Supplemental Coversheet

Red Text Indicates Statistical Signficance

Supplemental Table S1: Example Formulas

	A	B	C	D	E	F	G	H	I	J	K
	Sample Location	ΔR	± 1 σ	B2/(C2^2)	1/(C2^2)		((B2-B41)/C2)^2	(1/(C2^2))		C2^2	1/J2
3	Baranof8	-70	53	-0.0249199	0.000355999		36.21278579	0.000355999		2809	0.000355999
4	Pow203	422	59	0.121229532	0.000287274		8.603938732	0.000287274		3481	0.000287274
5	Krestof1	314	43	0.169821525	0.000540833		2.289350615	0.000540833		1849	0.000540833
6	Pow38	141	66	0.032369146	0.000229568		2.674633231	0.000229568		4356	0.000229568
7	EFSC2w	87	95	0.009639889	0.000110803		2.905712093	0.000110803		9025	0.000110803
8	Pow39	181	60	0.050277778	0.000277778		1.282119115	0.000277778		3600	0.000277778
9	Kuiu8	74	51	0.028450596	0.000384468		11.7660325	0.000384468		2601	0.000384468
10	EFSC3w	-5	106	-0.000444998	8.89996E-05		5.739117193	8.89996E-05		11236	8.89996E-05
11	Pow47	511	54	0.175240055	0.000342936		23.55153364	0.000342936		2916	0.000342936
12	Pow179	307	62	0.079864724	0.000260146		0.876989375	0.000260146		3844	0.000260146
13	Pow178	469	60	0.130277778	0.000277778		13.45197203	0.000277778		3600	0.000277778
14	Kuiu7	108	42	0.06122449	0.000566893		11.26056577	0.000566893		1764	0.000566893
15	Pow184	308	85	0.042629758	0.000138408		0.48280558	0.000138408		7225	0.000138408
16	Kuper6	-20	48	-0.008680556	0.000434028		31.39230615	0.000434028		2304	0.000434028
17	Pow199	375	46	0.177221172	0.00047259		7.510171142	0.00047259		2116	0.00047259
18	Kos7	464	54	0.159122085	0.000342936		15.86127692	0.000342936		2916	0.000342936
19	Pow177	506	40	0.31625	0.000625		41.30041018	0.000625		1600	0.000625
20	Kuiu 11	364	62	0.094693028	0.000260146		3.444112217	0.000260146		3844	0.000260146
21	Kuiu 5	481	67	0.107150813	0.000222767		11.99656432	0.000222767		4489	0.000222767
22	Pow64	103	102	0.009900038	9.61169E-05		2.047099406	9.61169E-05		10404	9.61169E-05
23	Heceta12	403	93	0.046594982	0.00011562		2.744244497	0.00011562		8649	0.00011562
24	Kos5	476	75	0.084622222	0.000177778		9.165682034	0.000177778		5625	0.000177778
25	Pow136	347	91	0.041903152	0.000120758		1.161221304	0.000120758		8281	0.000120758
26	Bostwick-8.5 W	309	60	0.085833333	0.000277778		1.002053744	0.000277778		3600	0.000277778
27	Bostwick-9.0 W	47	54	0.01611797	0.000342936		13.98461083	0.000342936		2916	0.000342936
28	Bostwick-8.0 W	111	62	0.028876171	0.000260146		4.949793837	0.000260146		3844	0.000260146
29	Pow 150	-30	71	-0.0059512	0.000198373		15.43476329	0.000198373		5041	0.000198373
30	Yatuk Creek 4c	147	96	0.015950521	0.000108507		1.127543546	0.000108507		9216	0.000108507
31	Kos6	365	70	0.074489796	0.000204082		2.749038882	0.000204082		4900	0.000204082
32	CCRD 8+880w	-199	95	-0.022049861	0.000110803		22.23255706	0.000110803		9025	0.000110803
33	Yatuk Creek 5c	-34	152	-0.001471607	4.32825E-05		3.464947589	4.32825E-05		23104	4.32825E-05
34	Pow198	410	54	0.140603567	0.000342936		8.896033192	0.000342936		2916	0.000342936
35	Bostwick-7.2 W	204	51	0.078431373	0.000384468		0.77641735	0.000384468		2601	0.000384468
36	Hecata13	89	109	0.007490952	8.4168E-05		2.153042501	8.4168E-05		11881	8.4168E-05
37	Pow135	-76	85	-0.010519031	0.000138408		14.61383755	0.000138408		7225	0.000138408
38	Kuiu 2	119	112	0.009486607	7.97194E-05		1.345981569	7.97194E-05		12544	7.97194E-05
39	Pow 54	186	109	0.015655248	8.4168E-05		0.333410035	8.4168E-05		11881	8.4168E-05
40	Formulas										
41	Weighted Mean	(SUM(D3:D39))/(SUM(E3:E39))	Standard Deviation	SQRT(((1/(COUNT(B3:B39)-1)*(SUM(G3:G39))))/(1/(COUNT(C3:C39))*(SUM(H3:H39))))				SED Mean	1/(SQRT(SUM(K3:K39)))		
	Artith. Mean	AVERAGE(B3:B39)	SED Pre.Values	SQRT((I42^2)+((STDEV.S(B3:B39))^2))				Pairs	COUNT(B3:B39)		
	Values										
	Weighted Mean	248.94	Standard Deviation	193.14				SED Mean	10.32		
	Artith. Mean	216.05	SED Pre.Values	195.84				Pairs	37		

ΔR: Reimer and Reimer, 2017.
Weighted Mean, Standard Deviation : Bevington, 1969.
Standard Error of the Mean: Long and Rippetau, 1974.
Standard Error for Predicted Values: Russell et al., 2011.

Supplemental Table S2: SEAK Subdivisions

Category	Dataset	R(t), Weighted Mean	R(t), Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs	ΔR, Weighted Mean	ΔR, Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs
All		720.56	698.11	181.33	192.03	9.10	37	248.94	216.05	193.14	195.84	10.32	37
Spatial Breaks	Inner Waters	723.20	698.50	184.32	198.96	11.89	20	267.38	225.95	198.18	199.11	13.54	20
	Outer Waters	716.84	697.65	183.16	190.12	14.14	17	223.32	204.41	189.38	197.95	15.95	17
Time Periods	Middle Holocene	752.32	751.54	168.05	166.68	14.22	13	226.74	219.00	182.86	184.56	16.09	13
	Early Holocene	698.52	669.17	190.89	202.12	11.85	24	264.44	214.46	203.03	205.92	13.45	24
Karst, All	< 300 m from Karst	798.76	756.43	169.98	191.11	17.22	14	361.74	301.64	147.37	192.01	18.53	14
	Non-Karst	690.25	662.61	179.17	188.24	10.72	23	198.23	163.96	191.98	183.46	12.42	23
Karst, No Outliers	< 300m from Karst	869.49	865.00	57.14	62.09	18.98	10	410.60	409.70	59.56	64.31	19.85	10
	Non-Karst	676.12	636.30	182.49	187.52	10.37	27	191.56	144.33	191.57	179.01	12.09	27
Deposit Feeders	All Deposit Feeders	693.08	680.00	195.01	204.61	11.28	27	228.96	204.22	201.87	201.06	12.89	27
	<300 m from Karst	775.06	736.67	188.06	199.99	19.72	12	343.36	277.67	158.41	197.42	20.65	12
	Non-Karst	653.15	634.67	190.29	204.04	13.76	15	155.84	145.47	196.14	190.87	16.50	15
Filter Feeders	All Filter Feeders	771.71	747.00	146.67	152.29	15.39	10	284.59	248.00	179.68	188.22	17.22	10

Category	Dataset	Statistical Test	Statistic	Significance
This Study	All	Shapiro-Wilk	0.949	p = .095
Spatial Breaks		Two-Sample T-Test	0.329 (35)	p = .744
	Inner Waters	Shapiro-Wilk	0.959	p = .054
	Outer Waters	Shapiro-Wilk	0.896	p = .058
Time Periods		Two-Sample T-Test	.066 (35)	p = .947
	Middle Holocene	Shapiro-Wilk	0.955	p = .683
	Early Holocene	Shapiro-Wilk	0.941	p = .941
Karst, All		Mann-Whitney U	-1.942	p = .053
	< 300 m from Karst	Shapiro-Wilk	0.834	p = .014
	Non-Karst	Shapiro-Wilk	0.969	p = .675
Karst, No Outliers		Two-Sample T-Test	4.565 (35)	p < .005
	< 300m from Karst	Shapiro-Wilk	0.917	p = .337
	Non-Karst	Shapiro-Wilk	0.962	p = .415
Feeder Type		Two-Sample T-Test	.599 (35)	p = .553
	Deposit Feeder	Shapiro-Wilk	0.955	p = .279
	Filter Feeder	Shapiro-Wilk	0.904	p = .243
	<300 m from Karst	Shapiro-Wilk	0.863	p = .053
	Non-Karst	Shapiro-Wilk	0.985	p = .992

Supplemental Table S3: Regional Groupings

Region	Dataset	R(t), Weighted Mean	R(t), Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs	ΔR, Weighted Mean	ΔR, Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs
Northwest Coast Synthesis		689.64	672.25	152.82	172.91	3.65	229	199.54	166.77	217.06	173.97	4.15	220
Southeast Alaska		743.98	727.46	173.94	185.51	8.20	46	274.51	244.13	179.26	187.44	9.06	46
	McNeely et al., 2006	845.24	848.11	86.28	87.35	18.92	9	360.49	359.56	78.71	82.28	18.92	9
	This Study	720.56	698.11	181.33	192.03	9.10	37	248.94	216.05	193.14	195.84	10.32	37
British Columbia		676.18	658.38	144.50	167.33	4.08	183	179.65	146.32	206.35	164.87	4.67	174
Northern British Columbia		640.22	628.12	128.11	144.27	5.29	121	124.93	112.93	150.02	144.76	6.70	114
	Edinborough et al., 2016	653.77	652.60	53.55	54.35	7.85	25	145.42	146.92	56.91	49.29	12.30	25
	Eldridge et al., 2014	507.08	503.83	109.08	108.87	17.18	6	-7.65	-0.83	122.27	108.24	18.42	6
	Letham et al., 2018	784.03	765.50	404.35	349.70	23.65	4	358.46	282.25	256.27	318.63	27.58	4
	McNeely et al., 2006	579.28	584.60	68.70	73.15	21.20	5	114.91	123.00	85.50	88.16	21.20	5
	Southon and Fedje, 2003	649.28	625.68	142.02	149.82	9.08	81	121.73	100.84	150.85	152.38	10.43	74
Southern British Columbia		729.17	717.42	151.80	193.07	6.42	62	231.25	209.75	137.64	182.73	6.50	60
	Southern British Columbia Without Kovanen and Easterbrook	702.68	675.89	110.51	143.19	6.64	56	207.53	168.81	98.34	132.27	6.72	54
	McNeely et al., 2006	714.19	708.75	78.79	76.22	7.60	24	228.16	241.00	73.45	73.00	7.49	24
	Southon and Fedje, 2003	665.33	651.25	175.33	175.37	13.69	32	122.74	111.07	137.64	142.04	15.19	30
	Kovanen and Easterbrook, 2002	1104.14	1105.00	166.97	174.05	25.00	6	580.20	578.17	166.22	168.10	25.78	6

ΔR: Reimer and Reimer, 2017
Weighted Mean, Standard Deviation : Bevington, 1969
Standard Error for Predicted Values: Russell et al., 2011

Supplemental Table S4: Regional Groups, Statistical Comparisons

Region	Dataset	Statistical Test	Statistic	Significance	Pairwise Comparisons
Northwest Coast Synthesis	All	Shapiro-Wilk	0.981	p = .004	Dunn's Pairwise Comparisons
		Kruskal-Wallis	24.618 (2)	p <.005	Group SEAK NBC SBC
					SEAK p <.005 p = 1
					NBC p = .001
					SBC
Southeast Alaska	SEAK Total	Shapiro-Wilk	0.947	p = .035	
		Two-Sample T-test	2.143 (44)	p = .038	
	McNeely et al., 2006	Shapiro-Wilk	0.95	p = .693	
	This Study	Shapiro-Wilk	0.95	p = .094	
British Columbia	BC Total	Shapiro-Wilk	0.957	p < .005	Tukey's HSD Comparisons by Dataset
		ANOVA	17.41 (7, 166)	p < .005	Group Eldridge Letham McNeely BC Southon BC McNeely VC Southon VC Kovanen
					Edinborough p = .037 p = .007 p = 1 p = .774 p = .172 p = .968 p <.005
					Eldridge p <.005 p = 485 p = .194 p <.005 p = .176 p <.005
					Letham p = .021 p <.005 p = .202 p = .001 p = .77
					McNeely BC p = 1 p = .567 p = 1 p <.005
					Southon BC p < .005 p = 1 p <.005
					McNeely VC p = .007 p <.005
					Southon VC p <.005
Northern British Columbia	North BC Total	Shapiro-Wilk	0.963	p = .003	Tukey's HSD Comparisons by Dataset
		ANOVA	2.975 (4, 109)	p = .022	Group Eldridge Letham McNeely BC Southon BC
	Edinborough et al., 2016	Shapiro-Wilk	0.967	p = .577	Edinborough p = .145 p = .38 p = .997 p = .613
	Eldridge et al., 2014	Shapiro-Wilk	0.861	p = .192	Eldridge p = .018 p = .589 p = .43
	Letham et al., 2018	Shapiro-Wilk	0.833	p = .176	Letham p = .439 p = .092
	McNeely et al., 2006	Shapiro-Wilk	0.879	p = .304	McNeely BC p = .997
	Southon and Fedje, 2003	Shapiro-Wilk	0.968	p = .059	
Southern British Columbia	Southern BC Total	Shapiro-Wilk	0.943	p = .007	
		Mann-Whitney U	27.654 (2)	p < .005	
	Southern British Columbia Without Kovanen and Easterbrook	Shapiro-Wilk	0.975	p = .307	Dunn's Pairwise Comparisons
	Southern British Columbia Without Kovanen and Easterbrook	Two-Sample T-Test	4.09 (52)	p < .005	Group McNeely VC Kovanen
	McNeely et al., 2006	Shapiro-Wilk	0.95	p = .693	Southon VC p = .001 p < .005
	Southon and Fedje, 2003	Shapiro-Wilk	0.974	p = .359	McNeely VC p = .035
	Kovanen and Easterbrook, 2002	Shapiro-Wilk	0.897	p < .005	

Supplemental Table S5: Time Periods, Statistical Comparisons

Time Period	Region	Statistical Test	Statistic	Significance	Pairwise Comparisons
All	Northwest Coast Synthesis	Shapiro-Wilk	0.981	p = .004	Tukey's HSD Comparisons by Dataset
		ANOVA	16.631 (5, 214)	p < .005	Group / YD / EH / MH / LH / Hist
					BO / p < .005 / p < .005 / p < .005 / p < .005 / p < .005
					YD / p = .009 / p = .13 / p = .227 / p < .005
					EH / p = .208 / p = .131 / p = .179
					MH / p = .997 / p < .005
					LH / p < .005
Bølling-Allerød / Meltwater Pulse 1A (> 10,700 RCBP)	Northwest Coast Synthesis	Shapiro-Wilk	0.935	p = .595	
Younger Dryas (10,700 - 10,000 RCBP)	Northwest Coast Synthesis	Shapiro-Wilk	0.90	p = .348	
Early Holocene / Meltwater Pulse 1B (10,000 - 8,000 RCBP)	EH Total	Shapiro-Wilk	0.98	p = .436	Tukey's HSD Comparisons by Dataset
	Between Datasets	ANOVA	4.122 (2, 58)	p = .021	Group / Letham / SEAK
	Between Regions	Two-Sample T-Test	1.059 (59)	p = .294	Southon / p = .028 / p = .263
	Southeast Alaska	Shapiro-Wilk	0.941	p = .173	Letham / p = .143
	Northern British Columbia	Shapiro-Wilk	0.981	p = .779	
Middle Holocene 8,000 - 2,000 RCBP	MH Total	Shapiro-Wilk	0.974	p = .185	Dunn's Pairwise Comparisons by Dataset
	Between Datasets	Kruskal-Wallis	16.297 (4)	p = .003	Group / Southon NBC / Southon VC / Edinborough / Eldridge
	Between Regions	Kruskal-Wallis	8.551 (2)	p = .014	This Study / p = 1 / p = .042 / p = 1 / p = .087
	Southeast Alaska	Shapiro-Wilk	0.955	p = .683	Southon NBC / p = .876 / p = 1 / p = .482
	Northern British Columbia	Shapiro-Wilk	0.919	p = .007	Southon VC / p = .032 / p = 1
	Southern British Columbia	Shapiro-Wilk	0.932	p = .405	Edinborough / p = .086
					Dunn's Pairwise Comparisons by Region
					Group / NBC / SBC
					SEAK / p = .621 / p = .012
					NBC / p = .071
Late Holocene 2,000 - 200 RCBP	LH Total	Shapiro-Wilk	0.954	p = .085	Tukey's HSD Comparisons by Dataset
	Between Datasets	ANOVA	3.889 (3, 39)	p = .016	Group / Eldridge / Southon NBC / Southon VC
	Between Regions	Two-Sample T-Test	2.537 (41)	p = .015	Edinborough / p = .629 / p = .151 / p = .939
	Northern British Columbia	Shapiro-Wilk	0.979	p = .866	Eldridge / p = .981 / p = .324
	Southern British Columbia	Shapiro-Wilk	0.951	p = .477	Southon NBC / p = .014
Historic < 200 RCBP	Hist Total	Shapiro-Wilk	0.976458	p = .592	Tukey's HSD Comparisons by Dataset
	Between Datasets	ANOVA	10.917 (4, 42)	p < .005	Group / McNeely SBC / McNeely VC / Southon BC / Southon VC
	Between Regions	ANOVA	8.493 (2, 44)	p = .001	McNeely SEA / p < .005 / p = .001 / p = .103 / p = .978
	Southeast Alaska	Shapiro-Wilk	0.946084	p = .647	McNeely HG / p = .027 / p = .014 / p = .001
	Northern British Columbia	Shapiro-Wilk	0.907782	p = .199	McNeely VC / p = .847 / p = .041
	Southern British Columbia	Shapiro-Wilk	0.947248	p = .199	Southon BC / p = .218

Supplemental Table S6: Libby Effect in McNeely et al.'s (2006) Vancouver Area Museum Samples

Category	R(t), Weighted Mean	R(t), Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs	ΔR, Weighted Mean	ΔR, Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs
All	714.19	708.75	78.79	76.22	7.60	24	228.16	241.00	73.45	73.00	7.49	24
Pre-Bomb	723.25	725.94	78.84	74.02	8.31	17	219.58	227.94	72.53	72.39	8.17	17
Post-Bomb	667.81	667.00	67.28	71.45	18.80	7	273.53	272.71	67.36	71.52	18.80	7

R(t)	Statistical Test	Statistic	Significance
Comparison	Two-Sample T-Test	2.831 (22)	p = .009
All	Shapiro-Wilk	0.931	p = .105
Pre-Bomb	Shapiro-Wilk	0.928	p = .205
Post-Bomb	Shapiro-Wilk	0.887	p = .259

ΔR	Statistical Test	Statistic	Significance
Comparison	Two-Sample T-Test	1.401 (22)	p = .175
All	Shapiro-Wilk	0.967	p = .598
Pre-Bomb	Shapiro-Wilk	0.953	p = .498
Post-Bomb	Shapiro-Wilk	0.887	p = .259

Supplemental Table S7: Comparisons with Martindale's Multiple-Paired Sample Results

Dataset	Category	R(t), Weighted Mean	R(t), Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs	ΔR, Weighted Mean	ΔR, Arithmetic Mean	Standard Deviation	SED Pre.Val.	SED Mean	# of Pairs
Full Synthesis	Mid/Late Holocene	651.37	642.20	125.04	135.86	5.33	108	123.67	115.00	137.02	128.71	6.68	108
Edinborough et al.	Mid/Late Holocene	653.77	652.60	53.55	54.35	7.85	25	145.42	146.92	56.91	49.29	12.30	25
Synthesis without Edinborough et al.	Mid/Late Holocene	649.33	639.07	163.41	152.35	7.26	83	114.55	105.39	158.47	143.36	7.96	83
Edinborough et al.	Middle Holocene	674.94	674.50	28.64	30.20	9.81	16	157.32	155.31	29.09	34.46	17.89	16
Synthesis without Edinborough et al.	Middle Holocene	656.12	633.86	181.50	164.24	9.25	49	125.08	108.98	188.10	161.18	10.53	49
Edinborough et al.	Late Holocene	615.87	613.67	67.61	68.22	13.12	9	134.75	132.00	74.58	71.45	16.94	9
Synthesis without Edinborough et al.	Late Holocene	638.43	646.59	131.29	135.90	11.73	34	100.51	100.21	108.01	115.68	12.16	34

Dataset	Time Period	Statistical Test	Statistic	Significance
Comparison	Mid/Late Holocene	Mann-Whitney U	2.411	p = .016
Full Synthesis	Mid/Late Holocene	Shapiro-Wilk	0.971	p = .017
Edinborough et al.	Mid/Late Holocene	Shapiro-Wilk	0.967	p = .578
Synthesis without Edinborough et al.	Mid/Late Holocene	Shapiro-Wilk	0.969	p = .044
Comparison	Middle Holocene	Two-Sample T-Tes	1.14 (63)	p = .259
Edinborough et al.	Middle Holocene	Shapiro-Wilk	0.906	p = .101
Synthesis without Edinborough et al.	Middle Holocene	Shapiro-Wilk	0.979	p = .514
Comparison	Late Holocene	Two-Sample T-Tes	.788 (41)	p = .435
Edinborough et al.	Late Holocene	Shapiro-Wilk	0.962	p = .815
Synthesis without Edinborough et al.	Late Holocene	Shapiro-Wilk	0.941	p = .067

Supplemental Table S8: Ring Seal (*Phoca hispida*) Remains from Shuká-Kaa Cave

Study	Region	Location	Lab #	Species	Conventional 14C	±	ΔR	±	Calibrated Age Min (2 σ)	Calibrated Age max (2 σ)
Heaton and Grady, 2003	Southeast Alaska	Shuká-Kaa Cave	AA-21564	*Phoca hispida*	13,690	240	575	165	13,970	15,700
Heaton and Grady, 2003	Southeast Alaska	Shuká-Kaa Cave	AA-36661	*Phoca hispida*	14,520	470	575	165	14,600	17,300
Heaton and Grady, 2003	Southeast Alaska	Shuká-Kaa Cave	AA-37873	*Phoca hispida*	17,130	240	575	165	18,410	19,840
Heaton and Grady, 2003	Southeast Alaska	Shuká-Kaa Cave	AA-44445	*Phoca hispida*	17,740	270	575	165	19,020	20,570

Supplemental Table S9: All Datasets in Synthesis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	± (1 σ)	ΔR	± (1 σ)
This Study	MH	SEAK	Baranof8	Beta - 436194	*Littorina sitkana*	5930	30	UGAMS - 26200	charred *Pinaceae* needles	5390	30	540	42	-70	53
This Study	MH	SEAK	Pow203	Beta - 283663	*Macoma inquinata*	6820	40	UGAMS - 26223	charred *Pinaceae* needles	5820	30	1000	50	422	59
This Study	MH	SEAK	Krestof1	Beta - 418058	*Balanus glandula*	7670	30	UGAMS - 26201	charred *Pinaceae* needles	6780	30	890	42	314	43
This Study	MH	SEAK	Pow38	Beta - 283841	*Mytilus edulis*	7680	40	UGAMS - 26224	charred *Pinaceae* needles	6980	30	700	50	141	66
Carlson, 2007	MH	SEAK	EFSC2w	Beta - 154990	*Mytilus edulis*	7670	80	Beta - 154991	charred *Pinaceae* needles	7020	40	650	89	87	95
This Study	MH	SEAK	Pow39	Beta - 283842	*Littorina sitkana*	7770	40	UGAMS - 26225	charred *Pinaceae* needles	7020	30	750	50	181	60
This Study	MH	SEAK	Kuiu8	Beta - 418065	*Balanus glandula*	7700	30	UGAMS - 26210	charred *Pinaceae* needles	7070	30	630	42	74	51
Carlson, 2007	MH	SEAK	EFSC3w	Beta - 154992	*Mytilus edulis*	7910	70	Beta - 154993	charred *Pinaceae* needles	7380	60	530	92	-5	106
This Study	MH	SEAK	Pow47	Beta - 283844	*Macoma inquinata*	8710	40	UGAMS - 26226	charred *Pinaceae* needles	7720	30	990	50	511	54
This Study	MH	SEAK	Pow179	Beta - 276619	*Littorina sitkana*	8550	50	UGAMS - 26218	charred *Pinaceae* needles	7770	30	780	58	307	62
This Study	MH	SEAK	Pow178	Beta - 276618	*Littorina sitkana*	8720	50	UGAMS - 26217	charred *Pinaceae* needles	7780	30	940	58	469	60
This Study	MH	SEAK	Kuiu7	Beta - 418064	*Balanus glandula*	8400	30	UGAMS - 26209	charred *Pinaceae* needles	7830	30	570	42	108	42
This Study	MH	SEAK	Pow184	Beta - 276616	*Littorina sitkana*	8750	50	UGAMS - 26219	charred *Pinaceae* needles	7950	30	800	58	308	85
This Study	EH	SEAK	Kuper6	Beta - 283658	*Macoma inquinata*	9000	40	UGAMS - 26211	charred *Pinaceae* needles	8520	30	480	50	-20	48
This Study	EH	SEAK	Pow199	Beta - 436192	*Littorina sitkana*	9420	40	UGAMS - 26222	charred *Pinaceae* needles	8560	30	860	50	375	46
This Study	EH	SEAK	Kos7	Beta - 276611	*Littorina sitkana*	9530	50	UGAMS - 26206	charred *Pinaceae* needles	8600	30	930	58	464	54
This Study	EH	SEAK	Pow177	Beta – 418061	*Balanus glandula*	9590	30	UGAMS - 26216	charred *Pinaceae* needles	8630	30	960	42	506	40
This Study	EH	SEAK	Kuiu 11	Beta - 418068	*Balanus glandula*	9530	30	UGAMS - 26207	charred *Pinaceae* needles	8740	30	790	42	364	62
Carlson, 2007	EH	SEAK	Kuiu 5	Beta - 395235	*Balanus glandula*	9,650	40	UGAMS - 26337	charred *Pinaceae* needles	8740	30	910	50	481	67
This Study	EH	SEAK	Pow64	Beta - 145933	*Littorina sitkana*	9540	80	UGAMS - 26228	charred *Pinaceae* needles	8940	30	600	85	103	102
This Study	EH	SEAK	Heceta12	Beta - 264100	*Littorina sitkana*	9970	90	UGAMS - 26203	charred *Pinaceae* needles	9100	30	870	95	403	93
This Study	EH	SEAK	Kos5	Beta - 276609	*Littorina sitkana*	10150	60	UGAMS - 26204	charred *Pinaceae* needles	9230	30	920	67	476	75
This Study	EH	SEAK	Pow136	Beta - 269004	*Littorina sitkana*	10020	80	UGAMS - 26215	charred *Pinaceae* needles	9230	30	790	85	347	91
This Study	EH	SEAK	Bostwick-8.5 W	Beta - 472309	*Macoma inquinata*	10000	30	Beta - 472309	spruce needles	9250	40	750	50	309	60
This Study	EH	SEAK	Bostwick-9.0 W	Beta - 472307	*Macoma inquinata*	9740	30	Beta - 472308	spruce needles	9250	30	490	42	47	54
This Study	EH	SEAK	Bostwick-8.0 W	Beta - 472311	*Macoma inquinata*	9870	40	Beta - 472310	spruce needles	9310	40	560	57	111	62
This Study	EH	SEAK	Pow150	Beta - 214402	*Littorina sitkana*	9730	60	UGAMS - 26212	charred *Pinaceae* needles	9310	30	420	67	-30	71
Carlson, 2007	EH	SEAK	Yatuk Creek 4c	Beta - 214448	*Littorina sitkana*	9910	70	Beta - 214421	charcoal	9320	60	590	92	147	96
This Study	EH	SEAK	Kos6	Beta - 276610	*Littorina sitkana*	10150	60	UGAMS - 26205	charred *Pinaceae* needles	9340	30	810	67	365	70
Carlson, 2007	EH	SEAK	CCRD 8+880w	Beta - 214403	*Littorina sitkana*	9640	70	Beta - 214404	charred *Pinaceae* needles	9400	60	240	92	-199	95
Carlson, 2007	EH	SEAK	Yatuk Creek 5c	Beta - 214423	*Littorina sitkana*	9840	130	Beta - 214422	charcoal	9430	60	410	143	-34	152
This Study	EH	SEAK	Pow198	Beta - 436191	*Balanus glandula*	10280	40	UGAMS - 26221	charred *Pinaceae* needles	9440	30	840	50	410	54
This Study	EH	SEAK	Bostwick-7.2 W	Beta - 472314	*Macoma inquinata*	10090	30	Beta - 472315	spruce needles	9460	30	630	42	204	51
This Study	EH	SEAK	Hecata13	Beta - 264099	*Littorina sitkana*	10030	80	UGAMS - 26202	charred *Pinaceae* needles	9490	30	540	85	89	109
This Study	EH	SEAK	Pow135	Beta - 269005	*Littorina sitkana*	9940	50	UGAMS - 26214	charred *Pinaceae* needles	9540	30	400	58	-76	85
This Study	EH	SEAK	Kuiu 2	Beta - 276610	*Littorina sitkana*	10220	40	UGAMS - 26208	charred *Pinaceae* needles	9630	30	590	50	119	112
This Study	EH	SEAK	Pow54	Beta- 264103	*Littorina sitkana*	10330	80	UGAMS - 26213	charred *Pinaceae* needles	9650	35	680	87	186	109
Southon and Fedje, 2003	EH	NBC	M1	8373*	*Protothaca*	9680	70	8380	spruce cone	9150	60	530	92	58	90
Southon and Fedje, 2003	EH	NBC	M1	8374	*Protothaca*	9660	70	8384	hemlock cone	9150	80	510	106	33	99
Southon and Fedje, 2003	EH	NBC	M1	8375	*Protothaca*	9930	70	8385	hemlock cone	9310	60	620	92	178	97
Southon and Fedje, 2003	EH	NBC	M1	8376	*Protothaca*	9870	60	8381	spruce cone	9240	60	630	85	186	86
Southon and Fedje, 2003	MH	NBC	M1	9973	*Protothaca*	8580	80	9972	wood	7940	60	640	100	150	113
Southon and Fedje, 2003	EH	NBC	M1	9978	shell	9640	70	9977	wood	8550	60	1090	92	610	82
Southon and Fedje, 2003	EH	NBC	M1	9981	shell	9310	60	9980	cone	8890	60	420	85	-67	105
Southon and Fedje, 2003	EH	NBC	M1	9983	*Mytilus*	9820	80	9982	twig/ leaf	9390	60	430	100	-10	102
Southon and Fedje, 2003	EH	NBC	M1	9992	*Mytilus*	10490	80	9991	twig	9530	60	960	100	486	119

All Southon and Fedje radiocarbon dates from CAMS

Supplemental Table S9: All Datasets in Synthesis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	± (1 σ)	ΔR	± (1 σ)
Southon and Fedje, 2003	EH	NBC	M1	10835	*Pododesmus*	10070	80	10815	wood	9440	110	630	136	166	158
Southon and Fedje, 2003	EH	NBC	M1	10836	*Pododesmus*	9740	60	10816	wood	9030	50	710	78	215	72
Southon and Fedje, 2003	EH	NBC	M1	10837	*Mytilus*	10200	60	10817	wood	9530	60	670	85	197	108
Southon and Fedje, 2003	EH	NBC	M1	10845	*Saxidomus*	9900	70	10600	wood	9580	200	320	212	-144	209
Southon and Fedje, 2003	EH	NBC	M1	10848	*Mytilus*	10030	100	10847	wood	9430	100	600	141	142	160
Southon and Fedje, 2003	EH	NBC	M1	10853	*Mytilus*	10020	60	10846	wood	9320	60	700	85	257	89
Southon and Fedje, 2003	EH	NBC	M1	10854	shell	9250	60	9974	cone	8550	70	700	92	221	79
Southon and Fedje, 2003	EH	NBC	M1	10856	*Balanus*	9930	60	10600	twig	9580	200	350	209	-116	206
Southon and Fedje, 2003	EH	NBC	M1	10858	shell	9880	60	10857	wood	9270	50	610	78	169	84
Southon and Fedje, 2003	EH	NBC	M1	10860	shell	9870	60	10859	wood	9310	60	560	85	117	90
Southon and Fedje, 2003	EH	NBC	M1	10862	shell	9570	80	10861	wood	9230	60	340	100	-108	100
Southon and Fedje, 2003	EH	NBC	M1	10866	shell	9540	60	10865	wood	9310	70	230	92	-213	90
Southon and Fedje, 2003	EH	NBC	M1	10867	shell	9890	70	10838	wood	9410	60	480	92	43	96
Southon and Fedje, 2003	EH	NBC	M1	10868	shell	9700	60	10839	wood	9110	80	590	100	110	94
Southon and Fedje, 2003	EH	NBC	M1	10869	*Saxidomus*	8930	60	10597	wood	8080	60	850	85	356	101
Southon and Fedje, 2003	Hist	NBC	G1	10870	shell	840	60	10841	charcoal	180	60	660	85		
Southon and Fedje, 2003	LH	NBC	G1	10871	shell	1750	60	10598	charcoal	1180	60	570	85	37	96
Southon and Fedje, 2003	LH	NBC	MI	10873	shell	2420	60	10843	wood	1850	60	570	85	93	86
Southon and Fedje, 2003	EH	NBC	MI	14938	marine bone	9270	100	9977	wood	8550	60	720	117	240	109
Southon and Fedje, 2003	LH	NBC	MI	15356	*Mytilus*	900	90	14418	charcoal	210	50	690	103	110	121
Southon and Fedje, 2003	Hist	NBC	MI	15357	*Saxidomus*	740	60	14421	charcoal	160	60	580	85		
Southon and Fedje, 2003	Hist	NBC	MI	15361	*Protothaca*	820	60	14423	charcoal	0	60	820	85		
Southon and Fedje, 2003	LH	NBC	MI	15362	*Mytilus*	1230	60	14424	charcoal	730	60	500	85	-62	78
Southon and Fedje, 2003	Hist	NBC	MI	15364	*Mytilus*	900	50	14421	charcoal	160	60	740	78		
Southon and Fedje, 2003	LH	NBC	MI	15365	*Protothaca*	1390	60	14426	charcoal	880	50	510	78	-30	85
Southon and Fedje, 2003	LH	NBC	MI	15367	*Protothaca*	1000	70	14428	charcoal	430	60	570	92	-40	97
Southon and Fedje, 2003	LH	NBC	MI	15368	*Mytilus*	1330	60	14429	charcoal	540	60	790	85	179	82
Southon and Fedje, 2003	LH	NBC	MI	15369	*Mytilus*	1330	50	14430	charcoal	720	50	610	71	47	65
Southon and Fedje, 2003	LH	NBC	MI	15370	*Mytilus*	1270	60	14431	charcoal	820	50	450	78	-85	76
Southon and Fedje, 2003	EH	NBC	G1	15371	*Littorina*	9690	60	14432	twig	9200	60	490	85	33	83
Southon and Fedje, 2003	MH	NBC	G1	15372	*Mytilus*	3860	60	14433	charcoal	3260	60	600	85	128	83
Southon and Fedje, 2003	MH	NBC	G1	15373	*Mytilus*	3840	60	14434	charcoal	3340	50	500	78	38	81
Southon and Fedje, 2003	MH	NBC	G1	15374	*Mytilus*	3810	60	14435	charcoal	3250	70	560	92	85	89
Southon and Fedje, 2003	MH	NBC	G1	15375	*Mytilus*	3900	60	14436	charcoal	3070	60	830	85	347	89
Southon and Fedje, 2003	LH	NBC	G1	15376	*Mytilus*	2280	70	14437	terrestrial bone	1700	60	580	92	91	93
Southon and Fedje, 2003	Hist	NBC	MI	15393	*Mytilus*	970	60	14419	charcoal	150	60	820	85		
Southon and Fedje, 2003	Hist	NBC	MI	15394	*Mytilus*	910	60	14420	charcoal	100	50	810	78		
Southon and Fedje, 2003	MH	NBC	G1	16956	*Saxidomus*	5240	60	16203	charcoal	4520	60	720	85	188	104
Southon and Fedje, 2003	MH	NBC	G1	16957	*Protothaca*	5990	60	16204	charcoal	5320	60	670	85	95	100
Southon and Fedje, 2003	MH	NBC	G1	16958	*Mytilus*	5650	60	16205	charcoal	4900	80	750	100	179	106
Southon and Fedje, 2003	MH	NBC	G1	16959	*Protothaca*	5570	50	16206	charcoal	4970	60	600	78	42	89
Southon and Fedje, 2003	MH	NBC	G1	16960	*Protothaca*	5550	60	16207	charcoal	5000	70	550	92	-18	101
Southon and Fedje, 2003	MH	NBC	G1	16961	*Mytilus*	4890	70	16208	charcoal	4390	70	500	99	-27	119
Southon and Fedje, 2003	MH	NBC	G1	16962	*Mytilus*	5020	60	16209	charcoal	4420	60	600	85	70	113
Southon and Fedje, 2003	YD	NBC	MI	18996	*Mytilus*	11150	60	18995	spruce cone	10490	60	660	85	-16	115
Southon and Fedje, 2003	YD	NBC	MI	18997	*Mytilus*	11320	60	18601	twig	10670	60	650	85	-23	82

All Southon and Fedje radiocarbon dates from CAMS

Supplemental Table S9: All Datasets in Synthesis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	± (1 σ)	ΔR	± (1 σ)
Southon and Fedje, 2003	YD	NBC	MI	19000	*Protothaca*	10460	60	19001	spruce needle	9940	70	520	92	63	103
Southon and Fedje, 2003	EH	NBC	MI	19002	*Mitreua*	10200	70	19003	Gynm,weed	9600	60	600	92	-44	116
Southon and Fedje, 2003	YD	NBC	MI	19007	bivalve	11150	60	18751	spruce needle	10440	50	710	78	84	139
Southon and Fedje, 2003	MH	NBC	MI	19008	shell	5070	60	18603	spruce needle	4390	60	680	85	168	105
Southon and Fedje, 2003	EH	NBC	MI	19013	forams	9100	50	19012	hemlock needle	8480	50	620	71	105	65
Southon and Fedje, 2003	EH	NBC	MI	19016	shell	9190	60	19015	hemlock needle	8750	60	440	85	-3	101
Southon and Fedje, 2003	MH	NBC	G1	19018	*Saxidomus*	5790	60	19017	Gymn.charcoal	5370	70	420	92	-159	106
Southon and Fedje, 2003	MH	NBC	G1	19020	*Saxidomus*	5810	60	19019	Angio.charcoal	5330	60	480	85	-96	101
Southon and Fedje, 2003	LH	NBC	MI	33902	shell	1620	50	33901	charcoal	1000	60	620	78	102	85
Southon and Fedje, 2003	LH	NBC	MI	33904	shell	1690	60	33903	charcoal	1160	50	530	78	0	90
Southon and Fedje, 2003	MH	NBC	G1	50949	*Mytilus*	6340	40	50950	charcoal	5680	90	660	98	98	102
Southon and Fedje, 2003	MH	NBC	G1	50951	*Mytilus*	6150	40	50950	charcoal	5230	40	920	57	359	72
Southon and Fedje, 2003	MH	NBC	G1	50953	*Mytilus*	6000	40	50952	charcoal	5380	40	620	57	16	75
Southon and Fedje, 2003	MH	NBC	G1	50955	*Mytilus*	5890	40	50954	charcoal	5090	50	800	64	246	73
Southon and Fedje, 2003	MH	NBC	G1	50957	*Mytilus*	6350	40	50956	charcoal	5590	50	760	64	203	61
Southon and Fedje, 2003	MH	NBC	G1	50961	*Mytilus*	6020	40	50960	charcoal	5290	40	730	57	151	72
Southon and Fedje, 2003	MH	NBC	G1	50963	*Mytilus*	5980	50	50962	charcoal	5260	40	720	64	141	82
Southon and Fedje, 2003	EH	NBC	MI	54595	shell	9970	50	54596	wood	9490	50	480	71	20	103
Southon and Fedje, 2003	EH	NBC	MI	54597	shell	9030	50	54598	wood	8380	50	650	71	130	82
Southon and Fedje, 2003	LH	NBC	MI	70705	*Mytilus*	1090	40	70706	charcoal	390	50	700	64	82	75
Southon and Fedje, 2003	Hist	NBC	MI	70707	*Mytilus*	970	40	70708	charcoal	190	40	780	57		
Southon and Fedje, 2003	EH	NBC	MI	76667	*Mytilus*	10040	50	76666	conifer charcoal	9430	50	610	71	178	75
Southon and Fedje, 2003	EH	NBC	MI	76669	*Mytilus*	10140	40	76668	deciduous char.	9230	50	910	64	466	69
Southon and Fedje, 2003	EH	NBC	MI	79681	shell	10020	50	79682	charcoal	9260	40	760	64	319	72
Southon and Fedje, 2003	EH	NBC	MI	79683	shell	10040	40	79684	charcoal	9340	40	700	57	254	60
Southon and Fedje, 2003	YD	NBC	MI	T03735	shell	10780	70	T03495	wood	10360	80	420	106	-158	150
Southon and Fedje, 2003	LH	SBC	VI	15377	*Mytilus*	1580	70	14442	charcoal	1090	60	490	92	-43	96
Southon and Fedje, 2003	LH	SBC	VI	15379	*Mytilus*	1920	50	14444	charcoal	1100	60	820	78	291	82
Southon and Fedje, 2003	MH	SBC	VI	15380	*Mytilus*	3170	60	14445	spruce cone	2430	50	740	78	238	101
Southon and Fedje, 2003	MH	SBC	VI	15381	*Mytilus*	2970	60	14446	spruce twig	2450	60	520	85	18	103
Southon and Fedje, 2003	MH	SBC	VI	15382	*Mytilus*	3020	60	14447	charcoal	2530	60	490	85	3	103
Southon and Fedje, 2003	MH	SBC	VI	15383	*Mytilus*	2990	60	14448	charcoal	2500	60	490	85	0	102
Southon and Fedje, 2003	MH	SBC	VI	15384	*Mytilus*	3020	50	14449	charcoal	2440	60	580	78	76	99
Southon and Fedje, 2003	MH	SBC	VI	15385	*Mytilus*	2850	60	14450	charcoal	2390	60	460	85	-45	105
Southon and Fedje, 2003	MH	SBC	VI	15386	*Mytilus*	2930	60	14451	charcoal	2410	60	520	85	13	105
Southon and Fedje, 2003	LH	SBC	VI	15387	*Mytilus*	1200	60	14451	charcoal	610	80	590	100	2	86
Southon and Fedje, 2003	MH	SBC	VI	15388	*Mytilus*	2510	60	14451	charcoal	2260	60	250	85	-221	89
Southon and Fedje, 2003	LH	SBC	VI	15389	*Mytilus*	2390	60	14451	charcoal	1920	60	470	85	1	86
Southon and Fedje, 2003	LH	SBC	VI	15391	*Mytilus*	1360	60	14456	charcoal	690	60	670	85	106	80
Southon and Fedje, 2003	LH	SBC	VI	15392	*Mytilus*	1330	60	14457	spruce cone	600	60	730	85	138	79
Southon and Fedje, 2003	LH	SBC	VI	28073	shell	1390	50	28070	charcoal	600	50	790	71	197	68
Southon and Fedje, 2003	LH	SBC	VI	28074	shell	1140	50	28071	charcoal	420	50	720	71	103	76
Southon and Fedje, 2003	LH	SBC	VI	28078	shell	1150	50	28068	charcoal	240	50	910	71	299	96
Southon and Fedje, 2003	LH	SBC	VI	28079	shell	1190	50	28069	charcoal	360	50	830	71	220	82
Southon and Fedje, 2003	MH	SBC	VI	28081	shell	2690	50	28075	charcoal	2260	50	430	71	-44	78
Southon and Fedje, 2003	LH	SBC	VI	28082	shell	1040	50	28076	charcoal	240	50	800	71	189	96

All Southon and Fedje radiocarbon dates from CAMS

Supplemental Table S9: All Datasets in Synthesis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	± (1 σ)	ΔR	± (1 σ)
Southon and Fedje, 2003	Hist	SBC	VI	28084	shell	960	50	28077	charcoal	170	50	790	71		
Southon and Fedje, 2003	LH	SBC	VI	29299	shell	1720	50	28300	charcoal	680	50	1040	71	472	68
Southon and Fedje, 2003	LH	SBC	VI	29301	*Mytilus*	2360	60	29302	charcoal	1720	50	640	78	155	78
Southon and Fedje, 2003	LH	SBC	VI	29305	*Mytilus*	2200	50	29306	charcoal	1570	50	630	71	158	69
Southon and Fedje, 2003	LH	SBC	VI	29307	*Mytilus*	2040	50	29308	charcoal	1390	50	650	71	121	65
Southon and Fedje, 2003	BA	SBC	VA	40376	*clinocardium*	12990	70	weighted 40374, 40375	pine needle and cone bract	12170	150	820	166	355	187
Southon and Fedje, 2003	MH	SBC	VI	40384	*ostrea*	2760	50	40393	charcoal	2250	70	510	86	39	89
Southon and Fedje, 2003	MH	SBC	VI	40386	*ostrea*	2900	50	40385	charcoal	2230	50	670	71	189	78
Southon and Fedje, 2003	LH	SBC	VI	40388	*clam*	2220	50	40387	charcoal	1690	50	530	71	37	75
Southon and Fedje, 2003	LH	SBC	VI	40392	*mytilus*	1530	40	40391	charcoal	800	50	730	64	191	56
Southon and Fedje, 2003	MH	SBC	VI	40394	*ostrea*	2670	50	40393	charcoal	2120	50	550	71	74	87
Southon and Fedje, 2003	Hist	SBC	VI	40396	*ostrea*	1170	50	40395	charcoal	190	50	980	71		
McNeeley et al., 2006	Hist	SEAK	943	CAMS-17923	*Mytilus*	980	60	1907	(Known Age Specimen)			870	60	371	60
McNeeley et al., 2006	Hist	SEAK	942	CAMS-17922	*Mytilus*	920	60	1907	(Known Age Specimen)			810	60	311	60
McNeeley et al., 2006	Hist	SEAK	940	CAMS-17920	*Mytilus*	910	50	1934	(Known Age Specimen)			749	50	306	50
McNeeley et al., 2006	Hist	SEAK	939	CAMS-17914	*Macoma*	970	50	1934	(Known Age Specimen)			809	50	366	50
McNeeley et al., 2006	Hist	SEAK	937	CAMS-17912	*Macoma*	990	70	1907	(Known Age Specimen)			880	70	381	70
McNeeley et al., 2006	Hist	SEAK	936	CAMS-17911	*Macoma*	1050	50	1907	(Known Age Specimen)			940	50	441	50
McNeeley et al., 2006	Hist	SEAK	935	CAMS-17910	*Macoma*	1120	60	1907	(Known Age Specimen)			1010	60	511	60
McNeeley et al., 2006	Hist	SEAK	934	CAMS-17824	*Mytilus*	910	60	1907	(Known Age Specimen)			800	60	301	60
McNeeley et al., 2006	Hist	SEAK	931	CAMS-06562	*Nucella*	890	60	1867	(Known Age Specimen)			765	60	248	60
McNeeley et al., 2006	Hist	NBC	952	CAMS-46269	*Siliqua*	850	50	1937	(Known Age Specimen)			689	50	247	50
McNeeley et al., 2006	Hist	NBC	951	CAMS-46268	*Mya*	650	40	1910	(Known Age Specimen)			532	40	43	40
McNeeley et al., 2006	Hist	NBC	950	CAMS-46267	*Musculus*	680	50	1910	(Known Age Specimen)			562	50	73	50
McNeeley et al., 2006	Hist	NBC	941	CAMS-17921	*Mytilus*	780	50	1935	(Known Age Specimen)			620	50	176	50
McNeeley et al., 2006	Hist	NBC	938	CAMS-17913	*Macoma*	680	50	1935	(Known Age Specimen)			520	50	76	50
McNeeley et al., 2006	Hist	SBC	957	UCIAMS-6009	*Mya*	725	20	1909	(Known Age Specimen)			609	20	117	20
McNeeley et al., 2006	Hist	SBC	956	UCIAMS-6008	*Musculus*	775	25	1909	(Known Age Specimen)			659	30	167	25
McNeeley et al., 2006	Hist	SBC	955	TO-8015	*Mya*	900	50	1909	(Known Age Specimen)			784	50	292	50
McNeeley et al., 2006	Hist	SBC	953	CAMS-46270	*Mytilus*	820	40	1955	(Known Age Specimen)			611	40	217	40
McNeeley et al., 2006	Hist	SBC	949	CAMS-46266	*Megayoldia*	760	50	1909	(Known Age Specimen)			644	50	152	50
McNeeley et al., 2006	Hist	SBC	948	CAMS-46265	*Musculus*	670	50	1909	(Known Age Specimen)			554	50	62	50
McNeeley et al., 2006	Hist	SBC	947	CAMS-46264	*Mytilus*	850	50	1909	(Known Age Specimen)			734	50	242	50
McNeeley et al., 2006	Hist	SBC	946	CAMS-46263	*Mytilus*	810	50	1909	(Known Age Specimen)			694	50	202	50
McNeeley et al., 2006	Hist	SBC	944	CAMS-33136	*Mya*	950	50	1955	(Known Age Specimen)			741	50	347	50
McNeeley et al., 2006	Hist	SBC	930	UCIAMS-6007	*Mytilus*	910	20	1893	(Known Age Specimen)			809	20	289	20
McNeeley et al., 2006	Hist	SBC	929	UCIAMS-6006	*Mytilus*	865	20	1885	(Known Age Specimen)			749	20	236	20
McNeeley et al., 2006	Hist	SBC	928	GSC-6086	*Crassostrea*	800	70	1955	(Known Age Specimen)			591	70	197	70
McNeeley et al., 2006	Hist	SBC	927	GSC-3130	*Patinopecten*	840	40	1910	(Known Age Specimen)			722	40	233	40
McNeeley et al., 2006	Hist	SBC	926	CAMS-46751	*Clinocardium*	880	40	1889	(Known Age Specimen)			767	40	255	40
McNeeley et al., 2006	Hist	SBC	925	CAMS-46262	*Clinocardium*	820	50	1893	(Known Age Specimen)			719	50	199	50
McNeeley et al., 2006	Hist	SBC	924	CAMS-34655	*Balanus*	860	50	1955	(Known Age Specimen)			651	50	257	50
McNeeley et al., 2006	Hist	SBC	923	CAMS-34652	*Mya*	850	50	1955	(Known Age Specimen)			641	50	247	50
McNeeley et al., 2006	Hist	SBC	922	CAMS-33356	*Macoma*	890	50	1908	(Known Age Specimen)			777	50	282	50
McNeeley et al., 2006	Hist	SBC	921	CAMS-33151	*Crepidula*	860	50	1954	(Known Age Specimen)			653	50	257	50
McNeeley et al., 2006	Hist	SBC	920	CAMS-33141	*Mytilus*	900	50	1885	(Known Age Specimen)			784	50	271	50

All Southon and Fedje radiocarbon dates from CAMS

Supplemental Table S9: All Datasets in Synthesis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	± (1 σ)	ΔR	± (1 σ)
McNeeley et al., 2006	Hist	SBC	919	CAMS-33137	*Protothaca*	990	50	1955	(Known Age Specimen)			781	50	387	50
McNeeley et al., 2006	Hist	SBC	918	CAMS-17917	*Macoma*	880	50	1890	(Known Age Specimen)			770	50	256	50
McNeeley et al., 2006	Hist	SBC	917	CAMS-17916	*Macoma*	870	50	1918	(Known Age Specimen)			738	50	265	50
McNeeley et al., 2006	Hist	SBC	916	CAMS-17915	*Macoma*	960	40	1918	(Known Age Specimen)			828	40	355	40
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44469	*Mytilus*	4886	29	SUERC-44470	charcoal	4176	27	710	40	191	67
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44465	*Mytilus*	4852	27	SUERC-44470	charcoal	4176	27	676	38	157	69
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44467	*Mytilus*	4898	27	SUERC-44470	charcoal	4176	27	722	38	203	69
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44474	*Mytilus*	4854	29	SUERC-44470	charcoal	4176	27	678	40	159	67
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44467	*Mytilus*	4898	27	SUERC-44468	charcoal	4182	27	716	38	198	71
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44465	*Mytilus*	4852	27	SUERC-44468	charcoal	4182	27	670	38	152	71
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44469	*Mytilus*	4886	29	SUERC-44468	charcoal	4182	27	704	40	189	69
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44474	*Mytilus*	4854	29	SUERC-44468	charcoal	4182	27	672	40	154	69
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44474	*Mytilus*	4854	29	SUERC-44475	charcoal	4216	27	638	40	116	75
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44469	*Mytilus*	4886	29	SUERC-44475	charcoal	4216	27	670	40	148	75
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44467	*Mytilus*	4898	27	SUERC-44475	charcoal	4216	27	682	38	162	66
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44465	*Mytilus*	4852	27	SUERC-44475	charcoal	4216	27	636	38	116	76
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44465	*Mytilus*	4852	27	SUERC-44466	charcoal	4218	29	634	40	116	77
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44467	*Mytilus*	4898	27	SUERC-44466	charcoal	4218	29	680	40	162	77
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44469	*Mytilus*	4886	29	SUERC-44466	charcoal	4218	29	668	41	147	76
Edinborough et al., 2016	MH	NBC	GbTo-34	SUERC-44474	*Mytilus*	4854	29	SUERC-44466	charcoal	4218	29	636	41	115	76
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44476	*Mytilus*	2239	29	SUERC-44484	charcoal	1619	24	620	38	144	145
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44478	*Mytilus*	2352	29	SUERC-44484	charcoal	1619	24	733	38	257	45
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44485	*Mytilus*	2274	29	SUERC-44484	charcoal	1619	24	655	38	179	45
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44485	*Mytilus*	2274	29	SUERC-44486	charcoal	1685	29	589	41	103	50
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44476	*Mytilus*	2239	29	SUERC-44486	charcoal	1685	29	554	41	68	50
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44478	*Mytilus*	2352	29	SUERC-44486	charcoal	1685	29	667	41	181	50
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44476	*Mytilus*	2239	29	SUERC-44477	charcoal	1720	27	519	40	36	49
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44478	*Mytilus*	2352	29	SUERC-44477	charcoal	1720	27	632	40	149	49
Edinborough et al., 2016	LH	NBC	GbTo-34	SUERC-44485	*Mytilus*	2274	29	SUERC-44477	charcoal	1720	27	554	40	71	49
Letham et al., in Edinborough et al., 2016	YD	NBC	Tea Bay Creek	D-AMS 005851	shell	10256	31	D-AMS 005850	g	9989	41	267	51	-181	76
Letham et al., in Edinborough et al., 2016	EH	NBC	Tea Bay Creek	D-AMS 004468	*Sa*	9526	34	D-AMS 004469	g	8472	35	1054	49	531	48
Letham et al., in Edinborough et al., 2016	EH	NBC	Benke Lagoon	D-AMS 007877	*My*	9908	33	D-AMS 007893	g	8962	32	946	46	427	57
Letham et al., in Edinborough et al., 2016	EH	NBC	Benke Lagoon	D-AMS 007878	*Cl*	10154	34	D-AMS 007894	g	9359	28	795	44	352	50
Eldridge et al., 2014	MH	NBC	GbTo-54	D-AMS 005148	shell	2930	27	D-AMS 005147	charcoal	2500	33	430	43	-68	75
Eldridge et al., 2014	MH	NBC	GbTo-54	D-AMS 005151	shell	2927	30	D-AMS 005150	charcoal	2588	30	339	42	-183	36
Eldridge et al., 2014	LH	NBC	GbTo-54	D-AMS 005139	shell	1894	29	D-AMS 005138	charcoal	1270	25	624	38	68	46
Eldridge et al., 2014	LH	NBC	GbTo-54	D-AMS 005146	shell	2058	27	D-AMS 005145	charcoal	1473	33	585	43	90	39
Eldridge et al., 2014	LH	NBC	GbTo-54	D-AMS 005153	shell	2153	32	D-AMS 005152	charcoal	1589	32	564	45	77	47
Eldridge et al., 2014	LH	NBC	GbTo-54	D-AMS 005136	shell	2421	25	D-AMS 005136	charcoal	1940	34	481	42	11	49
Kovanen and Easterbrook, 2002	BA	SBC	Bradner Pit BC	B-144094	shell	12950	40	B-144095	wood	11770	40	1180	57	652	69
Kovanen and Easterbrook, 2002	BA	SBC	Bradner Pit BC	B-144096	shell	12950	40	B-144097	wood	11680	50	1270	64	742	61
Kovanen and Easterbrook, 2002	BA	SBC	Bradner Pit BC	B-144098	shell	12970	40	B-144099	wood	11660	50	1310	64	774	62
Kovanen and Easterbrook, 2002	BA	SBC	Axton Pit WA	B-145455	shell	12680	40	B-145458	wood	11670	40	1010	57	476	56
Kovanen and Easterbrook, 2002	BA	SBC	Axton Pit WA	B-145456	shell	12720	40	B-145459	wood	11830	50	890	64	381	65
Kovanen and Easterbrook, 2002	BA	SBC	Axton Pit WA	B-145457	shell	12760	40	B-145460	wood	11790	50	970	64	444	69

All Southon and Fedje radiocarbon dates from CAMS

Supplemental Table S10: Data Excluded from Final Analysis

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)	R(t)	Reason for Removal
This Study	EH	SEAK	Pow197	Beta - 436188	marine shell	9910	40	UGAMS-26220	charred *Pinaceae* needles	1000	25	8910	Extreme outlier removed to achieve normal distribution
This Study	EH	SEAK	Pow48	Beta - 245298	marine shell	9370	60	UGAMS-26227	charred *Pinaceae* needles	9390	30	-20	Negative R(t) signals sampling error
This Study	EH	SEAK	Tbsy002	Beta - 245299	marine shell	9060	60	UGAMS-26229	charred *Pinaceae* needles	9580	30	-520	Negative R(t) signals sampling error
This Study	EH	SEAK	Tbsy004	Beta - 245292	marine shell	9230	60	UGAMS-26230	charred *Pinaceae* needles	9440	30	-210	Negative R(t) signals sampling error
This Study	EH	SEAK	Tux1	Beta - 145938	marine shell	9210	70	UGAMS-26231	charred *Pinaceae* needles	5320	30	3890	Extreme outlier removed to achieve normal distribution
This Study	EH	SEAK	pow167	Beta - 283658	marine shell	9000	40	UGAMS-26338	charred *Pinaceae* needles	modern			Modern
This Study	EH	SEAK	pow202	Beta – 436193	marine shell	9,440	40	UGAMS-26339	charred *Pinaceae* needles	10260	30	-820	Negative R(t) signals sampling error
This Study	EH	SEAK	hecata2	Beta - 264100	marine shell	9,970	90	UGAMS-26340	charred *Pinaceae* needles	4630	25	5340	Extreme outlier removed to achieve normal distribution

On a later date, four shell samples were processed to compare to previous dates. As all four dates are inconsistent with prior measures, we suspect there were pretreatment issues with this batch of four radiocarbon dates.

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Marine ID	Sample Type	Marine 14C	(+-)
This Study	EH	SEAK	Kos7	UGAMS-26383	*Littorina sitkana*	9910	30		Beta - 276611	*Littorina sitkana*	9000	40
This Study	EH	SEAK	Kuper6	UGAMS-26384	*Littorina sitkana*	8580	30		Beta - 283658	*Littorina sitkana*	9530	50
This Study	EH	SEAK	Pow136	UGAMS-26385	*Littorina sitkana*	9380	30		Beta - 269004	*Littorina sitkana*	10020	80
This Study	MH	SEAK	Pow179	UGAMS-26386	*Littorina sitkana*	5910	30		Beta - 276619	*Littorina sitkana*	8550	50

Extreme outliers removed to achieve normal distribution when organized by region and time period

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)
Southon and Fedje 2003	MH	NBC	G1	19024	*Protothaca*	5990	70	19023	Gymn. charc0al	5740	60
Southon and Fedje 2003	MH	NBC	MI	19010	*Pecten*	5160	70	19009	charred wood	4870	60
Southon and Fedje 2003	Hist	NBC	MI	15360	*Protothaca*	660	60	14422	charcoal	240	60

Outliers removed to achieve normal distribution when organized by region and time period

Study	Era	Area	Sample Location	Marine ID	Sample Type	Marine 14C	(+-)	Terrestrial ID	Sample Type	Terrestrial 14C	(+-)
Eldridge et al., 2014	LH	NBC	GbTo-54	D-AMS 005141	shell	2920	28	D-AMS 005140	charcoal	1770	29