4.2	4.3	2.3	2.9	1.8	3.8	1.5	8.3	12.5	9.1	7.5	10.8
Rhodophyta (juv blades)	-	-	0.2	0.1	0.2	-	0.2	0.8	0.7	-	0.3	-	0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Algal and Substrate Mean Abundance (% Cover for 7m squared) Patton Cove SC 2 -6m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Coverage Based on # of Contact Points																											
Antithamnion/Platytham. spp -complex	-	-	-	-	-	<1	<.1	<1	-	-	-	<1			-	<1	<1	-	-	-				-	-	-	-
Bryopsis spp	-	-	-	-	-	-	-	<1	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Calliarthron/Bossiella spp -complex	18 0	24 0	26 8	28.1	41 0	40 5	46 9	38 3	44 7	46 0	38 8	39.3			42 3	48 0	45 9	45 0	46 0	43 8				33 3	33 4	24 1	28 0
Callithamnion spp./*Pleonosporium* spp.	-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-				-	-	-	-
Callophyllis firma	-	-	-	-	-	-	-	0 2	<1	<1	0 2	0 2			<1	<1	<.1	<.1	<.1	<.1				<1	-	-	0 3
Callophyllis flabellulata	2 0	4 5	0 3	2 4	1 3	1 0	2 3	1 2	2 2	1 0	0 7	1 5			1 1	2 8	0 8	0 2	1.3	0 3				<.1	0 4	0 5	<1
Callophyllis spp	5 5	8 8	8 8	9 9	10 8	7 7	7 4	1.5	3 8	6 6	4 7	8 3			9 0	8 0	8 6	8 7	8 8	6 5				1 2	2 0	0 8	0 3
Chondracanthus corymbiferus	7 5	11 0	22 7	30 3	32.5	22 7	26 6	15 2	28	24	19 5	17.3			17 9	21 2	20 0	26 0	25 5	22 8				20 8	17 1	16 4	13 0
Chondracanthus harveyanus/spinosus	-	-	-	-	-	-	-	0 2	-	<1	-	-			-	-	-	-	-	-				-	-	-	-
Chrysophyta unid	-	-	-	0.1	-	-	-	-	-	-	0 2	0 2			-	-	-	-	-	-				<.1	-	-	-
Corallina officinalis	2 0	-	-	-	-	0 2	-	-	<.1	-	<1	-			<1	-	<1	-	-	-				-	-	-	<1
Cryptopleura ruprechtiana	-	22 5	21 7	29 0	30 0	25 5	28 8	9 7	15 7	22 3	27 7	40 7			32 6	36 0	37 0	47 5	43 3	36 5				53 0	27 8	13 0	5 8
Cryptopleura violacea	-	<.1	0 3	0.1	-	-	<.1	<.1	-	-	-	<1			-	-	-	<.1	0 1	<1				-	-	-	-
Cystoseira osmundacea	2 5	0 8	3.2	4.3	6 0	5 0	6 6	1 8	3.7	2 6	1 8	1.2			1 5	1 3	0 9	1 0	2 1	2 3				0 2	<.1	<1	<1
Delesseriaceae (juv)	12.5	-	-	2 5	1 8	0 3	-	<1	0 2	0 2	-	-			-	-	-	-	-	-				-	-	-	0 8
Desmarestia spp	1 5	5 3	13 2	<.1	2 0	1.2	0 1	13 2	-	<1	0 5	-			7 0	0 5	3 3	-	2 8	0 5				0 8	12 9	11.4	19 0
Dictyoneurum californicum	1 0	0.3	2 7	1 9	2 3	0.7	0 1	-	-	-	-	-			<1	<1	-	<.1	<1	-				-	-	-	-
Dictyota binghamiae	-	0 8	0.7	0 5	0 8	0 3	0 4	<.1	<1	0 1	0 5	0 5			0 1	<1	0 1	0 3	0 6	<.1				0 2	<1	1 0	1 0
Egregia menziesii	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	-	-	-				-	-	-	-
Erythrophyllum delesserioides	-	1 0	3 0	1 1	1 5	0 8	0 9	0 7	0 5	0 2	0 7	<.1			0 1	0 2	0 3	1 0	1 1	0.5				0 7	0 6	0 3	<1
Farlowia/Pikea spp -complex	-	-	<1	0 6	<.1	-	<1	<1	<.1	<.1	<.1	<1			<.1	<1	<1	<1	<.1	<1				0 3	<1	0 5	<1
Fauchea laciniata	-	-	<1	-	-	-	<1	-	-	-	-	<.1			<1	<1	<1	<.1	<1	-				-	-	-	-
Fryeella gardneri	-	-	-	-	-	-	-	-	-	-	<.1	<.1			-	<1	<1	<1	<1	-				-	-	-	-
Gastroclonium subarticulatum	-	-	-	-	-	-	-	-	-	<1	<1	-			-	-	-	-	-	-				-	-	-	-
Gelidium robustum	-	-	-	<.1	<1	<1	<1	<.1	0 3	0 1	0 2	<.1			<1	<1	<1	<1	0 1	-				-	-	<1	<1
Halicystis ovalis (=Derbesia marina)	-	-	-	-	<.1	<.1	-	-	-	<1	-	-			-	-	<.1	-	<.1	-				<1	-	-	<1
Halymenia/Schizymenia spp -complex	0 5	1 0	1.3	0.3	0 8	0 3	-	0 7	0 3	<1	0 5	<.1			0 5	0 5	0 1	0 3	1 4	1 3				0 2	1 1	0 3	0 3
Hymenena spp.	-	-	-	-	-	0 2	<1	-	-	-	0 3	-			-	-	-	-	-	-				-	-	-	-
Laminaria setchellii	-	<1	0 2	1 6	1 8	1 7	2 4	0 8	2.2	1 2	1 0	1 2			1 3	2 0	0 8	0 5	0 6	0 3				0 3	1 3	2 0	0 3
Laminariales	-	-	<1	<1	0 3	<1	<1	<1	<1	<1	0 3	<1			0 1	-	-	-	<1	-				<1	<.1	<1	<1
Mazzaella lilacina	5	5 8	7.2	2.1	2 8	1 7	1 1	0 3	0 7	0 4	0 3	0 3			-	0 2	<.1	0 7	0 5	1 0				2 3	1 4	0 6	0 5
Mazzaella rosea	-	-	-	-	-	-	-	<.1	-	-	-	<1			<.1	-	<.1	-	<1	<1				0 2	<1	-	-
Membranoptera/Branchioglossum spp	-	-	-	-	-	-	-	-	<1	-	-	<.1			<1	-	-	-	-	<.1				-	-	-	-
Microcladia coulteri	<1	1 3	1 0	1 0	0.3	0 5	0 5	0 2	0 3	<1	<1	0 5			0 1	<1	<.1	0 2	<.1	<.1				<1	<1	<1	0 3
Neoptilota densa	0 5	0 5	0 7	0 5	0 5	0 3	<1	0 2	0 5	0 7	<1	<1			<1	<1	0 4	0 2	<.1	<.1				0 3	<.1	<1	<1
Nereocystis luetkeana	-	0 3	<.1	<.1	<1	<.1	<1	<.1	-	-	0 2	<1			0 3	0 2	-	<1	0 3	<.1				0 8	2 3	3 3	4 3
Nienburgia andersoniana	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-				-	-	0 1	-
Non-coralline crust	2 5	0 3	<1	0 8	<1	0 5	0 8	<1	<.1	0 9	0 2	0 2			0 4	0 8	0 1	0 7	0 4	<1				<1	0 6	1 0	1 5
Opuntiella californica	-	0 3	<1	<1	0 5	<1	0 8	<1	0 2	0 3	0 5	0 5			0 3	0 2	0 1	<1	<1	0 3				<1	<1	<1	-
Osmundea spp	-	0 5	1 8	1.3	<1	0 5	0 4	-	0 5	0 6	<1	0 3			0 1	<.1	<1	0 2	<1	<1				<1	-	<1	<1
Phaeophyta (juv)	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-				-	-	-	-
Phycodrys spp	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-				-	-	-	-
Phyllospadix spp	-	-	-	-	-	-	-	<1	<1	-	-	-			-	-	-	-	-	-				-	-	-	-
Pikea robusta	-	-	-	-	-	-	-	-	-	-	<.1	<1			-	<1	<1	0.3	<.1	-				-	-	-	-
Plocamium cartilagineum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	0 1	-
Polyneura latissima	-	12 5	21 2	7 1	3 5	4 5	2 3	7 5	5 0	1 4	1 8	8 5			5 6	4 5	3 8	4 2	2 5	7 0				3 2	1 9	0 3	1 0
Porphyra spp.	-	-	-	-	-	-	-	-	-	-	<1	<1			-	-	<1	-	-	-				0 3	0 1	-	-
Prionitis spp.	0 5	0 3	0 5	0 5	0.3	0 5	0 1	0 2	0 2	0 2	0 2	<1			<1	<.1	<1	<1	<1	0 3				0 2	<1	<.1	<1
Pterocladia caloglossoides	-	0 5	-	0 3	<1	0 2	-	<1	<.1	-	-	-			-	-	-	-	-	-				-	-	-	-
Pterosiphonia dendroidea	-	1 0	0 3	0 8	0 3	0 2	0 5	0 2	0 7	0 1	<1	<1			<.1	-	-	<1	<1	-				-	-	<1	-
Pterygophora californica	-	-	<1	1 3	1 0	1 0	1 8	3 5	6 5	8 2	6 3	5 8			4 3	3 2	1 3	1 5	1 4	<1				2 5	1 6	1 6	2 5
Rhodophyta (juv. blades)	4 0	5 3	<1	0 1	-	-	<1	0 5	-	-	<1	-			<1	-	-	-	-	-				-	-	0 1	-
Rhodoptilum plumosum	-	0 3	0 5	0 5	<1	<.1	<1	<.1	<1	<1	<1	<.1			<1	<1	<.1	<.1	<.1	0 5				<1	<1	<1	<1
Rhodymenia spp	-	0 3	0 7	0 5	<1	<.1	0 8	0 2	0 3	1.1	2 3	5 2			4 6	7 8	8 3	12.2	13 8	8 0				17 2	15 6	11 6	13 5
Sarcodiotheca gaudichaudii	-	0 8	0 2	0 1	0 3	<1	0 1	<1	-	<1	<1	0 2			<1	<.1	<1	0 2	<1	0 3				<1	<1	-	<1
Schizymenia epiphytica	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-				-	-	-	-
Scinaia confusa	-	-	<1	<1	<.1	<1	-	<1	0 2	-	<.1	-			<1	-	<1	<.1	-	<1				<.1	<1	0 1	<1
Ulva/Enteromorpha spp	0 5	0 3	0 3	<1	<.1	<1	<1	1 7	0 2	<.1	<1	<1			<.1	0 3	<1	<1	<.1	<.1				<1	<1	<1	<1
Weeksia spp	-	-	-	-	-	<1	<.1	-	0 2	<1	-	<1			<1	-	0 1	<1	-	-				-	-	<1	-
coralline crust	45 0	44 3	68 0	68 6	81 5	73 3	76 3	73.5	68 3	72.4	61.7	64 7			67 4	60 5	63.1	60 8	54.3	67 5				53 0	53 8	71 0	62 8
filamentous red algae-complex	19 0	22 5	9 2	2 8	<1	0 5	<1	4 5	1 3	<1	0 2	0 2			<.1	0 2	0 1	<1	<.1	0 3				-	0 8	0 1	<.1

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) Fields Cove FC 1-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	3	4	2	3	3	1	1	4	4	4	4	2
Counted Regardless of Size																											
Cystoseira osmundacea													-	<.1	-	0.2	0.1	0.1	<.1	0.2	-	0.3	-	3.4	1.0	3.4	4.3
Egregia menziesii													-	-	-	-	-	-	-	<.1	-	-	<.1	0.2	-	-	-
Laminaria setchellii													43.3	37.8	18.5	20.0	12.9	8.8	9.3	8.2	28.8	41.3	45.3	73.9	118.9	97.5	101.3
Laminariales													-	-	-	-	-	0.1	1.9	8.6	-	3.8	13.1	5.3	8.5	0.9	13.4
Macrocystis spp													-	-	-	-	-	-	-	-	-	-	0.1	0.3	-	-	-
Nereocystis luetkeana													-	-	0.1	-	-	-	<.1	8.3	2.8	2.0	19.6	15.4	13.2	2.0	2.6
Pterygophora californica													5.9	0.9	7.7	-	-	0.1	-	1.4	-	-	18.1	49.7	31.6	5.9	1.5

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) North Diablo Cove NDC 2-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																											
Cystoseira osmundacea	2.3	6.3	6.0	5.9	6.5	11.3	12.4	19.0	6.6	5.7	3.6	2.5	0.3	0.3	0.1	0.4	4.1	4.6	2.4	1.1				6.8	5.3	4.9	10.5
Egregia menziesii	-	2.3	0.3	0.3	0.4	1.5	1.2	-	0.6	-	-	-	-	-	-	-	-	0.1	-	-				-	-	-	-
Laminaria setchellii	24.5	17.8	23.3	12.2	13.5	9.4	12.9	5.9	6.9	5.7	1.7	-	-	-	-	-	-	-	0.1	-				-	-	-	-
Laminariales	-	-	-	-	0.7	0.6	1.3	7.7	0.6	-	-	-	-	-	0.5	0.8	-	-	0.2	-				3.4	0.1	-	5
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.3	2.1	4.1	3.8				15.7	6.9	4.1	7.3
Nereocystis luetkeana	-	2.9	0.1	0.8	3.2	0.2	0.4	<.1	<.1	-	-	-	-	-	-	-	-	<.1	-	-				0.7	-	-	-
Pterygophora californica	19.3	19.6	38.3	38.1	21.7	25.4	12.4	8.5	6.2	4.2	0.3	<.1	-	-	-	-	-	-	-	-				-	-	-	-
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				0.8	1.3	0.6	2.9

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) North Diablo Cove NDC 3-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Cystoseira osmundacea	[illegible]	<.1	4.4	1.1	2.3	2.1	2.7	5.4	1.1	0.8	0.8	-	-	1.0	0.6	1.1	1.3	0.3	0.9	-	3.9	1.3	1.6	7.6	10.8	13.6	17.1
Egregia menziesii	-	-	-	-	-	-	-	0.9	0.3	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Laminaria setchellii	9.3	3.7	9.8	15.6	10.3	12.9	10.8	13.4	9.8	12.2	1.5	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laminariales	-	-	-	-	0.5	-	0.4	21.8	16.0	1.2	-	-	-	0.6	-	-	-	-	-	0.1	-	-	-	-	0.9	-	-
Macrocystis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.4	0.8	2.8	3.8	4.8	8.8	25.3	11.6	1.3	0.3
Nereocystis luetkeana	3.3	1.1	0.3	0.1	1.0	0.8	0.7	0.9	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pterygophora californica	16.3	15.2	27.9	21.6	18.3	11.1	7.2	39.6	49.3	31.5	9.1	0.6	-	0.3	-	-	-	-	-	-	-	-	0.3	<.1	-	-	-
Sargassum muticum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.5	0.8	1.0.9	1.0.5

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) North Diablo Cove NDC 4-4m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																												
Cystoseira osmundacea		9.8	8.0	13.3	9.7	10.5	16.5	15.1	15.9	11.9	10.1	7.3	7.1			1.9	5.3	3.2	3.0	4.1	4.1	8.8	2.9	1.3	2.4	4.9	4.1	12.1
Egregia menziesii		-	-	0.3	<1	-	-	-	-	-	-	-	-			-	0.1	-	-	-	-	-	-	-	-	-	-	-
Laminaria setchellii		1.5	1.5.3	1.5.8	18.2	17.5	17.9	16.6	11.8	4.8	5.9	3.2	0.5			0.1	<1	0.1	<1	<1	0.1	0.5	-	-	-	0.6	-	-
Laminariales		-	-	0.2	0.2	0.7	0.4	0.3	2.8	2.4	-	0.5	-			0.4	0.2	-	0.5	0.7	3.1	0.5	-	-	<.1	2.1	-	7.4
Macrocystis spp		-	-	-	-	-	-	-	-	-	-	-	-			-	<1	0.9	1.8	4.7	1.8	4.3	3.5	10.5	22.4	5.4	4.5	5.6
Nereocystis luetkeana		0.3	-	0.9	0.5	0.3	<1	0.3	0.5	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pterygophora californica		21.3	18.0	27.6	28.5	23.8	23.5	20.2	22.3	18.2	14.6	4.3	1.3			0.3	-	-	-	-	-	-	-	0.9	3.0	0.4	-	-
Sargassum muticum		-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	0.2	-	-	0.1	0.1	<1	0.9	-	2.4

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) South Diablo Cove SDC 2 -3m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																												
Cystoseira osmundacea		-	2.4	11.8	6.8	4.7	7.4	5.7	4.1	2.1	1.1	0.5	0.9	-	0.4	2.7	11.3	7.8	7.8	8.3	7.6	8.5	4.3	9.3	8.4	8.4	10.2	17.9
Egregia menziesii		-	-	-	0.9	0.6	0.1	-	-	-	-	-	-	-	-	0.3	0.6	-	0.1	-	-	-	-	-	-	-	-	-
Laminaria setchellii		4.0	5.6	4.9	16.3	9.2	11.4	12.8	7.8	4.8	4.8	1.9	-	<1	-	0.1	0.4	<1	<1	-	-	0.1	0.4	0.1	-	<1	0.2	0.3
Laminariales		2.0	-	1.2	1.2	1.0	0.6	0.5	30.8	1.0	0.1	-	-	-	-	0.3	<1	-	<1	-	-	0.1	-	-	-	-	0.4	1.8
Macrocystis spp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	1.1	2.5	13.6	5.9	5.8	5.1	8.1	13.7	4.1	7.1	7.1
Nereocystis luetkeana		0.3	1.2	1.3	4.1	1.4	<.1	<1	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pterygophora californica		35.8	31.1	38.1	40.2	36.7	36.0	29.1	18.8	16.0	13.9	6.2	1.3	0.2	0.1	-	0.3	<1	-	-	-	0.3	0.1	-	-	<1	0.1	0.4
Sargassum muticum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	0.5	3.8

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) South Diablo Cove SDC 3-4m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																												
Cystoseira osmundacea		-	0.8	2.4	3.9	3.0	5.7	6.3	5.7	3.5	1.9	2.1	2.8			1.8	4.1	5.8	3.6	2.0	4.0	7.0	2.4	3.5	2.2	2.5	3.0	4.8
Egregia menziesii		-	-	0.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Laminaria setchellii		5.0	3.8	10.2	7.5	9.6	13.3	10.5	7.0	5.6	5.4	2.8	4.1			5.3	5.4	4.9	3.3	4.4	4.5	3.8	0.5	-	-	0.4	1.1	2.0
Laminariales		-	0.6	0.6	-	1.6	-	0.3	<1	1.5	0.3	109.8	2.5			14.1	0.9	0.8	5.8	0.4	16.3	12.8	0.5	-	0.3	1.6	2.4	5.0
Macrocystis spp		-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	2.3	4.8	6.0	11.3	4.4	5.8	3.8	1.3	3.8	3.4
Nereocystis luetkeana		-	<1	-	-	-	-	0.2	-	-	-	-	-			-	0.2	-	-	-	-	-	-	-	-	-	-	-
Pterygophora californica		111.5	96.7	92.7	76.9	64.7	58.0	32.8	13.7	8.2	3.6	8.1	22.1			15.4	39.4	27.4	14.5	12.6	10.3	21.5	5.8	2.0	1.1	0.2	0.5	1.1

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) Patton Cove SC 1-3m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Counted Regardless of Size																												
Cystoseira osmundacea		-	0.1	<1	0.2	0.9	1.3	1.0	1.2	1.0	0.9	0.4	3.3	2.4	6.6	6.0	7.0	7.4	7.0	7.4	8.3	11.0	5.0	5.0	4.9	2.2	2.6	7.5
Egregia menziesii		-	-	-	-	-	-	0.3	-	<.1	0.1	0.1	0.3	0.4	-	-	-	-	-	-	-	0.1	-	0.1	0.6	<.1	-	-
Laminaria setchellii		22.0	21.9	40.3	64.2	57.3	49.1	98.1	20.7	73.0	89.0	50.8	73.5	101.3	75.9	82.4	52.0	47.0	35.1	20.8	18.9	33.4	67.3	15.6	34.2	24.0	40.4	71.1
Laminariales		-	-	2.8	-	3.8	2.2	8.1	17.8	62.3	15.2	139.3	125.9	89.4	50.1	24.4	13.0	7.7	5.6	0.5	38.1	17.5	-	90.0	217.5	41.8	24.9	12.8
Nereocystis luetkeana		-	0.1	2.8	0.3	0.7	1.0	<1	1.3	-	<1	2.0	2.0	13.7	1.1	0.5	2.4	0.2	0.3	-	9.1	0.6	0.3	17.8	3.4	19.4	5.4	13.9
Pterygophora californica		-	0.4	3.3	7.8	15.7	23.7	16.6	33.1	107.9	72.1	38.5	163.6	184.0	142.1	114.9	79.3	49.9	32.6	21.0	19.6	25.5	18.5	84.9	262.6	83.4	126.3	100.0

Subtidal Arc Quadrant - Yearly Algal Mean Abundance (per 7m squared) Patton Cove SC 2-6m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																												
Cystoseira osmundacea		-	1.3	8.3	6.8	7.4	9.2	5.8	4.7	8.8	3.6	3.1	2.7			3.8	3.8	2.9	2.8	2.7	2.4				0.2	0.1	-	0.8
Egregia menziesii		-	-	-	-	0.1	-	-	-	-	-	-	-			-	0.2	-	-	-	-				-	-	-	-
Laminaria setchellii		2.8	5.5	6.5	15.3	17.4	20.5	22.7	10.4	12.8	20.5	26.5	28.5			12.1	19.2	13.4	13.3	9.9	11.5				7.8	10.4	13.1	27.4
Laminariales		-	-	0.5	1.1	-	4.1	2.3	108.3	41.7	60.1	21.3	35.6			6.4	4.0	4.2	0.5	0.4	-				2.3	5.3	9.3	-
Nereocystis luetkeana		2.8	0.4	4.3	0.3	1.5	0.9	0.6	2.3	-	-	0.3	<1			1.5	0.7	0.1	<.1	0.8	0.3				15.8	21.0	32.1	56.3
Pterygophora californica		-	0.9	1.7	23.2	29.8	28.9	38.4	152.3	237.0	171.6	123.5	145.5			31.5	22.8	17.6	13.9	10.1	6.4				47.3	24.3	17.1	26.0

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Fields Cove FC 1-3m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	3	4	2	3	3	1	1	4	4	4	4	2
Counted Regardless of Size																												
Acmaea mitra														0.5	0.9	0.5	0.7	0.8	0.4	1.2	1.8	1.3	1.3	0.6	1.6	0.5	0.6	0.4
Acmaeid unid. a														-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Aeolidiella oliviae														-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-
Aldisa sanguinea														-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Alia carinata														-	2.3	1.4	3.8	0.7	1.6	0.3	1.3	-	8.3	0.1	-	0.7	<.1	0.6
Alia spp.														0.4	0.4	<1	-	1.5	-	0.3	1.3	0.8	-	-	0.2	0.1	-	-
Alpheus clamator														-	-	-	-	0.1	-	0.1	-	-	0.3	-	-	-	-	-
Amphissa spp														0.8	1.3	0.8	1.5	0.9	1.1	0.7	1.4	0.5	6.0	1.2	0.6	0.8	0.6	0.1
Anisodoris nobilis														0.1	-	-	<1	-	-	-	-	-	-	<1	-	-	-	0.1
Anthopleura artemisia														-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthopleura elegantissima														-	<.1	-	-	-	-	-	-	-	-	0.1	<1	0.1	0.1	0.1
Anthozoa unid														0.8	0.1	0.7	0.2	0.2	0.1	0.6	0.2	0.3	-	0.3	0.2	0.4	0.2	-
Asterina miniata														-	-	0.2	<1	<1	-	-	0.3	0.3	0.3	<1	0.2	<1	<1	-
Asterina miniata (juv)														-	-	-	-	-	-	-	<1	0.5	-	-	-	-	0.1	0.1
Balanophyllia elegans														-	0.4	<1	0.3	0.2	0.1	<1	-	-	-	-	-	-	-	-
Balanus spp														-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Balanus/Tetraclita spp.														-	0.1	2.8	1.6	0.2	0.1	-	1.6	2.8	0.3	2.3	0.3	<1	0.8	0.6
Barnacles (juv)														-	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-
Boltenia villosa														-	<1	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Brachyura unid. b (juv)														0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cactosoma arenaria														-	0.6	0.3	0.3	-	-	-	-	-	-	-	-	-	-	0.1
Cadlina flavomaculata														-	-	<1	0.2	0.1	-	-	-	-	-	-	-	<1	0.1	0.3
Cadlina luteomarginata														-	-	0.1	-	-	0.1	-	-	-	-	-	0.3	-	0.1	-
Cadlina modesta														-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Calliostoma ligatum														1.6	0.8	1.0	0.8	0.4	-	<1	0.3	0.3	-	0.2	0.1	0.2	0.6	0.4
Callistochiton crassicostatus														-	-	-	-	<.1	0.1	0.1	-	-	-	-	-	-	-	-
Cancer antennarius														-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Cancer productus (juv)														-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
Cancer spp														-	-	<1	-	<.1	-	<1	-	-	0.3	-	-	0.1	<1	-
Chama spp														-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Chromodoris macfarlandi														-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-
Cirratulidae/Terebellidae unid														-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Clavularia spp														4.9	-	1.1	2.1	1.6	3.1	2.8	-	<.1	-	0.1	-	-	-	-
Corynactis californica														-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-
Crassedoma giganteum														-	-	-	-	0.1	-	-	-	-	-	-	-	<1	<1	-
Crepidula spp														0.1	-	0.1	-	<1	-	0.2	-	-	0.5	-	<1	0.3	-	0.5
Cryptochiton stelleri														-	<1	-	<.1	-	-	-	-	-	-	<1	<1	<.1	-	0.1
Cryptolithodes sitchensis														-	-	<1	<1	-	0.1	-	<1	-	-	<.1	<.1	<1	0.3	0.1
Cucumaria spp														-	0.3	<1	0.6	0.4	-	-	-	0.3	-	-	<1	-	-	-
Dendropoma lituella														0.3	-	-	0.8	0.8	1.8	0.2	1	-	-	0.3	-	-	-	-
Diaulula sandiegensis														-	<.1	<.1	-	<1	-	-	-	-	-	<.1	-	-	-	-
Diodora aspera														-	0.2	<1	0.4	<.1	-	0.1	<.1	-	-	-	<1	0.1	-	0.3
Diopatra ornata														-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Doridacea unid														-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Doriopsilla albopunctata														-	-	<1	0.2	<.1	0.1	<.1	<.1	-	-	-	0.1	0.2	0.1	0.1
Epiactis prolifera														0.6	0.5	0.6	1.0	0.2	0.5	0.6	-	0.3	-	1.5	0.8	0.5	0.5	1.3
Erato vitellina														-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Eudistylia polymorpha														-	<1	-	-	-	-	-	-	-	-	-	-	<1	-	-
Eupentacta quinquesemita														-	-	0.1	-	0.1	-	-	<.1	-	-	-	-	-	-	-
Fissurella volcano														0.3	0.7	0.5	0.9	0.6	0.3	1.6	0.6	0.8	0.5	0.6	0.5	0.8	0.3	0.3
Fusinus luteopictus														0.4	0.9	0.9	0.5	0.6	0.3	<.1	0.5	0.8	1.3	0.5	0.3	1.0	0.3	0.6
Grapsidae (juv)														-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Halcampa decemtentaculata														-	-	-	-	-	-	-	0.3	0.3	-	-	-	-	-	-
Haliotis rufescens														-	-	-	-	0.2	-	-	-	-	-	-	<.1	0.1	-	-
Haliotis spp (juv.)														0.3	<.1	-	-	<1	0.1	0.2	-	-	-	-	0.1	0.1	-	0.1
Henricia leviuscula														-	<1	-	0.3	0.3	0.1	<1	0.3	-	0.3	<1	0.1	<1	0.6	0.1
Hermissenda crassicornis														0.1	-	0.2	<.1	0.2	0.1	0.3	<1	-	-	0.2	<.1	0.2	0.2	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Fields Cove FC 1-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	3	4	2	3	3	1	1	4	4	4	4	2
Counted Regardless of Size																											
Homalopoma spp													30	40	25	39	34	29	29	36	23	65	29	41	73	62	38
Hopkinsia rosacea													-	-	-	-	-	01	-	-	-	-	03	03	-	-	-
Idotea spp													-	-	-	-	-	-	-	<1	-	-	-	<1	-	-	-
Ischnochitonidae													-	-	-	-	-	01	-	-	-	10	-	-	-	<1	-
Lacuna spp													01	06	01	08	-	-	02	03	-	-	-	-	-	-	-
Lepidozona spp													-	-	-	-	-	-	-	<1	-	-	-	<1	-	-	01
Leptasterias spp													13	12	1.3	22	12	11	10	15	-	10	06	17	16	08	05
Leucandra heathi													04	10	03	13	<1	-	-	10	-	-	01	08	-	-	-
Leucilla nuttingi													10	12	12	03	18	10	-	-	08	-	08	04	-	-	-
Lissothuria nutriens													06	06	24	15	24	21	11	<1	-	13	10	09	08	05	01
Lithopoma gibberosum													-	-	-	-	-	-	-	-	-	-	<1	-	-	01	-
Lithopoma gibberosum (juv)													-	-	-	-	-	-	<1	-	-	-	<1	01	-	-	01
Lophopanopeus spp													01	01	03	<1	01	03	-	-	-	03	01	03	-	<1	-
Lottia instabilis													-	<1	-	-	-	-	-	-	-	-	-	<1	-	02	01
Lottia ochracea													01	03	06	03	09	-	04	03	28	-	06	06	01	02	04
Loxorhynchus spp													-	-	-	-	-	-	<1	-	-	-	<1	-	-	-	-
Mimulus foliatus													-	-	-	<1	-	-	-	<1	-	03	-	-	-	-	-
Mitra idae													-	-	-	<1	<1	01	-	03	03	-	<1	<1	<1	01	01
Modiolus spp													-	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-
Mopalia lignosa													-	-	-	-	-	-	-	-	03	-	-	<1	-	-	-
Mopalia spp													-	-	-	-	-	-	-	-	-	03	-	-	-	<1	-
Natantia unid													01	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nereididae unid													01	-	-	-	-	01	02	-	-	-	-	-	-	<1	-
Ocenebra lurida													-	01	-	-	-	-	-	03	03	-	<1	<1	02	02	01
Ocenebra spp													08	02	03	-	-	01	-	-	-	-	<.1	<1	-	-	-
Octopus spp													-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Ophiothrix spiculata													09	05	02	03	03	-	02	03	-	03	<1	03	07	<1	-
Ophiuroidea unid													-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-
Pagurus spp													43	49	51	69	31	13	57	29	13	15	09	34	18	27	05
Paraxanthias taylori													-	-	<1	<1	-	-	-	-	-	03	-	-	-	-	-
Pelecypoda unid. boring													211	46	141	109	88	143	95	37	50	58	53	32	57	66	28
Petrolisthes spp													01	-	-	-	<1	04	-	-	-	03	-	-	-	-	-
Phidiana hiltoni													-	-	-	-	-	-	01	<1	-	-	03	03	-	-	-
Phragmatopoma californica													04	18	21	27	16	13	09	32	25	-	51	42	49	49	03
Phyllochaetopterus prolifica													-	-	03	08	01	-	06	04	10	-	05	02	04	06	-
Pisaster giganteus													-	-	-	-	-	-	-	-	03	-	-	-	<1	-	-
Pisaster/Henricia (juv)													01	-	02	-	03	08	02	<1	-	-	01	-	-	<1	01
Pista spp													01	-	01	05	06	05	02	-	08	03	04	07	<1	03	-
Platyhelminthes unid													-	-	-	-	-	01	-	-	-	-	-	-	-	-	-
Pododesmus cepio													01	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-
Pseudomelatoma torosa													01	03	01	<1	<1	-	-	-	-	-	-	01	-	<1	04
Pugettia producta													-	02	01	-	-	01	02	<1	-	-	-	01	<1	<1	-
Pugettia richii													13	16	13	18	11	04	11	08	03	20	08	09	13	13	11
Pycnopodia helianthoides													-	-	-	-	-	-	-	-	-	-	-	-	-	-	01
Pyura haustor													-	-	01	<1	<1	-	-	-	-	-	-	-	-	-	-
Sabellidae													-	-	-	<1	-	-	-	05	-	-	01	-	-	-	-
Scyra acutifrons													-	-	-	-	-	-	-	-	-	03	-	-	-	-	-
Serpula vermicularis													-	-	-	-	-	-	-	02	05	-	-	-	-	01	01
Serpulidae unid													-	-	-	-	01	-	01	-	-	-	01	01	-	-	
Serpulorbis squamigerus													06	04	08	10	04	04	03	09	-	03	02	03	<1	03	-
Spirobranchus spinosus													01	01	06	08	17	14	14	05	05	08	13	11	08	08	01
Strongylocentrotus purpuratus													-	-	-	04	04	-	02	06	-	15	03	06	12	13	06
Strongylocentrotus spp													06	-	05	07	03	04	06	05	08	-	03	02	04	04	-
Styela montereyensis													-	01	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula brunnea													13	61	39	79	46	29	33	45	10	25	38	60	57	63	61
Tegula montereyi													-	<1	-	-	02	-	<.1	-	-	-	-	-	<1	-	-
Tegula pulligo													-	-	-	<1	-	-	-	<1	-	-	-	-	-	<1	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Fields Cove FC 1-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	3	4	2	3	3	1	1	4	4	4	4	2
Counted Regardless of Size																											
Tethya aurantia													-	-	-	-	0.1	0.1	<.1	-	-	-	-	-	<1	-	1.1
Tetraclita rubescens													-	-	-	-	0.6	-	3.7	0.4	-	-	0.1	-	-	-	-
Themiste pyroides													6.6	2.6	5.8	2.8	4.2	3.4	2.6	2.3	2.0	-	2.0	1.0	1.8	1.5	0.3
Tonicella lineata													0.3	0.2	0.3	0.2	0.3	-	<1	0.3	1.0	0.3	0.4	0.9	0.4	6.6	0.8
Tricolia pulloides													-	0.2	-	-	<1	-	0.3	-	-	-	-	-	-	-	-
tunicate, solitary unid.													0.1	0.3	0.3	0.9	0.3	-	0.1	-	-	-	0.2	<1	0.3	-	-
Coverage Based on # of 1" Squares																											
Abiet./Sertularella/Sertularia spp													-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Barentsia spp													-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid. (encrusting)													4.5	2.1	1.1	1.3	1.1	1.9	0.6	1.2	0.3	1.0	1.2	1.4	1.3	1.4	1.1
Bryozoa, unid. (erect)													-	-	-	<.1	-	-	-	-	<1	-	-	-	-	-	-
Bryozoa, unid. (foliose)													-	-	-	-	-	-	-	<1	-	-	-	-	<1	-	-
Didemnum/Trididemnum spp.													2.4	1.4	1.6	0.8	1.0	0.4	0.6	0.3	0.5	1.0	0.4	0.3	0.3	0.3	0.5
Eurystomella bilabiata													1.6	0.9	1.3	0.3	1.3	1.3	2.5	0.5	0.8	-	0.3	-	<1	<.1	-
Hydroida													0.4	-	<.1	-	0.1	-	-	-	-	-	-	-	-	-	<1
Hymenamphiastra cyanocrypta													<1	-	-	-	<.1	-	-	<1	0.3	-	<1	<1	-	-	0.1
Microporella californica													-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-
Porifera unid. (encrusting)													6.5	3.3	5.5	2.3	2.3	1.6	1.3	1.3	2.0	5.0	1.0	1.8	1.6	1.9	<1
Salmacina tribranchiata													7.0	2.3	1.3	1.1	1.4	0.8	0.9	0.3	0.3	-	0.2	0.2	0.2	0.2	-
Spirorbis spp													1.8	0.3	0.5	0.5	0.2	<.1	0.1	<1	<.1	0.5	<1	<1	0.4	<1	<.1
tunicates, colonial/social unid.													3.6	3.9	4.0	2.3	2.9	2.3	1.8	1.5	2.3	4.8	1.5	1.4	2.1	1.4	0.5

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 2-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																											
Acmaea mitra	-	0.5	0.5	0.1	0.2	0.3	0.8	0.5	0.3	1.0	0.9	0.6	0.6	0.8	0.5	0.8	0.2	0.8	2.6	2.8				3.0	1.4	0.9	2.4
Acmaeid unid a	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	0.1	-	-	-				-	-	<1	-
Acmaeidae unid	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-				-	-	-	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-				-	-	-	-
Aeolidiella oliviae	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<1	-	-	-	-	-				-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-				-	-	-	-
Alia carinata	-	5.0	10.3	4.9	13.2	7.8	5.0	3.8	5.9	6.0	6.5	4.1	1.8	2.7	1.2	1.5	0.8	0.3	0.4	-				-	-	-	-
Alia spp	-	1.3	-	6.9	-	-	1.0	-	1.1	2.1	1.3	0.2	-	-	<1	0.8	1.5	<1	0.8	-				-	-	-	-
Amphissa spp	-	0.3	-	1.6	1.5	1.6	1.3	1.0	1.8	1.7	2.4	2.4	0.8	0.1	0.3	0.3	0.3	0.3	0.3	-				-	-	-	-
Amphissa versicolor	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Anisodoris nobilis	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-				-	<1	-	-
Anthopleura artemisia	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	<1	-	-	-				<1	-	-	0.1
Anthopleura elegantissima	-	-	-	-	-	-	-	-	-	-	-	<1	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.5				0.2	0.1	0.4	0.3
Anthozoa unid	2.8	0.9	-	0.1	-	-	-	0.3	0.3	0.2	0.2	0.6	0.8	0.1	0.1	0.3	0.1	<1	-	-				-	0.3	-	-
Aphrodita spp	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-				-	-	-	-
Aplysia californica egg mass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-				-	-	-	-
Archidoris montereyensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-				-	-	-	-
Asterina miniata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.1	<1	-	0.1				-	-	-	-
Balanophyllia elegans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-				-	-	-	-
Balanus spp	-	-	-	-	-	<1	-	-	-	0.6	-	-	-	-	-	-	-	-	-	0.1				-	-	-	-
Balanus/Tetraclita spp	-	-	-	-	0.5	-	-	-	0.3	-	<1	4.3	2.9	1.1	0.9	0.8	10.9	1.1	<.1	1.1				3.9	0.4	-	-
Bittium eschrichtii	-	-	2.3	0.4	0.3	1.3	0.6	-	-	-	-	<1	-	-	<1	0.3	0.4	0.3	0.6	-				-	<1	-	-
Bittium spp	-	<1	-	1.2	-	-	-	-	-	0.2	-	-	<1	0.1	-	0.4	-	-	-	-				0.2	-	-	-
Boltenia villosa	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-				-	-	-	-
Brachyura unid b (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	0.3	-				-	-	-	-
Cactosoma arenaria	-	0.7	0.3	1.1	1.1	0.3	1.2	1.3	0.9	0.5	0.9	0.9	-	<1	-	0.3	-	-	-	-				-	-	-	-
Cadlina flavomaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-				-	-	-	-
Cadlina luteomarginata	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	<1	-	-	-				-	-	-	-
Calliostoma ligatum	0.3	<1	0.4	0.3	-	0.5	0.4	0.3	0.3	0.9	0.6	0.4	0.2	<1	-	-	<1	-	-	-				-	-	-	-
Calliostoma supragranosum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-				-	-	-	-
Callistochiton crassicostatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-				-	-	-	-
Cancer antennarius	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Cancer antennarius (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	0.1	-				-	-	-	-
Cancer spp	-	-	<1	0.1	<1	-	-	-	-	-	-	0.1	-	-	<1	-	<1	-	-	-				-	-	-	-
Cirratulidae/Terebellidae unid	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-				-	-	-	-
Clavelina huntsmani	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Crassedoma giganteum	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	<.1	<.1	-	-	-	-				-	<1	-	-
Crepidula spp	-	-	-	0.3	-	-	-	0.2	0.9	0.8	0.5	0.4	<1	-	0.1	-	-	-	-	-				-	-	-	-
Cryptolithodes sitchensis	-	-	-	0.4	0.3	0.2	0.3	<1	0.2	<1	<1	-	-	-	-	-	-	-	-	-				-	-	-	-
Cucumaria spp	2.8	0.3	-	<1	-	-	<1	-	-	-	0.1	0.1	0.3	<1	0.1	-	-	-	-	-				-	-	-	-
Dendrodoris spp	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-				-	-	<1	-
Dendropoma lituella	-	-	-	-	0.3	-	0.9	-	<1	0.2	0.6	0.1	-	0.3	0.1	-	<1	1.1	0.3	1.0				0.3	-	0.1	-
Diaulula sandiegensis	-	-	<1	-	-	-	<1	-	-	-	-	-	-	-	<1	-	-	-	-	-				-	-	<1	-
Diodora aspera	-	-	-	-	-	-	-	-	<1	<1	-	-	<1	-	-	0.3	0.1	0.2	0.4	-				-	<1	0.1	0.1
Diopatra ornata	-	-	<1	<1	-	<1	<1	-	<1	<1	0.1	0.3	0.2	0.2	0.1	<1	0.3	0.4	0.6	-				-	-	-	-
Doridacea unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	<1	-	-
Doriopsilla albopunctata	-	-	-	<1	-	-	0.2	-	-	0.1	0.1	-	-	-	-	-	0.2	0.1	-	-				<1	-	-	-
Epiactis prolifera	2.0	2.5	1.3	0.8	1.8	0.8	1.3	1.2	0.6	0.6	0.8	0.5	0.8	0.3	0.6	<1	-	<1	0.1	-				0.2	0.6	<.1	-
Eudistylia polymorpha	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Eupentacta quinquesemita	-	-	-	-	-	-	-	-	0.1	0.1	<1	-	-	-	<1	-	-	-	-	0.1				-	-	-	-
Fissurella volcano	-	0.3	-	0.3	0.4	0.2	0.2	<1	0.3	1.2	1.4	0.7	1.2	1.7	2.4	1.8	0.8	1.3	3.8	0.8				0.6	0.8	1.3	2.5
Flabellina trilineata	-	-	-	-	-	0.2	-	-	-	-	-	<1	-	-	<1	-	-	-	-	-				-	-	-	-
Fusinus luteopictus	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	-	-				-	-	-	-
Halcampa decementaculata	-	-	-	-	0.2	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Haliotis rufescens	0.3	<.1	-	<1	-	-	-	-	-	-	0.1	<.1	-	-	-	-	-	-	<1	-				-	-	-	-
Haliotis spp	-	-	-	-	-	-	-	<1	0.3	0.1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Haliotis spp (juv)	-	-	<1	-	-	-	-	-	-	-	<1	0.3	-	-	-	<1	-	-	<1	0.4				-	-	-	-
Henricia leviuscula	-	-	0.2	-	0.2	-	0.3	0.4	0.3	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Heptacarpus spp	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 2-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																											
Hermissenda crassicornis	-	-	-	-	-	<1	-	-	01	01	<1	<1	<1	-	-	-	-	02	-	-				-	-	-	-
Hiatella arctica	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-				-	-	-	-
Hiatella spp	-	04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Hipponix spp	-	-	-	-	-	-	-	-	-	-	-	01	-	<1	-	-	-	-	-	-				-	-	-	-
Homalopoma spp	-	04	-	01	-	-	06	14	13	11	23	17	<1	-	0.1	-	-	-	-	-				-	-	-	-
Ischnochitonidae	-	-	02	01	0.3	-	<1	<1	04	02	<1	02	<1	04	-	02	<1	02	01	-				02	<1	<1	-
Isopoda unid	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-				-	-	-	-
Lacuna spp	-	-	-	-	02	02	-	03	06	02	01	09	03	09	08	09	02	09	05	0.1				-	-	-	-
Laila cockerelli	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-				-	-	-	-
Lepidozona spp	-	-	-	-	-	-	-	-	02	01	<1	01	<1	03	-	<1	02	-	-	-				02	-	-	-
Leptasterias hexactis	43	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Leptasterias spp	-	09	08	11	32	13	14	11	05	11	08	03	-	-	-	-	-	-	-	-				-	-	-	-
Leucandra heathi	-	-	-	01	-	<1	-	02	-	02	-	<1	-	-	02	-	<1	-	-	-				-	-	-	-
Leucilla nuttingi	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-				-	-	01	-
Lissothuria nutriens	-	-	02	02	-	03	-	03	05	07	07	11	03	10	29	16	08	18	36	11				1.6	01	08	15
Lithopoma gibberosum	-	-	-	-	<1	-	-	<1	-	-	-	-	<1	-	<1	-	-	-	-	-				-	-	-	-
Lophopanopeus spp	-	<1	0.2	04	07	02	06	-	05	02	01	01	02	<1	01	-	-	<1	01	03				-	-	-	-
Lottia instabilis	-	-	-	-	-	-	<1	-	<1	<1	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Lottia ochracea	-	02	06	07	02	<1	03	-	1.5	29	18	19	20	09	06	08	1.5	09	15	08				<1	01	03	10
Lottia spp.	-	-	-	-	-	-	-	-	-	-	-	-	05	-	-	-	-	-	-	-				-	-	-	-
Loxorhynchus spp	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Majidae	-	10	07	03	<1	-	06	02	-	-	-	-	02	-	-	-	-	-	-	-				-	-	-	-
Megatebennus bimaculatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-				-	-	-	-
Melibe leonina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-				-	-	-	-
Mimulus foliatus	-	-	-	-	-	-	<1	-	-	<1	-	-	-	-	-	-	-	<1	-	-				-	-	-	-
Mitra idae	-	-	-	01	-	-	-	-	04	01	<1	<1	<1	-	02	-	-	-	-	-				-	01	-	-
Mopalia lignosa	-	-	-	-	-	-	-	-	-	-	-	-	02	-	-	-	-	-	-	-				-	-	-	-
Mopalia muscosa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1	-				<1	-	-	-
Mopalia spp	-	<1	-	-	-	<1	-	-	-	02	-	01	-	01	-	-	<1	-	01	-				-	-	-	-
Mytilus californianus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	<1	-	-
Myxicola infundibulum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-				-	-	-	-
Nereididae unid.	-	-	-	-	-	-	-	-	<1	<1	-	-	<1	01	<1	<1	-	-	01	-				-	-	-	-
Nitidiscala spp	13	-	-	-	02	02	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Nitidiscala/Opalia spp	-	-	-	-	-	-	-	02	<1	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Ocenebra foveolata	-	-	-	-	-	-	-	-	01	<1	-	-	03	<1	-	-	-	-	-	-				-	-	-	-
Ocenebra interfossa	-	-	<1	-	-	<1	-	02	-	01	<1	-	-	<1	-	-	-	-	-	-				-	-	-	-
Ocenebra lurida	-	-	01	-	-	02	<1	05	04	<1	05	04	-	-	-	-	-	-	-	-				-	-	-	-
Ocenebra spp	-	-	-	01	03	<1	<1	-	<1	03	01	05	-	01	01	<1	-	-	-	-				-	-	-	-
Octopus spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-				-	-	-	-
Ophiactis simplex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				07	29	192	188
Ophioplocus esmarki	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	<1	-				-	<1	01	-
Ophiothrix spiculata	-	-	01	04	-	06	<1	-	-	03	02	03	04	<1	02	03	03	19	04	14				02	03	07	20
Ophiuroidea unid.	-	-	<1	-	-	-	-	-	-	-	-	-	04	-	01	-	-	-	-	-				02	-	-	-
Pagurus spp	20	38	87	133	10.3	212	127	114	114	124	77	71	49	37	08	29	1.9	0.3	1.5	01				<1	04	<1	-
Parastichopus parvimensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-				-	-	-	-
Paraxanthias taylori	-	-	-	-	-	-	-	-	-	<1	04	02	<1	-	-	-	-	-	-	-				-	-	-	-
Pelecypoda unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-				-	-	-	-
Pelecypoda unid boring	-	13	16	36	1.1	14	18	19	20	38	4.1	52	103	96	90	124	106	69	125	3.5				28	38	55	111
Petrolisthes spp	-	-	<1	-	-	-	-	-	<1	02	<1	-	-	-	-	<1	-	-	-	-				-	-	-	-
Phascolosoma agassizii	-	-	-	03	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-				-	-	-	-
Phidiana hiltoni	-	-	-	<1	<1	-	-	-	-	<1	<1	02	02	05	06	05	04	06	08	10				-	-	01	01
Phragmatopoma californica	-	<1	03	01	14	04	08	02	18	26	31	48	226	149	93	53	29	30	24	15				458	691	883	531
Phyllochaetopterus prolifica	-	-	-	03	03	10	02	03	08	02	13	16	18	24	13	10	1.1	41	10	11				07	03	<1	03
Pisaster giganteus	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1	<1	<1	-	-				-	-	-	-
Pisaster ochraceus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-				-	-	-	-
Pisaster/Henricia (juv.)	-	02	1.0	26	14	19	14	20	14	08	06	02	-	-	-	-	-	-	<1	-				-	-	-	-
Pista spp	05	08	04	12	07	03	09	04	21	18	10	15	07	05	09	12	22	26	24	70				53	32	18	20
Pista/Streblosoma spp	30	09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 2-3m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																												
Platyhelminthes unid		-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-				-	-	-	-
Pododesmus cepio		-	-	-	-	-	-	-	-	-	-	-	02	-	<1	01	<1	-	03	-	-				-	02	-	-
Polychaeta unid		-	-	-	-	-	-	-	-	-	-	-	-	<1	-	01	-	-	-	-	-				-	-	-	-
Pseudomelatoma torosa		-	<1	-	03	02	03	02	03	04	16	06	05	05	02	01	<1	-	-	<1	-				-	-	-	-
Psolus chitonoides		-	-	-	-	-	-	03	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Pugettia producta		-	<1	01	04	<1	03	02	03	08	02	03	-	<1	06	<1	03	-	-	-	-				-	-	-	-
Pugettia richii		-	-	09	22	19	14	43	13	17	33	16	13	05	08	02	08	-	06	07	-				<1	01	02	04
Pugettia spp		03	03	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Pycnopodia helianthoides		-	-	-	-	-	-	-	<1	<.1	<1	01	<1	-	<1	-	<1	-	-	-	-				-	-	-	-
Pyura haustor		-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-				-	-	-	-
Rostanga pulchra		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-				-	-	-	-
Sabellidae		23	<1	-	-	-	-	-	-	-	01	-	<1	-	<1	<1	04	01	-	-	-				-	-	<1	-
Scyra acutifrons		-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Serpula vermicularis		-	-	-	-	-	-	-	02	02	02	<1	-	-	<1	02	02	<1	05	03	01				<1	-	-	-
Serpulidae unid		-	-	-	-	-	-	-	-	-	<1	02	-	03	01	<1	-	<1	03	06	-				-	<1	-	-
Serpulorbis squamigerus		-	-	-	01	02	03	04	04	05	07	14	15	07	10	08	03	02	02	03	01				03	03	03	04
Sipuncula unid		-	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Sphaeromatidae unid		-	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-	-				-	-	-	-
Spirobranchus spinosus		-	-	-	-	-	-	-	-	<1	-	-	02	05	05	02	03	03	13	19	09				1.3	14	11	09
Spirontocaris spp		-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Stenoplax heathiana		-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-				-	-	-	-
Stenoplax spp		-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-				-	-	-	-
Strongylocentrotus franciscanus		-	-	-	-	-	-	-	-	-	-	01	-	06	-	02	-	01	-	-	-				-	-	-	-
Strongylocentrotus purpuratus		-	-	-	-	<1	<1	-	-	<1	-	-	-	02	02	03	06	18	14	36	34				79	75	113	125
Strongylocentrotus spp		-	-	-	-	-	03	02	-	-	<1	01	05	04	<1	09	09	01	06	09	-				-	-	01	
Styela montereyensis		-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Tectura paleacea		-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Tegula brunnea		10	18	3.9	21	29	35	21	32	59	70	98	131	233	64	03	13	23	02	05	-				02	06	03	-
Tegula montereyi		-	-	-	<1	-	-	<1	-	-	-	02	03	<1	-	<1	-	-	-	-	-				-	-	-	-
Tegula pulligo		-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Tethya aurantia		-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-				-	-	-	-
Tetraclita rubescens		-	-	-	-	05	10	<1	-	-	02	-	07	-	-	01	-	04	02	-	-				-	-	-	16
Themiste pyroides		-	06	03	15	11	10	09	18	21	19	22	26	18	11	06	05	02	<1	04	05				-	-	02	01
Tonicella lineata		-	02	02	01	02	<1	02	<.1	02	05	03	07	03	04	02	-	<1	<1	<1	-				-	<.1	<1	-
Tricolia pulloides		-	04	-	-	-	-	<1	-	12	19	08	14	11	19	11	02	02	-	-	-				-	-	-	-
Triopha catalinae		-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Triopha maculata		-	-	-	-	-	-	-	-	-	01	-	-	-	-	<1	-	-	-	-	-				-	-	-	-
Tubulanus polymorphus		-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Tubulanus sexlineatus		-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Williamia peltoides		-	-	-	-	-	-	-	-	-	-	-	-	06	-	05	-	-	-	-	-				-	-	-	-
tunicate, solitary unid		-	-	-	-	-	-	-	<1	-	-	-	-	-	01	-	<1	<1	01	<1	03				<1	-	-	-
Coverage Based on # of 1" Squares																												
Abiet /Sertularella/Sertularia spp		-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-				<1	-	-	-
Aglaophenia spp		-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Bryozoa, unid (encrusting)		-	08	03	08	10	08	08	16	09	11	10	10	02	11	06	04	06	03	02	03				<1	<1	<1	<1
Bryozoa, unid. (foliose)		-	-	-	-	-	-	<1	-	-	<1	-	<1	-	-	-	-	-	-	-	-				-	-	-	-
Didemnum/Trididemnum spp		-	13	15	14	19	11	12	<.1	04	03	1.5	1.3	08	04	05	04	09	05	02	<.1				-	-	-	-
Dodecaceria fewkesi		-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Entoprocta unid. a		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	01	-	-
Eurystomella bilabiata		-	-	-	-	-	-	-	-	-	<1	01	03	<1	<1	<1	-	<.1	-	-	-				-	-	-	-
Hydroida		-	-	-	-	-	-	-	02	-	<1	-	-	<1	<1	<1	-	-	-	-	-				-	-	-	-
Leucetta losangelensis		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	<1	<1	-
Leucosolenia spp		-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-				-	<1	-	-
Porifera unid. (encrusting)		-	13	<1	09	08	05	03	03	07	10	04	05	<1	04	03	03	03	01	03	<1				05	04	01	<1
Porifera unid. b (yellow)		15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Porifera unid c (orange)		08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Salmacina tribranchiata		-	-	<1	03	02	05	04	04	11	10	04	04	03	02	03	-	01	01	03	-				-	<1	<1	-
Spirorbis spp		-	2.5	01	02	07	03	08	06	09	14	09	09	04	05	06	02	01	03	<1	<.1				03	<1	<1	<1
tunicate, colonial unid a (white)		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
tunicates, colonial/social unid		08	12	11	12	16	08	14	08	06	07	09	13	08	14	14	10	15	06	06	<.1				02	02	<1	<1

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 3-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Acmaea mitra	1.0	0.6	0.7	0.6	0.5	0.6	1.0	1.4	1.5	3.3	0.7	0.3	0.5	1.0	0.9	1.4	1.6	0.7	2.6	3.0	1.9	2.0	-	2.0	1.0	0.8	0.8
Acmaeid unid. a	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	0.5	0.1	-	-	-	-	-	0.1	-	-	-	-
Aegires albopunctatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	<.1	-	0.1	-	-	-	-	-	-
Aeolidiacea unid. a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Alia carinata	-	3.0	11.9	8.3	8.3	6.7	1.6	3.8	4.7	5.3	9.4	4.7	2.0	1.1	2.8	3.8	1.7	0.3	2.1	-	-	0.8	-	<.1	-	-	-
Alia spp	0.5	-	-	2.8	-	<.1	1.0	0.4	1.3	1.6	1.2	0.1	-	0.2	0.3	0.2	0.8	0.3	1.4	0.1	0.5	0.3	-	-	-	-	-
Alpheus clamator	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphipoda unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Amphissa columbiana	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphissa spp	-	-	-	0.8	2.2	1.3	1.1	0.8	1.8	1.7	2.6	1.4	0.6	-	0.4	0.5	<.1	0.3	0.1	-	-	0.1	-	-	-	-	-
Amphissa versicolor	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ancula pacifica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Anisodoris nobilis	-	-	-	-	-	<.1	-	-	-	-	-	-	-	<.1	-	<.1	<.1	-	-	-	0.3	-	-	-	-	<.1	-
Anthopleura artemisia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	<.1	-	-
Anthopleura elegantissima	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.3	0.3	0.3	0.2	<.1	0.4	0.4	0.6	0.6	0.4	0.4	0.8	0.6	0.6
Anthozoa unid.	-	0.2	0.5	0.2	<.1	-	-	-	0.1	0.6	0.3	0.4	0.3	0.3	0.1	<.1	<.1	<.1	<.1	-	0.1	-	-	-	<.1	-	0.1
Aplysia californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Aplysia californica egg mass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Archidoris montereyensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	0.1	-	-	-	<.1	-	-	-
Asterina miniata	-	-	0.2	<.1	<.1	<.1	0.4	<.1	-	-	-	-	-	-	<.1	<.1	0.1	-	-	-	-	-	-	-	-	-	-
Asterina miniata (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-
Babakina festiva	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Balanophyllia elegans	-	-	-	-	-	-	-	-	-	-	<.1	0.1	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Balanus aquila	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Balanus spp	-	-	-	-	-	-	-	-	-	-	<.1	-	-	0.5	<.1	-	-	<.1	0.1	-	-	-	-	-	-	-	-
Balanus/Tetraclita spp	-	-	-	-	-	0.2	-	1.1	0.2	0.6	0.2	0.1	2.8	6.3	5.8	8.4	6.1	5.3	2.3	2.9	-	10.0	0.8	4.9	4.3	<.1	2.5
Barnacles (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	<.1	-	-
Bittium eschrichtii	-	-	1.1	0.5	0.5	0.3	-	<.1	-	<.1	<.1	-	-	-	0.4	-	-	<.1	-	-	-	0.1	-	-	-	-	-
Bittium spp	-	-	-	-	-	-	-	-	-	-	<.1	-	-	<.1	0.3	-	-	-	0.3	-	-	-	-	-	-	-	-
Boltenia villosa	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.2	<.1	0.1	-	-	-	-	-	-	-	-	-	-	-
Brachyura unid. b (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Cactosoma arenaria	-	-	1.9	2.5	2.9	1.7	2.3	2.2	1.2	1.1	1.4	0.6	0.3	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-
Cadlina flavomaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Calliostoma annulatum	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma ligatum	-	-	0.2	-	0.2	-	<.1	-	-	0.2	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Callistochiton crassicostatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-
Cancer antennarius	-	-	-	-	-	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Cancer antennarius (juv.)	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Cancer productus (juv.)	-	-	-	-	-	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer spp	-	-	0.5	-	0.2	-	-	-	-	-	<.1	<.1	-	0.1	-	-	<.1	<.1	-	-	-	0.1	-	-	<.1	<.1	-
Chama spp	-	-	-	-	-	-	-	-	-	-	-	0.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chelyosoma productum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Cirratulidae/Terebellidae unid	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clavelina huntsmani	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Clavularia spp	-	-	-	-	-	-	-	1.9	0.8	0.6	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conus californicus	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crassedoma giganteum	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-
Crepidula spp	-	-	-	-	-	0.2	<.1	0.4	<.1	0.1	0.6	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptochiton stelleri	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Cryptolithodes sitchensis	-	-	<.1	0.1	0.6	0.4	0.2	-	0.1	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cucumaria spp.	-	0.3	-	0.2	-	-	<.1	-	-	0.1	0.1	-	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	<.1	-
Dendrodoris spp	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	0.2	-	-	<.1	-	-	0.1	-	-	-	<.1	-
Dendropoma lituella	-	-	-	-	-	-	0.9	-	<.1	0.3	0.3	-	-	-	0.5	0.2	-	-	-	-	-	0.5	0.1	-	-	0.1	-
Diaulula sandiegensis	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	<.1	-	-	-	-	-	-	<.1	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 3-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Diodora aspera	-	-	-	-	-	-	-	<1	-	-	<1	-	-	01	-	-	-	-	01	-	-	-	-	-	01	01	-
Diopatra ornata	03	-	-	-	-	<1	03	<1	-	-	-	-	-	-	-	<1	-	-	-	-	01	01	-	<1	-	-	-
Dorídacea unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	
Doriopsilla albopunctata	-	-	-	<1	-	-	-	-	-	<1	01	-	-	-	-	<1	02	<1	<1	03	-	-	-	02	<1	-	-
Epiactis prolifera	10	38	25	28	26	14	08	23	07	14	11	15	11	07	08	04	-	<1	-	01	-	-	03	03	20	06	-
Erato vitellina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-
Eudistylia polymorpha	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eupentacta quinquesemita	-	-	-	-	-	-	-	<1	<1	-	<1	-	-	01	-	<1	-	-	-	-	-	-	-	-	-	<1	01
Fissurella volcano	-	<1	<1	-	<1	-	-	-	<1	08	1.4	04	08	16	24	12	05	05	24	19	09	16	18	05	04	29	45
Flabellina trilineata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-
Fusinus luteopictus	-	-	-	<1	-	<1	-	-	-	01	08	08	02	02	<1	01	<1	-	-	-	-	-	-	-	-	-	-
Grapsidae (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-
Halcampa decementaculata	-	<1	13	01	<1	-	-	-	-	-	<1	-	-	-	-	<1	-	-	<1	-	-	-	-	-	-	-	-
Haliotis rufescens	-	-	<1	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	<1	-	-
Haliotis spp	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp (juv)	-	-	-	-	-	-	-	-	-	-	01	<1	-	-	-	-	-	-	-	01	-	-	-	-	-	-	03
Henricia leviuscula	10	-	-	<1	-	-	03	01	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptacarpus spp	-	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hermissenda crassicornis	-	-	-	02	-	-	-	01	<1	02	01	-	-	<1	-	01	-	-	<1	01	-	-	-	-	-	-	-
Hiatella arctica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Hipponix spp	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Homalopoma spp	03	<1	04	08	06	16	24	18	23	31	42	26	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hopkinsia rosacea	-	-	-	-	-	-	-	01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Irus lamellifer	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ischnochitonidae	-	-	03	01	02	02	03	03	01	04	03	03	02	02	04	01	03	<1	01	-	01	-	-	-	02	-	-
Kelletia kelletii	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Lacuna spp	-	03	02	-	-	03	07	04	22	09	<.1	06	06	08	06	21	06	04	06	08	-	11	-	-	-	-	-
Lepidozona spp	-	-	-	-	-	<.1	-	-	-	<1	01	-	-	<1	-	<1	-	<1	01	03	-	04	-	-	<1	<1	-
Leptasterias spp	05	18	07	16	24	19	14	18	08	14	08	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leucandra heathi	-	-	-	-	-	-	03	-	-	03	01	<1	<1	-	02	-	-	-	-	-	-	-	-	-	-	-	-
Leucilla nuttingi	-	-	-	-	-	-	-	-	-	03	<1	03	-	<1	-	-	02	-	04	-	-	-	-	-	-	-	-
Lissothuria nutrens	-	-	03	01	02	<1	<1	01	03	06	04	07	06	28	19	03	08	04	10	08	01	03	03	01	-	04	-
Lithopoma gibberosum	-	-	-	<1	-	<1	-	<1	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lophopanopeus spp	-	-	<1	08	03	<1	0.3	01	01	02	01	01	-	-	<1	<1	01	-	-	-	-	-	-	-	-	<1	-
Lottia instabilis	-	-	-	01	-	-	-	-	-	-	01	-	08	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lottia ochracea	-	05	09	09	03	11	10	11	26	35	22	17	19	17	16	26	13	16	16	09	10	03	09	03	11	09	3
Lottia spp	05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loxorhynchus crispatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-
Majidae	-	<1	03	05	02	-	07	-	-	01	-	-	-	01	-	-	-	-	-	-	-	01	-	-	-	<1	-
Megabalanus californicus	-	-	-	-	-	-	-	-	-	01	-	-	02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Megatebennus bimaculatus	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mimulus foliatus	-	-	-	<1	<1	-	-	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mitra idae	-	-	-	-	-	-	-	01	-	01	02	02	-	<1	-	-	<1	-	-	-	-	-	-	-	01	-	-
Modiolus spp	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	01	-	01	-	-	-	-	-	-
Mopalia lignosa	-	-	-	-	-	<.1	-	01	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mopalia muscosa	-	-	-	-	-	-	<1	-	-	-	-	-	-	03	01	-	-	-	<1	-	-	-	-	-	-	-	-
Mopalia spp	-	-	-	<1	<1	-	-	-	-	01	-	<1	<1	-	-	-	-	01	-	-	-	-	-	-	-	-	-
Mytilidae	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mytilus galloprovincialis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-
Myxicola infundibulum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-	-	-	-	-	-	-	-	-	-	
Nemertea unid.	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1	-	-	-	<1	-	-	-	-	-	-	-	-	-
Nereididae unid	-	-	03	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-
Nitidiscala spp	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitidiscala/Opalia spp	-	-	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norrisia norrisi (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Ocenebra foveolata	-	-	-	<1	-	-	-	-	-	-	<1	-	02	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra interfossa	-	-	-	-	-	-	-	-	-	-	02	02	-	-	01	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 3-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Ocenebra lurida	-	-	0.3	0.2	0.3	0.4	0.5	0.2	0.2	0.2	0.6	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra spp.	-	-	<1	0.3	-	-	<1	-	<.1	0.2	0.2	0.3	0.3	0.2	<.1	<1	-	-	<1	-	-	-	-	-	-	-	-
Octopus spp	-	-	-	-	-	-	-	-	-	-	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophiactis simplex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	2.5	19.4	73.8	62.5
Ophioplocus esmarki	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	0.1	0.1	-	0.9	-	-	-	-	-	-	-
Ophiothrix spiculata	-	-	0.1	-	0.3	<.1	0.2	-	-	0.2	0.1	0.4	<.1	<1	1.1	0.4	0.8	1.6	1.1	0.5	1.1	0.1	0.4	3.1	3.7	2.9	2.9
Ophiuroidea unid.	-	-	-	-	-	-	-	-	0.2	<.1	0.1	<1	<.1	-	-	0.1	<1	-	<1	-	-	0.3	1.0	-	-	-	-
Pagurus spp	-	1.6	6.1	5.4	7.8	17.4	12.0	5.6	7.1	8.2	5.6	6.2	3.4	1.7	1.9	1.4	2.8	1.9	1.0	0.8	1.9	0.4	0.1	-	-	-	-
Paraxanthias taylori	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid. boring	-	1.1	4.4	1.8	2.3	2.0	3.5	5.6	4.7	6.3	7.6	7.8	12.7	13.9	13.4	5.6	12.3	10.1	8.9	3.1	1.3	28.9	6.6	1.8	2.3	3.3	9.9
Petrolisthes spp	-	-	-	-	0.3	-	-	-	-	-	-	<1	-	-	-	0.1	-	<1	-	-	-	-	-	-	-	-	-
Phidiana hiltoni	-	<1	-	-	-	-	-	-	-	0.2	0.5	0.1	<.1	0.4	0.3	0.4	0.1	0.4	0.4	0.1	0.4	0.1	-	-	-	<1	-
Phragmatopoma californica	-	0.8	7.6	4.3	2.3	2.8	3.3	5.5	12.4	20.6	14.7	3.2	12.3	2.8	2.4	1.7	1.3	4.3	5.8	5.4	7.4	8.3	38.3	146.1	143.4	184.1	101.3
Phyllochaetopterus prolifica	-	-	0.1	-	0.2	-	0.4	0.2	0.8	0.6	0.5	0.4	1.3	0.5	2.5	1.0	1.1	2.1	0.9	-	-	1.9	0.1	0.3	<1	<1	-
Pisaster brevispinus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	0.8	-	-	-	-
Pisaster giganteus	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	<.1	<.1	0.1	<1	-	0.1	-	-	-	-	-	-
Pisaster ochraceus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	<1	-
Pisaster/Henricia (juv)	-	<1	1.8	2.1	2.6	1.7	2.0	1.1	1.0	1.0	0.6	<1	-	-	<.1	-	-	-	-	-	-	-	-	-	-	<.1	-
Pista spp	-	<1	<.1	<.1	<.1	-	-	-	0.2	0.2	<1	-	-	-	-	-	0.1	0.4	0.1	0.1	0.6	0.5	-	0.3	0.3	0.4	-
Placiphorella velata	-	-	-	-	-	-	-	-	-	-	0.1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Platyhelminthes unid	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
Pododesmus cepio	-	-	-	-	-	-	-	-	-	<1	0.3	1.4	1.5	1.3	0.6	0.9	0.4	-	<.1	-	0.1	-	-	-	-	-	-
Polychaeta unid.	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyplacophora unid. a	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudomelatoma torosa	-	-	-	-	0.2	-	0.2	0.5	0.4	0.5	0.9	0.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pugettia producta	-	-	0.1	0.2	0.2	0.2	<.1	<.1	0.3	0.1	0.2	0.2	0.2	<1	0.2	<.1	<.1	<1	<.1	-	0.4	0.5	-	<.1	-	<1	-
Pugettia richii	-	-	0.4	0.8	3.4	2.3	3.6	1.1	0.3	1.2	0.9	0.8	-	0.3	0.6	0.7	0.1	0.1	0.7	0.4	1.1	0.5	0.1	-	0.4	0.3	0.1
Pugettia spp.	-	<.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnogonida unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Pycnopodia helianthoides	-	-	0.1	<.1	<.1	0.3	0.2	-	<.1	<.1	-	<1	-	-	-	0.1	<.1	<.1	<1	-	-	-	-	-	-	-	-
Rostanga pulchra	-	-	-	-	-	-	<.1	0.1	-	<.1	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Sabellidae	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	<.1	0.1
Serpula vermicularis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	<.1	0.4	-	-	0.1	-	-	<.1	-
Serpulidae unid.	-	0.3	0.8	-	-	-	-	-	<.1	-	<.1	-	0.8	0.2	0.3	-	-	0.8	0.9	-	-	0.4	0.4	0.2	-	0.2	-
Serpulorbis squamigerus	-	<1	0.1	0.4	0.3	<.1	0.2	0.1	0.4	0.9	1.8	1.8	2.0	1.8	1.0	0.9	0.4	0.2	0.5	0.3	-	0.6	0.5	0.7	0.7	0.4	0.4
Sphaeromatidae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Spirobranchus spinosus	-	-	<.1	-	0.2	-	-	0.1	0.3	0.1	<1	0.4	0.5	1.3	0.9	0.5	0.5	1.3	2.7	1.3	1.8	1.6	2.4	1.6	1.9	1.5	2.6
Stenoplax heathiana	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
Stenoplax spp	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strongylocentrotus franciscanus	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	0.6	-	-	0.1	-	-	-	-	-	-	-	<1	0.3
Strongylocentrotus purpuratus	-	-	-	-	-	-	-	<1	-	-	-	<1	0.5	-	0.4	0.7	1.2	0.4	1.9	2.9	1.1	0.4	0.5	1.6	3.0	13.1	28.5
Strongylocentrotus spp	-	-	<.1	-	<.1	-	0.3	-	-	<1	0.9	0.6	-	0.8	0.8	-	<1	0.4	<1	-	0.5	-	-	-	-	0.9	0.4
Tectura paleacea	-	-	-	-	-	<.1	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula brunnea	0.5	2.3	4.2	5.5	3.0	4.4	2.9	5.6	8.6	10.6	13.6	9.8	12.5	1.9	0.6	0.3	3.0	0.6	0.4	-	0.9	0.5	-	-	0.1	<1	-
Tegula montereyi	-	0.2	-	-	-	-	-	<1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula pulligo	-	-	-	<1	-	-	-	-	-	-	<.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tethya aurantia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
Tetraclita rubescens	-	0.5	<.1	-	<1	-	-	-	0.8	0.2	0.5	2.1	0.7	0.1	0.8	3.0	3.6	2.0	6.3	2.9	8.0	-	5.6	-	-	0.9	-
Themiste pyroides	-	<.1	1.1	0.5	0.5	0.5	0.7	1.6	2.1	2.2	1.9	0.9	1.6	0.7	0.4	0.3	0.3	<1	-	-	-	0.1	0.1	0.1	0.3	0.3	0.1
Tonicella lineata	0.3	0.3	0.3	0.6	0.3	0.4	0.2	0.9	0.9	0.9	1.7	0.7	<.1	0.1	<1	0.2	0.3	-	0.2	0.1	0.3	-	-	0.2	-	0.1	0.1
Tricolia pulloides	-	-	0.1	-	0.2	0.8	0.3	0.6	4.1	1.8	0.3	0.2	<1	<.1	1	0.7	0.4	0.2	0.2	-	-	0.4	-	-	-	-	-
Triopha maculata	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Tritonia festiva	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Williamia peltoides	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Xanthidae unid	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, solitary unid	-	<.1	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.1	-	-	0.2	-	-	0.1	-	-	<1	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 3-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of 1" Squares																											
Abiet /Sertularella/Sertularia spp	-	-	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Archidistoma psammion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 3	-	-	-	-	-
Bryozoa, unid. (encrusting)	-	0 2	< 1	0 8	0 9	1 0	0 6	1 0	0 6	1 2	1 1	1 1	0 9	3 8	0 7	0 8	0 8	0 4	< 1	< 1	0 4	0 3	0 4	< 1	< 1	< 1	-
Bryozoa, unid. (erect)	-	0 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp	0 3	0 3	-	-	< 1	< 1	-	< 1	0 1	0 3	0 2	< 1	< 1	0 4	0 4	0 9	0 3	0 4	0 6	0 1	< 1	-	-	-	< 1	< 1	-
Entoprocta unid a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 4	-	-
Eurystomella bilabiata	-	-	-	-	-	-	-	-	-	0 3	0 3	0 3	1 2	0 2	0 6	< 1	< 1	-	-	-	-	0 1	-	-	-	-	-
Haliclona spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 0	-	-	-	-	-
Hydroida	-	-	< 1	-	-	-	-	-	0 2	0 9	< 1	< 1	-	-	< 1	-	-	-	-	-	-	-	-	-	0 1	-	-
Leucetta losangelensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 1	0 1	< 1	-	-
Leucosolenia spp	-	-	-	0 1	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-
Membranipora spp	-	-	-	-	-	-	-	-	0 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metandrocarpa taylori	-	-	-	-	-	-	-	-	-	-	-	-	-	3 9	0 2	-	-	0 2	-	-	-	-	-	-	-	-	-
Porifera unid. (encrusting)	-	0 2	0 1	0 9	1 3	1 0	1 1	0 9	1 1	1 1	0 6	0 9	0 8	1 4	0 2	0 5	0 6	0 9	0 3	0 4	1 1	1 4	0 8	0 4	0 6	<.1	< 1
Porifera unid. c (orange)	< 1	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salmacina tribranchiata	-	-	< 1	0 8	0 8	1 3	0 6	1 6	1 1	1 3	0 4	0 3	< 1	0 6	0 3	0 3	< 1	<.1	< 1	0 1	0 3	-	0 3	0 3	< 1	-	-
Spirorbis spp	-	-	< 1	0 6	0 7	1 2	0 6	0 6	0 9	1 0	1 0	1 4	1 1	0 5	0 9	0 1	0 5	0 4	< 1	< 1	0 1	0 5	0 1	< 1	0 2	0 4	< 1
bryozoan unid b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 3	-	-	-
epiphytic bryozoan (sq)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	< 1	-	-	-
tunicates, colonial/social unid	-	1 2	0 3	0 8	0 7	1 0	1 2	1 4	2 3	2 2	1 4	1 0	0 8	1.9	1 1	0 9	0 4	0 3	0 5	0 1	0 5	0 1	0 4	0 2	0 5	< 1	-

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 4-4m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Acmaea mitra	0.5	0.5	0.9	0.5	0.9	0.7	1.7	0.4	1.6	2.0	0.7	0.9			1.7	2.2	1.3	1.3	3.4	4.9	1.5	0.5	1.3	1.2	2.7	0.8	1.9
Acmaeid unid. a	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<.1	-
Aegires albopunctatus	-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	<.1	-
Aeolidia papillosa	-	-	-	-	-	<.1	<.1	<.1	-	-	<.1	-			-	-	-	-	-	-	-	-	-	-	-	0.1	-
Aeolidiella olivae	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	0.1
Alia carinata	-	1.3	1.1	0.7	1.9	0.7	1.1	1.5	1.7	2.5	0.4	3.5			0.4	0.8	1.5	0.3	0.5	0.1	-	3.3	0.1	-	-	0.6	-
Alia spp	-	-	-	1.2	0.8	0.3	0.1	0.5	0.2	<.1	0.6	0.3			0.8	-	0.4	0.2	0.3	0.8	0.3	-	-	-	-	0.3	-
Amphissa spp.	-	0.3	1.2	0.7	1.0	1.0	0.8	0.9	2.1	1.1	2.0	4.1			0.5	0.3	<.1	0.4	0.4	0.5	0.5	0.4	-	<.1	-	-	-
Amphissa versicolor	-	-	-	0.1	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	-	-
Anisodoris nobilis	-	-	-	-	<.1	-	-	-	-	<.1	-	-			<.1	<.1	-	<.1	-	-	-	-	-	-	-	-	-
Anthopleura artemisia	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	<.1	-	-	0.1
Anthopleura elegantissima	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.3	0.3	0.3	0.5			0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.9	0.4	0.3	0.7	0.8
Anthozoa unid.	0.8	1.0	-	0.4	0.2	-	-	<.1	-	0.4	0.4	0.2			-	0.1	<.1	0.3	0.4	0.3	0.3	-	-	-	0.1	<.1	-
Aphrodita spp	-	-	-	-	-	-	-	-	-	-	<.1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Aplysia californica	-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	0.1	-	<.1	-	-	-	-	-	<.1	-	-
Aplysia californica egg mass	-	-	-	-	-	-	-	-	-	-	-	-			-	-	0.6	-	<.1	-	-	-	-	-	-	-	-
Archidoris montereyensis	-	-	<.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Asterina miniata	0.3	-	0.3	0.2	<.1	-	0.2	0.3	-	<.1	-	-			0.1	0.1	0.2	-	<.1	0.1	-	-	-	-	-	-	-
Balanophyllia elegans	0.3	-	0.1	0.1	0.3	0.3	0.2	0.3	0.4	0.7	0.8	0.6			0.2	0.2	0.1	0.3	-	-	-	-	-	-	-	-	-
Balanus aquila	-	-	-	-	-	-	-	-	-	<.1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Balanus spp.	-	-	-	<.1	-	-	-	-	-	<.1	-	<.1			1.5	-	-	-	0.3	-	-	-	-	-	-	0.9	-
Balanus/Tetraclita spp	-	-	-	-	-	<.1	0.2	<.1	-	0.2	1.1	<.1			0.5	0.6	0.9	0.4	0.6	0.9	8.5	-	0.3	2.4	2.7	0.6	-
Barnacles (juv.)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	<.1	-	-
Bittium eschrichtii	-	-	0.3	0.2	0.2	-	-	-	-	0.1	-	-			0.2	1.1	<.1	0.1	0.3	0.3	-	-	-	-	-	-	-
Bittium spp	-	-	-	-	-	-	0.1	0.4	-	-	-	0.3			-	-	0.9	0.1	-	-	-	-	0.3	-	-	0.1	-
Bolteria villosa	-	-	-	-	-	-	<.1	0.3	-	-	<.1	<.1			-	-	0.2	<.1	-	0.1	0.3	-	0.1	-	-	-	-
Cactosoma arenaria	-	-	2.4	3.1	1.9	2.9	2.1	1.8	0.4	0.5	0.2	<.1			-	-	-	-	-	-	-	-	-	-	-	0.1	-
Cadlina flavomaculata	-	-	-	-	-	<.1	-	-	-	<.1	<.1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma ligatum	0.8	-	0.1	0.3	0.4	0.3	0.3	0.3	<.1	0.5	0.5	0.5			-	<.1	-	<.1	-	-	-	-	-	-	-	-	-
Calliostoma spp.	-	-	-	-	-	-	-	-	-	<.1	-	<.1			<.1	-	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius	-	-	-	-	-	-	-	-	-	-	<.1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius (juv)	-	-	-	-	-	-	-	-	-	<.1	<.1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer spp	-	-	<.1	-	-	-	<.1	-	<.1	-	-	<.1			-	0.2	-	-	0.3	0.1	-	-	-	-	-	-	-
Cirratulidae/Terebellidae unid.	-	-	-	-	-	-	-	-	-	-	-	-			0.2	-	<.1	-	-	-	-	-	-	<.1	-	-	-
Clavelina huntsmani	-	-	-	-	-	-	-	-	-	-	-	-			0.4	1.6	-	-	<.1	-	-	-	1.3	-	-	-	-
Clavularia spp	-	-	-	-	-	-	-	2.3	0.7	4.0	1.4	4.4			-	-	-	-	-	-	-	-	-	-	-	-	-
Cnemidocarpa finmarkiensis	-	-	<.1	-	-	-	-	-	-	0.1	0.2	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Conus californicus	-	-	-	-	-	-	-	-	-	-	<.1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Crassedoma giganteum	-	-	<.1	-	-	-	-	-	-	<.1	0.2	0.3			0.3	<.1	0.1	0.1	<.1	-	-	-	-	-	-	-	-
Crepidula spp	-	-	0.4	-	-	1.4	0.6	0.6	0.5	0.7	1.2	0.2			<.1	-	-	-	-	-	-	-	-	-	-	-	-
Cryptolithodes sitchensis	-	-	-	<.1	0.2	0.3	0.1	0.2	0.2	0.2	<.1	<.1			-	<.1	-	-	<.1	0.1	-	-	-	-	-	-	0.1
Cucumaria spp.	-	-	<.1	0.3	<.1	0.3	0.4	0.3	0.4	1.1	0.4	0.4			-	-	0.1	-	-	-	-	-	-	-	-	-	-
Dendrodoris spp.	-	-	-	-	-	-	-	-	-	<.1	0.2	-			<.1	-	0.1	-	<.1	0.3	-	-	-	0.1	-	0.1	0.1
Dendropoma lituella	-	-	-	0.2	-	1.8	3.8	1.7	2.2	0.9	0.6	0.9			0.3	-	1.1	1.1	1.9	2.5	1.3	0.4	-	-	-	-	-
Diadumene spp	-	-	<.1	-	-	-	-	-	-	-	-	0.3			-	-	-	-	-	-	-	-	-	-	-	-	-
Diaulula sandiegensis	-	0.3	<.1	-	-	-	-	-	-	<.1	-	-			-	-	-	-	0.2	-	-	-	-	-	-	<.1	-
Diodora aspera	-	-	-	-	-	-	-	-	-	-	0.1	-			<.1	<.1	0.3	0.1	0.1	-	-	-	-	<.1	<.1	-	0.1
Diopatra ornata	-	-	-	-	-	-	-	0.1	-	<.1	0.1	0.3			0.1	0.1	-	0.2	-	-	-	-	-	-	<.1	-	-
Doriopsilla albopunctata	-	-	0.3	0.1	<.1	-	0.1	0.1	0.1	0.3	0.4	-			-	0.4	<.1	0.2	<.1	0.4	0.3	0.1	0.1	0.4	0.3	<.1	-
Epiactis prolifera	3.5	1.8	1.4	1.5	0.6	0.3	0.7	1.5	<.1	1.0	0.9	0.8			0.2	0.4	0.1	-	-	-	-	-	-	0.4	0.3	0.6	0.4
Eudistylia polymorpha	-	-	-	<.1	-	-	-	-	-	-	-	-			-	-	-	-	<.1	0.1	-	0.1	0.3	-	0.1	-	-
Eupentacta quinquesemita	-	-	-	-	0.2	-	<.1	<.1	-	<.1	0.2	<.1			-	0.1	-	-	<.1	-	-	-	0.1	-	-	-	-
Fissurella volcano	-	0.3	-	<.1	0.3	-	-	<.1	0.1	0.3	0.5	0.3			1.3	1.4	<.1	1.1	1.8	0.9	-	-	1.4	0.3	0.4	0.4	1.1
Flabellina trilineata	-	-	-	<.1	-	<.1	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Fusinus luteopictus	-	-	-	-	-	-	-	-	<.1	0.2	0.2	1.2			0.6	0.3	0.1	-	-	-	-	-	-	-	-	-	-
Geitodoris heathi	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	0.1	-	-
Grapsidae (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<.1	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 4 -4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Halcampa decemtentaculata	-	-	-	0.2	-	-	-	-	<1	0.1	-	-			<1	<1	-	-	-	-	-	-	-	-	-	-	-
Haliotis rufescens	-	-	<1	-	<1	-	<1	-	-	<1	-	<1			-	-	-	<1	<1	0.3	-	-	-	-	-	-	-
Haliotis spp	-	-	-	-	<1	-	-	<1	<1	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp (juv)	-	-	-	-	-	-	-	-	-	-	0.2	-			-	<1	-	-	0.1	-	0.3	-	-	-	0.1	-	-
Henricia leviuscula	-	-	0.4	<1	0.3	0.8	0.2	0.3	<.1	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Hermissenda crassicornis	-	-	-	-	-	<1	-	0.1	-	0.3	-	<1			0.3	0.2	-	<1	0.2	-	-	-	-	-	<1	-	0.3
Hippolytidae unid.	-	-	<1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Homalopoma spp	2.0	3.3	4.8	2.6	3.7	2.3	4.6	3.3	3.9	3.4	5.9	4.9			0.2	<1	-	<1	-	-	-	-	-	-	-	-	-
Idotea spp	-	-	-	<1	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ischnochitonidae	-	-	<1	0.2	0.2	0.3	-	0.2	0.2	0.2	0.1	1.0			0.2	0.2	<1	0.7	0.3	0.5	1.3	-	-	-	<1	-	-
Lacuna marmorata	-	-	0.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lacuna spp	-	-	-	-	0.3	0.2	0.2	0.4	0.9	1.0	0.1	0.8			1.2	0.6	0.4	0.4	1.2	0.4	0.3	-	-	-	-	-	-
Laila cockerelli	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lebbeus lagunae	-	-	-	-	-	0.2	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	0.1	-	-
Lepidozona spp	-	-	-	-	-	-	-	<.1	0.1	0.2	0.1	-			<1	-	-	-	-	-	-	0.1	-	<1	-	-	-
Leptasterias hexactis	0.8	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Leptasterias spp	-	-	0.6	0.3	1.1	1.5	1.3	1.4	0.1	0.5	0.3	<1			-	-	-	-	-	-	-	-	-	-	-	-	-
Leucandra heathi	0.5	-	-	0.2	-	0.2	0.2	-	0.2	1.0	0.8	0.8			-	-	-	-	-	-	-	-	-	-	-	-	-
Leucilla nuttingi	-	-	-	-	<1	0.2	0.2	-	-	0.3	0.6	0.4			-	-	-	0.3	-	-	-	-	-	-	<1	-	-
Lissothuria nutriens	-	-	<1	0.3	0.3	<1	<.1	0.4	<1	0.3	1.3	0.9			2.2	1.9	0.4	0.3	0.7	0.3	-	-	0.6	0.1	0.1	0.4	-
Lithopoma gibberosum	-	0.3	0.5	0.3	0.3	-	<1	0.1	0.2	-	<1	0.2			-	<1	-	-	-	-	0.5	-	-	-	<1	-	-
Lithopoma gibberosum (juv)	-	-	-	-	-	-	-	-	-	-	-	<1			-	-	-	0.2	<1	0.1	-	-	-	-	-	-	-
Lithopoma undosa	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
Lophopanopeus spp	-	-	0.3	0.2	0.2	0.3	0.1	-	<1	0.1	-	0.2			<1	0.3	0.1	0.1	0.1	-	-	0.1	-	-	<1	-	-
Lottia instabilis	-	-	0.2	-	-	-	0.2	0.3	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lottia ochracea	0.5	1.0	-	-	0.3	0.3	0.7	0.2	1.3	2.2	1.4	0.9			1.1	1.3	0.6	0.5	1.1	1.6	0.8	0.1	0.3	0.1	0.2	0.1	-
Loxorhynchus crispatus	-	-	-	-	-	-	<1	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	0.1	-
Loxorhynchus spp	-	-	-	-	-	-	-	-	-	<1	-	<1			-	-	<1	-	-	-	-	-	-	-	-	-	-
Majidae	-	-	<1	0.3	0.2	-	-	0.3	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	0.3
Megabalanus californicus	-	-	-	-	-	-	-	-	-	<1	-	-			0.3	-	-	-	-	-	-	-	-	-	-	-	-
Megathura crenulata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	0.1	-	-	-	<1	-
Micrura verrilli	-	-	-	-	-	-	-	<1	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Mimulus foliatus	-	-	-	<1	-	<1	<1	<1	-	-	-	-			-	-	0.1	-	-	-	-	-	-	-	-	-	-
Mitra idae	-	-	0.2	-	<1	0.3	<1	<1	<1	0.2	0.2	<1			-	0.1	-	-	<1	0.1	-	-	-	-	0.2	0.2	0.1
Modiolus spp	-	-	-	-	-	-	-	-	-	-	<1	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Mopalia muscosa	-	-	-	-	-	-	-	-	-	-	-	-			<1	<1	-	<1	-	-	-	-	-	-	-	-	-
Mopalia spp	-	-	-	<1	-	-	<.1	-	-	-	-	<1			<1	0.1	-	-	<1	-	-	-	-	-	-	-	-
Mytilidae	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	<1	-	-
Mixicola infundibulum	-	-	-	-	-	-	-	-	-	0.4	0.1	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Nassarius mendicus	-	-	-	-	-	-	-	-	-	<.1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nemertea unid	-	-	<1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nereididae unid	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	0.1	-	-	-	-	-	-	-
Nitidiscala spp	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nitidiscala/Opalia spp	-	-	<1	-	-	-	-	-	-	-	<1	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
Norrisia norrisi	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Norrisia norrisi (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-	-	-	-	-	-	-	-
Ocenebra foveolata	-	-	-	-	-	<1	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra interfossa	-	-	<1	-	-	-	<1	<1	-	-	-	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Ocenebra lurida	-	-	0.3	0.4	0.7	<1	0.4	0.2	0.5	0.3	0.4	0.2			-	0.1	<1	-	-	-	-	-	-	-	-	-	-
Ocenebra spp	-	0.5	<1	0.1	-	<1	-	0.1	<1	0.3	0.3	0.3			0.2	<.1	-	<1	-	-	-	-	-	-	-	-	-
Octopus spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-	-	-	-	-	-	-	-
Ophiactis simplex	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	4.4	3.3	12.3	15.4	17.9
Ophioplocus esmarki	-	-	<1	0.3	0.3	-	-	<1	-	-	-	-			-	0.1	0.2	0.2	<1	-	0.3	0.1	0.4	0.2	-	<1	-
Ophiothrix spiculata	-	-	-	0.4	0.3	0.2	<1	0.3	0.1	<1	0.6	0.9			1.1	2.3	2.0	2.8	5.0	2.8	1.0	1.0	3.9	0.6	0.4	0.6	0.6
Ophiuroidea unid.	-	-	-	-	-	-	-	0.3	-	-	-	-			0.1	-	0.1	-	-	-	-	-	0.1	<1	-	-	-
Pachycheles spp	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pagurus spp	1.3	-	1.9	5.4	9.1	13.7	9.9	7.1	7.5	7.9	8.1	4.8			1.3	6.6	3.3	0.9	2.9	1.1	0.5	0.8	0.8	0.1	-	0.5	0.1

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diabb Cove NDC 4 -4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Paracerceis cordata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	0.4	-	-	-	-
Parastichopus parvimensis	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	0.1	-	-	-	-
Paraxanthias taylori	-	-	-	-	-	-	-	-	-	-	0.1	<1			-	-	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid.	-	-	<.1	-	-	-	-	-	-	-	-	-			0.2	<1	-	<1	<.1	0.1	-	-	-	-	-	-	-
Pelecypoda unid. boring	0.5	5.8	5.9	8.3	8.9	3.2	4.1	5.8	5.6	7.1	4.9	5.8			9.4	7.5	3.1	8.1	3.9	10.9	13.3	1.8	3.4	1.0	1.5	4.4	2.3
Petrolisthes spp	-	-	-	<.1	-	<.1	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
Phidiana hiltoni	-	-	-	-	-	-	-	-	<.1	0.1	0.1	0.2			0.1	0.2	0.4	0.4	0.3	0.4	-	1.0	0.1	-	-	<1	0.3
Phragmatopoma californica	-	0.8	16.2	35.1	19.5	13.2	19.9	66.8	55.7	131.5	57.3	8.9			1.7	3.0	2.1	6.3	6.8	13.5	40.0	35.8	71.6	268.3	190.0	145.8	64.0
Phyllochaetopterus prolifica	-	1.5	0.3	0.8	1.1	1.1	2.2	2.4	2.8	2.3	1.8	1.7			1.8	0.4	0.6	1.8	0.9	1.5	1.0	0.6	0.6	1.1	1.1	-	0.3
Pisaster giganteus	-	-	-	-	-	-	-	-	-	-	-	-			-	0.1	0.1	-	0.2	0.3	-	0.1	-	-	<1	-	-
Pisaster spp (juv)	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Pisaster/Henricia (juv)	-	-	0.2	1.2	1.6	1.4	1.6	1.3	-	0.6	-	<1			<.1	-	-	-	-	-	-	-	-	-	-	-	-
Pista spp	-	-	0.2	0.1	-	0.3	<1	<.1	0.1	0.1	0.1	-			-	<1	0.3	0.2	0.3	1.8	2.8	0.8	-	0.8	0.4	-	-
Pista/Streblosoma spp	0.3	1.0	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Placiphorella velata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-	-	-	-	-	-	-	-
Platyhelminthes unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	0.3	-	-	-	-	-	-
Pododesmus cepio	-	-	-	-	-	-	-	-	-	<1	0.3	1.2			1.3	1.1	1.3	0.1	-	-	0.3	-	-	-	-	0.1	-
Polynoidae	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Polyplacophora unid a	-	-	0.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudomelatoma torosa	0.3	0.3	<1	0.2	0.3	0.7	0.9	1.3	0.5	1.3	1.5	1.0			-	0.3	0.2	-	-	-	-	0.1	-	-	-	-	-
Psolus chitonoides	-	-	-	-	-	-	0.2	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pugettia producta	0.3	-	-	0.2	-	-	<.1	0.1	0.1	0.1	<1	0.2			0.4	<1	0.4	<.1	-	-	-	-	-	-	0.1	-	-
Pugettia richii	-	-	0.2	1.5	1.9	3.0	1.4	1.4	0.8	1.0	0.8	0.5			1.0	0.9	1.5	0.9	1.0	0.5	0.3	1.6	0.5	0.2	0.8	0.1	-
Pugettia spp	-	-	0.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnopodia helianthoides	-	-	<.1	-	<.1	-	-	<1	<1	<.1	<1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pyura haustor	-	-	-	-	<.1	0.2	0.1	0.1	0.2	0.1	0.2	<1			<1	<.1	-	-	-	-	-	-	-	-	<.1	-	-
Rostanga pulchra	-	-	-	-	-	-	-	<1	-	-	-	0.2			<.1	-	-	-	-	-	-	-	-	-	-	-	-
Sabellidae	0.3	-	-	<1	-	-	<.1	-	-	-	0.2	<1			0.4	<.1	-	-	0.4	-	-	-	-	-	<1	-	-
Scyra acutifrons	-	-	-	-	-	-	-	-	-	-	-	-			0.2	<.1	-	<1	-	-	-	-	-	-	-	-	-
Searlesia dira	-	0.5	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Serpula vermicularis	-	-	-	<.1	-	-	-	0.1	-	<1	<.1	-			-	0.1	<1	0.3	0.1	0.1	-	-	0.1	<1	-	<.1	-
Serpulidae unid.	-	0.3	0.3	-	-	<1	-	<1	-	0.1	<1	0.3			<1	0.1	<1	0.3	0.6	0.5	0.5	-	2.3	0.1	<.1	0.9	0.1
Serpulorbis squamigerus	0.3	-	-	0.4	0.5	0.3	0.3	0.3	0.3	0.9	1.7	2.0			1.4	1.5	1.3	1.1	0.7	0.4	0.3	0.4	0.6	0.9	0.5	0.8	0.5
Sipuncula unid.	-	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Sphaeromatidae unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<.1	-	<.1	0.4	-	-	-	-	-	-	-
Spirobranchus spinosus	-	-	-	-	-	<1	<1	-	-	0.2	-	0.3			1.8	2.0	2.1	2.6	2.4	2.4	1.8	0.3	2.3	1.6	2.1	2.6	0.9
Strongylocentrotus franciscanus	-	-	-	-	-	-	-	-	-	-	0.3	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Strongylocentrotus purpuratus	-	-	-	-	-	0.2	0.2	-	-	<1	-	-			1.3	2.1	1.5	1.9	2.1	3.3	2.3	0.5	2.0	7.6	7.4	8.3	7.8
Strongylocentrotus spp	-	-	-	-	-	0.3	<1	-	-	0.1	0.3	0.8			1.1	1.1	0.8	0.8	1.4	0.4	-	-	-	-	0.9	-	-
Styela montereyensis	-	-	0.1	-	-	-	-	-	-	<1	-	-			-	-	-	-	<.1	-	-	-	-	-	-	-	-
Tegula brunnea	1.0	5.5	4.5	3.6	3.5	3.6	3.9	6.9	7.6	6.0	5.1	8.3			0.9	1.8	3.1	0.4	0.6	0.1	-	0.8	0.1	0.1	0.2	1.1	-
Tegula montereyi	0.3	-	<.1	<1	-	-	<.1	-	<1	-	-	0.5			-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula pulligo	-	-	<1	-	-	-	-	-	-	0.2	-	0.2			-	<1	0.1	<1	-	-	-	-	-	-	-	-	-
Tethya aurantia	-	0.3	<.1	<1	-	-	-	-	0.1	0.2	0.2	0.3			0.2	0.1	-	0.2	0.1	-	-	-	-	-	-	-	-
Tetraclita rubescens	-	-	0.6	-	-	-	-	-	-	-	1.7	0.2			2.3	0.6	-	1.1	0.1	1.1	-	2.4	1.5	-	-	0.3	1.6
Themiste pyroides	-	1.3	0.8	1.4	0.4	0.9	0.5	1.4	1.6	1.9	0.9	1.2			0.3	0.1	<.1	0.3	-	0.3	-	-	0.1	<.1	<.1	-	-
Tonicella lineata	0.5	0.3	0.6	0.6	0.7	0.4	0.6	0.3	1.3	0.9	1.1	0.3			0.4	0.4	0.1	0.3	0.2	0.4	0.3	-	-	-	0.2	0.3	-
Tricolia pulloides	-	-	<.1	<1	0.3	0.6	0.3	0.6	1.6	1.8	-	1.0			1.2	0.6	0.4	<.1	0.2	-	-	-	-	-	0.1	-	-
Tricolia spp.	-	-	-	-	-	-	-	-	-	-	-	-			0.1	-	-	-	-	-	-	-	-	-	-	-	-
Triopha catalinae	-	-	-	-	-	-	-	<.1	-	-	-	-			-	-	-	-	-	0.1	-	-	-	-	-	-	-
Triopha maculata	-	-	-	-	-	-	<.1	-	<1	<1	<1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Tubulanus polymorphus	-	-	-	-	-	-	-	<1	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Tubulanus sexlineatus	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
tunicate, solitary unid.	-	-	-	<.1	-	-	-	0.1	<1	<1	-	0.5			0.3	0.1	-	<.1	<1	0.1	-	0.1	-	-	<.1	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) North Diablo Cove NDC 4-4m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of 1" Squares																												
Abiet /Sertularella/Sertularia spp		-	-	< 1	-	-	-	-	-	< 1		-	-			-	-	-	-	-	-	-	-	-	-	-	< 1	-
Acarnus erithacus		-	-	-	-	-	-	-	< 1	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid (encrusting)		1 3	0 8	0 2	1 1	0 7	0 9	1 2	1 3	1 5	1 3	1 5	2 2			2 0	1 6	1 5	1 0	0 6	1 1	4 3	1 3	2 0	0 1	< 1	< 1	-
Bryozoa, unid (erect)		-	-	-	-	-	-	-	-	-	< 1	< 1	-			-	-	-	-	-	-	-	-	-	-	0 1	-	-
Bryozoa, unid (foliose)		-	-	-	-	-	-	-	< 1	-	0 2	< 1	< 1			< 1	-	-	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp		3 8	3 0	0 9	3 5	2 2	3 1	2 6	0 7	1 1	0 8	0 6	0 8			0 5	0 3	0 6	0 9	0 3	< 1	0 3	0 5	-	< 1	< 1	< 1	< 1
Dodecaceria fewkesi		-	0 5	-	-	-	-	-	-	-	-	-	-			-	0 7	-	< 1	< 1	-	< 1	-	-	-	-	-	
Entoprocta unid a		-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	0 2	-
Eurystomella bilabiata		-	-	-	-	-	-	-	-	-	< 1	< 1	-			-	< 1	< 1	-	-	-	-	0 1	-	-	-	-	-
Hydroida		-	-	0 2	-	-	-	0 1	0 1	-	< 1	0 1	< 1			-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1
Hymenamphiastra cyanocrypta		-	-	-	-	-	-	-	-	-	< 1	0 2	< 1			1 1	1 3	0 9	1 1	0 4	1 0	2 0	1 1	-	-	-	-	-
Leucosolenia spp		-	-	-	-	< 1	-	-	-	-		-	-			-	-	-	-	-	-	-	-	-	-	-		-
Plumularia spp		-	0 3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera unid (encrusting)		-	0 5	0 5	1 0	1 5	1 7	1 6	0 5	1 1	0 8	1 3	0 8			1 9	1 6	1 2	0 9	0 9	0 4	0 5	1 1	0 9	0 1	0 4	0 1	< 1
Porifera unid b (yellow)		0 8	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera unid c (orange)		0 3	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Salmacina tribranchiata		-	-	0 1	1 2	0 5	0 7	0 6	0 8	1 0	1 2	0 6	0 8			0 1	0 2	< 1	0 1	0 1	0 1	0 3	0 1	-	< 1	-	-	
Spirorbis spp		-	0 3	-	0 5	0 7	0 7	1 6	1 1	1 4	1 3	1 2	1 1			0 6	0 3	0 3	< 1	< 1	< 1	< 1	< 1	0 5	< 1	< 1	< 1	-
Tricellaria spp		-	0 3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid		1 3	7 8	2 3	2 3	1 8	0 9	1 1	0 8	1 1	1 5	1 1	0 5			0 9	1 0	0 6	0 1	0 8	0 3	0 3	0 4	1 3	0 2	< 1	< 1	0 1

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 2-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Acanthodoris lutea	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acmaea mitra	0.3	0.5	-	0.2	0.1	<.1	0.7	0.1	2.4	1.9	0.3	2.7	2.9	2.8	1.9	1.1	1.0	1.1	1.2	1.5	0.5	0.9	-	0.1	0.3	0.3	-
Acmaeid unid. a	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alia carinata	-	4.9	5.0	1.9	1.7	1.6	1.0	2.6	0.5	1.4	4.0	1.5	1.3	1.8	1.1	2.4	10.4	0.9	0.3	-	4.3	0.6	-	-	0.1	1.0	0.3
Alia spp.	1.8	-	-	1.9	<.1	-	0.6	0.8	1.3	3.7	0.6	1.6	0.3	0.4	0.3	0.5	-	0.3	0.6	0.3	0.1	-	-	-	0.1	0.4	0.1
Alpheus clamator	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Amphissa spp	2.0	-	0.2	1.0	0.5	0.3	0.6	0.4	-	0.7	0.4	0.3	-	0.5	1.4	2.1	1.6	1.4	0.6	0.4	-	-	-	0.1	<.1	-	-
Amphissa versicolor	-	2.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisodoris nobilis	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	<1	-	-	-	-	-	0.1	-	-	-	-	-
Anthopleura artemisia	-	-	-	<1	<.1	0.2	0.1	<1	0.2	0.3	0.1	0.1	<1	-	-	-	-	0.1	0.3	-	-	-	-	0.1	-	-	-
Anthopleura elegantissima	-	<1	-	<1	0.2	-	<1	0.1	<.1	<1	0.2	0.1	-	<1	0.1	-	0.2	0.2	-	-	-	-	-	-	0.2	<1	0.1
Anthozoa unid.	1.0	-	-	0.5	0.4	-	-	-	0.2	0.3	-	-	0.1	<.1	-	-	-	<.1	-	0.1	-	-	-	<.1	-	<1	-
Aplysia californica	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	0.2	<1	-	-	-	0.1	-	-	-	-
Aplysia californica egg mass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	0.3	0.6	0.1	-	-	-	-	-	-	-	-
Aplysia vaccaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Asterina miniata	0.3	0.2	0.1	0.2	0.2	0.4	0.2	0.1	<1	<1	-	-	-	0.2	<.1	0.2	0.3	0.3	<.1	0.1	-	-	-	-	<1	-	-
Balanophyllia elegans	1.0	0.4	0.2	0.4	0.6	0.1	0.3	0.5	0.5	1.3	0.3	-	<1	0.1	0.1	<1	-	-	-	0.3	-	-	0.4	-	-	-	-
Balanus aquila	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Balanus spp	-	-	-	-	-	-	-	-	-	0.3	-	<1	0.8	-	-	2.7	-	-	-	-	0.1	-	-	-	-	-	-
Balanus/Tetraclita spp	-	-	-	-	-	-	-	-	<.1	-	0.3	0.5	4.2	4.7	10.6	2.4	3.1	0.3	<1	0.4	0.1	2.0	-	0.3	0.4	3.6	-
Barnacles (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	3.1	-	-	-	-	-	-	-	-	-	-	0.1	-
Berthella californica	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bittium eschrichtii	-	0.2	<.1	0.7	-	0.6	<.1	-	0.5	0.2	-	-	-	0.2	0.7	1.4	0.2	1.1	1.3	-	-	-	-	-	-	-	-
Bittium spp	1.3	-	-	-	0.1	-	-	-	-	0.5	0.3	0.4	0.2	0.7	0.3	0.8	3.5	0.3	-	-	-	-	-	-	-	-	-
Boltenia villosa	-	-	-	-	<1	-	-	-	-	-	-	-	0.3	0.2	-	0.1	-	-	-	0.4	0.3	0.3	-	0.1	-	-	-
Brachyura unid. b (juv.)	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cactosoma arenaria	-	-	<.1	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadlina flavomaculata	-	-	-	-	<1	-	-	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadlina modesta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Calliostoma annulatum	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma ligatum	0.3	<.1	<1	<.1	<.1	-	<.1	0.2	-	0.8	<1	-	0.1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius	-	<1	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius (juv.)	-	-	-	<1	-	<1	<1	<.1	-	<.1	<1	<.1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-
Cancer productus (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer spp	-	-	-	0.4	<.1	<.1	<1	<.1	-	<1	-	-	-	0.3	0.3	<1	-	<.1	-	-	-	-	-	-	0.1	-	-
Ceratostoma foliatum	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cirratulidae/Terebellidae unid.	-	-	-	-	<1	-	-	-	-	-	0.2	0.3	0.5	0.1	0.1	0.4	-	-	-	0.4	-	-	-	-	-	-	-
Clavelina huntsmani	-	-	-	-	-	-	-	-	0.1	-	0.4	0.5	1.1	5.0	-	0.1	0.1	-	0.2	1.1	-	-	-	-	-	-	-
Clavularia spp	-	-	-	-	-	-	<.1	0.7	0.4	0.9	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-
Cnemidocarpa finmarkiensis	-	<.1	0.2	-	-	-	-	-	-	-	-	-	-	<1	0.3	<.1	-	-	-	-	-	-	-	-	-	-	-
Conus californicus	-	<.1	0.2	0.2	<1	0.1	-	<1	<.1	0.2	0.3	0.1	<1	-	-	-	<1	-	-	-	-	-	-	-	-	<.1	-
Crangon spp	-	-	-	-	-	-	-	<.1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
Crangon stylirostris	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crassedoma giganteum	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-
Crepidula spp	0.3	-	1.8	1.5	1.8	0.6	0.9	1.0	0.5	0.8	0.7	0.8	0.6	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Cryptochiton stelleri	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	0.1	-	-	-	-	-	-	-
Cryptolithodes sitchensis	-	-	-	0.2	0.1	0.2	0.3	0.1	<1	<1	-	0.2	-	<.1	-	-	-	0.3	-	0.1	-	-	-	-	-	<1	-
Cucumaria spp	-	-	<1	<.1	-	-	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-
Dendrodoris spp	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Dendropoma lituella	-	-	-	0.2	0.9	-	0.4	<.1	0.3	1.4	<1	0.1	1.3	2.1	4.1	0.2	-	-	1.5	-	-	-	-	0.3	-	-	-
Diadumene spp	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diaulula sandiegensis	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diodora aspera	-	-	-	-	-	<1	-	-	-	<1	-	-	-	<1	-	-	<.1	-	-	-	-	-	-	-	<1	-	-
Diopatra ornata	-	0.9	<.1	-	<.1	0.1	<1	-	<.1	<.1	0.1	0.4	0.1	0.3	0.2	0.4	<1	0.3	0.8	-	0.5	0.3	0.1	0.1	0.2	-	-
Doridacea unid	-	-	-	<1	<.1	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 2-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Doriopsilla albopunctata	-	-	0.2	< 1	< 1	-	-	-	0.2	0.3	< 1	< 1	-	< 1	-	< 1	-	-	< 1	0.3	-	0.1	-	< 1	-	-	-
Epiactis prolifera	0.3	0.2	0.5	0.5	0.2	0.3	0.1	0.1	0.1	< 1	-	0.2	< 1	-	0.2	-	-	-	< 1	-	-	-	-	-	-	-	-
Erato vitellina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-
Eudistylia polymorpha	-	-	-	< 1	-	-	-	-	< 1	< 1	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-
Eupentacta quinquesemita	-	-	-	-	-	-	< 1	-	-	-	< 1	< 1	-	-	< 1	< 1	-	0.1	-	-	-	0.1	-	-	-	-	-
Fissurella volcano	-	-	-	<.1	-	-	0.1	-	< 1	0.2	< 1	-	-	0.2	0.1	0.3	< 1	< 1	0.2	0.3	-	0.1	0.5	< 1	0.3	0.3	0.4
Flabellina trilineata	-	-	-	-	-	< 1	-	0.1	-	-	0.1	-	-	< 1	-	-	-	-	< 1	-	-	-	-	-	< 1	< 1	-
Fusinus luteopictus	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastropoda, neopic unid a	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glans subquadrata	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Halcampa decemtentaculata	-	-	-	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	-	-	< 1	-	-	0.1	0.1	-	-	< 1	-	-	-
Haliotis rufescens	-	-	-	-	-	-	< 1	-	< 1	0.1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	< 1	-	-	-
Haliotis spp	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp (juv)	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Henricia leviuscula	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hermissenda crassicornis	-	-	-	-	-	-	-	-	-	< 1	-	-	< 1	-	< 1	< 1	-	-	-	0.1	-	-	-	< 1	-	-	-
Hiatella arctica	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Hiatella spp	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hipponix spp	-	-	-	-	-	-	< 1	0.4	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Holothuroidea unid a	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Homalopoma spp	0.3	0.8	0.9	0.5	1.0	0.5	0.3	0.7	1.0	2.0	1.9	3.6	3.3	2.7	0.4	< 1	0.4	-	< 1	0.3	-	-	-	-	-	-	-
Hopkinsia rosacea	-	-	< 1	<.1	-	-	-	0.2	0.5	< 1	-	0.1	0.1	-	-	-	-	< 1	-	-	-	0.1	-	-	-	-	-
Idotea spp	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ischnochitonidae	-	0.2	< 1	0.2	0.2	0.2	0.3	0.4	0.8	0.9	0.1	0.4	0.4	0.3	0.2	0.8	-	0.4	0.9	0.8	0.3	-	0.1	< 1	-	< 1	-
Isopoda unid	-	-	-	-	-	-	-	-	-	-	< 1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Lacuna spp	0.5	-	-	0.2	-	0.1	-	0.5	0.5	0.3	0.4	0.2	0.1	0.8	0.4	1.0	0.6	0.2	0.3	0.1	-	-	-	-	-	-	-
Laila cockerelli	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lamellaria diegoensis	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Lebbeus lagunae	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lepidozona spp	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	< 1	-	-
Leptasterias hexactis	1.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptasterias spp	-	1.3	0.6	0.4	0.5	0.4	0.4	< 1	-	< 1	0.2	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Leucandra heathi	-	-	-	1.0	0.1	-	-	-	0.1	0.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leucilla nuttingi	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	-
Lissothuria nutriens	0.3	-	-	< 1	< 1	-	-	< 1	-	<.1	-	-	0.2	< 1	0.3	0.4	0.3	0.3	< 1	-	-	-	-	-	-	-	-
Lithopoma gibberosum	-	0.2	0.2	< 1	< 1	0.1	<.1	-	< 1	0.4	< 1	0.2	0.4	< 1	0.1	<.1	-	-	0.3	0.1	-	-	-	-	-	-	-
Lithopoma gibberosum (juv)	-	-	-	-	-	-	-	-	-	-	-	< 1	-	< 1	-	-	< 1	0.3	< 1	-	-	-	-	< 1	-	-	-
Lophopanopeus spp	-	0.2	< 1	0.3	0.3	0.2	0.6	0.4	< 1	-	0.3	< 1	0.1	0.1	-	0.2	-	< 1	0.1	-	0.1	-	-	-	-	-	-
Lottia asmi	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lottia instabilis	-	-	0.7	1.1	0.8	1.6	0.8	1.2	0.6	0.5	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lottia ochracea	0.3	0.3	1.0	1.7	0.8	0.8	0.9	0.3	2.3	2.9	0.2	2.7	2.3	2.7	1.0	1.4	0.3	0.9	0.8	0.3	0.1	-	0.3	< 1	-	0.2	0.3
Lottia spp	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loxorhynchus crispatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-	< 1	-
Majidae	3.3	0.8	0.5	0.2	< 1	-	0.4	0.2	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Megabalanus californicus	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
Melanella thersites	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-
Melibe leonina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Micrura verrilli	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
Mimulus foliatus	-	-	-	< 1	< 1	0.2	< 1	-	-	< 1	-	-	< 1	-	< 1	-	-	-	< 1	-	-	-	-	-	< 1	-	-
Mitra idae	0.3	-	0.3	0.2	0.2	< 1	0.1	0.1	0.2	< 1	0.1	0.3	0.3	< 1	< 1	-	0.3	< 1	<.1	0.1	0.1	-	0.3	< 1	0.7	0.4	0.1
Modiolus spp	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	< 1	-
Mopalia lignosa	-	-	-	-	-	-	-	0.3	-	-	< 1	< 1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mopalia muscosa	-	-	-	-	-	-	0.1	-	-	<.1	-	-	-	-	-	< 1	-	0.2	0.1	0.1	-	-	-	-	< 1	-	-
Mopalia spp	-	-	-	< 1	< 1	< 1	-	-	-	-	< 1	-	-	< 1	-	0.3	-	-	0.1	-	-	-	-	-	0.2	-	-
Mytilidae	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myxicola infundibulum	-	-	-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	-	-	-	-	-	-	0.3	-	< 1	-	-	-
Nassarius mendicus	-	-	< 1	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) SouthDiablo Cove SDC 2 -3m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																												
Natantia unid.		-	-	-	-	-	-	-	-	<.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nemertea unid.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Nereididae unid.		-	-	-	-	-	-	-	-	-	0.1	-	-	<.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitidiscala spp		-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Nitidiscala/Opalia spp		-	-	-	0.1	<.1	-	-	-	-	-	-	<.1	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Norrisia norrisi		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Ocenebra circumtexta		-	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra foveolata		-	-	-	-	-	-	-	-	-	0.2	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra interfossa		-	-	0.1	-	0.1	0.1	0.1	-	-	-	0.2	-	-	-	0.5	<.1	-	-	-	-	-	-	-	-	-	-	-
Ocenebra lurida		-	-	-	-	<.1	-	-	-	<.1	-	-	<.1	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-
Ocenebra spp.		0.3	-	0.2	0.4	<.1	0.1	<.1	0.3	0.1	0.2	0.2	-	0.1	0.2	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Octopus spp		-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-
Olivella biplicata		-	-	-	-	-	-	-	0.1	<.1	<.1	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	11.4	15.9	17.7	38.1
Ophiactis simplex		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophioplocus esmarki		-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Ophiothrix spiculata		-	-	0.1	0.1	0.2	-	0.3	-	0.2	1.0	0.2	-	0.7	<.1	0.5	3.1	1.2	2.9	4.8	2.6	0.3	1.6	4.0	0.6	4.2	2.3	3.1
Ophiuroidea unid.		-	0.3	-	-	<.1	-	<.1	-	-	-	<.1	-	0.2	0.1	-	-	-	0.5	0.6	-	-	0.5	-	0.4	-	-	-
Pagurus spp		4.3	13.3	3.6	5.8	11.5	16.8	15.3	12.1	8.4	14.0	4.1	7.6	7.8	6.6	8.9	6.0	9.0	5.8	4.3	1.4	4.4	0.8	-	-	0.1	2.7	0.1
Parastichopus parvimensis		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Pelecypoda unid.		-	-	-	-	-	-	-	-	0.2	-	-	-	<.1	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid. boring		2.8	2.1	5.7	5.6	6.7	4.6	4.9	7.9	12.5	15.5	5.1	12.4	16.4	15.1	18.4	15.4	7.5	13.3	12.4	5.6	2.5	7.4	2.0	1.3	11.5	7.4	6.6
Phascolosoma agassizii		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Phidiana hiltoni		-	-	-	<.1	-	-	-	<.1	-	-	-	-	<.1	0.4	0.3	-	0.2	-	-	0.3	0.1	0.1	-	-	-	<.1	-
Phragmatopoma californica		-	<.1	0.6	0.5	<.1	0.1	0.3	1.3	0.9	<.1	0.4	2.5	4.5	2.8	1.4	1.1	1.6	1.0	2.0	0.6	3.8	3.1	6.6	53.4	27.8	22.3	33.4
Phyllochaetopterus prolifica		-	0.5	2.2	2.2	3.2	0.7	1.4	2.4	2.8	3	0.8	4.4	6.1	9.2	6.4	9.0	3.7	2.8	2.8	1.3	0.9	1.8	2.3	0.7	3.4	2.2	1.3
Pisaster giganteus		-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	0.1	0.2	<.1	<.1	-	-	0.1	-	-	<.1	-	0.1
Pisaster/Henricia (juv.)		0.3	<.1	0.2	<.1	<.1	<.1	<.1	<.1	0.1	0.2	-	0.2	-	<.1	<.1	-	<.1	-	-	-	-	-	-	-	-	-	-
Pista spp		-	-	0.4	0.9	0.9	0.2	0.7	0.3	0.4	0.8	0.3	0.2	-	0.3	0.6	0.4	0.7	1.3	2.7	5.0	4.3	1.6	1.3	4.2	3.4	4.3	4.6
Pista/Streblosoma spp		0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Platyhelminthes unid		-	-	-	-	-	-	-	-	<.1	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pododesmus cepio		-	-	-	-	0.1	-	0.1	0.3	1.4	1.3	0.2	0.4	0.3	1.0	1.5	0.5	<.1	0.3	0.2	-	-	-	-	-	-	-	-
Polychaeta unid.		-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	<.1	-	-	-	-	-	-	-	<.1	-
Polynoidae		-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Pseudomelatoma torosa		-	<.1	0.4	0.7	1.0	0.6	1.2	0.8	0.9	1.0	0.5	0.4	0.6	0.3	0.1	0.1	-	-	-	-	-	0.1	-	-	-	<.1	-
Pteropurpura festiva		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Pugettia producta		-	-	0.1	0.2	0.4	0.3	0.8	0.1	0.5	0.3	0.3	0.1	<.1	0.8	0.3	0.2	<.1	<.1	-	-	-	-	-	-	-	-	-
Pugettia richii		-	-	0.4	2.1	2.3	1.4	3.4	1.2	0.7	1.3	0.6	0.7	0.9	1.6	1.0	1.5	0.8	0.6	0.7	0.1	-	-	-	-	0.4	0.1	-
Pugettia spp		0.8	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnogonida unid		-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	<.1	<.1	-	-	-	-	-	-	-	0.1	-	-	-
Pycnopodia helianthoides		-	-	-	0.2	0.3	-	-	<.1	-	-	-	-	-	0.1	-	<.1	-	0.1	-	-	-	0.1	-	-	-	<.1	0.1
Pyura haustor		-	-	-	<.1	<.1	-	-	-	-	0.1	-	-	0.1	0.3	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-
Rictaxis punctocaelatus		-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	0.3	-	<.1	-	0.2	-
Rostanga pulchra		-	-	-	-	-	-	<.1	-	0.3	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sabellidae		0.5	<.1	0.1	-	-	-	-	-	0.5	0.6	<.1	<.1	0.3	0.3	0.6	0.2	0.1	<.1	0.3	0.6	-	0.1	-	1.2	<.1	-	-
Scyra acutifrons		-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Serpula vermicularis		-	-	<.1	-	-	-	-	-	-	-	-	0.1	-	0.5	0.4	0.3	0.3	-	0.3	0.4	0.3	1.0	0.5	-	0.2	0.1	-
Serpulidae unid.		0.5	<.1	0.4	0.1	0.2	0.1	0.2	<.1	0.5	0.2	0.2	0.4	0.3	0.7	0.4	0.3	-	0.3	1.0	0.6	0.6	2.1	-	0.2	0.7	0.4	0.3
Serpulorbis squamigerus		-	<.1	<.1	0.3	0.1	0.1	0.2	0.3	0.4	1.2	1.6	1.5	1.3	1.2	1.2	1.0	1.1	0.5	0.4	0.3	0.3	0.3	0.5	1.2	1.3	1.2	1.1
Sipuncula unid		0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sphaeromatidae unid		-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Spirobranchus spinosus		-	-	-	<.1	-	-	-	-	-	-	-	0.2	0.6	0.7	0.4	0.6	0.6	0.7	0.4	0.5	-	0.5	0.4	0.4	0.3	0.5	-
Stenoplax heathiana		-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	<.1	-	-	<.1	-	-	-	-	-	-	-	-
Stenoplax spp		-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Strongylocentrotus franciscanus		-	-	-	-	-	-	-	-	-	-	-	<.1	<.1	<.1	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Strongylocentrotus purpuratus		-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	<.1	0.4	0.2	0.1	0.5	-	0.1	-	1.4	0.9	2.5	0.8	-
Strongylocentrotus spp.		-	0.2	0.3	<.1	0.2	0.1	<.1	<.1	0.3	0.3	0.1	0.6	0.3	0.5	0.6	0.4	0.3	1	0.2	0.8	0.3	0.1	0.1	-	-	<.1	-
Styela montereyensis		-	-	0.1	0.2	0.2	-	-	-	-	<.1	-	-	-	0.2	0.3	-	0.1	-	-	-	-	0.1	-	<.1	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 2-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Counted Regardless of Size																											
Tectura persona	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula brunnea	1.8	2.6	7.8	7.4	5.5	2.6	1.3	2.4	2.3	2.4	2.8	5.0	2.9	2.7	0.7	0.9	9.3	1.2	0.8	-	1.5	0.3	-	-	<1	-	0.1
Tegula montereyi	-	-	0.2	<.1	0.3	-	-	0.1	-	-	-	0.3	0.1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula pulligo	0.3	-	<1	<1	<1	-	-	-	0.1	<1	<1	<1	<1	-	0.1	0.1	<1	<1	-	-	-	-	-	-	-	-	-
Terebellidae unid	0.8	-	0.1	<1	0.1	<1	0.1	-	<1	0.4	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Tetraclita rubescens	-	-	-	-	-	-	-	-	<1	0.4	-	4.9	2.5	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Themiste pyroides	-	1.8	3.4	2.2	2.2	1.7	1.9	2.6	2.2	2.0	1.7	1.2	1.4	0.8	0.8	1.3	0.4	0.1	0.4	-	-	-	-	-	1.6	0.6	0.9
Tonicella lineata	-	<1	<1	0.2	<1	<1	0.2	<1	0.4	0.9	0.6	0.6	1.3	1.7	0.3	0.3	0.3	-	0.3	0.4	-	-	-	-	-	-	-
Tricolia pulloides	-	0.3	<1	0.2	<1	0.3	0.3	-	0.7	0.9	0.1	0.7	0.4	0.6	0.4	0.8	0.8	<1	-	0.3	-	-	-	-	-	-	-
Tricolia spp	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Triopha catalinae	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Triopha maculata	-	-	-	-	-	<1	-	-	-	0.4	<1	<1	0.3	0.1	0.1	<1	<1	-	-	-	-	-	-	-	-	-	-
Tritonia festiva	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Tubulanus polymorphus	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tubulanus sexlineatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Urticina coriacea	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
Urticina crassicornis	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urticina spp	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Williamia peltoides	-	-	-	-	-	-	-	-	-	-	-	-	<1	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Xanthidae unid.	0.3	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, solitary unid	-	<1	-	<1	<1	-	-	-	-	0.4	-	0.1	0.5	0.5	0.3	0.4	0.3	-	-	-	-	-	-	-	-	0.1	-
Coverage Based on # of 1" Squares																											
Abiet./Sertularella/Sertularia spp	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aglaophenia spp	-	-	-	-	-	-	-	-	-	-	-	0.1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid. (encrusting)	5	1.4	0.7	1.3	1.8	1.6	2.9	2.2	2.3	1.1	0.3	1.0	2.0	1.4	0.8	0.4	0.7	0.3	0.1	<1	0.9	1.0	0.1	0.1	<1	0.2	0.1
Bryozoa, unid (erect)	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid (foliose)	-	-	0.8	<1	<1	0.2	<1	0.2	<1	<.1	<1	<1	<1	<1	-	-	-	<1	<1	-	-	-	-	-	-	<1	<1
Chthamalus fissus	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp	1.8	0.3	0.3	0.3	<1	-	-	-	<1	0.4	<1	<1	0.8	1.1	0.5	0.8	0.6	<1	0.1	<1	<1	-	-	-	-	-	-
Euherdmania claviformis	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eurystomella bilabiata	-	-	0.2	0.2	-	-	-	-	-	0.3	<1	0.1	0.4	-	-	<1	-	-	-	-	-	0.3	-	-	-	-	-
Hydroida	-	-	-	<1	-	-	-	-	<1	<1	-	-	<.1	-	-	-	-	-	<1	-	-	-	-	-	<1	<1	-
Hymenamphiastra cyanocrypta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-
Leucosolenia spp	-	-	-	<.1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera unid. (encrusting)	-	0.4	0.7	0.8	0.9	0.7	0.5	0.7	0.7	0.5	0.2	0.3	0.1	0.3	0.3	<1	0.3	<1	<1	<1	<.1	0.3	<1	<1	0.3	<1	-
Porifera unid. c (orange)	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salmacina tribranchiata	-	-	-	<1	-	-	-	-	-	-	-	-	-	<1	-	-	<.1	-	-	-	-	0.1	-	-	-	<1	-
Spirorbis spp	-	2.1	0.4	0.5	0.4	0.4	1.1	1.4	0.6	0.3	<1	0.4	0.7	0.9	1.3	0.3	0.4	0.3	0.1	<.1	0.4	0.4	<1	<1	<1	0.2	<1
Tricellaria spp	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, colonial unid a (white)	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, colonial unid b (yellow)	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, colonial unid. c (orange)	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid	-	1.9	1.7	2.6	2.9	1.9	2.0	1.4	1.3	1.5	0.4	0.5	0.6	0.9	0.6	0.3	0.4	0.3	0.3	<1	0.1	0.1	0.3	<1	<1	-	-

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 3-4m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Acanthodoris lutea	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	01	-	-	-	-	-	-	-
Acmaea mitra	10	12	07	06	1.3	10	24	12	39	35	15	26			11	19	15	32	19	21	10	09	04	01	03	06	08
Aegires albopunctatus	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	<.1	-	-	-	-	-	-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	-	<.1	-	<1			-	-	-	-	-	-	-	-	-	-	-	-	-
Alia carinata	-	-	06	<.1	04	03	06	1.1	02	30	07	24			07	07	<1	12	08	-	03	01	-	-	<1	03	-
Alia spp	05	-	01	<1	-	-	03	03	05	03	18	02			-	04	02	-	02	03	-	-	-	-	-	-	-
Alpheus clamator	-	-	-	-	-	-	-	02	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Alpheus spp	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Amphissa spp	03	02	-	01	03	09	07	12	06	14	19	20			16	16	09	05	08	05	-	-	-	01	01	03	01
Amphissa versicolor	-	-	05	<1	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Anisodoris nobilis	-	-	<.1	-	-	-	<1	-	-	02	-	-			<1	<1	-	<.1	-	-	-	01	-	<1	<1	-	-
Anthopleura artemisia	-	-	-	-	-	-	-	-	-	-	-	<1			-	-	-	<1	03	01	03	-	03	02	01	03	01
Anthopleura elegantissima	03	04	06	04	06	05	04	04	04	05	05	07			09	06	04	08	08	09	13	05	05	13	13	09	15
Anthozoa unid.	-	-	02	10	45	-	<1	03	02	03	06	03			03	05	02	06	09	09	-	01	05	02	03	02	01
Aplysia californica	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-	-	01	04	<1	-	-	01
Aplysia californica egg mass	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<1	-	19	-	-	-	-	-	-	-
Ascidia spp.	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Asterina miniata	03	05	05	05	05	08	07	03	<1	-	-	-			-	<.1	01	<1	-	-	-	-	-	-	03	<1	-
Asterina miniata (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<1	<1	-	-	-	-	-	-	<.1	-
Balanophyllia elegans	10	21	27	38	47	53	58	49	55	45	36	26			20	19	1.7	43	4.3	46	90	110	51	94	81	76	55
Balanus aquila	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Balanus spp	-	02	<.1	<.1	<.1	-	<1	-	-	-	01	-			-	-	-	-	06	-	-	-	-	-	-	-	-
Balanus/Tetraclita spp	-	-	-	-	-	<1	<.1	02	<1	-	-	-			0.2	-	-	03	-	75	-	-	03	-	<1	03	29
Barleeia spp	-	<1	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Barnacles (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	04	-	-	-	-	-	13	-	-
Bittium eschrichtii	-	-	04	-	-	02	02	-	<.1	-	-	03			<1	01	<.1	<1	02	-	-	-	-	-	-	-	-
Bittium spp	-	<1	-	02	-	-	-	04	-	-	-	01			04	-	-	-	-	-	-	-	-	-	-	-	-
Boltenia villosa	-	-	-	-	-	-	-	-	-	<1	03	01			<.1	<1	-	03	01	03	-	04	06	02	-	<.1	01
Brachyura unid. b (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	01	-	-	-	-	-	-	-
Cactosoma arenaria	-	05	12	09	08	08	08	09	01	03	02	02			-	-	-	-	-	-	-	-	-	-	-	<1	-
Cadlina flavomaculata	-	-	0.1	<.1	-	-	-	-	<.1	01	01	<1			<1	01	-	<.1	<.1	-	-	-	-	-	-	-	-
Cadlina luteomarginata	-	-	-	<1	-	-	-	-	-	-	-	-			-	-	-	<.1	-	-	-	-	-	01	-	<.1	01
Cadlina modesta	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<.1	-	-	-	-	-	-	-	-	-
Calliostoma annulatum	-	-	-	-	-	-	<.1	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma ligatum	-	03	05	<1	03	07	02	03	03	10	08	0.7			01	<1	-	-	-	-	-	-	-	-	-	-	-
Calliostoma spp	-	-	-	-	-	-	-	-	-	-	-	01			-	-	-	-	-	-	-	-	-	-	-	-	-
Callistochiton crassicostatus	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Cancer antennarius	-	-	-	-	-	-	-	-	<1	<1	-	<1			-	-	-	01	-	-	-	-	-	-	-	<.1	-
Cancer antennarius (juv)	-	<.1	-	-	-	-	01	-	-	-	-	<1			-	-	-	-	<.1	-	-	-	-	-	-	<.1	-
Cancer spp	-	-	-	-	<.1	-	-	-	<1	<1	-	-			01	<1	-	-	01	-	-	-	-	<.1	<1	-	-
Ceratostoma foliatum	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	<1	01
Chelyosoma productum	-	-	-	-	-	-	-	-	01	-	-	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Cirratulidae/Terebellidae unid.	-	-	-	-	-	-	-	02	-	-	<1	-			<1	-	01	-	02	-	-	-	-	02	03	01	-
Clavelina huntsmani	-	-	-	-	-	-	-	-	10	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Clavularia spp	-	-	-	-	-	-	-	42	09	1.7	25	57			06	17	04	-	-	-	-	-	-	-	-	-	-
Cnemidocarpa finmarkiensis	03	-	02	-	-	-	-	-	-	-	-	<1			-	-	<.1	-	02	04	0.3	01	03	04	03	03	01
Conus californicus	-	-	<1	-	01	-	-	<1	-	02	03	03			<1	-	-	0.1	<1	01	-	-	-	01	-	-	-
Corynactis californica	-	-	-	-	-	-	03	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	0.1	15
Crassedoma giganteum	-	-	-	-	-	-	-	-	-	02	03	-			<.1	<1	-	-	-	-	-	-	-	-	-	-	-
Crepidula spp	-	-	03	04	10	13	1.2	12	11	04	11	03			01	01	-	01	-	-	-	-	-	-	-	-	-
Cryptochiton stelleri	-	-	-	-	-	-	<1	-	-	-	-	-			-	-	-	02	-	01	-	01	-	<1	-	<.1	-
Cryptolithodes sitchensis	-	-	-	-	-	<1	-	-	<.1	-	<.1	<1			-	-	<1	-	<1	-	-	-	-	-	-	-	-
Cucumaria spp	-	06	13	17	11	13	07	06	06	10	09	04			08	04	-	-	<1	03	03	-	-	<1	03	01	-
Dendrodoris spp	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	<1	-	-	-	-	-	01	-	-	02	-
Dendropoma lituella	-	-	79	263	139	101	143	17.5	185	176	133	77			174	193	124	38	35	36	-	08	-	-	-	08	-
Dendropoma spp	18	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 3 -4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Diadumene spp	-	-	<1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diaulula sandiegensis	-	-	-	-	-	-	<1	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diodora aspera	-	-	-	<1	-	-	-	-	<1	0.3	-	0.2			-	-	<1	-	0.1	-	-	-	-	-	-	-	-
Diopatra ornata	0.3	0.8	1.2	2.0	0.6	0.3	0.2	0.2	0.2	0.2	0.4	0.4			0.1	0.2	0.2	0.7	0.4	0.5	1.0	0.6	1.6	0.4	0.4	0.8	0.3
Discurtia insessa	-	<1	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Doriopsilla albopunctata	-	-	0.4	0.4	<1	<1	0.2	<1	0.3	0.5	0.4	0.2			0.4	0.4	0.3	0.5	0.4	0.4	-	0.1	-	0.6	-	0.3	-
Doriopsilla gemela	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Epiactis prolifera	1.3	2.7	3.1	2.4	1.7	0.9	0.5	0.3	0.2	0.2	0.6	0.1			<1	<1	<1	<1	-	0.3	-	0.1	-	-	-	-	-
Erato vitellina	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	-	-	-	-	-	-	-	-
Eudistylia polymorpha	-	-	-	<1	-	-	-	-	-	-	-	-			0.6	-	-	<1	-	-	-	-	-	0.3	0.3	0.4	-
Eupentacta quinquesemita	0.3	-	-	<1	-	0.3	<1	-	0.1	<1	<1	0.2			0.1	0.1	-	-	<.1	-	-	-	0.1	-	-	<1	-
Fissurella volcano	-	-	-	<1	-	<1	0.3	-	0.2	0.2	0.1	0.2			<1	<1	-	<1	<1	0.1	-	-	-	<1	-	<1	0.1
Flabelliderma essenbergae	-	-	-	-	-	-	-	-	-	-	-	-			0.1	-	-	-	-	-	-	-	-	-	-	-	-
Flabellina trilineata	-	-	-	-	<1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Fusinus luteopictus	-	-	-	-	-	-	-	-	-	-	-	<1			-	-	0.2	<1	-	-	-	-	-	-	-	<1	-
Glans subquadrata	-	-	-	-	-	-	-	<1	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Halcampa decementaculata	-	-	<1	<1	<1	-	0.1	0.3	<1	0.1	-	0.2			-	-	-	<1	0.1	-	-	-	-	-	-	-	-
Haliotis rufescens	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp.	-	-	-	-	-	-	<1	-	-	0.1	-	-				-	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp (juv)	-	-	-	-	-	-	-	-	-	-	<1	-			-	-	<1	-	-	-	-	-	-	-	-	-	-
Henricia leviuscula	-	-	-	-	-	-	<1	0.2	-	<1	-	-			-	-	-	-	-	-	0.3	-	-	-	-	-	-
Heptacarpus spp	-	-	-	-	-	-	-	-	-	-	-				<1	<1	-	-	-	-	-	-	-	-	-	-	-
Hermissenda crassicornis	-	-	-	-	<1	-	0.1	-	<1	<1	-	-			0.1	<1	<1	-	<1	0.1	-	-	0.6	0.4	<1	0.1	-
Homalopoma spp	0.5	2.6	5.2	4.2	5.7	5.2	5	4.7	3	4.3	4.1	3.7			2.3	0.6	-	-	-	0.1	-	-	-	-	-	-	-
Hopkinsia rosacea	-	-	-	-	-	-	-	-	0.1	-	-	-			-	-	-	-	-	-	-	-	-	-		-	-
Idotea spp	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ischnochitonidae	-	-	-	0.2	<1	0.2	<1	<1	0.4	0.3	0.1	0.1			0.2	<1	<1	0.2	<1	0.1	-	-	-	-	-	-	-
Isopoda unid	-	<1	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lacuna spp	-	0.6	-	-	-	-	<1	<1	<1	0.3	0.1	-			0.5	0.4	1	0.4	<1	-	-	-	-	-	<1	-	-
Laila cockerelli	-	-	-	-	-	-	-	-	0.1	<1	0.2	-			<1	-	<1	-	-	-	-	-	-	-	-	-	-
Lebbeus lagunae	-	-	<1	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lepidozona cooperi	-	-	-	-	-	-	-	-	-	-	1.0	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lepidozona spp	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	<1	-	0.2	-	-	-	-	-	-	<1	-
Leptasterias spp	-	-	0.1	0.1	-	0.2	0.1	<1	-	-	-	-			-	<1	-	-	<1	-	-	-	-	-	-	<1	-
Leucandra heathi	-	<1	0.5	3.0	2.0	1.8	1.4	0.2	0.4	1.0	1.3	1.2			-	0.1	-	-	-	-	-	-	-	-	-	-	-
Leucilla nuttingi	0.5	<1	0.4	1.4	1.8	1.3	1.7	1.1	2.1	0.8	4.0	1.4			<1	1.1	1.0	0.4	-	-	-	-	-	0.3	-	0.1	0.5
Lissothuria nutriens	-	-	0.1	<1	-	-	<1	-	0.4	0.4	<1	0.2			0.2	0.3	0.1	-	-	-	-	-	-	-	-	-	-
Lithopoma gibberosum	-	<1	-	0.2	0.5	0.3	0.6	0.5	0.5	0.2	0.2	0.4			<1	<1	<1	-	<1	0.3	0.3	-	-	-	-	<1	-
Lithopoma gibberosum (juv)	-	-	-	-	-	-	-	-	-	-	-	0.3			<1	-	-	0.1	<1	0.1	0.3	-	-	-	-	-	-
Lophopanopeus spp	-	-	-	-	-	0.3	0.5	<1	<1	0.2	0.1	0.1			0.2	-	-	-	<1	-	-	-	-	-	-	-	-
Lottia asmi	-	-	-	<1	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Lottia instabilis	-	0.2	1.5	0.8	0.5	0.6	0.8	-	-	-	-	0.1			<1	0.1	-	-	<1	-	-	-	-	-	-	-	-
Lottia ochracea	0.3	0.3	0.2	<1	0.7	0.3	0.4	0.3	1.7	1.3	0.4	0.6			1.1	0.6	0.1	0.3	0.2	0.1	-	-	-	<1	-	-	-
Loxorhynchus crispatus	-	-	-	-		-	-	-	-	-	-	-			-	-	-	-	-	0.1	-	-	-	-	-	0.1	0.1
Lytechinus spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	0.1
Majidae	-	-	0.4	<1	-	0.3	-	-	-	-	-	0.3			0.1	-	-	-	-	-	-	-	-	-	-	<1	-
Megabalanus californicus	-	-	-	-	<1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Mimulus foliatus	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	0.1	-	-	0.1	0.3	-	-	-	-	0.2	-
Mitra idae	-	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.5	0.3	0.3	0.3			0.1	0.2	0.2	0.1	0.4	0.6	0.5	0.3	0.8	0.7	0.4	0.8	0.6
Mopalia spp	-	-	<1	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Myxicola infundibulum	-	-	<1	-	-	-	0.1	1.0	0.1	<1	0.3	0.2			0.3	<1	-	-	0.2	-	-	-	-	0.1	-	<1	-
Nassarius mendicus	-	-	-	<1	<1	-	-	-	-	0.1	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Natantia unid	-	-	-	-	-	-	-	-	-	-	0.3	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nemertea unid	-	-	-	-	<1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Nereididae unid	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Nitidiscala spp	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Norrisia norrisi	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<1	0.1	0.3	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 3 -4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Counted Regardless of Size																											
Norrisia norrisi (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<.1	-	-	-	-	-	-	-	-	-
Ocenebra foveolata	-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra interfossa	-	-	-	-	-	<.1	-	02	-	<1	-	<1			-	<.1	-	-	-	-	-	-	-	-	-	-	-
Ocenebra lurida	-	-	-	-	-	-	03	<.1	01	-	-	<1			01	<1	-	<.1	-	-	-	-	-	-	-	<1	-
Ocenebra spp	-	-	-	-	-	-	<.1	-	-	<.1	-	02			01	-	-	-	-	-	03	-	-	-	-	-	-
Ophiactis simplex	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	234	183	296	149
Ophioplocus esmarki	-	-	-	<1	<.1	-	01	02	-	-	-	<.1			-	-	-	02	01	-	03	-	01	01	-	02	01
Ophiothrix spiculata	-	-	<.1	-	-	<1	<1	-	-	-	03	0.2			16	19	1.3	04	01	06	-	03	10	04	06	05	09
Ophiuroidea unid	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<.1	-	-	-	-	-	-	-	-
Pagurus spp	-	38	20	3.5	45	107	110	103	60	86	80	50			52	28	49	49	42	5.5	08	11	01	03	02	18	28
Paracerceis cordata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	<.1	-	-
Paracyathus stearnsii	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	0.3	<1	01	02	03
Parastichopus parvimensis	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	01	-	<1	-
Paraxanthias taylori	-	-	-	-	-	-	-	-	-	-	-	<1			-	-	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid.	-	-	-	-	-	-	-	-	<.1	-	-	-			<.1	<1	-	-	-	-	-	-	-	-	-	-	-
Pelecypoda unid. boring	1.5	205	21.7	242	213	193	150	270	33	26.5	296	340			28.5	228	17.1	176	74	16.3	58	6.6	36	144	61	103	18
Phidiana hiltoni	-	-	-	-	-	-	-	-	<.1	<1	0.3	<.1			02	-	-	-	-	-	-	01	01	-	-	-	-
Phragmatopoma californica	-	1.7	40.3	32.5	22.1	156	44	09	94	28	43	112			7.2	30	13	1.1	24	06	05	85	128	253	88	14	56
Phragmatopoma spp	1.5	205	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Phyllochaetopterus prolifica	-	16	55	65	26	90	90	121	48	7.7	129	126			40	2.3	15	23	25	2.3	03	29	08	08	27	20	05
Pisaster brevispinus	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<.1	-	01	-	-	-	-	-	-	-	-
Pisaster giganteus	-	-	-	-	-	-	-	-	-	-	-	-			-	01	01	<1	02	-	03	-	-	<1	-	-	01
Pisaster/Henricia (juv)	-	-	01	-	<.1	0.2	02	-	-	-	<1	-			-	<1	-	<1	-	-	-	-	-	-	-	-	-
Pista spp	-	14	0.4	<1	0.3	10	07	08	09	18	05	0.7			06	1.1	09	17	23	30	43	30	05	23	28	30	09
Pista/Streblosoma spp	1.5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Placiphorella velata	-	-	-	-	-	-	<.1	-	-	-	-	<.1			-	-	-	-	-	-	-	-	-	-	<.1	-	-
Platyhelminthes unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	<1	-	<.1	-	-	-	-	-	-	-	-	-
Pododesmus cepio	-	03	-	-	<.1	-	<.1	-	03	02	03	0.2			-	02	03	01	-	-	-	-	-	<.1	<1	-	-
Polychaeta unid.	-	02	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Polynoidae	-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	-	-
Prostheceraeus bellostriatus	-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-	-	-	-	-	-	-	-
Pseudoceros montereyensis	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<.1	-	-	-	-	-	-	-	-	-
Pseudomelatoma torosa	-	02	09	08	05	06	18	08	1.2	1.1	13	09			06	03	06	03	03	0.3	-	-	01	<1	<1	-	-
Pugettia producta	-	-	-	-	-	<.1	04	-	<.1	0.3	0.3	01			<.1	02	-	-	<.1	-	-	-	-	-	-	-	-
Pugettia richii	-	-	03	<.1	07	08	17	1.5	1.3	18	04	02			08	08	04	01	08	05	10	09	08	03	1.2	1.1	05
Pugettia spp	-	<.1	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnogonida unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	01	-	-	-	-	-	-	-	-	-
Pycnopodia helianthoides	-	<1	<.1	-	-	-	-	-	-	-	-	<1			-	-	03	<.1	<1	-	-	-	-	-	-	-	-
Pycnopodia helianthoides (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<.1	-	-	-	-	-	-	-	-
Pyura haustor	-	03	05	07	06	05	05	04	04	01	04	05			06	07	04	03	03	-	-	-	-	02	02	-	-
Rostanga pulchra	-	-	-	-	-	-	-	-	02	-	-	<1			<.1	-	-	-	-	-	-	-	-	-	-	-	-
Sabellidae	-	-	03	<1	<.1	-	-	-	04	08	11	32			0.3	03	07	03	09	16	13	04	01	17	05	01	-
Serpula vermicularis	-	07	07	15	1.5	11	11	09	08	06	09	13			05	07	04	<.1	01	04	-	03	06	03	09	03	-
Serpulidae unid.	10	07	56	05	-	03	02	-	03	05	04	02			06	04	03	03	04	06	-	-	-	02	04	06	08
Serpulorbis squamigerus	-	-	03	04	04	06	06	06	06	10	12	15			08	08	04	03	<1	06	-	03	03	05	03	06	06
Sipuncula unid	23	04	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Spirobranchus spinosus	-	-	08	02	04	-	<.1	03	02	05	04	04			04	04	<1	02	03	01	-	05	-	01	02	04	-
Strongylocentrotus franciscanus	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<1	-	-	-	-	-	-	-	-	-
Strongylocentrotus purpuratus	-	-	-	-	-	02	03	<.1	-	-	<1	-			-	03	02	<1	09	10	18	04	16	84	53	27	36
Strongylocentrotus spp	-	-	-	-	-	03	<1	-	01	<1	08	04			04	03	06	03	02	10	-	-	-	-	-	-	03
Styela montereyensis	05	<.1	02	<.1	-	-	-	-	<1	-	<1	-			02	03	<.1	-	01	-	-	-	-	<1	-	<.1	04
Stylochus spp	-	-	-	-	-	-	-	-	-	-	-	-			<1	-	-	-	-	-	-	-	-	-	-	-	-
Tegula brunnea	13	35	5.8	4.7	35	40	32	23	1.1	14	21	36			08	14	26	02	11	03	-	09	-	-	07	04	-
Tegula montereyi	-	04	03	05	02	02	03	-	-	<1	04	06			<1	<.1	-	-	-	-	-	03	-	-	-	-	-
Tegula pulligo	-	<1	02	<1	<1	<1	02	-	<1	<1	02	03			<.1	<1	03	-	<1	0.1	-	-	-	-	-	-	-
Terebellidae unid	-	-	02	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Tethya aurantia	-	-	-	-	-	-	-	-	-	-	-	-			-	01	<.1	-	-	-	-	03	-	<1	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) South Diablo Cove SDC 3-4m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Tetraclita rubescens	-	< 1	-	-	< 1	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Themiste pyroides	-	1 3	2 2	1 2	1 0	1 2	1 0	1 1	1 3	1 5	1 4	1 2			0 9	1 5	1.0	0 4	0 6	0 6	0 3	0 1	0 3	< 1	< 1	< 1	-
Tonicella lineata	0 3	< 1	0 6	0 3	0 4	0 4	0 3	0 7	0 9	0 5	0 5	0 8			0 6	0 2	0 1	0 1	< 1	0 3	-	-		-	-	0 1	-
Tricolia pulloides	-	-	-	-	-	-	< 1	-	0 3	0 8	-	0 4			< 1	-	0 9	-	-	0 3	-	-	-	-	-	-	-
Triopha catalinae	-	-	< 1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Triopha maculata	-	-	-	-	< 1	-	-	-	-	0 1	-	< 1			0 1	< 1	-	-	-	-	-	-	-	-	-	-	-
Tritonia festiva	-	< 1	0 1	-	< 1	< 1	-	< 1	< 1	-	< 1	-			-	-	-	< 1	-	-	-	-	-	-	-	-	-
Trivia californiana	-	-	-	-	-	-	-	-	-	-	-	-			-	< 1	-	-	-	-	-	-	-	-	-	-	-
Trivia solandri	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	< 1	-
Urticina spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	< 1	-	-	-	-	-	-	-	-	-
Williamia peltoides	-	-	-	-	-	-	-	-	-	-	-	-			< 1	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, solitary unid	-	0 4	-	< 1	< 1	-	-	-	< 1	< 1	0 4	0 5			< 1	0 2	0 1	-	0 1	-	-	0 1	-	< 1	< 1	-	-
Coverage Based on # of 1" Squares																											
Abiet /Sertularella/Sertularia spp	-	-	-	-	-	0 2	< 1	-	-	-	-	< 1			-	-	-	-	-	-	-	-	-	-	-	-	-
Barentsia spp	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	0 1	-	-	-	-	-	-	-
Bryozoa, unid (encrusting)	0 8	0 6	0 3	0 7	0 5	1 2	0 9	1 0	1 0	0 8	1 3	1 2			1 3	0 9	0 4	0 6	0 8	0 3	0 5	0 6	0 4	0 3	0 6	1 0	< 1
Bryozoa, unid (erect)	-	-	< 1	-	-	-	-	-	-	< 1	-	-			-	< 1	-	< 1	-	-	< 1	-	-	-	-	-	-
Bryozoa, unid. (foliose)	-	-	0 1	-	-	-	-	< 1	< 1	< 1	0 3	< 1			< 1	< 1	< 1	< 1	< 1	-	-	-	-	-	< 1	< 1	-
Chthamalus fissus	-	-	-	-	-	-	-	-	-	-	-	-			-	1 5	-	-	-	-	-	-	-	-	-	-	-
Cliona spp	-	-	-	-	-	-	-	-	-	-	-	< 1			-	-	-	-	-	-	-	-		-	-	-	-
Didemnum/Trididemnum spp	2 3	-	0 5	1 3	1 4	0 7	0 3	0 4	0 6	0 4	0 9	0 8			0 3	0 3	0 2	0 1	0.3	< 1	0 5	-	-	< 1	< 1	-	-
Dodecaceria fewkesi	-	0 5	0 4	0 1	0 9	0 9	0 9	0 5	0 4	0 7	0 6	0 5			-	-	< 1	-	-	-	-	-	-	-	-	-	-
Entoprocta unid. a	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	< 1	-
Eurystomella bilabiata	-	-	-	-	-	-	-	-	-	-	-	0 2			-	-	-	-	-	-	-	0 3	-	-	-	-	-
Hydroida	-	1 3	0 5	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1			< 1	< 1	-	-	-	-	-	-	-	-	-	-	-
Hymenamphiastra cyanocrypta	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	0 1	0 3	0 3	0 1	< 1	0 2	0 3	0 2	0 3
Leucosolenia spp	-	-	-	< 1	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera unid (encrusting)	-	0 2	0 2	0 7	0 8	0 8	1 9	1 5	1 7	1 4	2 3	0 8			1 5	2 0	0 8	0 3	0 3	0 1	-	1 1	-	0 3	0 1	0 4	0 4
Salmacina tribranchiata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	< 1	0 1	< 1	-	-	0 5	-	< 1	-	-	0 1
Spirorbis spp	-	-	-	< 1	0 2	< 1	1 0	0 8	0 6	0 6	0 6	0 4			0 8	0 6	0 3	< 1	0 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tricellaria spp	0 3	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
epiphytic bryozoan (sq)	-	-	-	-	-	-	-	-	-	-	-	-			-	0 2	-	-	-	-	-	-	-	-	-	-	-
tunicate, colonial unid. a (white)	2 8	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid	2 8	3 4	2 5	2 1	2 3	2 4	2 3	2 5	2 3	2 6	3 1	2 2			2 0	1 6	1 4	0 4	0 6	0 8	1 0	1 1	0 1	< 1	0 1	0 4	< 1

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 1-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Counted Regardless of Size																											
Acanthodoris lutea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Acmaea mitra	1.0	0.6	0.8	0.5	0.4	-	0.8	0.6	2.8	2.2	0.3	0.7	0.2	0.4	0.1	0.2	0.2	0.8	0.9	1.0	2.0	-	1.1	0.8	0.4	0.4	0.3
Acmaeid unid. a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Alia carinata	-	3.9	8.6	2.7	2.3	3.8	1.4	0.7	2.3	2.7	0.8	1.4	0.8	0.9	1.4	0.2	1.6	1.4	1.1	0.3	-	1.3	-	0.6	-	0.2	0.3
Alia spp	5.0	-	-	2.0	-	0.6	0.6	0.2	0.3	1.0	0.8	0.3	0.2	0.3	1.1	0.2	-	-	0.6	0.5	0.1	-	-	0.2	0.1	-	-
Alpheus spp	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphissa spp	-	0.1	0.6	0.8	<.1	<.1	0.7	0.5	0.5	0.8	0.4	0.8	0.2	0.6	0.4	0.4	1.4	0.5	0.8	0.5	0.9	0.5	0.1	0.8	0.8	0.6	-
Amphissa versicolor	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anisodoris nobilis	-	0.1	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthopleura artemisia	-	0.1	-	-	-	<.1	-	0.2	-	<.1	0.1	0.2	<.1	0.2	0.3	<.1	-	-	0.1	-	-	-	0.1	0.2	<.1	<.1	0.1
Anthopleura elegantissima	0.3	0.4	0.4	0.7	0.8	0.3	0.3	0.6	0.5	0.8	0.6	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.4	-	0.6	0.8	0.9	0.7	0.6
Anthozoa unid.	0.3	-	-	<.1	-	-	-	-	-	-	-	<.1	<.1	<.1	-	-	<.1	0.2	-	-	-	-	-	-	-	-	-
Archidoris montereyensis	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Asterina miniata	0.5	0.6	0.5	1.1	1.3	0.8	1.3	1.3	0.2	<.1	-	0.4	0.3	0.3	0.1	<.1	0.3	0.3	0.4	0.4	0.6	0.5	0.1	0.2	0.2	0.4	0.1
Asterina miniata (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	0.5	-	-	-	<.1	-
Asteroidea unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-
Balanophyllia elegans	0.8	1.6	0.5	0.6	1.5	0.8	0.9	0.8	0.7	1.1	-	0.2	<.1	0.9	0.6	0.6	1.0	0.8	0.4	1.4	0.5	0.3	0.8	1.0	0.9	0.2	0.4
Balanus spp	6.3	-	-	1.4	-	-	-	-	-	<.1	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Balanus/Tetraclita spp	-	-	0.9	0.9	-	0.3	8.3	1.8	4.3	2.5	4.1	-	0.2	0.4	1.9	0.3	11.7	6.8	-	5.3	4.9	5.5	0.8	8.1	7.3	3.4	0.5
Barnacles (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	3.1	-	7.5	-	-	-	-	0.3	-
Bittium eschrichtii	-	-	<.1	-	0.2	-	-	-	-	0.1	-	0.4	-	-	<.1	<.1	-	-	0.2	-	-	-	-	-	-	-	-
Bittium spp.	0.5	-	-	0.1	-	-	-	-	-	<.1	-	-	0.3	0.2	<.1	-	-	-	-	-	-	-	-	-	-	-	0.3
Bolinia vilosa	-	-	-	-	-	-	-	-	-	-	-	<.1	0.3	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Brachyura unid. b (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Cactosoma arenaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-
Cadlina flavomaculata	-	-	<.1	-	-	-	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma canaliculatum	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calliostoma ligatum	-	-	-	<.1	0.3	-	-	<.1	<.1	0.1	0.3	0.2	-	0.3	0.5	0.2	<.1	<.1	0.4	0.1	0.3	-	0.1	0.3	0.2	0.8	-
Calliostoma spp.	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Cancer antennarius (juv)	-	-	-	-	-	-	<.1	-	<.1	0.1	-	-	-	-	0.1	<.1	-	<.1	0.1	0.1	0.3	-	-	-	-	-	-
Cancer productus (juv)	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	<.1	-	<.1	-	-	-	-	-	-	<.1	-	-
Cancer spp	-	-	-	-	0.3	-	-	<.1	-	-	-	-	-	<.1	-	-	-	-	0.3	-	-	-	-	-	-	-	-
Chelyosoma productum	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.1	-	-	-	0.1	-	<.1	-	-
Cirratulidae/Terebellidae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Clavelina huntsmani	-	-	-	-	-	-	-	-	-	-	-	-	0.6	2.6	2.2	0.6	0.4	-	1.3	-	-	-	-	-	-	-	-
Clavularia spp	-	-	-	-	-	-	<.1	-	2.2	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cnemidocarpa finmarkiensis	-	-	-	-	-	-	-	-	<.1	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corynactis californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Crangon stylirostris	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crepidula adunca	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crepidula spp	-	-	-	-	-	-	0.2	-	0.3	1.0	-	0.7	0.8	1.6	0.4	0.4	0.4	0.3	0.4	0.6	0.8	0.5	-	1.4	<.1	0.9	0.1
Cryptochiton stelleri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	<.1	0.1	-	-
Cryptolithodes sitchensis	-	-	<.1	0.5	<.1	0.3	0.2	0.3	0.3	0.4	-	0.4	0.2	-	0.2	<.1	-	<.1	0.4	0.5	0.6	-	-	0.1	<.1	<.1	0.1
Cucumaria spp	-	0.3	-	-	<.1	<.1	0.5	<.1	-	0.1	-	<.1	-	-	0.3	0.4	0.4	-	-	-	-	-	-	-	-	<.1	0.1
Dendrodoris spp	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Dendropoma lituella	-	-	49.2	81.1	101.7	66.2	92.7	52.6	89.0	66.5	30.1	61.6	56.3	77.3	49.3	92.8	41.6	14.8	19.5	16.6	2	2.5	4.6	1.0	7.5	3.4	3.1
Dendropoma spp	50.8	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diodora aspera	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	<.1	-
Diopatra ornata	-	-	-	<.1	-	<.1	0.2	-	-	0.2	-	-	-	-	-	-	-	<.1	<.1	-	-	-	-	-	0.1	<.1	0.1
Discurria insessa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-
Doridacea unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Doriopsilla albopunctata	-	-	-	<.1	0.2	-	-	0.2	-	0.3	0.5	0.4	0.3	0.1	-	0.2	0.1	-	-	-	-	0.3	-	0.3	0.1	0.1	-
Epiactis prolifera	1.0	1.3	1.4	0.3	0.3	0.4	0.3	<.1	0.2	0.7	1.1	0.8	0.8	0.6	0.4	0.8	0.7	0.2	<.1	0.4	0.3	-	0.4	0.5	1.1	0.4	0.1
Eudistylia polymorpha	-	-	-	-	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 1 -3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Counted Regardless of Size																											
Eupentacta quinquesemita	-	-	-	< 1	-	-	< 1	-	-	-	0 1	0 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fissurella volcano	-	0 4	-	-	-	-	< 1	-	< 1	-	0 1	-	-	< 1	-	0 2	-	-	-	-	-	-	-	-	-	-	-
Flabellina trilineata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-
Fusinus luteopictus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	0 3	< 1	-
Gammaridea unid	0 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastropoda, neopic unid a	0 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halcampa decemtentaculata	0 8	-	-	0 4	0 3	0 3	< 1	0 2	0 2	0 5	-	2 0	0 8	0 6	0 8	1 0	0 6	0 2	< 1	-	0 1	-	0 1	0 4	0 3	0 5	0 1
Haliotis rufescens	-	-	-	-	-	-	-	-	-	<,1	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Haliotis spp (juv)	-	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-
Henricia leviuscula	0 5	-	0 5	< 1	-	-	-	-	-	-	-	< 1	-	0 2	0 1	-	0 4	-	-	-	0 1	0 3	0.1	0 3	0 1	< 1	-
Hermissenda crassicornis	-	-	-	-	-	< 1	-	-	< 1	< 1	-	< 1	-	0 4	-	-	0 1	< 1	0 1	-	-	-	-	0 3	0 2	-	-
Homalopoma spp	-	-	-	-	-	-	0 5	-	0 2	1 1	0 5	2 8	2 7	5 4	5 9	4 2	4 1	3 9	5 2	5 9	5 8	6 0	4 1	8 3	5 6	10 9	8 8
Hopkansia rosacea	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	0 1	0 1	-	-	-
Ischnochitonidae	-	-	0 2	< 1	-	<,1	0 2	0 2	0 2	0 5	-	0 3	< 1	-	0 1	-	-	< 1	-	0 4	-	-	-	-	< 1	-	-
Lacuna spp	-	-	-	< 1	-	0 2	< 1	-	0 4	< 1	0 3	0 3	-	-	0 2	< 1	< 1	0 2	0 3	-	0 3	-	-	-	< 1	-	-
Laila cockerelli	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lebbeus lagunae	-	-	-	-	-	-	-	-	-	-	-	0 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lepidozona spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	0 1	0 1	-	-	-	-	< 1	-
Leptasterias hexactis	6 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptasterias spp	-	3 1	4	2 1	3 8	4 4	2 7	1 5	1 1	0 5	0 5	1 6	0 8	0 5	0 1	0 5	1 2	0 5	0 9	0 8	1 1	2 3	0 5	1 9	1 9	0 9	0 6
Leucandra heathi	-	-	-	-	-	-	-	-	0 5	0 4	-	0 3	-	< 1	< 1	-	-	<,1	-	-	0 3	-	-	-	-	-	-
Leucilla nuttingi	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	-	-	0 6	-	-	-	-	-	-	-	-
Lissothuria nutriens	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	< 1	-	< 1	-	-	0 3	0 2	-	-	0 3	0 1	-	-	0 1	-
Lithopoma gibberosum	0 3	0 1	< 1	0 3	0 3	-	0 2	-	-	< 1	-	0 2	0 4	0 4	< 1	< 1	-	-	-	-	0 3	0 5	-	< 1	< 1	-	-
Lithopoma gibberosum (juv)	-	-	-	-	-	-	-	-	-	-	-	0 2	0 2	0 2	-	-	0 2	-	-	0 1	-	0 5	-	0 1	-	-	-
Lophopanopeus spp	-	0 6	0 7	1.9	0 4	0 8	0 8	< 1	0 4	0 3	0 3	-	0 3	< 1	0 2	0 2	0 1	0 2	0 4	0 4	0 3	-	0 4	0 4	-	< 1	0 1
Lottia instabilis	-	-	-	-	-	-	-	-	-	0.3	0 1	0 7	-	0 5	0 8	0 3	0 5	0 4	0 2	-	-	-	-	0 6	0 2	< 1	-
Lottia ochracea	0 5	0 3	0 3	0 4	0 3	0 4	< 1	0 4	1 4	0 6	0 8	0 3	0 6	0 5	0 3	< 1	0 2	1 1	0 6	0 6	1 8	-	1 4	1 3	< 1	0 3	0 6
Lottia strigatella	0 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loxorhynchus crispatus	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-
Majidae	4 8	1 3	1 4	0 9	-	0 8	-	-	0 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manania spp	-	-	-	-	-	-	-	< 1	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Micrura verrilli	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mimulus foliatus	-	-	-	0 1	-	1	-	-	0 2	< 1	-	-	-	0 3	0 2	0 3	-	-	< 1	-	0 3	-	-	-	0 1	< 1	-
Mitra idae	-	-	-	-	-	-	-	-	< 1	0 2	-	< 1	< 1	< 1	-	-	-	0 2	<,1	0 1	-	-	0 1	0 3	-	0 2	0 1
Modiolus spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-
Mopalia lignosa	-	-	-	-	-	-	-	0 2	< 1	< 1	-	-	0 2	< 1	< 1	-	-	-	-	-	0 3	-	-	< 1	0 1	0 2	-
Mopalia muscosa	-	-	-	-	< 1	-	-	-	-	0 2	-	-	< 1	< 1	< 1	< 1	-	-	0 1	-	0 1	-	-	-	-	-	-
Mopalia spp	-	0 3	< 1	-	< 1	-	-	-	-	-	-	0 2	-	-	0 2	-	-	-	-	-	0 1	-	-	-	< 1	-	-
Mytilidae	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Myxicola infundibulum	-	-	-	-	-	-	-	-	-	-	-	< 1	-	< 1	0 1	-	-	-	-	-	-	-	-	-	-	-	-
Nereididae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	0 1	-	-	-	-	-	-	-
Nitidiscala spp	-	-	-	-	-	< 1	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitidiscala/Opalia spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-
Ocenebra foveolata	-	-	-	-	-	-	-	-	-	0 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ocenebra interfossa	-	-	0 3	-	-	-	-	-	< 1	0 3	-	-	-	< 1	-	0 2	-	-	0 1	-	-	-	-	-	< 1	-	-
Ocenebra lurida	-	-	-	0 1	< 1	< 1	0 3	< 1	-	<,1	0 1	0 3	-	0 1	0 3	-	0 1	< 1	< 1	-	0 3	0 3	0 3	0 6	< 1	< 1	-
Ocenebra spp	0 3	0 4	0 3	0 1	-	0 3	-	< 1	0 3	0 1	0 1	-	0 4	0 1	0 3	0 3	0 1	-	0 4	-	-	-	-	< 1	0 1	< 1	-
Octopus spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	
Opalia spp	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophioplocus esmarki	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-
Ophiothrix spiculata	0 3	-	0 2	0 1	0 2	< 1	0 4	-	< 1	< 1	-	< 1	-	-	-	< 1	-	-	< 1	-	0 1	-	-	-	-	-	0 1
Pagurus spp	1 5	1 5	7 8	12 6	14 6	23 8	17 6	6 6	11 8	8 9	7 9	7 8	4 8	3 7	5 5	7 1	7 6	6 8	7 6	2 8	4 8	8 5	4 4	5 9	3 3	3 8	5
Pelecypoda unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-
Pelecypoda unid boring	-	0 3	0 3	0 3	0 3	0 3	2 1	1 7	1 1	2 3	0 3	0 3	0 9	0 8	1 1	2 4	1 4	0 3	0 6	-	0 5	1 3	0 1	< 1	0 3	0 5	0 3
Phascolosoma agassizii	-	-	-	-	-	< 1	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phidiana hiltoni	-	-	-	0,2	-	-	-	-	-	0 2	-	-	-	0 2	< 1	-	-	-	-	-	0 1	0 8	-	< 1	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 1-3m (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Counted Regardless of Size																											
Phragmatopoma californica	-	25	343	68	89	107	75	21	88	567	400	218	768	1171	880	332	449	83	60	69	74	138	108	441	338	386	129
Phyllochaetopterus prolifica	-	-	0.3	06	13	18	33	13	09	19	10	11	13	-	10	07	13	10	14	05	-	08	-	04	03	<.1	-
Pisaster giganteus	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	<1	-	<1	-
Pisaster/Henricia (juv)	-	05	23	4.3	28	41	32	07	<.1	<.1	09	03	-	03	0.5	07	09	04	10	04	05	05	03	-	01	<1	13
Pista spp	-	01	<.1	03	<.1	08	12	<1	09	13	05	03	-	-	-	-	03	<1	03	03	05	-	-	04	06	13	08
Placiphorella velata	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Pododesmus cepio	-	-	-	-	-	-	-	-	-	-	-	<1	<.1	01	01	<1	<.1	-	01	0.1	01	-	-	-	-	-	-
Polynoidae	-	-	-	-	<.1	-	<1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Porcellanidae unid	03	-	-	02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pseudomelatoma torosa	05	-	02	01	<1	03	08	04	04	07	04	10	07	09	08	08	08	0.3	08	06	01	05	-	01	05	01	03
Pugettia producta	-	-	-	<.1	-	03	05	-	05	02	01	<1	<1	01	04	<1	01	<.1	01	01	01	-	03	01	02	<1	-
Pugettia richii	-	-	<1	38	19	34	30	04	07	18	05	08	09	08	13	14	09	06	11	01	04	08	01	08	03	10	04
Pugettia spp.	10	08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnogonida unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-
Pycnopodia helianthoides	-	0.1	02	<1	-	-	-	02	-	<1	04	<1	02	01	<.1	<.1	<.1	-	<1	01	-	-	-	<1	01	01	-
Pycnopodia helianthoides (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01	-
Pyura haustor	-	-	<.1	-	<1	03	03	<.1	<.1	04	-	-	-	<1	-	04	03	-	-	01	-	-	-	-	-	-	-
Rostanga pulchra	-	-	03	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-
Sabellidae	-	-	-	-	-	-	-	-	-	05	-	-	<1	03	01	-	0.1	-	<.1	-	-	-	-	<1	-	-	-
Serpula vermicularis	-	01	-	-	-	-	02	-	-	<1	-	-	<1	05	<1	<1	03	<1	<1	03	04	-	-	-	<1	-	-
Serpulidae unid.	50	14	06	04	03	<.1	02	-	05	03	01	02	<.1	<1	01	-	-	08	12	21	04	-	-	01	-	<.1	08
Serpulorbis squamigerus	10	09	13	19	28	06	03	04	13	31	29	13	15	18	16	14	07	06	08	06	-	-	-	-	<.1	-	-
Spirobranchus spinosus	-	-	-	-	-	03	-	-	<1	03	04	04	02	-	-	-	<.1	03	04	06	05	-	-	03	-	-	-
Strongylocentrotus franciscanus	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strongylocentrotus purpuratus	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<.1	-	-	-	-	<.1	-	-	01
Strongylocentrotus spp	-	-	<1	-	<.1	-	-	-	-	01	-	-	-	<.1	01	-	-	<1	-	01	-	-	-	<1	04	-	-
Styela montereyensis	-	-	-	-	-	02	-	-	03	01	-	-	-	-	-	-	<.1	-	-	-	01	-	01	01	01	<1	-
Tectura fenestrata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	06	-	-	-	-
Tectura paleacea	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tectura persona	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tegula brunnea	2.5	41	51	41	5.2	25	28	28	51	74	85	44	33	41	4.3	18	60	67	60	48	65	48	61	90	53	62	5
Tegula montereyi	-	-	-	<1	02	-	-	-	-	-	-	<.1	-	-	-	-	01	<1	-	-	-	-	01	-	<1	-	-
Tegula pulligo	-	-	-	-	<1	-	-	-	-	<.1	-	-	-	-	<1	-	-	<1	-	01	-	-	-	-	<.1	-	-
Terebellidae unid.	-	-	-	<1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetraclita rubescens	-	54	2.7	20	96	23	73	19	17	33	-	-	-	-	17	23	72	61	84	-	-	-	08	-	-	81	-
Themiste pyroides	-	-	02	01	<1	03	03	03	-	0.1	-	<1	02	01	<.1	04	03	-	02	01	01	-	-	-	-	<1	-
Tonicella lineata	05	-	<.1	10	08	0.2	08	10	1.1	09	14	05	03	04	03	04	05	<.1	09	06	1.3	03	05	14	04	06	05
Tricolia pulloides	-	08	-	04	-	03	-	05	26	04	01	05	03	03	06	04	01	02	-	03	-	-	-	-	-	-	01
Triopha maculata	-	-	-	-	-	-	02	-	02	<1	01	<1	<1	-	<1	-	-	-	<1	-	-	-	-	-	-	-	-
Tubulanus sexlineatus	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	01
Urticina coriacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	02	03	03	03	01	-	-	-	-	-	-
Xanthidae unid.	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, solitary unid.	-	-	02	04	03	-	-	-	<1	04	-	03	08	08	04	08	09	-	04	-	-	03	-	08	03	04	-
Coverage Based on # of 1" Squares																											
Abiet./Sertularella/Sertularia spp	03	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aglaophenia spp	03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Archidistoma spp.	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid. (encrusting)	43	05	10	14	19	11	15	09	1.7	14	14	19	43	26	21	18	13	18	21	1.8	08	05	06	14	16	15	03
Bryozoa, unid (erect)	-	0.1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid. (foliose)	-	-	<1	-	-	-	-	<1	-	<.1	-	-	-	-	01	-	-	-	<1	-	-	-	-	-	-	01	01
Cauloramphus spiniferum	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cliona spp.	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	04	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp	15	-	-	<1	07	<1	<1	-	-	<1	04	04	06	08	10	1.1	08	07	01	01	-	-	-	06	01	<1	-
Dodecaceria fewkesi	-	-	-	<.1	-	-	-	-	-	02	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eurystomella bilabiata	-	-	-	-	-	-	-	-	-	-	0.1	-	-	01	-	<1	-	<.1	<1	-	01	-	-	<1	03	<1	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 1-3m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Coverage Based on # of 1" Squares																												
Hydroida		-	-	-	-	-	-	-	-	-	0 2	-	-	-	-	-	< 1	-	-	-	0 1	-	-	-	-	< 1	0 1	-
Hymenamphiastra cyanocrypta		-	-	-	-	-	-	-	-	-	-	-		-	< 1	< 1	< 1	0 3	-	-	-	-	-	-	-	< 1	-	-
Leucosolenia eleanor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-
Leucosolenia spp		-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Metandrocarpa taylori		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 2	-	-
Obelia spp		-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perophora annectens		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 2	-	-	-
Porifera unid (encrusting)		-	1 1	1 4	1 4	2 4	1 9	4 6	0 5	0 9	2 5	0 8	0 9	1 3	1 4	1 3	1 8	0 9	1 4	2 0	1 3	0 8	1 0	0 6	1 4	1 0	1 1	0 8
Porifera unid c (orange)		3 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ritterella pulchra		-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salmacina tribranchiata		-	-	-	< 1	-	-	-	-	0 3	-	-	0 3	0 4	1 0	0 6	0 9	1 0	0 6	1 1	-	0 3	< 1	0 1	0 5	0 6	0 4	-
Spirorbis spp		2 0	0 1	< 1	0 6	< 1	0 9	0 5	0 5	1 2	1 0	0 4	0 3	< 1	0 3	0 1	0 3	< 1	< 1	< 1	< 1	0 1	< 1	< 1	< 1	0 1	< 1	< 1
tunicate, colonial unid a (white)		1 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicate, colonial unid c (orange)		0 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid		1 0	1 3	0 8	1 3	1.3	1 8	2 7	0 2	0 3	2 0	1 6	1 1	1 2	2 1	1 0	1 1	1 3	0 9	0 8	0 4	0 5	0 3	0 4	2 3	2 3	1 6	1 5

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 2-6m

Taxon / # Surveys/Year	1976 1	1977 2	1978 3	1979 4	1980 2	1981 3	1982 4	1983 3	1984 3	1985 5	1986 3	1987 3	1988 ns	1989 ns	1990 4	1991 3	1992 4	1993 3	1994 4	1995 2	1996 ns	1997 ns	1998 ns	1999 3	2000 4	2001 4	2002 2
Counted Regardless of Size																											
Acmaea mitra	1.5	0.5	1.4	1.4	0.6	1.3	0.8	0.4	0.8	0.9	0.3	0.8			<1	0.8	0.4	0.5	0.3	0.6				0.8	1.4	0.5	0.5
Aegires albopunctatus	-	-	-	-	-	-	-	-	-	<1	-	<1			-	-	-	-	-	-				-	-	-	-
Aeolidia papillosa	-	-	-	-	-	-	-	-	<1	-	-	-			-	<.1	-	-	-	-				-	-	-	-
Aldisa sanguinea	-	-	-	-	-	-	-	-	-	-	-	<1			-	-	-	-	-	-				-	-	<.1	-
Alia carinata	-	0.4	2.8	0.5	1.1	3.3	0.9	-	0.3	0.4	-	-			-	-	-	-	0.1	0.1				0.2	0.1	-	-
Alia spp	2.5	0.6	-	-	-	-	-	-	0.2	0.7	-	-			-	-	0.2	-	0.1	-				-	-	-	-
Alpheidae unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	<1	-
Alpheus clamator	-	-	-	-	-	-	-	<1	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Amphissa spp	0.5	0.1	0.8	1.9	2.3	2.2	1.7	0.7	1.0	0.5	<.1	0.5			0.3	1.5	0.9	0.4	1.3	2.6				0.9	0.6	0.3	-
Amphissa versicolor	-	1.3	1.2	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Anisodoris nobilis	-	-	<.1	-	0.3	-	-	-	-	0.2	-	-			-	0.2	-	-	-	-				-	-	<1	-
Anthopleura artemisia	-	-	0.2	0.1	-	-	-	-	-	0.1	-	-			-	-	-	-	-	-				-	-	-	-
Anthopleura elegantissima	0.3	0.3	0.3	0.5	0.8	0.8	0.6	0.7	0.4	0.8	0.5	0.5			0.7	0.3	0.3	0.4	0.4	0.4				0.6	0.6	0.4	0.3
Anthopleura xanthogrammica	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	0.1				-	-	-	-
Anthozoa unid.	-	-	-	0.4	-	-	-	0.3	0.2	<.1	0.3	0.4			-	-	<1	-	<1	-				<1	-	-	-
Archidoris montereyensis	-	-	-	-	-	-	-	-	-	-	0.3	-			-	-	-	-	-	-				-	-	-	-
Ascidia ceratodes	-	-	-	-	-	-	0.2	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Asterina miniata	1.0	1.5	1.3	1.8	1.8	2.2	1.4	1.5	0.3	0.5	0.2	0.5			0.6	0.5	0.6	0.6	1.1	0.6				0.5	0.3	0.6	1.1
Asterina miniata (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	<.1	-				-	<.1	-	-
Asteroidea unid.	-	-	0.3	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Balanophyllia elegans	14.3	16.0	35.4	41.7	53.8	52.3	61.9	67.7	73.5	63.5	65.3	56.7			50.5	45.0	66.1	42.5	42.6	47.6				18.7	25.9	27.3	27.8
Balanus aquila	-	-	-	-	-	-	-	-	-	0.1	-	-			0.2	0.3	-	0.2	0.3	0.3				<1	<1	0.3	-
Balanus nubilus	-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-				-	<1	-	-
Balanus spp.	11.0	-	0.5	<1	0.1	-	-	-	-	0.2	0.2	0.3			-	-	<.1	0.4	0.1	-				-	-	-	-
Balanus/Tetraclita spp	-	-	0.6	6.3	0.1	0.5	0.7	2.9	0.6	0.1	0.7	1.2			13.6	1.3	0.4	1.3	-	2.4				1.0	-	188.6	1.8
Barnacles (juv)	-	-	-	-	-	-	-	-	-	-	1.1	-			-	-	-	3.8	-	3.8				-	3.4	1.7	0.9
Bittium eschrichtii	-	0.1	0.4	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Boltenia villosa	-	-	-	0.3	0.1	0.3	0.1	-	0.3	1.7	1.3	1.3			0.5	-	0.3	0.6	<1	0.1				0.3	<.1	0.1	0.1
Brachyura unid. b (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	0.1				-	-	-	-
Cactosoma arenaria	-	-	0.3	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Cadlina flavomaculata	-	-	-	-	-	<1	-	-	-	-	-	<1			<1	-	-	-	-	-				0.2	-	-	-
Cadlina luteomarginata	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	0.1	-
Cadlina modesta	-	-	-	-	-	-	-	-	-	0.1	-	0.2			-	-	-	-	-	-				-	-	-	-
Calliostoma annulatum	-	-	-	-	-	-	-	-	-	<1	<1	-			-	-	-	-	<.1	-				-	-	0.4	-
Calliostoma canaliculatum	-	-	-	-	-	<1	-	-	<1	-	-	-			-	-	-	<1	-	-				-	-	-	-
Calliostoma ligatum	-	0.3	-	0.4	0.6	0.7	0.5	0.3	<1	0.7	1.1	1.3			0.8	1.0	0.6	1.3	1.3	1.5				1.5	1.3	1.2	1.0
Calliostoma spp	-	-	-	-	-	-	-	-	<.1	-	-	-			-	-	-	-	-	-				-	-	-	-
Cancer antennarius	-	-	-	<1	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Cancer antennarius (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	0.1	-	-	-				-	-	-	-
Cancer productus (juv)	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	<1	-	-				-	-	-	-
Cancer spp	-	-	-	0.1	-	-	-	<1	-	<1	-	<.1			-	-	-	-	-	-				-	-	-	-
Ceratostoma foliatum	-	-	-	0.1	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	<1	-
Chelyosoma productum	-	-	-	<.1	-	-	0.3	-	-	0.2	0.2	0.3			0.2	0.5	0.3	-	<1	-				-	-	-	-
Chelyosoma spp	-	-	-	0.1	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Cirratulidae/Terebellidae unid.	-	-	-	-	0.5	0.5	0.2	0.3	<1	0.2	-	0.2			-	-	<1	-	0.1	-				-	-	-	-
Clavelina huntsmani	-	-	-	<1	-	0.6	-	1.7	1.4	0.2	2.1	3.8			-	-	0.1	0.8	-	0.3				-	-	-	-
Clavularia spp	-	-	-	-	-	-	-	-	0.8	0.2	-	-			-	-	3.1	-	-	-				-	-	-	-
Cnemidocarpa finmarkiensis	-	-	<.1	-	0.4	0.3	0.2	0.3	0.3	0.6	0.9	0.4			0.4	-	-	0.5	<.1	-				<.1	0.2	0.3	0.3
Corynactis californica	12.5	13.9	18.9	18.1	17.5	12.8	18.0	9.5	12.2	16.5	19.1	23.6			31.1	24.4	36.1	15.5	10.4	10.1				9.8	15.8	25.2	26.1
Crassedoma giganteum	-	-	-	-	-	-	-	-	-	0.1	-	-			-	<1	<1	-	0.1	0.1				-	<.1	-	-
Crepidula spp	-	-	-	<1	0.5	0.2	0.2	<1	0.2	0.1	0.2	0.7			0.6	0.9	0.4	0.5	0.5	0.4				<.1	0.1	0.3	1.1
Cryptochiton stelleri	-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-				-	<1	-	0.1
Cryptolithodes sitchensis	0.3	-	0.3	0.1	-	0.2	-	<1	0.3	0.2	-	0.2			0.1	-	<1	<1	<1	0.5				0.2	<1	<1	-
Cucumaria spp.	-	-	0.5	0.6	0.3	0.3	1.0	1.2	1.9	1.8	9.1	2.1			2.3	0.5	0.3	-	0.3	0.1				0.7	0.3	0.6	0.5
Dendrodoris spp	-	-	-	-	-	-	-	-	0.2	<1	-	-			-	-	-	-	-	-				-	<1	-	-
Dendropoma lituella	-	1.0	195.3	206.1	249.1	243.3	225.5	173.8	108.6	89.9	66.0	87.6			25.3	1.9	12.5	6.8	4.4	2.6				3.3	1.3	2.6	4.1
Dendropoma spp.	12.8	65.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 2-6m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																												
Diaulula sandiegensis		.	.	.	.	.	.	.	.	< 1	< 1	.	.			.	.	.	.	.	.				< 1	.	.	.
Diodora aspera		.	.	.	.	.	.	.	.	.	.	.	0 3			.	0 2	< 1	.	.	0 1				.	< 1	.	.
Diopatra ornata		.	.	.	.	0 1	.	.	.	.	.	.	< 1			.	.	.	0 3	< 1	0 1				.	.	< 1	.
Dirona albolineata		.	.	.	.	.	.	.	.	.	.	.	.			< 1	.	.	.	.	.				.	.	.	.
Dorídacea unid		.	.	.	.	.	0 2	.	< 1	.	.	.	.			.	.	0 2	.	.	.				.	.	.	.
Doriopsilla albopunctata		0 3	.	0 2	1 4	0 5	< 1	0 1	< 1	0 5	0 5	0 8	0 8			0 6	0 5	0 3	0 3	0 2	0 1				0 8	0 5	0 2	0 1
Epiactis prolifera		1 3	0 8	0 9	0 6	1 8	1.0	1 7	1 2	0 9	1 3	1 7	2 4			1 5	0 8	0 8	0.7	0 6	0 8				1.2	2.1	0 9	0 6
Erato vitellina		.	.	.	.	.	.	.	.	.	.	.	.			.	0 2	.	.	< 1	.				.	.	.	.
Eudistylia polymorpha		0 3	0 3	< 1	0 3	0 4	< 1	.	.	< 1	0 2	< 1	0 4			0 5	< 1	<.1	< 1	.	.				.	0 2	.	.
Eupentacta quinquesemita		.	.	.	.	.	0 2	0 5	0 3	0 5	0 1	0 3	0 3			0 2	< 1	0 3	< 1	0 3	0 1				.	.	< 1	0 5
Fissurella volcano		.	0 1	.	.	.	.	.	.	.	< 1	.	.			.	.	0 2	.	< 1	0 3				< 1	< 1	< 1	.
Flabellina iodinea		.	.	.	.	.	.	.	.	< 1	.	.	.			.	.	.	.	.	.				.	.	.	.
Flabellina trilineata		.	.	.	.	0 4	.	.	.	< 1	.	.	.			.	.	.	.	.	.				.	.	.	.
Fusinus luteopictus		.	.	.	< 1	.	.	< 1	.	.	.	.	.			0 4	0 2	0 3	0 2	0 5	.				< 1	<.1	0 4	.
Halcampa decementaculata		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	.	.				< 1	.	.	.
Haliotis rufescens		0 3	.	.	.	.	0 2	< 1	.	.	< 1	.	.			.	.	.	.	.	0 3				.	.	.	.
Haliotis spp		.	.	.	.	.	.	.	< 1	.	.	.	.			.	.	.	.	.	.				.	.	.	.
Haliotis spp (juv)		.	.	.	.	.	.	.	.	.	.	.	.			.	< 1	0 2	< 1	0 1	.				0 3	0 2	.	.
Henricia leviuscula		1 0	.	0 3	< 1	.	0 5	0 2	0 2	.	< 1	0 3	0 5			0 6	0 7	0 2	0 7	0 2	.				0 2	0 3	< 1	0 3
Heptacarpus spp		.	.	.	.	.	.	.	.	.	.	.	.			.	.	< 1	.	.	.				.	.	.	.
Hermissenda crassicornis		.	.	< 1	0 2	.	< 1	0 1	0 4	0 2	0 2	< 1	.			< 1	0 2	< 1	< 1	.	0 3				0.3	0 3	< 1	.
Homalopoma spp		0 5	2 5	2 3	2 8	3 1	1.5	1 3	1 3	1 0	0 8	2 6	2 8			3 1	6 1	4 6	5 4	5 6	6 6				4 3	4 7	4 8	4 5
Idotea spp		.	.	< 1	.	.	.	.	.	.	.	.	.			.	.	.	.	<.1	.				.	.	.	.
Ischnochiton spp		0 5	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	.	.				.	.	.	.
Ischnochitonidae		.	.	0 3	0 3	.	.	< 1	.	0 3	0 1	.	< 1			.	.	0 1	.	.	0 3				.	.	.	.
Lacuna spp		.	.	.	0 6	.	.	0 2	.	.	.	.	.			.	< 1	< 1	0 2	< 1	.				0 3	.	< 1	.
Laila cockerelli		.	.	.	.	.	.	.	.	< 1	.	.	0 2			.	.	0 1	.	.	.				.	.	.	.
Lamellaria diegoensis		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	< 1	.				.	.	.	.
Lepidozona spp		.	.	.	.	.	.	.	.	.	.	.	0 2			.	< 1	.	0 2	< 1	.				0 2	.	.	0 1
Leptasterias hexactis		0 5	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	.	.				.	.	.	.
Leptasterias spp		.	0 5	0 8	1 1	1 1	0 9	0 8	0 3	0 3	0 5	2 3	2 5			0 9	2 1	0 4	0 8	0 6	0 6				0 9	0 6	0 7	0 5
Leucandra heathi		0 3	.	< 1	0 3	.	0 6	0 6	.	1 3	0 6	1 5	0 9			0 3	0 3	0 6	.	.	.				.	.	< 1	.
Leucilla nuttingi		.	.	.	< 1	1 0	0 9	1 0	0 7	5 2	3 4	2 6	1 8			2 8	1.9	0 7	.	0 4	0 8				0 2	0 5	.	.
Lirularia spp		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	< 1	.				.	.	.	.
Lissothuria nutriens		.	.	.	.	.	.	< 1	.	.	.	0 2	.			.	.	.	.	.	.				.	.	.	.
Lithopoma gibberosum		.	0 3	1 6	1 1	0 1	0 3	0 2	< 1	< 1	< 1	0 2	< 1			0 1	0 3	0 1	< 1	.	0 1				.	0 3	.	.
Lithopoma gibberosum (juv)		.	.	.	.	.	.	.	.	.	.	.	< 1			.	< 1	.	.	.	.				0 3	.	0 1	.
Lophopanopeus spp		.	.	.	0 3	0 9	.	0 1	< 1	.	.	.	.			.	0 3	0 1	< 1	0 2	0 1				.	.	.	.
Lottia instabilis		.	.	.	< 1	.	0 4	0 4	0 5	0 5	1 0	0 5	0 7			1 3	0 8	0 1	0 5	.	.				0 3	0 2	0 1	0 3
Lottia ochracea		0 3	0 8	0 8	0 5	.	0 7	0 2	0 2	0 2	0 4	.	.			< 1	0 3	0 2	< 1	0 4	.				0 3	< 1	.	0 4
Loxorhynchus crispatus		.	.	.	.	.	<.1	.	< 1	.	.	.	.			< 1	.	.	.	.	.				.	< 1	.	.
Loxorhynchus spp		.	.	.	.	.	.	.	.	< 1	.	.	0 2			< 1	.	<.1	.	0 1	.				.	.	.	.
Majidae		1 5	0 5	1 6	0 7	.	.	.	0 3	.	.	.	.			.	.	.	.	.	.				.	.	.	.
Megabalanus californicus		.	.	.	.	.	.	.	.	.	0 1	.	.			.	.	.	.	.	.				.	.	.	.
Megathura crenulata		.	.	.	.	.	.	.	.	.	.	.	.			.	.	< 1	.	.	.				.	.	.	.
Mimulus foliatus		.	0 1	< 1	0 1	.	0 2	0 3	.	.	.	.	0 2			< 1	0 2	0 1	.	0 2	.				< 1	0 2	< 1	.
Mitra idae		0 5	0 4	< 1	0 4	0 6	0 3	0 3	0 4	0 4	0 5	0 2	0 4			0 6	0 7	0 5	0 6	0 8	0 5				0 3	0 6	0 4	0 9
Mopalia lignosa		.	.	.	.	.	.	.	.	.	.	.	<.1			.	.	.	.	.	.				.	.	.	.
Mopalia muscosa		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	.	0 1				.	.	.	.
Mopalia spp		.	.	.	.	.	.	.	< 1	.	<.1	.	0 2			.	.	0 2	.	< 1	.				.	.	.	.
Myxicola infundibulum		.	.	.	0 8	.	0 3	0 4	0 6	0 3	0 8	1 0	0 7			0 4	0 2	0 3	< 1	< 1	0 1				.	< 1	0 2	.
Nassarius mendicus		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	< 1	.				.	.	.	.
Natantia unid		.	.	.	.	.	.	.	.	.	.	.	.			.	.	<.1	.	.	.				.	.	.	.
Nemertea unid		.	.	.	.	.	.	.	.	0 2	.	.	.			< 1	.	0 1	.	.	.				.	.	.	.
Nereididae unid		.	.	.	.	.	.	.	.	.	.	.	.			.	.	.	.	0 1	.				.	.	.	.
Nitidiscala spp		.	.	.	.	.	.	.	.	.	.	.	< 1			< 1	.	.	.	.	.				.	.	.	.
Nitidiscala/Opalia spp		.	.	.	.	.	.	.	0 2	.	.	.	.			.	.	.	.	.	.				.	.	.	.

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 2-6m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																												
Ocenebra foveolata		-	-	-	-	-	-	-	-	-	<1	-	-			-	-	-	-	-	-				-	-	-	-
Ocenebra interfossa		-	-	-	-	-	0.2	-	0.2	-	-	-	-			-	-	<1	-	-	-				-	-	-	-
Ocenebra lurida		1.0	-	0.8	0.7	0.8	1.0	0.7	0.5	0.2	-	0.5	<1			0.3	<.1	-	<1	-	0.5				-	0.4	0.4	0.8
Ocenebra spp		-	-	0.8	1.3	0.9	<1	0.1	0.2	0.2	0.1	0.3	<1			0.5	0.4	0.3	<1	0.3	-				-	-	0.3	-
Ophioplocus esmarki		-	-	<.1	0.2	-	-	0.1	-	-	-	-	0.2			-	-	-	-	0.2	-				-	-	-	-
Ophiothrix spiculata		-	-	0.3	0.9	0.9	<.1	0.1	0.5	-	<.1	<1	0.3			0.3	0.8	0.9	0.5	1.3	0.8				<1	<.1	-	-
Ophiothrix spp.		-	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Ophiuroidea unid.		-	-	-	<1	0.3	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Orthasterias koehleri		-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	0.1				-	-	-	-
Pagurus spp		7.0	0.5	7.3	5.3	10.9	7.8	17.3	4.6	2.0	7.3	3.7	5.5			3.8	6.5	6.0	4.9	6.8	4.9				6.7	2.3	2.8	0.6
Paracyathus stearnsii		-	-	-	-	0.4	<1	0.2	<1	-	<1	-	-			-	<1	0.2	0.3	0.1	0.3				-	-	-	0.3
Pelecypoda unid		-	-	-	-	-	-	-	-	<1	-	-	-			-	-	-	-	-	-				-	-	-	-
Pelecypoda unid. boring		0.5	2.5	2.8	4.3	3.8	4.0	3.3	4.4	0.9	1.4	1.8	0.8			1.2	0.3	0.9	2.5	1.1	0.4				0.2	0.2	1.3	0.8
Petrolisthes spp		-	-	-	0.1	-	-	-	-	-	-	-	-			-	-	<1	-	0.1	-				-	-	-	-
Phascolosoma agassizii		-	-	-	0.8	-	-	-	<.1	-	-	0.2	-			-	-	-	-	-	-				-	-	-	-
Phidiana hiltoni		-	0.1	-	0.1	-	-	-	<1	-	0.4	-	-			0.1	0.3	-	-	0.1	-				-	<.1	-	-
Phragmatopoma californica		-	4.3	17.3	19.8	15.1	16.1	35.4	24.8	43.8	93.8	109.8	67.8			37.1	16.8	11.1	8.2	6.2	8.6				4.8	5.1	4.4	7.3
Phyllochaetopterus prolifica		-	-	2.6	1.6	3.4	4.3	5.1	5.8	4.5	6.1	5.8	4.1			1.7	<.1	0.4	0.9	1.6	1.1				2.3	2.4	1.4	0.4
Pisaster giganteus		-	-	-	-	-	<.1	-	-	0.2	0.1	-	0.2			-	-	<.1	-	<1	0.1				-	0.1	-	-
Pisaster ochraceus		-	-	-	-	-	-	-	0.3	-	-	-	-			-	-	-	-	-	-				<1	0.1	-	0.1
Pisaster/Henricia (juv.)		-	-	0.4	0.4	0.8	1.2	0.8	0.3	0.2	0.7	0.7	0.8			0.7	0.6	0.8	0.2	0.5	0.1				-	-	0.1	0.1
Pista spp		-	-	0.7	0.1	0.3	0.5	0.7	-	0.5	0.9	0.8	0.8			0.8	0.8	0.3	0.4	0.6	0.9				0.8	0.5	0.7	-
Pista/Streblosoma spp		0.3	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Placiphorella velata		-	-	-	-	-	-	<1	-	<1	-	-	-			-	-	-	-	-	-				-	-	-	-
Pododesmus cepio		0.3	-	-	-	-	-	-	-	-	0.5	0.3	-			<1	0.2	0.4	-	-	-				-	-	-	-
Polyplacophora unid. a		-	-	<.1	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Porcellanidae unid.		-	-	-	<.1	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Pseudomelatoma torosa		-	0.1	-	-	-	<1	<1	-	<1	<.1	0.3	0.2			0.2	0.8	0.5	0.6	0.3	0.3				0.3	0.2	-	0.4
Pugettia producta		-	0.1	<1	-	0.1	-	-	-	-	0.2	-	0.3			-	-	-	-	-	-				<1	0.1	<.1	-
Pugettia richii		-	-	0.5	2.6	3.3	1.8	2.7	1.1	0.7	1.6	0.9	1.9			2.3	2.6	2.7	1.5	2.8	1.9				0.9	1.9	0.3	0.1
Pugettia spp.		-	-	0.2	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Pycnogonida unid.		-	-	-	-	-	-	-	-	-	-	0.2	-			-	-	-	-	-	-				-	-	-	-
Pycnopodia helianthoides		-	-	0.2	-	-	-	-	-	-	-	-	-			-	-	-	<1	-	-				-	0.2	<.1	-
Pyura haustor		-	-	0.4	1.6	3.0	3.3	2.6	1.6	1.5	3.1	3.7	2.9			2.1	1.1	0.9	0.7	0.3	0.6				0.4	0.4	0.6	0.5
Rostanga pulchra		-	-	-	<1	-	-	-	<1	0.2	-	-	-			<1	-	-	-	<1	-				-	-	0.1	-
Sabellidae		0.3	-	0.2	0.6	-	0.3	0.4	-	-	0.8	1.3	1.4			0.4	1.5	0.4	0.2	-	-				0.2	0.3	-	-
Scyra acutifrons		-	-	-	-	-	-	-	-	<1	0.1	<1	-			<.1	0.4	-	-	-	-				-	-	-	-
Searlesia dira		-	0.1	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Serpula vermicularis		-	-	-	1.8	3.3	3.4	3.6	7.2	6.8	6.7	7.5	6.3			2.3	1.8	1.9	1.4	1.1	1.4				1.0	0.3	0.3	0.5
Serpulidae unid		10.5	0.5	11.8	2.2	1.1	1.5	0.6	1.3	3.2	2.3	1.1	0.8			0.5	-	0.2	0.3	0.4	1.9				-	0.1	0.3	0.1
Serpulorbis squamigerus		1.5	1.0	2.8	7.6	9.0	8.0	7.3	8.4	10.1	15.7	20.0	19.3			12.7	9.7	10.2	6.5	6.8	5.9				2.7	3.6	4.3	4.1
Sipuncula unid.		0.3	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Sphaeromatidae unid.		-	-	-	-	-	-	-	-	-	-	-	-			-	-	<1	-	-	-				-	-	-	-
Spirobranchus spinosus		-	-	<1	1.3	0.5	0.3	1.8	0.9	2.8	1.5	1.7	2.5			1.1	0.8	1.9	2.9	2.5	2.9				3.4	1.2	1.4	0.6
Strongylocentrotus franciscanus		0.8	0.1	-	<.1	-	-	-	-	-	0.1	<1	-			-	-	-	-	-	-				-	-	-	-
Strongylocentrotus purpuratus		0.3	0.4	0.2	0.3	-	<1	0.1	0.2	0.3	0.2	-	-			0.1	-	-	0.3	-	-				-	<1	-	-
Strongylocentrotus spp		-	-	-	<.1	0.3	0.3	0.5	0.2	0.3	0.5	-	0.8			0.5	1.2	0.3	0.3	0.4	0.6				0.2	-	-	-
Styela montereyensis		1.3	0.4	0.2	0.9	1.3	0.8	1.4	0.9	1.0	2.1	2.5	2.5			1.8	1.2	0.5	0.3	0.1	0.4				0.6	0.9	1.2	0.9
Styela spp		-	-	-	-	-	-	-	-	0.2	-	-	-			-	-	-	-	-	-				-	-	-	-
Tectura persona		0.5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Tegula brunnea		1.0	3.3	2.4	3.0	6.3	3.6	3.1	2.8	3.3	3.4	4.8	5.1			2.4	2.6	1.0	6.6	1.9	3.9				7.7	5.3	4.4	3.8
Tegula montereyi		-	-	-	<1	-	-	0.2	-	-	-	0.4	-			0.1	<.1	0.2	0.2	0.1	-				0.2	-	0.3	0.3
Tegula pulligo		0.8	-	<1	0.4	0.6	0.3	0.4	<1	-	<.1	<1	0.3			0.1	<1	<.1	0.6	0.2	-				-	0.1	0.3	0.1
Terebellidae unid		0.5	0.1	0.3	-	-	0.3	0.4	0.3	0.2	0.2	<1	-			-	-	-	-	-	-				-	-	-	-
Tethya aurantia		-	-	-	-	-	-	0.1	-	-	-	-	-			-	-	-	-	-	0.1				0.2	0.3	0.2	0.3
Tetraclita rubescens		-	0.9	0.2	0.8	-	<.1	0.6	-	1.2	3.4	0.2	0.3			-	-	0.4	-	0.9	1.1				-	-	-	-
Themiste pyroides		-	0.1	0.5	0.6	0.4	1.8	0.2	0.9	0.3	0.6	0.3	0.6			0.4	0.8	0.4	0.2	<.1	0.4				<1	0.2	0.2	0.3

(continued)

Subtidal Fixed Quadrat - Yearly Invertebrate Mean Abundance (per quarter meter squared) Patton Cove SC 2-6m (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Counted Regardless of Size																												
Tonicella lineata		4.8	1.5	2.4	3.8	4.3	3.1	2.1	1.7	1.5	1.1	0.7	0.8			1.2	0.7	0.8	0.6	1.2	0.9				0.9	1.0	1.2	1.0
Tricolia pullolides		-	-	0.7	0.3	-	-	0.1	0.2	0.3	0.1	-	0.2			-	-	-	-	0.8	0.1				0.5	-	-	-
Tricolia spp		-	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Triopha catalinae		-	-	-	<.1	-	<.1	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	0.1
Triopha maculata		-	-	-	-	-	-	-	-	0.2	-	0.2	<.1			<.1	<.1	<.1	<.1	0.3	-				-	-	-	-
Tritonia festiva		-	-	-	-	-	-	-	-	-	<.1	-	-			-	-	-	-	-	-				-	-	-	-
Trivia californiana		-	-	-	-	-	-	-	-	-	0.1	-	-			-	-	-	-	-	-				-	-	-	-
Tubulanus polymorphus		-	-	-	<.1	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Tubulanus sexlineatus		-	-	-	-	-	-	-	-	<.1	-	-	-			-	-	-	-	-	-				-	-	-	-
Urticina lofotensis		-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	<.1	-	-	-				-	-	-	-
Urticina spp		-	-	-	-	-	-	-	-	-	-	-	-			-	<.1	-	-	-	-				-	-	-	-
tunicate, solitary unid.		-	0.9	0.3	<.1	-	-	0.2	0.3	0.3	0.7	1.3	1.4			1.8	2.1	0.8	1.6	0.4	-				0.6	0.8	0.9	0.8
Coverage Based on # of 1" Squares																												
Abiet./Sertularella/Sertularia spp		5.5	-	-	<.1	-	-	<.1	-	-	0.1	<.1	0.2			<.1	<.1	<.1	-	-	<.1				-	-	<.1	<.1
Aglaophenia spp		-	-	-	-	0.3	<.1	<.1	-	-	0.2	0.3	<.1			<.1	-	-	-	-	-				-	-	-	-
Bryozoa, unid (encrusting)		18.5	6.3	1.8	4.1	2.9	4.3	5.1	5.3	3.4	6.7	5.8	6.6			3.9	3.6	6.0	4.0	3.6	4.1				3.8	3.0	4.9	2.5
Bryozoa, unid. (erect)		-	0.1	-	0.5	0.4	0.6	0.3	0.3	<.1	0.3	0.9	0.9			1.4	1.3	2.6	2.0	0.9	0.6				0.3	0.9	1.4	0.4
Bryozoa, unid. (foliose)		-	-	<.1	0.3	1.0	0.5	0.5	0.8	0.8	0.9	1.2	0.9			0.6	0.2	<.1	<.1	0.1	-				<.1	0.2	0.3	0.3
Cliona spp		-	-	-	-	-	-	-	-	-	-	-	0.3			-	-	-	-	-	-				-	-	-	-
Didemnum/Trididemnum spp		1.3	0.5	0.8	1.3	2.0	2.0	2.2	0.2	0.3	0.7	2.0	1.7			1.3	1.4	1.1	0.8	0.8	1.0				1.9	1.2	0.6	0.5
Dodecaceria fewkesi		-	-	-	-	-	-	-	0.5	-	<.1	-	-			-	-	-	-	-	-				-	-	-	-
Eurystomella bilabiata		-	-	-	-	-	-	-	-	-	0.1	0.8	0.6			-	-	-	<.1	-	-				-	-	-	-
Hydroid, thecate unid a		-	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Hydroida		-	-	0.8	-	-	0.3	1.3	0.8	2.5	2.0	0.2	<.1			0.3	<.1	0.1	<.1	0.3	0.5				-	-	0.1	0.1
Hymenamphiastra cyanocrypta		-	-	-	<.1	0.4	0.8	0.3	0.2	0.2	0.3	0.9	1.3			1.7	2.0	3.8	1.4	2.6	2.3				2.4	2.9	3.4	4.6
Leucosolenia eleanor		-	-	-	-	-	-	-	-	-	-	-	-			<.1	-	-	-	-	-				-	-	-	-
Leucosolenia spp		-	-	-	<.1	-	-	-	-	-	0.2	-	0.2			-	0.2	-	-	-	-				-	-	-	-
Metandrocarpa taylori		-	-	-	-	-	-	-	-	-	-	-	<.1			-	-	-	-	-	-				-	0.2	0.3	0.4
Obelia spp.		-	-	-	-	-	<.1	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Phidolopora pacifica		-	-	<.1	<.1	-	-	-	-	0.4	0.3	0.2	0.3			0.4	<.1	<.1	<.1	<.1	-				0.5	-	-	-
Phidolopora spp		1.0	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Porifera unid. (encrusting)		-	0.1	1.1	1.7	1.9	3.9	3.3	3.3	2.8	5.4	4.2	4.1			3.8	2.3	3.3	1.2	1.8	1.3				1.8	1.6	2.9	1.5
Porifera unid. c (orange)		0.8	-	-	-	-	-	-	-	-	-	-	-			-	0.7	-	-	-	-				-	-	-	-
Salmacina tribranchiata		-	-	<.1	0.2	0.3	0.2	0.2	0.3	<.1	0.1	0.7	0.3			0.6	0.5	0.4	0.2	<.1	0.1				0.6	<.1	0.3	0.4
Spirorbis spp		-	-	-	0.4	0.9	1.8	1.4	1.0	1.2	0.8	0.3	0.3			0.3	<.1	<.1	<.1	<.1	<.1				<.1	<.1	<.1	<.1
Tricellaria spp		0.8	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Tubularia spp.		-	-	-	-	-	-	-	-	-	-	-	0.5			-	-	-	-	-	-				-	-	-	-
epiphytic bryozoan (sq)		-	-	-	-	-	-	-	-	-	-	-	-			0.6	1.4	-	-	-	-				-	-	-	-
tunicate, colonial unid. b(yellow)		0.3	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
tunicates, colonial/social unid		-	0.3	0.8	1.6	1.5	1.7	2.7	0.8	1.1	3.1	2.1	3.8			1.0	1.8	1.6	1.3	1.3	1.0				1.1	0.9	1.1	0.5

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) Fields Cove FC 1-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	2	4	4	2	4	2	3	3	1	1	4	4	4	4	2
Coverage Based on # of Contact Points																											
Bryozoa, unid. (encrusting)													-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-
Phragmatopoma californica													-	-	-	0.3	-	-	-	-	-	-	-	-	0.1	-	-
Porifera unid. (encrusting)													-	0.1	0.5	0.8	0.1	-	-	-	-	-	-	-	-	-	-
Serpulorbis squamigerus													-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid.													-	0.5	0.4	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) North Diablo CoveNDC 2 -3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	3	4	5	4	5	3	4	4	3	4	4	4	2	ns	ns	ns	3	4	4	2
Coverage Based on # of Contact Points																											
Anthozoa unid.	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Bryozoa, unid. (encrusting)	1.0	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Dodecaceria fewkesi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-				-	-	-	-
Eplactis prolifera	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Hydroida	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-
Phragmatopoma californica	-	-	-	-	-	-	-	-	-	0.1	-	0.3	1.7	2.4	0.3	-	-	-	-	-				0.8	5.3	2.1	-
Porifera unid. (encrusting)	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-				-	-	-	-
tunicates, colonial/social unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-				-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 3-3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	3	4	4	3	3	3	4	4	5	5	4	3	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																											
Bryozoa, unid (encrusting)	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Phragmatopoma californica	-	-	-	-	-	-	-	-	-	1.0	0.8	-	0.2	0.1	-	-	-	-	-	-	-	-	-	0.6	1.4	0.3	1.8
Pista spp	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera unid (encrusting)	-	-	-	0.1	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Serpulorbis squamigerus	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	0.1	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) North Diablo Cove NDC 4 -4m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	1	4	5	3	3	4	4	4	6	4	3	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																												
Abiet /Sertularella/Sertularia spp		0 5	-	-	-	-	-	-	-	-	•	-				-	-	-	-	-	-	•	-	-	-	•	-	-
Anthopleura elegantissima		1 0	-	•	-	•	•	-	-	-	-	•	•			-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid (encrusting)		0 5	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	0 3	-	-	-	-
Didemnum/Trididemnum spp		-	0 5	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diopatra ornata		•	-	-	-	-	-	-	-	•	-	-	-			-	0 1	-	-	-	-	•	-	-	-	•	-	-
Phragmatopoma californica		-	-	-	0 1	-	-	-	2 6	3 4	10 3	7 4	1 3			-	0 3	-	-	0 3	-	-	7 5	16 5	23 1	18 8	8 0	2 0
Porifera unid (encrusting)		3 5	-	-	•	-	-	-	-	-	-	0 3	•			-	-	-	-	-	-	-	0 3	-	-	-	-	-
Serpulorbis squamigerus		-	-	-	-	-	-	-	-	-	•	0 1	-			-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid		0 5	-	-	-	-	-	-	-	-	-	-	-			-	-	•	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) South Diablo Cove SDC 2-3m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	5	6	6	4	4	5	6	6	5	5	4	4	4	4	4	4	4	2	2	2	2	4	4	4	2
Coverage Based on # of Contact Points																												
Anthopleura elegantissima		-	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Didemnum/Trididemnum spp		-	-	•		•	-	-	-	-	-	-	-	-	0 1	-	-	•	-	-	-	-	-	-	-	-	-	-
Diopatra ornata		-	0 2	-	-	-	-	-	-	-	-	-	-	-	-	•	•	-	-	0 3	-	-	-	-	-	-	-	-
Halcampa decemtentaculata		-	-	-	-	-	-	-	-	-	-	-	-	-	0 1	-	-	-	-	-	-	-	-	-	-	-	-	•
Phragmatopoma californica		-	•	-	-	-	-	-	-	-	-	-	0 2	•	-	-	-	-	•	-	-	-	0 5	1 3	2 9	1 5	0 1	-
tunicates, colonial/social unid		-	0 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) South Diablo Cove SDC 3-4m

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Surveys/Year	1	3	5	6	6	3	6	3	6	6	4	5	ns	ns	4	4	4	4	4	2	1	2	2	4	4	4	2
Coverage Based on # of Contact Points																												
Anthopleura elegantissima		-	0 2	-	< 1	-	-	-	-	-	-	-	0 2			-	-	-	-	-	-	-	-	-	-	-	-	-
Anthopleura xanthogrammica		-	0 2	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Bryozoa, unid (encrusting)		-	•	-	-	-	-	-	-	-	-	0 3	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Dendropoma spp		-	0 2	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diopatra ornata		2 0	0 3	-	0 8	-	-	-	-	-	0 2	0 1	0 2			0 1	0 4	0 4	0 4	-	0 5	1 5	2 5	0 5	0 6	0 3	0 6	-
Epiactis prolifera		0 5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	
Phragmatopoma californica		-	-	0 2	0 4	-	-	-	-	-	< 1	-	-			0 6	0 3	-	-	-	-	-	2 3	2 8	1 0	0 1	-	
Porifera unid (encrusting)		•	-	-	-	-	-	-	-	-	-	0 1	-			-	0 1	-	-	-	0 3	-	-	-	-	-	-	-
Serpulidae unid		0 5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-		-	-	-	-	-	-	-	-
Styela spp		-	< 1	-	•	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid		-	0 2	0 4	< 1	-	-	-	-	-	-	0 1	-			0 1	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) Patton Cove SC 1 -3m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	3	3	3	3	3	5	2	3	3	4	4	3	4	3	4	2	2	1	2	4	4	4	2
Coverage Based on # of Contact Points																											
Rhodoptilum plumosum	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	<1	-	-	-	-	<1	-	-	-	-	-	<1	<1
Rhodymenia spp	<.1	1.3	1.3	0.9	<1	0.7	1.2	1.0	3.7	2.0	2.5	8.7	6.3	4.6	6.3	9.0	8.4	10.2	11.9	13.3	17.5	9	12.3	16.5	16.5	17.3	19.5
Sarcodiotheca gaudichaudii	2.0	1.3	2.0	1.1	0.3	1.2	1.0	1.0	0.7	0.2	1.3	0.7	0.3	0.8	<1	0.3	<.1	0.3	0.3	0.5	0.3	-	0.3	<1	<1	0.1	<1
Scinaia confusa	-	-	<.1	-	<.1	<.1	-	0.5	-	-	-	-	<.1	<1	-	<.1	-	-	-	<.1	<1	-	<1	-	<1	-	-
Smithora naiadum	-	0.3	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spongomorpha/Acrosiphonia-complex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Ulva/Enteromorpha spp	3.5	2.5	3.2	1.4	2.7	5.3	0.3	33.3	9.8	0.2	3.8	1.7	2.3	0.9	1.1	0.7	<.1	0.2	<1	<.1	1	-	4.3	<1	0.3	<1	<1
coralline crust	59.5	48.3	51.8	39.4	53.8	47.3	52.2	55.5	56.5	51.5	53	50.2	48.3	41.8	42.8	46.7	49.8	52.5	44.5	53	47.0	45.5	59.0	41.8	45.1	49.4	74.5
filamentous red algae-complex	0.5	2.0	1.5	0.4	0.2	<1	0.5	0.5	0.2	<1	0.3	<1	<.1	0.1	<1	<.1	<.1	<.1	0.1	<1	-	<1	-	-	0.1	-	<1
Anthopleura elegantissima	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Balanus spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
Bryozoa, unid. (encrusting)	-	-	-	-	-	-	-	-	-	-	1.3	0.2	0.8	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
Dendropoma spp	-	0.3	-	-	-	0.3	-	-	-	-	0.3	0.2	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Diopatra ornata	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-
Epiactis prolifera	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phragmatopoma californica	-	0.3	-	-	-	-	0.3	-	0.8	8.5	7.5	7.5	7.5	10.0	8.6	6.2	3.9	0.5	0.6	-	0.5	1.0	3.3	14.6	12.3	5.1	1.3
Porifera unid. (encrusting)	0.5	0.3	-	-	-	-	-	-	-	-	-	0.3	-	-	0.1	-	-	-	-	-	0.3	-	-	-	-	-	-
Serpulidae unid	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Serpulorbis squamigerus	-	0.3	-	-	-	-	-	-	-	-	1.0	-	2.8	0.5	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Tetraclita rubescens	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
tunicates, colonial/social unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-

Subtidal Line Contact - Yearly Invertebrate Mean Abundance (% Cover for 7m squared) Patton Cove SC 2 -6m

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Surveys/Year	1	2	3	4	2	3	4	3	3	5	3	3	ns	ns	4	3	4	3	4	2	ns	ns	ns	3	4	4	2
Coverage Based on # of Contact Points																											
Aglaophenia spp	-	-	-	-	-	-	-	-	-	-	-	0.2			-	-	-	-	-	-				-	-	-	-
Anthopleura elegantissima	1.0	0.3	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Balanophyllia elegans	-	-	-	-	-	-	-	-	-	0.2	-	-			-	-	-	-	-	-				-	-	-	0.3
Balanus spp	0.5	-	-	-	-	-	-	-	-	-	0.5	-			0.3	-	-	-	-	-				-	3.9	0.8	2.8
Barnacle scar unid.	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	0.4	-
Bryozoa, unid. (encrusting)	-	-	-	-	-	-	-	0.3	0.2	1.1	2	4.3			0.8	4.5	0.6	4.3	1.6	-				-	2.9	2.9	1.0
Bryozoa, unid (erect)	-	-	-	-	-	-	-	-	-	-	-	0.2			0.5	-	-	-	-	-				-	-	-	-
Bryozoa, unid. (foliose)	-	-	-	-	-	-	-	-	-	-	0.2	0.2			-	-	-	-	-	-				-	-	-	-
Corynactis californica	0.5	-	-	0.1	-	-	-	-	-	0.2	-	0.2			-	-	-	-	-	-				-	-	-	-
Dendropoma spp	-	1.0	1.2	-	-	-	0.1	0.3	0.2	0.2	0.3	0.5			-	-	-	-	-	-				-	-	-	-
Diopatra ornata	-	-	-	-	-	-	-	-	-	-	-	-			-	0.2	-	-	-	-				-	-	-	-
Dodecaceria fewkesi	4.0	3.5	3.7	2.8	-	0.7	0.6	1.7	0.3	0.5	-	0.3			-	-	-	-	-	-				-	-	-	-
Eudistylia polymorpha	1.0	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Hymenamphiastra cyanocrypta	-	-	-	-	-	-	-	-	-	0.2	-	-			-	-	-	-	-	-				-	-	-	-
Phragmatopoma californica	-	-	-	0.1	-	-	0.5	-	2.5	5.2	10.2	5.3			1.9	1.0	0.3	0.2	0.1	-				-	-	0.3	-
Porifera unid (encrusting)	-	-	-	-	-	-	-	-	-	0.2	1.5	3.7			1.1	0.8	0.1	0.2	-	-				-	0.6	0.9	-
Serpulidae unid.	2.5	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-				-	-	-	-
Serpulorbis squamigerus	-	-	-	-	-	-	-	-	-	-	0.5	2.0			0.6	0.2	0.1	-	-	-				-	-	-	-
tunicates, colonial/social unid.	-	-	-	-	-	-	-	-	-	0.2	0.7	0.5			1.0	1.0	-	-	0.3	-				-	0.4	-	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Midwater- North Control

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Station Replicates/Year	4	6	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	- ns	ns
Atherinidae unid		-	-																									
Aulorhynchus flavidus		-	0 4																									
Brachyistius frenatus		-	-																									
Damalichthys vacca		0 5	0 2																									
Embiotoca jacksoni		0 6	-																									
Embiotoca lateralis		1 8	1 8																									
Engraulis mordax		-	4 2																									
Girella nigricans		0 3	-																									
Hypsurus caryi		0 1	-																									
Myliobatis californica		-	-																									
Ophiodon elongatus		-	-																									
Oxyjulis californica		3 6	26 7																									
Paralabrax clathratus		-	-																									
Phanerodon furcatus		-	-																									
Rhacochilus toxotes		-	-																									
Sebastes atrovirens		-	-																									
Sebastes atrovirens (yoy)		-	-																									
Sebastes chrysomelas/S carnatus		-	-																									
Sebastes melanops		-	< 1																									
Sebastes melanops (juv)		-	-																									
Sebastes mystinus		-	1 4																									
Sebastes mystinus (juv)		8 1	13 3																									
Sebastes paucispinis (juv)		-	0 5																									
Sebastes serranoides		-	-																									
Sebastes serranoides/S. flavidus (juv)		2 6	16 3																									
Sebastes spp		1 5	-																									
Triakis semifasciata		-	-																									

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Midwater- Field's Cove

Taxon	Year / # Station Replicates/Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
		ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	6	9	8	2
Atherinidae unid																												
Aulorhynchus flavidus																									-	2 1	-	
Brachyistius frenatus																									-	1 6	6 5	22 5
Damalichthys vacca																									-	0 7	3 2	-
Embiotoca jacksoni																									0 9	3 4	0 4	3 5
Embiotoca lateralis																									0 2	0 3	< 1	-
Engraulis mordax																									0 2	0 4	< 1	-
Girella nigricans																									-	-	-	-
Hypsurus caryi																									-	0 1	< 1	-
Myliobatis californica																									-	< 1	-	-
Ophiodon elongatus																									-	0 1	-	-
Oxyjulis californica																									-	< 1	-	-
Paralabrax clathratus																									48 8	49 1	36 2	40 8
Phanerodon furcatus																									-	< 1	-	-
Rhacochilus toxotes																									-	0 9	-	-
Sebastes atrovirens																									< 1	0 1	< 1	-
Sebastes atrovirens (yoy)																									< 1	0 5	-	0 3
Sebastes chrysomelas/S carnatus																									< 1	0 3	1 8	-
Sebastes melanops																									-	7 7	2 8	
Sebastes melanops (juv)																									-	-	-	-
Sebastes mystinus																									6 3	-	0 4	-
Sebastes mystinus (juv)																									-	-	< 1	-
Sebastes paucispinis (juv)																									1 0	0 8	-	-
Sebastes serranoides																									0 6	0 1	-	-
Sebastes serranoides/S flavidus (juv)																									-	0 2	0 2	-
Sebastes spp																									12 9	4 2	10 6	-
Triakis semifasciata																									-	-	-	-
																									< 1	-	< 1	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Midwater- North Diablo Cove

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	8	3	7	4	4	6	6	6	5	8	8	6	8	5	7	5	3	3	4	6	9	8	2
Atherinidae unid.	-	0.5	-	-	-	-	-	-	-	15.0	21.9	18.8	-	6.3	15.6	-	25.0	-	35.9	23.3	236.3	342.3	38.4	21.5	57.8	5.9	-
Aulorhynchus flavidus	13.8	2.3	1.2	9.7	0.3	0.5	<.1	0.7	-	0.1	-	-	-	-	0.1	-	-	<.1	4.9	2.5	20.3	7.8	-	-	0.1	-	-
Brachyistius frenatus	0.3	0.9	0.9	0.6	-	0.1	<.1	-	-	1.8	0.1	<.1	-	<.1	0.1	<.1	1.2	0.5	8.9	7.8	20.8	9.6	0.3	1.2	3.4	4.1	-
Chromis punctipinnis	4.4	-	-	-	-	-	-	-	15.1	0.1	2.4	-	-	-	0.4	0.8	0.5	0.2	0.1	<.1	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	0.3	-	-	-	0.1	43.8	<.1	38.8	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	0.4	0.7	0.3	0.4	0.1	0.4	0.4	0.2	0.8	1.8	5.5	0.8	0.4	2.8	6.8	2.3	3.1	0.5	22.3	22.3	5.0	1.8	1.5	3.2	1.7	2.4	1.5
Embiotoca jacksoni	-	-	<.1	-	<.1	-	<.1	<.1	-	-	-	-	<.1	0.1	0.9	0.3	0.8	0.2	0.6	-	-	-	0.3	0.6	1.4	0.6	1.3
Embiotoca lateralis	0.9	2.2	1.3	0.6	0.4	0.5	0.7	0.2	1.8	1.2	<.1	<.1	-	-	0.2	0.4	0.7	0.3	0.1	-	0.1	-	-	1.0	<.1	0.3	0.8
Embiotocidae	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibbonsia spp	-	-	-	-	-	-	-	0.2	-	<.1	-	-	-	0.3	-	-	<.1	-	-	-	0.1	-	-	-	-	-	-
Girella nigricans	-	-	-	-	-	-	-	<.1	-	-	-	0.1	-	-	1.6	0.8	1.3	-	0.9	2.3	-	-	0.3	2.4	0.8	0.2	-
Hermosilla azurea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	<.1	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-
Hexagrammos decagrammus	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hyperprosopon anale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	<.1	-	-	-	-	-	-	-	-	-
Hypsurus caryi	0.1	<.1	-	-	-	-	-	-	-	0.7	-	-	-	-	<.1	-	-	-	1.0	-	-	-	-	-	-	-	-
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.8	0.2	0.6	2.1	0.4	-	-	1.3	0.1	-	0.1	-	-
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	0.1	0.3	-	1.1	0.9	0.5	0.3	0.9	<.1	1.1	0.9	-	<.1	-	<.1	-
Oxyjulis californica	24.8	16.5	8.4	30.2	44.1	0.4	4.4	11.5	102.9	47.8	54.8	57.4	43.8	40.5	70.0	44.2	26.1	70.6	79.4	50.0	68.6	67.5	60.8	16.8	90.6	32.1	29.0
Paralabrax clathratus	-	-	-	-	-	-	-	12.6	-	-	-	-	-	-	-	-	0.1	<.1	0.4	0.9	0.3	-	1.4	0.8	1.9	0.5	0.8
Phanerodon atripes	-	-	-	-	-	-	<.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	0.3	-	-	2.1	-	-	-	-	-
Phanerodon spp.	0.3	-	-	-	-	-	-	-	0.1	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	0.3	<.1	0.1	1.2	1.4	-	-	0.2	1.2	<.1	-
Roccus saxatilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-
Sciaenidae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.8	5.6	-	-
Scomber japonicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Sebastes atrovirens	-	-	-	-	-	-	-	-	0.1	-	-	-	0.2	-	<.1	-	0.1	-	0.4	0.4	1.3	8.6	0.1	0.3	-	<.1	-
Sebastes atrovirens (yoy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	1.8	-	18.5	<.1	0.6	41.0	0.4	-	0.4	6.0	-
Sebastes chrysomelas/S. carnatus	-	2.1	35.9	-	-	10.5	8.7	3.0	17.8	0.8	<.1	0.6	-	<.1	-	1.7	-	0.7	8.0	113.8	161.3	1.9	-	-	6.9	2.9	-
Sebastes melanops (juv.)	-	-	-	-	-	-	-	-	-	-	-	1.3	-	-	-	0.6	-	-	-	<.1	-	-	-	-	-	-	-
Sebastes mystinus	5.6	7.6	2.7	1.7	1.8	2.6	4.1	3.8	9.9	3.3	1.3	1.4	-	0.1	0.4	2.0	0.9	1.2	0.9	0.4	1.5	-	0.6	-	-	-	-
Sebastes mystinus (juv.)	23.5	30.6	7.4	8.5	14.8	1.6	0.3	-	2.3	1.5	4.4	<.1	0.3	0.7	0.4	13.2	1.9	-	-	-	-	-	-	-	-	-	-
Sebastes paucispinis (juv.)	0.1	5.6	-	24.4	-	-	-	-	1.5	0.7	0.1	1.1	-	-	-	1.1	-	0.6	0.9	-	-	-	-	-	-	<.1	-
Sebastes rastrelliger	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes serranoides	0.1	0.4	0.6	7.5	-	-	0.3	0.2	0.3	<.1	0.4	0.6	-	1.1	0.4	0.4	0.2	0.3	0.3	<.1	2.3	0.4	0.5	<.1	<.1	-	-
Sebastes serranoides/S. flavidus (juv.)	12.6	33.1	-	24.4	0.9	2.0	-	-	8.5	14.7	9.8	7.7.7	7.8	1.9	6.9	16.0	<.1	6.4	0.7	0.4	0.8	0.9	0.4	12.8	1.9	11.4	-
Sebastes spp	0.8	0.3	<.1	1.3	<.1	0.1	-	0.8	-	0.8	-	-	0.2	<.1	<.1	-	-	-	-	-	-	-	-	-	-	1.9	-
Semicossyphus pulcher	-	-	-	-	-	-	-	-	-	-	0.1	0.5	0.6	0.4	2.4	0.4	0.2	-	0.1	-	0.4	-	0.1	<.1	-	0.3	-
Trachurus symmetricus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.8	78.3	0.4	-	-
Triakis semifasciata	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	<.1	-	-	-	<.1	<.1	0.1	0.6	0.1	0.8	0.4	<.1	0.3
larval/post-larval fish, unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106.3	-	3.1	-	-	-	13.1	-	-	-	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Midwater- South Diablo Cove

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	7	3	8	4	6	6	5	5	5	8	8	6	8	5	7	5	3	3	4	6	9	8	2
Atherinidae unid	-	-	-	-	-	-	-	2.0	18.8	34.4	-	-	-	-	-	-	3.1	-	4.4	7.9	169.3	120.6	25.8	10.7	20.7	20.1	-
Aulorhynchus flavidus	0.4	0.3	4.9	1.6	25.4	1.0	<1	-	-	0.6	4.4	0.7	0.2	1.8	<1	<1	<1	<1	3.4	0.8	14.4	0.3	-	-	1.0	7.1	-
Brachyistius frenatus	1.3	0.3	0.4	0.8	-	-	-	-	-	-	-	-	-	-	0.1	<1	<1	0.8	1.6	0.8	9.6	4.1	0.3	0.6	0.5	3.0	-
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	-		-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	0.7	5.6	-	-	-	176.2	-	15.9	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	0.1	<1	0.5	0.6	0.6	0.1	0.6	0.2	0.4	0.1	0.6	-	-	<1	3.6	0.3	0.6	0.7	1.0	0.8	0.5	6.4	1.0	1.4	4.7	4.8	1.5
Embiotoca jacksoni	0.1	-	-	0.2	<1	-	-	-	<1	-	0.2	-	-	-	<1	-	-	<1	0.4	-	-	-	0.8	-	0.8	0.2	1.8
Embiotoca lateralis	0.5	-	0.7	1.3	0.1	0.4	-	0.3	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.2	-	<1	-
Embiotocidae	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-
Engraulis mordax	-	-	-	<1	-	-	-	-	-	-	-	12.5	-	-	-	<1	-	429.2	-	-	-	-	-	-	0.2	-	-
Gibbonsia spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	0.1	0.1	-	-	-	-	-
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	<1	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	<1	-	-	-	-	-	-	-		-
Hexagrammos decagrammus	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hypsurus caryi	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-
Myliobatis californica	-	-	-	-	-	-	-	-	0.1	-	-	-	<1	<1	0.8	0.5	0.9	<1	-	0.2	-	0.3	-	0.2	<1	-	-
Oxyjulis californica	14.9	16.9	55.4	90.1	33.1	13.3	13.4	19.0	25.0	11.8	35.3	10.9	56.2	39.8	33.5	46.9	46.3	63.2	83.4	19.4	52.5	35.0	91.6	32.5	25.3	9.8	52.5
Paralabrax clathratus	-	-	-	-	-	-	-	0.8	-		-	-	-	-	-	-	-	-	-	-	-	0.5	0.9	0.4	0.3	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.4	-	-	-	-	-	-	-	-	-	-	-
Phanerodon spp	-	-	-	0.3	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0.3	<1	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-
Sciaenidae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-	-
Sebastes atrovirens	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	0.3	1.1	-	-	0.2	-		-
Sebastes atrovirens (yoy)	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	0.9	0.5	30.3	1.7	2.5	6.5	0.4	-	0.6	6.3	-
Sebastes chrysomelas/S carnatus	-	0.3	11.7	0.3	-	55.6	13.0	3.8	1.2	2.1	0.1	<1	-	-	0.1	-	-	0.3	8.1	24.2	25.3	2.4	-	-	2.4	23.1	-
Sebastes melanops (juv)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Sebastes mystinus	-	4.3	-	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes mystinus (juv)	-	6.0	0.1	4.8	0.2	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes paucispinis (juv)	-	5.8	-	34.8	-	0.3	-	-	0.2	0.3	0.5	-	-	-	-	0.4	-	-	-	<1	-	-	-	-	-	0.2	-
Sebastes rastrelliger	-	-	0.1	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes serranoides	-	<1	0.1	0.3	-	-	<1	0.2	0.1	-	<1		-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	
Sebastes serranoides/S flavidus (juv)	0.8	24.1	-	89.5	<1	0.4	0.1	-	9.1	7.5	0.9	<1	11.8	-	2.8	0.4	-	12.8	<1	-	-	0.5	-	5.0	0.5	11.4	-
Sebastes spp	0.3	-	0.7	9.3	1.6	-	-	2.8	-	-	0.1	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Semicossyphus pulcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Trachurus symmetricus	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	1.3	-	-	-	-	-
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	0.5	-	<1	-
larval/post-larval fish, unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58.1	-	14.3	-	-	-	3.8	-	-	-	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Midwater- South Control

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	8	3	7	4	3	5	4	4	5	8	8	6	6	4	7	5	3	3	4	6	9	8	2
Atherinidae unid	-	-	-	-	-	-	-	16.7	-	68.7	33.3	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	-	-
Aulorhynchus flavidus	0.4	-	7.1	9.4	3.7	27.5	97.4	-	-	-	18.6	0.7	0.2	19.6	-	<.1	-	0.1	19.4	12.6	37.4	-	-	<.1	5.5	9.4	5.0
Brachyistius frenatus	0.3	0.2	0.1	0.5	-	-	0.2	0.2	-	0.3	-	0.2	-	0.3	1.1	0.3	0.3	-	<.1	<.1	-	-	-	-	0.2	0.3	-
Damalichthys vacca	0.4	0.4	0.4	0.7	0.1	0.1	0.2	0.2	0.1	0.5	-	5.3	-	0.3	0.4	1.5	1.5	0.3	2.2	0.2	0.8	0.3	0.6	<.1	1.4	2.6	-
Embiotoca jacksoni	0.1	-	<.1	0.2	0.2	-	-	-	0.1	<.1	-	-	-	0.2	<.1	0.4	-	-	-	-	-	-	-	-	1.8	1.0	-
Embiotoca lateralis	0.8	2.6	0.9	1.7	0.6	0.3	0.4	0.3	0.5	0.6	-	<.1	0.2	0.1	0.1	0.5	0.2	0.3	-	0.2	-	0.3	0.3	0.2	0.8	0.3	0.3
Engraulis mordax	-	-	-	-	-	-	6.3	-	-	-	-	-	-	-	-	10.0	-	-	-	-	-	-	-	-	-	-	-
Gibbonsia spp	-	-	-	-	-	-	-	-	0.3	0.1	-	-	-	-	-	-	-	-	-	-	0.1	0.3	-	-	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-
Hexagrammos decagrammus	-	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Hypsurus caryi	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptops connectens	-	-	<.1	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophiodon elongatus	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxyjulis californica	156.4	3.7	8.3	20.2	8.6	0.8	13.7	18.0	59.8	51.5	31.8	96.0	28.4	18.0	71.5	21.3	22.8	98.3	48.4	12.9	12.1	14.1	12.4	46.8	78.0	39.7	44.5
Oxylebius pictus	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Paralabrax clathratus	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Platyrhinoidis triseriata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Rhacochilus toxotes	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.2	0.2	-
Sardinops sagax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5	-	-	-
Sebastes atrovirens	-	-	-	<.1	-	0.3	<.1	-	-	-	-	-	-	0.1	<.1	-	-	-	0.2	0.3	0.3	-	-	0.3	0.2	0.3	-
Sebastes atrovirens (yoy)	-	-	-	-	-	-	0.3	-	1.3	-	-	-	-	-	0.8	0.9	-	-	6.1	-	-	0.8	0.3	-	0.1	0.9	-
Sebastes chrysomelas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-
Sebastes chrysomelas/S. carnatus	-	0.8	28.4	-	-	26.4	17.1	9.8	0.5	-	-	-	-	-	0.4	7.0	0.8	0.4	20.2	64.4	31.5	10.9	-	-	0.2	0.2	-
Sebastes melanops	-	<.1	-	0.1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	0.4	-	-	-	0.1	-	-	-	<.1	-
Sebastes melanops (juv.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	0.3	0.3	0.2	-	-	-	1.3	-	<.1	-
Sebastes mystinus	2.8	8.3	4.4	9.4	2.2	5.5	6.4	5.9	2.1	3.3	3.0	6.8	2.3	5.7	1.8	2.0	5.5	1.5	0.4	0.3	0.9	1.5	1.9	0.7	0.4	0.3	-
Sebastes mystinus (juv.)	17.3	35.3	14.8	20.1	4.8	1.8	<.1	-	-	4.1	1.8	3.2	1.7	-	8.3	12.4	12.0	-	-	<.1	-	-	-	0.3	0.1	0.6	0.3
Sebastes paucispinis (juv.)	-	4.1	0.4	37.9	-	62.8	-	-	-	0.3	0.2	<.1	-	-	0.1	0.6	-	-	0.1	-	-	0.1	-	<.1	-	-	-
Sebastes rastrelliger	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	<.1	-
Sebastes serranoides	-	1.0	<.1	11.4	0.3	0.3	0.2	<.1	0.9	0.3	0.7	0.8	0.2	0.1	0.2	0.4	0.2	-	0.1	<.1	0.4	0.1	-	0.3	0.8	0.7	-
Sebastes serranoides/S. flavidus (juv.)	2.3	37.7	<.1	41.8	1.3	-	0.2	-	3.8	18.8	7.0	6.3	0.6	0.2	6.0	4.8	-	1.8	<.1	-	0.1	-	-	10.6	0.9	3.3	-
Sebastes spp	-	-	0.3	-	-	0.6	-	0.6	-	2.3	7.3	0.6	1.7	0.9	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Trachurus symmetricus	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
larval/post-larval fish, unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.0	-	25.0	-	-	-	-	-	-	33.1	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - North Control

Taxon / # Station Replicates/Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	4	6	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Artedius spp	-	-																									
Atherinidae unid	-	-																									
Aulorhynchus flavidus	-	0 2																									
Brachyistius frenatus	-	-																									
Cebidichthys violaceus	0 4	<.1																									
Cephaloscyllium ventriosum	-	-																									
Coryphopterus nicholsi	-	-																									
Cottidae unid.	1 3	0 3																									
Damalichthys vacca	0 9	-																									
Embiotoca jacksoni	-	0 8																									
Embiotoca lateralis	10 8	9 0																									
Embiotocidae	-	-																									
Gibbonsia spp	0 1	0 5																									
Girella nigricans	0 1	-																									
Gobiesox maeandricus	0 1	-																									
Hexagrammos decagrammus	2 1	1 8																									
Hyperprosopon anale	-	-																									
Hypsurus caryi	0 3	-																									
Ophiodon elongatus	0 3	0 2																									
Orthonopias triacis	0 4	-																									
Oxyjulis californica	5 6	12 3																									
Oxylebius pictus	2 1	3 3																									
Paralabrax clathratus	-	-																									
Rhacochilus toxotes	-	< 1																									
Scorpaenichthys marmoratus	1.5	1.5																									
Sebastes atrovirens	-	-																									
Sebastes atrovirens (yoy)	-	-																									
Sebastes carnatus	-	< 1																									
Sebastes chrysomelas	2 5	3 1																									
Sebastes chrysomelas/S carnatus	-	0 3																									
Sebastes melanops	0 1	1 3																									
Sebastes melanops (juv.)	-	-																									
Sebastes mystinus	0 3	1.7																									
Sebastes mystinus (juv)	15 9	17 9																									
Sebastes pauctspinis (juv)	-	0 3																									
Sebastes rastrelliger	0 1	0 9																									
Sebastes serranoides	-	<.1																									
Sebastes serranoides/S flavidus (juv)	3 1	15 8																									
Sebastes spp	0.1	-																									
Semicossyphus pulcher	-	-																									
Stichaeidae unid	-	-																									
Triakis semifasciata	-	-																									
Urolophus halleri	-	-																									

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - Field's Cove

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Station Replicates/Year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	6	9	8	2
Artedius spp																									0.6	0.3	-	-
Atherinidae unid																									-	0.1	-	-
Aulorhynchus flavidus																									0.2	2.3	2.9	20.0
Brachyistius frenatus																									-	0.8	1.1	-
Cebidichthys violaceus																									0.4	0.4	0.8	0.3
Cephaloscyllium ventriosum																									-	<1	-	-
Corvphopterus nicholsi			-																						-	0.1	0.3	0.5
Cottidae unid																									<1	0.1	0.3	-
Damalichthys vacca																									13.2	10.4	4.8	10.3
Embiotoca jackson																									9.2	6.0	3.7	4.5
Embiotoca lateralis																									7.7	4.8	4.9	4.8
Embiotocidae																									<1	-	-	-
Gibbonsia spp																									0.7	0.8	0.4	0.8
Girella nigricans																									-	0.3	0.1	0.3
Gobiesox maeandricus																									-	-	-	-
Hexagrammos decagrammus																									-	0.1	0.6	0.3
Hyperprosopon anale																									-	1.3	-	-
Hypsurus caryi																									3.1	1.6	0.3	3.0
Ophiodon elongatus																									-	0.3	0.3	-
Orthonopias triacis																									-	-	<1	-
Oxyjulis californica																									71.2	47.9	17.3	19.5
Oxylebius pictus																									3.7	5.8	7.6	6.0
Paralabrax clathratus																									-	-	-	0.3
Rhacochilus toxotes																									0.2	0.9	0.1	1.5
Scorpaenichthys marmoratus																									0.5	0.9	0.7	1.8
Sebastes atrovirens																									0.7	0.7	0.3	0.8
Sebastes atrovirens (yoy)																									-	<1	<1	-
Sebastes carnatus																									-	0.2	-	-
Sebastes chrysomelas																									2.1	3.3	2.7	3.8
Sebastes chrysomelas/S carnatus																									0.4	<1	-	-
Sebastes melanops																									1.5	<1	-	-
Sebastes melanops (juv)																									10.4	-	0.3	-
Sebastes mystinus																									0.3	0.3	-	-
Sebastes mystinus (juv)																									1.1	<1	0.4	1.0
Sebastes paucispinis (juv)																									17.7	-	-	-
Sebastes rastrelliger																									0.4	0.9	0.6	0.5
Sebastes serranoides																									-	0.2	-	0.3
Sebastes serranoides/S flavidus (juv)																									29.1	2.4	2.0	-
Sebastes spp																									-	1.3	-	-
Semicossyphus pulcher																									0.3	<1	0.3	-
Stichaeidae unid																									-	-	<1	-
Triakis semifasciata																									<1	0.1	<1	-
Urolophus halleri																									-	-	<1	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - North Diablo Cove

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	8	3	7	4	4	6	6	6	5	8	8	6	8	5	7	5	3	3	4	6	9	8	2
Anarrhichthys ocellatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-
Anoplarchus purpurescens	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Artedius spp	-	<.1	0.3	<.1	0.1	0.5	0.4	0.6	1.4	0.4	0.3	0.1	0.3	0.2	0.1	1.2	0.8	0.5	0.8	0.7	1.1	0.4	-	-	0.3	0.1	0.5
Atherinidae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5	-	-	-	11.3	0.5	-	-	15.4	-	-
Aulorhynchus flavidus	3.9	-	0.8	5.6	-	0.3	-	<.1	-	-	-	-	-	<.1	0.3	3.5	0.6	-	4.6	6.3	0.3	4.5	-	<.1	-	0.6	-
Brachyistius frenatus	1.3	<.1	2.8	3.0	0.3	1.0	0.8	0.7	-	3.4	-	0.1	-	0.3	1.9	0.9	2.1	0.5	3.6	2.2	0.8	1.1	-	-	2.5	2.5	-
Cebidichthys violaceus	0.3	0.2	0.9	0.4	0.5	-	0.3	1.3	0.8	0.4	<.1	0.4	<.1	0.2	1.3	2.7	1.6	1.1	0.6	0.9	1.3	1.9	0.5	0.3	0.2	0.2	0.5
Cephaloscyllium ventriosum	-	<.1	-	-	-	-	0.2	0.5	0.1	0.3	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-
Chirolophis nugator	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	<.1	-	-	-	<.1	-	-	-	-	-	-	-
Chromis punctipinnis	-	-	-	-	-	-	-	-	-	-	1.0	<.1	-	-	0.3	0.3	-	<.1	0.2	-	-	-	-	-	-	-	-
Clinidae unid	-	-	-	-	-	0.5	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coryphopterus nicholsi	0.3	-	-	<.1	0.8	1.0	0.2	0.3	0.1	-	0.3	6.4	7.7	17.7	12.0	13.8	15.4	8.4	8.3	5.6	5.5	6.4	3.5	2.8	9.0	16.8	23.8
Cottidae unid.	1.1	0.9	1.3	1.1	1.1	0.6	1.0	1.4	2.1	1.8	1.3	1.2	<.1	<.1	0.4	0.6	0.2	0.2	0.6	1.0	0.3	0.5	-	0.3	0.1	0.1	-
Cymatogaster aggregata	0.4	-	-	-	0.4	-	-	1.3	-	<.1	-	14.7	74.6	-	32.1	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	1.1	0.5	0.4	1.5	1.6	1.5	1.9	1.8	4.5	14.7	7.5	16.4	6.3	5.7	23.1	14.4	12.2	11.1	48.9	23.8	8.5	17.5	10.9	32.2	26.1	16.1	40.0
Embiotoca jacksoni	2.6	1.4	1.3	1.4	2.1	1.5	2.0	7.5	8.1	15.4	11.8	12.6	4.8	7.6	15.1	14.1	14.5	5.0	17.3	12.8	17.0	16.4	15.3	22.3	32.2	26.7	36.5
Embiotoca lateralis	16.8	14.8	4.9	7.1	7.3	6.9	6.3	9.1	12.0	20.2	15.9	7.1	3.0	6.0	10.2	8.6	8.9	3.2	6.9	5.8	7.9	3.5	6.1	7.9	4.7	3.8	2.8
Embiotocidae	0.1	-	<.1	0.4	-	-	-	-	-	-	-	-	-	-	0.1	0.7	<.1	-	<.1	0.2	-	-	-	-	-	-	-
Engraulis mordax	-	-	-	-	-	-	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibbonsia spp	1.9	1.3	1.4	1.5	1.7	1.3	1.1	1.9	1.3	2.8	2.3	2.6	1.0	0.6	2.4	3.6	6.6	2.0	4.6	3.4	1.3	3.5	0.5	0.9	0.4	0.8	1.5
Girella nigricans	-	-	-	-	-	-	-	-	-	-	<.1	1.8	<.1	7.9	6.2	8.3	4.4	0.7	6.1	5.1	2.3	10.9	2.3	15.3	3.6	4.3	3.0
Gobiesocidae unid	-	-	-	-	-	-	-	0.2	-	-	-	-	<.1	-	<.1	-	-	-	-	0.2	-	-	-	-	-	-	-
Gobiesox maeandricus	-	-	<.1	-	-	-	0.1	<.1	0.1	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus (yoy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	<.1	-	-	-
Hermosilla azurea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Heterostichus rostratus	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	0.1	<.1	0.1	<.1	-	-	-	-	-	-	<.1	-	-
Hexagrammos decagrammus	4.9	3.5	1.1	0.8	1.3	0.1	0.7	3.1	1.3	1.3	1.3	0.3	-	<.1	0.3	0.3	0.3	<.1	0.3	0.3	0.5	-	-	-	0.2	0.3	-
Hyperprosopon anale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9	-	-	5.2	-	-	-	-	-	-	-	-	-
Hypsurus caryi	1.5	0.3	-	-	0.1	-	-	0.3	-	11.7	0.4	1.1	0.6	0.4	2.4	2.0	0.1	0.6	0.7	0.2	0.1	0.4	0.4	0.8	3.3	0.1	-
Hypsypops rubicundus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	0.5
Jordania zanope	-	<.1	<.1	0.2	0.1	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lethops connectens	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liparis spp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.3	2.3	0.4	1.4	0.3	1.3	-	0.3	0.5	-	-	0.2	0.1	-
Myliobatis californica	-	-	-	-	-	-	-	-	0.1	-	-	1.1	0.3	1.5	4.2	1.3	0.3	-	0.6	-	0.4	0.9	1.6	0.3	0.4	0.6	-
Ophiodon elongatus	0.3	0.8	0.4	<.1	0.5	0.5	0.3	0.3	-	0.3	0.6	0.1	-	0.3	0.1	0.6	<.1	0.2	<.1	0.3	0.1	-	0.4	0.2	-	0.4	0.3
Orthonopias triacis	2.0	1.1	0.2	<.1	0.4	-	0.3	0.9	1.4	1.9	0.3	0.7	0.2	-	<.1	<.1	0.2	0.2	0.3	<.1	0.4	0.8	-	-	0.1	-	-
Oxyjulis californica	29.3	7.9	15.4	73.7	28.5	26.3	45.7	25.1	151.0	70.4	97.6	223.1	120.3	122.8	178.1	105.8	91.1	187.9	137.3	118.8	92.3	82.8	46.3	64.8	84.6	42.4	59.5
Oxylebius pictus	5.4	4.4	2.4	4.7	9.4	3.6	5.6	15.2	16.3	12.4	11.6	10.9	4.2	5.5	9.8	11.1	12.1	4.8	5.4	7.6	11.9	13.6	6.1	3.1	7.4	7.8	11.5
Paralabrax clathratus	-	-	-	-	-	-	-	21.4	-	<.1	-	-	-	-	-	-	0.4	0.4	3.3	4.6	1.9	2.1	5.0	2.3	3.2	0.7	2.0
Phanerodon atripes	0.4	-	-	-	-	-	<.1	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	2.1	-	-	-	<.1	-	-	-	-	0.5	4.0	<.1	-
Phanerodon spp.	-	-	0.2	-	-	-	-	-	-	-	0.3	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pholididae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-
Pholididae/Stichaeidae unid.	-	-	-	-	-	-	-	-	0.4	<.1	0.3	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-
Pleuronichthys spp	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	<.1	-	0.3	-	0.1	-	-	-	-	-
Porichthys notatus	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0.3	0.2	0.1	0.1	0.1	-	-	0.8	-	1.6	0.6	-	-	0.3	14.5	0.9	0.6	0.3	1.8	3.8	0.4	1.3	1.8	2.4	1.4	1.8	0.5
Sciaenidae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	2.9	-	-
Scorpaenichthys marmoratus	1.1	1.3	1.9	1.5	2.6	0.6	2.1	3.8	3.5	2.2	3.2	3.8	1.1	0.9	1.9	2.7	0.9	0.4	1.0	0.6	1.1	0.3	1.3	0.6	0.8	0.8	0.5
Sebastes atrovirens	0.5	<.1	<.1	0.1	<.1	0.1	0.4	1.3	1.0	1.5	1.1	1.4	-	0.4	1.3	0.8	1.3	0.8	1.9	2.4	4.8	0.5	1.4	1.3	0.4	<.1	-
Sebastes atrovirens (yoy)	-	-	-	-	-	-	-	-	0.3	-	0.1	-	-	1.2	1.1	1.8	0.8	<.1	60.6	7.8	8.0	1.3	7.6	0.2	0.1	5.8	-
Sebastes auriculatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Sebastes carnatus	-	0.3	-	0.1	0.1	-	-	2.0	0.8	1.4	0.4	0.3	-	<.1	<.1	0.3	0.4	<.1	0.1	-	0.5	-	-	-	-	-	-
Sebastes caurinus	-	-	-	-	-	-	-	0.4	-	-	0.4	0.3	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes chrysomelas	3.6	8.7	4.5	6.4	7.9	2.9	5.4	15.8	13.1	11.6	8.2	8.1	4.0	2.4	5.5	6.8	7.1	5.5	4.8	8.7	13.5	9.3	5.0	5.6	1.8	2.0	1.8
Sebastes chrysomelas/S. carnatus	-	7.4	18.8	1.5	1.4	9.1	3.1	4.3	9.0	2.5	0.4	2.9	0.3	0.1	0.6	3.8	0.8	0.8	6.7	88.4	18.4	10.5	15.5	-	0.2	22.8	-

(continued)

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - North Diablo Cove (continued)

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	8	3	7	4	4	6	6	6	5	8	8	6	8	5	7	5	3	3	4	6	9	8	2
Sebastes melanops	-	-	0.1	-	-	-	-	-	-	-	-	-	-	<1	-	-	<1	-	-	-	-	-	-	-	-	-	-
Sebastes melanops (juv.)	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	-	11.2	-	1.9	-	0.6	-	-	-	<1	0.2	0.5	-
Sebastes mystinus	5.5	3.0	2.2	3.2	3.1	5.1	10.4	6.3	7.1	3.9	2.2	1.4	0.3	0.9	2.9	6.1	2.6	0.6	1.3	2.5	1.8	-	0.6	-	-	<1	-
Sebastes mystinus (juv.)	21.6	35.3	8.8	38.0	16.4	4.9	0.3	-	7.1	12.5	4.8	2.1	4.4	0.9	9.1	38.0	8.8	0.9	0.5	0.6	1.8	3.5	-	-	-	<1	-
Sebastes paucispinis (juv.)	-	1.8	-	14.4	-	1.0	-	-	0.1	0.4	-	3.1	-	-	<1	1.3	-	0.3	0.4	-	-	0.1	0.4	<1	-	0.2	-
Sebastes rastrelliger	0.1	0.5	<1	0.3	1.1	0.6	1.2	2.3	2.6	1.6	2.3	3.1	1.3	2.1	3.9	3.4	1.3	1.3	1.6	2.2	0.5	0.6	0.4	0.4	0.3	0.6	0.5
Sebastes serranoides	-	0.4	-	-	0.2	-	<1	0.2	0.5	0.2	0.9	1.1	<1	2.2	1.7	0.9	1.0	0.3	0.7	0.3	1.1	0.3	0.5	<1	<1	0.1	0.3
Sebastes serranoides/S. flavidus (juv.)	13.8	30.7	0.8	52.0	0.2	1.9	0.1	-	14.5	19.4	4.6	27.6	10.5	3.4	11.9	19.1	0.7	18.3	3.6	2.5	1.0	0.8	0.4	7.8	1.0	16.0	-
Sebastes spp.	1.3	<1	0.4	4.2	0.3	-	-	1.9	0.3	3.4	1.8	1.8	2.1	3.2	<1	-	-	-	-	-	-	-	-	-	-	-	-
Semicossyphus pulcher	-	-	-	-	-	-	-	-	-	0.8	7.1	10.1	6.5	10.5	16.2	7.8	2.9	1.3	4.1	3.3	2.3	1.0	2.0	1.5	2.1	1.1	1.5
Stichaeidae unid.	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Torpedo californica	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1		-	-	-	-	
Trachurus symmetricus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40.0	-	-	-
Triakis semifasciata	-	-	-	-	-	-	-	-	-	-	-	<1	-	0.3	0.3	<1	0.4	-	1.0	<1	0.1	0.5	-	0.9	1.3	0.4	-
Urolophus halleri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	0.3	0.2	0.3	0.6	-	0.4	<1	-	-
Xiphister spp.	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - South Diablo Cove

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	7	3	8	4	6	6	5	5	5	8	8	6	8	5	7	5	3	3	4	6	9	8	2
Anoplarchus purpurescens	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Artedius spp	-	0.2	1.1	0.2	0.3	0.6	0.2	<.1	0.9	0.4	0.2	0.3	<.1	0.2	<.1	0.3	0.3	0.6	0.8	0.3	0.9	0.9	0.5	0.3	0.3	0.1	1.3
Atherinidae unid.	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	-	1.9	-
Aulorhynchus flavidus	0.1	-	18.1	3.1	0.3	2.3	4.8	12.2	0.3	0.6	14.0	3.6	0.8	26.9	9.8	14.5	6.6	0.8	31.8	15.6	1.6	0.9	0.3	5.5	11.5	35.0	0.8
Brachyistius frenatus	1.0	-	0.3	1.5	0.1	0.1	0.5	-	-	-	-	-	-	0.2	1.6	0.3	0.4	<.1	1.1	0.2	1.3	3.5	-	<.1	0.1	0.4	0.5
Cebidichthys violaceus	-	-	0.1	0.2	-	0.8	0.2	-	0.6	<.1	0.1	0.3	0.7	0.7	0.4	0.7	0.3	<.1	<.1	-	0.1	-	-	-	-	-	-
Cephaloscyllium ventriosum	-	-	-	0.3	0.2	1.4	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chilara taylori	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chirolophis nugator	-	-	-	-	<.1	0.1	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Citharichthys spp.	0.4	-	-	2.4	0.8	2.6	0.3	0.3	3.3	5.2	1.7	15.3	14.1	5.3	1.0	5.6	5.3	1.4	28.3	1.1	9.5	4.5	1.4	4.3	6.2	14.7	4.3
Coryphopterus nicholsi	0.4	-	-	-	-	-	-	-	<.1	<.1	0.3	0.4	0.8	1.5	0.2	2.6	1.9	0.7	0.3	0.2	-	2.4	0.4	0.8	0.7	4.4	6.3
Cottidae unid.	2	1.7	0.6	1.3	1.1	0.6	0.8	1.1	1.0	0.9	1.0	1.1	0.3	0.3	<.1	0.3	0.2	-	0.4	0.3	0.3	0.6	0.4	0.3	0.4	-	-
Cymatogaster aggregata	-	-	-	-	-	-	-	-	-	-	-	0.3	9.7	<.1	54.3	<.1	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	0.6	0.3	0.8	1.5	1.4	1.1	0.6	1.9	1.1	4.1	4.4	2.8	0.8	0.4	18.4	3.6	1.9	3.4	4.8	0.8	7.4	44.3	3.8	8.0	6.9	5.9	2.3
Embiotoca jacksoni	1.3	0.3	2.2	2.1	2.8	0.9	2.4	1.8	3.2	5.1	5.3	3.8	4.5	0.8	3.9	2.2	2.0	1.5	2.1	0.9	4.4	9.8	3.0	5.8	4.5	2.6	3.3
Embiotoca lateralis	1.4	2.1	2.3	5.5	1.4	0.9	2.7	3.2	1.6	3.3	3.8	1.3	0.8	0.5	2.2	0.2	0.3	1.1	0.3	0.3	3.3	3.3	1.1	1.4	1.2	1.2	1.8
Embiotocidae	0.3	-	-	0.4	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	0.1	-	-	<.1	-	-
Engraulis mordax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75.8	-	-	-	-	-	-	-	-	-
Gibbonsia spp	2.1	3.5	1.4	1.3	2.5	1.5	2.3	4.2	2.5	2.4	1.1	1.0	0.8	0.9	1.6	2.2	3.3	1.7	2.8	1.2	0.5	0.9	0.3	0.3	0.2	0.4	0.5
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	-	0.2	<.1	-	-
Gobiesocidae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-
Gobiesox maeandricus	-	-	-	<.1	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Halichoeres semicinctus (yoy)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Hermosilla azurea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-
Heterostichus rostratus	0.1	<.1	-	-	0.2	-	-	2.7	0.8	<.1	-	-	-	<.1	-	-	1.4	0.2	-	-	-	0.8	0.1	-	<.1	-	-
Hexagrammos decagrammus	1.0	1.3	1.9	1.1	1.4	0.4	0.4	0.3	0.8	0.6	0.1	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-
Hypsurus caryi	0.1	-	-	-	-	-	-	-	0.1	-	-	0.8	-	-	0.2	0.6	-	-	-	-	0.6	0.1	-	0.2	0.4	-	-
Lethops connectens	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medialuna californiensis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-
Myliobatis californica	-	-	-	-	-	-	-	-	<.1	-	-	-	2.9	0.2	1.0	1.5	2.6	-	1.5	0.2	-	0.5	0.3	<.1	0.3	-	-
Neoclinus spp	-	-	-	-	-	-	-	0.2	0.2	-	-	0.5	-	-	-	-	<.1	0.2	0.2	-	0.3	0.5	-	<.1	-	<.1	0.3
Ophiodon elongatus	-	0.4	0.3	<.1	0.2	1.0	0.4	0.8	<.1	-	0.4	0.3	-	-	0.1	-	-	<.1	-	-	0.1	0.4	0.1	0.6	0.8	0.7	0.5
Orthonopias triacis	0.6	1.0	0.3	<.1	0.1	0.3	0.2	-	0.4	0.6	0.4	-	-	-	-	-	<.1	-	-	-	-	-	-	<.1	0.1	<.1	-
Oxyjulis californica	20.1	3.1	13.7	92.3	22.8	34.1	21.5	33.3	106.7	52.0	79.6	88.3	73.0	74.5	89.8	75.0	106.9	55.4	44.2	32.3	47.9	53.5	16.5	38.8	6.0	12.9	53.0
Oxylebius pictus	0.9	1.7	1.7	1.4	3.3	3.3	1.9	4.6	2.9	1.1	1.4	1.1	0.3	0.7	1.1	1.3	0.9	0.2	0.4	0.6	0.9	5.3	2.6	2.6	3.7	3.8	4.0
Paralabrax clathratus	0.1	-	-	-	-	-	-	14.6	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.9	0.3	0.2	0.1	-
Paralichthyidae unid	-	-	-	-	-	-	-	-	0.5	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	0.1	-	<.1	<.1	-	0.1	-	-	-	<.1	-	-	-	-	-	-	<.1	-
Phanerodon atripes	0.1	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon furcatus	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	3.4	0.2	-	-	-	-	-	-	-	-	-	-	-
Phanerodon spp.	-	-	-	4.1	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pholididae unid.	-	-	0.1	<.1	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pholididae/Stichaeidae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-
Platichthys stellatus	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Platyrhinoidis triseriata	-	-	-	-	-	-	<.1	<.1	-	0.1	-	-	-	-	<.1	-	<.1	-	-	-	-	-	-	-	0.1	-	-
Pleuronectidae unid	-	0.3	-	-	-	0.3	-	-	-	0.1	-	-	-	<.1	<.1	-	-	-	-	-	-	-	0.1	-	-	-	-
Pleuronichthys spp	0.1	-	-	0.1	0.1	-	<.1	0.3	0.1	0.1	0.3	-	<.1	<.1	<.1	0.6	0.6	0.2	0.4	0.2	0.6	1.0	0.6	<.1	<.1	0.2	0.3
Raja spp	-	-	-	<.1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0.3	0.3	0.1	0.2	0.4	-	<.1	-	-	-	0.6	<.1	0.2	0.3	-	0.2	-	-	0.3	<.1	1.0	2.1	0.4	0.5	0.6	0.1	-
Sciaenidae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	0.2	-	-	-
Scorpaena guttata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-
Scorpaenichthys marmoratus	0.5	2.0	1.5	0.5	0.9	0.5	0.6	1.3	1.3	0.8	2.3	1.1	0.6	1.1	1.4	0.8	0.8	0.3	0.4	0.3	-	0.1	0.9	0.6	0.5	0.3	-
Sebastes atrovirens	0.1	<.1	-	-	0.2	0.1	<.1	1.1	0.1	0.4	0.2	-	-	-	-	0.4	-	0.7	0.9	0.8	1.6	1.4	0.6	0.4	-	0.2	0.3
Sebastes atrovirens (yoy)	-	-	-	<.1	-	-	-	-	-	-	0.1	-	-	0.5	1.2	1.4	0.2	<.1	41.0	6.4	15.0	9.6	6.0	<.1	<.1	2.5	-
Sebastes auriculatus	-	-	-	-	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.4	<.1	-	-	-
Sebastes carnatus	-	-	-	<.1	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes chrysomelas	0.5	1.5	2.8	2.2	2.0	0.5	1.8	2.9	3.9	0.8	2.1	1.3	0.6	0.8	1.1	0.6	0.9	0.3	0.3	0.4	0.3	1.3	0.6	1.8	1.0	1.4	0.8

(continued)

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - South Diablo Cove (continued)

Taxon	Year / # Station Replicates/Year	1976 / 4	1977 / 6	1978 / 8	1979 / 9	1980 / 7	1981 / 3	1982 / 8	1983 / 4	1984 / 6	1985 / 6	1986 / 5	1987 / 5	1988 / 5	1989 / 8	1990 / 8	1991 / 6	1992 / 8	1993 / 5	1994 / 7	1995 / 5	1996 / 3	1997 / 3	1998 / 4	1999 / 6	2000 / 9	2001 / 8	2002 / 2
Sebastes chrysomelas/S carnatus		0.8	14.8	25.3	6.8	0.3	66.1	22.8	9.4	16.2	10.9	0.5	0.4	2.0	-	1.0	3.3	0.2	2.7	2.3	56.7	12.3	15.3	2.3	-	-	16.5	-
Sebastes melanops (juv.)		-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	5.3	-	-	<1	0.2	-	-	-	0.3	-	0.6	
Sebastes miniatus		-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	0.4	0.2	-	<1	<1	-	0.3	-	-	-	-	0.3
Sebastes mystinus		-	-	-	0.2	0.5	0.5	0.1	-	0.1	0.1	0.3	-		-	-	-	0.1	-	-	-	-	-	-	-	-	-	-
Sebastes mystinus (juv.)		0.4	3.7	-	10.2	0.2	0.1	0.2	-	0.1	1.3	-	0.3	-	-	-	0.9	-	-	-	-	-	-	-	-	-	<1	-
Sebastes paucispinis (juv.)		-	0.5	0.9	37.1	-	0.3	-	-	0.4	0.2	1.1	1.6	0.5	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-
Sebastes rastrelliger		0.3	0.8	1.0	0.8	1.3	0.3	1.4	1.4	2.3	1.6	3.1	0.9	0.4	1.1	2.0	0.8	1.6	0.8	0.7	0.8	1.4	1.1	0.5	0.5	0.5	0.5	-
Sebastes serranoides		-	-	-	0.2	0.4	-	-	-	0.7	0.1	<1	<1	-	-	-	<1	-	-	-	-	-	-	-	-	<1	-	-
Sebastes serranoides/S flavidus (juv.)		2.8	11.7	0.2	110.9	0.5	-	0.3	-	5.1	7.7	1.6	3.5	4.8	0.3	5.7	2.2	-	1.0	-	2.6	-	2.3	-	32.1	0.6	11.8	-
Sebastes spp		0.1	-	0.3	4.7	4.1	5.1	0.4	9.4	0.3	-	-	0.3	3.9	0.3	<1	0.4	-	-	-	-	-	-	-	-	-	-	-
Semicossyphus pulcher		-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	-	<1	-	<1	<1	0.3	-	-	0.1	0.3	<1	-	<1	-
Seriphus politus		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-
Stichaeidae unid		-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syngnathus spp		-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Triakis semifasciata		-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.3	-	<1	-	-	-	-	-	-	0.2	0.2	0.1	0.3
Urolophus halleri		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	0.9	-	-	0.1	-	-	-	-	-
Xiphister spp		-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
larval/post-larval fish, unid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.6	-	1.3	0.8	-	-	-	-	9.4	-	-	1.3	-

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic- South Control

Taxon / Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Station Replicates/Year	4	6	8	9	8	3	7	4	3	5	4	4	5	8	8	6	6	4	7	5	3	3	4	6	9	8	2
Anarrhichthys ocellatus	-	-	-	0.1	<1	-	-	0.2	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-
Artedius spp.	0.1	<1	<1	<.1	0.3	-	0.2	0.6	0.3	0.1	0.3	0.6	0.3	<1	0.3	0.5	0.5	1.0	0.3	0.8	0.5	0.4	0.1	0.4	0.4	0.6	0.5
Aulorhynchus flavidus	0.1	<1	6.3	8.0	8.8	1.5	22.6	-	-	3.6	-	<1	-	0.2	8.1	1.2	2.2	-	3.2	3.4	2.3	0.3	2.6	1.4	0.8	2.5	-
Brachyistius frenatus	2.1	-	0.8	1.8	1.7	0.3	0.9	0.7	0.1	0.3	0.5	0.2	-	0.9	0.3	0.8	0.4	0.1	3.4	0.4	0.8	0.5	-	-	0.1	0.4	-
Cebidichthys violaceus	-	0.7	0.3	<.1	0.1	-	0.1	0.3	0.1	<.1	-	0.2	0.4	0.1	0.5	1.0	0.8	0.4	0.4	0.5	1.0	0.4	0.1	0.3	0.3	0.3	-
Cephaloscyllium ventriosum	-	-	-	-	-	0.3	0.8	1.0	0.3	2.8	0.5	0.6	0.6	-	-	-	-	-	-	0.2	0.8	-	-	0.8	0.4	0.5	-
Chirolophis nugator	-	0.2	-	<1	-	-	<1	-	-	-	-	-	-	-	-	0.2	-	0.1	-	-	-	-	-	-	-	-	-
Citharichthys spp	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.3	-	0.1	-	-	-	-	-	-	-	-
Clinidae unid.	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coryphopterus nicholsi	1.9	2.8	0.4	0.6	0.8	1.3	3.3	<1	0.5	0.7	0.9	3.2	3.3	2.9	3.6	1.5	6.3	0.8	0.6	0.3	0.9	0.6	1.3	1.9	1.0	1.3	-
Cottidae unid	0.6	0.6	1.2	1.2	1.0	0.8	1.1	1.0	1.3	1.1	1.0	0.3	0.6	0.9	0.4	1.1	0.2	0.3	0.3	0.5	0.3	0.1	-	<1	0.4	-	-
Cymatogaster aggregata	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	-	-	-	-	-	-	-	-
Damalichthys vacca	2.4	0.7	1.1	2.1	1.1	1.8	1.8	1.0	2.6	5.6	1.1	10.7	2.2	1.8	2.1	3.7	3.9	0.9	5.5	1.5	2.8	6.9	2.0	2.5	3.6	1.6	2.8
Embiotoca jacksoni	1.8	1.3	1.9	2.9	3.4	2.0	3.8	3.6	4.3	6.9	6.9	5.2	3.8	3.1	5.1	4.2	7.7	2.3	4.7	4.2	3.5	7.0	2.5	2.3	3.9	6.1	2.3
Embiotoca lateralis	18.9	18.0	9.9	11.4	7.3	8.1	6.7	6.6	9.0	10.8	8.6	7.1	3.3	4.6	7.8	9.1	12.6	7.5	11.3	8.8	10.1	12.4	3.3	5.1	12.8	7.0	8.5
Embiotocidae	-	-	0.4	0.3	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-
Engraulis mordax	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibbonsia spp	0.4	1.6	0.9	1.1	1.0	1.1	0.6	0.8	1.0	1.3	0.4	0.6	1	0.5	0.7	1.1	2.5	0.8	1.4	0.8	0.6	0.4	0.1	0.3	0.5	0.1	1.0
Girella nigricans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Gobiesocidae unid.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<.1	-	0.1	-	-	-	-	-	-	-	-
Gobiesox maeandricus	-	-	-	0.2	-	-	-	-	-	-	<1	0.4	-	<.1	<1	-	0.1	0.1	<.1	-	-	-	-	-	-	-	-
Heterostichus rostratus	-	-	-	0.1	<1	-	-	-	0.1	0.1	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	0.2	-	-
Hexagrammos decagrammus	2.8	3.3	2.1	1.7	2.9	1.0	1.4	1.3	0.8	1.8	1.2	1.3	0.7	1.0	1.3	2.8	1.9	1.1	0.9	1.3	0.4	0.4	0.6	0.4	1.3	1.1	1.3
Hypsurus caryi	0.4	0.4	-	0.7	-	-	-	0.4	0.9	0.5	0.7	0.5	0.4	0.8	0.8	0.2	0.1	-	0.2	-	-	-	-	-	0.1	-	-
Jordania zanope	-	-	<1	0.2	<.1	0.3	-	<1	-	-	-	-	-	-	<1	<.1	<1	-	<1	<1	-	-	-	-	-	-	-
Myliobatis californica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-
Neoclinus spp.	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophiodon elongatus	0.1	0.4	1.0	0.5	1.1	-	0.3	-	0.6	0.3	0.8	0.5	0.4	0.2	0.4	0.7	0.1	0.4	0.3	0.6	-	0.4	-	0.4	0.8	0.6	2.0
Orthonopias triacis	0.6	0.8	0.3	0.2	0.5	-	0.7	1.3	0.8	2.1	1.3	0.8	0.7	0.6	1.1	0.8	1.3	0.9	0.5	0.3	-	0.8	-	0.3	0.5	0.9	1.3
Oxyjulis californica	75.9	4.3	14.1	47.6	9.3	7.5	48.0	88.3	134.0	83.5	54.3	13.2	2.7	51.8	62.7	7.4	47.3	88.9	82.8	46.3	41.6	26.5	37.1	149.8	68.3	13.4	10.5
Oxylebius pictus	3.6	5.3	4.1	4.4	7.6	8.9	8.1	10.6	10.9	9.2	9.8	9.7	8.0	9.1	10.3	13.7	15.1	6	4.4	6.5	6.8	8.9	7.3	6.4	8.6	7.1	6.8
Paralabrax clathratus	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paralichthys californicus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-
Phanerodon atripes	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phanerodon spp	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pholididae unid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	0.1	-	-	-	-	-	-	-	-
Pholididae/Stichaeidae unid.	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleuronectidae unid.	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleuronichthys spp	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Porichthys notatus	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rhacochilus toxotes	0.1	-	0.1	0.1	<.1	-	0.6	<1	0.5	0.1	0.2	-	<1	0.3	0.3	0.3	0.6	0.6	0.6	0.8	0.3	0.9	1.6	0.8	0.5	0.1	0.3
Scorpaenichthys marmoratus	-	1.4	1.4	1.7	2.2	1.1	1.6	1.4	1.5	1.8	3.4	2.3	1.7	1.6	2.4	2.8	2.1	0.8	0.8	1.1	1.1	1.3	0.4	0.2	0.9	0.8	0.5
Sebastes atrovirens	-	<1	<1	0.4	0.2	0.1	0.4	0.5	1.0	0.6	0.3	1.3	0.4	1.2	0.8	0.8	1.1	0.9	1.8	2.3	1.0	1.6	0.5	2.1	1.6	1.2	0.3
Sebastes atrovirens (yoy)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	0.8	-	9.8	0.3	1.3	0.5	2.8	<.1	-	0.2	-
Sebastes auriculatus	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes carnatus	-	-	-	0.1	-	0.4	0.1	0.2	-	-	0.6	0.2	<.1	0.2	0.1	-	-	0.4	0.3	-	-	-	0.1	-	0.2	0.1	-
Sebastes caurinus	-	-	-	-	-	-	-	-	0.5	-	0.2	-	-	-	-	<.1	<.1	-	-	-	-	-	-	-	-	-	-
Sebastes chrysomelas	2.3	5.1	2.9	3.9	4.3	4.5	5.2	9.3	6.5	7.7	6.5	7.8	5.7	5.0	5.4	8.8	7.8	4.6	5.8	6.5	6.6	5.5	2.4	3.9	4.4	4.9	5.5
Sebastes chrysomelas/S carnatus	0.1	3.3	11.0	1.6	1.1	17.6	2.2	1.1	4.3	2.8	0.7	0.3	1.8	0.4	1.8	4.8	2.4	2.5	5.8	38.6	1.1	13.5	0.8	0.3	0.2	6.4	-
Sebastes melanops	0.3	0.5	0.2	0.2	<1	-	0.1	0.2	-	0.3	-	<.1	-	0.1	0.1	0.2	0.7	0.1	-	<1	0.1	0.6	-	0.3	<1	0.1	-
Sebastes melanops (juv)	-	-	-	-	-	-	-	-	0.3	-	-	0.2	-	-	-	6.3	-	7.8	0.9	1.3	-	0.3	-	11.7	0.7	1.2	0.3
Sebastes miniatus	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes mystinus	3.9	4.7	6.5	14.7	3.1	4.0	3.1	6.9	2.4	4.9	7.7	4.3	5.0	3.1	3.8	2.1	4.9	2.3	0.3	1.7	1.6	2.1	1.5	1.5	1.0	0.8	0.3
Sebastes mystinus (juv)	38.0	47.8	13.8	67.2	20.2	12.5	1.3	-	6.8	6.4	6.4	6.2	13.0	2.0	19.7	35.5	20.1	0.9	<1	<1	-	-	-	15.1	6.2	0.9	0.5
Sebastes nebulosus	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sebastes paucispinis (juv)	-	0.6	0.3	21.5	-	10.1	-	-	-	-	-	1.6	0.2	-	-	<.1	-	-	-	-	-	-	0.3	1.6	-	<1	-
Sebastes pinniger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-	-	-	-

(continued)

Subtidal Fish Observations - Yearly Mean Abundance (per 50 x 4 m transect) Benthic - South Control (continued)

Taxon	Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
	# Station Replicates/Year	4	6	8	9	8	3	7	4	3	5	4	4	5	8	8	6	6	4	7	5	3	3	4	6	9	8	2
Sebastes rastrelliger		0.4	0.3	0.3	0.4	0.7	0.5	0.9	0.7	1.4	0.5	1.2	2.5	0.8	2.3	2.2	2.0	0.9	0.5	0.3	0.7	1.3	-	0.8	0.4	0.4	1.3	1.3
Sebastes serranoides		1.1	0.3	0.6	0.3	0.5	1.1	0.8	0.4	0.5	0.9	0.5	0.6	0.7	0.7	0.2	0.5	0.6	0.4	0.3	1.2	-	0.3	0.1	<1	0.4	0.2	0.3
Sebastes serranoides/S flavidus (juv)		5.3	41.3	0.3	92.6	1.4	1.0	<1	<1	13.8	20.1	4.0	20.9	8.3	0.3	1.9	4.8	-	1.6	0.2	0.9	-	0.3	-	18.5	2.6	2.3	-
Sebastes spp		0.1	0.2	<1	2.5	-	1.5	-	2.4	-	0.9	1.0	1.1	0.2	<1	0.1	-	<.1	0.1	<1	-	-	-	-	0.4	0.1	0.8	-
Semicossyphus pulcher		-	-	-	-	-	-	-	-	-	0.4	-	0.2	0.2	0.4	0.1	-	0.1	0.4	0.4	-	-	-	-	-	-	0.1	-
Stichaeidae unid.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-
Urolophus halleri		-	-	-	-	-	-	-	-	-	0.3	-	-	-	<1	-	-	<1	0.1	<1	-	-	-	-	-	-	-	-
larval/post-larval fish, unid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<.1	-	-	-	-	-	-	-	-

APPENDIX E

Analytical Results

E1 Taxa Used in Analyses

E2 Assumption Testing

E3 BACI/ANOVA

Horizontal band transects cumulative percent and mean algal cover of the top ten species, excluding crustose taxa groups, from each analysis period at the +0.1m stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Mazzaella flaccida	19%	19.00	Mazzaella flaccida	15%	11.22	Mazzaella flaccida	13%	6 95
Corallina vancouveriensis	30%	10.74	Corallina vancouveriensis	28%	9 01	Gastroclonium subarticulatum	24%	6.15
Chondracanthus canaliculatus	40%	9 04	Gelidium coulteri	39%	7.86	Phyllospadix spp.	34%	5.37
Phyllospadix spp.	48%	8.40	Gastroclonium subarticulatum	49%	7.51	Corallina vancouveriensis	43%	4 62
Gastroclonium subarticulatum	56%	7.62	Mastocarpus papillatus	57%	5.87	filamentous red algae-complex	51%	4 51
Cryptopleura violacea	62%	5.93	Chondracanthus canaliculatus	63%	3.92	Calliarthron/Bossiella spp.-complex	58%	3 48
Gelidium coulteri	68%	5.64	Cryptopleura violacea	68%	3 81	Gelidium coulteri	64%	3.37
Mastocarpus papillatus	72%	3.79	Prionitis spp.	73%	3 74	Chondracanthus canaliculatus	70%	3.23
Calliarthron/Bossiella spp -complex	75%	3.21	Calliarthron/Bossiella spp -complex	78%	3.65	Prionitis spp.	74%	1.90
Prionitis spp.	78%	2 62	Phyllospadix spp.	81%	2.53	Egregia menziesii	77%	1.83

Horizontal band transects cumulative percent and mean algal cover of the top ten species, excluding crustose taxa groups, from each analysis period at the +0.3m stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Mastocarpus papillatus	29%	19.73	Endocladia muricata	47%	16 09	Endocladia muricata	50%	16 46
Endocladia muricata	58%	19.53	Mastocarpus papillatus	78%	10 70	Mastocarpus papillatus	82%	10.70
Mazzaella flaccida	71%	8.21	Mazzaella flaccida	81%	1.17	Mazzaella flaccida	86%	1 24
Corallina vancouveriensis	75%	3.08	Ulva/Enteromorpha spp	85%	1 09	Gelidium coulteri	89%	0 92
Pelvetia compressa	80%	2 91	Gelidium coulteri	88%	0 99	Pelvetia compressa	90%	0.50
Gelidium coulteri	83%	2.53	Pelvetia compressa	90%	0 80	Corallina vancouveriensis	92%	0 49
Chondracanthus canaliculatus	87%	2.33	Mazzaella affinis	92%	0.59	Mazzaella affinis	93%	0 40
Porphyra spp.	89%	1 43	Gelidium pusillum	93%	0.47	Ulva/Enteromorpha spp.	94%	0 39
Mazzaella affinis	91%	1.37	filamentous red algae-complex	94%	0 47	Gelidium pusillum	95%	0.28
Fucus gardneri	93%	1.16	Prionitis spp	95%	0.31	Cladophora spp.	95%	0.20

Horizontal band transects cumulative percent and mean invertebrate count of the top ten species from each analysis period at the +0.1m stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Tegula funebralis	19%	22 27	Tetraclita rubescens	26%	79 03	Macclintockia scabra	19%	76.17
Tetraclita rubescens	31%	13.81	Tegula funebralis	46%	64 40	Mytilus californianus	36%	68.04
Anthopleura elegantissima	43%	12 84	Macclintockia scabra	61%	45.40	Tetraclita rubescens	51%	62 87
Pagurus spp.	53%	12 07	Anthopleura elegantissima	70%	27 24	Strongylocentrotus purpuratus	64%	52 99
Macclintockia scabra	63%	11 00	Strongylocentrotus purpuratus	78%	25 26	Anthopleura elegantissima	72%	32 92
Tegula brunnea	70%	7 89	Mytilus californianus	82%	13 11	Tegula funebralis	80%	31 99
Mytilus californianus	74%	5 41	Pagurus spp	85%	9 60	Lottia pelta	85%	18.25
Strongylocentrotus purpuratus	78%	3 71	Fissurella volcano	88%	9 28	Fissurella volcano	87%	8 81
Tectura scutum	79%	1 95	Tegula brunnea	90%	4.19	Lottia limatula	89%	8 25
Haliotis spp	81%	1.75	Lottia pelta	91%	4 02	Pagurus spp	91%	7 46

Horizontal band transects cumulative percent and mean invertebrate count of the top ten species from each analysis period at the +0 3m stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Tegula funebralis	50%	116 69	Tegula funebralis	48%	188 54	Tegula funebralis	40%	153 85
Anthopleura elegantissima	72%	51 50	Macclintockia scabra	70%	85 94	Macclintockia scabra	72%	122 15
Macclintockia scabra	86%	31.95	Anthopleura elegantissima	86%	62.25	Anthopleura elegantissima	83%	40.76
Pagurus spp	91%	10 33	Pagurus spp	90%	14 85	Lottia limatula	86%	11 03
Tetraclita rubescens	92%	2.83	Tetraclita rubescens	92%	8 05	Lottia digitalis	89%	11 01
Nuttallina californica	93%	2.82	Chthamalus fissus	93%	5 17	Pagurus spp	91%	8.27
Tectura scutum	94%	2 70	Lottia limatula	95%	4 31	Chthamalus fissus	93%	5 94
Lottia limatula	95%	1 47	Tectura scutum	95%	3 32	Lottia pelta	94%	5 01
Lottia pelta	95%	1.27	Lottia digitalis	96%	2.78	Tetraclita rubescens	95%	4 68
Lottia digitalis	96%	0 88	Fissurella volcano	97%	2 34	Tectura scutum	96%	3 24

Subtidal arc quadrant cumulative percent and mean algal count of all species from each analysis period

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Pterygophora californica	60%	32.04	Pterygophora californica	41%	3.90	Macrocystis spp.	43%	7.51
Laminaria setchellii	81%	11.13	Cystoseira osmundacea	71%	2 86	Cystoseira osmundacea	79%	6 35
Cystoseira osmundacea	93%	6 83	Macrocystis spp.	82%	1.14	Laminariales	87%	1.39
Laminariales	99%	2.86	Laminaria setchellii	91%	0 85	Sargassum muticum	94%	1.15
Nereocystis luetkeana	100%	0.54	Laminariales	99%	0 78	Pterygophora californica	98%	0.76
Egregia menziesii	100%	0.20	Egregia menziesii	100%	0.04	Laminaria setchellii	100%	0 25
Macrocystis spp.	100%	0 00	Nereocystis luetkeana	100%	0.01	Nereocystis luetkeana	100%	0.02
Sargassum muticum	100%	0 00	Sargassum muticum	100%	0.01	Egregia menziesii	100%	0.00

Subtidal arc quadrant cumulative percent and mean invertebrate count of the top ten species from each analysis period

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Tegula brunnea	54%	72.70	Tegula brunnea	44%	36 26	Strongylocentrotus purpuratus	58%	47.19
Pagurus spp.	65%	14.89	Pagurus spp.	54%	8.83	Anthopleura elegantissima	66%	6 04
Asterina miniata	70%	6.12	Acmaea mitra	63%	7.58	Acmaea mitra	73%	5.63
Acmaea mitra	74%	6 06	Serpulorbis squamigerus	69%	4 48	Tegula brunnea	79%	5.57
Tonicella lineata	79%	5.84	Anthopleura elegantissima	73%	3 66	Diopatra ornata	85%	4.23
Diopatra ornata	82%	4.28	Diopatra ornata	77%	3.47	Serpulidae unid.	87%	1.53
Serpulorbis squamigerus	84%	3 65	Strongylocentrotus purpuratus	82%	3.40	Mitra idae	88%	1.05
Phragmatopoma californica	87%	3.28	Tonicella lineata	84%	1.82	Serpulorbis squamigerus	89%	0 88
Anthopleura elegantissima	89%	2.54	Ophiothrix spp.	85%	1 09	Ophiothrix spp.	90%	0 85
Lottia instabilis	90%	2.32	Pisaster giganteus	86%	0.92	Pista spp.	91%	0 61

Subtidal fixed quadrat cumulative percent and algal count of the top ten species from each analysis period

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Phragmatopoma californica	18%	11 90	Pelecypoda unid. boring	21%	12.04	Phragmatopoma californica	61%	68 82
Pelecypoda unid boring	31%	9 27	Phragmatopoma californica	29%	4 53	Ophiactis simplex	74%	14 33
Pagurus spp	44%	8.80	Pagurus spp	36%	4 03	Pelecypoda unid. boring	79%	5 97
Tegula brunnea	50%	4 22	Tegula brunnea	42%	3 25	Strongylocentrotus purpuratus	84%	5 11
Dendropoma spp	56%	4 18	Chaetopteridae	47%	2.83	Pista spp.	85%	1 85
Alia spp.	62%	3 80	Balanus/Tetraclita spp.	51%	2 42	Balanophyllia elegans	87%	1.65
Chaetopteridae	66%	2.48	Dendropoma spp.	55%	2 23	Balanus/Tetraclita spp	88%	1.60
Homolo luridum/Lirularia succincta	69%	2.26	Alia spp	59%	2 13	Serpulidae unid.	90%	1 58
Pugettia spp	71%	1.63	Acmaea mitra	61%	1 56	Ophiothrix spp	91%	1 45
Sipuncula unid.	74%	1 45	Serpulidae unid.	64%	1 33	Acmaea mitra	92%	1 08

Subtidal fixed quadrat cumulative percent and invertebrate cover of the top five species from each analysis period

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
tunicates, colonial/social unid	30%	1.67	Bryozoa, unid (encrusting)	24%	0.92	Bryozoa, unid (encrusting)	27%	0.33
Bryozoa, unid (encrusting)	49%	1.07	tunicates, colonial/social unid	46%	0 86	Porifera unid (encrusting)	54%	0 32
Porifera unid (encrusting)	65%	0.86	Porifera unid (encrusting)	61%	0 60	tunicates, colonial/social unid	70%	0 20
Didemnum/Trididemnum spp.	78%	0 76	Didemnum/Trididemnum spp	73%	0.47	Spirorbidae	78%	0 09
Spirorbidae	89%	0 59	Spirorbidae	85%	0 46	Hymenamphiastra cyanocrypta	85%	0 09

Subtidal line contact cumulative percent and mean algal cover of the top ten species, excluding crustose taxa groups, from each analysis period

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Calliarthron/Bossiella spp.-complex	35%	40.33	Cryptopleura violacea	24%	33 61	Calliarthron/Bossiella spp -complex	26%	25 65
Cryptopleura ruprechtiana	63%	31.36	Calliarthron/Bossiella spp -complex	45%	30.38	Cryptopleura violacea	39%	12 58
Chondracanthus corymbiferus	69%	7.19	Cryptopleura ruprechtiana	55%	14 07	Chrysophyta unid	49%	9 07
Desmarestia spp.	74%	5.90	Prionitis spp.	65%	13 63	Farlowia/Pikea spp.-complex	57%	7.90
Cystoseira osmundacea	77%	3.66	Chondracanthus corymbiferus	74%	13 51	Prionitis spp.	63%	5 86
Mazzaella lilacina	81%	3.58	Farlowia/Pikea spp -complex	79%	5 92	Rhodymenia spp.	69%	5.54
Corallina officinalis	83%	3.27	Rhodymenia spp.	82%	5.18	Macrocystis spp.	74%	5 28
Phyllospadix spp.	86%	2.80	Osmundea spp.	85%	4.59	Chondracanthus corymbiferus	78%	4 10
Pterygophora californica	88%	2.44	Gelidium robustum	87%	2 09	Gelidium robustum	82%	3 64
Ulva/Enteromorpha spp	89%	1.65	Microcladia coulteri	88%	1.70	Cystoseira osmundacea	85%	2.73

Subtidal fish observations cumulative percent and mean count of the top five species, from each analysis period, at the midwater stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Oxyjulis californica	41%	13.23	Oxyjulis californica	36%	15 42	Atherinidae unid.	42%	19 98
Sebastes serran /S flavidus (juv)	58%	5 58	Engraulis mordax	55%	8 28	Oxyjulis californica	68%	12 28
Sebastes chrysomelas/S carnatus	72%	4 30	Cymatogaster aggregata	67%	5.10	Sebastes chrysomelas/S carnatus	82%	6.80
Sebastes paucispinis (juv)	80%	2.58	larval/post-larval fish, unid	78%	4 54	Trachurus symmetricus	86%	1 86
Aulorhynchus flavidus	85%	1 66	Sebastes serran /S. flavidus (juv)	85%	3.21	Sebastes serran /S flavidus (juv.)	90%	1 72

Subtidal fish observations cumulative percent and mean count of the top five species, from each analysis period, at the benthic stations

Pre-Operation 01/01/1978 - 12/31/1984			Operation Period 1 01/01/1987 - 04/30/1995			Operation Period 2 05/1/1995 - 06/30/2002		
Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean	Species Name	Cumulative Percent	Mean
Oxyjulis californica	37%	21.75	Oxyjulis californica	53%	38.89	Oxyjulis californica	31%	14.65
Sebastes serran /S flavidus (juv.)	50%	7.78	Cymatogaster aggregata	58%	3.86	Sebastes chrysomelas/S. carnatus	42%	5 22
Sebastes chrysomelas/S. carnatus	60%	5.44	Damalichthys vacca	63%	3.79	Damalichthys vacca	53%	5 07
Sebastes mystinus (juv)	65%	3.31	Sebastes atrovirens (yoy)	67%	2 42	Embiotoca jacksoni	62%	4 28
Sebastes paucispinis (juv.)	69%	2 29	Aulorhynchus flavidus	70%	2 25	Sebastes serran./S. flavidus (juv.)	66%	2.26
Embiotoca lateralis	73%	2.12	Coryphopterus nicholsi	73%	2.24	Aulorhynchus flavidus	71%	2 09
Sebastes chrysomelas	76%	2.02	Embiotoca jacksoni	76%	2 20	Coryphopterus nicholsi	74%	1.71
Oxylebius pictus	80%	1 88	Sebastes serran./S. flavidus (juv.)	79%	2.20	Oxylebius pictus	77%	1.40
Aulorhynchus flavidus	83%	1.71	Citharichthys spp.	81%	1.68	Citharichthys spp.	80%	1.16
Sebastes mystinus	84%	1.03	Engraulis mordax	83%	1.42	Embiotoca lateralis	82%	1.08

Horizontal band transect algal assumption testing for BACI analysis

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
Algal cover																
	1	10	ALL	1/(x+constant)	0.01	0.013	<.001	1.163	<=0.05	2.053	> 0.05	< 001	0.390	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.1	<.001	< 001	1.164	<=0.05	1.719	> 0.05	< 001	0.390	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.5	<.001	< 001	1.168	<=0.05	1.109	<=0.05	< 001	0.390	NONE	Y	N
	1	10	ALL	1/(x+constant)	1	<.001	<.001	1.173	<=0.05	0.938	<=0.05	<.001	0.390	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.01	<.001	0.001	1.503	> 0.05	0.958	<=0.05	0.001	0.330	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.1	< 001	0.001	1.503	> 0.05	0.902	<=0.05	0.001	0.330	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.5	< 001	0.001	1.505	> 0.05	0.894	<=0.05	0.001	0.329	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	1	< 001	0.001	1.507	> 0.05	0.899	<=0.05	0.001	0.328	NONE	Y	N
	1	10	ALL	NONE	0	< 001	0.387	1.669	> 0.05	2.180	> 0.05	0.006	0.230	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.01	< 001	0.071	1.607	> 0.05	1.731	> 0.05	0.002	0.276	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.1	< 001	0.072	1.607	> 0.05	1.735	> 0.05	0.002	0.276	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.5	< 001	0.073	1.607	> 0.05	1.749	> 0.05	0.002	0.276	NONE	Y	Y
	1	10	ALL	√(x+constant)	1	<.001	0.074	1.608	> 0.05	1.763	> 0.05	0.002	0.275	NONE	Y	Y
	3	10	COVE	1/(x+constant)	0.01	<.001	< 001	2.074	> 0.05	1.371	> 0.05	0.384	0.024	NONE	Y	N
	3	10	COVE	1/(x+constant)	0.1	<.001	< 001	2.070	> 0.05	1.347	> 0.05	0.394	0.023	NONE	Y	N
	3	10	COVE	1/(x+constant)	0.5	<.001	<.001	2.049	> 0.05	1.264	> 0.05	0.446	0.018	NONE	Y	N
	3	10	COVE	1/(x+constant)	1	<.001	< 001	2.015	> 0.05	1.192	<=0.05	0.517	0.013	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.01	< 001	< 001	1.585	> 0.05	0.964	<=0.05	0.304	0.033	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.1	<.001	<.001	1.576	> 0.05	0.958	<=0.05	0.293	0.034	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.5	<.001	<.001	1.541	> 0.05	0.942	<=0.05	0.252	0.041	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	1	< 001	< 001	1.508	> 0.05	0.936	<=0.05	0.215	0.048	NONE	Y	N
	3	10	COVE	NONE	0	0.199	0.025	1.444	<=0.05	2.160	> 0.05	0.029	0.140	NONE	N	N
	3	10	COVE	√(x+constant)	0.01	<.001	<.001	1.388	<=0.05	1.569	> 0.05	0.045	0.120	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	< 001	< 001	1.387	<=0.05	1.576	> 0.05	0.045	0.120	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	< 001	< 001	1.383	<=0.05	1.605	> 0.05	0.043	0.122	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	<.001	1.379	<=0.05	1.636	> 0.05	0.041	0.125	NONE	Y	N
Algal diversity																
	1	10	ALL	1/(x+constant)	0.01	0.038	<.001	0.991	<=0.05	2.122	> 0.05	0.036	0.143	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.1	< 001	<.001	0.987	<=0.05	1.824	> 0.05	0.035	0.144	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.5	<.001	<.001	0.972	<=0.05	1.197	<=0.05	0.032	0.149	NONE	Y	N
	1	10	ALL	1/(x+constant)	1	< 001	< 001	0.959	<=0.05	1.207	> 0.05	0.029	0.154	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.01	< 001	<.001	0.938	<=0.05	1.426	> 0.05	0.024	0.164	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.1	< 001	< 001	0.936	<=0.05	1.298	> 0.05	0.024	0.165	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
Algal diversity (continued)																
	1	10	ALL	log_{10}(x+constant)	0 5	< 001	< 001	0 930	<=0 05	1 413	> 0 05	0 022	0 167	NONE	Y	N
	1	10	ALL	log_{10}(x+constant)	1	< 001	< 001	0.924	<=0 05	1.528	> 0 05	0 021	0.170	NONE	Y	N
	1	10	ALL	NONE	0	< 001	< 001	0 892	<=0 05	1 975	> 0 05	0 015	0 186	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	< 001	< 001	0 914	<=0 05	1 537	> 0 05	0 019	0 175	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	< 001	< 001	0 913	<=0 05	1.586	> 0 05	0 019	0 175	NONE	Y	N
	1	10	ALL	√(x+constant)	0 5	< 001	< 001	0 910	<=0 05	1 685	> 0 05	0 019	0 177	NONE	Y	N
	1	10	ALL	√(x+constant)	1	< 001	< 001	0 908	<=0 05	1 749	> 0 05	0 018	0 178	NONE	Y	N
	1	10	COVE	1/(x+constant)	0 01	0 050	0 001	0 895	<=0 05	2 126	> 0.05	0 018	0 178	NONE	N	N
	1	10	COVE	1/(x+constant)	0 1	< 001	0 001	0 892	<=0 05	1 904	> 0 05	0 017	0 180	NONE	Y	N
	1	10	COVE	1/(x+constant)	0.5	<.001	0 001	0.879	<=0.05	1 277	> 0.05	0 016	0 185	NONE	Y	N
	1	10	COVE	1/(x+constant)	1	< 001	0 001	0 868	<=0 05	1 225	> 0 05	0.014	0.190	NONE	Y	N
	1	10	COVE	log_{10}(x+constant)	0 01	<.001	0 001	0.850	<=0 05	1 557	> 0.05	0 012	0 199	NONE	Y	N
	1	10	COVE	log_{10}(x+constant)	0 1	< 001	0 001	0 849	<=0 05	1 339	> 0 05	0 012	0.200	NONE	Y	N
	1	10	COVE	log_{10}(x+constant)	0 5	< 001	0 001	0 843	<=0 05	1 394	> 0 05	0 011	0 203	NONE	Y	N
	1	10	COVE	log_{10}(x+constant)	1	<.001	0 001	0 839	<=0 05	1 497	> 0 05	0 010	0 205	NONE	Y	N
	1	10	COVE	NONE	0	< 001	0 001	0 813	<=0.05	1 900	> 0.05	0 008	0 222	NONE	Y	N
	1	10	COVE	√(x+constant)	0 01	< 001	0 001	0 831	<=0 05	1 512	> 0 05	0 009	0.210	NONE	Y	N
	1	10	COVE	√(x+constant)	0 1	< 001	0 001	0 830	<=0 05	1 548	> 0 05	0.009	0.211	NONE	Y	N
	1	10	COVE	√(x+constant)	0 5	< 001	0 001	0 828	<=0 05	1 638	> 0 05	0 009	0 212	NONE	Y	N
	1	10	COVE	√(x+constant)	1	< 001	0 001	0 826	<=0 05	1 697	> 0 05	0 009	0.214	NONE	Y	N
	3	10	COVE	1/(x+constant)	0 01	< 001	0.013	1 617	> 0 05	1.564	> 0.05	0.005	0 224	NONE	Y	N
	3	10	COVE	1/(x+constant)	0 1	<.001	0 016	1 608	> 0 05	1.593	> 0 05	0.004	0 228	NONE	Y	N
	3	10	COVE	1/(x+constant)	0 5	<.001	0 031	1.579	> 0 05	1 588	> 0 05	0 003	0 241	NONE	Y	N
	3	10	COVE	1/(x+constant)	1	<.001	0 052	1 553	> 0 05	1 545	> 0 05	0 002	0.253	NONE	Y	Y
	3	10	COVE	log_{10}(x+constant)	0 01	< 001	0 089	1.524	> 0 05	1 537	> 0 05	0 002	0 269	NONE	Y	Y
	3	10	COVE	log_{10}(x+constant)	0 1	< 001	0 097	1 520	> 0 05	1.527	> 0 05	0 002	0 271	NONE	Y	Y
	3	10	COVE	log_{10}(x+constant)	0 5	< 001	0 130	1 503	> 0 05	1 483	> 0 05	0 001	0 278	NONE	Y	Y
	3	10	COVE	log_{10}(x+constant)	1	<.001	0 166	1.489	> 0 05	1 448	> 0 05	0.001	0.284	NONE	Y	Y
	3	10	COVE	NONE	0	<.001	0 472	1 415	<=0 05	1 340	> 0 05	0.001	0 314	AR	Y	Y
	3	10	COVE	√(x+constant)	0 01	< 001	0 215	1 472	> 0.05	1 447	> 0 05	0 001	0 292	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.1	< 001	0 224	1 470	> 0 05	1 438	> 0 05	0 001	0 293	NONE	Y	Y
	3	10	COVE	√(x+constant)	0 5	< 001	0.256	1 461	> 0 05	1 411	> 0 05	0.001	0.296	NONE	Y	Y
	3	10	COVE	√(x+constant)	1	< 001	0 286	1 453	> 0.05	1 392	> 0 05	0 001	0.299	NONE	Y	Y

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
***Calliarthron/Bossiella* spp.-complex**																
	1	10	ALL	arcsin	0	<.001	0.151	1.411	<=0.05	2.060	> 0.05	0.140	0.073	NONE	Y	Y
	1	10	ALL	NONE	0	<.001	<.001	1.533	> 0.05	2.091	> 0.05	0.675	0.006	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.152	1.417	<=0.05	2.047	> 0.05	0.146	0.071	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0.098	1.433	> 0.05	2.038	> 0.05	0.179	0.062	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.5	<.001	0.032	1.445	> 0.05	2.043	> 0.05	0.248	0.046	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	0.012	1.452	> 0.05	2.048	> 0.05	0.304	0.036	NONE	Y	N
Chondracanthus canaliculatus																
	1	10	ALL	arcsin	0	<.001	0.862	0.747	<=0.05	1.266	> 0.05	<.001	0.422	AR	Y	Y
	1	10	ALL	NONE	0	0.061	0.207	0.879	<=0.05	1.497	> 0.05	<.001	0.390	AR	N	Y
	1	10	ALL	√(x+constant)	0.01	<.001	0.925	0.742	<=0.05	1.227	> 0.05	<.001	0.422	AR	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0.863	0.758	<=0.05	1.269	> 0.05	<.001	0.416	AR	Y	Y
	1	10	ALL	√(x+constant)	0.5	<.001	0.854	0.784	<=0.05	1.328	> 0.05	<.001	0.408	AR	Y	Y
	1	10	ALL	√(x+constant)	1	<.001	0.888	0.799	<=0.05	1.361	> 0.05	<.001	0.404	AR	Y	Y
	3	10	COVE	arcsin	0	0.004	0.807	1.229	<=0.05	1.753	> 0.05	0.473	0.016	AR	Y	Y
	3	10	COVE	NONE	0	<.001	<.001	1.055	<=0.05	1.816	> 0.05	0.836	0.001	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	0.001	0.778	1.231	<=0.05	1.743	> 0.05	0.452	0.018	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1	<.001	0.567	1.179	<=0.05	1.766	> 0.05	0.472	0.016	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5	<.001	0.188	1.104	<=0.05	1.795	> 0.05	0.521	0.013	AR	Y	Y
	3	10	COVE	√(x+constant)	1	<.001	0.058	1.072	<=0.05	1.804	> 0.05	0.555	0.011	AR	Y	Y
***Cladophora* spp.**																
	3	10	COVE	arcsin	0	<.001	0.003	1.094	<=0.05	2.117	> 0.05	0.304	0.033	NONE	Y	N
	3	10	COVE	NONE	0	<.001	<.001	1.118	<=0.05	2.219	> 0.05	0.667	0.006	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	<.001	<.001	1.167	<=0.05	2.134	> 0.05	0.438	0.019	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	<.001	<.001	1.149	<=0.05	2.138	> 0.05	0.601	0.009	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	<.001	<.001	1.118	<=0.05	2.168	> 0.05	0.661	0.006	NONE	Y	N
	3	10	COVE	√(x+constant)	1	<.001	<.001	1.116	<=0.05	2.185	> 0.05	0.667	0.006	NONE	Y	N
Corallina vancouveriensis																
	1	10	ALL	arcsin	0	<.001	<.001	1.493	> 0.05	0.953	<=0.05	0.735	0.004	NONE	Y	N
	1	10	ALL	NONE	0	<.001	<.001	1.570	> 0.05	0.926	<=0.05	0.442	0.020	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.006	1.465	> 0.05	0.961	<=0.05	0.782	0.003	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	<.001	0.004	1.463	> 0.05	0.929	<=0.05	0.761	0.003	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	0.002	1.457	> 0.05	0.871	<=0.05	0.727	0.004	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	<.001	1.453	> 0.05	0.839	<=0.05	0.705	0.005	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
***Corallina vancouveriensis* (continued)**																
	1	10	COVE	arcsin	0	0.001	0.016	0.896	<=0.05	1.137	<=0.05	0.074	0.106	NONE	Y	N
	1	10	COVE	NONE	0	<.001	< 001	0.997	<=0.05	1.328	> 0.05	0.109	0.086	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	0.002	0.023	0.895	<=0.05	1.131	<=0.05	0.075	0.105	NONE	Y	N
	1	10	COVE	√(x+constant)	0.1	0.001	0.017	0.900	<=0.05	1.090	<=0.05	0.079	0.102	NONE	Y	N
	1	10	COVE	√(x+constant)	0.5	< 001	0.008	0.910	<=0.05	1.036	<=0.05	0.085	0.099	NONE	Y	N
	1	10	COVE	√(x+constant)	1	< 001	0.004	0.917	<=0.05	1.017	<=0.05	0.089	0.096	NONE	Y	N
	3	10	COVE	arcsin	0	0.001	<.001	1.134	<=0.05	1.038	<=0.05	0.005	0.225	NONE	Y	N
	3	10	COVE	NONE	0	< 001	< 001	0.729	<=0.05	1.078	<=0.05	0.003	0.251	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	0.001	< 001	1.143	<=0.05	1.047	<=0.05	0.005	0.221	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	0.001	< 001	1.107	<=0.05	1.066	<=0.05	0.005	0.224	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	< 001	< 001	1.001	<=0.05	1.083	<=0.05	0.003	0.239	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	<.001	0.928	<=0.05	1.087	<=0.05	0.003	0.248	NONE	Y	N
Coralline crust																
	1	10	ALL	arcsin	0	0.001	< 001	1.219	<=0.05	2.297	> 0.05	<.001	0.459	NONE	Y	N
	1	10	ALL	NONE	0	< 001	< 001	1.304	<=0.05	2.173	> 0.05	< 001	0.419	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	0.002	< 001	1.216	<=0.05	2.289	> 0.05	<.001	0.459	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	0.002	< 001	1.219	<=0.05	2.289	> 0.05	< 001	0.458	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	0.001	< 001	1.231	<=0.05	2.291	> 0.05	< 001	0.453	NONE	Y	N
	1	10	ALL	√(x+constant)	1	< 001	< 001	1.243	<=0.05	2.291	> 0.05	<.001	0.449	NONE	Y	N
	1	10	COVE	arcsin	0	0.021	0.913	1.478	> 0.05	1.957	> 0.05	0.001	0.328	NONE	Y	Y
	3	10	COVE	arcsin	0	0.202	0.064	2.161	> 0.05	2.513	> 0.05	0.383	0.024	NONE	N	Y
	1	10	COVE	NONE	0	0.011	0.402	1.843	> 0.05	1.898	> 0.05	0.005	0.246	NONE	Y	Y
	3	10	COVE	NONE	0	0.301	0.005	2.056	> 0.05	2.517	> 0.05	0.608	0.008	NONE	N	N
	1	10	COVE	√(x+constant)	0.01	0.020	0.854	1.456	> 0.05	1.959	> 0.05	0.001	0.332	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.01	0.217	0.070	2.158	> 0.05	2.512	> 0.05	0.371	0.025	NONE	N	Y
	1	10	COVE	√(x+constant)	0.1	0.020	0.887	1.464	> 0.05	1.958	> 0.05	0.001	0.331	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.1	0.232	0.068	2.144	> 0.05	2.509	> 0.05	0.378	0.024	NONE	N	Y
	1	10	COVE	√(x+constant)	0.5	0.023	0.993	1.496	> 0.05	1.957	> 0.05	0.001	0.326	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.5	0.226	0.054	2.113	> 0.05	2.497	> 0.05	0.396	0.023	NONE	N	Y
	1	10	COVE	√(x+constant)	1	0.024	0.888	1.527	> 0.05	1.955	> 0.05	0.001	0.321	NONE	Y	Y
	3	10	COVE	√(x+constant)	1	0.219	0.044	2.094	> 0.05	2.492	> 0.05	0.413	0.021	NONE	N	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
Cryptopleura violacea																
	1	10	ALL	arcsin	0	<.001	0.386	0.779	<=0.05	1.283	>0.05	0.001	0.305	AR	Y	Y
	1	10	ALL	NONE	0	<.001	<.001	0.828	<=0.05	1.452	>0.05	0.007	0.224	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.293	0.804	<=0.05	1.292	>0.05	0.001	0.299	AR	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0.358	0.820	<=0.05	1.330	>0.05	0.002	0.290	AR	Y	Y
	1	10	ALL	√(x+constant)	0.5	<.001	0.598	0.834	<=0.05	1.392	>0.05	0.002	0.281	AR	Y	Y
	1	10	ALL	√(x+constant)	1	<.001	0.851	0.840	<=0.05	1.427	>0.05	0.002	0.278	AR	Y	Y
Egregia menziesii																
	1	10	ALL	arcsin	0	<.001	<.001	1.707	>0.05	1.861	>0.05	0.429	0.022	NONE	Y	N
	1	10	ALL	NONE	0	<.001	<.001	1.350	<=0.05	1.687	>0.05	0.113	0.084	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	<.001	1.706	>0.05	1.877	>0.05	0.407	0.024	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	<.001	<.001	1.659	>0.05	1.875	>0.05	0.327	0.033	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	<.001	1.558	>0.05	1.848	>0.05	0.223	0.051	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	<.001	1.501	>0.05	1.818	>0.05	0.182	0.061	NONE	Y	N
	1	10	COVE	arcsin	0	<.001	<.001	1.369	<=0.05	1.512	>0.05	0.084	0.099	NONE	Y	N
	1	10	COVE	NONE	0	<.001	<.001	1.208	<=0.05	1.385	>0.05	0.006	0.236	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	<.001	<.001	1.358	<=0.05	1.565	>0.05	0.078	0.103	NONE	Y	N
	1	10	COVE	√(x+constant)	0.1	<.001	<.001	1.319	<=0.05	1.560	>0.05	0.053	0.123	NONE	Y	N
	1	10	COVE	√(x+constant)	0.5	<.001	<.001	1.261	<=0.05	1.461	>0.05	0.026	0.159	NONE	Y	N
	1	10	COVE	√(x+constant)	1	<.001	<.001	1.235	<=0.05	1.363	>0.05	0.018	0.179	NONE	Y	N
Endocladia muricata																
	3	10	COVE	arcsin	0	<.001	0.504	0.962	<=0.05	0.887	<=0.05	0.003	0.243	AR	Y	Y
	3	10	COVE	NONE	0	0.001	0.059	1.505	>0.05	0.863	<=0.05	0.339	0.029	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.01	<.001	0.158	0.858	<=0.05	0.898	<=0.05	0.001	0.291	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1	<.001	0.210	0.873	<=0.05	0.896	<=0.05	0.001	0.284	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5	<.001	0.424	0.925	<=0.05	0.886	<=0.05	0.002	0.261	AR	Y	Y
	3	10	COVE	√(x+constant)	1	<.001	0.658	0.974	<=0.05	0.880	<=0.05	0.003	0.239	AR	Y	Y
Filamentous red algae-complex																
	1	10	ALL	arcsin	0	<.001	0.025	1.542	>0.05	2.060	>0.05	0.604	0.009	NONE	Y	N
	1	10	ALL	NONE	0	<.001	<.001	1.352	<=0.05	1.681	>0.05	0.360	0.029	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.006	1.612	>0.05	2.055	>0.05	0.611	0.009	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	<.001	<.001	1.694	>0.05	1.997	>0.05	0.573	0.011	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	<.001	1.654	>0.05	1.917	>0.05	0.487	0.017	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	<.001	1.597	>0.05	1.874	>0.05	0.446	0.020	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
Filamentous red algae-complex (continued)																
	1	10	COVE	arcsin	0	<.001	0.002	1 412	<=0.05	1 944	> 0 05	0 406	0 024	NONE	Y	N
	1	10	COVE	NONE	0	< 001	<.001	1 284	<=0.05	1 762	> 0.05	0.237	0 048	NONE	Y	N
	1	10	COVE	√(x+constant)	0 01	< 001	< 001	1 461	> 0 05	1.942	> 0.05	0.398	0 025	NONE	Y	N
	1	10	COVE	√(x+constant)	0 1	< 001	< 001	1 522	> 0 05	1.923	> 0.05	0.350	0 030	NONE	Y	N
	1	10	COVE	√(x+constant)	0 5	< 001	< 001	1 486	> 0.05	1 897	> 0.05	0 280	0 040	NONE	Y	N
	1	10	COVE	√(x+constant)	1	< 001	< 001	1 442	> 0 05	1 881	> 0 05	0 255	0.044	NONE	Y	N
	3	10	COVE	arcsin	0	<.001	0 081	0 864	<=0 05	2 567	> 0 05	0 004	0.233	AR	Y	Y
	3	10	COVE	NONE	0	< 001	<.001	1 351	<=0.05	2 520	> 0.05	0 137	0 068	NONE	Y	N
	3	10	COVE	√(x+constant)	0 01	< 001	0 060	0 906	<=0 05	2.558	> 0 05	0.013	0.178	AR	Y	Y
	3	10	COVE	√(x+constant)	0 1	< 001	0 011	1 071	<=0 05	2.542	> 0.05	0.046	0.119	NONE	Y	N
	3	10	COVE	√(x+constant)	0 5	< 001	0 001	1 233	<=0.05	2.531	> 0.05	0 092	0 086	NONE	Y	N
	3	10	COVE	√(x+constant)	1	<.001	<.001	1 281	<=0 05	2 527	> 0.05	0.109	0 078	NONE	Y	N
Fucus gardneri																
	3	10	COVE	arcsin	0	< 001	0 005	0 763	<=0 05	1.668	> 0.05	< 001	0 506	NONE	Y	N
	3	10	COVE	NONE	0	< 001	< 001	0 463	<=0 05	1.312	> 0.05	< 001	0 409	NONE	Y	N
	3	10	COVE	√(x+constant)	0 01	< 001	< 001	0 683	<=0.05	1 611	> 0 05	< 001	0.533	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	< 001	< 001	0 565	<=0 05	1.480	> 0.05	< 001	0 578	NONE	Y	N
	3	10	COVE	√(x+constant)	0 5	< 001	<.001	0 466	<=0 05	1 379	> 0 05	< 001	0.580	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	< 001	0 440	<=0 05	1.352	> 0 05	<.001	0 557	NONE	Y	N
Gastroclonium subarticulatum																
	1	10	ALL	arcsin	0	< 001	0 082	0 542	<=0 05	1.504	> 0.05	<.001	0 517	NONE	Y	N
	1	10	ALL	NONE	0	< 001	0 438	0 684	<=0 05	1.628	> 0.05	< 001	0 509	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01	< 001	0 073	0 546	<=0 05	1.526	> 0 05	< 001	0 508	NONE	Y	N
	1	10	ALL	√(x+constant)	0 1	<.001	0 076	0.563	<=0 05	1 567	> 0 05	< 001	0.498	AR	Y	Y
	1	10	ALL	√(x+constant)	0 5	< 001	0 089	0 591	<=0 05	1.615	> 0 05	< 001	0 484	AR	Y	Y
	1	10	ALL	√(x+constant)	1	< 001	0 103	0.608	<=0 05	1 637	> 0 05	< 001	0.477	AR	Y	Y
Gelidium coulteri																
	1	10	ALL	arcsin	0	< 001	0 597	1 484	> 0 05	1 983	> 0 05	0 025	0.162	NONE	Y	Y
	1	10	ALL	NONE	0	< 001	0 420	1 604	> 0.05	1 845	> 0 05	0 053	0.124	NONE	Y	Y
	1	10	ALL	√(x+constant)	0 01	< 001	0 552	1 477	> 0.05	1 987	> 0 05	0 024	0.163	NONE	Y	Y
	1	10	ALL	√(x+constant)	0 1	< 001	0.572	1.483	> 0 05	1 979	> 0 05	0 025	0 161	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.5	< 001	0 648	1 502	> 0.05	1 955	> 0 05	0 028	0 156	NONE	Y	Y
	1	10	ALL	√(x+constant)	1	< 001	0.722	1 517	> 0 05	1 940	> 0 05	0 030	0 152	NONE	Y	Y

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[3] d f. used in Analysis	Passed Tests for BACI Analysis
***Gelidium coulteri* (continued)**																
	3	10	COVE	NONE	0	<.001	0 009	2.023	> 0 05	2 070	> 0 05	0.933	< 001	NONE	Y	N
	3	10	COVE	√(x+constant)	0 01	<.001	0.691	1.965	> 0.05	1.818	> 0.05	0.932	< 001	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.1	<.001	0.997	1.952	> 0 05	1.867	> 0 05	0.889	0 001	NONE	Y	Y
	3	10	COVE	√(x+constant)	0 5	<.001	0.610	1.959	> 0 05	1.928	> 0.05	0 831	0 001	NONE	Y	Y
	3	10	COVE	√(x+constant)	1	<.001	0.403	1.972	> 0 05	1.960	> 0 05	0 821	0 002	NONE	Y	Y
	3	10	COVE	arcsin	0	< 001	0.543	1.983	> 0 05	1.790	> 0.05	0 952	< 001	NONE	Y	Y
Gelidium pusillum																
	3	10	COVE	NONE	0	<.001	0 695	1.809	> 0 05	2.147	> 0 05	0 689	0 005	AR	Y	Y
	3	10	COVE	√(x+constant)	0 01	<.001	0.134	1.956	> 0 05	2.328	> 0 05	0 815	0 002	NONE	Y	Y
	3	10	COVE	√(x+constant)	0 1	<.001	0 219	1.936	> 0 05	2.238	> 0 05	0.963	< 001	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.5	< 001	0 515	1.888	> 0.05	2.187	> 0 05	0.863	0.001	NONE	Y	Y
	3	10	COVE	√(x+constant)	1	<.001	0.730	1 862	> 0 05	2.172	> 0.05	0.793	0 002	NONE	Y	Y
	3	10	COVE	arcsin	0	<.001	0.138	1.954	> 0 05	2 409	> 0 05	0.741	0 003	NONE	Y	Y
Mastocarpus papillatus																
	1	10	ALL	arcsin	0	<.001	0.188	1.986	> 0 05	1.953	> 0 05	0 505	0.016	AR	Y	Y
	1	10	ALL	NONE	0	<.001	0.697	2.133	> 0 05	1.967	> 0.05	0.274	0 041	AR	Y	Y
	1	10	ALL	√(x+constant)	0 01	< 001	0.158	1.968	> 0.05	1.946	> 0 05	0.581	0.011	AR	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0 144	1.970	> 0.05	1.951	> 0 05	0.617	0.009	AR	Y	Y
	1	10	ALL	√(x+constant)	0.5	< 001	0 132	1.974	> 0 05	1.966	> 0 05	0 617	0 009	AR	Y	Y
	1	10	ALL	√(x+constant)	1	<.001	0.130	1.983	> 0.05	1.973	> 0 05	0.598	0 010	AR	Y	Y
	3	10	COVE	arcsin	0	0.019	0.499	0.965	<=0.05	1.002	<=0 05	0 029	0.140	AR	Y	Y
	3	10	COVE	NONE	0	0 031	0 026	1.108	<=0.05	0.990	<=0 05	0 064	0.104	NONE	Y	N
	3	10	COVE	√(x+constant)	0 01	0.007	0.729	0.919	<=0 05	1.002	<=0 05	0 019	0.161	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1	0.007	0 757	0 919	<=0 05	0 993	<=0.05	0.018	0.162	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5	0.013	0.861	0.923	<=0 05	0.976	<=0 05	0 018	0.164	AR	Y	Y
	3	10	COVE	√(x+constant)	1	0 019	0 961	0.929	<=0 05	0.969	<=0 05	0 017	0 164	AR	Y	Y
Mazzaella affinis																
	3	10	COVE	arcsin	0	0 001	0 156	1.326	<=0.05	1.721	> 0 05	< 001	0.326	AR	Y	Y
	3	10	COVE	NONE	0	0.002	0.004	1.438	<=0 05	1.757	> 0 05	0.002	0.254	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	0 001	0.107	1.331	<=0 05	1.736	> 0.05	< 001	0.322	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1	0 002	0 068	1.337	<=0.05	1.755	> 0 05	0 001	0 314	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5	0 004	0 045	1.347	<=0.05	1.769	> 0.05	0.001	0.301	NONE	Y	N
	3	10	COVE	√(x+constant)	1	0 005	0.033	1.358	<=0 05	1.771	> 0.05	0.001	0.292	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
Mazzaella flaccida																
	1	10	ALL	arcsin	0	< 001	0 415	1 362	<=0 05	2 287	> 0 05	0 008	0.218	NONE	Y	Y
	1	10	ALL	NONE	0	< 001	0 001	1 349	<=0.05	2.276	> 0.05	0.017	0.182	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01	<.001	0.785	1 311	<=0 05	2 291	> 0 05	0 005	0 241	NONE	Y	Y
	1	10	ALL	√(x+constant)	0 1	< 001	0 668	1 300	<=0 05	2 294	> 0 05	0 005	0.243	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.5	< 001	0 484	1 279	<=0 05	2.296	> 0 05	0.005	0.246	NONE	Y	Y
	1	10	ALL	√(x+constant)	1	< 001	0 370	1 267	<=0.05	2 297	> 0.05	0 004	0 248	NONE	Y	Y
	3	10	COVE	arcsin	0	0 125	0 165	1.180	<=0.05	1 612	> 0.05	0 001	0 277	AR	N	Y
	3	10	COVE	NONE	0	0 005	0 782	1 180	<=0 05	1 661	> 0 05	0.003	0.249	AR	Y	Y
	3	10	COVE	√(x+constant)	0 01	0 194	0.130	1.149	<=0 05	1 610	> 0 05	0 001	0 288	AR	N	Y
	3	10	COVE	√(x+constant)	0 1	0 231	0 151	1 122	<=0 05	1 612	> 0 05	0.001	0.296	AR	N	Y
	3	10	COVE	√(x+constant)	0 5	0 225	0 189	1.106	<=0 05	1 618	> 0 05	0 001	0 300	AR	N	Y
	3	10	COVE	√(x+constant)	1	0 183	0 215	1 103	<=0 05	1.623	> 0 05	0.001	0 300	AR	N	Y
Non-coralline crust																
	1	10	ALL	arcsin	0	< 001	< 001	1 888	> 0 05	0 914	<=0 05	0 350	0.030	NONE	Y	N
	1	10	ALL	NONE	0	< 001	< 001	1 830	> 0.05	0.969	<=0.05	0 608	0 009	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01	< 001	0.001	1.934	> 0 05	0 972	<=0 05	0 331	0.033	NONE	Y	N
	1	10	ALL	√(x+constant)	0 1	< 001	0.001	1.949	> 0 05	0 977	<=0 05	0 341	0.031	NONE	Y	N
	1	10	ALL	√(x+constant)	0 5	<.001	< 001	1 964	> 0 05	0 992	<=0 05	0 371	0.028	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	< 001	1 970	> 0 05	1 004	<=0 05	0 397	0.025	NONE	Y	N
	1	10	COVE	arcsin	0	< 001	0 873	1 665	> 0.05	1 009	<=0 05	0 325	0 033	NONE	Y	Y
	1	10	COVE	NONE	0	< 001	0 023	1 572	> 0 05	0.932	<=0.05	0 384	0 026	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	< 001	0 616	1 713	> 0 05	1 086	<=0 05	0 323	0 034	NONE	Y	Y
	1	10	COVE	√(x+constant)	0 1	< 001	0.629	1.713	> 0 05	1 085	<=0 05	0 323	0.034	NONE	Y	Y
	1	10	COVE	√(x+constant)	0 5	< 001	0 685	1 713	> 0 05	1.081	<=0 05	0.327	0 033	NONE	Y	Y
	1	10	COVE	√(x+constant)	1	< 001	0 751	1.713	> 0.05	1 075	<=0 05	0 331	0 033	NONE	Y	Y
	3	10	COVE	arcsin	0	0 006	0 020	1 668	> 0 05	1.596	> 0.05	0 131	0 070	NONE	Y	N
	3	10	COVE	NONE	0	0.041	0.110	1 656	> 0 05	1 757	> 0 05	0.107	0.079	NONE	Y	Y
	3	10	COVE	√(x+constant)	0 01	0 002	0 013	1 672	> 0.05	1 581	> 0 05	0 138	0 067	NONE	Y	N
	3	10	COVE	√(x+constant)	0 1	0 002	0 013	1 672	> 0.05	1.586	> 0 05	0 138	0 068	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	0 003	0 015	1 671	> 0.05	1 604	> 0.05	0 136	0 068	NONE	Y	N
	3	10	COVE	√(x+constant)	1	0 004	0 016	1 670	> 0.05	1.621	> 0.05	0.135	0 068	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R[4]	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
Pelvetia compressa																
	3	10	COVE	arcsin	0	<.001	0.192	1.991	> 0.05	1.484	> 0.05	0.184	0.054	AR	Y	Y
	3	10	COVE	NONE	0	< 001	0.002	1.704	> 0.05	1.480	> 0.05	0.015	0.170	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	<.001	0.211	1.939	> 0.05	1.483	> 0.05	0.172	0.057	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1	< 001	0.197	1.854	> 0.05	1.483	> 0.05	0.131	0.070	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5	<.001	0.138	1.780	> 0.05	1.482	> 0.05	0.080	0.092	AR	Y	Y
	3	10	COVE	√(x+constant)	1	< 001	0.095	1.756	> 0.05	1.481	> 0.05	0.060	0.107	AR	Y	Y
Phyllospadix spp.																
	1	10	ALL	arcsin	0	<.001	< 001	0.286	<=0.05	1.483	> 0.05	< 001	0.527	NONE	Y	N
	1	10	ALL	NONE	0	<.001	<.001	0.426	<=0.05	1.539	> 0.05	<.001	0.460	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	< 001	0.286	<=0.05	1.483	> 0.05	<.001	0.526	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	< 001	< 001	0.301	<=0.05	1.486	> 0.05	<.001	0.519	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	< 001	0.324	<=0.05	1.492	> 0.05	<.001	0.508	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	< 001	0.338	<=0.05	1.496	> 0.05	<.001	0.502	NONE	Y	N
	1	10	COVE	arcsin	0	<.001	0.020	0.298	<=0.05	1.545	> 0.05	< 001	0.506	NONE	Y	N
	1	10	COVE	NONE	0	< 001	<.001	0.452	<=0.05	1.593	> 0.05	<.001	0.429	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	<.001	0.066	0.293	<=0.05	1.539	> 0.05	<.001	0.508	NONE	Y	N
	1	10	COVE	√(x+constant)	0.1	< 001	0.056	0.306	<=0.05	1.539	> 0.05	< 001	0.501	NONE	Y	N
	1	10	COVE	√(x+constant)	0.5	< 001	0.028	0.326	<=0.05	1.542	> 0.05	<.001	0.489	NONE	Y	N
	1	10	COVE	√(x+constant)	1	<.001	0.014	0.339	<=0.05	1.545	> 0.05	<.001	0.483	NONE	Y	N
Prionitis spp.																
	1	10	ALL	arcsin	0	<.001	0.736	0.916	<=0.05	0.996	<=0.05	0.001	0.311	AR	Y	Y
	1	10	ALL	NONE	0	< 001	<.001	0.799	<=0.05	1.387	> 0.05	0.002	0.277	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.719	0.939	<=0.05	1.008	<=0.05	0.001	0.298	AR	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0.461	0.944	<=0.05	1.037	<=0.05	0.002	0.287	AR	Y	Y
	1	10	ALL	√(x+constant)	0.5	<.001	0.141	0.905	<=0.05	1.096	<=0.05	0.002	0.290	AR	Y	Y
	1	10	ALL	√(x+constant)	1	<.001	0.058	0.876	<=0.05	1.144	<=0.05	0.002	0.294	AR	Y	Y
Porphyra spp.																
	3	10	COVE	arcsin	0	< 001	< 001	1.656	> 0.05	1.279	> 0.05	0.852	0.001	NONE	Y	N
	3	10	COVE	NONE	0	<.001	< 001	1.567	> 0.05	1.246	> 0.05	0.531	0.012	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	<.001	<.001	1.675	> 0.05	1.304	> 0.05	0.866	0.001	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	<.001	<.001	1.700	> 0.05	1.311	> 0.05	0.849	0.001	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	<.001	<.001	1.701	> 0.05	1.288	> 0.05	0.814	0.002	NONE	Y	N
	3	10	COVE	√(x+constant)	1	<.001	<.001	1.685	> 0.05	1.275	> 0.05	0.780	0.002	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^4	Variance[2] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
***Prionitis* spp.**																
	3	10	COVE	arcsin	0	< 001	< 001	1 930	> 0 05	1.247	> 0 05	0.678	0.005	NONE	Y	N
	3	10	COVE	NONE	0	<.001	< 001	1 707	> 0 05	0 950	<=0 05	0 540	0 012	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	< 001	< 001	1 831	> 0 05	1.166	<=0 05	0.866	0 001	NONE	Y	N
	3	10	COVE	√(x+constant)	0 1	< 001	<.001	1.756	> 0 05	1 061	<=0 05	0 934	< 001	NONE	Y	N
	3	10	COVE	√(x+constant)	0 5	< 001	< 001	1 716	> 0 05	0 988	<=0 05	0.763	0.003	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	<.001	1.708	> 0 05	0 970	<=0 05	0 692	0 005	NONE	Y	N
Rock																
	1	10	ALL	arcsin	0	<.001	0 066	0 841	<=0 05	1 023	<=0 05	0 709	0 005	AR	Y	Y
	1	10	ALL	NONE	0	< 001	0.004	0.805	<=0 05	1 119	<=0 05	0 619	0 009	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01	< 001	0 077	0.843	<=0 05	1 000	<=0 05	0 721	0 004	AR	Y	Y
	1	10	ALL	√(x+constant)	0 1	<.001	0 075	0 840	<=0 05	1.002	<=0 05	0 726	0.004	AR	Y	Y
	1	10	ALL	√(x+constant)	0 5	< 001	0 068	0 826	<=0.05	1.007	<=0.05	0.738	0 004	AR	Y	Y
	1	10	ALL	√(x+constant)	1	< 001	0 060	0 815	<=0 05	1 012	<=0.05	0 742	0 004	AR	Y	Y
	3	10	COVE	arcsin	0	< 001	< 001	1 178	<=0 05	1 180	<=0 05	0 008	0 200	NONE	Y	N
	3	10	COVE	NONE	0	<.001	< 001	1 226	<=0 05	0.976	<=0.05	0.013	0 178	NONE	Y	N
	3	10	COVE	√(x+constant)	0 01	0 086	0 001	1.069	<=0 05	1 414	> 0 05	0 004	0.228	NONE	N	N
	3	10	COVE	√(x+constant)	0 1	0.084	0 001	1 069	<=0 05	1.414	> 0 05	0.004	0 228	NONE	N	N
	3	10	COVE	√(x+constant)	0 5	0.073	0 001	1 069	<=0.05	1.413	> 0.05	0.004	0 228	NONE	N	N
	3	10	COVE	√(x+constant)	1	0.061	0 001	1 068	<=0 05	1.411	> 0.05	0 004	0 228	NONE	N	N
Spp. algae																
	1	10	ALL	1/(x+constant)	0 01	0 009	0 031	1 573	> 0.05	2 061	> 0 05	0 013	0 194	NONE	Y	N
	1	10	ALL	1/(x+constant)	0 1	0 001	0 030	1 573	> 0.05	1.980	> 0.05	0 013	0 194	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.5	< 001	0.027	1.577	> 0.05	1 588	> 0 05	0 014	0.192	NONE	Y	N
	1	10	ALL	1/(x+constant)	1	<.001	0 024	1 580	> 0.05	1 243	> 0 05	0 014	0.191	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0 01	<.001	0 003	1 627	> 0 05	1.208	> 0.05	0 021	0 171	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0 1	<.001	0 003	1 627	> 0.05	1 157	<=0 05	0 021	0.171	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0 5	< 001	0 003	1 628	> 0.05	1 118	<=0 05	0 021	0.171	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	1	< 001	0 002	1 630	> 0 05	1.142	<=0 05	0 021	0 170	NONE	Y	N
	1	10	ALL	NONE	0	0 002	< 001	1 666	> 0.05	1 635	> 0 05	0 030	0.153	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01	< 001	0.001	1 648	> 0 05	1.348	> 0.05	0 025	0.162	NONE	Y	N
	1	10	ALL	√(x+constant)	0 1	< 001	0 001	1 648	> 0 05	1 357	> 0 05	0 025	0 162	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	0 001	1 649	> 0.05	1 387	> 0 05	0 025	0 161	NONE	Y	N
	1	10	ALL	√(x+constant)	1	< 001	0.001	1 649	> 0 05	1.413	> 0.05	0 025	0.161	NONE	Y	N

(continued)

Horizontal band transect algal assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Prob.	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
Spp. algae (continued)																
	1	10	COVE	1/(x+constant)	0.01	0.016	0.023	1.682	> 0.05	2.084	> 0.05	0.009	0.211	NONE	Y	N
	1	10	COVE	1/(x+constant)	0.1	0.004	0.022	1.683	> 0.05	2.028	> 0.05	0.009	0.211	NONE	Y	N
	1	10	COVE	1/(x+constant)	0.5	< 001	0.021	1.687	> 0.05	1.757	> 0.05	0.010	0.209	NONE	Y	N
	1	10	COVE	1/(x+constant)	1	<.001	0.019	1.690	> 0.05	1.489	> 0.05	0.010	0.208	NONE	Y	N
	1	10	COVE	$\log_{10}$(x+constant)	0.01	<.001	0.005	1.735	> 0.05	1.407	> 0.05	0.015	0.186	NONE	Y	N
	1	10	COVE	$\log_{10}$(x+constant)	0.1	<.001	0.005	1.735	> 0.05	1.343	> 0.05	0.015	0.186	NONE	Y	N
	1	10	COVE	$\log_{10}$(x+constant)	0.5	<.001	0.005	1.736	> 0.05	1.256	> 0.05	0.016	0.185	NONE	Y	N
	1	10	COVE	$\log_{10}$(x+constant)	1	< 001	0.005	1.737	> 0.05	1.245	> 0.05	0.016	0.185	NONE	Y	N
	1	10	COVE	NONE	0	0.018	0.001	1.767	> 0.05	1.538	> 0.05	0.023	0.165	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	< 001	0.002	1.753	> 0.05	1.362	> 0.05	0.019	0.175	NONE	Y	N
	1	10	COVE	√(x+constant)	0.1	< 001	0.002	1.753	> 0.05	1.365	> 0.05	0.019	0.175	NONE	Y	N
	1	10	COVE	√(x+constant)	0.5	< 001	0.002	1.754	> 0.05	1.379	> 0.05	0.019	0.175	NONE	Y	N
	1	10	COVE	√(x+constant)	1	<.001	0.002	1.754	> 0.05	1.394	> 0.05	0.019	0.174	NONE	Y	N
	3	10	COVE	1/(x+constant)	0.01	< 001	< 001	1.732	> 0.05	1.498	> 0.05	0.026	0.145	NONE	Y	N
	3	10	COVE	1/(x+constant)	0.1	< 001	< 001	1.730	> 0.05	1.495	> 0.05	0.026	0.146	NONE	Y	N
	3	10	COVE	1/(x+constant)	0.5	<.001	<.001	1.720	> 0.05	1.490	> 0.05	0.024	0.149	NONE	Y	N
	3	10	COVE	1/(x+constant)	1	<.001	< 001	1.710	> 0.05	1.492	> 0.05	0.023	0.152	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.01	<.001	<.001	1.629	> 0.05	1.530	> 0.05	0.010	0.192	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.1	<.001	<.001	1.627	> 0.05	1.533	> 0.05	0.009	0.192	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	0.5	<.001	< 001	1.622	> 0.05	1.546	> 0.05	0.009	0.194	NONE	Y	N
	3	10	COVE	$\log_{10}$(x+constant)	1	< 001	< 001	1.616	> 0.05	1.560	> 0.05	0.009	0.196	NONE	Y	N
	3	10	COVE	NONE	0	<.001	0.173	1.490	> 0.05	1.711	> 0.05	0.003	0.244	NONE	Y	Y
	3	10	COVE	√(x+constant)	0.01	< 001	0.003	1.564	> 0.05	1.615	> 0.05	0.005	0.218	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	< 001	0.003	1.564	> 0.05	1.618	> 0.05	0.005	0.218	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	< 001	0.004	1.561	> 0.05	1.626	> 0.05	0.005	0.219	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	0.005	1.557	> 0.05	1.635	> 0.05	0.005	0.220	NONE	Y	N
***Ulva/Enteromorpha* spp.**																
	3	10	COVE	arcsin	0	< 001	< 001	1.160	<=0.05	2.768	> 0.05	0.150	0.064	NONE	Y	N
	3	10	COVE	NONE	0	<.001	<.001	1.151	<=0.05	2.400	> 0.05	0.280	0.036	NONE	Y	N
	3	10	COVE	√(x+constant)	0.01	<.001	<.001	1.145	<=0.05	2.803	> 0.05	0.154	0.063	NONE	Y	N
	3	10	COVE	√(x+constant)	0.1	< 001	<.001	1.125	<=0.05	2.602	> 0.05	0.163	0.060	NONE	Y	N
	3	10	COVE	√(x+constant)	0.5	< 001	<.001	1.123	<=0.05	2.483	> 0.05	0.185	0.054	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	< 001	1.129	<=0.05	2.452	> 0.05	0.202	0.050	NONE	Y	N

1 Stations analyzed All = FC3, NDC 1, 2 and 3, SDC 2, SDP 1 and 2 Cove = FC 3, NDC 1, 2 and 3, SDC 2.

2 Serially correlated data requiring use of autoregressive error structure in analysis

3 Heterogeneous variances requiring Satterthwaite adjusted degrees of freedom in analysis

Horizontal band transect invertebrate assumption testing for BACI analysis

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
Anthopleura elegantissima																
	1	5	ALL	1/(x+constant)	0.01	<.001	0.559	0.190	<=0.05	2.125	>0.05	<.001	0.602	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	0.828	0.662	<=0.05	1.609	>0.05	<.001	0.356	AR	Y	Y
	1	5	ALL	1/(x+constant)	0.5	<.001	0.905	1.583	>0.05	1.400	>0.05	0.016	0.185	AR	Y	Y
	1	5	ALL	1/(x+constant)	1	<.001	0.912	1.834	>0.05	1.393	>0.05	0.013	0.196	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	<.001	0.609	1.516	>0.05	1.536	>0.05	0.001	0.326	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.1	<.001	0.495	1.700	>0.05	1.617	>0.05	0.002	0.284	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	<.001	0.344	1.784	>0.05	1.644	>0.05	0.002	0.280	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.251	1.786	>0.05	1.611	>0.05	0.002	0.289	AR	Y	Y
	1	5	ALL	NONE	0	<.001	<.001	1.357	<=0.05	0.443	<=0.05	0.016	0.184	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	<.001	0.001	1.592	>0.05	0.724	<=0.05	0.001	0.305	NONE	Y	N
	1	5	ALL	√(x+constant)	0.1	<.001	<.001	1.600	>0.05	0.716	<=0.05	0.001	0.303	NONE	Y	N
	1	5	ALL	√(x+constant)	0.5	<.001	<.001	1.598	>0.05	0.675	<=0.05	0.001	0.303	NONE	Y	N
	1	5	ALL	√(x+constant)	1	<.001	<.001	1.588	>0.05	0.636	<=0.05	0.001	0.303	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.01	<.001	<.001	1.601	>0.05	1.577	>0.05	0.041	0.125	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.1	<.001	<.001	1.887	>0.05	1.553	>0.05	0.156	0.062	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.5	<.001	<.001	1.972	>0.05	1.593	>0.05	0.014	0.174	NONE	Y	N
	3	5	COVE	1/(x+constant)	1	<.001	0.665	0.865	<=0.05	1.900	>0.05	<.001	0.591	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	0.01	<.001	<.001	1.239	<=0.05	2.468	>0.05	0.001	0.304	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0.011	0.597	0.662	<=0.05	2.472	>0.05	<.001	0.625	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0.002	0.361	0.521	<=0.05	2.444	>0.05	<.001	0.702	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	1	0.001	0.245	0.517	<=0.05	2.405	>0.05	<.001	0.701	NONE	Y	N
	3	5	COVE	NONE	0	<.001	<.001	0.949	<=0.05	1.007	<=0.05	0.166	0.059	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	<.001	0.968	<=0.05	1.322	>0.05	0.034	0.134	NONE	Y	N
	3	5	COVE	√(x+constant)	0.1	<.001	<.001	0.974	<=0.05	1.321	>0.05	0.032	0.136	NONE	Y	N
	3	5	COVE	√(x+constant)	0.5	<.001	<.001	0.982	<=0.05	1.310	>0.05	0.037	0.129	NONE	Y	N
	3	5	COVE	√(x+constant)	1	<.001	<.001	0.987	<=0.05	1.293	>0.05	0.046	0.119	NONE	Y	N
Chthamalus fissus																
	1	10	ALL	arcsin	0	<.001	0.001	1.419	<=0.05	0.305	<=0.05	0.616	0.009	NONE	Y	N
	1	10	ALL	NONE	0	<.001	<.001	0.924	<=0.05	0.189	<=0.05	0.022	0.167	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	<.001	1.284	<=0.05	0.287	<=0.05	0.250	0.045	NONE	Y	N
	1	10	ALL	√(x+constant)	0.1	<.001	<.001	1.098	<=0.05	0.263	<=0.05	0.069	0.109	NONE	Y	N
	1	10	ALL	√(x+constant)	0.5	<.001	<.001	0.988	<=0.05	0.244	<=0.05	0.033	0.147	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	<.001	0.960	<=0.05	0.235	<=0.05	0.028	0.156	NONE	Y	N

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^4	Variance[2] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
***Chthamalus fissus* (continued)**																
	1	10	COVE	arcsin	0	< 001	< 001	1 154	<=0 05	0.249	<=0.05	0.585	0 010	NONE	Y	N
	1	10	COVE	NONE	0	< 001	< 001	0.762	<=0 05	0.183	<=0.05	0.035	0 145	NONE	Y	N
	1	10	COVE	√(x+constant)	0 01	< 001	< 001	0 988	<=0 05	0 254	<=0.05	0.255	0.044	NONE	Y	N
	1	10	COVE	√(x+constant)	0 1	< 001	< 001	0 834	<=0 05	0.248	<=0 05	0 085	0 099	NONE	Y	N
	1	10	COVE	√(x+constant)	0 5	< 001	< 001	0 779	<=0 05	0 236	<=0 05	0 048	0.128	NONE	Y	N
	1	10	COVE	√(x+constant)	1	< 001	< 001	0.770	<=0 05	0.229	<=0 05	0.042	0 135	NONE	Y	N
	3	10	COVE	arcsin	0	< 001	0 039	1 003	<=0.05	0 495	<=0 05	0 011	0 185	NONE	Y	N
	3	10	COVE	NONE	0	< 001	0 075	0.966	<=0 05	0.340	<=0 05	0 027	0 145	AR	Y	Y
	3	10	COVE	√(x+constant)	0 01	< 001	0 026	0 946	<=0.05	0 472	<=0 05	0 009	0 194	NONE	Y	N
	3	10	COVE	√(x+constant)	0 1	< 001	0 024	0.909	<=0 05	0 421	<=0.05	0.010	0 189	NONE	Y	N
	3	10	COVE	√(x+constant)	0 5	< 001	0.038	0 923	<=0.05	0 386	<=0 05	0 015	0 170	NONE	Y	N
	3	10	COVE	√(x+constant)	1	< 001	0.048	0 936	<=0.05	0 372	<=0 05	0.019	0 161	NONE	Y	N
Fissurella volcano																
	1	5	ALL	1/(x+constant)	0 01	< 001	<.001	1 643	> 0.05	1 860	> 0 05	0.060	0 117	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	0 041	1.613	> 0.05	1.849	> 0.05	0 015	0.186	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	< 001	0 605	1 694	> 0 05	1 590	> 0 05	0.054	0 122	NONE	Y	Y
	1	5	ALL	1/(x+constant)	1	<.001	0.135	1 780	> 0.05	1 472	> 0 05	0.098	0.092	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	<.001	0 228	1.719	> 0 05	1.632	> 0.05	0 028	0 156	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0 1	< 001	0 468	1 739	> 0 05	1 513	> 0 05	0 053	0 124	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0 5	< 001	0 031	1 831	> 0.05	1 408	> 0 05	0 103	0.089	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	1	< 001	0.006	1 870	> 0.05	1 355	> 0 05	0.127	0.079	NONE	Y	N
	1	5	ALL	NONE	0	< 001	< 001	1 793	> 0 05	1 389	> 0 05	0 076	0 104	NONE	Y	N
	1	5	ALL	√(x+constant)	0 01	< 001	0.040	1.821	> 0.05	1.364	> 0.05	0 069	0.109	NONE	Y	N
	1	5	ALL	√(x+constant)	0 1	<.001	0 012	1.841	> 0.05	1.368	> 0.05	0 085	0 099	NONE	Y	N
	1	5	ALL	√(x+constant)	0 5	< 001	0.002	1 871	> 0 05	1.346	> 0.05	0.107	0.087	NONE	Y	N
	1	5	ALL	√(x+constant)	1	< 001	0 001	1 876	> 0 05	1 329	> 0 05	0.113	0 084	NONE	Y	N
	3	5	COVE	1/(x+constant)	0 01	0 910	0 970	2 465	> 0 05	2 238	> 0 05	0 482	0 016	NONE	N	Y
	3	5	COVE	1/(x+constant)	0.1	0.319	0 676	2.416	> 0 05	2 240	> 0 05	0 576	0 010	NONE	N	Y
	3	5	COVE	1/(x+constant)	0 5	< 001	0 320	2 259	> 0.05	1 233	> 0 05	0.862	0 001	NONE	Y	Y
	3	5	COVE	1/(x+constant)	1	<.001	0 008	2 091	> 0 05	0 972	<=0 05	0.937	< 001	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	0 01	0 290	0.975	2.364	> 0.05	1.996	> 0.05	0 615	0 008	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	<.001	0 241	2 234	> 0 05	1 207	> 0 05	0 862	0 001	NONE	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
***Fissurella volcano* (continued)**																
	3	5	COVE	$\log_{10}$(x+constant)	0.5	<.001	<.001	1.989	> 0.05	0.936	<=0.05	0.825	0.002	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	1	<.001	<.001	1.869	> 0.05	0.947	<=0.05	0.701	0.005	NONE	Y	N
	3	5	COVE	NONE	0	<.001	<.001	1.641	> 0.05	1.173	<=0.05	0.485	0.015	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	0.005	2.078	> 0.05	0.977	<=0.05	0.976	<.001	NONE	Y	N
	3	5	COVE	√(x+constant)	0.1	<.001	<.001	1.956	> 0.05	0.962	<=0.05	0.799	0.002	NONE	Y	N
	3	5	COVE	√(x+constant)	0.5	<.001	<.001	1.809	> 0.05	1.001	<=0.05	0.640	0.007	NONE	Y	N
	3	5	COVE	√(x+constant)	1	<.001	<.001	1.750	> 0.05	1.027	<=0.05	0.585	0.009	NONE	Y	N
***Haliotis* spp.**																
	1	10	ALL	1/(x+constant)	0.01	<.001	<.001	1.892	> 0.05	1.542	> 0.05	0.211	0.053	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.1	<.001	0.001	0.755	<=0.05	1.163	<=0.05	<.001	0.419	NONE	Y	N
	1	10	ALL	1/(x+constant)	0.5	<.001	<.001	0.768	<=0.05	1.016	<=0.05	0.001	0.325	NONE	Y	N
	1	10	ALL	1/(x+constant)	1	<.001	0.001	1.159	<=0.05	1.007	<=0.05	0.050	0.126	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.01	<.001	<.001	1.159	<=0.05	1.266	> 0.05	0.005	0.239	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.1	<.001	<.001	1.102	<=0.05	1.047	<=0.05	0.010	0.207	NONE	Y	N
	1	10	ALL	$\log_{10}$(x+constant)	0.5	<.001	0.296	1.650	> 0.05	1.007	<=0.05	0.802	0.002	NONE	Y	Y
	1	10	ALL	$\log_{10}$(x+constant)	1	<.001	0.135	1.753	> 0.05	1.007	<=0.05	0.239	0.047	NONE	Y	Y
	1	10	ALL	NONE	0	<.001	<.001	1.076	<=0.05	1.011	<=0.05	<.001	0.496	NONE	Y	N
	1	10	ALL	√(x+constant)	0.01	<.001	0.724	1.862	> 0.05	1.082	<=0.05	0.861	0.001	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.1	<.001	0.206	1.845	> 0.05	1.015	<=0.05	0.296	0.038	NONE	Y	Y
	1	10	ALL	√(x+constant)	0.5	<.001	<.001	1.655	> 0.05	1.007	<=0.05	0.015	0.188	NONE	Y	N
	1	10	ALL	√(x+constant)	1	<.001	<.001	1.506	> 0.05	1.008	<=0.05	0.002	0.280	NONE	Y	N
Lottia digitalis																
	3	5	COVE	1/(x+constant)	0.01	0.172	0.996	2.484	> 0.05	2.188	> 0.05	0.574	0.010	NONE	N	Y
	3	5	COVE	1/(x+constant)	0.1	0.139	0.776	2.069	> 0.05	1.987	> 0.05	0.468	0.017	NONE	N	Y
	3	5	COVE	1/(x+constant)	0.5	<.001	0.808	1.810	> 0.05	1.179	<=0.05	0.155	0.062	NONE	Y	Y
	3	5	COVE	1/(x+constant)	1	<.001	0.704	1.893	> 0.05	0.694	<=0.05	0.151	0.063	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	0.001	0.698	2.107	> 0.05	1.541	> 0.05	0.441	0.019	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	<.001	0.598	1.950	> 0.05	0.863	<=0.05	0.190	0.053	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	<.001	0.392	2.060	> 0.05	0.693	<=0.05	0.171	0.058	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	<.001	0.258	2.156	> 0.05	0.744	<=0.05	0.185	0.054	NONE	Y	Y
	3	5	COVE	NONE	0	<.001	0.001	2.497	> 0.05	2.023	> 0.05	0.333	0.029	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	0.200	2.181	> 0.05	1.267	> 0.05	0.223	0.046	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.1	<.001	0.156	2.206	> 0.05	1.290	> 0.05	0.203	0.050	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.5	<.001	0.086	2.289	> 0.05	1.338	> 0.05	0.216	0.047	NONE	Y	Y
	3	5	COVE	√(x+constant)	1	<.001	0.054	2.339	> 0.05	1.375	> 0.05	0.231	0.045	NONE	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
Lottia limatula																
	1	5	ALL	1/(x+constant)	0.01	< 001	0.099	1.729	> 0.05	1.957	> 0.05	0.836	0.001	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.1	< 001	0.269	1.839	> 0.05	2.394	> 0.05	0.975	< 001	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.5	0.007	0.758	1.804	> 0.05	2.001	> 0.05	0.488	0.017	NONE	Y	Y
	1	5	ALL	1/(x+constant)	1	0.003	0.278	1.754	> 0.05	1.984	> 0.05	0.257	0.044	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	< 001	0.486	1.826	> 0.05	2.542	> 0.05	0.739	0.004	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.1	0.002	0.647	1.793	> 0.05	2.387	> 0.05	0.404	0.024	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	< 001	0.115	1.714	> 0.05	2.417	> 0.05	0.140	0.073	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	< 001	0.045	1.678	> 0.05	2.473	> 0.05	0.076	0.104	NONE	Y	N
	1	5	ALL	NONE	0	<.001	0.001	1.576	> 0.05	2.434	> 0.05	0.011	0.204	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	< 001	0.166	1.737	> 0.05	2.608	> 0.05	0.162	0.066	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.1	< 001	0.065	1.694	> 0.05	2.588	> 0.05	0.097	0.092	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.5	< 001	0.020	1.648	> 0.05	2.565	> 0.05	0.045	0.131	NONE	Y	N
	1	5	ALL	√(x+constant)	1	< 001	0.011	1.629	> 0.05	2.550	> 0.05	0.031	0.151	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.01	0.011	< 001	2.025	> 0.05	0.894	<=0.05	0.403	0.022	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.1	<.001	< 001	1.859	> 0.05	0.992	<=0.05	0.805	0.002	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.5	0.001	0.036	1.522	> 0.05	1.225	> 0.05	0.506	0.014	NONE	Y	N
	3	5	COVE	1/(x+constant)	1	0.063	0.288	1.386	<=0.05	1.364	> 0.05	0.361	0.026	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	0.178	0.008	1.767	> 0.05	1.466	> 0.05	0.692	0.005	NONE	N	N
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0.547	0.197	1.462	> 0.05	1.486	> 0.05	0.415	0.021	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0.448	0.607	1.318	<=0.05	1.520	> 0.05	0.323	0.030	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	0.100	0.731	1.290	<=0.05	1.528	> 0.05	0.314	0.032	NONE	N	Y
	3	5	COVE	NONE	0	< 001	0.814	1.295	<=0.05	1.554	> 0.05	0.375	0.025	AR	Y	Y
	3	5	COVE	√(x+constant)	0.01	< 001	0.637	1.343	<=0.05	1.466	> 0.05	0.353	0.027	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.1	< 001	0.718	1.307	<=0.05	1.465	> 0.05	0.336	0.029	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.5	<.001	0.782	1.286	<=0.05	1.461	> 0.05	0.331	0.030	NONE	Y	Y
	3	5	COVE	√(x+constant)	1	< 001	0.794	1.283	<=0.05	1.455	> 0.05	0.334	0.029	NONE	Y	Y
Lottia pelta																
	1	5	ALL	1/(x+constant)	0.01	< 001	0.068	1.876	> 0.05	2.385	> 0.05	0.448	0.020	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.1	< 001	0.096	1.737	> 0.05	2.729	> 0.05	0.356	0.029	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.5	0.011	0.163	1.300	<=0.05	1.641	> 0.05	0.063	0.114	NONE	Y	Y
	1	5	ALL	1/(x+constant)	1	0.178	0.143	1.115	<=0.05	1.238	> 0.05	0.044	0.133	NONE	N	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	0.001	0.039	1.432	> 0.05	1.974	> 0.05	0.205	0.055	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	0.122	0.026	1.146	<=0.05	1.589	> 0.05	0.053	0.124	NONE	N	N

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
Lottia pelta (continued)																
	1	5	ALL	$\log_{10}$(x+constant)	0.5	0.006	0.007	0.906	<=0.05	1.518	>0.05	0.038	0.140	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.002	0.812	<=0.05	1.647	>0.05	0.040	0.137	NONE	Y	N
	1	5	ALL	NONE	0	<.001	<.001	0.650	<=0.05	2.018	>0.05	0.121	0.081	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	<.001	<.001	0.840	<=0.05	2.037	>0.05	0.052	0.124	NONE	Y	N
	1	5	ALL	√(x+constant)	0.1	<.001	<.001	0.789	<=0.05	2.041	>0.05	0.047	0.129	NONE	Y	N
	1	5	ALL	√(x+constant)	0.5	<.001	<.001	0.726	<=0.05	2.046	>0.05	0.053	0.123	NONE	Y	N
	1	5	ALL	√(x+constant)	1	<.001	<.001	0.699	<=0.05	2.045	>0.05	0.058	0.118	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.01	<.001	<.001	1.704	>0.05	2.651	>0.05	0.333	0.029	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.1	<.001	0.001	1.572	>0.05	2.428	>0.05	0.204	0.050	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.5	0.008	0.235	1.449	<=0.05	1.958	>0.05	0.141	0.067	NONE	Y	Y
	3	5	COVE	1/(x+constant)	1	0.070	0.867	1.394	<=0.05	1.926	>0.05	0.157	0.062	AR	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	0.006	0.052	1.469	>0.05	2.087	>0.05	0.172	0.057	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0.106	0.714	1.387	<=0.05	1.919	>0.05	0.158	0.061	AR	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0.014	0.311	1.328	<=0.05	1.923	>0.05	0.179	0.056	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	<.001	0.110	1.302	<=0.05	1.941	>0.05	0.198	0.051	AR	Y	Y
	3	5	COVE	NONE	0	<.001	<.001	1.220	<=0.05	1.878	>0.05	0.183	0.055	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	0.128	1.295	<=0.05	1.816	>0.05	0.175	0.057	AR	Y	Y
	3	5	COVE	√(x+constant)	0.1	<.001	0.054	1.282	<=0.05	1.831	>0.05	0.183	0.055	AR	Y	Y
	3	5	COVE	√(x+constant)	0.5	<.001	0.015	1.264	<=0.05	1.848	>0.05	0.197	0.051	NONE	Y	N
	3	5	COVE	√(x+constant)	1	<.001	0.007	1.253	<=0.05	1.850	>0.05	0.204	0.050	NONE	Y	N
Macclintockia scabra																
	1	5	ALL	1/(x+constant)	0.01	<.001	0.809	1.684	>0.05	2.139	>0.05	0.340	0.031	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.1	<.001	0.117	1.850	>0.05	1.312	>0.05	0.183	0.060	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.5	<.001	0.147	1.869	>0.05	0.911	<=0.05	0.140	0.074	AR	Y	Y
	1	5	ALL	1/(x+constant)	1	0.017	0.306	1.581	>0.05	0.827	<=0.05	0.178	0.062	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	<.001	0.407	1.685	>0.05	1.333	>0.05	0.441	0.021	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.1	0.017	0.846	1.604	>0.05	1.354	>0.05	0.694	0.005	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	0.348	0.843	1.198	<=0.05	1.499	>0.05	0.684	0.006	AR	N	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	0.179	0.913	0.980	<=0.05	1.656	>0.05	0.323	0.034	AR	N	Y
	1	5	ALL	NONE	0	<.001	<.001	0.229	<=0.05	1.327	>0.05	<.001	0.723	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	<.001	0.527	0.781	<=0.05	2.135	>0.05	<.001	0.384	AR	Y	Y
	1	5	ALL	√(x+constant)	0.1	<.001	0.360	0.684	<=0.05	2.108	>0.05	<.001	0.431	AR	Y	Y
	1	5	ALL	√(x+constant)	0.5	<.001	0.107	0.549	<=0.05	2.028	>0.05	<.001	0.508	NONE	Y	N
	1	5	ALL	√(x+constant)	1	<.001	0.029	0.485	<=0.05	1.960	>0.05	<.001	0.555	NONE	Y	N

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[1] d.f. used in Analysis	Passed Tests for BACI Analysis
***Macclintockia scabra* (continued)**																
	3	5	COVE	1/(x+constant)	0.01	0.064	<.001	1.551	> 0.05	2.525	> 0.05	0.033	0.134	NONE	N	N
	3	5	COVE	1/(x+constant)	0.1	0.064	<.001	1.537	> 0.05	2.505	> 0.05	0.034	0.133	NONE	N	N
	3	5	COVE	1/(x+constant)	0.5	0.068	<.001	1.487	> 0.05	2.298	> 0.05	0.040	0.125	NONE	N	N
	3	5	COVE	1/(x+constant)	1	0.069	<.001	1.446	<=0.05	2.031	> 0.05	0.050	0.115	NONE	N	N
	3	5	COVE	$\log_{10}$(x+constant)	0.01	0.059	0.583	1.106	<=0.05	1.811	> 0.05	0.811	0.002	AR	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0.055	0.612	1.104	<=0.05	1.795	> 0.05	0.794	0.002	AR	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0.042	0.728	1.096	<=0.05	1.748	> 0.05	0.725	0.004	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	0.034	0.856	1.087	<=0.05	1.713	> 0.05	0.654	0.006	AR	Y	Y
	3	5	COVE	NONE	0	<.001	0.007	0.456	<=0.05	1.198	<=0.05	0.010	0.191	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	0.050	0.720	<=0.05	1.269	> 0.05	0.066	0.102	NONE	Y	N
	3	5	COVE	√(x+constant)	0.1	<.001	0.049	0.719	<=0.05	1.265	> 0.05	0.065	0.103	NONE	Y	N
	3	5	COVE	√(x+constant)	0.5	<.001	0.046	0.716	<=0.05	1.249	> 0.05	0.062	0.105	NONE	Y	N
	3	5	COVE	√(x+constant)	1	<.001	0.042	0.712	<=0.05	1.231	> 0.05	0.058	0.108	NONE	Y	N
Mytilus californianus																
	1	5	ALL	1/(x+constant)	0.01	<.001	0.042	1.492	> 0.05	1.319	> 0.05	0.380	0.027	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	0.001	1.784	> 0.05	1.348	> 0.05	0.771	0.003	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	<.001	<.001	2.039	> 0.05	1.511	> 0.05	0.072	0.107	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	<.001	<.001	1.658	> 0.05	1.671	> 0.05	0.003	0.270	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.01	<.001	<.001	1.442	> 0.05	1.670	> 0.05	0.004	0.255	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	<.001	<.001	0.963	<=0.05	1.891	> 0.05	<.001	0.474	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.5	<.001	<.001	0.616	<=0.05	2.075	> 0.05	<.001	0.589	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	<.001	0.501	<=0.05	2.131	> 0.05	<.001	0.620	NONE	Y	N
	1	5	ALL	NONE	0	<.001	<.001	0.576	<=0.05	2.030	> 0.05	0.001	0.340	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	<.001	<.001	0.434	<=0.05	2.277	> 0.05	<.001	0.527	NONE	Y	N
	1	5	ALL	√(x+constant)	0.1	<.001	<.001	0.421	<=0.05	2.297	> 0.05	<.001	0.532	NONE	Y	N
	1	5	ALL	√(x+constant)	0.5	<.001	<.001	0.407	<=0.05	2.318	> 0.05	<.001	0.532	NONE	Y	N
	1	5	ALL	√(x+constant)	1	<.001	<.001	0.403	<=0.05	2.328	> 0.05	<.001	0.529	NONE	Y	N
	1	5	COVE	1/(x+constant)	0.01	<.001	0.001	1.370	<=0.05	0.927	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	1/(x+constant)	0.1	<.001	0.001	1.370	<=0.05	0.849	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	1/(x+constant)	0.5	<.001	0.001	1.370	<=0.05	0.684	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	1/(x+constant)	1	<.001	0.001	1.370	<=0.05	0.615	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	$\log_{10}$(x+constant)	0.01	<.001	0.001	1.370	<=0.05	0.679	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	$\log_{10}$(x+constant)	0.1	<.001	0.001	1.370	<=0.05	0.605	<=0.05	0.482	0.017	NONE	Y	N

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Prob.	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d.f. used in Analysis	Passed Tests for BACI Analysis
Mytilus californianus (continued)																
	1	5	COVE	$\log_{10}$(x+constant)	0.5	<.001	0.001	1.370	<=0.05	0.593	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	$\log_{10}$(x+constant)	1	<.001	0.001	1.370	<=0.05	0.614	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	NONE	0	<.001	0.001	1.370	<=0.05	1.045	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	√(x+constant)	0.01	<.001	0.001	1.370	<=0.05	0.740	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	√(x+constant)	0.1	<.001	0.001	1.370	<=0.05	0.761	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	√(x+constant)	0.5	<.001	0.001	1.370	<=0.05	0.799	<=0.05	0.482	0.017	NONE	Y	N
	1	5	COVE	√(x+constant)	1	<.001	0.001	1.370	<=0.05	0.826	<=0.05	0.482	0.017	NONE	Y	N
Nuttallina californica																
	3	5	COVE	1/(x+constant)	0.01	0.013	0.345	1.887	>0.05	1.998	>0.05	0.009	0.195	NONE	Y	Y
	3	5	COVE	1/(x+constant)	0.1	0.013	0.268	1.965	>0.05	1.432	>0.05	0.009	0.196	AR	Y	Y
	3	5	COVE	1/(x+constant)	0.5	<.001	0.248	1.975	>0.05	1.131	<=0.05	0.016	0.168	AR	Y	Y
	3	5	COVE	1/(x+constant)	1	<.001	0.545	1.915	>0.05	1.123	<=0.05	0.022	0.153	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	0.004	0.155	1.970	>0.05	1.327	>0.05	0.008	0.199	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	<.001	0.337	1.971	>0.05	1.139	<=0.05	0.016	0.168	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	<.001	0.275	1.800	>0.05	1.134	<=0.05	0.052	0.112	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	<.001	0.014	1.667	>0.05	1.157	<=0.05	0.108	0.079	NONE	Y	N
	3	5	COVE	NONE	0	<.001	<.001	1.435	<=0.05	1.229	>0.05	0.720	0.004	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	<.001	0.102	1.805	>0.05	1.137	<=0.05	0.055	0.110	AR	Y	Y
	3	5	COVE	√(x+constant)	0.1	<.001	0.005	1.683	>0.05	1.142	<=0.05	0.120	0.074	NONE	Y	N
	3	5	COVE	√(x+constant)	0.5	<.001	<.001	1.540	>0.05	1.171	<=0.05	0.260	0.039	NONE	Y	N
	3	5	COVE	√(x+constant)	1	<.001	<.001	1.487	>0.05	1.188	<=0.05	0.354	0.027	NONE	Y	N
Pagurus spp.																
	1	5	ALL	1/(x+constant)	0.01	<.001	<.001	1.046	<=0.05	1.844	>0.05	0.139	0.074	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	<.001	1.203	<=0.05	1.730	>0.05	0.160	0.067	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	<.001	<.001	1.414	<=0.05	1.514	>0.05	0.141	0.073	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	<.001	<.001	1.441	>0.05	1.335	>0.05	0.138	0.074	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.01	<.001	<.001	1.602	>0.05	1.379	>0.05	0.230	0.049	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	<.001	<.001	1.683	>0.05	1.366	>0.05	0.290	0.039	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.5	<.001	0.009	1.735	>0.05	1.449	>0.05	0.359	0.029	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.038	1.765	>0.05	1.532	>0.05	0.409	0.024	NONE	Y	N
	1	5	ALL	NONE	0	<.001	0.825	1.979	>0.05	2.265	>0.05	0.617	0.009	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.01	<.001	0.460	1.878	>0.05	1.851	>0.05	0.522	0.014	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.1	<.001	0.493	1.881	>0.05	1.884	>0.05	0.532	0.014	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.5	<.001	0.555	1.889	>0.05	1.935	>0.05	0.551	0.012	NONE	Y	Y
	1	5	ALL	√(x+constant)	1	<.001	0.601	1.896	>0.05	1.967	>0.05	0.566	0.011	NONE	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob	Trend Test R^2	Variance[4] Structure used in Analysis	Adjusted[5] d f used in Analysis	Passed Tests for BACI Analysis
***Pagurus* spp. (continued)**																
	3	5	COVE	1/(x+constant)	0.01	0.009	0 225	1.572	> 0.05	1.366	> 0.05	0.204	0.050	NONE	Y	Y
	3	5	COVE	1/(x+constant)	0.1	<.001	0.345	1.601	> 0 05	1.405	> 0.05	0.210	0.049	NONE	Y	Y
	3	5	COVE	1/(x+constant)	0.5	<.001	0.912	1.699	> 0 05	1.408	> 0 05	0 230	0.045	NONE	Y	Y
	3	5	COVE	1/(x+constant)	1	<.001	0 663	1.777	> 0.05	1.457	> 0.05	0.247	0.042	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	<.001	0.287	2.022	> 0 05	1.750	> 0.05	0.406	0.022	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	<.001	0 287	2 025	> 0 05	2 066	> 0.05	0.411	0.021	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0 5	<.001	0.289	2.034	> 0 05	2 316	> 0.05	0.428	0.020	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	0 003	0 293	2.042	> 0 05	2.438	> 0 05	0.445	0.018	AR	Y	Y
	3	5	COVE	NONE	0	0 003	0.074	2 162	> 0 05	2 674	> 0.05	0.798	0.002	NONE	Y	Y
	3	5	COVE	√(x+constant)	0 01	0.010	0 236	2 100	> 0 05	2 655	> 0 05	0 596	0 009	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.1	0 010	0 235	2 101	> 0 05	2.673	> 0.05	0.598	0.009	NONE	Y	Y
	3	5	COVE	√(x+constant)	0 5	0.012	0 233	2 102	> 0 05	2 692	> 0.05	0.606	0.008	NONE	Y	Y
	3	5	COVE	√(x+constant)	1	0.013	0 231	2.104	> 0 05	2.700	> 0.05	0.615	0.008	NONE	Y	Y
Phragmatopoma californica																
	1	10	ALL	arcsin	0	0.002	0.752	0.452	<=0.05	1.724	> 0 05	<.001	0.754	NONE	Y	N
	1	10	ALL	arcsin	0									NONE	N	Y
	1	10	ALL	NONE	0	<.001	0.036	0 685	<=0 05	1.016	<=0.05	<.001	0.582	NONE	Y	N
	1	10	ALL	NONE	0									NONE	N	Y
	1	10	ALL	√(x+constant)	0.01	0.001	0.672	0 459	<=0 05	1 686	> 0.05	<.001	0.741	NONE	Y	N
	1	10	ALL	√(x+constant)	0 01									NONE	N	Y
	1	10	ALL	√(x+constant)	0 1	<.001	0 465	0.489	<=0.05	1.576	> 0.05	<.001	0.708	NONE	Y	N
	1	10	ALL	√(x+constant)	0 1									NONE	N	Y
	1	10	ALL	√(x+constant)	0.5	< 001	0 220	0.547	<=0.05	1.392	> 0 05	<.001	0.665	NONE	Y	N
	1	10	ALL	√(x+constant)	0 5									NONE	N	Y
	1	10	ALL	√(x+constant)	1	<.001	0 140	0.580	<=0.05	1 295	> 0 05	<.001	0.643	NONE	Y	N
	1	10	ALL	√(x+constant)	1									NONE	N	Y
	1	10	COVE	arcsin	0	0.121	0 995	0.454	<=0 05	1.705	> 0.05	<.001	0.762	NONE	N	N
	1	10	COVE	NONE	0	< 001	0.945	0 697	<=0 05	1.353	> 0.05	<.001	0 585	NONE	Y	N
	1	10	COVE	√(x+constant)	0.01	0 041	0 993	0 463	<=0 05	1 673	> 0.05	<.001	0.748	NONE	Y	N
	1	10	COVE	√(x+constant)	0.1	0.007	0.984	0.496	<=0.05	1 611	> 0 05	<.001	0.714	NONE	Y	N
	1	10	COVE	√(x+constant)	0.5	0.001	0.975	0.556	<=0.05	1 520	> 0.05	<.001	0.669	NONE	Y	N
	1	10	COVE	√(x+constant)	1	0.001	0.969	0.591	<=0.05	1 474	> 0 05	<.001	0 647	NONE	Y	N

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
***Phragmatopoma californica* (continued)**																
	3	10	COVE	arcsin	0	< 001	0 676	1.499	> 0.05	1.312	> 0.05	0 004	0.234	NONE	Y	Y
	3	10	COVE	arcsin	0									NONE	N	Y
	3	10	COVE	NONE	0	< 001	0 466	1 642	> 0 05	1.978	> 0 05	0.022	0.153	AR	Y	Y
	3	10	COVE	NONE	0									NONE	N	Y
	3	10	COVE	√(x+constant)	0 01	< 001	0 694	1.560	> 0.05	1 522	> 0.05	0 007	0.209	NONE	Y	Y
	3	10	COVE	√(x+constant)	0 01									NONE	N	Y
	3	10	COVE	√(x+constant)	0.1	< 001	0.632	1 616	> 0 05	1.731	> 0 05	0 013	0 177	AR	Y	Y
	3	10	COVE	√(x+constant)	0.1									NONE	N	Y
	3	10	COVE	√(x+constant)	0.5	< 001	0 536	1.634	> 0 05	1.872	> 0.05	0 019	0 161	AR	Y	Y
	3	10	COVE	√(x+constant)	0.5									NONE	N	Y
	3	10	COVE	√(x+constant)	1	<.001	0 507	1.638	> 0 05	1.914	> 0.05	0 020	0.157	AR	Y	Y
	3	10	COVE	√(x+constant)	1									NONE	N	Y
Spp. Inverts																
	1	10	ALL	1/(x+constant)	0 01	0.975	0 988	1.976	> 0.05	2 377	> 0.05	0 249	0.046	NONE	N	Y
	1	10	ALL	1/(x+constant)	0.1	0 976	0 987	1 975	> 0 05	2.376	> 0 05	0 248	0.046	NONE	N	Y
	1	10	ALL	1/(x+constant)	0.5	0 978	0.984	1.969	> 0 05	2.371	> 0 05	0 241	0.047	NONE	N	Y
	1	10	ALL	1/(x+constant)	1	0 981	0 979	1.962	> 0.05	2 366	> 0.05	0.234	0 049	NONE	N	Y
	1	10	ALL	$\log_{10}$(x+constant)	0.01	0.998	0 916	1 862	> 0 05	2.265	> 0.05	0.139	0.074	NONE	N	Y
	1	10	ALL	$\log_{10}$(x+constant)	0.1	0.998	0 915	1.861	> 0 05	2.264	> 0.05	0.138	0.074	NONE	N	Y
	1	10	ALL	$\log_{10}$(x+constant)	0.5	0.998	0.912	1 858	> 0 05	2.260	> 0 05	0.136	0.075	NONE	N	Y
	1	10	ALL	$\log_{10}$(x+constant)	1	0 999	0.907	1 854	> 0 05	2 255	> 0 05	0.133	0.076	NONE	N	Y
	1	10	ALL	NONE	0	0.923	0.754	1.737	> 0 05	2 076	> 0.05	0 068	0.110	NONE	N	Y
	1	10	ALL	√(x+constant)	0 01	0.996	0.848	1.800	> 0 05	2.180	> 0 05	0 098	0 092	NONE	N	Y
	1	10	ALL	√(x+constant)	0.1	0.996	0 847	1.800	> 0 05	2.179	> 0.05	0 098	0 092	NONE	N	Y
	1	10	ALL	√(x+constant)	0.5	0 996	0 845	1.798	> 0 05	2.177	> 0 05	0 097	0 092	NONE	N	Y
	1	10	ALL	√(x+constant)	1	0.996	0 842	1.796	> 0 05	2.174	> 0 05	0 096	0.093	NONE	N	Y
	3	10	COVE	1/(x+constant)	0 01	< 001	0 534	2.178	> 0 05	2.233	> 0 05	0 301	0.033	NONE	Y	Y
	3	10	COVE	1/(x+constant)	0.1	<.001	0 549	2.179	> 0.05	2.233	> 0 05	0.304	0 033	NONE	Y	Y
	3	10	COVE	1/(x+constant)	0 5	0.001	0 612	2.180	> 0 05	2.236	> 0 05	0 320	0.031	NONE	Y	Y
	3	10	COVE	1/(x+constant)	1	0.001	0 688	2.181	> 0 05	2.239	> 0.05	0.338	0.029	NONE	Y	Y
	3	10	COVE	$\log_{10}$(x+constant)	0 01	0.098	0 591	2.184	> 0.05	2 224	> 0 05	0 528	0 013	NONE	N	Y
	3	10	COVE	$\log_{10}$(x+constant)	0.1	0.101	0.585	2.184	> 0 05	2.224	> 0 05	0.530	0 012	NONE	N	Y
	3	10	COVE	$\log_{10}$(x+constant)	0.5	0.114	0.562	2.184	> 0 05	2 223	> 0.05	0.539	0 012	NONE	N	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Prob	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
Spp. inverts (continued)																
	3	10	COVE	$\log_{10}$(x+constant)	1	0.131	0.535	2.184	> 0.05	2.222	> 0.05	0.549	0.011	NONE	N	Y
	3	10	COVE	NONE	0	0.608	0.161	2.175	> 0.05	2.155	> 0.05	0.753	0.003	NONE	N	Y
	3	10	COVE	√(x+constant)	0.01	0.368	0.316	2.181	> 0.05	2.197	> 0.05	0.645	0.007	NONE	N	Y
	3	10	COVE	√(x+constant)	0.1	0.370	0.314	2.181	> 0.05	2.197	> 0.05	0.646	0.007	NONE	N	Y
	3	10	COVE	√(x+constant)	0.5	0.381	0.307	2.180	> 0.05	2.196	> 0.05	0.650	0.007	NONE	N	Y
	3	10	COVE	√(x+constant)	1	0.393	0.299	2.180	> 0.05	2.195	> 0.05	0.655	0.006	NONE	N	Y
Strongylocentrotus purpuratus																
	1	5	ALL	1/(x+constant)	0.01	0.021	0.967	1.789	> 0.05	2.288	> 0.05	0.127	0.078	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.1	< 001	0.407	1.674	> 0.05	2.385	> 0.05	0.089	0.096	NONE	Y	Y
	1	5	ALL	1/(x+constant)	0.5	<.001	0.016	1.190	<=0.05	2.269	> 0.05	0.022	0.169	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	< 001	0.003	1.031	<=0.05	2.033	> 0.05	0.008	0.222	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.01	< 001	0.345	1.669	> 0.05	2.043	> 0.05	0.050	0.126	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.1	< 001	0.145	1.388	<=0.05	1.731	> 0.05	0.013	0.194	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	< 001	0.998	1.219	<=0.05	1.723	> 0.05	0.005	0.239	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.095	1.213	<=0.05	1.770	> 0.05	0.009	0.213	AR	Y	Y
	1	5	ALL	NONE	0	<.001	<.001	1.192	<=0.05	1.951	> 0.05	0.244	0.046	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	<.001	<.001	1.263	<=0.05	1.744	> 0.05	0.036	0.143	NONE	Y	N
	1	5	ALL	√(x+constant)	0.1	<.001	<.001	1.197	<=0.05	1.793	> 0.05	0.047	0.129	NONE	Y	N
	1	5	ALL	√(x+constant)	0.5	<.001	<.001	1.154	<=0.05	1.830	> 0.05	0.076	0.105	NONE	Y	N
	1	5	ALL	√(x+constant)	1	< 001	< 001	1.136	<=0.05	1.841	> 0.05	0.098	0.091	NONE	Y	N
Tectura scutum																
	1	5	ALL	1/(x+constant)	0.01	<.001	< 001	1.549	> 0.05	2.124	> 0.05	0.583	0.011	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	< 001	2.190	> 0.05	2.573	> 0.05	0.478	0.017	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	0.002	0.084	2.420	> 0.05	1.774	> 0.05	0.651	0.007	NONE	Y	Y
	1	5	ALL	1/(x+constant)	1	0.059	0.185	2.267	> 0.05	1.446	> 0.05	0.763	0.003	NONE	N	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	< 001	0.010	2.313	> 0.05	2.201	> 0.05	0.880	0.001	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	<.001	0.164	2.299	> 0.05	1.619	> 0.05	0.958	<.001	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	< 001	0.346	2.158	> 0.05	1.331	> 0.05	0.725	0.004	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.480	2.077	> 0.05	1.307	> 0.05	0.552	0.012	NONE	Y	Y
	1	5	ALL	NONE	0	< 001	<.001	1.072	<=0.05	1.873	> 0.05	<.001	0.412	NONE	Y	N
	1	5	ALL	√(x+constant)	0.01	< 001	0.756	2.113	> 0.05	1.484	> 0.05	0.181	0.061	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.1	< 001	0.645	2.077	> 0.05	1.450	> 0.05	0.151	0.070	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.5	<.001	0.381	1.987	> 0.05	1.480	> 0.05	0.087	0.098	NONE	Y	Y
	1	5	ALL	√(x+constant)	1	<.001	0.202	1.916	> 0.05	1.523	> 0.05	0.051	0.125	NONE	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d f used in Analysis	Passed Tests for BACI Analysis
***Tectura scutum* (continued)**																
	3	5	COVE	1/(x+constant)	0 01	0.001	< 001	1 888	> 0 05	0.968	<=0.05	0.201	0 050	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.1	< 001	<.001	1.942	> 0 05	1 093	<=0 05	0 244	0 042	NONE	Y	N
	3	5	COVE	1/(x+constant)	0 5	0 003	0.482	1.852	> 0 05	1.869	> 0 05	0 610	0.008	NONE	Y	Y
	3	5	COVE	1/(x+constant)	1	0.132	0.052	1.733	> 0 05	2.218	> 0 05	0.793	0.002	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0 01	0 033	0 699	1.782	> 0 05	1.701	> 0 05	0.459	0 017	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0.260	0.127	1 672	> 0.05	2.175	> 0.05	0.716	0 004	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0 244	0 096	1.580	> 0.05	2.388	> 0 05	0 880	0 001	NONE	N	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	0.170	0.166	1.538	> 0.05	2 433	> 0 05	0 922	< 001	NONE	N	Y
	3	5	COVE	NONE	0	0 021	0.181	1.572	> 0.05	2.363	> 0.05	0.784	0 002	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.01	0 073	0 231	1.529	> 0 05	2.363	> 0 05	0 833	0 001	NONE	N	Y
	3	5	COVE	√(x+constant)	0.1	0 055	0 277	1 515	> 0 05	2.388	> 0.05	0.867	0 001	NONE	N	Y
	3	5	COVE	√(x+constant)	0.5	0 043	0 371	1 496	> 0 05	2.412	> 0 05	0 894	0 001	NONE	Y	Y
	3	5	COVE	√(x+constant)	1	0.040	0 428	1 487	> 0 05	2 421	> 0 05	0.900	<.001	NONE	Y	Y
Tegula brunnea																
	1	5	ALL	1/(x+constant)	0.01	<.001	< 001	1.117	<=0 05	2.252	> 0 05	0.172	0.063	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	<.001	<.001	1.211	<=0 05	1 994	> 0 05	0 104	0 089	NONE	Y	N
	1	5	ALL	1/(x+constant)	0 5	<.001	<.001	1.472	> 0.05	1.578	> 0.05	0.051	0.125	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	< 001	<.001	1.564	> 0 05	1.427	> 0.05	0 031	0.151	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0 01	<.001	< 001	1.620	> 0 05	1 529	> 0.05	0 011	0.203	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	< 001	0 017	1 663	> 0 05	1.330	> 0 05	0 011	0 201	NONE	Y	N
	1	5	ALL	$\log_{10}$(x+constant)	0.5	< 001	0 276	1 646	> 0 05	1.229	> 0.05	0.014	0.191	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0.451	1.628	> 0.05	1.198	<=0 05	0.015	0.186	NONE	Y	Y
	1	5	ALL	NONE	0	<.001	0.167	1.847	> 0 05	1.792	> 0 05	0 052	0.124	NONE	Y	Y
	1	5	ALL	√(x+constant)	0 01	< 001	0.323	1.706	> 0 05	1 265	> 0 05	0 021	0.171	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.1	<.001	0.335	1.701	> 0.05	1.265	> 0.05	0 022	0.168	NONE	Y	Y
	1	5	ALL	√(x+constant)	0.5	< 001	0.317	1 693	> 0.05	1.273	> 0 05	0 024	0.163	NONE	Y	Y
	1	5	ALL	√(x+constant)	1	< 001	0.288	1 690	> 0 05	1.286	> 0 05	0 026	0.160	NONE	Y	Y
Tegula funebralis																
	1	5	ALL	1/(x+constant)	0.01	< 001	< 001	2.098	> 0 05	1.509	> 0 05	0 879	0 001	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	< 001	0 001	2.022	> 0 05	1.619	> 0.05	0.737	0.004	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	< 001	0 032	1.643	> 0 05	1.905	> 0 05	0 463	0 019	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	<.001	0.243	1 428	> 0.05	2.078	> 0 05	0.302	0.037	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.01	< 001	0.158	1 600	> 0 05	2.192	> 0 05	0 075	0 105	AR	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^2	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
Tegula funebralis (continued)																
	1	5	ALL	$\log_{10}$(x+constant)	0.1	< 001	0.781	1.400	<=0.05	2.375	> 0.05	0 023	0.166	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	<.001	0.715	1.261	<=0.05	2.485	> 0 05	0.007	0 223	AR	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	<.001	0 688	1.230	<=0 05	2.518	> 0.05	0.005	0.244	AR	Y	Y
	1	5	ALL	NONE	0	<.001	0.561	1.777	> 0 05	2.396	> 0.05	0.048	0.128	AR	Y	Y
	1	5	ALL	√(x+constant)	0.01	< 001	0 615	1.479	> 0.05	2.513	> 0.05	0.011	0.203	AR	Y	Y
	1	5	ALL	√(x+constant)	0.1	<.001	0 605	1.471	> 0.05	2.516	> 0.05	0 011	0.204	AR	Y	Y
	1	5	ALL	√(x+constant)	0.5	<.001	0.557	1.465	> 0.05	2.520	> 0 05	0 011	0 203	AR	Y	Y
	1	5	ALL	√(x+constant)	1	<.001	0.512	1.466	> 0 05	2.521	> 0 05	0.012	0 200	AR	Y	Y
	3	5	COVE	1/(x+constant)	0.01	0 001	<.001	1.701	> 0.05	2.347	> 0.05	0.404	0.022	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.1	0 001	<.001	1.699	> 0.05	2.348	> 0.05	0.404	0.022	NONE	Y	N
	3	5	COVE	1/(x+constant)	0.5	< 001	<.001	1.691	> 0.05	2.353	> 0.05	0.405	0.022	NONE	Y	N
	3	5	COVE	1/(x+constant)	1	<.001	< 001	1.682	> 0.05	2.358	> 0.05	0.405	0.022	NONE	Y	N
	3	5	COVE	$\log_{10}$(x+constant)	0 01	0.006	0.108	1 871	> 0.05	2 544	> 0.05	0.617	0 008	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	0 006	0.110	1.872	> 0 05	2 545	> 0.05	0 618	0.008	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.5	0.006	0.122	1.874	> 0.05	2 546	> 0.05	0.621	0.008	NONE	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	0.007	0 138	1.877	> 0.05	2.547	> 0.05	0.624	0 008	NONE	Y	Y
	3	5	COVE	NONE	0	< 001	0 011	2 143	> 0 05	2.458	> 0 05	0.817	0.002	NONE	Y	N
	3	5	COVE	√(x+constant)	0.01	0.001	0.309	2.064	> 0.05	2 536	> 0 05	0 913	<.001	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.1	0.001	0 308	2 064	> 0 05	2.536	> 0.05	0.913	<.001	NONE	Y	Y
	3	5	COVE	√(x+constant)	0.5	0 001	0.303	2.065	> 0.05	2.536	> 0 05	0.914	<.001	NONE	Y	Y
	3	5	COVE	√(x+constant)	1	0 001	0.298	2 065	> 0.05	2.536	> 0.05	0.916	<.001	NONE	Y	Y
Tetraclita rubescens																
	1	5	ALL	1/(x+constant)	0 01	0 002	< 001	1.192	<=0 05	2.147	> 0.05	0.179	0.061	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.1	0 001	<.001	1.297	<=0.05	2.181	> 0.05	0.227	0.050	NONE	Y	N
	1	5	ALL	1/(x+constant)	0.5	<.001	0.003	1.907	> 0.05	2 217	> 0 05	0.608	0.009	NONE	Y	N
	1	5	ALL	1/(x+constant)	1	0 004	0 153	2 198	> 0.05	2.172	> 0.05	0 895	0.001	NONE	Y	Y
	1	5	ALL	$\log_{10}$(x+constant)	0 01	0 064	0 009	1 991	> 0 05	2.326	> 0 05	0.975	<.001	NONE	N	N
	1	5	ALL	$\log_{10}$(x+constant)	0.1	0.175	0 258	2.012	> 0.05	2.283	> 0.05	0 547	0 013	AR	N	Y
	1	5	ALL	$\log_{10}$(x+constant)	0.5	0.157	0.728	1.830	> 0.05	2 198	> 0 05	0.324	0.034	AR	N	Y
	1	5	ALL	$\log_{10}$(x+constant)	1	0 093	0 855	1.719	> 0.05	2.161	> 0 05	0 270	0 042	AR	N	Y
	1	5	ALL	NONE	0	< 001	< 001	1.608	> 0 05	1.943	> 0 05	0.350	0.030	NONE	Y	N
	1	5	ALL	√(x+constant)	0 01	< 001	0.338	1.663	> 0.05	2.175	> 0 05	0.281	0 040	AR	Y	Y
	1	5	ALL	√(x+constant)	0.1	< 001	0.307	1.644	> 0.05	2.165	> 0.05	0.268	0.042	AR	Y	Y
	1	5	ALL	√(x+constant)	0.5	< 001	0.254	1.613	> 0.05	2.149	> 0.05	0 256	0.044	AR	Y	Y
	1	5	ALL	√(x+constant)	1	< 001	0 215	1.596	> 0.05	2.139	> 0 05	0.252	0.045	AR	Y	Y

(continued)

Horizontal band transect invertebrate assumption testing for BACI analysis (continued)

Taxon	Transect Level	Number of Quads	Stations[1] Analyzed	Transformation	Constant Used in Transformation	Levene Test Prob.	Tukey Test Prob.	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Prob.	Trend Test R^4	Variance[2] Structure used in Analysis	Adjusted[3] d.f. used in Analysis	Passed Tests for BACI Analysis
***Tetraclita rubescens* (continued)**																
	3	5	COVE	1/(x+constant)	0 01	< 001	0 056	1.760	> 0 05	1.826	> 0 05	0 822	0 002	NONE	Y	Y
	3	5	COVE	1/(x+constant)	0.1	< 001	0 060	1 363	<=0 05	1.924	> 0.05	0.373	0.025	AR	Y	Y
	3	5	COVE	1/(x+constant)	0 5	0 004	0.128	0.995	<=0.05	1.908	> 0 05	0 092	0 086	AR	Y	Y
	3	5	COVE	1/(x+constant)	1	0 001	0.172	1 007	<=0 05	1.842	> 0.05	0.052	0.113	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.01	< 001	0.061	1.342	<=0.05	1.815	> 0 05	0.113	0 077	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0.1	< 001	0.116	1.265	<=0 05	1.706	> 0 05	0.043	0.122	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	0 5	< 001	0 264	1.409	<=0.05	1.479	> 0.05	0 027	0.144	AR	Y	Y
	3	5	COVE	$\log_{10}$(x+constant)	1	< 001	0.445	1.533	> 0 05	1.342	> 0 05	0 026	0.145	NONE	Y	Y
	3	5	COVE	NONE	0	< 001	0 182	1 997	> 0 05	1.089	<=0 05	0.118	0 075	AR	Y	Y
	3	5	COVE	√(x+constant)	0 01	< 001	0 907	1.787	> 0 05	1.207	> 0.05	0 047	0.118	AR	Y	Y
	3	5	COVE	√(x+constant)	0.1	<.001	0 926	1.808	> 0.05	1.157	<=0 05	0 047	0.118	AR	Y	Y
	3	5	COVE	√(x+constant)	0.5	<.001	0.667	1.854	> 0.05	1.108	<=0.05	0 051	0.114	AR	Y	Y
	3	5	COVE	√(x+constant)	1	<.001	0.524	1.882	> 0 05	1.089	<=0.05	0.055	0.111	AR	Y	Y

1 Stations analyzed All = FC3, NDC 1, 2 and 3, SDC 2, SDP 1 and 2. Cove = FC 3, NDC 1, 2 and 3, SDC 2

2 Serially correlated data requiring use of autoregressive error structure in analysis

3 Heterogeneous variances requiring Satterthwaite adjusted degrees of freedom in analysis

Subtidal arc quadrants assumption testing for BACI analysis

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance Structure used in Analysis	Adjusted d.f. used in Analysis	Passed Tests for BACI Analysis
Acmaea mitra														
	count	1/(x+constant)	0.01	<.001	<.001	1.698	> 0.05	1.357	> 0.05	0.159	0.107	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	1.741	> 0.05	1.506	> 0.05	0.214	0.084	NONE	Y	N
		1/(x+constant)	0.5	0.002	<.001	1.880	> 0.05	1.965	> 0.05	0.784	0.004	NONE	Y	N
		1/(x+constant)	1	0.018	0.008	1.821	> 0.05	2.126	> 0.05	0.553	0.020	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	0.017	0.006	1.740	> 0.05	2.174	> 0.05	0.431	0.035	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0.195	0.137	1.465	> 0.05	2.268	> 0.05	0.152	0.110	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.524	0.452	1.247	<=0.05	2.277	> 0.05	0.064	0.177	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.568	0.576	1.153	<=0.05	2.273	> 0.05	0.045	0.204	NONE	N	Y
		NONE	0	0.325	0.100	0.672	<=0.05	2.561	> 0.05	0.005	0.365	NONE	N	Y
		√(x+constant)	0.01	0.601	0.874	0.943	<=0.05	2.428	> 0.05	0.023	0.257	NONE	N	Y
		√(x+constant)	0.1	0.583	0.900	0.924	<=0.05	2.419	> 0.05	0.021	0.263	NONE	N	Y
		√(x+constant)	0.5	0.556	0.940	0.892	<=0.05	2.413	> 0.05	0.018	0.272	NONE	N	Y
		√(x+constant)	1	0.537	0.969	0.871	<=0.05	2.414	> 0.05	0.017	0.277	NONE	N	Y
		√√(x+constant)	0.01	0.496	0.386	1.229	<=0.05	2.354	> 0.05	0.068	0.173	NONE	N	Y
		√√(x+constant)	0.1	0.602	0.551	1.140	<=0.05	2.345	> 0.05	0.047	0.201	NONE	N	Y
		√√(x+constant)	0.5	0.610	0.685	1.050	<=0.05	2.332	> 0.05	0.033	0.228	NONE	N	Y
		√√(x+constant)	1	0.616	0.736	1.001	<=0.05	2.330	> 0.05	0.028	0.241	NONE	N	Y
Anthopleura elegantissima														
	count	1/(x+constant)	0.01	<.001	<.001	1.653	> 0.05	2.948	> 0.05	0.714	0.008	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	1.607	> 0.05	2.994	> 0.05	0.573	0.018	NONE	Y	N
		1/(x+constant)	0.5	<.001	0.034	1.568	> 0.05	3.058	> 0.05	0.392	0.041	NONE	Y	N
		1/(x+constant)	1	<.001	0.219	1.479	> 0.05	2.987	> 0.05	0.276	0.066	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	<.001	0.060	1.625	> 0.05	2.483	> 0.05	0.314	0.056	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.017	0.594	1.605	> 0.05	2.449	> 0.05	0.275	0.066	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.195	0.563	1.673	> 0.05	2.336	> 0.05	0.325	0.054	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.249	0.338	1.728	> 0.05	2.244	> 0.05	0.367	0.045	NONE	N	Y
		NONE	0	<.001	0.583	1.887	> 0.05	1.604	> 0.05	0.641	0.012	NONE	Y	Y
		√(x+constant)	0.01	0.052	0.357	1.809	> 0.05	1.942	> 0.05	0.453	0.032	NONE	N	Y
		√(x+constant)	0.1	0.044	0.311	1.808	> 0.05	1.933	> 0.05	0.467	0.030	NONE	Y	Y
		√(x+constant)	0.5	0.028	0.276	1.820	> 0.05	1.901	> 0.05	0.493	0.026	NONE	Y	Y
		√(x+constant)	1	0.019	0.273	1.831	> 0.05	1.872	> 0.05	0.511	0.024	NONE	Y	Y
		√√(x+constant)	0.01	0.079	0.978	1.731	> 0.05	2.190	> 0.05	0.333	0.052	NONE	N	Y
		√√(x+constant)	0.1	0.208	0.572	1.727	> 0.05	2.170	> 0.05	0.359	0.047	NONE	N	Y
		√√(x+constant)	0.5	0.178	0.317	1.762	> 0.05	2.104	> 0.05	0.409	0.038	NONE	N	Y
		√√(x+constant)	1	0.128	0.257	1.788	> 0.05	2.047	> 0.05	0.440	0.034	NONE	N	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Asterina miniata														
	count	1/(x+constant)	0 01	<.001	<.001	0.829	<=0.05	0 890	<=0 05	0 017	0.276	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	0.713	<=0 05	0.779	<=0 05	0.018	0.275	NONE	Y	N
		1/(x+constant)	0.5	0 009	<.001	0.649	<=0.05	0.783	<=0.05	0.029	0 239	NONE	Y	N
		1/(x+constant)	1	0 004	0.011	0.702	<=0.05	1 045	<=0.05	0.045	0.206	NONE	Y	N
		$\log_{10}$(x+constant)	0 01	0.002	0 015	0.922	<=0 05	0.881	<=0 05	0 010	0 318	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0.158	0.330	1.111	<=0.05	1.112	<=0.05	0.012	0.304	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.209	0.907	1.534	> 0.05	1.410	> 0.05	0.038	0.219	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.126	0.903	1.698	> 0.05	1.495	> 0 05	0.102	0.142	NONE	N	Y
		NONE	0	<.001	0.188	1.108	<=0 05	1 510	> 0.05	0.483	0.028	NONE	Y	Y
		√(x+constant)	0.01	< 001	0.967	1.373	> 0.05	1 429	> 0.05	0.266	0.068	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.798	1 344	> 0 05	1 474	> 0.05	0 316	0.056	NONE	Y	Y
		√(x+constant)	0.5	< 001	0 545	1.295	<=0 05	1.513	> 0.05	0.400	0 040	NONE	Y	Y
		√(x+constant)	1	<.001	0 416	1.263	<=0.05	1 523	> 0 05	0.449	0.032	NONE	Y	Y
		√√(x+constant)	0 01	0.136	0 759	1.544	> 0.05	1.193	> 0.05	0.020	0.265	NONE	N	Y
		√√(x+constant)	0.1	0 080	0.640	1.606	> 0.05	1.355	> 0.05	0.057	0.187	NONE	N	Y
		√√(x+constant)	0.5	0.009	0.928	1.569	> 0 05	1.485	> 0.05	0.182	0.097	NONE	Y	Y
		√√(x+constant)	1	0.001	0.788	1.496	> 0.05	1.519	> 0.05	0.293	0.061	NONE	Y	Y
Cystoseira osmundacea														
	count	1/(x+constant)	0 01	< 001	<.001	1.573	> 0 05	1.026	<=0.05	0 800	0 004	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	1.514	> 0.05	1.190	> 0.05	0.819	0.003	NONE	Y	N
		1/(x+constant)	0 5	< 001	< 001	1 373	> 0.05	1 021	<=0.05	0.876	0.001	NONE	Y	N
		1/(x+constant)	1	< 001	<.001	1 295	<=0 05	0.923	<=0.05	0.902	0.001	NONE	Y	N
		$\log_{10}$(x+constant)	0 01	< 001	<.001	1.187	<=0.05	0.901	<=0.05	0.898	0.001	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0.003	0 001	1.178	<=0.05	0.886	<=0.05	0 903	0 001	NONE	Y	N
		$\log_{10}$(x+constant)	0.5	0 036	0 016	1.165	<=0 05	0.844	<=0.05	0.914	0.001	NONE	Y	N
		$\log_{10}$(x+constant)	1	0 050	0.086	1.166	<=0.05	0.840	<=0.05	0.918	0.001	NONE	N	Y
		NONE	0	0.001	< 001	1.510	> 0.05	0.992	<=0.05	0.945	<.001	NONE	Y	N
		√(x+constant)	0.01	0 033	0.601	1.224	<=0.05	0 871	<=0.05	0 955	<.001	NONE	Y	Y
		√(x+constant)	0.1	0 024	0.536	1.228	<=0 05	0.873	<=0.05	0 956	< 001	NONE	Y	Y
		√(x+constant)	0 5	0 018	0.352	1 243	<=0 05	0.883	<=0 05	0.961	<.001	NONE	Y	Y
		√(x+constant)	1	0 014	0 232	1.260	<=0 05	0 896	<=0.05	0.964	< 001	NONE	Y	Y
		√√(x+constant)	0 01	0.023	0 121	1 169	<=0 05	0 860	<=0.05	0.922	0.001	NONE	Y	Y
		√√(x+constant)	0.1	0.045	0.178	1.169	<=0.05	0 854	<=0.05	0.925	0.001	NONE	Y	Y
		√√(x+constant)	0 5	0 045	0.457	1.177	<=0 05	0.849	<=0.05	0 931	< 001	NONE	Y	Y
		√√(x+constant)	1	0 036	0.787	1.191	<=0.05	0 859	<=0.05	0.935	<.001	NONE	Y	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Diopatra ornata														
	count	1/(x+constant)	0.01	<001	0.140	1.561	> 0 05	0 971	<=0 05	0.016	0.284	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.237	1.375	> 0.05	1.183	> 0 05	0.012	0.301	NONE	Y	Y
		1/(x+constant)	0.5	<001	0 711	1.248	<=0.05	2 393	> 0 05	0.010	0 316	NONE	Y	Y
		1/(x+constant)	1	<.001	0 862	1.319	> 0 05	2 828	> 0 05	0.009	0.319	NONE	Y	Y
		log_{10}(x+constant)	0 01	0 001	0 889	1.164	<=0 05	2.143	> 0 05	0.004	0.381	NONE	Y	Y
		log_{10}(x+constant)	0.1	0 014	0.383	1.248	<=0 05	2.762	> 0 05	0.004	0.375	NONE	Y	Y
		log_{10}(x+constant)	0.5	<001	0.037	1.404	> 0 05	2.548	> 0 05	0 005	0 366	NONE	Y	N
		log_{10}(x+constant)	1	<001	0.006	1.465	> 0 05	2.349	> 0 05	0.005	0.367	NONE	Y	N
		NONE	0	<001	<001	0.984	<=0 05	1.919	> 0 05	<.001	0.501	NONE	Y	N
		√(x+constant)	0.01	<001	<001	1.267	<=0 05	2 378	> 0 05	0.002	0.432	NONE	Y	N
		√(x+constant)	0.1	<001	<001	1.307	> 0 05	2.266	> 0 05	0 002	0.427	NONE	Y	N
		√(x+constant)	0.5	<001	<001	1.333	> 0 05	2 126	> 0 05	0.002	0.426	NONE	Y	N
		√(x+constant)	1	<.001	<001	1.331	> 0.05	2.060	> 0.05	0.002	0.429	NONE	Y	N
		√√(x+constant)	0.01	0 005	0.054	1.211	<=0 05	2.736	> 0.05	0.002	0.409	NONE	Y	Y
		√√(x+constant)	0.1	<001	0 007	1.313	> 0.05	2.599	> 0 05	0 003	0.397	NONE	Y	N
		√√(x+constant)	0.5	<001	<001	1.406	> 0.05	2.320	> 0.05	0.003	0.392	NONE	Y	N
		√√(x+constant)	1	<001	<001	1 429	> 0.05	2.190	> 0.05	0 003	0 394	NONE	Y	N
Egregia menziesii														
	count	1/(x+constant)	0 01	0 554	0.410	1.815	> 0 05	0 681	<=0 05	0 042	0.211	NONE	N	Y
		1/(x+constant)	0.1	0.189	0 404	1.729	> 0.05	0.625	<=0.05	0.057	0.186	NONE	N	Y
		1/(x+constant)	0 5	0 009	0.442	1 546	> 0 05	0.710	<=0 05	0.111	0.135	NONE	Y	Y
		1/(x+constant)	1	<.001	0 606	1.448	> 0.05	0.784	<=0 05	0.156	0.108	NONE	Y	Y
		log_{10}(x+constant)	0 01	0 139	0.288	1.693	> 0 05	0 627	<=0 05	0 058	0 186	NONE	N	Y
		log_{10}(x+constant)	0.1	0 018	0.360	1 554	> 0 05	0.677	<=0 05	0.094	0.148	NONE	Y	Y
		log_{10}(x+constant)	0.5	<001	0.806	1.437	> 0.05	0.802	<=0.05	0.176	0 099	NONE	Y	Y
		log_{10}(x+constant)	1	<001	0.776	1.452	> 0.05	0.853	<=0.05	0 235	0 078	NONE	Y	Y
		NONE	0	<001	0 055	1.749	> 0 05	0.937	<=0.05	0.406	0 039	NONE	Y	Y
		√(x+constant)	0 01	0.001	0 505	1.505	> 0 05	0 695	<=0 05	0.110	0.136	NONE	Y	Y
		√(x+constant)	0.1	<.001	0 897	1.471	> 0 05	0.776	<=0 05	0.168	0.103	NONE	Y	Y
		√(x+constant)	0.5	<001	0.504	1 515	> 0 05	0.864	<=0 05	0.263	0.069	NONE	Y	Y
		√(x+constant)	1	<.001	0 295	1 567	> 0 05	0.893	<=0 05	0.309	0.057	NONE	Y	Y
		√√(x+constant)	0 01	0.053	0.283	1.601	> 0 05	0 641	<=0.05	0 072	0.168	NONE	N	Y
		√√(x+constant)	0.1	0.001	0 487	1.490	> 0 05	0.718	<=0 05	0.119	0.130	NONE	Y	Y
		√√(x+constant)	0.5	<001	0 886	1.454	> 0 05	0.831	<=0.05	0.212	0.085	NONE	Y	Y
		√√(x+constant)	1	<001	0.522	1 498	> 0 05	0 872	<=0 05	0.268	0.068	NONE	Y	Y

(continued)

Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op. Q-Value	Pre-Op. Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Laminaria setchellii														
	count	1/(x+constant)	0.01	<.001	0.093	0.998	<=0.05	1.936	>0.05	0.009	0.325	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.100	0.999	<=0.05	1.958	>0.05	0.008	0.328	NONE	Y	Y
		1/(x+constant)	0.5	<.001	0.131	1.011	<=0.05	2.160	>0.05	0.007	0.336	NONE	Y	Y
		1/(x+constant)	1	<.001	0.174	1.039	<=0.05	2.539	>0.05	0.007	0.340	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	<.001	0.965	1.512	>0.05	2.352	>0.05	0.057	0.187	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.005	0.974	1.514	>0.05	2.347	>0.05	0.058	0.185	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.870	0.987	1.525	>0.05	2.145	>0.05	0.063	0.179	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.982	0.945	1.536	>0.05	2.037	>0.05	0.069	0.172	NONE	N	Y
		NONE	0	1.000	0.529	1.738	>0.05	1.388	>0.05	0.252	0.072	NONE	N	Y
		√(x+constant)	0.01	1.000	0.691	1.638	>0.05	1.675	>0.05	0.166	0.104	NONE	N	Y
		√(x+constant)	0.1	1.000	0.689	1.639	>0.05	1.663	>0.05	0.167	0.103	NONE	N	Y
		√(x+constant)	0.5	1.000	0.679	1.641	>0.05	1.642	>0.05	0.171	0.102	NONE	N	Y
		√(x+constant)	1	1.000	0.669	1.643	>0.05	1.627	>0.05	0.175	0.100	NONE	N	Y
		√√(x+constant)	0.01	0.854	0.827	1.585	>0.05	1.984	>0.05	0.108	0.137	NONE	N	Y
		√√(x+constant)	0.1	0.990	0.822	1.587	>0.05	1.921	>0.05	0.109	0.137	NONE	N	Y
		√√(x+constant)	0.5	0.999	0.801	1.591	>0.05	1.843	>0.05	0.114	0.133	NONE	N	Y
		√√(x+constant)	1	1.000	0.780	1.596	>0.05	1.800	>0.05	0.120	0.129	NONE	N	Y
Laminariales														
	count	1/(x+constant)	0.01	0.796	0.926	2.680	>0.05	0.749	<=0.05	0.809	0.003	NONE	N	Y
		1/(x+constant)	0.1	0.728	0.828	2.700	>0.05	0.729	<=0.05	0.979	<.001	NONE	N	Y
		1/(x+constant)	0.5	0.717	0.703	2.679	>0.05	0.698	<=0.05	0.475	0.029	NONE	N	Y
		1/(x+constant)	1	0.793	0.670	2.547	>0.05	0.687	<=0.05	0.181	0.097	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.897	0.645	2.469	>0.05	0.730	<=0.05	0.170	0.102	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.946	0.786	2.065	>0.05	0.722	<=0.05	0.028	0.240	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.973	0.855	1.554	>0.05	0.722	<=0.05	0.003	0.393	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.983	0.630	1.338	>0.05	0.729	<=0.05	0.001	0.444	NONE	N	Y
		NONE	0	0.884	0.884	1.897	>0.05	1.127	<=0.05	0.043	0.209	NONE	N	Y
		√(x+constant)	0.01	0.991	0.539	1.446	>0.05	0.869	<=0.05	0.006	0.356	NONE	N	Y
		√(x+constant)	0.1	0.992	0.477	1.432	>0.05	0.872	<=0.05	0.005	0.358	NONE	N	Y
		√(x+constant)	0.5	0.993	0.414	1.423	>0.05	0.880	<=0.05	0.005	0.356	NONE	N	Y
		√(x+constant)	1	0.993	0.392	1.428	>0.05	0.886	<=0.05	0.006	0.352	NONE	N	Y
		√√(x+constant)	0.01	0.979	0.997	1.653	>0.05	0.768	<=0.05	0.007	0.335	NONE	N	Y
		√√(x+constant)	0.1	0.992	0.738	1.457	>0.05	0.770	<=0.05	0.003	0.389	NONE	N	Y
		√√(x+constant)	0.5	0.996	0.481	1.298	<=0.05	0.780	<=0.05	0.002	0.425	NONE	N	Y
		√√(x+constant)	1	0.997	0.380	1.249	<=0.05	0.789	<=0.05	0.002	0.429	NONE	N	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[3] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Lottia instabilis														
	count	1/(x+constant)	0.01	0.003	0.409	1.576	> 0.05	2.577	> 0.05	0.058	0.185	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.561	1.746	> 0.05	2.486	> 0.05	0.084	0.157	NONE	Y	Y
		1/(x+constant)	0.5	0.003	0.829	1.955	> 0.05	2.228	> 0.05	0.149	0.112	NONE	Y	Y
		1/(x+constant)	1	0.241	0.926	1.997	> 0.05	2.063	> 0.05	0.203	0.088	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.013	0.670	1.784	> 0.05	2.353	> 0.05	0.109	0.136	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.254	0.854	1.920	> 0.05	2.140	> 0.05	0.179	0.098	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.540	0.989	1.969	> 0.05	1.905	> 0.05	0.296	0.060	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.250	0.981	1.953	> 0.05	1.798	> 0.05	0.373	0.044	NONE	N	Y
		NONE	0	0.007	0.363	1.661	> 0.05	1.511	> 0.05	0.821	0.003	NONE	Y	Y
		√(x+constant)	0.01	0.413	0.913	1.893	> 0.05	1.898	> 0.05	0.330	0.053	NONE	N	Y
		√(x+constant)	0.1	0.217	0.925	1.903	> 0.05	1.807	> 0.05	0.401	0.039	NONE	N	Y
		√(x+constant)	0.5	0.054	0.900	1.878	> 0.05	1.700	> 0.05	0.504	0.025	NONE	N	Y
		√(x+constant)	1	0.023	0.863	1.854	> 0.05	1.650	> 0.05	0.561	0.019	NONE	Y	Y
		√√(x+constant)	0.01	0.420	0.836	1.870	> 0.05	2.147	> 0.05	0.179	0.098	NONE	N	Y
		√√(x+constant)	0.1	0.617	0.938	1.936	> 0.05	1.979	> 0.05	0.261	0.070	NONE	N	Y
		√√(x+constant)	0.5	0.241	0.990	1.938	> 0.05	1.803	> 0.05	0.383	0.043	NONE	N	Y
		√√(x+constant)	1	0.081	0.982	1.914	> 0.05	1.724	> 0.05	0.456	0.031	NONE	N	Y
Mitra idae														
	count	1/(x+constant)	0.01	0.260	0.819	1.324	> 0.05	1.164	<=0.05	0.101	0.142	NONE	N	Y
		1/(x+constant)	0.1	0.222	0.762	1.636	> 0.05	0.959	<=0.05	0.145	0.114	NONE	N	Y
		1/(x+constant)	0.5	0.492	0.704	2.029	> 0.05	0.728	<=0.05	0.301	0.059	NONE	N	Y
		1/(x+constant)	1	0.590	0.795	2.067	> 0.05	0.795	<=0.05	0.312	0.057	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.368	0.716	1.659	> 0.05	0.907	<=0.05	0.145	0.114	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.481	0.756	1.942	> 0.05	0.823	<=0.05	0.238	0.076	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.235	0.960	2.019	> 0.05	0.933	<=0.05	0.269	0.067	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.061	0.876	1.999	> 0.05	1.029	<=0.05	0.255	0.071	NONE	N	Y
		NONE	0	<.001	0.356	1.847	> 0.05	1.288	> 0.05	0.183	0.096	NONE	Y	Y
		√(x+constant)	0.01	0.048	0.981	1.904	> 0.05	0.986	<=0.05	0.210	0.086	NONE	Y	Y
		√(x+constant)	0.1	0.018	0.906	1.956	> 0.05	1.029	<=0.05	0.231	0.079	NONE	Y	Y
		√(x+constant)	0.5	0.002	0.718	1.953	> 0.05	1.118	<=0.05	0.229	0.079	NONE	Y	Y
		√(x+constant)	1	<.001	0.617	1.933	> 0.05	1.166	<=0.05	0.219	0.083	NONE	Y	Y
		√√(x+constant)	0.01	0.359	0.771	1.821	> 0.05	0.884	<=0.05	0.186	0.095	NONE	N	Y
		√√(x+constant)	0.1	0.243	0.878	1.966	> 0.05	0.903	<=0.05	0.242	0.075	NONE	N	Y
		√√(x+constant)	0.5	0.043	0.894	1.992	> 0.05	1.023	<=0.05	0.250	0.073	NONE	Y	Y
		√√(x+constant)	1	0.008	0.752	1.969	> 0.05	1.098	<=0.05	0.238	0.077	NONE	Y	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
Nereocystis luetkeana														
	count	1/(x+constant)	0 01	0.001	0.682	2.107	> 0 05	2 275	> 0.05	0.762	0.005	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.790	1.790	> 0.05	2.316	> 0.05	0 768	0 005	NONE	Y	Y
		1/(x+constant)	0.5	<.001	0.282	1 394	> 0 05	2.277	> 0.05	0 831	0.003	NONE	Y	Y
		1/(x+constant)	1	0 063	0.279	1 322	> 0 05	2 263	> 0 05	0.821	0 003	NONE	N	Y
		log_{10}(x+constant)	0.01	0.177	0 658	1.618	> 0.05	2.250	> 0.05	0 743	0 006	NONE	N	Y
		log_{10}(x+constant)	0.1	0 822	0.454	1.394	> 0.05	2.231	> 0.05	0.754	0.006	NONE	N	Y
		log_{10}(x+constant)	0.5	0.020	0.650	1.336	> 0.05	2.192	> 0.05	0.743	0.006	NONE	Y	Y
		log_{10}(x+constant)	1	< 001	0.931	1.345	> 0 05	2.161	> 0.05	0.720	0.007	NONE	Y	Y
		NONE	0	<.001	0.001	1.431	> 0 05	1.809	> 0 05	0.723	0.007	NONE	Y	N
		√(x+constant)	0 01	< 001	0 783	1.375	> 0 05	2.030	> 0.05	0.704	0.008	NONE	Y	Y
		√(x+constant)	0.1	< 001	0 608	1.365	> 0.05	2.025	> 0 05	0.707	0 008	NONE	Y	Y
		√(x+constant)	0.5	< 001	0.334	1.372	> 0.05	2 008	> 0.05	0.700	0.008	NONE	Y	Y
		√(x+constant)	1	< 001	0 207	1 379	> 0 05	1 994	> 0 05	0 692	0 009	NONE	Y	Y
		√√(x+constant)	0 01	0 084	0 645	1 436	> 0 05	2.152	> 0.05	0.722	0 007	NONE	N	Y
		√√(x+constant)	0.1	< 001	0.717	1 358	> 0.05	2.141	> 0.05	0.728	0 007	NONE	Y	Y
		√√(x+constant)	0 5	< 001	0.901	1 351	> 0.05	2 110	> 0 05	0 716	0 008	NONE	Y	Y
		√√(x+constant)	1	< 001	0 621	1.361	> 0 05	2 086	> 0.05	0.701	0.008	NONE	Y	Y
Pagurus spp.														
	count	1/(x+constant)	0.01	<.001	<.001	1.742	> 0 05	2.850	> 0 05	0.254	0.072	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	1.915	> 0.05	2.748	> 0 05	0.362	0.046	NONE	Y	N
		1/(x+constant)	0.5	<.001	0.001	2.289	> 0.05	2.376	> 0.05	0.918	0.001	NONE	Y	N
		1/(x+constant)	1	<.001	0.058	2.382	> 0 05	2.047	> 0.05	0.631	0.013	NONE	Y	Y
		log_{10}(x+constant)	0 01	< 001	0.791	2.396	> 0 05	2.433	> 0 05	0.353	0.048	NONE	Y	Y
		log_{10}(x+constant)	0.1	< 001	0 880	2 389	> 0 05	2 074	> 0 05	0 327	0.053	NONE	Y	Y
		log_{10}(x+constant)	0.5	<.001	0 922	2 368	> 0.05	1.906	> 0 05	0 270	0.067	NONE	Y	Y
		log_{10}(x+constant)	1	< 001	0 831	2.356	> 0 05	1.934	> 0.05	0.244	0.075	NONE	Y	Y
		NONE	0	0 001	0.771	2 502	> 0.05	2 169	> 0.05	0.706	0.008	NONE	Y	Y
		√(x+constant)	0 01	<.001	0.898	2.443	> 0 05	2 023	> 0.05	0.377	0 044	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.894	2 443	> 0 05	2 028	> 0.05	0 375	0 044	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.882	2 442	> 0 05	2.056	> 0.05	0 373	0 044	NONE	Y	Y
		√(x+constant)	1	<.001	0.876	2 443	> 0 05	2 077	> 0.05	0 375	0.044	NONE	Y	Y
		√√(x+constant)	0.01	<.001	0.937	2 406	> 0 05	2.067	> 0.05	0.319	0.055	NONE	Y	Y
		√√(x+constant)	0 1	< 001	0 916	2.402	> 0 05	1.964	> 0.05	0.310	0 057	NONE	Y	Y
		√√(x+constant)	0.5	< 001	0 869	2 395	> 0.05	1.974	> 0.05	0.292	0 062	NONE	Y	Y
		√√(x+constant)	1	<.001	0.849	2 393	> 0 05	2 009	> 0 05	0.285	0 063	NONE	Y	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob.	Operation Q-Value Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Pisaster giganteus												
	count	1/(x+constant)	0 01	0.285	0.634	1.707 > 0 05	1.896 > 0.05	0 468	0.030	NONE	N	Y
		1/(x+constant)	0.1	0.644	0.747	1.554 > 0 05	2.421 > 0.05	0 869	0.002	NONE	N	Y
		1/(x+constant)	0.5	0.321	0 284	1.297 <=0 05	2.969 > 0 05	0.471	0 029	NONE	N	Y
		1/(x+constant)	1	0 003	0 253	1 284 <=0.05	3 033 > 0 05	0.443	0 033	NONE	Y	Y
		log_{10}(x+constant)	0.01	0.714	0 687	1 519 > 0 05	2.909 > 0 05	0.892	0.001	NONE	N	Y
		log_{10}(x+constant)	0.1	0 121	0.343	1.328 > 0 05	3.054 > 0.05	0.534	0 022	NONE	N	Y
		log_{10}(x+constant)	0 5	<.001	0 262	1.291 <=0.05	3.053 > 0 05	0.448	0 032	NONE	Y	Y
		log_{10}(x+constant)	1	< 001	0.274	1.304 > 0 05	3.040 > 0.05	0 448	0 032	NONE	Y	Y
		NONE	0	< 001	0.341	1.349 > 0 05	2.986 > 0.05	0.466	0 030	NONE	Y	Y
		√(x+constant)	0 01	< 001	0 335	1.326 > 0.05	3 097 > 0 05	0 543	0.021	NONE	Y	Y
		√(x+constant)	0.1	< 001	0 281	1.298 <=0 05	3 063 > 0 05	0.468	0 030	NONE	Y	Y
		√(x+constant)	0.5	<.001	0 286	1.312 > 0.05	3 031 > 0 05	0.453	0.032	NONE	Y	Y
		√(x+constant)	1	<.001	0.301	1.324 > 0 05	3.019 > 0.05	0 455	0.031	NONE	Y	Y
		√√(x+constant)	0 01	0.160	0 465	1 401 > 0 05	3.090 > 0 05	0 680	0 010	NONE	N	Y
		√√(x+constant)	0.1	0.001	0 298	1.302 > 0 05	3.078 > 0.05	0 492	0 027	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.271	1.299 <=0.05	3.046 > 0.05	0.449	0 032	NONE	Y	Y
		√√(x+constant)	1	<.001	0 286	1.313 > 0.05	3.031 > 0.05	0 451	0.032	NONE	Y	Y
***Pista* spp.**												
	count	1/(x+constant)	0 01	0.059	0 093	1.184 <=0 05	2 393 > 0 05	0.249	0.073	NONE	N	Y
		1/(x+constant)	0.1	0.099	0.062	1.180 <=0 05	2.418 > 0.05	0.235	0 077	NONE	N	Y
		1/(x+constant)	0.5	0.169	0 028	1.211 <=0 05	2.507 > 0.05	0 207	0 087	NONE	N	N
		1/(x+constant)	1	0 204	0 017	1.237 <=0 05	2.579 > 0.05	0.194	0 092	NONE	N	N
		log_{10}(x+constant)	0 01	0.135	0 046	1.188 <=0.05	2.599 > 0 05	0.212	0.085	NONE	N	N
		log_{10}(x+constant)	0.1	0.230	0.022	1.217 <=0 05	2.717 > 0 05	0.197	0 091	NONE	N	N
		log_{10}(x+constant)	0.5	0.351	0 008	1.260 <=0.05	2.779 > 0 05	0.181	0.097	NONE	N	N
		log_{10}(x+constant)	1	0 414	0 004	1.282 <=0 05	2.742 > 0 05	0.174	0.100	NONE	N	N
		NONE	0	0.312	< 001	1.362 > 0 05	2.279 > 0.05	0.145	0.114	NONE	N	N
		√(x+constant)	0.01	0.477	0 007	1 252 <=0 05	2.768 > 0 05	0.176	0.099	NONE	N	N
		√(x+constant)	0.1	0.497	0 004	1 274 <=0 05	2 692 > 0 05	0.171	0.101	NONE	N	N
		√(x+constant)	0.5	0.496	0 002	1.302 > 0 05	2 576 > 0 05	0.164	0.105	NONE	N	N
		√(x+constant)	1	0 484	0.001	1.315 > 0 05	2 515 > 0 05	0.160	0.106	NONE	N	N
		√√(x+constant)	0.01	0.269	0 023	1.211 <=0 05	2 814 > 0 05	0.194	0 092	NONE	N	N
		√√(x+constant)	0.1	0.370	0 011	1 242 <=0 05	2.828 > 0 05	0.184	0 096	NONE	N	N
		√√(x+constant)	0.5	0.459	0.004	1.279 <=0 05	2.740 > 0.05	0 173	0.101	NONE	N	N
		√√(x+constant)	1	0 486	0 002	1.297 <=0.05	2.658 > 0 05	0.167	0.103	NONE	N	N

(continued)

Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Pterygophora californica														
	count	1/(x+constant)	0.01	< 001	0.533	0.433	<=0.05	2.117	> 0.05	0.019	0.270	NONE	Y	Y
		1/(x+constant)	0.1	< 001	0.505	0.397	<=0.05	1.901	> 0.05	0.014	0.290	NONE	Y	Y
		1/(x+constant)	0.5	< 001	0.470	0.329	<=0.05	1.390	> 0.05	0.005	0.358	NONE	Y	Y
		1/(x+constant)	1	0.005	0.490	0.300	<=0.05	1.111	<=0.05	0.002	0.420	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.001	0.004	0.192	<=0.05	1.739	> 0.05	<.001	0.782	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	< 001	0.004	0.191	<=0.05	1.647	> 0.05	<.001	0.789	NONE	Y	N
		$\log_{10}$(x+constant)	0.5	<.001	0.002	0.189	<=0.05	1.689	> 0.05	<.001	0.807	NONE	Y	N
		$\log_{10}$(x+constant)	1	<.001	0.001	0.188	<=0.05	1.697	> 0.05	<.001	0.818	NONE	Y	N
		NONE	0	0.458	<.001	0.206	<=0.05	1.434	> 0.05	<.001	0.699	NONE	N	N
		√(x+constant)	0.01	0.002	< 001	0.176	<=0.05	1.600	> 0.05	< 001	0.802	NONE	Y	N
		√(x+constant)	0.1	0.003	< 001	0.176	<=0.05	1.598	> 0.05	<.001	0.802	NONE	Y	N
		√(x+constant)	0.5	0.004	< 001	0.177	<=0.05	1.594	> 0.05	<.001	0.800	NONE	Y	N
		√(x+constant)	1	0.005	< 001	0.177	<=0.05	1.590	> 0.05	<.001	0.798	NONE	Y	N
		√√(x+constant)	0.01	< 001	< 001	0.177	<=0.05	1.690	> 0.05	<.001	0.827	NONE	Y	N
		√√(x+constant)	0.1	<.001	< 001	0.177	<=0.05	1.683	> 0.05	<.001	0.827	NONE	Y	N
		√√(x+constant)	0.5	<.001	<.001	0.177	<=0.05	1.674	> 0.05	<.001	0.828	NONE	Y	N
		√√(x+constant)	1	<.001	<.001	0.177	<=0.05	1.665	> 0.05	<.001	0.828	NONE	Y	N
Serpulidae unid.														
	count	1/(x+constant)	0.01	0.365	0.155	1.708	> 0.05	1.442	> 0.05	0.602	0.015	NONE	N	Y
		1/(x+constant)	0.1	0.234	0.243	1.673	> 0.05	1.385	> 0.05	0.703	0.008	NONE	N	Y
		1/(x+constant)	0.5	0.125	0.889	1.807	> 0.05	1.165	<=0.05	0.811	0.003	NONE	N	Y
		1/(x+constant)	1	0.096	0.681	1.920	> 0.05	0.958	<=0.05	0.853	0.002	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.132	0.577	1.808	> 0.05	1.158	<=0.05	0.757	0.005	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.107	0.885	1.906	> 0.05	0.924	<=0.05	0.856	0.002	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.141	0.441	2.028	> 0.05	0.731	<=0.05	0.938	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.185	0.327	2.080	> 0.05	0.758	<=0.05	0.979	<.001	NONE	N	Y
		NONE	0	0.226	0.170	2.214	> 0.05	1.651	> 0.05	0.805	0.003	NONE	N	Y
		√(x+constant)	0.01	0.172	0.444	2.064	> 0.05	0.900	<=0.05	0.977	<.001	NONE	N	Y
		√(x+constant)	0.1	0.207	0.344	2.093	> 0.05	0.989	<=0.05	0.987	<.001	NONE	N	Y
		√(x+constant)	0.5	0.252	0.259	2.133	> 0.05	1.129	<=0.05	0.945	<.001	NONE	N	Y
		√(x+constant)	1	0.270	0.229	2.152	> 0.05	1.209	> 0.05	0.920	0.001	NONE	N	Y
		√√(x+constant)	0.01	0.106	0.895	1.936	> 0.05	0.848	<=0.05	0.859	0.002	NONE	N	Y
		√√(x+constant)	0.1	0.133	0.559	2.005	> 0.05	0.762	<=0.05	0.928	<.001	NONE	N	Y
		√√(x+constant)	0.5	0.197	0.335	2.083	> 0.05	0.838	<=0.05	0.992	<.001	NONE	N	Y
		√√(x+constant)	1	0.236	0.273	2.117	> 0.05	0.944	<=0.05	0.973	< 001	NONE	N	Y

(continued)

Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Serpulorbis squamigerus														
	count	1/(x+constant)	0.01	0.009	0.048	1.592	> 0.05	1.656	> 0.05	0.010	0.317	NONE	Y	N
		1/(x+constant)	0.1	0.005	0.112	1.745	> 0.05	1.757	> 0.05	0.007	0.343	NONE	Y	Y
		1/(x+constant)	0.5	0.016	0.427	2.163	> 0.05	2.032	> 0.05	0.013	0.294	NONE	Y	Y
		1/(x+constant)	1	0.082	0.723	2.380	> 0.05	2.167	> 0.05	0.067	0.175	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.037	0.666	2.201	> 0.05	2.038	> 0.05	0.067	0.175	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.323	0.805	2.356	> 0.05	2.180	> 0.05	0.270	0.067	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.831	0.655	2.193	> 0.05	2.271	> 0.05	0.897	0.001	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.890	0.730	2.038	> 0.05	2.292	> 0.05	0.733	0.007	NONE	N	Y
		NONE	0	< 001	0.894	1.818	> 0.05	2.259	> 0.05	0.268	0.068	NONE	Y	Y
		√(x+constant)	0.01	0.077	0.578	1.978	> 0.05	2.304	> 0.05	0.590	0.016	NONE	N	Y
		√(x+constant)	0.1	0.027	0.671	1.932	> 0.05	2.304	> 0.05	0.493	0.026	NONE	Y	Y
		√(x+constant)	0.5	0.003	0.827	1.863	> 0.05	2.300	> 0.05	0.372	0.044	NONE	Y	Y
		√(x+constant)	1	0.001	0.917	1.831	> 0.05	2.296	> 0.05	0.316	0.056	NONE	Y	Y
		√√(x+constant)	0.01	0.699	0.558	2.254	> 0.05	2.220	> 0.05	0.604	0.015	NONE	N	Y
		√√(x+constant)	0.1	0.828	0.542	2.165	> 0.05	2.268	> 0.05	0.962	< 001	NONE	N	Y
		√√(x+constant)	0.5	0.601	0.688	1.992	> 0.05	2.295	> 0.05	0.623	0.014	NONE	N	Y
		√√(x+constant)	1	0.214	0.813	1.904	> 0.05	2.300	> 0.05	0.455	0.031	NONE	N	Y
Spp. inverts														
	count	1/(x+constant)	0.01	<.001	0.538	1.706	> 0.05	1.132	<=0.05	0.093	0.149	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.545	1.706	> 0.05	1.130	<=0.05	0.093	0.149	NONE	Y	Y
		1/(x+constant)	0.5	<.001	0.574	1.706	> 0.05	1.121	<=0.05	0.092	0.150	NONE	Y	Y
		1/(x+constant)	1	< 001	0.609	1.707	> 0.05	1.111	<=0.05	0.091	0.150	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.046	0.876	1.745	> 0.05	0.961	<=0.05	0.099	0.144	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.047	0.873	1.745	> 0.05	0.960	<=0.05	0.099	0.144	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.053	0.862	1.747	> 0.05	0.957	<=0.05	0.099	0.144	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.061	0.850	1.748	> 0.05	0.952	<=0.05	0.100	0.143	NONE	N	Y
		NONE	0	0.349	0.590	1.850	> 0.05	0.847	<=0.05	0.143	0.115	NONE	N	Y
		√(x+constant)	0.01	0.268	0.688	1.790	> 0.05	0.894	<=0.05	0.116	0.132	NONE	N	Y
		√(x+constant)	0.1	0.269	0.688	1.790	> 0.05	0.893	<=0.05	0.116	0.132	NONE	N	Y
		√(x+constant)	0.5	0.275	0.684	1.791	> 0.05	0.892	<=0.05	0.116	0.132	NONE	N	Y
		√(x+constant)	1	0.282	0.681	1.793	> 0.05	0.890	<=0.05	0.116	0.131	NONE	N	Y
		√√(x+constant)	0.01	0.133	0.770	1.765	> 0.05	0.925	<=0.05	0.106	0.139	NONE	N	Y
		√√(x+constant)	0.1	0.135	0.769	1.766	> 0.05	0.925	<=0.05	0.106	0.139	NONE	N	Y
		√√(x+constant)	0.5	0.143	0.762	1.767	> 0.05	0.922	<=0.05	0.106	0.138	NONE	N	Y
		√√(x+constant)	1	0.154	0.755	1.768	> 0.05	0.919	<=0.05	0.107	0.138	NONE	N	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
Strongylocentrotus purpuratus														
	count	1/(x+constant)	0.01	0.925	0.767	1 785	> 0.05	1.110	<=0.05	0.400	0 040	NONE	N	Y
		1/(x+constant)	0.1	0.259	0.346	1.798	> 0 05	1 043	<=0 05	0 350	0.049	NONE	N	Y
		1/(x+constant)	0.5	0.001	0 026	1.765	> 0.05	0.926	<=0.05	0.308	0 058	NONE	Y	N
		1/(x+constant)	1	< 001	0 005	1.771	> 0.05	0.874	<=0.05	0 303	0 059	NONE	Y	N
		log_{10}(x+constant)	0 01	0 619	0.228	1 748	> 0.05	0.768	<=0.05	0 332	0.052	NONE	N	Y
		log_{10}(x+constant)	0 1	0 009	0.035	1.750	> 0.05	0.749	<=0 05	0.307	0 058	NONE	Y	N
		log_{10}(x+constant)	0 5	<.001	0.003	1.776	> 0 05	0 873	<=0.05	0 302	0 059	NONE	Y	N
		log_{10}(x+constant)	1	< 001	0.001	1.795	> 0.05	0.941	<=0 05	0 304	0.059	NONE	Y	N
		NONE	0	<.001	<.001	1.840	> 0 05	0.716	<=0.05	0.309	0.057	NONE	Y	N
		√(x+constant)	0 01	< 001	0.012	1.737	> 0 05	0.873	<=0 05	0 298	0 060	NONE	Y	N
		√(x+constant)	0.1	< 001	0.003	1.767	> 0 05	0 896	<=0 05	0 300	0.060	NONE	Y	N
		√(x+constant)	0.5	<.001	0 001	1 801	> 0 05	0.912	<=0 05	0.304	0.059	NONE	Y	N
		√(x+constant)	1	<.001	<.001	1 815	> 0 05	0 915	<=0 05	0.306	0.058	NONE	Y	N
		√√(x+constant)	0 01	< 001	0 073	1.732	> 0 05	0.751	<=0 05	0 310	0 057	NONE	Y	Y
		√√(x+constant)	0.1	< 001	0 011	1.752	> 0.05	0.852	<=0.05	0.301	0.059	NONE	Y	N
		√√(x+constant)	0 5	< 001	0.001	1.787	> 0.05	0.944	<=0.05	0 303	0.059	NONE	Y	N
		√√(x+constant)	1	<.001	0.001	1.804	> 0 05	0.973	<=0.05	0.304	0 058	NONE	Y	N
Tegula brunnea														
	count	1/(x+constant)	0 01	< 001	0.486	1 402	> 0 05	1.596	> 0 05	0.066	0.175	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.490	1 400	> 0 05	1 557	> 0.05	0 066	0.176	NONE	Y	Y
		1/(x+constant)	0 5	< 001	0 506	1.389	> 0 05	1 419	> 0 05	0 065	0.177	NONE	Y	Y
		1/(x+constant)	1	< 001	0 525	1.377	> 0 05	1 306	> 0 05	0 063	0 179	NONE	Y	Y
		log_{10}(x+constant)	0.01	< 001	0 588	1.139	<=0.05	1 066	<=0.05	0.034	0 225	NONE	Y	Y
		log_{10}(x+constant)	0.1	<.001	0 589	1.138	<=0 05	0 902	<=0 05	0 034	0 225	NONE	Y	Y
		log_{10}(x+constant)	0.5	<.001	0.591	1.136	<=0 05	0.786	<=0.05	0 034	0 226	NONE	Y	Y
		log_{10}(x+constant)	1	<.001	0.594	1.133	<=0 05	0.751	<=0.05	0 034	0.226	NONE	Y	Y
		NONE	0	0.717	0 321	1 090	<=0.05	0 647	<=0 05	0 081	0.159	NONE	N	Y
		√(x+constant)	0 01	0 372	0 685	1 056	<=0 05	0 585	<=0 05	0 036	0 223	NONE	N	Y
		√(x+constant)	0 1	0.368	0.686	1 056	<=0 05	0 593	<=0 05	0.036	0.223	NONE	N	Y
		√(x+constant)	0.5	0.389	0.689	1 055	<=0.05	0 605	<=0.05	0.036	0.223	NONE	N	Y
		√(x+constant)	1	0.413	0.692	1.054	<=0 05	0 610	<=0.05	0 036	0.223	NONE	N	Y
		√√(x+constant)	0 01	< 001	0.587	1 093	<=0.05	0.662	<=0 05	0.033	0.229	NONE	Y	Y
		√√(x+constant)	0 1	0 003	0 588	1 092	<=0 05	0 643	<=0 05	0.033	0.229	NONE	Y	Y
		√√(x+constant)	0 5	0 017	0.590	1.091	<=0 05	0.640	<=0 05	0 033	0 229	NONE	Y	Y
		√√(x+constant)	1	0.032	0 592	1 089	<=0 05	0 642	<=0 05	0 033	0.229	NONE	Y	Y

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Subtidal arc quadrants assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f. used in Analysis	Passed Tests for BACI Analysis
Tonicella lineata														
	count	1/(x+constant)	0 01	<.001	< 001	1.871	> 0.05	1 953	> 0.05	0.512	0 024	NONE	Y	N
		1/(x+constant)	0.1	<.001	< 001	1.883	> 0 05	1.911	> 0.05	0 508	0.025	NONE	Y	N
		1/(x+constant)	0.5	<.001	0 002	2 036	> 0 05	1 676	> 0 05	0 555	0.020	NONE	Y	N
		1/(x+constant)	1	<.001	0 034	2.129	> 0 05	1 366	> 0 05	0 623	0.014	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	< 001	0.109	1.974	> 0 05	1 491	> 0 05	0 636	0 013	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	<.001	0 299	1 898	> 0 05	1.186	> 0 05	0.718	0 007	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0 042	0.331	1.796	> 0 05	0.919	<=0 05	0.792	0 004	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0 044	0 299	1.730	> 0 05	0.860	<=0 05	0.825	0.003	NONE	Y	Y
		NONE	0	< 001	0 065	1.330	> 0 05	0.993	<=0.05	0.939	<.001	NONE	Y	Y
		√(x+constant)	0.01	0 002	0.246	1.517	> 0.05	0 899	<=0 05	0.916	0 001	NONE	Y	Y
		√(x+constant)	0 1	< 001	0.217	1.505	> 0 05	0 887	<=0.05	0.924	0.001	NONE	Y	Y
		√(x+constant)	0 5	< 001	0.178	1 483	> 0 05	0 885	<=0 05	0 938	<.001	NONE	Y	Y
		√(x+constant)	1	< 001	0.157	1.466	> 0 05	0.891	<=0.05	0 947	<.001	NONE	Y	Y
		√√(x+constant)	0 01	0 014	0.403	1.724	> 0 05	1 069	<=0 05	0.799	0 004	NONE	Y	Y
		√√(x+constant)	0.1	0 062	0.354	1.681	> 0.05	0.943	<=0.05	0.832	0.003	NONE	N	Y
		√√(x+constant)	0 5	0.016	0.275	1 622	> 0 05	0.869	<=0 05	0 868	0 002	NONE	Y	Y
		√√(x+constant)	1	0 003	0 233	1.583	> 0 05	0.861	<=0 05	0.886	0 001	NONE	Y	Y

1 Serially correlated data requiring use of autoregressive error structure in analysis

2 Heterogeneous variances requiring Satterthwaite adjusted degrees of freedom in analysis

Subtidal fixed quadrats assumption testing for BACI analysis

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Acmaea mitra														
	count	1/(x+constant)	0 01	0 007	<.001	1.518	> 0 05	2.734	> 0 05	0 110	0.135	NONE	Y	N
		1/(x+constant)	0.1	0 015	0 001	1 219	<=0 05	2.718	> 0 05	0 024	0 254	NONE	Y	N
		1/(x+constant)	0 5	0.280	0 189	0 878	<=0.05	2 582	> 0 05	0 007	0.343	NONE	N	Y
		1/(x+constant)	1	0.434	0.645	0 905	<=0 05	2 548	> 0 05	0.006	0 347	NONE	N	Y
		$\log_{10}$(x+constant)	0 01	0.054	0 013	0 949	<=0 05	2.753	> 0 05	0.008	0 329	NONE	N	N
		$\log_{10}$(x+constant)	0.1	0.314	0 305	0.905	<=0 05	2 645	> 0 05	0.005	0 358	NONE	N	Y
		$\log_{10}$(x+constant)	0 5	0.510	0.702	0 987	<=0.05	2.554	> 0.05	0.005	0 360	NONE	N	Y
		$\log_{10}$(x+constant)	1	0 468	0.295	1.045	<=0 05	2.518	> 0 05	0.005	0.359	NONE	N	Y
		NONE	0	0.118	<.001	1.253	<=0.05	2 406	> 0.05	0 004	0 373	NONE	N	N
		√(x+constant)	0 01	0.487	0.543	1.015	<=0 05	2 607	> 0 05	0.004	0.372	NONE	N	Y
		√(x+constant)	0.1	0.445	0 224	1.057	<=0 05	2.555	> 0 05	0 004	0.371	NONE	N	Y
		√(x+constant)	0.5	0.321	0 045	1.118	<=0.05	2.498	> 0 05	0.005	0.368	NONE	N	N
		√(x+constant)	1	0.257	0 014	1.151	<=0.05	2.472	> 0.05	0.005	0.367	NONE	N	N
		√√(x+constant)	0 01	0.306	0.267	0.918	<=0 05	2.696	> 0 05	0 005	0 362	NONE	N	Y
		√√(x+constant)	0.1	0.468	0 974	0 964	<=0.05	2 608	> 0.05	0.005	0 366	NONE	N	Y
		√√(x+constant)	0.5	0.464	0.272	1 049	<=0 05	2.531	> 0.05	0 005	0 364	NONE	N	Y
		√√(x+constant)	1	0 361	0 094	1.097	<=0 05	2.498	> 0 05	0.005	0.363	NONE	N	Y
Alia spp.														
	count	1/(x+constant)	0 01	<.001	< 001	1.172	<=0 05	2.394	> 0 05	0.328	0.053	NONE	Y	N
		1/(x+constant)	0 1	< 001	< 001	0 737	<=0.05	2.380	> 0 05	0.100	0.143	NONE	Y	N
		1/(x+constant)	0 5	0 001	0 001	0.571	<=0 05	2.326	> 0.05	0.026	0 246	NONE	Y	N
		1/(x+constant)	1	0 005	0 003	0 617	<=0 05	2.296	> 0 05	0.019	0.271	NONE	Y	N
		$\log_{10}$(x+constant)	0 01	0.001	0.001	0.547	<=0.05	2.372	> 0.05	0.042	0.210	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0 025	0 005	0 657	<=0.05	2.337	> 0 05	0.036	0.222	NONE	Y	N
		$\log_{10}$(x+constant)	0 5	0.008	0 014	0 829	<=0 05	2 290	> 0.05	0.047	0 202	NONE	Y	N
		$\log_{10}$(x+constant)	1	0.001	0 031	0.934	<=0.05	2.273	> 0 05	0.066	0.176	NONE	Y	N
		NONE	0	<.001	0.113	1.316	> 0 05	2.256	> 0 05	0.989	<.001	NONE	Y	Y
		√(x+constant)	0 01	0 026	0.179	0.994	<=0 05	2 324	> 0 05	0.169	0.102	NONE	Y	Y
		√(x+constant)	0.1	0 003	0.220	1.043	<=0 05	2.298	> 0 05	0.186	0.095	NONE	Y	Y
		√(x+constant)	0.5	<.001	0 356	1.120	<=0.05	2.272	> 0 05	0.240	0 076	NONE	Y	Y
		√(x+constant)	1	< 001	0 502	1.165	<=0.05	2 264	> 0.05	0.292	0.061	NONE	Y	Y
		√√(x+constant)	0.01	0.122	0.016	0.729	<=0.05	2.353	> 0 05	0 062	0.181	NONE	N	N
		√√(x+constant)	0.1	0 059	0 026	0 835	<=0 05	2.319	> 0 05	0 069	0.172	NONE	N	N
		√√(x+constant)	0 5	0.002	0 064	0 974	<=0 05	2 281	> 0.05	0.099	0.144	NONE	Y	Y
		√√(x+constant)	1	< 001	0.123	1.053	<=0 05	2.268	> 0 05	0.136	0.119	NONE	Y	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Balanophyllia elegans														
	count	1/(x+constant)	0.01	<.001	0.054	1.610	>0.05	1.076	<=0.05	0.033	0.228	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0.151	1.396	>0.05	1.067	<=0.05	0.012	0.304	NONE	Y	Y
		1/(x+constant)	0.5	<.001	0.292	1.309	>0.05	1.330	>0.05	0.011	0.307	NONE	Y	Y
		1/(x+constant)	1	<.001	0.042	1.490	>0.05	2.106	>0.05	0.039	0.215	NONE	Y	N
		log_{10}(x+constant)	0.01	<.001	0.911	2.122	>0.05	2.170	>0.05	0.721	0.007	NONE	Y	Y
		log_{10}(x+constant)	0.1	<.001	0.444	1.817	>0.05	2.180	>0.05	0.083	0.157	NONE	Y	Y
		log_{10}(x+constant)	0.5	0.059	0.061	1.118	<=0.05	2.087	>0.05	<.001	0.506	NONE	N	N
		log_{10}(x+constant)	1	0.109	0.006	0.915	<=0.05	2.056	>0.05	<.001	0.605	NONE	N	N
		NONE	0	0.206	<.001	0.704	<=0.05	1.911	>0.05	<.001	0.722	NONE	N	N
		√(x+constant)	0.01	0.914	<.001	0.700	<=0.05	2.006	>0.05	<.001	0.719	NONE	N	N
		√(x+constant)	0.1	0.911	<.001	0.688	<=0.05	1.995	>0.05	<.001	0.721	NONE	N	N
		√(x+constant)	0.5	0.893	<.001	0.677	<=0.05	1.983	>0.05	<.001	0.724	NONE	N	N
		√(x+constant)	1	0.889	<.001	0.673	<=0.05	1.978	>0.05	<.001	0.725	NONE	N	N
		√√(x+constant)	0.01	0.175	0.024	1.016	<=0.05	2.112	>0.05	<.001	0.596	NONE	N	N
		√√(x+constant)	0.1	0.575	0.007	0.844	<=0.05	2.066	>0.05	<.001	0.654	NONE	N	N
		√√(x+constant)	0.5	0.556	<.001	0.746	<=0.05	2.028	>0.05	<.001	0.691	NONE	N	N
		√√(x+constant)	1	0.646	<.001	0.713	<=0.05	2.014	>0.05	<.001	0.703	NONE	N	N
***Balanus/Tetraclita* spp.**														
	count	1/(x+constant)	0.01	0.667	0.314	2.124	>0.05	2.123	>0.05	0.289	0.062	NONE	N	Y
		1/(x+constant)	0.1	0.842	0.183	1.970	>0.05	2.235	>0.05	0.223	0.081	NONE	N	Y
		1/(x+constant)	0.5	0.859	0.139	1.838	>0.05	2.509	>0.05	0.179	0.098	NONE	N	Y
		1/(x+constant)	1	0.600	0.187	1.798	>0.05	2.612	>0.05	0.180	0.097	NONE	N	Y
		log_{10}(x+constant)	0.01	0.813	0.152	1.904	>0.05	2.775	>0.05	0.211	0.086	NONE	N	Y
		log_{10}(x+constant)	0.1	0.496	0.187	1.843	>0.05	2.654	>0.05	0.214	0.084	NONE	N	Y
		log_{10}(x+constant)	0.5	0.353	0.352	1.854	>0.05	2.486	>0.05	0.254	0.072	NONE	N	Y
		log_{10}(x+constant)	1	0.360	0.485	1.886	>0.05	2.406	>0.05	0.290	0.062	NONE	N	Y
		NONE	0	0.416	0.907	2.123	>0.05	2.155	>0.05	0.623	0.014	NONE	N	Y
		√(x+constant)	0.01	0.435	0.434	1.936	>0.05	2.220	>0.05	0.345	0.050	NONE	N	Y
		√(x+constant)	0.1	0.424	0.548	1.953	>0.05	2.208	>0.05	0.367	0.045	NONE	N	Y
		√(x+constant)	0.5	0.414	0.712	1.987	>0.05	2.193	>0.05	0.408	0.038	NONE	N	Y
		√(x+constant)	1	0.413	0.796	2.009	>0.05	2.186	>0.05	0.437	0.034	NONE	N	Y
		√√(x+constant)	0.01	0.475	0.210	1.871	>0.05	2.442	>0.05	0.246	0.074	NONE	N	Y
		√√(x+constant)	0.1	0.428	0.311	1.874	>0.05	2.363	>0.05	0.270	0.067	NONE	N	Y
		√√(x+constant)	0.5	0.392	0.511	1.912	>0.05	2.289	>0.05	0.319	0.055	NONE	N	Y
		√√(x+constant)	1	0.391	0.632	1.945	>0.05	2.257	>0.05	0.355	0.048	NONE	N	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Bryozoa, unid. (encrusting)														
	cover	arcsin	0	0.808	0.287	1.919	> 0.05	1.618	> 0.05	0.213	0.085	NONE	N	Y
		NONE	0	0.939	0.296	2.217	> 0.05	1.479	> 0.05	0.849	0.002	NONE	N	Y
		√(x+constant)	0.01	0.732	0.302	1.966	> 0.05	1.578	> 0.05	0.248	0.074	NONE	N	Y
		√(x+constant)	0.1	0.589	0.315	2.050	> 0.05	1.519	> 0.05	0.343	0.050	NONE	N	Y
		√(x+constant)	0.5	0.634	0.310	2.130	> 0.05	1.476	> 0.05	0.503	0.025	NONE	N	Y
		√(x+constant)	1	0.715	0.302	2.159	> 0.05	1.465	> 0.05	0.593	0.016	NONE	N	Y
Chaetopteridae														
	count	1/(x+constant)	0.01	0.002	0.969	1.991	> 0.05	2.573	> 0.05	0.119	0.129	NONE	Y	Y
		1/(x+constant)	0.1	0.010	0.397	2.339	> 0.05	2.667	> 0.05	0.306	0.058	NONE	Y	Y
		1/(x+constant)	0.5	0.302	0.026	2.403	> 0.05	2.762	> 0.05	0.784	0.004	NONE	N	N
		1/(x+constant)	1	0.764	0.007	2.270	> 0.05	2.742	> 0.05	0.992	< 0.01	NONE	N	N
		$\log_{10}$(x+constant)	0.01	0.087	0.024	2.312	> 0.05	2.684	> 0.05	0.541	0.021	NONE	N	N
		$\log_{10}$(x+constant)	0.1	0.487	0.002	2.286	> 0.05	2.718	> 0.05	0.891	0.001	NONE	N	N
		$\log_{10}$(x+constant)	0.5	0.534	0.001	2.166	> 0.05	2.695	> 0.05	0.853	0.002	NONE	N	N
		$\log_{10}$(x+constant)	1	0.175	0.001	2.119	> 0.05	2.668	> 0.05	0.776	0.005	NONE	N	N
		NONE	0	< 0.01	<.001	2.269	> 0.05	2.575	> 0.05	0.699	0.008	NONE	Y	N
		√(x+constant)	0.01	0.004	<.001	2.195	> 0.05	2.665	> 0.05	0.863	0.002	NONE	Y	N
		√(x+constant)	0.1	0.001	< 0.01	2.176	> 0.05	2.659	> 0.05	0.789	0.004	NONE	Y	N
		√(x+constant)	0.5	<.001	<.001	2.157	> 0.05	2.638	> 0.05	0.725	0.007	NONE	Y	N
		√(x+constant)	1	< 0.01	< 0.01	2.157	> 0.05	2.625	> 0.05	0.703	0.008	NONE	Y	N
		√√(x+constant)	0.01	0.266	< 0.01	2.258	> 0.05	2.691	> 0.05	0.872	0.001	NONE	N	N
		√√(x+constant)	0.1	0.263	< 0.01	2.208	> 0.05	2.695	> 0.05	0.925	0.001	NONE	N	N
		√√(x+constant)	0.5	0.036	< 0.01	2.143	> 0.05	2.667	> 0.05	0.779	0.004	NONE	Y	N
		√√(x+constant)	1	0.003	<.001	2.125	> 0.05	2.647	> 0.05	0.733	0.007	NONE	Y	N
***Dendropoma* spp.**														
	count	1/(x+constant)	0.01	0.009	0.305	1.832	> 0.05	1.101	<= 0.05	0.199	0.090	NONE	Y	Y
		1/(x+constant)	0.1	0.004	0.312	1.803	> 0.05	1.179	<= 0.05	0.189	0.094	NONE	Y	Y
		1/(x+constant)	0.5	<.001	0.535	1.755	> 0.05	1.437	> 0.05	0.148	0.113	NONE	Y	Y
		1/(x+constant)	1	< 0.01	0.999	1.743	> 0.05	1.601	> 0.05	0.117	0.131	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.001	0.901	1.792	> 0.05	1.334	> 0.05	0.071	0.170	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.001	0.361	1.780	> 0.05	1.522	> 0.05	0.041	0.213	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	< 0.01	0.021	1.725	> 0.05	1.695	> 0.05	0.025	0.249	NONE	Y	N
		$\log_{10}$(x+constant)	1	<.001	0.004	1.654	> 0.05	1.749	> 0.05	0.024	0.253	NONE	Y	N
		NONE	0	<.001	0.680	1.091	<= 0.05	1.738	> 0.05	0.194	0.092	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.307	1.087	<= 0.05	1.690	> 0.05	0.075	0.165	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.324	1.083	<= 0.05	1.723	> 0.05	0.083	0.158	NONE	Y	Y
		√(x+constant)	0.5	< 0.01	0.357	1.074	<= 0.05	1.756	> 0.05	0.095	0.147	NONE	Y	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
***Dendropoma* spp. (continued)**														
	count	√(x+constant)	1	< 001	0 383	1.068	<=0.05	1.768	> 0.05	0.104	0.140	NONE	Y	Y
		√√(x+constant)	0.01	<.001	0.115	1.490	> 0.05	1.535	> 0.05	0 019	0 268	NONE	Y	Y
		√√(x+constant)	0.1	<.001	0.052	1.408	> 0.05	1.646	> 0 05	0.022	0.257	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.034	1.303	> 0.05	1.737	> 0.05	0.033	0.229	NONE	Y	N
		√√(x+constant)	1	<.001	0.035	1.245	<=0.05	1.765	> 0 05	0 043	0.209	NONE	Y	N
***Didemnum/Trididemnum* spp.**														
	cover	arcsin	0	0.335	0.571	1.540	> 0 05	1.272	> 0.05	0.506	0.025	NONE	N	Y
		NONE	0	0.065	0 017	1.806	> 0 05	1 253	> 0 05	0.755	0.006	NONE	N	N
		√(x+constant)	0.01	0.478	0.562	1 503	> 0 05	1.235	> 0 05	0.524	0.023	NONE	N	Y
		√(x+constant)	0.1	0.615	0.688	1 513	> 0 05	1.188	> 0 05	0 630	0 013	NONE	N	Y
		√(x+constant)	0.5	0.628	0.863	1 611	> 0.05	1.173	<=0.05	0.849	0.002	NONE	N	Y
		√(x+constant)	1	0 539	0 554	1 670	> 0 05	1.184	> 0 05	0.964	<.001	NONE	N	Y
Homolopoma luridum/Lirularia succincta														
	count	1/(x+constant)	0 01	< 001	<.001	1.278	<=0 05	1.079	<=0.05	0.014	0.291	NONE	Y	N
		1/(x+constant)	0.1	< 001	<.001	0.950	<=0.05	1.105	<=0.05	0.002	0.417	NONE	Y	N
		1/(x+constant)	0.5	<.001	< 001	0 840	<=0.05	1.369	> 0 05	<.001	0.557	NONE	Y	N
		1/(x+constant)	1	< 001	0.002	0.850	<=0 05	1.702	> 0 05	<.001	0 593	NONE	Y	N
		log_{10}(x+constant)	0.01	<.001	<.001	0.875	<=0 05	1.516	> 0.05	0.001	0.497	NONE	Y	N
		log_{10}(x+constant)	0.1	0 001	0 001	0.843	<=0.05	1.794	> 0.05	<.001	0.565	NONE	Y	N
		log_{10}(x+constant)	0.5	0.040	0.012	0.882	<=0.05	1.928	> 0.05	<.001	0.596	NONE	Y	N
		log_{10}(x+constant)	1	0.296	0 031	0.911	<=0.05	1.950	> 0.05	<.001	0.596	NONE	N	N
		NONE	0	0.787	0.588	1 088	<=0.05	2.020	> 0.05	<.001	0.522	NONE	N	N
		√(x+constant)	0.01	0 599	0 025	0 891	<=0 05	1 966	> 0 05	<.001	0.578	NONE	N	N
		√(x+constant)	0.1	0.837	0.049	0.917	<=0.05	1.975	> 0.05	< 001	0.583	NONE	N	N
		√(x+constant)	0.5	0.974	0.107	0 957	<=0 05	1.982	> 0 05	<.001	0.579	NONE	N	N
		√(x+constant)	1	0.990	0.158	0.980	<=0.05	1.986	> 0.05	< 001	0.573	NONE	N	N
		√√(x+constant)	0 01	0.006	0.002	0 848	<=0.05	1.857	> 0.05	<.001	0.555	NONE	Y	N
		√√(x+constant)	0.1	0 056	0 008	0 868	<=0.05	1.927	> 0.05	<.001	0.583	NONE	N	N
		√√(x+constant)	0 5	0.512	0 036	0 913	<=0.05	1.960	> 0 05	< 001	0 592	NONE	N	N
		√√(x+constant)	1	0.861	0 071	0.941	<=0 05	1.969	> 0.05	< 001	0 587	NONE	N	N
Hymenamphiastra cyanocrypta														
	cover	arcsin	0	0.123		1.035	<=0.05	2.148	> 0.05	0.162	0.106	NONE	N	N
		NONE	0	<.001		1.074	<=0.05	1.648	> 0.05	0.294	0.061	NONE	Y	N
		√(x+constant)	0 01	0 017		1 025	<=0 05	2.104	> 0 05	0.178	0.099	NONE	Y	N
		√(x+constant)	0 1	< 001		1.022	<=0.05	2.012	> 0.05	0.211	0 085	NONE	Y	N
		√(x+constant)	0 5	<.001		1.038	<=0 05	1.885	> 0 05	0.252	0 072	NONE	Y	N
		√(x+constant)	1	<.001		1 050	<=0.05	1.821	> 0 05	0 268	0 068	NONE	Y	N

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance Structure used in Analysis	Adjusted d.f. used in Analysis	Passed Tests for BACI Analysis
Ophiothrix spp.														
	count	1/(x+constant)	0.01	0.068	0.656	2.468	> 0.05	2.077	> 0.05	0.856	0.002	NONE	N	Y
		1/(x+constant)	0.1	0.277	0.587	2.356	> 0.05	1.799	> 0.05	0.593	0.016	NONE	N	Y
		1/(x+constant)	0.5	0.294	0.588	2.224	> 0.05	1.419	> 0.05	0.363	0.046	NONE	N	Y
		1/(x+constant)	1	0.065	0.701	2.224	> 0.05	1.404	> 0.05	0.316	0.056	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.322	0.638	2.371	> 0.05	1.775	> 0.05	0.570	0.018	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.237	0.646	2.269	> 0.05	1.546	> 0.05	0.388	0.042	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	<.001	0.810	2.244	> 0.05	1.618	> 0.05	0.304	0.059	NONE	Y	Y
		$\log_{10}$(x+constant)	1	< 001	0.943	2.256	> 0.05	1.783	> 0.05	0.289	0.062	NONE	Y	Y
		NONE	0	<.001	0.694	2.293	> 0.05	2.441	> 0.05	0.278	0.065	NONE	Y	Y
		√(x+constant)	0.01	< 001	0.787	2.296	> 0.05	1.783	> 0.05	0.360	0.047	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.864	2.266	> 0.05	1.868	> 0.05	0.309	0.057	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.973	2.268	> 0.05	2.053	> 0.05	0.285	0.063	NONE	Y	Y
		√(x+constant)	1	<.001	0.887	2.275	> 0.05	2.154	> 0.05	0.281	0.064	NONE	Y	Y
		√√(x+constant)	0.01	0.294	0.677	2.328	> 0.05	1.672	> 0.05	0.456	0.031	NONE	N	Y
		√√(x+constant)	0.1	0.015	0.728	2.262	> 0.05	1.619	> 0.05	0.344	0.050	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.909	2.255	> 0.05	1.811	> 0.05	0.293	0.061	NONE	Y	Y
		√√(x+constant)	1	< 001	0.976	2.265	> 0.05	1.965	> 0.05	0.284	0.063	NONE	Y	Y
Pagurus spp.														
	count	1/(x+constant)	0.01	< 001	< 001	1.049	<=0.05	1.522	> 0.05	0.021	0.262	NONE	Y	N
		1/(x+constant)	0.1	<.001	< 001	1.053	<=0.05	1.448	> 0.05	0.018	0.273	NONE	Y	N
		1/(x+constant)	0.5	<.001	< 001	1.072	<=0.05	1.392	> 0.05	0.012	0.304	NONE	Y	N
		1/(x+constant)	1	<.001	0.001	1.093	<=0.05	1.390	> 0.05	0.009	0.321	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	<.001	0.085	1.171	<=0.05	1.359	> 0.05	0.010	0.317	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	< 001	0.096	1.175	<=0.05	1.316	> 0.05	0.010	0.318	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.032	0.139	1.187	<=0.05	1.294	> 0.05	0.010	0.317	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.079	0.187	1.199	<=0.05	1.277	> 0.05	0.010	0.315	NONE	N	Y
		NONE	0	< 001	0.953	1.374	> 0.05	1.252	> 0.05	0.025	0.248	NONE	Y	Y
		√(x+constant)	0.01	0.031	0.511	1.260	<=0.05	1.238	> 0.05	0.014	0.291	NONE	Y	Y
		√(x+constant)	0.1	0.021	0.520	1.262	<=0.05	1.240	> 0.05	0.014	0.290	NONE	Y	Y
		√(x+constant)	0.5	0.010	0.554	1.267	<=0.05	1.240	> 0.05	0.015	0.289	NONE	Y	Y
		√(x+constant)	1	0.005	0.590	1.273	<=0.05	1.238	> 0.05	0.015	0.286	NONE	Y	Y
		√√(x+constant)	0.01	0.016	0.256	1.213	<=0.05	1.281	> 0.05	0.011	0.307	NONE	Y	Y
		√√(x+constant)	0.1	0.059	0.268	1.216	<=0.05	1.271	> 0.05	0.011	0.307	NONE	N	Y
		√√(x+constant)	0.5	0.073	0.315	1.225	<=0.05	1.261	> 0.05	0.012	0.305	NONE	N	Y
		√√(x+constant)	1	0.059	0.364	1.233	<=0.05	1.252	> 0.05	0.012	0.302	NONE	N	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
Pelecypoda unid. boring														
	count	1/(x+constant)	0.01	<.001	<.001	2.162	> 0 05	2.099	> 0 05	0 635	0.013	NONE	Y	N
		1/(x+constant)	0.1	<.001	0.002	1.896	> 0 05	2.113	> 0.05	0.908	0 001	NONE	Y	N
		1/(x+constant)	0 5	0.326	0.195	1.582	> 0.05	2.172	> 0.05	0.837	0.002	NONE	N	Y
		1/(x+constant)	1	0.848	0.414	1.504	> 0.05	2.236	> 0.05	0.845	0.002	NONE	N	Y
		log_{10}(x+constant)	0.01	0.033	0.237	1.451	> 0 05	2 336	> 0.05	0.787	0.004	NONE	Y	Y
		log_{10}(x+constant)	0.1	0.702	0.649	1 398	> 0 05	2.400	> 0.05	0.699	0 009	NONE	N	Y
		log_{10}(x+constant)	0.5	0 791	0.986	1.362	> 0.05	2.058	> 0.05	0.650	0 012	NONE	N	Y
		log_{10}(x+constant)	1	0.585	0.803	1.339	> 0.05	1.792	> 0 05	0 603	0.015	NONE	N	Y
		NONE	0	<.001	<.001	1 443	> 0.05	1.412	> 0.05	0.153	0.110	NONE	Y	N
		√(x+constant)	0 01	0 002	0.119	1.305	> 0.05	1.868	> 0.05	0.407	0.038	NONE	Y	Y
		√(x+constant)	0.1	0 001	0 086	1.315	> 0 05	1.692	> 0.05	0.393	0 041	NONE	Y	Y
		√(x+constant)	0 5	<.001	0 046	1.323	> 0.05	1.533	> 0.05	0.360	0.047	NONE	Y	N
		√(x+constant)	1	<.001	0 026	1.324	> 0.05	1.477	> 0.05	0.332	0 052	NONE	Y	N
		√√(x+constant)	0 01	0.443	0.969	1.329	> 0.05	2.461	> 0.05	0.604	0.015	NONE	N	Y
		√√(x+constant)	0.1	0.433	0.706	1 331	> 0 05	2.171	> 0.05	0.567	0 019	NONE	N	Y
		√√(x+constant)	0.5	0.189	0.453	1.325	> 0.05	1.748	> 0.05	0.517	0.024	NONE	N	Y
		√√(x+constant)	1	0.048	0.320	1.315	> 0 05	1.595	> 0.05	0.473	0 029	NONE	Y	Y
Phragmatopoma californica														
	count	1/(x+constant)	0 01	<.001	< 001	2.474	> 0 05	1.208	> 0.05	0.255	0 071	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	2.437	> 0.05	1.544	> 0 05	0.219	0.083	NONE	Y	N
		1/(x+constant)	0.5	<.001	0.001	2 414	> 0 05	2.153	> 0 05	0.318	0.055	NONE	Y	N
		1/(x+constant)	1	<.001	0.084	2 430	> 0 05	2.348	> 0.05	0 561	0.019	NONE	Y	Y
		log_{10}(x+constant)	0 01	0.001	0.026	2.594	> 0.05	2 566	> 0 05	0.568	0.018	NONE	Y	N
		log_{10}(x+constant)	0.1	0 027	0.909	2.478	> 0.05	2.683	> 0 05	0.882	0 001	NONE	Y	Y
		log_{10}(x+constant)	0.5	0.003	0.307	2 346	> 0 05	2.779	> 0.05	0.796	0.004	NONE	Y	Y
		log_{10}(x+constant)	1	0.001	0.176	2 298	> 0 05	2 835	> 0 05	0.688	0.009	NONE	Y	Y
		NONE	0	<.001	0 010	2 110	> 0 05	2.194	> 0.05	0.967	<.001	NONE	Y	N
		√(x+constant)	0.01	<.001	0 034	2 210	> 0 05	2 599	> 0.05	0 813	0 003	NONE	Y	N
		√(x+constant)	0 1	<.001	0 035	2.200	> 0.05	2.605	> 0.05	0.792	0 004	NONE	Y	N
		√(x+constant)	0.5	<.001	0 033	2.187	> 0.05	2 612	> 0 05	0.768	0.005	NONE	Y	N
		√(x+constant)	1	< 001	0 031	2.181	> 0.05	2.612	> 0.05	0.761	0 005	NONE	Y	N
		√√(x+constant)	0.01	0 044	0.233	2 372	> 0.05	2.715	> 0 05	0.952	<.001	NONE	Y	Y
		√√(x+constant)	0.1	0.013	0 131	2.304	> 0 05	2 749	> 0 05	0 833	0.003	NONE	Y	Y
		√√(x+constant)	0 5	0 006	0.083	2.251	> 0.05	2.791	> 0.05	0.728	0 007	NONE	Y	Y
		√√(x+constant)	1	0 005	0.066	2.232	> 0 05	2.813	> 0 05	0.694	0 009	NONE	Y	Y

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Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob.	Results of Tests for Serial Correlation: Operation Q-Value Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f. used in Analysis	Passed Tests for BACI Analysis
Pista spp.												
	count	1/(x+constant)	0.01	<.001	0.788	1.420 > 0 05	1.250 > 0 05	0 646	0 012	NONE	Y	Y
		1/(x+constant)	0 1	0.001	0.610	1.303 > 0.05	1.339 > 0.05	0.783	0.004	NONE	Y	Y
		1/(x+constant)	0 5	0.148	0.310	1.242 <=0 05	1.548 > 0 05	0.989	<.001	NONE	N	Y
		1/(x+constant)	1	0.162	0 214	1.265 <=0.05	1 623 > 0.05	0.925	0.001	NONE	N	Y
		log_{10}(x+constant)	0 01	0.029	0.539	1.265 <=0 05	1.568 > 0.05	0 814	0.003	NONE	Y	Y
		log_{10}(x+constant)	0.1	0.244	0.319	1 235 <=0 05	1.629 > 0 05	0.964	<.001	NONE	N	Y
		log_{10}(x+constant)	0.5	0.023	0 165	1.278 <=0 05	1.719 > 0.05	0.941	<.001	NONE	Y	Y
		log_{10}(x+constant)	1	0.001	0.117	1.306 > 0 05	1.775 > 0 05	0.934	< 001	NONE	Y	Y
		NONE	0	<.001	0 027	1.340 > 0 05	2.176 > 0.05	0 961	<.001	NONE	Y	N
		√(x+constant)	0 01	0.013	0.204	1.242 <=0 05	1.836 > 0 05	0.967	<.001	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.142	1.272 <=0.05	1.850 > 0.05	0.983	<.001	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.087	1.312 > 0.05	1.905 > 0 05	0.964	< 001	NONE	Y	Y
		√(x+constant)	1	< 001	0 067	1.328 > 0.05	1.949 > 0.05	0.971	<.001	NONE	Y	Y
		√√(x+constant)	0 01	0.365	0 371	1.232 <=0 05	1 697 > 0.05	0.898	0.001	NONE	N	Y
		√√(x+constant)	0.1	0 096	0.228	1.246 <=0 05	1.725 > 0.05	1.000	<.001	NONE	N	Y
		√√(x+constant)	0.5	0.001	0.125	1 295 <=0 05	1.797 > 0.05	0.947	<.001	NONE	Y	Y
		√√(x+constant)	1	<.001	0 091	1 318 > 0 05	1.851 > 0 05	0.949	<.001	NONE	Y	Y
Porifera unid. (encrusting)												
	cover	arcsin	0	0.114	0.493	1.790 > 0 05	2.674 > 0 05	0 998	< 001	NONE	N	Y
		NONE	0	0.517	0.047	1.910 > 0 05	2.888 > 0.05	0 455	0.031	NONE	N	N
		√(x+constant)	0 01	0.140	0.500	1.821 > 0 05	2.751 > 0.05	0.924	0.001	NONE	N	Y
		√(x+constant)	0.1	0.187	0 451	1.864 > 0 05	2 861 > 0 05	0.777	0 005	NONE	N	Y
		√(x+constant)	0.5	0.294	0 335	1.885 > 0.05	2 933 > 0 05	0.627	0.013	NONE	N	Y
		√(x+constant)	1	0.362	0 264	1.888 > 0.05	2.943 > 0 05	0.570	0.018	NONE	N	Y
Pugettia spp.												
	count	1/(x+constant)	0 01	0.152	0 054	0 927 <=0.05	1.918 > 0 05	0.188	0.094	NONE	N	Y
		1/(x+constant)	0.1	0.185	0 023	1.733 > 0.05	1.792 > 0 05	0.157	0 108	NONE	N	N
		1/(x+constant)	0 5	0 479	0.046	1.702 > 0 05	1.697 > 0.05	0 174	0 100	NONE	N	N
		1/(x+constant)	1	0 499	0 051	1.325 > 0 05	1.800 > 0 05	0.156	0.109	NONE	N	Y
		log_{10}(x+constant)	0.01	0.445	0 016	1.667 > 0.05	1.732 > 0.05	0 060	0 183	NONE	N	N
		log_{10}(x+constant)	0.1	0 629	0 030	1.382 > 0 05	1.740 > 0 05	0.105	0.139	NONE	N	N
		log_{10}(x+constant)	0.5	0 350	0.046	1.036 <=0 05	1.922 > 0.05	0.121	0.128	NONE	N	N
		log_{10}(x+constant)	1	0.150	0 056	0.924 <=0 05	2 032 > 0.05	0.116	0.131	NONE	N	Y
		NONE	0	0 003	0 216	0.763 <=0.05	2.279 > 0 05	0.101	0.142	NONE	Y	Y
		√(x+constant)	0 01	0 357	0.046	0.980 <=0 05	1.896 > 0 05	0.090	0.151	NONE	N	N
		√(x+constant)	0.1	0.166	0 057	0 910 <=0 05	1.989 > 0.05	0.103	0.141	NONE	N	Y
		√(x+constant)	0.5	0 047	0 077	0 836 <=0.05	2.112 > 0.05	0.107	0.138	NONE	Y	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob	Results of Tests for Serial Correlation: Operation Q-Value Prob.	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
***Pugettia* spp. (continued)**												
	count	√(x+constant)	1	0 025	0 092	0 808 <=0.05	2.166 > 0.05	0.106	0.139	NONE	Y	Y
		√√(x+constant)	0 01	0.704	0 025	1 312 > 0.05	1.746 > 0 05	0.071	0.170	NONE	N	N
		√√(x+constant)	0.1	0.487	0 038	1.101 <=0.05	1.840 > 0.05	0.105	0.139	NONE	N	N
		√√(x+constant)	0.5	0.159	0.055	0 920 <=0.05	2.015 > 0.05	0.113	0.134	NONE	N	Y
		√√(x+constant)	1	0 064	0.068	0.857 <=0 05	2.100 > 0.05	0 110	0.136	NONE	N	Y
Serpulidae unid.												
	count	1/(x+constant)	0.01	< 001	0.006	0 898 <=0 05	1.295 > 0 05	0.003	0.404	NONE	Y	N
		1/(x+constant)	0.1	0.018	0.020	1.139 <=0.05	1.292 > 0.05	0.042	0.211	NONE	Y	N
		1/(x+constant)	0.5	0 700	0.611	1.772 > 0.05	1.178 <=0.05	0.514	0.024	NONE	N	Y
		1/(x+constant)	1	0 266	0.011	1.674 > 0.05	1.102 <=0.05	0.073	0.168	NONE	N	N
		log_{10}(x+constant)	0.01	0.656	0.740	1.792 > 0.05	1.095 <=0.05	0.794	0.004	NONE	N	Y
		log_{10}(x+constant)	0.1	0.778	0.001	1.692 > 0 05	1.042 <=0.05	0.065	0.177	NONE	N	N
		log_{10}(x+constant)	0.5	0.342	< 001	1 392 > 0 05	0 967 <=0.05	0 005	0 369	NONE	N	N
		log_{10}(x+constant)	1	0.502	<.001	1 261 <=0.05	0.917 <=0.05	0 002	0 435	NONE	N	N
		NONE	0	0.455	< 001	1.125 <=0.05	0.751 <=0.05	0.001	0.474	NONE	N	N
		√(x+constant)	0 01	0.671	<.001	1.303 > 0 05	0.887 <=0.05	0 002	0 409	NONE	N	N
		√(x+constant)	0 1	0.672	<.001	1 236 <=0.05	0.875 <=0.05	0.001	0.442	NONE	N	N
		√(x+constant)	0 5	0.701	<.001	1.153 <=0.05	0.843 <=0.05	0.001	0.477	NONE	N	N
		√(x+constant)	1	0.699	< 001	1.116 <=0 05	0.822 <=0.05	0.001	0.490	NONE	N	N
		√√(x+constant)	0.01	0.855	<.001	1.632 > 0.05	0.983 <=0 05	0 036	0 223	NONE	N	N
		√√(x+constant)	0.1	0.521	<.001	1.441 > 0.05	0.958 <=0.05	0 007	0 343	NONE	N	N
		√√(x+constant)	0.5	0.584	<.001	1.252 <=0 05	0.904 <=0.05	0 001	0 438	NONE	N	N
		√√(x+constant)	1	0.674	<.001	1.173 <=0 05	0.868 <=0.05	0.001	0.472	NONE	N	N
Sipuncula unid.												
	count	1/(x+constant)	0 01	0.006	0.004	1 915 > 0 05	2.280 > 0.05	0 561	0.019	NONE	Y	N
		1/(x+constant)	0.1	0 025	0.009	1.651 > 0.05	2.704 > 0.05	0.500	0.026	NONE	Y	N
		1/(x+constant)	0.5	0.011	0.279	1.378 > 0.05	3 060 > 0.05	0.111	0.135	NONE	Y	Y
		1/(x+constant)	1	0.001	0.673	1 339 > 0.05	3.091 > 0.05	0.096	0.147	NONE	Y	Y
		log_{10}(x+constant)	0 01	0 045	0 241	1.529 > 0.05	2.774 > 0.05	0.377	0.044	NONE	Y	Y
		log_{10}(x+constant)	0.1	0.013	0.729	1 388 > 0.05	3.038 > 0 05	0.162	0 106	NONE	Y	Y
		log_{10}(x+constant)	0.5	<.001	0.713	1.363 > 0 05	3 056 > 0 05	0 139	0.117	NONE	Y	Y
		log_{10}(x+constant)	1	<.001	0.455	1.377 > 0.05	2.992 > 0.05	0 163	0.105	NONE	Y	Y
		NONE	0	<.001	0 010	1.512 > 0.05	2.664 > 0.05	0.430	0.035	NONE	Y	N
		√(x+constant)	0 01	<.001	0.357	1.407 > 0.05	3.044 > 0.05	0.224	0.081	NONE	Y	Y
		√(x+constant)	0 1	< 001	0.297	1.403 > 0.05	3.025 > 0.05	0 207	0.087	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.178	1.419 > 0.05	2.924 > 0.05	0.230	0.079	NONE	Y	Y
		√(x+constant)	1	< 001	0.120	1.433 > 0 05	2.860 > 0 05	0.258	0 071	NONE	Y	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob	Operation Q-Value Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f. used in Analysis	Passed Tests for BACI Analysis
Sipuncula unid. (continued)												
	count	√√(x+constant)	0 01	0 026	0.999	1.424 > 0.05	2.961 > 0 05	0.238	0 076	NONE	Y	Y
		√√(x+constant)	0.1	0 001	0.732	1.380 > 0 05	3.067 > 0.05	0.167	0.103	NONE	Y	Y
		√√(x+constant)	0 5	<.001	0 406	1.386 > 0 05	3 006 > 0 05	0.174	0.100	NONE	Y	Y
		√√(x+constant)	1	<.001	0 259	1.402 > 0 05	2.934 > 0 05	0.203	0 089	NONE	Y	Y
Spirorbidae												
	cover	arcsin	0	0 025	0 357	1.451 > 0.05	1 803 > 0 05	0.880	0 001	NONE	Y	Y
		NONE	0	0 004	0 553	1 668 > 0.05	2 053 > 0 05	0.827	0 003	NONE	Y	Y
		√(x+constant)	0.01	0.009	0 394	1.519 > 0.05	1.832 > 0.05	0.965	< 001	NONE	Y	Y
		√(x+constant)	0.1	0.003	0 456	1.612 > 0.05	1.899 > 0 05	0.925	0 001	NONE	Y	Y
		√(x+constant)	0.5	0 002	0.507	1.665 > 0.05	1.978 > 0 05	0.861	0.002	NONE	Y	Y
		√(x+constant)	1	0 002	0.521	1.673 > 0 05	2.007 > 0.05	0 847	0 002	NONE	Y	Y
Spp. Inverts												
		1/(x+constant)	0.01	< 001	0 091	1.748 > 0 05	1 002 <= 0 05	0 050	0.197	NONE	Y	Y
		1/(x+constant)	0.1	<.001	0 097	1.749 > 0.05	0 997 <= 0.05	0 050	0.198	NONE	Y	Y
		1/(x+constant)	0 5	< 001	0.126	1.752 > 0.05	0 980 <= 0.05	0.047	0.202	NONE	Y	Y
		1/(x+constant)	1	0 001	0.168	1.756 > 0 05	0.959 <= 0.05	0.044	0.206	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0 118	0.943	1.775 > 0 05	0.777 <= 0.05	0.036	0 222	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.122	0.932	1.776 > 0 05	0.775 <= 0.05	0.036	0.222	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.144	0.888	1.778 > 0 05	0.767 <= 0 05	0.036	0.222	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.171	0 838	1.780 > 0.05	0.758 <= 0.05	0.036	0 222	NONE	N	Y
		NONE	0	0 521	0.185	1.845 > 0 05	0 639 <= 0 05	0.050	0.197	NONE	N	Y
		√(x+constant)	0.01	0.388	0.424	1.804 > 0 05	0 692 <= 0 05	0 040	0 214	NONE	N	Y
		√(x+constant)	0.1	0.390	0.421	1.804 > 0.05	0.691 <= 0.05	0 040	0.214	NONE	N	Y
		√(x+constant)	0.5	0.399	0.409	1.806 > 0 05	0.689 <= 0.05	0.040	0 214	NONE	N	Y
		√(x+constant)	1	0.409	0.396	1.808 > 0.05	0 685 <= 0 05	0.040	0.213	NONE	N	Y
		√√(x+constant)	0 01	0.269	0 647	1.788 > 0.05	0.730 <= 0.05	0 037	0.220	NONE	N	Y
		√√(x+constant)	0.1	0.273	0.640	1.788 > 0 05	0.729 <= 0.05	0 037	0.220	NONE	N	Y
		√√(x+constant)	0.5	0.290	0 614	1.790 > 0 05	0.724 <= 0 05	0.037	0.219	NONE	N	Y
		√√(x+constant)	1	0.306	0.585	1.792 > 0.05	0.718 <= 0.05	0 037	0.219	NONE	N	Y
Strongylocentrotus purpuratus												
	count	1/(x+constant)	0 01	0 047	0 579	1 906 > 0 05	1.518 > 0.05	0 262	0 069	NONE	Y	Y
		1/(x+constant)	0.1	0.513	0.572	1.994 > 0 05	1.505 > 0 05	0.380	0 043	NONE	N	Y
		1/(x+constant)	0.5	0 799	0.476	2.079 > 0 05	1.530 > 0 05	0.625	0.014	NONE	N	Y
		1/(x+constant)	1	0 015	0.379	2 099 > 0 05	1.428 > 0 05	0.732	0.007	NONE	Y	Y
		$\log_{10}$(x+constant)	0 01	0.653	0.540	1.989 > 0 05	1.361 > 0 05	0.394	0 041	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0 027	0 467	2.061 > 0 05	1.299 > 0 05	0 568	0 018	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	< 001	0.327	2.104 > 0.05	1.146 <= 0 05	0.757	0 005	NONE	Y	Y

(continued)

Subtidal fixed quadrats assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
***Strongylocentrotus purpuratus* (continued)**														
	count	$\log_{10}$(x+constant)	1	<.001	0.261	2.113	>0.05	1.050	<=0.05	0.820	0.003	NONE	Y	Y
		NONE	0	<.001	0.137	2.125	>0.05	0.561	<=0.05	0.919	0.001	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.381	2.065	>0.05	0.926	<=0.05	0.604	0.015	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.314	2.097	>0.05	0.892	<=0.05	0.725	0.007	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.231	2.115	>0.05	0.834	<=0.05	0.834	0.002	NONE	Y	Y
		√(x+constant)	1	<.001	0.197	2.119	>0.05	0.803	<=0.05	0.868	0.002	NONE	Y	Y
		√√(x+constant)	0.01	<.001	0.482	2.026	>0.05	1.182	>0.05	0.482	0.028	NONE	Y	Y
		√√(x+constant)	0.1	<.001	0.399	2.080	>0.05	1.112	<=0.05	0.641	0.012	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.279	2.110	>0.05	0.992	<=0.05	0.795	0.004	NONE	Y	Y
		√√(x+constant)	1	<.001	0.229	2.116	>0.05	0.929	<=0.05	0.843	0.002	NONE	Y	Y
Tegula brunnea														
	count	1/(x+constant)	0.01	<.001	<.001	1.959	>0.05	1.651	>0.05	0.816	0.003	NONE	Y	N
		1/(x+constant)	0.1	<.001	0.002	2.032	>0.05	1.645	>0.05	0.717	0.007	NONE	Y	N
		1/(x+constant)	0.5	<.001	0.131	2.257	>0.05	1.567	>0.05	0.601	0.016	NONE	Y	Y
		1/(x+constant)	1	<.001	0.360	2.371	>0.05	1.497	>0.05	0.602	0.015	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	<.001	0.813	2.354	>0.05	1.519	>0.05	0.700	0.008	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	<.001	0.884	2.369	>0.05	1.481	>0.05	0.700	0.008	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	<.001	0.921	2.390	>0.05	1.578	>0.05	0.714	0.008	NONE	Y	Y
		$\log_{10}$(x+constant)	1	<.001	0.782	2.388	>0.05	1.676	>0.05	0.733	0.007	NONE	Y	Y
		NONE	0	0.167	0.129	2.088	>0.05	1.821	>0.05	0.939	<.001	NONE	N	Y
		√(x+constant)	0.01	<.001	0.484	2.295	>0.05	1.644	>0.05	0.803	0.004	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.468	2.294	>0.05	1.697	>0.05	0.806	0.003	NONE	Y	Y
		√(x+constant)	0.5	0.001	0.417	2.286	>0.05	1.765	>0.05	0.816	0.003	NONE	Y	Y
		√(x+constant)	1	0.004	0.374	2.272	>0.05	1.795	>0.05	0.827	0.003	NONE	Y	Y
		√√(x+constant)	0.01	<.001	0.797	2.348	>0.05	1.491	>0.05	0.746	0.006	NONE	Y	Y
		√√(x+constant)	0.1	<.001	0.760	2.352	>0.05	1.554	>0.05	0.748	0.006	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.648	2.352	>0.05	1.683	>0.05	0.762	0.005	NONE	Y	Y
		√√(x+constant)	1	<.001	0.562	2.340	>0.05	1.748	>0.05	0.778	0.005	NONE	Y	Y
Tunicates, colonial/social unid.														
	cover	arcsin	0	0.727	0.958	0.781	<=0.05	2.256	>0.05	0.917	0.001	NONE	N	Y
		NONE	0	0.175	0.846	0.743	<=0.05	2.007	>0.05	0.904	0.001	NONE	N	Y
		√(x+constant)	0.01	0.687	0.959	0.781	<=0.05	2.221	>0.05	0.916	0.001	NONE	N	Y
		√(x+constant)	0.1	0.555	0.951	0.771	<=0.05	2.157	>0.05	0.930	<.001	NONE	N	Y
		√(x+constant)	0.5	0.405	0.930	0.751	<=0.05	2.089	>0.05	0.970	<.001	NONE	N	Y
		√(x+constant)	1	0.345	0.915	0.742	<=0.05	2.061	>0.05	0.999	<.001	NONE	N	Y

1 Serially correlated data requiring use of autoregressive error structure in analysis.

2 Heterogeneous variances requiring Satterthwaite adjusted degrees of freedom in analysis.

Subtidal line contact assumption testing for BACI analysis

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Algal cover														
	cover	arcsin	0	0.025		FALSE		FALSE			1.000	NONE	Y	N
		NONE	0	0.808	0.027	1.012	<=0.05	1.525	>0.05	0.002	0.422	NONE	N	N
		√(x+constant)	0.01	0.156	0.001	1.029	<=0.05	1.672	>0.05	0.002	0.427	NONE	N	N
		√(x+constant)	0.1	0.157	0.001	1.029	<=0.05	1.672	>0.05	0.002	0.427	NONE	N	N
		√(x+constant)	0.5	0.159	0.001	1.029	<=0.05	1.672	>0.05	0.002	0.427	NONE	N	N
		√(x+constant)	1	0.161	0.002	1.029	<=0.05	1.671	>0.05	0.002	0.427	NONE	N	N
Algal diversity														
	cover	arcsin	0	0.003	0.553	1.007	<=0.05	1.765	>0.05	0.153	0.110	NONE	Y	Y
		NONE	0	0.010	0.320	1.064	<=0.05	1.757	>0.05	0.199	0.090	NONE	Y	Y
		√(x+constant)	0.01	0.003	0.558	1.006	<=0.05	1.766	>0.05	0.152	0.111	NONE	Y	Y
		√(x+constant)	0.1	0.003	0.546	1.008	<=0.05	1.765	>0.05	0.153	0.110	NONE	Y	Y
		√(x+constant)	0.5	0.004	0.503	1.017	<=0.05	1.764	>0.05	0.160	0.107	NONE	Y	Y
		√(x+constant)	1	0.004	0.468	1.025	<=0.05	1.763	>0.05	0.166	0.104	NONE	Y	Y
***Calliarthron/Bossiella* spp.-complex**														
	cover	arcsin	0	0.604	0.468	0.967	<=0.05	1.217	>0.05	0.429	0.035	NONE	N	Y
		NONE	0	0.666	0.407	0.954	<=0.05	1.102	<=0.05	0.443	0.033	NONE	N	Y
		√(x+constant)	0.01	0.365	0.562	1.001	<=0.05	1.287	>0.05	0.440	0.034	NONE	N	Y
		√(x+constant)	0.1	0.366	0.562	1.001	<=0.05	1.286	>0.05	0.440	0.034	NONE	N	Y
		√(x+constant)	0.5	0.373	0.560	1.001	<=0.05	1.282	>0.05	0.440	0.033	NONE	N	Y
		√(x+constant)	1	0.381	0.558	1.000	<=0.05	1.277	>0.05	0.440	0.033	NONE	N	Y
Chondracanthus corymbiferus														
	cover	arcsin	0	0.012	0.404	1.454	>0.05	1.470	>0.05	0.010	0.315	NONE	Y	Y
		NONE	0	<.001	0.098	1.538	>0.05	0.796	<=0.05	0.135	0.120	NONE	Y	Y
		√(x+constant)	0.01	0.013	0.296	1.457	>0.05	1.564	>0.05	0.008	0.331	NONE	Y	Y
		√(x+constant)	0.1	0.008	0.478	1.493	>0.05	1.522	>0.05	0.011	0.306	NONE	Y	Y
		√(x+constant)	0.5	0.003	0.827	1.535	>0.05	1.440	>0.05	0.019	0.271	NONE	Y	Y
		√(x+constant)	1	0.002	0.944	1.551	>0.05	1.378	>0.05	0.024	0.251	NONE	Y	Y
Chrysophyta unid.														
	cover	arcsin	0	<.001	<.001	2.056	>0.05	2.260	>0.05	0.872	0.001	NONE	Y	N
		NONE	0	<.001	<.001	2.020	>0.05	2.263	>0.05	0.921	0.001	NONE	Y	N
		√(x+constant)	0.01	<.001	<.001	2.051	>0.05	2.266	>0.05	0.894	0.001	NONE	Y	N
		√(x+constant)	0.1	<.001	<.001	2.042	>0.05	2.260	>0.05	0.926	<.001	NONE	Y	N
		√(x+constant)	0.5	<.001	<.001	2.033	>0.05	2.253	>0.05	0.947	<.001	NONE	Y	N
		√(x+constant)	1	<.001	<.001	2.029	>0.05	2.251	>0.05	0.948	<.001	NONE	Y	N

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Subtidal line contact assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Corallina officinalis														
	cover	arcsin	0	<.001	0.263	1.653	> 0.05	1.367	> 0.05	0.008	0.327	NONE	Y	Y
		NONE	0	<.001	< 001	0.839	<=0.05	1.257	> 0.05	<.001	0.646	NONE	Y	N
		√(x+constant)	0.01	<.001	0.234	1.617	> 0.05	1.400	> 0.05	0.007	0.343	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.143	1.496	> 0.05	1.431	> 0.05	0.003	0.394	NONE	Y	Y
		√(x+constant)	0.5	< 001	0.060	1.307	> 0.05	1.407	> 0.05	0.001	0.472	NONE	Y	Y
		√(x+constant)	1	<.001	0.033	1.201	<=0.05	1.381	> 0.05	<.001	0.515	NONE	Y	N
Coralline crust														
	cover	arcsin	0	< 001	0.160	1.370	> 0.05	2.016	> 0.05	0.539	0.021	NONE	Y	Y
		NONE	0	<.001	0.145	1.367	> 0.05	2.261	> 0.05	0.522	0.023	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.060	1.330	> 0.05	2.289	> 0.05	0.434	0.034	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.060	1.330	> 0.05	2.289	> 0.05	0.435	0.034	NONE	Y	Y
		√(x+constant)	0.5	< 001	0.061	1.331	> 0.05	2.289	> 0.05	0.435	0.034	NONE	Y	Y
		√(x+constant)	1	<.001	0.062	1.331	> 0.05	2.289	> 0.05	0.436	0.034	NONE	Y	Y
Cryptopleura ruprechtiana														
	cover	arcsin	0	< 001	0.166	0.732	<=0.05	0.310	<=0.05	< 001	0.562	NONE	Y	N
		NONE	0	< 001	0.947	0.745	<=0.05	0.254	<=0.05	<.001	0.552	NONE	Y	N
		√(x+constant)	0.01	<.001	0.044	0.746	<=0.05	0.328	<=0.05	<.001	0.543	NONE	Y	N
		√(x+constant)	0.1	< 001	0.046	0.743	<=0.05	0.329	<=0.05	< 001	0.543	NONE	Y	N
		√(x+constant)	0.5	< 001	0.053	0.734	<=0.05	0.325	<=0.05	< 001	0.546	NONE	Y	N
		√(x+constant)	1	< 001	0.062	0.725	<=0.05	0.320	<=0.05	<.001	0.549	NONE	Y	N
Cryptopleura violacea														
	cover	arcsin	0	< 001	0.599	1.891	> 0.05	1.666	> 0.05	0.693	0.009	NONE	Y	Y
		NONE	0	<.001	< 001	0.828	<=0.05	1.803	> 0.05	0.027	0.244	NONE	Y	N
		√(x+constant)	0.01	< 001	0.523	1.886	> 0.05	1.702	> 0.05	0.655	0.011	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.274	1.827	> 0.05	1.761	> 0.05	0.519	0.023	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.047	1.679	> 0.05	1.823	> 0.05	0.327	0.053	NONE	Y	N
		√(x+constant)	1	< 001	0.009	1.559	> 0.05	1.850	> 0.05	0.233	0.078	NONE	Y	N
Desmarestia spp.														
	cover	arcsin	0	<.001	0.156	1.076	<=0.05	2.011	> 0.05	0.001	0.483	NONE	Y	Y
		NONE	0	< 001	< 001	1.158	<=0.05	1.800	> 0.05	0.001	0.470	NONE	Y	N
		√(x+constant)	0.01	0.001	0.768	1.130	<=0.05	1.996	> 0.05	0.002	0.423	NONE	Y	Y
		√(x+constant)	0.1	< 001	0.582	1.108	<=0.05	1.962	> 0.05	0.001	0.442	NONE	Y	Y
		√(x+constant)	0.5	< 001	0.325	1.101	<=0.05	1.905	> 0.05	0.001	0.465	NONE	Y	Y
		√(x+constant)	1	< 001	0.198	1.108	<=0.05	1.874	> 0.05	0.001	0.476	NONE	Y	Y

(continued)

Subtidal line contact assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
***Farlowia/Pikea* spp.-complex**														
	cover	arcsin	0	<.001	0.224	2.181	> 0.05	1.800	> 0.05	0.528	0.022	NONE	Y	Y
		NONE	0	<.001	0.588	2.235	> 0.05	1.981	> 0.05	0.853	0.002	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.261	2.204	> 0.05	1.813	> 0.05	0.557	0.019	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.341	2.237	> 0.05	1.847	> 0.05	0.621	0.014	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.446	2.251	> 0.05	1.853	> 0.05	0.711	0.008	NONE	Y	Y
		√(x+constant)	1	<.001	0.492	2.249	> 0.05	1.851	> 0.05	0.753	0.006	NONE	Y	Y
Gelidium robustum														
	cover	arcsin	0	<.001	0.001	2.664	> 0.05	1.553	> 0.05	0.405	0.039	NONE	Y	N
		NONE	0	<.001	<.001	2.472	> 0.05	1.140	<=0.05	0.199	0.090	NONE	Y	N
		√(x+constant)	0.01	<.001	<.001	2.640	> 0.05	1.549	> 0.05	0.370	0.045	NONE	Y	N
		√(x+constant)	0.1	<.001	<.001	2.589	> 0.05	1.519	> 0.05	0.308	0.058	NONE	Y	N
		√(x+constant)	0.5	<.001	<.001	2.531	> 0.05	1.466	> 0.05	0.249	0.073	NONE	Y	N
		√(x+constant)	1	<.001	<.001	2.509	> 0.05	1.427	> 0.05	0.230	0.079	NONE	Y	N
Mazzaella lilacina														
	cover	arcsin	0	0.072	0.027	1.307	> 0.05	1.149	<=0.05	0.328	0.053	NONE	N	N
		NONE	0	<.001	<.001	1.316	> 0.05	1.165	<=0.05	0.142	0.116	NONE	Y	N
		√(x+constant)	0.01	0.098	0.032	1.314	> 0.05	1.137	<=0.05	0.355	0.048	NONE	N	N
		√(x+constant)	0.1	0.114	0.029	1.318	> 0.05	1.128	<=0.05	0.359	0.047	NONE	N	N
		√(x+constant)	0.5	0.076	0.022	1.326	> 0.05	1.141	<=0.05	0.347	0.049	NONE	N	N
		√(x+constant)	1	0.039	0.017	1.330	> 0.05	1.153	<=0.05	0.330	0.053	NONE	Y	N
Microcladia coulteri														
	cover	arcsin	0	0.176	0.843	2.261	> 0.05	0.611	<=0.05	0.582	0.017	NONE	N	Y
		NONE	0	0.141	0.044	2.468	> 0.05	0.591	<=0.05	0.554	0.020	NONE	N	N
		√(x+constant)	0.01	0.180	0.794	2.265	> 0.05	0.606	<=0.05	0.576	0.018	NONE	N	Y
		√(x+constant)	0.1	0.191	0.644	2.283	> 0.05	0.597	<=0.05	0.566	0.019	NONE	N	Y
		√(x+constant)	0.5	0.187	0.432	2.312	> 0.05	0.590	<=0.05	0.561	0.019	NONE	N	Y
		√(x+constant)	1	0.182	0.324	2.332	> 0.05	0.588	<=0.05	0.561	0.019	NONE	N	Y
***Osmundea* spp.**														
	cover	arcsin	0	<.001	0.172	0.889	<=0.05	1.515	> 0.05	0.637	0.013	NONE	Y	Y
		NONE	0	<.001	0.021	0.635	<=0.05	1.725	> 0.05	0.138	0.118	NONE	Y	N
		√(x+constant)	0.01	<.001	0.144	0.883	<=0.05	1.510	> 0.05	0.577	0.018	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.094	0.851	<=0.05	1.539	> 0.05	0.453	0.032	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.052	0.789	<=0.05	1.611	> 0.05	0.314	0.056	NONE	Y	Y
		√(x+constant)	1	<.001	0.040	0.752	<=0.05	1.646	> 0.05	0.257	0.071	NONE	Y	N

(continued)

Subtidal line contact assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob.	Results of Tests for Serial Correlation: Operation Q-Value Prob	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[4] d f. used in Analysis	Passed Tests for BACI Analysis
***Phyllospadix* spp.**												
	cover	arcsin	0	<.001	0 084	1.194 <=0 05	2 154 > 0 05	0.770	0.005	NONE	Y	Y
		NONE	0	<.001	< 001	0 853 <=0 05	2.154 > 0.05	0.018	0.273	NONE	Y	N
		√(x+constant)	0.01	<.001	0.044	1.148 <=0 05	2 154 > 0.05	0.956	<.001	NONE	Y	N
		√(x+constant)	0.1	< 001	0.008	1.067 <=0.05	2.154 > 0.05	0.634	0.013	NONE	Y	N
		√(x+constant)	0.5	<.001	0.001	0 972 <=0 05	2.154 > 0.05	0.260	0.070	NONE	Y	N
		√(x+constant)	1	<.001	< 001	0.926 <=0 05	2.154 > 0.05	0.151	0.111	NONE	Y	N
***Prionitis* spp.**												
	cover	arcsin	0	<.001	0 143	1.909 > 0.05	1.051 <=0 05	0.381	0 043	NONE	Y	Y
		NONE	0	<.001	0.072	1.967 > 0.05	0.531 <=0.05	0.323	0 054	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.140	1.939 > 0 05	1 075 <=0.05	0 385	0.042	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.131	1.979 > 0.05	1 032 <=0 05	0.386	0.042	NONE	Y	Y
		√(x+constant)	0 5	<.001	0.116	1 998 > 0 05	0 909 <=0.05	0.376	0.044	NONE	Y	Y
		√(x+constant)	1	<.001	0 107	1.996 > 0.05	0.827 <=0.05	0.367	0.045	NONE	Y	Y
***Rhodymenia* spp.**												
	cover	arcsin	0	0.325	0.216	0 894 <=0 05	1.903 > 0 05	0 465	0.030	NONE	N	Y
		NONE	0	<.001	<.001	1.013 <=0.05	1.892 > 0.05	0.492	0 027	NONE	Y	N
		√(x+constant)	0 01	0 247	0.188	0.894 <=0.05	1.908 > 0 05	0.485	0.028	NONE	N	Y
		√(x+constant)	0 1	0.063	0.118	0.905 <=0.05	1.902 > 0 05	0 517	0 024	NONE	N	Y
		√(x+constant)	0.5	0.002	0.047	0.932 <=0.05	1.887 > 0.05	0.546	0 021	NONE	Y	N
		√(x+constant)	1	<.001	0.024	0.950 <=0.05	1.877 > 0.05	0.552	0.020	NONE	Y	N
Rock												
	cover	arcsin	0	0 003	0.415	1.477 > 0.05	2 059 > 0.05	0.710	0.008	NONE	Y	Y
		NONE	0	0 003	0.056	1.418 > 0.05	2.394 > 0.05	0.156	0.109	NONE	Y	Y
		√(x+constant)	0.01	0 002	0.398	1 500 > 0.05	2 093 > 0 05	0.685	0.009	NONE	Y	Y
		√(x+constant)	0 1	0 001	0 361	1.534 > 0 05	2.176 > 0.05	0.584	0.017	NONE	Y	Y
		√(x+constant)	0.5	0.001	0.316	1.563 > 0 05	2 274 > 0 05	0.439	0.034	NONE	Y	Y
		√(x+constant)	1	0.001	0.289	1.563 > 0.05	2.320 > 0.05	0.363	0 046	NONE	Y	Y
Sand (shell gravel)												
	cover	arcsin	0	< 001	0 002	2.087 > 0.05	2 062 > 0 05	0 487	0 027	NONE	Y	N
		NONE	0	< 001	< 001	1.598 > 0.05	1 861 > 0 05	0.202	0.089	NONE	Y	N
		√(x+constant)	0 01	0 008	0 022	2.185 > 0.05	2 035 > 0 05	0.550	0.020	NONE	Y	N
		√(x+constant)	0.1	0.005	0.014	2 171 > 0 05	1 993 > 0.05	0.532	0.022	NONE	Y	N
		√(x+constant)	0 5	0.001	0.005	2.140 > 0.05	1.932 > 0.05	0.493	0.026	NONE	Y	N
		√(x+constant)	1	<.001	0.002	2 114 > 0 05	1.895 > 0.05	0.464	0.030	NONE	Y	N

(continued)

Subtidal line contact assumption testing for BACI analysis (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
Spp. algae														
	cover	arcsin	0	0.204	0.088	1.247	<=0 05	1.493	> 0 05	0 010	0 318	NONE	N	Y
		NONE	0	0 430	0.291	1.319	> 0.05	1.422	> 0.05	0.014	0.290	NONE	N	Y
		√(x+constant)	0.01	0.157	0 066	1.232	<=0 05	1.510	> 0 05	0 009	0.323	NONE	N	Y
		√(x+constant)	0.1	0.158	0 067	1.232	<=0 05	1.510	> 0 05	0.009	0.323	NONE	N	Y
		√(x+constant)	0 5	0 166	0 071	1.235	<=0 05	1 508	> 0 05	0 009	0.322	NONE	N	Y
		√(x+constant)	1	0.175	0 075	1.238	<=0 05	1.505	> 0.05	0 009	0 321	NONE	N	Y
***Ulva/Enteromorpha* spp.**														
	cover	arcsin	0	< 001	< 001	0.877	<=0 05	1.728	> 0 05	0.304	0 059	NONE	Y	N
		NONE	0	< 001	<.001	0.893	<=0 05	1.302	> 0 05	0.507	0 025	NONE	Y	N
		√(x+constant)	0 01	<.001	<.001	0.864	<=0 05	1 698	> 0.05	0.274	0.066	NONE	Y	N
		√(x+constant)	0.1	<.001	< 001	0.839	<=0 05	1.626	> 0 05	0.272	0 067	NONE	Y	N
		√(x+constant)	0.5	<.001	< 001	0 819	<=0 05	1 516	> 0.05	0.277	0.065	NONE	Y	N
		√(x+constant)	1	<.001	<.001	0.814	<=0 05	1.459	> 0 05	0.285	0.063	NONE	Y	N

1 Serially correlated data requiring use of autoregressive error structure in analysis

2 Heterogeneous variances requiring Satterthwaite adjusted degrees of freedom in analysis

Subtidal fish observations assumption testing for BACI analysis - Midwater

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Atherinidae unid.														
	count	1/(x+constant)	0.01	0.001	0.019	2.822	> 0.05	1.480	> 0.05	0.531	0.018	NONE	Y	N
		1/(x+constant)	0.1	<.001	0.023	2.805	> 0.05	1.654	> 0.05	0.513	0.020	NONE	Y	N
		1/(x+constant)	0.5	<.001	0.044	2.738	> 0.05	1.945	> 0.05	0.454	0.026	NONE	Y	N
		1/(x+constant)	1	<.001	0.076	2.670	> 0.05	2.029	> 0.05	0.403	0.032	NONE	Y	Y
		log_{10}(x+constant)	0.01	<.001	0.073	2.675	> 0.05	1.774	> 0.05	0.406	0.032	NONE	Y	Y
		log_{10}(x+constant)	0.1	<.001	0.124	2.595	> 0.05	1.908	> 0.05	0.357	0.039	NONE	Y	Y
		log_{10}(x+constant)	0.5	<.001	0.216	2.492	> 0.05	1.963	> 0.05	0.304	0.048	NONE	Y	Y
		log_{10}(x+constant)	1	<.001	0.282	2.433	> 0.05	1.974	> 0.05	0.279	0.053	NONE	Y	Y
		NONE	0	0.003	0.632	2.200	> 0.05	2.197	> 0.05	0.201	0.073	NONE	Y	Y
		√(x+constant)	0.01	<.001	0.337	2.389	> 0.05	2.055	> 0.05	0.262	0.057	NONE	Y	Y
		√(x+constant)	0.1	<.001	0.374	2.363	> 0.05	2.070	> 0.05	0.252	0.059	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.432	2.323	> 0.05	2.087	> 0.05	0.238	0.063	NONE	Y	Y
		√(x+constant)	1	<.001	0.467	2.300	> 0.05	2.097	> 0.05	0.230	0.065	NONE	Y	Y
		√√(x+constant)	0.01	<.001	0.173	2.536	> 0.05	1.912	> 0.05	0.326	0.044	NONE	Y	Y
		√√(x+constant)	0.1	<.001	0.230	2.479	> 0.05	1.970	> 0.05	0.299	0.049	NONE	Y	Y
		√√(x+constant)	0.5	<.001	0.318	2.405	> 0.05	2.007	> 0.05	0.268	0.056	NONE	Y	Y
		√√(x+constant)	1	<.001	0.372	2.364	> 0.05	2.023	> 0.05	0.252	0.059	NONE	Y	Y
Aulorhynchus flavidus														
	count	1/(x+constant)	0.01	0.938	0.424	1.935	> 0.05	2.042	> 0.05	0.696	0.007	NONE	N	Y
		1/(x+constant)	0.1	0.593	0.543	1.626	> 0.05	2.143	> 0.05	0.872	0.001	NONE	N	Y
		1/(x+constant)	0.5	0.182	0.921	1.402	> 0.05	2.328	> 0.05	0.948	<.001	NONE	N	Y
		1/(x+constant)	1	0.116	0.625	1.383	> 0.05	2.412	> 0.05	0.863	0.001	NONE	N	Y
		log_{10}(x+constant)	0.01	0.319	0.593	1.353	<=0.05	2.349	> 0.05	0.843	0.002	NONE	N	Y
		log_{10}(x+constant)	0.1	0.097	0.349	1.308	<=0.05	2.481	> 0.05	0.686	0.008	NONE	N	Y
		log_{10}(x+constant)	0.5	0.052	0.291	1.358	> 0.05	2.558	> 0.05	0.572	0.015	NONE	N	Y
		log_{10}(x+constant)	1	0.051	0.288	1.384	> 0.05	2.568	> 0.05	0.522	0.019	NONE	N	Y
		NONE	0	0.073	0.327	1.374	> 0.05	2.327	> 0.05	0.294	0.050	NONE	N	Y
		√(x+constant)	0.01	0.043	0.211	1.306	<=0.05	2.574	> 0.05	0.390	0.034	NONE	Y	Y
		√(x+constant)	0.1	0.041	0.235	1.317	<=0.05	2.558	> 0.05	0.378	0.036	NONE	Y	Y
		√(x+constant)	0.5	0.043	0.255	1.331	<=0.05	2.523	> 0.05	0.361	0.038	NONE	Y	Y
		√(x+constant)	1	0.044	0.261	1.335	<=0.05	2.499	> 0.05	0.352	0.040	NONE	Y	Y
		√√(x+constant)	0.01	0.081	0.215	1.286	<=0.05	2.534	> 0.05	0.562	0.016	NONE	N	Y
		√√(x+constant)	0.1	0.047	0.231	1.310	<=0.05	2.572	> 0.05	0.503	0.021	NONE	Y	Y
		√√(x+constant)	0.5	0.043	0.254	1.347	<=0.05	2.573	> 0.05	0.450	0.026	NONE	Y	Y
		√√(x+constant)	1	0.044	0.262	1.358	> 0.05	2.556	> 0.05	0.424	0.029	NONE	Y	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Midwater (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Engraulis mordax														
	count	1/(x+constant)	0.01	0.395	0.026	2.020	> 0.05	2.100	> 0.05	0.284	0.052	NONE	N	N
		1/(x+constant)	0.1	0.441	0.143	2.041	> 0.05	2.100	> 0.05	0.304	0.048	NONE	N	Y
		1/(x+constant)	0.5	0.450	0.496	2.068	> 0.05	2.100	> 0.05	0.341	0.041	NONE	N	Y
		1/(x+constant)	1	0.436	0.632	2.076	> 0.05	2.100	> 0.05	0.353	0.039	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.342	0.300	2.055	> 0.05	2.100	> 0.05	0.322	0.045	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.338	0.556	2.072	> 0.05	2.100	> 0.05	0.347	0.040	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.317	0.719	2.081	> 0.05	2.100	> 0.05	0.361	0.038	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.308	0.759	2.083	> 0.05	2.100	> 0.05	0.365	0.037	NONE	N	Y
		NONE	0	0.486	0.822	2.086	> 0.05	2.100	> 0.05	0.371	0.037	NONE	N	Y
		√(x+constant)	0.01	0.348	0.703	2.080	> 0.05	2.100	> 0.05	0.360	0.038	NONE	N	Y
		√(x+constant)	0.1	0.355	0.753	2.083	> 0.05	2.100	> 0.05	0.364	0.038	NONE	N	Y
		√(x+constant)	0.5	0.365	0.788	2.084	> 0.05	2.100	> 0.05	0.368	0.037	NONE	N	Y
		√(x+constant)	1	0.373	0.799	2.085	> 0.05	2.100	> 0.05	0.369	0.037	NONE	N	Y
		√√(x+constant)	0.01	0.293	0.529	2.070	> 0.05	2.100	> 0.05	0.344	0.041	NONE	N	Y
		√√(x+constant)	0.1	0.301	0.672	2.078	> 0.05	2.100	> 0.05	0.357	0.039	NONE	N	Y
		√√(x+constant)	0.5	0.307	0.759	2.083	> 0.05	2.100	> 0.05	0.365	0.037	NONE	N	Y
		√√(x+constant)	1	0.312	0.782	2.084	> 0.05	2.100	> 0.05	0.367	0.037	NONE	N	Y
Oxyjulis californica														
	count	1/(x+constant)	0.01	0.006	0.198	2.189	> 0.05	2.074	> 0.05	0.601	0.013	NONE	Y	Y
		1/(x+constant)	0.1	0.003	0.529	2.129	> 0.05	1.992	> 0.05	0.754	0.005	NONE	Y	Y
		1/(x+constant)	0.5	0.007	0.752	2.003	> 0.05	1.772	> 0.05	0.785	0.003	NONE	Y	Y
		1/(x+constant)	1	0.019	0.584	1.896	> 0.05	1.621	> 0.05	0.525	0.019	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.010	0.398	1.874	> 0.05	1.345	> 0.05	0.383	0.035	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.030	0.361	1.662	> 0.05	1.336	> 0.05	0.181	0.080	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.038	0.252	1.463	> 0.05	1.326	> 0.05	0.076	0.136	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.037	0.204	1.372	> 0.05	1.333	> 0.05	0.047	0.168	NONE	Y	Y
		NONE	0	0.075	0.004	1.190	<=0.05	1.927	> 0.05	0.002	0.354	NONE	N	N
		√(x+constant)	0.01	0.022	0.067	1.188	<=0.05	1.580	> 0.05	0.011	0.262	NONE	Y	Y
		√(x+constant)	0.1	0.022	0.062	1.167	<=0.05	1.588	> 0.05	0.009	0.271	NONE	Y	Y
		√(x+constant)	0.5	0.022	0.053	1.141	<=0.05	1.612	> 0.05	0.007	0.286	NONE	Y	Y
		√(x+constant)	1	0.022	0.047	1.129	<=0.05	1.632	> 0.05	0.006	0.296	NONE	Y	N
		√√(x+constant)	0.01	0.026	0.208	1.462	> 0.05	1.389	> 0.05	0.065	0.146	NONE	Y	Y
		√√(x+constant)	0.1	0.028	0.177	1.363	> 0.05	1.400	> 0.05	0.041	0.177	NONE	Y	Y
		√√(x+constant)	0.5	0.026	0.134	1.264	<=0.05	1.428	> 0.05	0.023	0.214	NONE	Y	Y
		√√(x+constant)	1	0.023	0.113	1.218	<=0.05	1.454	> 0.05	0.016	0.236	NONE	Y	Y

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Subtidal fish observations assumption testing for BACI analysis - Midwater (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Sebastes chrysomelas/S. carnatus														
	count	1/(x+constant)	0.01	0.144	0.058	2.036	> 0.05	2.252	> 0.05	0.857	0.002	NONE	N	Y
		1/(x+constant)	0.1	0.422	0.079	1.984	> 0.05	2.226	> 0.05	0.967	< 001	NONE	N	Y
		1/(x+constant)	0.5	0.994	0.423	1.803	> 0.05	1.936	> 0.05	0.735	0.005	NONE	N	Y
		1/(x+constant)	1	0.999	0.697	1.685	> 0.05	1.966	> 0.05	0.640	0.010	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.952	0.375	1.890	> 0.05	2.141	> 0.05	0.881	0.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.999	0.661	1.747	> 0.05	2.021	> 0.05	0.739	0.005	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.861	0.081	1.621	> 0.05	2.029	> 0.05	0.666	0.009	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.723	0.045	1.593	> 0.05	2.040	> 0.05	0.671	0.008	NONE	N	N
		NONE	0	0.341	0.058	2.003	> 0.05	2.134	> 0.05	0.839	0.002	NONE	N	Y
		√(x+constant)	0.01	0.581	0.696	1.815	> 0.05	2.094	> 0.05	0.741	0.005	NONE	N	Y
		√(x+constant)	0.1	0.502	0.674	1.797	> 0.05	2.091	> 0.05	0.731	0.005	NONE	N	Y
		√(x+constant)	0.5	0.439	0.724	1.790	> 0.05	2.092	> 0.05	0.736	0.005	NONE	N	Y
		√(x+constant)	1	0.420	0.800	1.797	> 0.05	2.093	> 0.05	0.748	0.005	NONE	N	Y
		√√(x+constant)	0.01	0.987	0.618	1.789	> 0.05	2.079	> 0.05	0.769	0.004	NONE	N	Y
		√√(x+constant)	0.1	0.843	0.275	1.715	> 0.05	2.055	> 0.05	0.710	0.006	NONE	N	Y
		√√(x+constant)	0.5	0.617	0.174	1.667	> 0.05	2.061	> 0.05	0.692	0.007	NONE	N	Y
		√√(x+constant)	1	0.538	0.191	1.667	> 0.05	2.066	> 0.05	0.706	0.007	NONE	N	Y
Sebastes paucispinis (juv.)														
	count	1/(x+constant)	0.01	0.957	0.222	1.437	> 0.05	1.931	> 0.05	0.115	0.109	NONE	N	Y
		1/(x+constant)	0.1	0.848	0.147	1.523	> 0.05	1.937	> 0.05	0.138	0.097	NONE	N	Y
		1/(x+constant)	0.5	0.420	0.136	1.740	> 0.05	1.951	> 0.05	0.257	0.058	NONE	N	Y
		1/(x+constant)	1	0.336	0.231	1.865	> 0.05	1.956	> 0.05	0.399	0.033	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.642	0.312	1.705	> 0.05	1.935	> 0.05	0.289	0.051	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.329	0.437	1.885	> 0.05	1.946	> 0.05	0.464	0.025	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.269	0.653	2.018	> 0.05	1.957	> 0.05	0.682	0.008	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.272	0.711	2.054	> 0.05	1.960	> 0.05	0.772	0.004	NONE	N	Y
		NONE	0	0.190	0.579	2.093	> 0.05	1.964	> 0.05	0.888	0.001	NONE	N	Y
		√(x+constant)	0.01	0.231	0.661	2.056	> 0.05	1.944	> 0.05	0.778	0.004	NONE	N	Y
		√(x+constant)	0.1	0.225	0.656	2.073	> 0.05	1.953	> 0.05	0.816	0.003	NONE	N	Y
		√(x+constant)	0.5	0.228	0.645	2.087	> 0.05	1.960	> 0.05	0.856	0.002	NONE	N	Y
		√(x+constant)	1	0.229	0.636	2.091	> 0.05	1.962	> 0.05	0.872	0.001	NONE	N	Y
		√√(x+constant)	0.01	0.322	0.597	1.931	> 0.05	1.939	> 0.05	0.551	0.016	NONE	N	Y
		√√(x+constant)	0.1	0.252	0.660	2.011	> 0.05	1.949	> 0.05	0.673	0.008	NONE	N	Y
		√√(x+constant)	0.5	0.248	0.693	2.065	> 0.05	1.958	> 0.05	0.792	0.003	NONE	N	Y
		√√(x+constant)	1	0.251	0.688	2.079	> 0.05	1.961	> 0.05	0.836	0.002	NONE	N	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Midwater (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
***Sebastes serranoides/S. flavidus* (juv.)**														
	count	1/(x+constant)	0.01	0.121	0.595	2.322	> 0.05	1.811	> 0.05	0.841	0.002	NONE	N	Y
		1/(x+constant)	0.1	0.134	0.948	2.310	> 0.05	2.024	> 0.05	0.991	<.001	NONE	N	Y
		1/(x+constant)	0.5	0.241	0.642	2.229	> 0.05	2.097	> 0.05	0.868	0.001	NONE	N	Y
		1/(x+constant)	1	0.304	0.675	2.169	> 0.05	2.177	> 0.05	0.899	0.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.352	0.952	2.344	> 0.05	2.377	> 0.05	0.974	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.541	0.938	2.287	> 0.05	2.509	> 0.05	0.971	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.595	0.940	2.264	> 0.05	2.501	> 0.05	0.990	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.670	0.847	2.289	> 0.05	2.517	> 0.05	0.950	<.001	NONE	N	Y
		NONE	0	0.517	<.001	2.849	> 0.05	2.405	> 0.05	0.611	0.012	NONE	N	N
		√(x+constant)	0.01	0.931	0.111	2.796	> 0.05	2.572	> 0.05	0.952	< 001	NONE	N	Y
		√(x+constant)	0.1	0.923	0.088	2.825	> 0.05	2.532	> 0.05	0.948	< 001	NONE	N	Y
		√(x+constant)	0.5	0.921	0.056	2.897	> 0.05	2.500	> 0.05	0.954	<.001	NONE	N	Y
		√(x+constant)	1	0.917	0.039	2.954	> 0.05	2.488	> 0.05	0.956	<.001	NONE	N	N
		√√(x+constant)	0.01	0.755	0.746	2.426	> 0.05	2.631	> 0.05	0.987	<.001	NONE	N	Y
		√√(x+constant)	0.1	0.776	0.679	2.420	> 0.05	2.569	> 0.05	0.999	<.001	NONE	N	Y
		√√(x+constant)	0.5	0.831	0.544	2.472	> 0.05	2.525	> 0.05	0.970	<.001	NONE	N	Y
		√√(x+constant)	1	0.879	0.461	2.535	> 0.05	2.516	> 0.05	0.948	< 001	NONE	N	Y
Spp. fish														
	count	1/(x+constant)	0.01	0.010	<.001	2.090	> 0.05	2.083	> 0.05	0.961	<.001	NONE	Y	N
		1/(x+constant)	0.1	0.009	<.001	2.084	> 0.05	2.080	> 0.05	0.988	<.001	NONE	Y	N
		1/(x+constant)	0.5	0.007	0.004	2.066	> 0.05	2.061	> 0.05	0.905	0.001	NONE	Y	N
		1/(x+constant)	1	0.006	0.022	2.050	> 0.05	2.040	> 0.05	0.797	0.003	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	0.007	0.118	2.026	> 0.05	2.016	> 0.05	0.548	0.017	NONE	Y	Y
		$\log_{10}$(x+constant)	0.1	0.007	0.134	2.024	> 0.05	2.011	> 0.05	0.531	0.018	NONE	Y	Y
		$\log_{10}$(x+constant)	0.5	0.009	0.199	2.017	> 0.05	1.994	> 0.05	0.471	0.024	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.011	0.254	2.011	> 0.05	1.980	> 0.05	0.419	0.030	NONE	Y	Y
		NONE	0	0.222	0.118	2.075	> 0.05	1.968	> 0.05	0.214	0.069	NONE	N	Y
		√(x+constant)	0.01	0.033	0.244	2.017	> 0.05	1.977	> 0.05	0.323	0.044	NONE	Y	Y
		√(x+constant)	0.1	0.035	0.247	2.017	> 0.05	1.975	> 0.05	0.317	0.045	NONE	Y	Y
		√(x+constant)	0.5	0.043	0.254	2.018	> 0.05	1.968	> 0.05	0.298	0.049	NONE	Y	Y
		√(x+constant)	1	0.053	0.255	2.019	> 0.05	1.962	> 0.05	0.282	0.052	NONE	N	Y
		√√(x+constant)	0.01	0.012	0.209	2.016	> 0.05	1.994	> 0.05	0.423	0.029	NONE	Y	Y
		√√(x+constant)	0.1	0.013	0.221	2.015	> 0.05	1.991	> 0.05	0.412	0.031	NONE	Y	Y
		√√(x+constant)	0.5	0.017	0.258	2.012	> 0.05	1.979	> 0.05	0.374	0.036	NONE	Y	Y
		√√(x+constant)	1	0.022	0.281	2.010	> 0.05	1.969	> 0.05	0.342	0.041	NONE	Y	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Midwater (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Total fish														
	count	1/(x+constant)	0.01	0.142	<.001	2.141	>0.05	1.355	>0.05	0.511	0.020	NONE	N	N
		1/(x+constant)	0.1	0.150	<.001	2.143	>0.05	1.348	>0.05	0.502	0.021	NONE	N	N
		1/(x+constant)	0.5	0.194	<.001	2.130	>0.05	1.333	>0.05	0.471	0.024	NONE	N	N
		1/(x+constant)	1	0.244	<.001	2.092	>0.05	1.338	>0.05	0.435	0.028	NONE	N	N
		$\log_{10}$(x+constant)	0.01	0.357	0.055	1.530	>0.05	1.586	>0.05	0.118	0.107	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.359	0.064	1.519	>0.05	1.588	>0.05	0.116	0.109	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.370	0.101	1.482	>0.05	1.600	>0.05	0.107	0.114	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.380	0.140	1.447	>0.05	1.612	>0.05	0.099	0.119	NONE	N	Y
		NONE	0	0.610	0.568	1.351	<=0.05	1.694	>0.05	0.065	0.146	NONE	N	Y
		√(x+constant)	0.01	0.588	0.523	1.268	<=0.05	1.655	>0.05	0.058	0.153	NONE	N	Y
		√(x+constant)	0.1	0.588	0.529	1.267	<=0.05	1.655	>0.05	0.058	0.154	NONE	N	Y
		√(x+constant)	0.5	0.591	0.549	1.264	<=0.05	1.657	>0.05	0.058	0.154	NONE	N	Y
		√(x+constant)	1	0.594	0.569	1.260	<=0.05	1.659	>0.05	0.057	0.155	NONE	N	Y
		√√(x+constant)	0.01	0.476	0.250	1.350	<=0.05	1.631	>0.05	0.075	0.137	NONE	N	Y
		√√(x+constant)	0.1	0.478	0.262	1.346	<=0.05	1.632	>0.05	0.074	0.138	NONE	N	Y
		√√(x+constant)	0.5	0.485	0.304	1.330	<=0.05	1.638	>0.05	0.071	0.140	NONE	N	Y
		√√(x+constant)	1	0.492	0.344	1.315	<=0.05	1.643	>0.05	0.069	0.143	NONE	N	Y

1. Serially correlated data requiring use of autoregressive error structure in analysis.
2. Heterogeneous variances requiring Satterthwaithe adjusted degrees of freedom in analysis

Subtidal fish observations assumption testing for BACI analysis - Benthic

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Aulorhynchus flavidus														
	count	1/(x+constant)	0.01	0.745	0.745	1.869	> 0.05	2.406	> 0.05	0.990	<.001	NONE	N	Y
		1/(x+constant)	0.1	0.372	0.680	1.929	> 0.05	2.447	> 0.05	0.952	< 001	NONE	N	Y
		1/(x+constant)	0.5	0.044	0.712	2.029	> 0.05	2.417	> 0.05	0.939	< 001	NONE	Y	Y
		1/(x+constant)	1	0.022	0.788	2.043	> 0.05	2.288	> 0.05	0.952	< 001	NONE	Y	Y
		log_{10}(x+constant)	0.01	0.172	0.738	1.814	> 0.05	2.309	> 0.05	0.939	< 001	NONE	N	Y
		log_{10}(x+constant)	0.1	0.025	0.766	1.855	> 0.05	2.196	> 0.05	0.920	<.001	NONE	Y	Y
		log_{10}(x+constant)	0.5	0.017	0.779	1.840	> 0.05	1.972	> 0.05	0.912	0.001	NONE	Y	Y
		log_{10}(x+constant)	1	0.016	0.746	1.800	> 0.05	1.841	> 0.05	0.905	0.001	NONE	Y	Y
		NONE	0	0.037	0.069	1.552	> 0.05	1.410	> 0.05	0.592	0.013	NONE	Y	Y
		√(x+constant)	0.01	0.015	0.535	1.656	> 0.05	1.763	> 0.05	0.809	0.003	NONE	Y	Y
		√(x+constant)	0.1	0.015	0.506	1.660	> 0.05	1.704	> 0.05	0.802	0.003	NONE	Y	Y
		√(x+constant)	0.5	0.016	0.451	1.645	> 0.05	1.619	> 0.05	0.790	0.003	NONE	Y	Y
		√(x+constant)	1	0.017	0.409	1.631	> 0.05	1.575	> 0.05	0.780	0.004	NONE	Y	Y
		√√(x+constant)	0.01	0.023	0.730	1.745	> 0.05	2.084	> 0.05	0.891	0.001	NONE	Y	Y
		√√(x+constant)	0.1	0.016	0.716	1.764	> 0.05	1.961	> 0.05	0.877	0.001	NONE	Y	Y
		√√(x+constant)	0.5	0.015	0.663	1.740	> 0.05	1.788	> 0.05	0.864	0.001	NONE	Y	Y
		√√(x+constant)	1	0.015	0.610	1.711	> 0.05	1.700	> 0.05	0.853	0.002	NONE	Y	Y
Brachyistius frenatus														
	count	1/(x+constant)	0.01	0.550	0.897	1.292	<=0.05	2.002	> 0.05	0.604	0.012	NONE	N	Y
		1/(x+constant)	0.1	0.687	0.589	1.449	> 0.05	2.082	> 0.05	0.823	0.002	NONE	N	Y
		1/(x+constant)	0.5	0.513	0.564	1.927	> 0.05	2.135	> 0.05	0.963	<.001	NONE	N	Y
		1/(x+constant)	1	0.428	0.637	2.098	> 0.05	2.139	> 0.05	0.910	0.001	NONE	N	Y
		log_{10}(x+constant)	0.01	0.715	0.538	1.518	> 0.05	2.047	> 0.05	0.753	0.005	NONE	N	Y
		log_{10}(x+constant)	0.1	0.562	0.538	1.873	> 0.05	2.098	> 0.05	0.853	0.002	NONE	N	Y
		log_{10}(x+constant)	0.5	0.428	0.589	2.121	> 0.05	2.129	> 0.05	0.798	0.003	NONE	N	Y
		log_{10}(x+constant)	1	0.425	0.552	2.165	> 0.05	2.138	> 0.05	0.729	0.006	NONE	N	Y
		NONE	0	0.449	0.150	2.022	> 0.05	2.167	> 0.05	0.460	0.025	NONE	N	Y
		√(x+constant)	0.01	0.521	0.465	1.948	> 0.05	2.077	> 0.05	0.705	0.007	NONE	N	Y
		√(x+constant)	0.1	0.449	0.474	2.070	> 0.05	2.113	> 0.05	0.702	0.007	NONE	N	Y
		√(x+constant)	0.5	0.433	0.426	2.131	> 0.05	2.140	> 0.05	0.642	0.010	NONE	N	Y
		√(x+constant)	1	0.437	0.375	2.130	> 0.05	2.148	> 0.05	0.600	0.013	NONE	N	Y
		√√(x+constant)	0.01	0.654	0.497	1.736	> 0.05	2.057	> 0.05	0.761	0.004	NONE	N	Y
		√√(x+constant)	0.1	0.491	0.539	1.992	> 0.05	2.102	> 0.05	0.795	0.003	NONE	N	Y
		√√(x+constant)	0.5	0.427	0.529	2.138	> 0.05	2.132	> 0.05	0.726	0.006	NONE	N	Y
		√√(x+constant)	1	0.431	0.476	2.156	> 0.05	2.142	> 0.05	0.667	0.009	NONE	N	Y

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Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[4] d f. used in Analysis	Passed Tests for BACI Analysis
Citharichthys spp.														
	count	1/(x+constant)	0.01	0 003	< 001	2 057	> 0 05	1.168	<=0.05	0.405	0.032	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	2 013	> 0.05	1.721	> 0 05	0.458	0 025	NONE	Y	N
		1/(x+constant)	0 5	<.001	<.001	1.905	> 0.05	2 076	> 0 05	0 609	0 012	NONE	Y	N
		1/(x+constant)	1	<.001	<.001	1.844	> 0 05	2.130	> 0 05	0.710	0.006	NONE	Y	N
		log_{10}(x+constant)	0.01	< 001	< 001	1.959	> 0 05	1.821	> 0.05	0.542	0.017	NONE	Y	N
		log_{10}(x+constant)	0.1	<.001	<.001	1 884	> 0 05	2.038	> 0.05	0.657	0.009	NONE	Y	N
		log_{10}(x+constant)	0.5	<.001	<.001	1.802	> 0.05	2.095	> 0.05	0.801	0.003	NONE	Y	N
		log_{10}(x+constant)	1	< 001	<.001	1.769	> 0 05	2 091	> 0 05	0.869	0 001	NONE	Y	N
		NONE	0	<.001	<.001	1.704	> 0 05	1.934	> 0.05	0 934	<.001	NONE	Y	N
		√(x+constant)	0.01	< 001	< 001	1 815	> 0.05	2.006	> 0.05	0.796	0 003	NONE	Y	N
		√(x+constant)	0.1	< 001	< 001	1.783	> 0.05	2 023	> 0 05	0 856	0 002	NONE	Y	N
		√(x+constant)	0 5	<.001	<.001	1.747	> 0.05	2 021	> 0 05	0.931	<.001	NONE	Y	N
		√(x+constant)	1	<.001	<.001	1.733	> 0.05	2 012	> 0 05	0.966	<.001	NONE	Y	N
		√√(x+constant)	0.01	<.001	<.001	1 891	> 0.05	1.973	> 0.05	0.654	0.009	NONE	Y	N
		√√(x+constant)	0 1	< 001	<.001	1 834	> 0.05	2.049	> 0 05	0.750	0.005	NONE	Y	N
		√√(x+constant)	0.5	<.001	<.001	1.774	> 0.05	2.065	> 0.05	0.864	0 001	NONE	Y	N
		√√(x+constant)	1	<.001	<.001	1.750	> 0.05	2 055	> 0.05	0.917	0 001	NONE	Y	N
Coryphopterus nicholsi														
	count	1/(x+constant)	0 01	0 008	0.021	1.505	> 0.05	1.421	> 0 05	0 114	0.110	NONE	Y	N
		1/(x+constant)	0.1	0 036	0.023	1 564	> 0.05	1.565	> 0.05	0.141	0 096	NONE	Y	N
		1/(x+constant)	0 5	0.153	0 065	1.716	> 0.05	1.366	> 0 05	0.413	0.031	NONE	N	Y
		1/(x+constant)	1	0.109	0.096	1 825	> 0.05	1.117	<=0.05	0 692	0.007	NONE	N	Y
		log_{10}(x+constant)	0 01	0 109	0.029	1 683	> 0.05	1.268	<=0.05	0.259	0 057	NONE	N	N
		log_{10}(x+constant)	0 1	0 279	0.064	1.800	> 0.05	1 093	<=0 05	0.541	0 017	NONE	N	Y
		log_{10}(x+constant)	0 5	0.110	0.138	1.931	> 0.05	0 818	<=0 05	0 969	<.001	NONE	N	Y
		log_{10}(x+constant)	1	0 070	0 184	1.983	> 0.05	0.700	<=0 05	0 856	0.002	NONE	N	Y
		NONE	0	<.001	0.368	2 068	> 0 05	0.439	<=0.05	0.533	0.018	NONE	Y	Y
		√(x+constant)	0 01	0.126	0.121	1.957	> 0 05	0 704	<=0 05	0.955	<.001	NONE	N	Y
		√(x+constant)	0 1	0 053	0.171	1 986	> 0.05	0 647	<=0 05	0 885	0.001	NONE	N	Y
		√(x+constant)	0.5	0 015	0 236	2 023	> 0 05	0.572	<=0 05	0.724	0.006	NONE	Y	Y
		√(x+constant)	1	0.006	0.268	2 038	> 0 05	0 539	<=0.05	0 663	0 009	NONE	Y	Y
		√√(x+constant)	0.01	0.341	0.054	1.823	> 0 05	0.992	<=0 05	0.531	0 018	NONE	N	Y
		√√(x+constant)	0.1	0 214	0.103	1.901	> 0 05	0.853	<=0 05	0 823	0.002	NONE	N	Y
		√√(x+constant)	0.5	0.064	0.181	1 982	> 0.05	0 682	<=0 05	0 866	0.001	NONE	N	Y
		√√(x+constant)	1	0 025	0 223	2 013	> 0.05	0 612	<=0.05	0.752	0.005	NONE	Y	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Damalichthys vacca (=Rhacochilus)														
	count	1/(x+constant)	0.01	0.450	0.992	1.710	> 0.05	2.108	> 0.05	0.344	0.041	NONE	N	Y
		1/(x+constant)	0.1	0.165	0.659	1.609	> 0.05	2.213	> 0.05	0.290	0.051	NONE	N	Y
		1/(x+constant)	0.5	0.165	0.348	1.878	> 0.05	2.437	> 0.05	0.387	0.034	NONE	N	Y
		1/(x+constant)	1	0.286	0.434	2.022	> 0.05	2.436	> 0.05	0.460	0.025	NONE	N	Y
		log_{10}(x+constant)	0.01	0.756	0.553	1.828	> 0.05	2.246	> 0.05	0.320	0.045	NONE	N	Y
		log_{10}(x+constant)	0.1	0.467	0.409	1.962	> 0.05	2.318	> 0.05	0.384	0.035	NONE	N	Y
		log_{10}(x+constant)	0.5	0.068	0.540	2.092	> 0.05	2.284	> 0.05	0.489	0.022	NONE	N	Y
		log_{10}(x+constant)	1	0.015	0.656	2.124	> 0.05	2.250	> 0.05	0.528	0.018	NONE	Y	Y
		NONE	0	0.009	0.979	2.149	> 0.05	2.202	> 0.05	0.589	0.013	NONE	Y	Y
		√(x+constant)	0.01	0.017	0.549	2.107	> 0.05	2.210	> 0.05	0.447	0.027	NONE	Y	Y
		√(x+constant)	0.1	0.010	0.608	2.123	> 0.05	2.209	> 0.05	0.493	0.022	NONE	Y	Y
		√(x+constant)	0.5	0.004	0.740	2.140	> 0.05	2.199	> 0.05	0.543	0.017	NONE	Y	Y
		√(x+constant)	1	0.003	0.810	2.145	> 0.05	2.194	> 0.05	0.560	0.016	NONE	Y	Y
		√√(x+constant)	0.01	0.282	0.471	1.988	> 0.05	2.248	> 0.05	0.369	0.037	NONE	N	Y
		√√(x+constant)	0.1	0.078	0.476	2.060	> 0.05	2.256	> 0.05	0.436	0.028	NONE	N	Y
		√√(x+constant)	0.5	0.011	0.633	2.122	> 0.05	2.231	> 0.05	0.516	0.019	NONE	Y	Y
		√√(x+constant)	1	0.004	0.730	2.137	> 0.05	2.213	> 0.05	0.544	0.017	NONE	Y	Y
Embiotoca jacksoni														
	count	1/(x+constant)	0.01	0.047	0.021	1.500	> 0.05	1.491	> 0.05	0.557	0.016	NONE	Y	N
		1/(x+constant)	0.1	<.001	0.047	1.439	> 0.05	1.404	> 0.05	0.597	0.013	NONE	Y	N
		1/(x+constant)	0.5	0.002	0.145	1.567	> 0.05	1.236	<= 0.05	0.632	0.011	NONE	Y	Y
		1/(x+constant)	1	0.016	0.200	1.791	> 0.05	1.180	<= 0.05	0.635	0.010	NONE	Y	Y
		log_{10}(x+constant)	0.01	0.009	0.163	1.800	> 0.05	1.087	<= 0.05	0.609	0.012	NONE	Y	Y
		log_{10}(x+constant)	0.1	0.043	0.191	1.880	> 0.05	1.076	<= 0.05	0.623	0.011	NONE	Y	Y
		log_{10}(x+constant)	0.5	0.170	0.234	2.103	> 0.05	1.065	<= 0.05	0.641	0.010	NONE	N	Y
		log_{10}(x+constant)	1	0.169	0.250	2.240	> 0.05	1.061	<= 0.05	0.650	0.010	NONE	N	Y
		NONE	0	<.001	0.276	2.555	> 0.05	0.837	<= 0.05	0.698	0.007	NONE	Y	Y
		√(x+constant)	0.01	0.009	0.245	2.259	> 0.05	0.949	<= 0.05	0.645	0.010	NONE	Y	Y
		√(x+constant)	0.1	0.005	0.251	2.295	> 0.05	0.952	<= 0.05	0.651	0.009	NONE	Y	Y
		√(x+constant)	0.5	0.001	0.261	2.381	> 0.05	0.956	<= 0.05	0.663	0.009	NONE	Y	Y
		√(x+constant)	1	<.001	0.265	2.431	> 0.05	0.952	<= 0.05	0.670	0.008	NONE	Y	Y
		√√(x+constant)	0.01	0.096	0.211	2.029	> 0.05	1.012	<= 0.05	0.625	0.011	NONE	N	Y
		√√(x+constant)	0.1	0.135	0.226	2.093	> 0.05	1.013	<= 0.05	0.635	0.010	NONE	N	Y
		√√(x+constant)	0.5	0.079	0.249	2.251	> 0.05	1.015	<= 0.05	0.650	0.010	NONE	N	Y
		√√(x+constant)	1	0.018	0.258	2.343	> 0.05	1.011	<= 0.05	0.659	0.009	NONE	Y	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
Embiotoca lateralis														
	count	1/(x+constant)	0 01	0 002	<.001	1 975	> 0 05	1.144	<=0 05	0.632	0.011	NONE	Y	N
		1/(x+constant)	0.1	< 001	< 001	1.925	> 0.05	1.472	> 0 05	0 698	0.007	NONE	Y	N
		1/(x+constant)	0.5	0 093	0 007	1 942	> 0 05	1 687	> 0 05	0 857	0.002	NONE	N	N
		1/(x+constant)	1	0.507	0.120	1.941	> 0 05	1.710	> 0.05	0.521	0.019	NONE	N	Y
		log_{10}(x+constant)	0.01	0.055	0.181	1.816	> 0.05	1.562	> 0.05	0.324	0.044	NONE	N	Y
		log_{10}(x+constant)	0.1	0 545	0.276	1.799	> 0.05	1.733	> 0 05	0.277	0.053	NONE	N	Y
		log_{10}(x+constant)	0.5	0.906	0.523	1.744	> 0 05	1.875	> 0 05	0.184	0 079	NONE	N	Y
		log_{10}(x+constant)	1	0.869	0 657	1 696	> 0 05	1.954	> 0.05	0.140	0 096	NONE	N	Y
		NONE	0	0 569	0.752	1.472	> 0.05	2.272	> 0.05	0.053	0.160	NONE	N	Y
		√(x+constant)	0 01	0.928	0 667	1 615	> 0.05	2 025	> 0 05	0 106	0 115	NONE	N	Y
		√(x+constant)	0.1	0.866	0.687	1.608	> 0 05	2 053	> 0 05	0.101	0.118	NONE	N	Y
		√(x+constant)	0 5	0.785	0.736	1.584	> 0.05	2.107	> 0.05	0.088	0 127	NONE	N	Y
		√(x+constant)	1	0 748	0.761	1 564	> 0 05	2 140	> 0.05	0 079	0.133	NONE	N	Y
		√√(x+constant)	0 01	0.725	0.467	1.714	> 0.05	1.814	> 0.05	0.177	0 081	NONE	N	Y
		√√(x+constant)	0.1	0.936	0.528	1.702	> 0 05	1.891	> 0.05	0 161	0.087	NONE	N	Y
		√√(x+constant)	0 5	0.876	0 662	1.660	> 0.05	1.992	> 0.05	0.124	0.104	NONE	N	Y
		√√(x+constant)	1	0.814	0.728	1 626	> 0 05	2 049	> 0.05	0.104	0.116	NONE	N	Y
Engraulis mordax														
	count	1/(x+constant)	0 01	0.421	0 012	2.014	> 0.05	2.074	------	0.167	0.085	NONE	N	N
		1/(x+constant)	0.1	0.456	< 001	2.001	> 0.05	2.074	------	0.161	0 087	NONE	N	N
		1/(x+constant)	0.5	0 542	< 001	2 025	> 0 05	2.074	------	0 216	0 069	NONE	N	N
		1/(x+constant)	1	0 572	< 001	2 047	> 0 05	2 074	------	0 263	0.057	NONE	N	N
		log_{10}(x+constant)	0.01	0.542	<.001	2 004	> 0 05	2 074	------	0 175	0.082	NONE	N	N
		log_{10}(x+constant)	0.1	0 590	< 001	2.034	> 0 05	2.074	------	0 235	0.064	NONE	N	N
		log_{10}(x+constant)	0 5	0 610	< 001	2.063	> 0 05	2.074	------	0.303	0 048	NONE	N	N
		log_{10}(x+constant)	1	0 614	<.001	2.071	> 0.05	2.074	------	0 324	0.044	NONE	N	N
		NONE	0	0.567	<.001	2 083	> 0 05	2.074	------	0 361	0.038	NONE	N	N
		√(x+constant)	0 01	0 608	<.001	2 060	> 0 05	2.074	------	0.295	0 050	NONE	N	N
		√(x+constant)	0.1	0.606	< 001	2 070	> 0 05	2.074	------	0.321	0 045	NONE	N	N
		√(x+constant)	0.5	0.602	<.001	2 077	> 0 05	2.074	------	0 341	0 041	NONE	N	N
		√(x+constant)	1	0 600	<.001	2.079	> 0 05	2.074	------	0.347	0.040	NONE	N	N
		√√(x+constant)	0 01	0.603	<.001	2 029	> 0 05	2 074	------	0 226	0.066	NONE	N	N
		√√(x+constant)	0.1	0 612	< 001	2 054	> 0.05	2 074	------	0 281	0.053	NONE	N	N
		√√(x+constant)	0.5	0.613	<.001	2 071	> 0.05	2.074	------	0.324	0 044	NONE	N	N
		√√(x+constant)	1	0 611	< 001	2 075	> 0 05	2 074	------	0.337	0 042	NONE	N	N

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Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Hexagrammos decagrammus														
	count	1/(x+constant)	0.01	0.226	0.679	1.827	> 0.05	1.766	> 0.05	0.690	0.007	NONE	N	Y
		1/(x+constant)	0.1	0.456	0.982	1.724	> 0.05	2.490	> 0.05	0.866	0.001	NONE	N	Y
		1/(x+constant)	0.5	0.794	0.786	1.505	> 0.05	2.466	> 0.05	0.785	0.003	NONE	N	Y
		1/(x+constant)	1	0.691	0.451	1.536	> 0.05	2.437	> 0.05	0.596	0.013	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.441	0.910	1.697	> 0.05	2.581	> 0.05	0.987	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.659	0.753	1.568	> 0.05	2.527	> 0.05	0.733	0.005	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.416	0.393	1.635	> 0.05	2.441	> 0.05	0.489	0.022	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.198	0.335	1.728	> 0.05	2.426	> 0.05	0.418	0.030	NONE	N	Y
		NONE	0	0.009	0.502	1.901	> 0.05	2.415	> 0.05	0.330	0.043	NONE	Y	Y
		√(x+constant)	0.01	0.317	0.558	1.675	> 0.05	2.549	> 0.05	0.541	0.017	NONE	N	Y
		√(x+constant)	0.1	0.265	0.439	1.700	> 0.05	2.469	> 0.05	0.451	0.026	NONE	N	Y
		√(x+constant)	0.5	0.083	0.373	1.788	> 0.05	2.428	> 0.05	0.383	0.035	NONE	N	Y
		√(x+constant)	1	0.039	0.381	1.829	> 0.05	2.421	> 0.05	0.362	0.038	NONE	Y	Y
		√√(x+constant)	0.01	0.457	0.791	1.641	> 0.05	2.611	> 0.05	0.784	0.003	NONE	N	Y
		√√(x+constant)	0.1	0.547	0.563	1.602	> 0.05	2.500	> 0.05	0.579	0.014	NONE	N	Y
		√√(x+constant)	0.5	0.243	0.364	1.711	> 0.05	2.434	> 0.05	0.429	0.029	NONE	N	Y
		√√(x+constant)	1	0.091	0.349	1.781	> 0.05	2.423	> 0.05	0.387	0.034	NONE	N	Y
Ophiodon elongatus														
	count	1/(x+constant)	0.01	0.574	0.260	1.361	> 0.05	1.544	> 0.05	0.269	0.055	NONE	N	Y
		1/(x+constant)	0.1	0.409	0.194	1.412	> 0.05	1.798	> 0.05	0.165	0.086	NONE	N	Y
		1/(x+constant)	0.5	0.043	0.145	1.482	> 0.05	1.991	> 0.05	0.076	0.136	NONE	Y	Y
		1/(x+constant)	1	0.017	0.125	1.491	> 0.05	1.979	> 0.05	0.057	0.155	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.337	0.181	1.396	> 0.05	1.785	> 0.05	0.140	0.096	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.067	0.142	1.459	> 0.05	1.958	> 0.05	0.081	0.132	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.014	0.115	1.489	> 0.05	1.965	> 0.05	0.052	0.161	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.007	0.105	1.490	> 0.05	1.943	> 0.05	0.045	0.170	NONE	Y	Y
		NONE	0	0.003	0.085	1.487	> 0.05	1.895	> 0.05	0.037	0.183	NONE	Y	Y
		√(x+constant)	0.01	0.038	0.124	1.451	> 0.05	1.945	> 0.05	0.066	0.145	NONE	Y	Y
		√(x+constant)	0.1	0.016	0.112	1.479	> 0.05	1.960	> 0.05	0.053	0.160	NONE	Y	Y
		√(x+constant)	0.5	0.006	0.100	1.489	> 0.05	1.934	> 0.05	0.043	0.173	NONE	Y	Y
		√(x+constant)	1	0.004	0.094	1.489	> 0.05	1.920	> 0.05	0.041	0.177	NONE	Y	Y
		√√(x+constant)	0.01	0.157	0.151	1.422	> 0.05	1.882	> 0.05	0.098	0.120	NONE	N	Y
		√√(x+constant)	0.1	0.029	0.127	1.470	> 0.05	1.969	> 0.05	0.065	0.146	NONE	Y	Y
		√√(x+constant)	0.5	0.009	0.107	1.489	> 0.05	1.951	> 0.05	0.047	0.167	NONE	Y	Y
		√√(x+constant)	1	0.006	0.099	1.490	> 0.05	1.932	> 0.05	0.043	0.174	NONE	Y	Y

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Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob	Operation Q-Value	Operation Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Oxyjulis californica														
	count	1/(x+constant)	0.01	0.325	0.996	2.716	> 0.05	2.008	> 0.05	0.702	0.007	NONE	N	Y
		1/(x+constant)	0.1	0.354	0.981	2.825	> 0.05	1.919	> 0.05	0.697	0.007	NONE	N	Y
		1/(x+constant)	0.5	0.276	0.785	2.956	> 0.05	1.703	> 0.05	0.713	0.006	NONE	N	Y
		1/(x+constant)	1	0.241	0.709	2.916	> 0.05	1.580	> 0.05	0.714	0.006	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.264	0.851	2.805	> 0.05	1.708	> 0.05	0.474	0.024	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.297	0.906	2.702	> 0.05	1.642	> 0.05	0.424	0.029	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.392	0.896	2.538	> 0.05	1.628	> 0.05	0.374	0.036	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.474	0.865	2.446	> 0.05	1.647	> 0.05	0.342	0.041	NONE	N	Y
		NONE	0	0.580	0.879	2.006	> 0.05	1.936	> 0.05	0.076	0.136	NONE	N	Y
		√(x+constant)	0.01	0.929	0.787	2.225	> 0.05	1.815	> 0.05	0.167	0.085	NONE	N	Y
		√(x+constant)	0.1	0.939	0.799	2.205	> 0.05	1.818	> 0.05	0.164	0.086	NONE	N	Y
		√(x+constant)	0.5	0.955	0.816	2.172	> 0.05	1.826	> 0.05	0.157	0.089	NONE	N	Y
		√(x+constant)	1	0.964	0.827	2.150	> 0.05	1.834	> 0.05	0.151	0.091	NONE	N	Y
		√√(x+constant)	0.01	0.515	0.763	2.503	> 0.05	1.719	> 0.05	0.286	0.052	NONE	N	Y
		√√(x+constant)	0.1	0.593	0.789	2.428	> 0.05	1.717	> 0.05	0.269	0.055	NONE	N	Y
		√√(x+constant)	0.5	0.705	0.796	2.335	> 0.05	1.731	> 0.05	0.246	0.061	NONE	N	Y
		√√(x+constant)	1	0.774	0.794	2.283	> 0.05	1.747	> 0.05	0.230	0.065	NONE	N	Y
Oxylebius pictus														
	count	1/(x+constant)	0.01	<.001	<.001	2.022	> 0.05	0.959	<=0.05	0.319	0.045	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	1.565	> 0.05	1.036	<=0.05	0.372	0.036	NONE	Y	N
		1/(x+constant)	0.5	0.001	0.026	1.250	<=0.05	1.246	<=0.05	0.940	<.001	NONE	Y	N
		1/(x+constant)	1	0.020	0.519	1.432	> 0.05	1.397	> 0.05	0.536	0.018	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.007	0.033	1.447	> 0.05	1.394	> 0.05	0.731	0.005	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0.129	0.633	1.471	> 0.05	1.468	> 0.05	0.341	0.041	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.422	0.647	1.635	> 0.05	1.612	> 0.05	0.133	0.100	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.716	0.504	1.695	> 0.05	1.693	> 0.05	0.084	0.130	NONE	N	Y
		NONE	0	0.344	0.500	1.774	> 0.05	1.938	> 0.05	0.035	0.187	NONE	N	Y
		√(x+constant)	0.01	0.762	0.521	1.693	> 0.05	1.723	> 0.05	0.076	0.136	NONE	N	Y
		√(x+constant)	0.1	0.834	0.480	1.711	> 0.05	1.745	> 0.05	0.064	0.147	NONE	N	Y
		√(x+constant)	0.5	0.854	0.456	1.737	> 0.05	1.796	> 0.05	0.051	0.163	NONE	N	Y
		√(x+constant)	1	0.803	0.456	1.748	> 0.05	1.828	> 0.05	0.045	0.171	NONE	N	Y
		√√(x+constant)	0.01	0.330	0.919	1.562	> 0.05	1.569	> 0.05	0.214	0.069	NONE	N	Y
		√√(x+constant)	0.1	0.487	0.701	1.621	> 0.05	1.614	> 0.05	0.132	0.100	NONE	N	Y
		√√(x+constant)	0.5	0.778	0.496	1.698	> 0.05	1.708	> 0.05	0.076	0.136	NONE	N	Y
		√√(x+constant)	1	0.856	0.460	1.726	> 0.05	1.763	> 0.05	0.058	0.153	NONE	N	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob	Operation Q-Value Prob	Trend Test Probability	Trend Test R^4	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Rhacochilus toxotes												
	count	1/(x+constant)	0.01	0.237	0.422	1.698 > 0.05	2.377 > 0.05	0.102	0.117	NONE	N	Y
		1/(x+constant)	0.1	0.549	0.458	1.812 > 0.05	2.464 > 0.05	0.111	0.112	NONE	N	Y
		1/(x+constant)	0.5	0.217	0.399	1.958 > 0.05	2.453 > 0.05	0.153	0.090	NONE	N	Y
		1/(x+constant)	1	0.108	0.357	1.994 > 0.05	2.474 > 0.05	0.181	0.080	NONE	N	Y
		log_{10}(x+constant)	0.01	0.522	0.431	1.830 > 0.05	2.501 > 0.05	0.111	0.112	NONE	N	Y
		log_{10}(x+constant)	0.1	0.273	0.408	1.941 > 0.05	2.495 > 0.05	0.141	0.096	NONE	N	Y
		log_{10}(x+constant)	0.5	0.088	0.351	2.003 > 0.05	2.507 > 0.05	0.190	0.077	NONE	N	Y
		log_{10}(x+constant)	1	0.067	0.335	2.016 > 0.05	2.528 > 0.05	0.209	0.071	NONE	N	Y
		NONE	0	0.053	0.328	2.032 > 0.05	2.598 > 0.05	0.243	0.061	NONE	N	Y
		√(x+constant)	0.01	0.192	0.386	1.964 > 0.05	2.546 > 0.05	0.151	0.091	NONE	N	Y
		√(x+constant)	0.1	0.098	0.361	2.000 > 0.05	2.537 > 0.05	0.183	0.079	NONE	N	Y
		√(x+constant)	0.5	0.063	0.335	2.020 > 0.05	2.550 > 0.05	0.215	0.069	NONE	N	Y
		√(x+constant)	1	0.058	0.329	2.025 > 0.05	2.562 > 0.05	0.226	0.066	NONE	N	Y
		√√(x+constant)	0.01	0.411	0.414	1.898 > 0.05	2.526 > 0.05	0.124	0.104	NONE	N	Y
		√√(x+constant)	0.1	0.164	0.385	1.973 > 0.05	2.513 > 0.05	0.159	0.088	NONE	N	Y
		√√(x+constant)	0.5	0.073	0.342	2.012 > 0.05	2.528 > 0.05	0.202	0.073	NONE	N	Y
		√√(x+constant)	1	0.062	0.331	2.021 > 0.05	2.545 > 0.05	0.217	0.068	NONE	N	Y
Scorpaenichthys marmoratus												
	count	1/(x+constant)	0.01	0.002	< 001	2.262 > 0.05	1.665 > 0.05	0.362	0.038	NONE	Y	N
		1/(x+constant)	0.1	0.002	< 001	2.001 > 0.05	1.332 > 0.05	0.298	0.049	NONE	Y	N
		1/(x+constant)	0.5	0.728	0.163	1.669 > 0.05	1.252 <=0.05	0.268	0.055	NONE	N	Y
		1/(x+constant)	1	0.987	0.485	1.630 > 0.05	1.248 <=0.05	0.299	0.049	NONE	N	Y
		log_{10}(x+constant)	0.01	0.027	0.001	1.852 > 0.05	1.362 > 0.05	0.281	0.053	NONE	Y	N
		log_{10}(x+constant)	0.1	0.807	0.177	1.695 > 0.05	1.256 <=0.05	0.291	0.050	NONE	N	Y
		log_{10}(x+constant)	0.5	0.818	0.708	1.656 > 0.05	1.245 <=0.05	0.337	0.042	NONE	N	Y
		log_{10}(x+constant)	1	0.306	0.918	1.674 > 0.05	1.243 <=0.05	0.371	0.037	NONE	N	Y
		NONE	0	0.005	0.650	1.799 > 0.05	1.238 <=0.05	0.488	0.022	NONE	Y	Y
		√(x+constant)	0.01	0.977	0.541	1.699 > 0.05	1.256 <=0.05	0.343	0.041	NONE	N	Y
		√(x+constant)	0.1	0.679	0.807	1.690 > 0.05	1.243 <=0.05	0.364	0.038	NONE	N	Y
		√(x+constant)	0.5	0.125	0.951	1.708 > 0.05	1.241 <=0.05	0.401	0.032	NONE	N	Y
		√(x+constant)	1	0.045	0.861	1.726 > 0.05	1.241 <=0.05	0.423	0.029	NONE	Y	Y
		√√(x+constant)	0.01	0.563	0.090	1.735 > 0.05	1.295 <=0.05	0.298	0.049	NONE	N	Y
		√√(x+constant)	0.1	0.993	0.459	1.675 > 0.05	1.248 <=0.05	0.320	0.045	NONE	N	Y
		√√(x+constant)	0.5	0.427	0.881	1.677 > 0.05	1.243 <=0.05	0.366	0.037	NONE	N	Y
		√√(x+constant)	1	0.128	0.970	1.697 > 0.05	1.242 <=0.05	0.395	0.033	NONE	N	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob.	Operation Q-Value Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d f used in Analysis	Passed Tests for BACI Analysis
***Sebastes atrovirens* (yoy)**												
	count	1/(x+constant)	0 01	<.001	<.001	2 087 > 0.05	2.536 > 0.05	0.515	0 019	NONE	Y	N
		1/(x+constant)	0.1	<.001	<.001	2 087 > 0.05	1.579 > 0.05	0 515	0 019	NONE	Y	N
		1/(x+constant)	0.5	0 001	<.001	2 087 > 0.05	1 401 > 0.05	0.515	0 019	NONE	Y	N
		1/(x+constant)	1	0.004	<.001	2.087 > 0.05	1.549 > 0 05	0 515	0.019	NONE	Y	N
		$\log_{10}$(x+constant)	0 01	<.001	<.001	2 087 > 0.05	1 343 > 0.05	0.515	0.019	NONE	Y	N
		$\log_{10}$(x+constant)	0.1	0.002	< 001	2 087 > 0 05	1.494 > 0 05	0.515	0.019	NONE	Y	N
		$\log_{10}$(x+constant)	0.5	0 019	<.001	2 087 > 0.05	1 680 > 0.05	0.515	0 019	NONE	Y	N
		$\log_{10}$(x+constant)	1	0.040	<.001	2 087 > 0 05	1.746 > 0 05	0.515	0 019	NONE	Y	N
		NONE	0	0.369	< 001	2.087 > 0.05	1.878 > 0.05	0.515	0 019	NONE	N	N
		√(x+constant)	0 01	0.054	<.001	2 087 > 0.05	1 694 > 0 05	0 515	0 019	NONE	N	N
		√(x+constant)	0 1	0.093	< 001	2 087 > 0.05	1.748 > 0 05	0.515	0 019	NONE	N	N
		√(x+constant)	0.5	0.152	< 001	2.087 > 0.05	1.803 > 0 05	0.515	0 019	NONE	N	N
		√(x+constant)	1	0.189	<.001	2 087 > 0 05	1.825 > 0.05	0.515	0.019	NONE	N	N
		√√(x+constant)	0.01	0.002	<.001	2.087 > 0 05	1.495 > 0 05	0.515	0 019	NONE	Y	N
		√√(x+constant)	0.1	0.017	<.001	2.087 > 0.05	1 633 > 0.05	0 515	0 019	NONE	Y	N
		√√(x+constant)	0 5	0.057	<.001	2.087 > 0.05	1.746 > 0 05	0.515	0 019	NONE	N	N
		√√(x+constant)	1	0 092	<.001	2 087 > 0 05	1.789 > 0.05	0.515	0 019	NONE	N	N
Sebastes chrysomelas/S. carnatus												
	count	1/(x+constant)	0 01	0 622	0 865	1.491 > 0 05	1.947 > 0 05	0 056	0 157	NONE	N	Y
		1/(x+constant)	0.1	0.656	0 890	1.407 > 0.05	2.237 > 0 05	0.060	0.152	NONE	N	Y
		1/(x+constant)	0 5	0.564	0.528	1 224 <=0.05	2.426 > 0.05	0 048	0.167	NONE	N	Y
		1/(x+constant)	1	0.576	0 289	1.149 <=0.05	2 363 > 0.05	0 041	0.177	NONE	N	Y
		$\log_{10}$(x+constant)	0 01	0.748	0 368	1 294 <=0 05	2 126 > 0 05	0 037	0 183	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0 458	0.100	1 343 <=0 05	2.263 > 0 05	0.056	0 156	NONE	N	Y
		$\log_{10}$(x+constant)	0 5	0.113	0 017	1 605 > 0 05	2 267 > 0 05	0.114	0.110	NONE	N	N
		$\log_{10}$(x+constant)	1	0 045	0 006	1.786 > 0.05	2.248 > 0.05	0 166	0.085	NONE	Y	N
		NONE	0	0.015	< 001	2.387 > 0 05	1.647 > 0.05	0.814	0.003	NONE	Y	N
		√(x+constant)	0 01	0.009	<.001	2.203 > 0.05	2 122 > 0.05	0.478	0.023	NONE	Y	N
		√(x+constant)	0.1	0.009	< 001	2 242 > 0.05	2 138 > 0.05	0 540	0.017	NONE	Y	N
		√(x+constant)	0 5	0 008	<.001	2.299 > 0.05	2.122 > 0 05	0.625	0.011	NONE	Y	N
		√(x+constant)	1	0.007	<.001	2.329 > 0.05	2.103 > 0.05	0.680	0.008	NONE	Y	N
		√√(x+constant)	0.01	0.156	0.018	1.655 > 0.05	2.155 > 0.05	0 110	0.112	NONE	N	N
		√√(x+constant)	0.1	0 053	0 005	1 816 > 0.05	2 232 > 0 05	0.185	0.079	NONE	N	N
		√√(x+constant)	0.5	0.019	0.001	2.018 > 0.05	2 233 > 0.05	0 296	0.050	NONE	Y	N
		√√(x+constant)	1	0 012	0 001	2 123 > 0.05	2 218 > 0 05	0 371	0.036	NONE	Y	N

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Sebastes mystinus														
	count	1/(x+constant)	0.01	0.016	0.042	1.383	> 0.05	2.163	> 0.05	0.163	0.086	NONE	Y	N
		1/(x+constant)	0.1	0.023	0.453	1.706	> 0.05	2.120	> 0.05	0.086	0.128	NONE	Y	Y
		1/(x+constant)	0.5	0.818	0.100	1.880	> 0.05	2.282	> 0.05	0.050	0.164	NONE	N	Y
		1/(x+constant)	1	0.521	0.034	1.791	> 0.05	2.382	> 0.05	0.038	0.182	NONE	N	N
		$\log_{10}$(x+constant)	0.01	0.449	0.545	1.639	> 0.05	2.200	> 0.05	0.023	0.213	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.438	0.068	1.660	> 0.05	2.298	> 0.05	0.020	0.222	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.011	0.050	1.518	> 0.05	2.432	> 0.05	0.019	0.225	NONE	Y	N
		$\log_{10}$(x+constant)	1	0.001	0.063	1.416	> 0.05	2.483	> 0.05	0.019	0.227	NONE	Y	Y
		NONE	0	<.001	0.045	1.092	<=0.05	2.572	> 0.05	0.026	0.205	NONE	Y	N
		√(x+constant)	0.01	0.001	0.050	1.322	<=0.05	2.393	> 0.05	0.014	0.245	NONE	Y	N
		√(x+constant)	0.1	<.001	0.057	1.298	<=0.05	2.446	> 0.05	0.016	0.237	NONE	Y	Y
		√(x+constant)	0.5	<.001	0.067	1.241	<=0.05	2.508	> 0.05	0.018	0.229	NONE	Y	Y
		√(x+constant)	1	<.001	0.069	1.204	<=0.05	2.531	> 0.05	0.019	0.225	NONE	Y	Y
		√√(x+constant)	0.01	0.177	0.077	1.522	> 0.05	2.285	> 0.05	0.013	0.247	NONE	N	Y
		√√(x+constant)	0.1	0.019	0.049	1.484	> 0.05	2.371	> 0.05	0.016	0.238	NONE	Y	N
		√√(x+constant)	0.5	<.001	0.062	1.372	> 0.05	2.471	> 0.05	0.017	0.232	NONE	Y	Y
		√√(x+constant)	1	<.001	0.070	1.302	<=0.05	2.508	> 0.05	0.018	0.229	NONE	Y	Y
***Sebastes mystinus* (juv.)**														
	count	1/(x+constant)	0.01	0.238	0.264	1.704	> 0.05	0.735	<=0.05	0.105	0.115	NONE	N	Y
		1/(x+constant)	0.1	0.112	0.308	1.616	> 0.05	0.610	<=0.05	0.093	0.123	NONE	N	Y
		1/(x+constant)	0.5	0.062	0.088	1.637	> 0.05	0.558	<=0.05	0.101	0.118	NONE	N	Y
		1/(x+constant)	1	0.016	0.027	1.673	> 0.05	0.535	<=0.05	0.109	0.113	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	0.179	0.105	1.711	> 0.05	0.517	<=0.05	0.031	0.194	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.054	0.029	1.647	> 0.05	0.505	<=0.05	0.028	0.200	NONE	N	N
		$\log_{10}$(x+constant)	0.5	0.004	0.007	1.560	> 0.05	0.510	<=0.05	0.031	0.195	NONE	Y	N
		$\log_{10}$(x+constant)	1	0.001	0.004	1.491	> 0.05	0.518	<=0.05	0.029	0.199	NONE	Y	N
		NONE	0	0.004	<.001	0.871	<=0.05	0.609	<=0.05	0.065	0.146	NONE	Y	N
		√(x+constant)	0.01	<.001	0.001	1.146	<=0.05	0.505	<=0.05	0.014	0.245	NONE	Y	N
		√(x+constant)	0.1	<.001	0.001	1.112	<=0.05	0.520	<=0.05	0.017	0.233	NONE	Y	N
		√(x+constant)	0.5	<.001	<.001	1.062	<=0.05	0.538	<=0.05	0.021	0.220	NONE	Y	N
		√(x+constant)	1	<.001	<.001	1.029	<=0.05	0.548	<=0.05	0.023	0.214	NONE	Y	N
		√√(x+constant)	0.01	0.045	0.017	1.552	> 0.05	0.485	<=0.05	0.011	0.258	NONE	Y	N
		√√(x+constant)	0.1	0.004	0.006	1.449	> 0.05	0.500	<=0.05	0.015	0.240	NONE	Y	N
		√√(x+constant)	0.5	<.001	0.002	1.337	<=0.05	0.518	<=0.05	0.019	0.226	NONE	Y	N
		√√(x+constant)	1	<.001	0.001	1.266	<=0.05	0.529	<=0.05	0.020	0.222	NONE	Y	N

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Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value Prob.	Operation Q-Value Prob	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[4] d.f. used in Analysis	Passed Tests for BACI Analysis
Sebastes paucispinis *(juv.)*												
	count	1/(x+constant)	0.01	0.979	0.981	1.601 > 0 05	1.802 > 0 05	0.236	0.063	NONE	N	Y
		1/(x+constant)	0.1	1.000	0.984	1.617 > 0.05	1.679 > 0 05	0.299	0.049	NONE	N	Y
		1/(x+constant)	0.5	0.997	0.630	1.723 > 0 05	1.739 > 0 05	0.605	0.012	NONE	N	Y
		1/(x+constant)	1	0.973	0.503	1 817 > 0.05	1.812 > 0.05	0.822	0.002	NONE	N	Y
		log_{10}(x+constant)	0.01	0.995	0.739	1.778 > 0 05	1.715 > 0 05	0.509	0.020	NONE	N	Y
		log_{10}(x+constant)	0.1	0.919	0.436	1 881 > 0 05	1.739 > 0.05	0 769	0.004	NONE	N	Y
		log_{10}(x+constant)	0 5	0.565	0.186	2 006 > 0 05	1 841 > 0 05	0.970	<.001	NONE	N	Y
		log_{10}(x+constant)	1	0.357	0.101	2.080 > 0.05	1.881 > 0.05	0.884	0 001	NONE	N	Y
		NONE	0	0.121	<.001	2.812 > 0 05	1.947 > 0.05	0.727	0.006	NONE	N	N
		√(x+constant)	0 01	0.163	0 003	2 384 > 0 05	1.797 > 0 05	0 884	0 001	NONE	N	N
		√(x+constant)	0 1	0.125	0 002	2.419 > 0 05	1 842 > 0 05	0.829	0.002	NONE	N	N
		√(x+constant)	0 5	0 093	0 001	2 481 > 0 05	1.896 > 0.05	0.779	0 004	NONE	N	N
		√(x+constant)	1	0 084	< 001	2.522 > 0 05	1.915 > 0.05	0.762	0.004	NONE	N	N
		√√(x+constant)	0 01	0.736	0.187	2.013 > 0 05	1.736 > 0.05	0.819	0.002	NONE	N	Y
		√√(x+constant)	0.1	0.463	0 080	2 093 > 0 05	1.787 > 0.05	0.995	<.001	NONE	N	Y
		√√(x+constant)	0.5	0 216	0 025	2 204 > 0.05	1.869 > 0.05	0.860	0 001	NONE	N	N
		√√(x+constant)	1	0 144	0 012	2 274 > 0.05	1.898 > 0.05	0.813	0 003	NONE	N	N
Sebastes rastrelliger												
	count	1/(x+constant)	0 01	0.845	0.161	2 225 > 0.05	1.642 > 0 05	0.700	0 007	NONE	N	Y
		1/(x+constant)	0.1	0.960	0.488	2.267 > 0.05	1.601 > 0.05	0.664	0 009	NONE	N	Y
		1/(x+constant)	0.5	0.993	0.730	2 153 > 0.05	1.394 > 0.05	0.582	0 014	NONE	N	Y
		1/(x+constant)	1	0 852	0.587	2 103 > 0.05	1.325 > 0.05	0.544	0 017	NONE	N	Y
		log_{10}(x+constant)	0.01	0.990	0.555	2.254 > 0.05	1 556 > 0 05	0 620	0.011	NONE	N	Y
		log_{10}(x+constant)	0.1	0 991	0.882	2.183 > 0 05	1 432 > 0 05	0 573	0.015	NONE	N	Y
		log_{10}(x+constant)	0 5	0.664	0.601	2.097 > 0.05	1 314 <=0 05	0.523	0.019	NONE	N	Y
		log_{10}(x+constant)	1	0.384	0.588	2 077 > 0 05	1.285 <=0.05	0.502	0.021	NONE	N	Y
		NONE	0	0 071	0 686	2 067 > 0.05	1.255 <=0 05	0.453	0.026	NONE	N	Y
		√(x+constant)	0 01	0 857	0.841	2 163 > 0.05	1.394 > 0.05	0.531	0 018	NONE	N	Y
		√(x+constant)	0 1	0 582	0 668	2.113 > 0 05	1 331 > 0 05	0 514	0.020	NONE	N	Y
		√(x+constant)	0 5	0 258	0.613	2.077 > 0 05	1.281 <=0.05	0 489	0.022	NONE	N	Y
		√(x+constant)	1	0.171	0 623	2 070 > 0 05	1.268 <=0.05	0.478	0.023	NONE	N	Y
		√√(x+constant)	0.01	0.996	0.867	2 220 > 0.05	1.482 > 0 05	0.576	0 014	NONE	N	Y
		√√(x+constant)	0 1	0.900	0.748	2.147 > 0.05	1.380 > 0 05	0.544	0.017	NONE	N	Y
		√√(x+constant)	0 5	0.449	0 600	2 086 > 0 05	1.296 <=0 05	0.506	0.020	NONE	N	Y
		√√(x+constant)	1	0.263	0 602	2.073 > 0 05	1 276 <=0 05	0.490	0.022	NONE	N	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Sebastes serranoides														
	count	1/(x+constant)	0.01	0.894	0.492	2.510	> 0.05	1.787	> 0.05	0.863	0.001	NONE	N	Y
		1/(x+constant)	0.1	0.679	0.965	2.361	> 0.05	1.811	> 0.05	0.818	0.002	NONE	N	Y
		1/(x+constant)	0.5	0.037	0.448	2.145	> 0.05	1.826	> 0.05	0.890	0.001	NONE	Y	Y
		1/(x+constant)	1	0.021	0.355	2.109	> 0.05	1.829	> 0.05	0.933	< 001	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.630	0.989	2.313	> 0.05	1.797	> 0.05	0.854	0.002	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.062	0.544	2.166	> 0.05	1.818	> 0.05	0.884	0.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.020	0.347	2.106	> 0.05	1.828	> 0.05	0.945	<.001	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.018	0.322	2.103	> 0.05	1.829	> 0.05	0.965	<.001	NONE	Y	Y
		NONE	0	0.021	0.313	2.113	> 0.05	1.830	> 0.05	0.993	<.001	NONE	Y	Y
		√(x+constant)	0.01	0.048	0.513	2.138	> 0.05	1.808	> 0.05	0.916	0.001	NONE	Y	Y
		√(x+constant)	0.1	0.023	0.378	2.110	> 0.05	1.823	> 0.05	0.941	<.001	NONE	Y	Y
		√(x+constant)	0.5	0.019	0.322	2.104	> 0.05	1.829	> 0.05	0.971	<.001	NONE	Y	Y
		√(x+constant)	1	0.019	0.315	2.106	> 0.05	1.830	> 0.05	0.980	<.001	NONE	Y	Y
		√√(x+constant)	0.01	0.202	0.744	2.213	> 0.05	1.801	> 0.05	0.878	0.001	NONE	N	Y
		√√(x+constant)	0.1	0.033	0.448	2.130	> 0.05	1.820	> 0.05	0.912	0.001	NONE	Y	Y
		√√(x+constant)	0.5	0.019	0.333	2.103	> 0.05	1.828	> 0.05	0.958	< 001	NONE	Y	Y
		√√(x+constant)	1	0.018	0.318	2.104	> 0.05	1.829	> 0.05	0.973	< 001	NONE	Y	Y
***Sebastes serranoides/S. flavidus* (juv.)**														
	count	1/(x+constant)	0.01	0.689	0.838	2.003	> 0.05	2.280	> 0.05	0.827	0.002	NONE	N	Y
		1/(x+constant)	0.1	0.437	0.639	1.918	> 0.05	2.258	> 0.05	0.793	0.003	NONE	N	Y
		1/(x+constant)	0.5	0.104	0.875	1.782	> 0.05	1.983	> 0.05	0.895	0.001	NONE	N	Y
		1/(x+constant)	1	0.039	0.809	1.745	> 0.05	1.839	> 0.05	0.985	< 001	NONE	Y	Y
		$\log_{10}$(x+constant)	0.01	0.264	0.775	1.939	> 0.05	2.128	> 0.05	0.884	0.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.068	0.893	1.854	> 0.05	1.953	> 0.05	0.983	<.001	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.029	0.926	1.813	> 0.05	1.872	> 0.05	0.838	0.002	NONE	Y	Y
		$\log_{10}$(x+constant)	1	0.038	0.981	1.821	> 0.05	1.891	> 0.05	0.754	0.005	NONE	Y	Y
		NONE	0	0.608	0.040	2.739	> 0.05	2.059	> 0.05	0.827	0.002	NONE	N	N
		√(x+constant)	0.01	0.645	0.356	2.298	> 0.05	1.998	> 0.05	0.894	0.001	NONE	N	Y
		√(x+constant)	0.1	0.672	0.349	2.297	> 0.05	1.983	> 0.05	0.908	0.001	NONE	N	Y
		√(x+constant)	0.5	0.761	0.333	2.309	> 0.05	1.991	> 0.05	0.915	0.001	NONE	N	Y
		√(x+constant)	1	0.821	0.324	2.319	> 0.05	2.003	> 0.05	0.908	0.001	NONE	N	Y
		√√(x+constant)	0.01	0.154	0.737	1.996	> 0.05	2.011	> 0.05	0.944	< 001	NONE	N	Y
		√√(x+constant)	0.1	0.105	0.745	1.977	> 0.05	1.934	> 0.05	0.983	< 001	NONE	N	Y
		√√(x+constant)	0.5	0.142	0.660	2.015	> 0.05	1.928	> 0.05	0.911	0.001	NONE	N	Y
		√√(x+constant)	1	0.209	0.575	2.051	> 0.05	1.951	> 0.05	0.903	0.001	NONE	N	Y

(continued)

Subtidal fish observations assumption testing for BACI analysis - Benthic (continued)

Taxon	Type	Transformation	Constant Used in Transformation	Levene Test Probability	Tukey Test Probability	Results of Tests for Serial Correlation: Pre-Op Q-Value	Pre-Op Prob.	Operation Q-Value	Operation Prob.	Trend Test Probability	Trend Test R^2	Variance[1] Structure used in Analysis	Adjusted[2] d.f. used in Analysis	Passed Tests for BACI Analysis
Spp. fish														
	count	1/(x+constant)	0.01	0.248	0.043	2.114	> 0.05	1.667	> 0.05	0.347	0.040	NONE	N	N
		1/(x+constant)	0.1	0.248	0.046	2.114	> 0.05	1.666	> 0.05	0.346	0.040	NONE	N	N
		1/(x+constant)	0.5	0.248	0.065	2.113	> 0.05	1.660	> 0.05	0.343	0.041	NONE	N	Y
		1/(x+constant)	1	0.249	0.092	2.111	> 0.05	1.655	> 0.05	0.338	0.042	NONE	N	Y
		$\log_{10}$(x+constant)	0.01	0.381	0.498	2.076	> 0.05	1.644	> 0.05	0.268	0.055	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.383	0.504	2.075	> 0.05	1.644	> 0.05	0.268	0.055	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.390	0.530	2.073	> 0.05	1.644	> 0.05	0.266	0.056	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.398	0.559	2.071	> 0.05	1.644	> 0.05	0.264	0.056	NONE	N	Y
		NONE	0	0.372	0.821	2.005	> 0.05	1.702	> 0.05	0.200	0.074	NONE	N	Y
		√(x+constant)	0.01	0.454	0.732	2.043	> 0.05	1.664	> 0.05	0.231	0.065	NONE	N	Y
		√(x+constant)	0.1	0.455	0.733	2.043	> 0.05	1.664	> 0.05	0.231	0.065	NONE	N	Y
		√(x+constant)	0.5	0.456	0.741	2.042	> 0.05	1.665	> 0.05	0.230	0.065	NONE	N	Y
		√(x+constant)	1	0.455	0.749	2.041	> 0.05	1.666	> 0.05	0.229	0.065	NONE	N	Y
		√√(x+constant)	0.01	0.425	0.632	2.060	> 0.05	1.652	> 0.05	0.249	0.060	NONE	N	Y
		√√(x+constant)	0.1	0.426	0.636	2.060	> 0.05	1.652	> 0.05	0.249	0.060	NONE	N	Y
		√√(x+constant)	0.5	0.431	0.652	2.059	> 0.05	1.652	> 0.05	0.247	0.060	NONE	N	Y
		√√(x+constant)	1	0.436	0.669	2.057	> 0.05	1.653	> 0.05	0.246	0.061	NONE	N	Y
Total fish														
	count	1/(x+constant)	0.01	0.002	0.021	2.336	> 0.05	1.533	> 0.05	0.954	<.001	NONE	Y	N
		1/(x+constant)	0.1	0.002	0.021	2.336	> 0.05	1.534	> 0.05	0.958	<.001	NONE	Y	N
		1/(x+constant)	0.5	0.003	0.024	2.339	> 0.05	1.538	> 0.05	0.973	<.001	NONE	Y	N
		1/(x+constant)	1	0.003	0.028	2.342	> 0.05	1.543	> 0.05	0.991	<.001	NONE	Y	N
		$\log_{10}$(x+constant)	0.01	0.343	0.355	2.356	> 0.05	1.695	> 0.05	0.540	0.017	NONE	N	Y
		$\log_{10}$(x+constant)	0.1	0.347	0.356	2.355	> 0.05	1.695	> 0.05	0.539	0.017	NONE	N	Y
		$\log_{10}$(x+constant)	0.5	0.364	0.363	2.353	> 0.05	1.696	> 0.05	0.534	0.018	NONE	N	Y
		$\log_{10}$(x+constant)	1	0.384	0.372	2.351	> 0.05	1.698	> 0.05	0.529	0.018	NONE	N	Y
		NONE	0	0.717	0.525	2.330	> 0.05	1.887	> 0.05	0.531	0.018	NONE	N	Y
		√(x+constant)	0.01	0.932	0.567	2.309	> 0.05	1.786	> 0.05	0.451	0.026	NONE	N	Y
		√(x+constant)	0.1	0.932	0.568	2.309	> 0.05	1.786	> 0.05	0.451	0.026	NONE	N	Y
		√(x+constant)	0.5	0.934	0.570	2.308	> 0.05	1.787	> 0.05	0.450	0.026	NONE	N	Y
		√(x+constant)	1	0.936	0.572	2.307	> 0.05	1.787	> 0.05	0.449	0.026	NONE	N	Y
		√√(x+constant)	0.01	0.751	0.480	2.330	> 0.05	1.739	> 0.05	0.476	0.023	NONE	N	Y
		√√(x+constant)	0.1	0.754	0.481	2.330	> 0.05	1.739	> 0.05	0.476	0.023	NONE	N	Y
		√√(x+constant)	0.5	0.764	0.486	2.328	> 0.05	1.740	> 0.05	0.473	0.024	NONE	N	Y
		√√(x+constant)	1	0.777	0.492	2.326	> 0.05	1.741	> 0.05	0.470	0.024	NONE	N	Y

1 Serially correlated data requiring use of autoregressive error structure in analysis.
2 Heterogeneous variances requiring Satterthwaithe adjusted degrees of freedom in analysis.

Horizontal band transect algal ANOVA analysis results

Taxon	Transect Level	Quad	Station	Transformation	Constant used in Transformation	Variance Structure used in Analysis[1]	Adjusted d.f. used in Analysis	F-Value for test among Periods	Prob of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op. and Op periods	F-Value for test of Station-Period interaction	Prob. Of F-Value for test of Station-Period interaction
Algal cover	1	10	all	none	0	none	Y	184.32	<.001	> 99	0 985	24.75	< 001
Algal diversity	1	10	all	none	0	none	Y						
Calliarthron/Bossiella spp.-complex	1	10	all	√(x+constant)	0.1	none	Y	1.55	0 219	>.99	0.708	14 41	< 001
Chondracanthus canaliculatus	1	10	all	none	0	AR	N	5.56	0 006	>.99	1 000	42.53	< 001
Corallina vancouveriensis	1	10	all	none	0	none	Y						
Coralline crust	1	10	cove	none	0	none	Y	11.55	<.001	>.99	0.760	11 02	< 001
Cryptopleura violacea	1	10	all	√(x+constant)	1	AR	Y	31.81	< 001	> 99	1 000	27.86	< 001
Egregia menziesii	1	10	all	none	0	none	Y						
Filamentous red algae-complex	1	10	all	none	0	none	Y						
Gastroclonium subarticulatum	1	10	all	√(x+constant)	1	AR	Y	15 02	< 001	> 99	0.844	6.03	<.001
Gelidium coulteri	1	10	all	none	0	none	Y	7.25	0 001	>.99	0 553	9.15	< 001
Mastocarpus papillatus	1	10	all	none	0	AR	Y	25.56	< 001	> 99	0.934	16 64	< 001
Mazzaella flaccida	1	10	all	arcsin	0	none	Y	48.28	<.001	>.99	1.000	37.25	<.001
Non-coralline crust	1	10	cove	arcsin	0	none	Y	26.74	< 001	>.99	0.446	9.73	< 001
Phyllospadix spp.	1	10	all	none	0	none	Y						
Prionitis spp.	1	10	all	√(x+constant)	1	AR	Y	26 10	< 001	> 99	0.881	24 05	< 001
Rock	1	10	all	arcsin	0	AR	Y	47.90	<.001	>.99	0 344	24.47	<.001
Spp. algae	1	10	all	none	0	none	Y						
Algal cover	3	10	cove	none	0	none	N						
Algal diversity	3	10	cove	none	0	AR	Y	135.09	<.001	>.99	0.913	32.48	< 001
Chondracanthus canaliculatus	3	10	cove	√(x+constant)	0.1	AR	Y	162.69	<.001	>.99	1 000	177.50	<.001
Cladophora spp.	3	10	cove	none	0	none	Y						
Corallina vancouveriensis	3	10	cove	none	0	none	Y						
Coralline crust	3	10	cove	arcsin	0	none	N	26 66	<.001	>.99	0.987	14.04	< 001
Endocladia muricata	3	10	cove	none	0	none	Y	127.89	<.001	>.99	1 000	40 10	<.001
Filamentous red algae-complex	3	10	cove	√(x+constant)	0 01	AR	Y	5 41	0.006	>.99	0.135	8 94	< 001
Fucus gardneri	3	10	cove	none	0	none	Y						
Gelidium coulteri	3	10	cove	√(x+constant)	1	none	Y	31.77	< 001	>.99	0 997	11.04	< 001
Gelidium pusillum	3	10	cove	√(x+constant)	0.5	none	Y	4.74	0 011	>.99	0 691	5.76	< 001
Mastocarpus papillatus	3	10	cove	arcsin	0	AR	Y	14.35	< 001	>.99	1.000	35.45	<.001
Mazzaella affinis	3	10	cove	arcsin	0	AR	Y	69.54	<.001	>.99	0.893	27.67	<.001
Mazzaella flaccida	3	10	cove	none	0	AR	Y	12.24	<.001	>.99	1.000	79.77	<.001
Non-coralline crust	3	10	cove	none	0	none	Y	2.16	0.122	>.99	0 594	18.99	<.001
Pelvetia compressa	3	10	cove	√(x+constant)	1	AR	Y	136.30	<.001	>.99	1.000	76.35	< 001
Porphyra spp.	3	10	cove	none	0	none	Y						
Prionitis spp.	3	10	cove	none	0	none	Y						
Rock	3	10	cove	none	0	none	Y						
Spp. algae	3	10	cove	none	0	none	Y	287.08	<.001	>.99	1.000	74.49	< 001
Ulva/Enteromorpha spp.	3	10	cove	none	0	none	Y						

(continued)

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Horizontal band transect algal ANOVA analysis results (continued)

	Orthogonal Comparisons															
	All Areas				Diablo Cove				Fields Cove				Diablo Point			
Taxon	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs Op. 1 + Op. 2 Prob.	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs Op. 2 Prob.	Pre-Op vs. Op. 1 + Op. 2 Prob.	Pre-Op vs. Op. 1 Prob.	Op 1 vs. Op. 2 Prob.	Pre-Op vs Op. 2 Prob.	Pre-Op vs Op 1 + Op. 2 Prob.
Algal cover	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	< 001	0.366	0.037	0.001	<.001	<.001	<.001	< 001
Algal diversity																
Calliarthron/Bossiella spp.-complex	0 083	0.567	0.352	0.130	<.001	0.203	0.072	0.003	0.447	0.037	0.006	0.027	0.392	0.051	0.329	0.886
Chondracanthus canaliculatus	0.578	0.001	0.005	0.090	0.030	<.001	< 001	< 001	0.302	0.248	0.053	0.063	< 001	0.018	0.149	0 001
Corallina vancouveriensis																
Coralline crust	0.077	0.001		< 001	0.132	<.001	<.001	<.001	0.058	0.985	0.111	0.039				
Cryptopleura violacea	0.103	<.001	<.001	<.001	0.195	<.001	<.001	<.001	0 020	0.157	<.001	<.001	0.354	<.001	<.001	<.001
Egregia menziesii																
Filamentous red algae-complex																
Gastroclonium subarticulatum	0.049	< 001	<.001	<.001	0.003	<.001	<.001	<.001	0 506	<.001	0.003	0.144	0.425	0.016	0 006	0.041
Gelidium coulteri	0.066	<.001	0 035	0.715	0.217	<.001	0 007	0.284	0.069	0.578	0.038	0.019	<.001	0.001	0.961	0 055
Mastocarpus papillatus	0.065	<.001	<.001	0.189	<.001	< 001	<.001	0.151	0.776	0.716	0.460	0.532	0.460	0 411	0.939	0.674
Mazzaella flaccida	<.001	0.705	< 001	< 001	<.001	0.103	<.001	<.001	<.001	0.248	0.075	0.002	0 006	<.001	<.001	<.001
Non-coralline crust	<.001	0.131		<.001	<.001	0.298	<.001	<.001	0.046	0.030	0.576	0.470				
Phyllospadix spp.																
Prionitis spp.	< 001	<.001	0 007	0.373	< 001	<.001	0 567	0 015	0.001	0.118	<.001	<.001	<.001	<.001	0.018	0.375
Rock	<.001	<.001	<.001	<.001	<.001	< 001	< 001	< 001	0.323	0.070	0.009	0.022	<.001	0 219	<.001	<.001
Spp. algae																
Algal cover																
Algal diversity	<.001	<.001		<.001	<.001	<.001	<.001	<.001	0.056	0.154	0.001	0.001				
Chondracanthus canaliculatus	< 001	0.012		<.001	<.001	0 002	<.001	<.001	0.032	0.799	0.083	0.022				
Cladophora spp.																
Corallina vancouveriensis																
Coralline crust	<.001	<.001		< 001	< 001	0.001	<.001	<.001	0.515	<.001	<.001	0.040				
Endocladia muricata	<.001	0.858		< 001	<.001	0.169	< 001	< 001	0.021	0.002	0 198	0 681				
Filamentous red algae-complex	0.002	0.049		0.001	0.001	0.017	0.155	0.001	0.375	0.929	0.295	0.230				
Fucus gardneri																
Gelidium coulteri	<.001	0.025		<.001	< 001	0.027	< 001	<.001	<.001	0.192	<.001	< 001				
Gelidium pusillum	0.003	0.127		0.023	0.002	0.125	0 274	0.018	0.190	0.420	0 804	0 380				
Mastocarpus papillatus	<.001	0.108		<.001	<.001	0.035	<.001	<.001	0.288	0.647	0.486	0.348				
Mazzaella affinis	< 001	0.000		<.001	<.001	< 001	< 001	<.001	0.019	0.502	0.005	0.001				
Mazzaella flaccida	<.001	0.626		<.001	<.001	0.494	< 001	<.001	0.050	0.776	0.038	0.017				
Non-coralline crust	0.240	0.044		0.965	0.524	0.256	0.555	0 972	0.049	0.001	0.092	0.966				
Pelvetia compressa	<.001	<.001		<.001	<.001	<.001	<.001	<.001	0.420	0.002	0.001	0.216				
Porphyra spp.																
Prionitis spp.																
Rock																
Spp. algae	<.001	< 001		<.001	<.001	< 001	< 001	<.001	0.469	0.606	0.948	0 662				
Ulva/Enteromorpha spp.																

Horizontal band transect invertebrate ANOVA analysis results

Taxon	Transect level	Quad	Station	Transformation	Constant used in Transformation	Variance[1] Structure used in Analysis	Adjusted d.f. used in Analysis	F-Value for test among Periods	Prob. of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op. and Op. periods	F-Value for test of Station-Period interaction	Prob Of F-Value for test of Station-Period interaction
Anthopleura elegantissima	1	5	all	$\log_{10}$(x+constant)	0.5	AR	Y	79.63	<.001	>.99	0 962	49.580	< 001
Lottia limatula	1	5	all	$\log_{10}$(x+constant)	0.1	none	Y	4.73	0.012	>.99	0.362	13 491	< 001
Lottia pelta	1	5	all	1/(x+constant)	0.1	none	Y	1.84	0.166	>.99	0.130	4.224	<.001
Macclintockia scabra	1	5	all	$\log_{10}$(x+constant)	0.1	none	Y	3 62	0 032	>.99	0 291	40 987	<.001
Fissurella volcano	1	5	all	1/(x+constant)	1	none	Y	19.50	< 001	>.99	0 444	8 067	<.001
Mytilus californianus	1	5	cove	none	0	none	Y						
Tectura scutum	1	5	all	$\log_{10}$(x+constant)	1	none	Y	1.38	0.258	>.99	0 367	4.395	< 001
Tegula brunnea	1	5	all	none	0	none	Y	0.69	0.504	>.99	0 852	4.280	< 001
Tegula funebralis	1	5	all	√(x+constant)	1	AR	Y	3 35	0 041	>.99	0.373	10.008	< 001
Chthamalus fissus	1	10	all	none	0	none	Y						
Pagurus spp.	1	5	all	none	0	none	Y	3.34	0 041	>.99	0 549	4 362	< 001
Tetraclita rubescens	1	5	all	√(x+constant)	1	AR	Y	30.14	<.001	>.99	0.357	19 668	<.001
Strongylocentrotus purpuratus	1	5	all	$\log_{10}$(x+constant)	0.5	AR	Y	222.67	<.001	>.99	0 846	37.884	< 001
Phragmatopoma californica	1	10	cove	arcsin	0	none	N						
Haliotis spp.	1	10	all	$\log_{10}$(x+constant)	1	none	Y	39 96	<.001	>.99	0.922	19 813	<.001
Spp. Inverts	1	10	all	√(x+constant)	1	none	N	7.66	0.001	>.99	0.316	8.998	<.001
Anthopleura elegantissima	3	5	cove	none	0	none	Y						
Lottia digitalis	3	5	cove	$\log_{10}$(x+constant)	0.5	none	Y	33.10	<.001	>.99	0.175	16 278	< 001
Lottia limatula	3	5	cove	$\log_{10}$(x+constant)	1	none	N	41.24	<.001	>.99	0.283	8.370	< 001
Lottia pelta	3	5	cove	$\log_{10}$(x+constant)	1	AR	Y	2.33	0.104	> 99	0.325	4.842	< 001
Macclintockia scabra	3	5	cove	$\log_{10}$(x+constant)	1	AR	Y	109.46	<.001	>.99	0.112	61.327	< 001
Fissurella volcano	3	5	cove	$\log_{10}$(x+constant)	0.1	none	Y	6.10	0.003	>.99	0.521	6.538	< 001
Tectura scutum	3	5	cove	√(x+constant)	1	none	Y	2.14	0.125	>.99	0.218	4.129	<.001
Tegula funebralis	3	5	cove	√(x+constant)	1	none	Y	17.73	< 001	>.99	0 460	2 666	0 008
Nuttallina californica	3	5	cove	$\log_{10}$(x+constant)	0.5	AR	Y	61.96	<.001	>.99	1.000	64.248	<.001
Chthamalus fissus	3	10	cove	none	0	AR	Y	49.27	<.001	>.99	0.101	47.750	< 001
Pagurus spp.	3	5	cove	√(x+constant)	1	none	Y	3 76	0 028	>.99	0.120	4 063	< 001
Tetraclita rubescens	3	5	cove	$\log_{10}$(x+constant)	1	none	Y	2 83	0 065	>.99	0 568	10 651	<.001
Phragmatopoma californica	3	10	cove	√(x+constant)	0 01	none	Y	42.54	<.001	>.99	0 206	17.985	< 001
Spp. Inverts	3	10	cove	none	0	none	N	17.21	<.001	>.99	0.903	4.582	<.001

(continued)

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Horizontal band transect invertebrate ANOVA analysis results (continued)

	Orthogonal Comparisons															
	All Areas				Diablo Cove				Fields Cove				Diablo Point			
Taxon	Pre-Op vs Op 1 Prob.	Op. 1 vs Op. 2 Prob.	Pre-Op vs. Op. 2 Prob.	Pre-Op. vs. Op 1 + Op. 2 Prob.	Pre-Op vs Op 1 Prob.	Op 1 vs. Op. 2 Prob	Pre-Op vs Op. 2 Prob	Pre-Op vs. Op. 1 + Op. 2 Prob.	Pre-Op vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob	Pre-Op vs. Op. 2 Prob.	Pre-Op vs. Op 1 + Op 2 Prob	Pre-Op. vs Op. 1 Prob.	Op 1 vs Op. 2 Prob	Pre-Op. vs Op 2 Prob	Pre-Op vs Op 1 + Op. 2 Prob
Anthopleura elegantissima	<.001	<.001	<.001	<.001	< 001	0 014	< 001	< 001	0 482	0 019	0.001	0.009	0 008	< 001	< 001	< 001
Lottia limatula	0 006	0.989	0.020	0.003	< 001	0.141	<.001	<.001	0 106	0.971	0.193	0.084	0.374	0.014	0.003	0 020
Lottia pelta	0 070	0.226	0 698	0.223	0.060	0.261	0 591	0.179	0 001	0.238	< 001	<.001	0 002	0 675	0 023	0 003
Macclintockia scabra	0 018	0.935	0.039	0.010	< 001	0 680	< 001	< 001	0 475	0 041	0.134	0.551	0.183	0 097	0 007	0 017
Fissurella volcano	<.001	0.006	< 001	< 001	<.001	0.003	<.001	< 001	0.928	0.459	0.497	0.693	<.001	0 028	<.001	< 001
Mytilus californianus																
Tectura scutum	0.547	0.236	0.104	0.181	0.808	0.428	0 341	0 470	0 369	0.132	0.430	0.977	0 683	0 014	0.013	0 088
Tegula brunnea	0 300	0.933	0 339	0 246	0 546	0.582	0.297	0.326	0 932	0.060	0.066	0.246	0.136	0.630	0 087	0.068
Tegula funebralis	0 018	0 345	0.136	0 012	< 001	0 737	< 001	<.001	0.144	< 001	0 001	0 229	0 253	0 660	0.503	0 286
Chthamalus fissus																
Pagurus spp.	0.419	0 058	0 013	0 043	0 622	0 001	0.003	0 106	0 146	0.120	0.706	0.588	0 067	0.894	0 089	0 046
Tetraclita rubescens	< 001	0 205	< 001	< 001	<.001	0 020	< 001	< 001	0 028	0.472	0 152	0 026	<.001	0.994	< 001	< 001
Strongylocentrotus purpuratus	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	0 002	0 013	< 001	< 001
Phragmatopoma californica																
Haliotis spp	<.001	< 001	< 001	< 001	< 001	0 116	< 001	< 001	<.001	< 001	< 001	< 001	0 215	< 001	<.001	0 110
Spp. Inverts	0.201	0 005	< 001	0 002	0.419	< 001	0 002	0.118	0 098	0 466	0 035	0 023	<.001	0.339	< 001	< 001
Anthopleura elegantissima																
Lottia digitalis	< 001	<.001		<.001	< 001	<.001	< 001	<.001	0 045	0.750	0.185	0.049				
Lottia limatula	< 001	0.001		<.001	<.001	<.001	<.001	<.001	0.008	0.380	0.197	0 022				
Lottia pelta	0 037	0 562		0 042	0 087	0 823	0 065	0 037	0 011	0 008	0.605	0.269				
Macclintockia scabra	< 001	0 005		< 001	< 001	0.002	<.001	< 001	0 048	0 216	0.001	0.001				
Fissurella volcano	0.008	0.408		0.001	0.001	0.465	<.001	<.001	0 474	0.476	0 883	0 770				
Tectura scutum	0 225	0 046		0.998	0.182	0 053	0 415	0 844	0.801	0.231	0.303	0 587				
Tegula funebralis	< 001	0 265		< 001	< 001	0.156	< 001	< 001	0.081	0.823	0.227	0.081				
Nuttallina californica	< 001	0.010		<.001	<.001	0 008	< 001	< 001	0 284	0.074	0 001	0.004				
Chthamalus fissus	<.001	0.507		<.001	< 001	0 354	< 001	<.001	0.949	0.714	0.718	0 819				
Pagurus spp.	0.584	0.009		0 248	0 725	0 001	0.003	0 081	0.359	0 844	0.338	0 258				
Tetraclita rubescens	0.171	0.252		0 026	0 060	0 552	0 031	0 016	0.462	0.010	0 038	0.327				
Phragmatopoma californica	<.001	0.001		<.001	<.001	0.011	<.001	< 001	<.001	<.001	0.028	< 001				
Spp Inverts	<.001	0.349		<.001	<.001	0.155	<.001	<.001	<.001	0.421	0.021	<.001				

Subtidal arc quadrant ANOVA analysis results

Taxon	Transformation	Constant used in Transformation	Variance Structure used in Analysis[1]	Adjusted d.f. used in Analysis	F-Value for test among Periods	Prob. of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op. and Op. periods	F-Value for test of Station-Period interaction	Prob. Of F-Value for test of Station-Period interaction
Acmaea mitra	√(x+constant)	1	none	N	4.99	0.010	<.99	0.172	3.568	0.001
Anthopleura elegantissima	√(x+constant)	1	none	Y	16.94	<.001	<.99	0.790	6.739	<.001
Asterina miniata	√(x+constant)	1	none	Y	4.17	0.021	<.99	0.985	24.672	<.001
Cystoseira osmundacea	√(x+constant)	1	none	Y	25.49	<.001	<.99	0.522	17.503	<.001
Diopatra ornata	√√(x+constant)	0.01	none	Y	0.67	0.514	<.99	0.339	3.940	<.001
Egregia menziesii	√(x+constant)	1	none	Y	17.83	<.001	<.99	0.398	4.286	<.001
Laminaria setchellii[1]	$\log_{10}$(x+constant)	0.5	none	N	122.03	<.001	<.99	0.101	42.860	<.001
Laminariales	$\log_{10}$(x+constant)	0.01	none	N	2.83	0.068	<.99	0.102	4.159	<.001
Lottia instabilis	√(x+constant)	1	none	Y	38.34	<.001	0.92	0.210	2.250	0.025
Macrocystis spp.	none	0	none	Y	26.51	<.001	<.99		3.507	0.001
Mitra idae	√(x+constant)	1	none	Y	6.39	0.003	<.99	0.535	8.110	<.001
Nereocystis luetkeana	√√(x+constant)	1	none	Y	50.47	<.001	0.89	0.184	1.989	0.049
Ophiothrix spp.	none	0	none	Y						
Pagurus spp.	none	0	none	Y	11.01	<.001	0.75	0.119	1.410	0.194
Pisaster giganteus	$\log_{10}$(x+constant)	0.1	none	N	16.77	<.001	<.99	0.107	6.635	<.001
Pista spp.	1/(x+constant)	0.1	none	N	1.14	0.329	0.69	0.101	1.250	0.272
Pterygophora californica	1/(x+constant)	1	none	Y	247.91	<.001	<.99	0.110	50.241	<.001
Sargassum muticum	none	0	none	Y	8.93	<.001	0.98		3.095	0.003
Serpulidae unid.	√√(x+constant)	1	none	N	6.51	0.003	0.91	0.116	2.122	0.035
Serpulorbis squamigerus	none	0	none	Y	11.41	<.001	0.97	0.405	2.908	0.004
Spp. inverts	1/(x+constant)	0.01	none	Y	6.99	0.002	0.89	0.915	1.990	0.049
Strongylocentrotus purpuratus	$\log_{10}$(x+constant)	0.01	none	N	94.17	<.001	<.99	0.101	5.323	<.001
Tegula brunnea	none	0	none	N	29.20	<.001	0.93	0.383	2.341	0.020
Tonicella lineata	none	0	none	Y	4.80	0.012	<.99	0.435	3.686	<.001

(continued)

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Subtidal arc quadrant ANOVA analysis results (continued)

	Orthogonal Comparisons											
	Diablo Cove				Diablo Cove - 10 ft. MLLW				Diablo Cove - 15 ft MLLW			
Taxon	Pre-Op. vs. Op 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op 1 + Op. 2 Prob.	Pre-Op vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs Op. 2 Prob.	Pre-Op vs. Op. 1 + Op. 2 Prob.	Pre-Op. vs. Op. 1 Prob	Op 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob	Pre-Op. vs. Op. 1 + Op. 2 Prob.
Acmaea mitra	0 002	0.167	0.149	0 009	0.003	0.693	0.023	0 002	0.019	0.022	0.886	0.227
Anthopleura elegantissima	<.001	0 023	< 001	< 001	0 003	0.308	<.001	<.001	<.001	< 001	<.001	<.001
Asterina miniata	0.238	0.068	0.006	0.018	0 001	0 094	< 001	< 001	0 038	0.053	0.954	0.264
Cystoseira osmundacea	< 001	< 001	0 058	0.107	< 001	<.001	<.001	0.959	<.001	0.005	0 160	0 001
Diopatra ornata	0.267	0.836	0.432	0 274	0 059	0.930	0 078	0 034	0.824	0.562	0.444	0.552
Egregia menziesii	< 001	0 033	< 001	< 001	< 001	0 035	<.001	<.001	0.656	0.378	0 208	0 308
Laminaria setchellii	<.001	0.963	<.001	< 001	< 001	0 151	<.001	< 001	<.001	0.049	< 001	<.001
Laminariales	0.162	0 259	0.019	0.027	0 019	0.261	0.002	0.001	0.898	0.311	0 379	0.636
Lottia instabilis	< 001	< 001	< 001	<.001	< 001	<.001	0 001	<.001	<.001	0.003	<.001	< 001
Macrocystis spp.	0.106	< 001	<.001	< 001	0 116	<.001	<.001	<.001	0.192	<.001	<.001	<.001
Mitra idae	0.566	0.001	0.006	0 154	0.928	0 077	0 071	0.240	0.156	<.001	< 001	0.117
Nereocystis luetkeana	0.572	<.001	<.001	<.001	0.368	<.001	< 001	< 001	0.961	< 001	<.001	<.001
Ophiothrix spp.												
Pagurus spp.	0 002	0 096	<.001	< 001	0 004	0 144	< 001	< 001	0.007	0.124	< 001	<.001
Pisaster giganteus	<.001	<.001	0 841	0.003	< 001	< 001	0 383	0.029	<.001	0 022	0.098	0.001
Pista spp.	0 259	0 680	0.160	0.137	0 329	0 417	0 097	0.119	0.212	0 838	0 363	0.212
Pterygophora californica	<.001	0 005	< 001	< 001	< 001	0 320	< 001	< 001	< 001	<.001	< 001	<.001
Sargassum muticum	0.985	<.001	<.001	0.025	1.000	<.001	<.001	0.006	0.975	0 651	0.639	0.760
Serpulidae unid.	0 207	0 013	< 001	0 004	0.142	0.124	0 005	0 011	0.466	0.001	<.001	0.005
Serpulorbis squamigerus	< 001	<.001	0.309	0.172	0.002	<.001	0.117	0.457	< 001	< 001	0 879	0 028
Spp inverts	0 186	0 013	< 001	0.004	0.100	0.001	< 001	< 001	0.685	0.563	0.355	0.428
Strongylocentrotus purpuratus	< 001	< 001	< 001	< 001	<.001	< 001	< 001	<.001	<.001	<.001	< 001	<.001
Tegula brunnea	< 001	0 001	< 001	< 001	< 001	0 003	< 001	<.001	<.001	0 002	< 001	< 001
Tonicella lineata	0.003	0.163	0.179	0 014	0 003	0 242	0.119	0.010	0.006	0 106	0 361	0 037

Subtidal fixed quadrat ANOVA analysis results

Taxon	Transformation	Constant used in Transformation	Variance[1] Structure used in Analysis	Adjusted d.f used in Analysis	F-Value for test among Periods	Prob. of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op. and Op. periods	F-Value for test of Station-Period interaction	Prob. Of F-Value for test of Station-Period interaction
Acmaea mitra	$\log_{10}$(x+constant)	1	none	N	21.84	<.001	>.99	0.205	6.61	<.001
Alia spp.	none	0	none	Y	3.51	0.037	>.99	0.814	8.48	<.001
Balanophyllia elegans	$\log_{10}$(x+constant)	0.1	none	Y	29.76	<.001	>.99	0.906	19.81	<.001
Balanus/Tetraclita spp.	$\log_{10}$(x+constant)	0.5	none	N	2.47	0.094	0.88	0.103	1.98	0.050
Bryozoa, unid. (encrusting)	none	0	none	N	5.66	0.006	>.99	0.524	7.91	<.001
Chaetopteridae	1/(x+constant)	0.01	none	Y	0.95	0.392	0.93	0.100	2.32	0.021
Dendropoma spp.	none	0	none	Y	140.95	<.001	>.99	0.932	7.54	<.001
Didemnum/Trididemnum spp	√(x+constant)	1	none	N	17.28	<.001	>.99	0.954	17.02	<.001
Homolopoma luridum/Lirularia succincta	none	0	none	N						
Hymenamphlastra cyanocrypta	none	0	none	Y						
Ophiactis simplex	none	0	none	Y	48.38	<.001	>.99		8.17	<.001
Ophiothrix spp.	$\log_{10}$(x+constant)	0.1	none	N	33.82	<.001	>.99	0.114	5.06	<.001
Pagurus spp.	none	0	none	Y	5.40	0.007	>.99	0.497	7.53	<.001
Pelecypoda unid. boring	√(x+constant)	0.1	none	Y	17.24	<.001	>.99	0.475	5.24	<.001
Phragmatopoma californica	√√(x+constant)	0.1	none	Y	50.63	<.001	>.99	0.355	32.52	<.001
Pista spp.	$\log_{10}$(x+constant)	0.5	none	Y	5.18	0.009	>.99	0.207	4.56	<.001
Porifera unid. (encrusting)	arcsin	0	none	N	4.53	0.015	0.99	0.126	3.36	0.001
Pugettia spp.	none	0	none	Y	2.77	0.072	>.99	0.310	4.12	<.001
Serpulidae unid.	$\log_{10}$(x+constant)	0.01	none	N	60.59	<.001	>.99	0.147	12.66	<.001
Sipuncula unid.	√(x+constant)	1	none	Y	9.91	<.001	>.99	0.428	4.84	<.001
Spirorbidae	none	0	none	Y	7.80	0.001	0.74	0.207	1.37	0.210
Spp. inverts	none	0	none	N	3.55	0.036	0.40	0.884	0.62	0.765
Strongylocentrotus purpuratus	$\log_{10}$(x+constant)	0.1	none	Y	77.57	<.001	>.99	0.104	9.72	<.001
Tegula brunnea	√(x+constant)	1	none	Y	34.33	<.001	0.92	0.175	2.22	0.028
Tunicates, colonial/social unid.	none	0	none	N	19.42	<.001	>.99	0.770	9.50	<.001

(continued)

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Subtidal fixed quadrat ANOVA analysis results (continued)

	Orthogonal Comparisons											
	Diablo Cove				Diablo Cove - 10 ft. MLLW				Diablo Cove - 15 ft. MLLW			
Taxon	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op 2 Prob.	Pre-Op. vs. Op 1 Prob	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.
Acmaea mitra	<.001	0.003	0.004	<.001	<.001	0.077	<.001	<.001	<.001	<.001	0 316	0.001
Alia spp.	0.433	0.057	0.012	0.046	0 005	0 013	<.001	< 001	0.025	0.765	0.086	0.022
Balanophyllia elegans	< 001	<.001	0 001	0.785	0.003	<.001	0.008	0.981	<.001	<.001	0.003	0.586
Balanus/Tetraclita spp.	0.124	0.036	0.486	0.678	0 031	0 006	0 425	0.486	0.647	0 369	0 636	0.968
Bryozoa, unid. (encrusting)	0 003	0.872	0.006	0.001	< 001	0.842	0.001	<.001	0.223	0 501	0 082	0.081
Chaetopteridae	0.182	0.741	0.385	0.205	0.039	0.512	0.224	0.060	0.977	0 849	0.833	0 884
Dendropoma spp.	<.001	0.002	<.001	<.001	< 001	0 001	<.001	< 001	<.001	0 004	< 001	< 001
Didemnum/Trididemnum spp	<.001	0.154	< 001	<.001	0 219	0 143	0 012	0 026	<.001	0.292	<.001	< 001
Homolopoma luridum/Lirularia succincta												
Hymenamphiastra cyanocrypta												
Ophiactis simplex	1.000	<.001	<.001	<.001	1.000	<.001	<.001	<.001	1.000	<.001	<.001	<.001
Ophiothrix spp.	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	0.750	< 001	< 001
Pagurus spp.	0.014	0 445	0 004	0.002	<.001	0.361	<.001	<.001	0.765	0 692	0.514	0 571
Pelecypoda unid. boring	< 001	0.001	0.072	<.001	<.001	0 010	<.001	< 001	0.282	0.005	0.074	0.607
Phragmatopoma californica	0.111	<.001	<.001	<.001	0.333	<.001	<.001	< 001	<.001	<.001	0.007	0.294
Pista spp.	0.019	0.382	0.004	0.002	0.038	0.127	0.001	0 002	0.024	0.812	0 074	0 020
Porifera unid. (encrusting)	0.022	0.451	0.006	0.003	0.001	0.476	0 029	0 002	0.646	0.009	0.003	0 037
Pugettia spp.	0 029	0.111	0.689	0.145	0.003	0.228	0.119	0.009	0 591	0 068	0.188	0 602
Serpulidae unid	<.001	0 001	<.001	< 001	<.001	0.002	<.001	<.001	<.001	0.008	<.001	< 001
Sipuncula unid.	<.001	0.573	< 001	<.001	< 001	0.832	< 001	<.001	0.071	0.135	0 003	0 004
Spirorbidae	<.001	0.037	0.171	0.004	< 001	0 054	0 079	0.001	0.031	0.110	0.713	0 157
Spp inverts	0.012	0.728	0.058	0.011	0 017	0 680	0.084	0 018	0.029	0.852	0 078	0 023
Strongylocentrotus purpuratus	<.001	<.001	<.001	< 001	< 001	<.001	< 001	<.001	<.001	< 001	< 001	<.001
Tegula brunnea	<.001	<.001	< 001	< 001	<.001	< 001	< 001	<.001	< 001	0.001	<.001	<.001
Tunicates, colonial/social unid.	<.001	0.002	<.001	<.001	0.003	0 010	<.001	<.001	<.001	0.001	<.001	<.001

Subtidal line contact ANOVA analysis results

Taxon	Transformation	Constant used in Transformation	Variance[1] Structure used in Analysis	Adjusted d.f. used in Analysis	F-Value for test among Periods	Prob. of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op. and Op. periods	F-Value for test of Station-Period interaction	Prob. Of F-Value for test of Station-Period interaction
Algal cover	none	0	none	N						
Algal diversity	none	0	none	Y	13.82	<.001	>.99	0.885	7.23	<.001
Calliarthron/Bossiella spp.-complex	none	0	none	N	18.34	<.001	>.99	0.878	14.79	<.001
Chondracanthus corymbiferus	none	0	none	Y	8.54	0.001	>.99	0.995	23.68	<.001
Chrysophyta unid	none	0	none	Y						
Corallina officinalis	√(x+constant)	0.1	none	Y	17.46	<.001	>.99	0.990	24.79	<.001
Coralline crust	none	0	none	Y	6.96	0.002	>.99	0.638	4.50	<.001
Cryptopleura ruprechtiana	none	0	none	Y						
Cryptopleura violacea	arcsin	0	none	Y	60.15	<.001	>.99	0.129	15.80	<.001
Desmarestia spp.	arcsin	0	none	Y	12.15	<.001	>.99	0.784	19.09	<.001
Farlowia/Pikea spp.-complex	arcsin	0	none	Y	54.07	<.001	>.99	0.105	17.69	<.001
Gelidium robustum	none	0	none	Y						
Mazzaella lilacina	none	0	none	Y						
Microcladia coulteri	arcsin	0	none	N	1.48	0.236	0.98	0.242	3.06	0.003
Osmundea spp.	√(x+constant)	0.1	none	Y	3.53	0.036	>.99	0.379	6.03	<.001
Phyllospadix spp.	arcsin	0	none	Y	78.34	<.001	>.99	1.000	107.33	<.001
Prionitis spp.	arcsin	0	none	Y	77.14	<.001	>.99	0.195	14.61	<.001
Rhodymenia spp.	arcsin	0	none	N	42.63	<.001	>.99	0.320	15.85	<.001
Rock	√(x+constant)	1	none	Y	3.81	0.028	0.59	0.114	1.00	0.434
Sand (shell gravel)	none	0	none	Y						
Spp. algae	none	0	none	N	6.20	0.004	>.99	0.832	7.60	<.001
Ulva/Enteromorpha spp.	none	0	none	Y						

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Subtidal line contact ANOVA analysis ANOVA analysis results (continued)

	Orthogonal Comparisons											
	Diablo Cove				Diablo Cove - 10 ft MLLW				Diablo Cove - 15 ft. MLLW			
Taxon	Pre-Op. vs. Op. 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.	Pre-Op vs. Op. 1 Prob.	Op 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob	Pre-Op. vs. Op 1 Prob.	Op. 1 vs. Op. 2 Prob.	Pre-Op. vs. Op. 2 Prob.	Pre-Op vs. Op 1 + Op. 2 Prob.
Algal cover												
Algal diversity	< 001	0.500	<.001	< 001	0.001	0.229	0.059	0 003	<.001	0.827	< 001	< 001
Calliarthron/Bossiella spp.-complex	<.001	<.001	0.172	0 098	< 001	< 001	0.804	0.003	0 006	< 001	0.001	0.588
Chondracanthus corymbiferus	< 001	0.102	0 047	0.001	0 007	0.055	0.586	0.068	<.001	0 279	<.001	< 001
Chrysophyta unid.												
Corallina officinalis	<.001	0.709	< 001	<.001	<.001	0 750	< 001	< 001	0.198	0.227	0.021	0 033
Coralline crust	0.001	0.380	0 021	0 001	< 001	0 501	<.001	<.001	0.467	0.387	0.842	0.782
Cryptopleura ruprechtiana												
Cryptopleura violacea	<.001	<.001	< 001	< 001	<.001	< 001	< 001	< 001	<.001	0 181	< 001	< 001
Desmarestia spp.	<.001	0 213	< 001	<.001	< 001	0 056	<.001	<.001	0 238	0 950	0.322	0 209
Farlowia/Pikea spp.-complex	<.001	0 278	< 001	< 001	<.001	0.220	<.001	<.001	<.001	0.477	< 001	<.001
Gelidium robustum												
Mazzaella lilacina												
Microcladia coulteri	0.917	0.112	0.142	0 394	0.689	0 030	0 013	0 079	0.417	0.594	0.842	0.570
Osmundea spp.	0.287	0 010	0.105	0.669	0 491	0.001	0.008	0.191	0.138	0.225	0.894	0.368
Phyllospadix spp.	< 001	0.764	< 001	< 001	< 001	0.762	<.001	<.001	<.001	0 825	< 001	<.001
Prionitis spp.	< 001	<.001	< 001	< 001	< 001	< 001	<.001	<.001	<.001	<.001	< 001	<.001
Rhodymenia spp.	0 044	< 001	< 001	<.001	0 083	<.001	<.001	< 001	0.054	< 001	<.001	< 001
Rock	0.071	0 011	0 345	0.674	0 031	0.042	0.938	0.251	0.351	0 005	0 053	0 490
Sand (shell gravel)												
Spp algae	0.004	0.570	0 002	0.001	0 223	0.861	0.362	0 218	< 001	0 147	< 001	< 001
Ulva/Enteromorpha spp												

Subtidal fish observation midwater and benthic ANOVA analysis results

Taxon	Transformation	Constant used in Transformation	Variance[1] Structure used in Analysis	Adjusted d.f. used in Analysis	F-Value for test among Periods	Prob. of F-Value for test among Periods	Power of F-Test among Periods	Power to detect a 50% change between Pre-Op and Op. periods	F-Value for test of Station-Period interaction	Prob. Of F-Value for test of Station-Period interaction
Midwater										
Atherinidae unid.	$\log_{10}$(x+constant)	0.5	none	Y	24.02	<.001	>.99	0.100	1.10	0.340
Oxyjulis californica	$\log_{10}$(x+constant)	0.5	none	Y	2.64	0.078	0.64	0.654	1.38	0.258
Partial diversity	none	0	none	N	7.03	0.002	0.96	0.994	3.82	0.027
Spp. fish	none	0	none	N	9.87	<.001	>.99	1.000	4.46	0.015
Aulorhynchus flavidus	1/(x+constant)	0.5	none	N	0.77	0.467	0.28	0.172	3.45	0.037
Total diversity	none	0	none	N	6.20	0.003	0.93	0.999	4.06	0.022
Sebastes paucispinis (juv.)	none	0	none	N	1.80	0.172	0.49	0.229	0.70	0.501
Sebastes serranoides/S flavidus (juv.)	√(x+constant)	0.01	none	N	0.11	0.900	0.12	0.864	2.28	0.110
Engraulis mordax	$\log_{10}$(x+constant)	0.01	none	N	0.46	0.635	0.20	0.100	1.21	0.305
Total fish	√(x+constant)	0.01	none	N	2.10	0.130	0.55	0.694	2.00	0.143
Sebastes chrysomelas/S. carnatus	√(x+constant)	1	none	N	2.21	0.117	0.57	0.994	0.82	0.444
Benthic										
Aulorhynchus flavidus	√(x+constant)	1	none	Y	3.74	0.029	0.78	0.256	1.04	0.358
Brachyistius frenatus	none	0	none	N	1.64	0.201	0.46	0.771	0.99	0.377
Citharichthys spp.	none	0	none	Y						
Coryphopterus nicholsi	$\log_{10}$(x+constant)	0.1	none	N	18.17	<.001	>.99	0.125	35.43	<.001
Damalichthys vacca (=Rhacochilus)	$\log_{10}$(x+constant)	0.1	none	N	7.75	0.001	0.97	0.772	12.34	<.001
Embiotoca jacksoni	√(x+constant)	0.01	none	Y	26.97	<.001	>.99	0.996	31.73	<.001
Embiotoca lateralis	$\log_{10}$(x+constant)	0.5	none	N	1.74	0.182	0.48	0.995	3.01	0.056
Engraulis mordax	none	0	none	N						
Hexagrammos decagrammus	$\log_{10}$(x+constant)	1	none	N	7.01	0.002	0.96	0.994	0.09	0.914
Ophiodon elongatus	√(x+constant)	1	none	Y	0.12	0.890	0.13	0.400	1.87	0.162
Oxyjulis californica	√√(x+constant)	1	none	N	3.90	0.025	0.79	0.645	4.61	0.013
Oxylebius pictus	$\log_{10}$(x+constant)	0.5	none	N	12.10	<.001	>.99	1.000	15.49	<.001
Partial diversity	√√(x+constant)	0.5	none	N	7.22	0.001	0.96	1.000	4.75	0.012
Rhacochilus toxotes	√√(x+constant)	0.1	none	N	1.48	0.234	0.43	0.156	2.04	0.138
Scorpaenichthys marmoratus	√(x+constant)	0.5	none	N	3.80	0.027	0.78	1.000	7.23	0.001
Sebastes atrovirens (yoy)	none	0	none	N						
Sebastes chrysomelas/S carnatus	$\log_{10}$(x+constant)	0.1	none	N	2.79	0.069	0.66	0.715	1.18	0.312
Sebastes mystinus	$\log_{10}$(x+constant)	0.1	none	N	2.12	0.128	0.55	0.400	43.26	<.001
Sebastes mystinus (juv.)	$\log_{10}$(x+constant)	0.01	none	N	1.75	0.182	0.48	0.201	8.74	<.001
Sebastes paucispinis (juv.)	$\log_{10}$(x+constant)	0.1	none	N	0.80	0.453	0.28	0.176	1.94	0.151
Sebastes rastrelliger	$\log_{10}$(x+constant)	1	none	N	2.32	0.105	0.59	0.993	6.91	0.002
Sebastes serranoides	$\log_{10}$(x+constant)	0.1	none	N	3.85	0.026	0.79	0.121	15.75	<.001
Sebastes serranoides/S flavidus (juv.)	√(x+constant)	1	none	N	1.21	0.306	0.37	0.951	3.16	0.049
Spp fish	none	0	none	N	3.42	0.038	0.74	1.000	8.01	0.001
Total diversity	none	0	none	N	5.89	0.004	0.92	1.000	2.61	0.081
Total fish	$\log_{10}$(x+constant)	0.01	none	N	7.00	0.002	0.96	1.000	4.78	0.011

(continued)

1. AR indicates that separate autoregressive error structures for each period were used in the analysis

Subtidal fish observation midwater and benthic ANOVA analysis results (continued)

	Orthogonal Comparisons											
	Diablo Cove				North Diablo Cove				South Diablo Cove			
Taxon	Pre-Op. vs. Op. 1 Prob.	Op 1 vs. Op 2 Prob	Pre-Op vs. Op. 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.	Pre-Op. vs Op 1 Prob.	Op 1 vs. Op 2 Prob.	Pre-Op. vs. Op 2 Prob.	Pre-Op. vs. Op. 1 + Op. 2 Prob.	Pre-Op. vs Op 1 Prob.	Op. 1 vs. Op 2 Prob.	Pre-Op. vs. Op. 2 Prob	Pre-Op. vs. Op 1 + Op 2 Prob
Atherinidae unid.	0.064	<.001	< 001	<.001	0.023	<.001	< 001	<.001	0.418	<.001	< 001	0.001
Oxyjulis californica	0.031	0 690	0.100	0 029	0.289	0 860	0 413	0 281	0.008	0 611	0.044	0 007
Partial diversity	0.243	0.010	<.001	0.006	0.099	0.193	0.006	0.011	0.631	0 001	<.001	0.012
Spp fish	0.072	0 007	< 001	<.001	0 004	0.165	<.001	< 001	0 824	0 001	0 001	0 026
Aulorhynchus flavidus	0.222	0.500	0 624	0.330	0.681	0.366	0 623	0.948	0 066	0 730	0 164	0 064
Total diversity	0.744	0 004	0 002	0.040	0.271	0.151	0.017	0.042	0 605	< 001	0.002	0.098
Sebastes paucispinis (juv)	0 092	0.991	0.119	0.063	0 058	0.973	0.083	0.037	0.172	0.990	0.199	0.128
Sebastes serranoides/S. flavidus (juv.)	0 841	0.647	0.799	0.968	0.147	0 545	0 440	0 205	0 253	0.921	0 246	0.184
Engraulis mordax	0.377	0 936	0.456	0.349	0.912	0.602	0.544	0.671	0.152	0.508	0.483	0 224
Total fish	0.218	0.368	0.046	0 061	0.224	0.121	0.010	0.026	0 332	0.967	0.343	0 269
Sebastes chrysomelas/S. carnatus	0.677	0.046	0.120	0.481	0.799	0.028	0 057	0 314	0.718	0 454	0 698	0.975
Benthic												
Aulorhynchus flavidus	0.018	0.937	0 023	0 008	0 236	0 877	0 210	0.159	0 007	0 979	0 012	0.003
Brachyistius frenatus	0.833	0.092	0.151	0.456	0.324	0.102	0.503	0.881	0.517	0 273	0 099	0.178
Citharichthys spp.												
Coryphopterus nicholsi	<.001	0 212	< 001	<.001	<.001	0.865	<.001	< 001	0.164	0 032	0 001	0.006
Damalichthys vacca (=Rhacochilus)	0 004	0 362	< 001	< 001	<.001	0.672	< 001	<.001	0.791	0 046	0 030	0.146
Embiotoca jacksoni	0.076	<.001	<.001	< 001	<.001	<.001	<.001	<.001	0.063	0 005	0 300	0.674
Embiotoca lateralis	0.067	0.476	0 301	0.102	0.514	0.741	0.355	0.360	0.010	0.114	0 367	0 048
Engraulis mordax												
Hexagrammos decagrammus	0.001	0 004	0.857	0 054	0.004	0 005	0.996	0.103	0.004	0 013	0.743	0.067
Ophiodon elongatus	0.955	0.687	0.658	0.768	0.723	0.669	0.934	0.882	0 801	0 246	0 375	0 696
Oxyjulis californica	0 068	0 009	0.381	0 617	0 019	0.060	0.691	0.119	0.328	0.003	0.048	0 514
Oxylebius pictus	< 001	< 001	0.977	0 019	0.167	0.398	0 635	0.292	<.001	<.001	0 670	0.003
Partial diversity	0.004	0.001	0 559	0 200	0 046	0 068	0 926	0 241	0.001	< 001	0 250	0.247
Rhacochilus toxotes	0.910	0 117	0 157	0.432	0.476	0.116	0.031	0 090	0.366	0 267	0 816	0 715
Scorpaenichthys marmoratus	0 017	0.029	0.913	0.159	<.001	0 066	0.094	0.003	0 623	0 046	0.137	0 535
Sebastes atrovirens (yoy)												
Sebastes chrysomelas/S. carnatus	0.046	0 051	0.977	0.270	0.156	0.032	0.437	0.742	0.040	0 213	0.466	0.114
Sebastes mystinus	0 174	0 051	0 527	0.702	< 001	0.297	0 014	0.001	0.223	0 010	<.001	0 005
Sebastes mystinus (juv.)	0.066	0 365	0 395	0.126	0.031	0.534	0.010	0 006	0 279	0.028	0 256	0.938
Sebastes paucispinis (juv.)	0.360	0.239	0.774	0.735	0.156	0.342	0 682	0.300	0.784	0 217	0.346	0 681
Sebastes rastrelliger	0 079	0.769	0 056	0.035	0.723	0.076	0.163	0.521	0.001	0.195	0.069	0.004
Sebastes serranoides	0 019	0.857	0.019	0 007	<.001	0 241	0 004	< 001	0.979	0 134	0 141	0.369
Sebastes serranoides/S flavidus (juv.)	0.170	0 993	0.198	0.126	0.012	0.265	0 195	0.030	0.676	0.259	0.481	0 850
Spp. fish	0.656	0 014	0 049	0.345	0.124	0.113	0.004	0 010	0.022	0.007	0 623	0 319
Total diversity	0.005	0.004	0.845	0.144	0 058	0 082	0.928	0.264	0 002	0.001	0 657	0 126
Total fish	<.001	0.372	0.014	0.001	< 001	0.763	< 001	<.001	0.100	0.244	0.677	0 243