

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-1	CS-1	% of total	CS-2	CS-2	% of total	CS-3
Site		403 Jack			403 Jack		
Age(yr) <i>red=ring count</i>		18			17		
Circumference (cm)		85			54		
Lipid extracted (g)		0.79			0.7348		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
4+10	6	18.06	22.86	0.72	0.82	1.12	0.02	0.82
7	7	1.17	1.48	0.05				
6	8	11.91	15.08	0.48				
8+5	9	31.26	39.57	1.25	33.26	45.26	0.86	33.26
19	13						0.00	
18	15	4.53	5.73	0.18	69.78	94.96	1.81	69.78
17	16							
24+27	17							
16+32	18	3.86	4.89	0.15	1.86	2.53	0.05	1.86
26	19	3.05	3.86	0.12	3.42	4.65	0.09	3.42
25	20	0.96	1.22	0.04				
31+28	21	9.82	12.43	0.39	12.59	17.13	0.33	12.59
33+53	22	2.47	3.13	0.10	10.27	13.98	0.27	10.27
51+22	23				1.08	1.47	0.03	1.08
45	24							
46	25							
52	26	28.63	36.24	1.15	58.68	79.86	1.52	58.68
43+49	27	13	16.46	0.52	35.69	48.57	0.93	35.69
47+48	28	53.99	68.34	2.16				
44	30	19.21	24.32	0.77	36.16	49.21	0.94	
37+42	31	10.93	13.84	0.44	24.55	33.41	0.64	36.16
41+71+64	32	25.76	32.61	1.03	33.79	45.99	0.88	33.79
40	33	1.28	1.62	0.05				
63	34	3.48	4.41	0.14	4.59	6.25	0.12	4.59
74	35	41.36	52.35	1.66	57.82	78.69	1.50	57.82
70+76	36	153.38	194.15	6.14	163.5	222.51	4.25	163.5
66+95	37	141.52	179.14	5.67	183.73	250.04	4.77	183.73
91	38	9.34	11.82	0.37	12.62	17.17	0.33	12.62
56+60	39	77.94	98.66	3.12	77.15	104.99	2.00	77.15
92+84	40	46.24	58.53	1.85	55.07	74.95	1.43	55.07
101	41	85.94	108.78	3.44	122.69	166.97	3.19	122.69
99	42	50.07	63.38	2.00	74.72	101.69	1.94	74.72
83	43	5.22	6.61	0.21	8.43	11.47	0.22	8.43
97	44	31.23	39.53	1.25	38.77	52.76	1.01	38.77
87	45	54.57	69.08	2.18	68.32	92.98	1.77	68.32
85	46	43.02	54.46	1.72	63.34	86.20	1.65	63.34
77+110	48	144.59	183.03	5.79	159.07	216.48	4.13	159.07
82	49	14.63	18.52	0.59	12.06	16.41	0.31	12.06
151	50	40.86	51.72	1.64	66.94	91.10	1.74	66.94
135+144	51	17.83	22.57	0.71	27.91	37.98	0.72	27.91
149	52	128.04	162.08	5.13	187.46	255.12	4.87	187.46
118	53	100.95	127.78	4.04	137.66	187.34	3.58	137.66
131	54	1.49	1.89	0.06	2.17	2.95	0.06	2.17

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-1	CS-1	% of total	CS-2	CS-2	% of total	CS-3
Site		403 Jack			403 Jack		
Age(yr) <i>red=ring count</i>		18			17		
Circumference (cm)		85			54		
Lipid extracted (g)		0.79			0.7348		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
146	55	37.52	47.49	1.50	60.42	82.23	1.57	60.42
153++	56	315.28	399.09	12.62	439.37	597.95	11.41	439.37
141	57	41.21	52.16	1.65	66.47	90.46	1.73	66.47
137+176	58	8.13	10.29	0.33	13.5	18.37	0.35	13.5
163+138	59	38.3	48.48	1.53	60.37	82.16	1.57	60.37
158	60	36.83	46.62	1.47	59.94	81.57	1.56	59.94
178	61	2.07	2.62	0.08	4.1	5.58	0.11	4.1
175	63	6.26	7.92	0.25	13.23	18.00	0.34	13.23
187+182	64	75.71	95.84	3.03	142.89	194.46	3.71	142.89
183	65	5.037	6.38	0.20	92.54	125.94	2.40	92.54
128	66	22.22	28.13	0.89	34.25	46.61	0.89	34.25
185	67	8.91	11.28	0.36	17.46	23.76	0.45	17.46
174	68	55.2	69.87	2.21	99.52	135.44	2.58	99.52
177	69	36.68	46.43	1.47	67.61	92.01	1.76	67.61
202+171	70	22.28	28.20	0.89	38.56	52.48	1.00	38.56
157+200	71	4.61	5.84	0.18	11	14.97	0.29	11
172+197	73	13.99	17.71	0.56	30.33	41.28	0.79	30.33
180	74	115.85	146.65	4.64	231.21	314.66	6.00	231.21
193	75	8.38	10.61	0.34	20.03	27.26	0.52	20.03
199	76	2.13	2.70	0.09	6.39	8.70	0.17	6.39
170+190	77	77.5	98.10	3.10	163.11	221.98	4.24	163.11
198	78	5.55	7.03	0.22	2.53	3.44	0.07	2.53
201	79	35.34	44.73	1.41	76.7	104.38	1.99	76.7
203+196	80	42.11	53.30	1.69	95.43	129.87	2.48	95.43
189	81	13.32	16.86	0.53	40.54	55.17	1.05	40.54
208+195	82	19.63	24.85	0.79	53.21	72.41	1.38	53.21
207	83	0.67	0.85	0.03	0.9	1.22	0.02	0.9
194	84	14.75	18.67	0.59	43	58.52	1.12	43
205	85			0.00	4.38	5.96	0.11	4.38
206	86	0.546	0.69	0.02	15.41	20.97	0.40	15.41

TOTAL PCB, ng/g	2497.60	3161.52	100.00	3850.37	5240.02	100.00	3825.82
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Surrogate recovery			%		%	
14	12	114.9	57.45	50.12	25.06	107.89
65	29	53.99	89.98	10.42	17.37	62.47
166	62	36.64	73.28	19.43	38.86	37
204	72	66.47	110.78	65.95	109.92	50.82

RED cells in the PCB sample data are hand-revised peaks mis-identified by integrator.

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-3	% of total	CS-4	CS-4	% of total	CS-5	CS-5
Site	403 Jack			403 Jack			403 Jack
Age(yr) <i>red=ring count</i>	13			18			55
Circumference (cm)	87			56			220
Lipid extracted (g)	0.329			1.085			0.679

PCB Congener	Calib #	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g
4+10	6	2.49	0.02	2.2	2.03	0.04		
7	7			2.61	2.41	0.05	24.57	36.19
6	8			17.16	15.82	0.35	9.27	13.65
8+5	9	101.09	0.87	68.62	63.24	1.40	115.98	170.81
19	13		0.00					
18	15	212.10	1.82	7.52	6.93	0.15	3.08	4.54
17	16							
24+27	17							
16+32	18	5.65	0.05	8.06	7.43	0.16	4.58	6.75
26	19	10.40	0.09				2.49	3.67
25	20							
31+28	21	38.27	0.33	94.37	86.98	1.92	14.16	20.85
33+53	22	31.22	0.27	32.88	30.30	0.67	6.6	9.72
51+22	23	3.28	0.03	13.79	12.71	0.28	3.51	5.17
45	24							
46	25			8.03	7.40	0.16		
52	26	178.36	1.53	49.41	45.54	1.00	17.08	25.15
43+49	27	108.48	0.93	25.07	23.11	0.51	8.4	12.37
47+48	28							
44	30			36.73	33.85	0.75	19.69	29.00
37+42	31	109.91	0.95	17.78	16.39	0.36	12.39	18.25
41+71+64	32	102.71	0.88	48.67	44.86	0.99	24.08	35.46
40	33			4.08	3.76	0.08	2.67	3.93
63	34	13.95	0.12	9.28	8.55	0.19	4.13	6.08
74	35	175.74	1.51	66.89	61.65	1.36	40.02	58.94
70+76	36	496.96	4.27	227.83	209.98	4.63	135.51	199.57
66+95	37	558.45	4.80	211.27	194.72	4.30	132.07	194.51
91	38	38.36	0.33	17.86	16.46	0.36	7.7	11.34
56+60	39	234.50	2.02	115.82	106.75	2.35	65.6	96.61
92+84	40	167.39	1.44	84.63	78.00	1.72	38.67	56.95
101	41	372.92	3.21	160.86	148.26	3.27	67.22	99.00
99	42	227.11	1.95	88.09	81.19	1.79	39.26	57.82
83	43	25.62	0.22	10.45	9.63	0.21	4.29	6.32
97	44	117.84	1.01	56.08	51.69	1.14	26.49	39.01
87	45	207.66	1.79	93.54	86.21	1.90	45.68	67.28
85	46	192.52	1.66	71.49	65.89	1.45	35.66	52.52
77+110	48	483.50	4.16	241.7	222.76	4.91	121.68	179.20
82	49	36.66	0.32	22.11	20.38	0.45	13.29	19.57
151	50	203.47	1.75	93.03	85.74	1.89	34.22	50.40
135+144	51	84.83	0.73	37.67	34.72	0.77	14.39	21.19
149	52	569.79	4.90	264.74	244.00	5.38	105.84	155.88
118	53	418.42	3.60	151.67	139.79	3.08	79.1	116.49
131	54	6.60	0.06	2.54	2.34	0.05	0.96	1.41

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-3	% of total	CS-4	CS-4	% of total	CS-5	CS-5
Site	403 Jack			403 Jack			403 Jack
Age(yr) <i>red=ring count</i>	13			18			55
Circumference (cm)	87			56			220
Lipid extracted (g)	0.329			1.085			0.679

PCB Congener	Calib #	PCB ng/g	%	PCB ng	PCB ng/g	%	PCB ng	PCB ng/g
146	55	183.65	1.58	80.47	74.17	1.64	33.36	49.13
153++	56	1335.47	11.48	588.18	542.10	11.96	261.84	385.63
141	57	202.04	1.74	94.32	86.93	1.92	31.58	46.51
137+176	58	41.03	0.35	21.09	19.44	0.43	7.36	10.84
163+138	59	183.50	1.58	76.93	70.90	1.56	33.08	48.72
158	60	182.19	1.57	74.34	68.52	1.51	30.7	45.21
178	61	12.46	0.11	6	5.53	0.12	1.61	2.37
175	63	40.21	0.35	18.01	16.60	0.37	4.5	6.63
187+182	64	434.32	3.73	188.16	173.42	3.83	65.71	96.77
183	65	281.28	2.42	123	113.36	2.50	45.81	67.47
128	66	104.10	0.90	38.39	35.38	0.78	18.62	27.42
185	67	53.07	0.46	23.96	22.08	0.49	6.08	8.95
174	68	302.49	2.60	126.98	117.03	2.58	56.04	82.53
177	69	205.50	1.77	86.03	79.29	1.75	33.33	49.09
202+171	70	117.20	1.01	48.96	45.12	1.00	22.2	32.70
157+200	71	33.43	0.29	24.48	22.56	0.50		
172+197	73	92.19	0.79	34.52	31.82	0.70	14	20.62
180	74	702.77	6.04	262.33	241.78	5.33	106.65	157.07
193	75	60.88	0.52	21	19.35	0.43	6.39	9.41
199	76	19.42	0.17	6.16	5.68	0.13	2.42	3.56
170+190	77	495.78	4.26	167.67	154.53	3.41	80.21	118.13
198	78	7.69	0.07	27.38	25.24	0.56	8.08	11.90
201	79	233.13	2.00	87.84	80.96	1.79	24.43	35.98
203+196	80	290.06	2.49	91.24	84.09	1.85	49.88	73.46
189	81	123.22	1.06	35.8	33.00	0.73	81.35	119.81
208+195	82	161.73	1.39	48.41	44.62	0.98	24.38	35.91
207	83	2.74	0.02	1.36	1.25	0.03	1.75	2.58
194	84	130.70	1.12	34.18	31.50	0.69	19.92	29.34
205	85	13.31	0.11	4.46	4.11	0.09	0.49	0.72
206	86	46.84	0.40	12.49	11.51	0.25	6.03	8.88

TOTAL PCB, ng/g	11628.63	100.00	4918.67	4533.34	100.00	2358.13	3472.95
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Surrogate recovery		%		%		%
14	12	53.945	85	42.5	139.78	69.89
65	29	104.12	58.48	97.47	57.48	95.80
166	62	74.00	41.32	82.64	35.54	71.08
204	72	84.70	53.52	89.20	71.35	118.92

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of total	CS-6	CS-6	% of total	CS-7	CS-7	% of total
Site			305 Jack			305 Jack	
Age(yr) <i>red=ring count</i>			28			24	
Circumference (cm)			135			127	
Lipid extracted (g)			0.773			0.4275	

PCB Congener	Calib #		PCB ng	PCB ng/g		PCB ng	PCB ng/g	
4+10	6		10.74	13.89	1.23	44.31	103.65	5.38
7	7	1.04						
6	8	0.39	14.82	19.17	1.69			
8+5	9	4.92	102.09	132.07	11.65	100.41	234.88	12.19
19	13							
18	15	0.13	39.64	51.28	4.52			
17	16							
24+27	17							
16+32	18	0.19						
26	19	0.11	10.31	13.34	1.18	1.89	4.42	0.23
25	20		11.06	14.31	1.26			
31+28	21	0.60	21.7	28.07	2.48	13.83	32.35	1.68
33+53	22	0.28	4.95	6.40	0.56	3.18	7.44	0.39
51+22	23	0.15	2.9	3.75	0.33	3.16	7.39	0.38
45	24		0.83	1.07	0.09			
46	25		4.59	5.94	0.52			
52	26	0.72	2.8	3.62	0.32	3.33	7.79	0.40
43+49	27	0.36	1.77	2.29	0.20	1.47	3.44	0.18
47+48	28							
44	30	0.83	3.02	3.91	0.34	1.62	3.79	0.20
37+42	31	0.53	5.16	6.68	0.59			
41+71+64	32	1.02	3.58	4.63	0.41	4.94	11.56	0.60
40	33	0.11						
63	34	0.18						
74	35	1.70	13.24	17.13	1.51	3.16	7.39	0.38
70+76	36	5.75	12.61	16.31	1.44	11.27	26.36	1.37
66+95	37	5.60	27.95	36.16	3.19	30.97	72.44	3.76
91	38	0.33	2.95	3.82	0.34			
56+60	39	2.78	48.41	62.63	5.52	5.22	12.21	0.63
92+84	40	1.64	21.63	27.98	2.47	3.97	9.29	0.48
101	41	2.85	28.72	37.15	3.28	13.8	32.28	1.68
99	42	1.66				4.6	10.76	0.56
83	43	0.18						
97	44	1.12	9.86	12.76	1.12	3.7	8.65	0.45
87	45	1.94	7.96	10.30	0.91	7.19	16.82	0.87
85	46	1.51	15.2	19.66	1.73	5.13	12.00	0.62
77+110	48	5.16	10.57	13.67	1.21	18.82	44.02	2.29
82	49	0.56	2.39	3.09	0.27	3.36	7.86	0.41
151	50	1.45	16.11	20.84	1.84	15.74	36.82	1.91
135+144	51	0.61	4.8	6.21	0.55	5.26	12.30	0.64
149	52	4.49	25.54	33.04	2.91	34.87	81.57	4.23
118	53	3.35	10.36	13.40	1.18	11.3	26.43	1.37
131	54	0.04	0.92	1.19	0.10			

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of total	CS-6	CS-6	% of total	CS-7	CS-7	% of total
Site			305 Jack			305 Jack	
Age(yr) <i>red=ring count</i>			28			24	
Circumference (cm)			135			127	
Lipid extracted (g)			0.773			0.4275	

PCB Congener	Calib #		PCB ng	PCB ng/g		PCB ng	PCB ng/g	
146	55	1.41	12.15	15.72	1.39	7.19	16.82	0.87
153++	56	11.10	67.21	86.95	7.67	75.97	177.71	9.22
141	57	1.34	11.98	15.50	1.37	12.19	28.51	1.48
137+176	58	0.31	3.24	4.19	0.37	3.62	8.47	0.44
163+138	59	1.40	8.78	11.36	1.00	10.03	23.46	1.22
158	60	1.30	10.48	13.56	1.20	8.94	20.91	1.09
178	61	0.07	0.64	0.83	0.07	0.73	1.71	0.09
175	63	0.19	2.79	3.61	0.32			
187+182	64	2.79	25.96	33.58	2.96	26.56	62.13	3.23
183	65	1.94	15.11	19.55	1.72	14.88	34.81	1.81
128	66	0.79	4.99	6.46	0.57	3.03	7.09	0.37
185	67	0.26	3.25	4.20	0.37	2.11	4.94	0.26
174	68	2.38	17.59	22.76	2.01	33.78	79.02	4.10
177	69	1.41	12.89	16.68	1.47	19.26	45.05	2.34
202+171	70	0.94	5.82	7.53	0.66	17.84	41.73	2.17
157+200	71							
172+197	73	0.59	4.58	5.92	0.52	4.74	11.09	0.58
180	74	4.52	46.9	60.67	5.35	44.03	102.99	5.35
193	75	0.27	3.61	4.67	0.41	3.85	9.01	0.47
199	76	0.10	0.76	0.98	0.09	0.83	1.94	0.10
170+190	77	3.40	33.77	43.69	3.85	24.1	56.37	2.93
198	78	0.34	6.62	8.56	0.76	133.83	313.05	16.25
201	79	1.04	17.11	22.13	1.95			
203+196	80	2.12	17.78	23.00	2.03			
189	81	3.45						
208+195	82	1.03	9.66	12.50	1.10	7.8	18.25	0.95
207	83	0.07	1.36	1.76	0.16	0.66	1.54	0.08
194	84	0.84	12.23	15.82	1.40	7.48	17.50	0.91
205	85	0.02					0.00	0.00
206	86	0.26	20.21	26.14	2.31	3.6	8.42	0.44
TOTAL PCB, ng/g		100.00	876.65	1134.09	100.00	823.55	1926.43	100.00

Surrogate recovery			%		%
14	12	185.99	92.995	128.99	64.495
65	29	49.93	83.22	45.03	75.05
166	62	49.86	99.72	36.01	72.02
204	72	68.89	114.82	60.21	100.35

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-8	CS-8	% of total	CS-9	CS-9	% of total	CS-12
Site		407 Jack			407 Jack		
Age(yr) <i>red=ring count</i>		28			38		
Circumference (cm)		161			170		
Lipid extracted (g)		0.5257			0.6114		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
4+10	6	26.73	50.85	1.01	3.88	6.35	0.45	4.38
7	7	20.4	38.81	0.77				
6	8							
8+5	9	117.91	224.29	4.44				
19	13							
18	15							
17	16							
24+27	17							4.35
16+32	18	5.5	10.46	0.21	1.49	2.44	0.17	
26	19	3.98	7.57	0.15	2.69	4.40	0.31	
25	20							1.81
31+28	21	9.05	17.22	0.34				
33+53	22	12.06	22.94	0.45	5.9	9.65	0.69	
51+22	23							
45	24							11.15
46	25							17
52	26	6.81	12.95	0.26	1.45	2.37	0.17	4.47
43+49	27	3.4	6.47	0.13	2.07	3.39	0.24	4.22
47+48	28							5.68
44	30	5.75	10.94	0.22	9.98	16.32	1.17	
37+42	31							
41+71+64	32	9.81	18.66	0.37	5.91	9.67	0.69	
40	33							
63	34							
74	35	9.45	17.98	0.36	3.6	5.89	0.42	
70+76	36	31.48	59.88	1.19	16.65	27.23	1.94	4.98
66+95	37	114.13	217.10	4.30	51.95	84.97	6.07	41.5
91	38	3.5	6.66	0.13	1.59	2.60	0.19	1.77
56+60	39	14.5	27.58	0.55	6.79	11.11	0.79	
92+84	40	21.29	40.50	0.80	9.27	15.16	1.08	8.88
101	41	59.15	112.52	2.23	22.96	37.55	2.68	19.78
99	42	17.52	33.33	0.66	6.91	11.30	0.81	6.67
83	43	0.93	1.77	0.04	0.58	0.95	0.07	
97	44	7.83	14.89	0.30	3.46	5.66	0.40	0.89
87	45	17.6	33.48	0.66	7.61	12.45	0.89	3.62
85	46	11.57	22.01	0.44	4.84	7.92	0.57	1.6
77+110	48	58.43	111.15	2.20	23.28	38.08	2.72	15.09
82	49	2.2	4.18	0.08	1.56	2.55	0.18	
151	50	68.13	129.60	2.57	21.15	34.59	2.47	34.99
135+144	51	26.91	51.19	1.01	8.21	13.43	0.96	11.64
149	52	183.93	349.88	6.93	53.68	87.80	6.27	70.89
118	53	41.24	78.45	1.55	14.1	23.06	1.65	6.58
131	54	0.92	1.75	0.03	0.13	0.21	0.02	

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-8	CS-8	% of total	CS-9	CS-9	% of total	CS-12
Site		407 Jack			407 Jack		
Age(yr) <i>red=ring count</i>		28			38		
Circumference (cm)		161			170		
Lipid extracted (g)		0.5257			0.6114		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
146	55	58.97	112.17	2.22	16.01	26.19	1.87	27.26
153++	56	362.53	689.61	13.67	100.85	164.95	11.78	139.61
141	57	66.46	126.42	2.51	17	27.81	1.99	29.34
137+176	58	20.64	39.26	0.78	5.25	8.59	0.61	9.35
163+138	59	49.61	94.37	1.87	12.42	20.31	1.45	18.9
158	60	39.55	75.23	1.49	11.87	19.41	1.39	16.14
178	61	4.09	7.78	0.15	1.23	2.01	0.14	2.51
175	63	11.96	22.75	0.45	3.86	6.31	0.45	5.92
187+182	64	144.05	274.02	5.43	38.21	62.50	4.46	76.75
183	65	91.75	174.53	3.46	22.53	36.85	2.63	40.12
128	66	16.89	32.13	0.64	4.54	7.43	0.53	5.73
185	67	16.13	30.68	0.61	3.64	5.95	0.43	9.49
174	68	97.83	186.09	3.69	22.79	37.28	2.66	47.97
177	69	67.46	128.32	2.54	15.13	24.75	1.77	37.91
202+171	70	33.91	64.50	1.28	10.43	17.06	1.22	25.04
157+200	71							
172+197	73	25.52	48.54	0.96	5.94	9.72	0.69	13.74
180	74	212.19	403.63	8.00	47.13	77.09	5.50	104.88
193	75	15.57	29.62	0.59	4.5	7.36	0.53	9.24
199	76	4.17	7.93	0.16	0.81	1.32	0.09	2.75
170+190	77	124.86	237.51	4.71	27.83	45.52	3.25	74.57
198	78	4.22	8.03	0.16	60.17	98.41	7.03	5.92
201	79	57.07	108.56	2.15	70.25	114.90	8.20	39.66
203+196	80	69.49	132.19	2.62	44.42	72.65	5.19	43.62
189	81	67.42	128.25	2.54		0.00	0.00	46.85
208+195	82	40.27	76.60	1.52	8.13	13.30	0.95	21.69
207	83	1.27	2.42	0.05	0.81	1.32	0.09	0.81
194	84	24.39	46.40	0.92	6.49	10.61	0.76	18.66
205	85	2.06	3.92	0.08		0.00	0.00	2.19
206	86	10.52	20.01	0.40	2.45	4.01	0.29	16.47

TOTAL PCB, ng/g	2652.96	5046.53	100.00	856.38	1400.69	100.00	1175.03
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Surrogate recovery			%		%	
14	12	161.88	80.94	73.12	36.56	105.23
65	29	60.38	100.63	32.49	54.15	43.33
166	62	43.87	87.74	27.57	55.14	37.48
204	72	73.56	122.60	38.39	63.98	63.9

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-12	% of total	CS-13	CS-13	% of total	CS-14	CS-14
Site	R. Williams			108Tucker			108Tucker
Age(yr) <i>red=ring count</i>	15			17			39
Circumference (cm)	69			56			73
Lipid extracted (g)	0.1251			0.2742			0.308

PCB Congener	Calib #	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g
4+10	6	35.01	0.37	0.52	1.90	0.04		
7	7			1.7	6.20	0.12		
6	8							
8+5	9			21.23	77.43	1.55		
19	13							
18	15							
17	16							
24+27	17	34.77	0.37					
16+32	18			7.13	26.00	0.52	28.9	93.83
26	19						25.28	82.08
25	20	14.47	0.15					
31+28	21						39.1	126.95
33+53	22							
51+22	23							
45	24	89.13	0.95					
46	25	135.89	1.45					
52	26	35.73	0.38					
43+49	27	33.73	0.36				26.34	85.52
47+48	28	45.40	0.48					
44	30							
37+42	31							
41+71+64	32							
40	33							
63	34							
74	35							
70+76	36	39.81	0.42	3.16	11.52	0.23	2.02	6.56
66+95	37	331.73	3.53	30.02	109.48	2.19	33.76	109.61
91	38	14.15	0.15	1.22	4.45	0.09	0.83	2.69
56+60	39					0.00		
92+84	40	70.98	0.76	9.51	34.68	0.69	8.58	27.86
101	41	158.11	1.68	19.24	70.17	1.40	18.34	59.55
99	42	53.32	0.57	5	18.23	0.37	6.78	22.01
83	43					0.00		
97	44	7.11	0.08	1.39	5.07	0.10	1.49	4.84
87	45	28.94	0.31	3.08	11.23	0.22	2.82	9.16
85	46	12.79	0.14	1.79	6.53	0.13	2.11	6.85
77+110	48	120.62	1.28	14.89	54.30	1.09	16.87	54.77
82	49					0.00		
151	50	279.70	2.98	58.44	213.13	4.27	62.4	202.60
135+144	51	93.05	0.99	16.39	59.77	1.20	17.35	56.33
149	52	566.67	6.03	116.94	426.48	8.54	126.21	409.77
118	53	52.60	0.56			0.00		
131	54					0.00		

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-12	% of total	CS-13	CS-13	% of total	CS-14	CS-14
Site	R. Williams			108Tucker			108Tucker
Age(yr) <i>red=ring count</i>	15			17			39
Circumference (cm)	69			56			73
Lipid extracted (g)	0.1251			0.2742			0.308

PCB Congener	Calib #	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g
146	55	217.91	2.32	38.82	141.58	2.83	53.12	172.47
153++	56	1115.99	11.88	212.14	773.67	15.49	232.36	754.42
141	57	234.53	2.50	42.99	156.78	3.14	41.95	136.20
137+176	58	74.74	0.80	11.79	43.00	0.86	11.19	36.33
163+138	59	151.08	1.61	27.36	99.78	2.00	27.95	90.75
158	60	129.02	1.37	19.39	70.71	1.42	22.44	72.86
178	61	20.06	0.21	3.63	13.24	0.27	4.08	13.25
175	63	47.32	0.50	5.93	21.63	0.43	9.5	30.84
187+182	64	613.51	6.53	107.61	392.45	7.86	117.24	380.65
183	65	320.70	3.41	51.41	187.49	3.75	54.61	177.31
128	66	45.80	0.49	5.23	19.07	0.38	7.42	24.09
185	67	75.86	0.81	10.57	38.55	0.77	11.78	38.25
174	68	383.45	4.08	58.69	214.04	4.28	57.17	185.62
177	69	303.04	3.23	44.06	160.69	3.22	46.27	150.23
202+171	70	200.16	2.13	22.84	83.30	1.67	23.75	77.11
157+200	71						7.05	22.89
172+197	73	109.83	1.17	17.77	64.81	1.30	15.87	51.53
180	74	838.37	8.93	104.53	381.22	7.63	111.11	360.75
193	75	73.86	0.79	9.86	35.96	0.72	10.7	34.74
199	76	21.98	0.23	4.62	16.85	0.34	2.87	9.32
170+190	77	596.08	6.35	65.68	239.53	4.79	68.1	221.10
198	78	47.32	0.50	11.02	40.19	0.80	1.77	5.75
201	79	317.03	3.38	43.39	158.24	3.17	39.81	129.25
203+196	80	348.68	3.71	40.37	147.23	2.95	40.53	131.59
189	81	374.50	3.99	55.53	202.52	4.05	10.23	33.21
208+195	82	173.38	1.85	19.16	69.88	1.40	21.62	70.19
207	83	6.47	0.07	0.63	2.30	0.05		
194	84	149.16	1.59	12.03	43.87	0.88	13.47	43.73
205	85	17.51	0.19	2.17	7.91	0.16	1.66	5.39
206	86	131.65	1.40	8.94	32.60	0.65	4.78	15.52

TOTAL PCB, ng/g	9392.73	100.00	1369.81	4995.66	100.00	1489.58	4836.30
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Surrogate recovery		%		%		%
14	12	52.615	82.63	41.315	108.93	54.465
65	29	72.22	33.91	56.52	60.16	100.27
166	62	74.96	26.43	52.86	34.2	68.40
204	72	106.50	61.93	103.22	59.37	98.95

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of total	CS-16	CS-16	% of total	CS-18	CS-18	% of total
Site			108Tucker			501 Camp	
Age(yr) <i>red=ring count</i>			26			18	
Circumference (cm)			80			72	
Lipid extracted (g)			0.0756			0.1978	

PCB Congener	Calib #		PCB ng	PCB ng/g		PCB ng	PCB ng/g	
4+10	6							
7	7							
6	8							
8+5	9					47.38		
19	13							
18	15					2.81	14.21	0.43
17	16					3.39	17.14	0.52
24+27	17							
16+32	18	1.94						
26	19	1.70						
25	20	0.00				13.94	70.48	2.15
31+28	21	2.62				62.87		
33+53	22							
51+22	23					23.96	121.13	3.69
45	24							
46	25					7.9	39.94	1.22
52	26							
43+49	27	1.77				17.7	89.48	2.73
47+48	28					14.71	74.37	2.27
44	30							
37+42	31							
41+71+64	32							
40	33							
63	34							
74	35							
70+76	36	0.14						
66+95	37	2.27	24.43	323.15	1.72	20.13	101.77	3.10
91	38	0.06				1.42	7.18	0.22
56+60	39	0.00						0.00
92+84	40	0.58	8.24	108.99	0.58	5.06	25.58	0.78
101	41	1.23	20.5	271.16	1.44	13.6	68.76	2.10
99	42	0.46	5.21	68.92	0.37	4.58	23.15	0.71
83	43	0.00						0.00
97	44	0.10				0.97	4.90	0.15
87	45	0.19	2.36	31.22	0.17	1.56	7.89	0.24
85	46	0.14				0.95	4.80	0.15
77+110	48	1.13	11.3	149.47	0.80	6.31	31.90	0.97
82	49							0.00
151	50	4.19	64.08	847.62	4.51	18.67	94.39	2.88
135+144	51	1.16	16.2	214.29	1.14	5.97	30.18	0.92
149	52	8.47	122.83	1624.74	8.65	40.77	206.12	6.29
118	53	0.00						0.00
131	54	0.00						0.00

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of total	CS-16	CS-16	% of total	CS-18	CS-18	% of total
Site			108Tucker			501 Camp	
Age(yr) <i>red=ring count</i>			26			18	
Circumference (cm)			80			72	
Lipid extracted (g)			0.0756			0.1978	

PCB Congener	Calib #	% of total	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total
146	55	3.57	45.93	607.54	3.23	15.23	77.00	2.35
153++	56	15.60	238.99	3161.24	16.82	79.42	401.52	12.25
141	57	2.82	45.95	607.80	3.23	16.5	83.42	2.54
137+176	58	0.75	10.18	134.66	0.72	6.51	32.91	1.00
163+138	59	1.88	30.96	409.52	2.18	7.6	38.42	1.17
158	60	1.51	16.42	217.20	1.16			
178	61	0.27	4.19	55.42	0.29	1.25	6.32	0.19
175	63	0.64	6.24	82.54	0.44			0.00
187+182	64	7.87	136.11	1800.40	9.58	41.61	210.36	6.42
183	65	3.67	52.18	690.21	3.67	20.31	102.68	3.13
128	66	0.50	4.23	55.95	0.30	2.57	12.99	0.40
185	67	0.79	14.97	198.02	1.05	5.52	27.91	0.85
174	68	3.84	65.19	862.30	4.59	22.52	113.85	3.47
177	69	3.11	52.62	696.03	3.70	18.73	94.69	2.89
202+171	70	1.59	25.37	335.58	1.79	10.39	52.53	1.60
157+200	71	0.47						
172+197	73	1.07	17.79	235.32	1.25	6.65	33.62	1.03
180	74	7.46	122.19	1616.27	8.60	53.26	269.26	8.21
193	75	0.72	13.29	175.79	0.94	4.08	20.63	0.63
199	76	0.19	3.87	51.19	0.27	1.1	5.56	0.17
170+190	77	4.57	83.79	1108.33	5.90	32.96	166.63	5.08
198	78	0.12	1.99	26.32	0.14	2.86	14.46	0.44
201	79	2.67	27.36	361.90	1.93	21.78	110.11	3.36
203+196	80	2.72	55.36	732.28	3.90	25.09	126.85	3.87
189	81	0.69	15.65	207.01	1.10	23.86	120.63	3.68
208+195	82	1.45	28.83	381.35	2.03	12.15	61.43	1.87
207	83	0.00	0.59	7.80	0.04		0.00	0.00
194	84	0.90	17.78	235.19	1.25	7.25	36.65	1.12
205	85	0.11	1.44	19.05	0.10			0.00
206	86	0.32	6.01	79.50	0.42	4.91	24.82	0.76
TOTAL PCB, ng/g		100.00	1420.62	18791.27	100.00	758.76	3278.61	100.00

Surrogate recovery			%		%
14	12	77.7	38.85	90.45	45.225
65	29	23.36	38.93	36.19	60.32
166	62	28.93	57.86	31.87	63.74
204	72	66.37	110.62	55.78	92.97

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-19	CS-19	% of total	CS-21	CS-21	% of total	CS-23
Site		501 Camp			111 McP		
Age(yr) <i>red=ring count</i>		22			41		
Circumference (cm)		49.5			74		
Lipid extracted (g)		0.2038			0.1738		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
4+10	6				0.42	2.42	0.16	0.86
7	7							
6	8							
8+5	9				17.54			
19	13							
18	15							
17	16							
24+27	17							
16+32	18							2.82
26	19							2.2
25	20				1.19	6.85	0.47	0.7
31+28	21							3.77
33+53	22							5.22
51+22	23							
45	24				4.56	26.24	1.79	
46	25							1.41
52	26				9.61	55.29	3.77	9.24
43+49	27							7.06
47+48	28							4.45
44	30							3.22
37+42	31							
41+71+64	32							4.29
40	33							
63	34				0.67	3.86	0.26	0.7
74	35							2.54
70+76	36							5.68
66+95	37	7.04	34.54	3.00	14.59	83.95	5.72	29.77
91	38							0.63
56+60	39							1.99
92+84	40				3.31	19.04	1.30	4.81
101	41	5.93	29.10	2.53	6.92	39.82	2.71	11.87
99	42	1.84	9.03	0.79	2.78	16.00	1.09	2.7
83	43							
97	44				0.76	4.37	0.30	1.05
87	45				1.72	9.90	0.67	2.75
85	46				0.7	4.03	0.27	1.08
77+110	48	2	9.81	0.85	3.83	22.04	1.50	
82	49	0.68	3.34	0.29				0.37
151	50	8.78	43.08	3.75	4.63	26.64	1.81	13.81
135+144	51	2.55	12.51	1.09	1.67	9.61	0.65	4.71
149	52	17.93	87.98	7.65	11.71	67.38	4.59	27.43
118	53			0.00				
131	54			0.00				

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-19	CS-19	% of total	CS-21	CS-21	% of total	CS-23
Site		501 Camp			111 McP		
Age(yr) <i>red=ring count</i>		22			41		
Circumference (cm)		49.5			74		
Lipid extracted (g)		0.2038			0.1738		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
146	55	5.24	25.71	2.24	4.22	24.28	1.65	8.3
153++	56	42.29	207.51	18.04	29.85	171.75	11.70	46.47
141	57	9.01	44.21	3.84	5.05	29.06	1.98	9.94
137+176	58	1.3	6.38	0.55	1.92	11.05	0.75	3.43
163+138	59	4.33	21.25	1.85	4.64	26.70	1.82	7.04
158	60				3.02	17.38	1.18	9.09
178	61	0.46	2.26	0.20	0.51	2.93	0.20	29.96
175	63			0.00	3.12	17.95	1.22	2.21
187+182	64	18.27	89.65	7.79	14.04	80.78	5.50	20.8
183	65	9	44.16	3.84	7.4	42.58	2.90	10.53
128	66			0.00	1.87	10.76	0.73	1.81
185	67			0.00	1.74	10.01	0.68	1.93
174	68	17.25	84.64	7.36	9.07	52.19	3.56	12.29
177	69	17.94	88.03	7.65	8.24	47.41	3.23	8.33
202+171	70	9	44.16	3.84	4.44	25.55	1.74	4.12
157+200	71						0.00	
172+197	73	2.18	10.70	0.93	7.18	41.31	2.81	4.31
180	74	20.25	99.36	8.64	32.74	188.38	12.83	24.13
193	75				10.23	58.86	4.01	1.87
199	76			0.00	1.86	10.70	0.73	0.43
170+190	77	9.18	45.04	3.92	20.7	119.10	8.11	14.54
198	78	2.21	10.84	0.94	209.43		0.00	1.34
201	79	7.93	38.91	3.38			0.00	8.03
203+196	80	6.26	30.72	2.67			0.00	7.3
189	81			0.00			0.00	
208+195	82	2.96	14.52	1.26	1.72	9.90	0.67	2.61
207	83			0.00	1.72	9.90	0.67	
194	84	2.58	12.66	1.10	5.89	33.89	2.31	3.2
205	85				0.34	1.96	0.13	
206	86				4.55	26.18	1.78	6.94
TOTAL PCB, ng/g		234.39	1150.10	100.00	482.10	1467.95	100.00	408.08

Surrogate recovery			%		%	
14	12	85.75	42.875	29.3	14.65	85.52
65	29	17.42	29.03	17.77	29.62	36.63
166	62	24.02	48.04	30.63	61.26	29.96
204	72	54.81	91.35	59.12	98.53	47.66

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-23	% of total	CS-25	CS-25	CS-26	CS-26
Site	RR Ave			106 Tucker		105 Tucker
Age(yr) <i>red=ring count</i>	29			21		18
Circumference (cm)	72			78		69
Lipid extracted (g)	0.2917			1.449		1.172

PCB Congener	Calib #	PCB ng/g	% of total	PCB ng	PCB ng/g	PCB ng	PCB ng/g
4+10	6	2.95	0.21			5.8	4.95
7	7						
6	8						
8+5	9						
19	13						
18	15						
17	16						
24+27	17						
16+32	18	9.67	0.69			6.21	5.30
26	19	7.54	0.54			1.94	1.66
25	20	2.40	0.17				
31+28	21	12.92	0.92			4.93	4.21
33+53	22	17.90	1.28			8.29	7.07
51+22	23						
45	24						
46	25	4.83	0.35				
52	26	31.68	2.26				
43+49	27	24.20	1.73				
47+48	28	15.26	1.09				
44	30	11.04	0.79				
37+42	31						
41+71+64	32	14.71	1.05			36.7	
40	33					25.3	21.59
63	34	2.40	0.17				
74	35	8.71	0.62				
70+76	36	19.47	1.39			3.09	2.64
66+95	37	102.06	7.30			10.47	8.93
91	38	2.16	0.15				
56+60	39	6.82	0.49			3.7	3.16
92+84	40	16.49	1.18			3.97	3.39
101	41	40.69	2.91			5.59	4.77
99	42	9.26	0.66			2.71	2.31
83	43						
97	44	3.60	0.26				
87	45	9.43	0.67			0.56	0.48
85	46	3.70	0.26				
77+110	48					2.95	2.52
82	49	1.27	0.09				
151	50	47.34	3.38			3.36	2.87
135+144	51	16.15	1.15			1.88	1.60
149	52	94.03	6.72				
118	53					8.48	7.24
131	54						

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-23	% of total	CS-25	CS-25	CS-26	CS-26
Site	RR Ave			106 Tucker		105 Tucker
Age(yr) <i>red=ring count</i>	29			21		18
Circumference (cm)	72			78		69
Lipid extracted (g)	0.2917			1.449		1.172

PCB Congener	Calib #	PCB ng/g	%	PCB ng	PCB ng/g	PCB ng	PCB ng/g
146	55	28.45	2.03			4.32	3.69
153++	56	159.31	11.39			16.96	14.47
141	57	34.08	2.44			3.6	3.07
137+176	58	11.76	0.84				
163+138	59	24.13	1.73			2.05	1.75
158	60	31.16	2.23				
178	61	102.71	7.34				
175	63	7.58	0.54				
187+182	64	71.31	5.10			6.47	5.52
183	65	36.10	2.58			2.38	2.03
128	66	6.21	0.44				
185	67	6.62	0.47				
174	68	42.13	3.01			3.83	3.27
177	69	28.56	2.04			2.9	2.47
202+171	70	14.12	1.01			2.54	2.17
157+200	71						
172+197	73	14.78	1.06				
180	74	82.72	5.91			6.27	5.35
193	75	6.41	0.46				
199	76	1.47	0.11				
170+190	77	49.85	3.56			5.61	4.79
198	78	4.59	0.33				
201	79	27.53	1.97				
203+196	80	25.03	1.79				
189	81						
208+195	82	8.95	0.64				
207	83					2.09	1.78
194	84	10.97	0.78				
205	85						
206	86	23.79	1.70			8.83	7.53

TOTAL PCB, ng/g	1398.97	100.00		203.78	142.56
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Surrogate recovery		%		%
14	12	42.76	101.46	50.73
65	29	61.05	35.96	59.93
166	62	59.92	31.69	63.38
204	72	79.43	61.84	103.07

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree Site	Age(yr)	Circumference (cm)	Lipid extracted (g)	% of total	CS-27	CS-27 103 Tucker	% of total	CS-28	CS-28 302 McP	% of total
						14			16	
						80			84	
						0.4579			1.411	
PCB Congener	Calib #				PCB ng	PCB ng/g		PCB ng	PCB ng/g	
4+10	6	3.47			1.21	2.64	0.58	7.45	5.28	2.14
7	7									
6	8							1.29	0.91	0.37
8+5	9				10.38	22.67	4.97	21.08	14.94	6.04
19	13							2.02	1.43	0.58
18	15				21.56	47.08	10.33			
17	16									
24+27	17				5.46	11.92	2.62			
16+32	18	3.72			8.1	17.69	3.88			
26	19	1.16						10.32	7.31	2.96
25	20				7.09	15.48	3.40			
31+28	21	2.95			29.73	64.93	14.24	25.64	18.17	7.35
33+53	22	4.96								
51+22	23				3.1	6.77	1.48	0.82	0.58	0.24
45	24				1.62	3.54	0.78	0.84	0.60	0.24
46	25				7.96	17.38	3.81	4.32	3.06	1.24
52	26									
43+49	27									
47+48	28									
44	30				3.8	8.30	1.82			
37+42	31				3.87	8.45	1.85	6.45	4.57	1.85
41+71+64	32				4.67	10.20	2.24	10.36	7.34	2.97
40	33	15.14						2.04	1.45	0.58
63	34				1.7	3.71	0.81	16.16	11.45	4.63
74	35									
70+76	36	1.85			3.37	7.36	1.61	3.89	2.76	1.12
66+95	37	6.27			40.03	87.42	19.17	15.27	10.82	4.38
91	38							1.24	0.88	0.36
56+60	39	2.21			1.65	3.60	0.79	23.89	16.93	6.85
92+84	40	2.38			1.92	4.19	0.92			
101	41	3.35			2.49	5.44	1.19	2.61	1.85	0.75
99	42	1.62			1.92	4.19	0.92	1.11	0.79	0.32
83	43							2.65	1.88	0.76
97	44				1.53	3.34	0.73	21.34	15.12	6.12
87	45	0.34			0.68	1.49	0.33			
85	46	0.00				0.00		10.86	7.70	3.11
77+110	48	1.77			3.26	7.12	1.56			
82	49				0.15	0.33	0.07	5.36	3.80	1.54
151	50	2.01			1.29	2.82	0.62	12.39	8.78	3.55
135+144	51	1.13			0.91	1.99	0.44	4.12	2.92	1.18
149	52							4.38	3.10	1.26
118	53	5.08			3.82	8.34	1.83	6.22	4.41	1.78
131	54				0.3	0.66	0.14	0.86	0.61	0.25

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of	CS-27	CS-27	% of	CS-28	CS-28	% of
Site	total		103 Tucker	total		302 McP	total
Age(yr) <i>red=ring count</i>			14			16	
Circumference (cm)			80			84	
Lipid extracted (g)			0.4579			1.411	

PCB Congener	Calib #		PCB ng	PCB ng/g		PCB ng	PCB ng/g	
146	55	2.59	2.89	6.31	1.38	2.33	1.65	0.67
153++	56	10.15	6.2	13.54	2.97	11.37	8.06	3.26
141	57	2.15	1.04	2.27	0.50	2.12	1.50	0.61
137+176	58		0.99	2.16	0.47	0.95	0.67	0.27
163+138	59	1.23	0.86	1.88	0.41	0.75	0.53	0.21
158	60					16	11.34	4.59
178	61							
175	63							
187+182	64	3.87	2.28	4.98	1.09	7.34	5.20	2.10
183	65	1.42	0.91	1.99	0.44	1.75	1.24	0.50
128	66					3.92	2.78	1.12
185	67							
174	68	2.29	1.88	4.11	0.90	3.11	2.20	0.89
177	69	1.74	1.15	2.51	0.55	5.33	3.78	1.53
202+171	70	1.52	1.3	2.84	0.62	2.43	1.72	0.70
157+200	71							
172+197	73							
180	74	3.75	2.92	6.38	1.40	7.25	5.14	2.08
193	75							
199	76					4.34	3.08	1.24
170+190	77	3.36	3.91	8.54	1.87	36	25.51	10.32
198	78							
201	79		1.34	2.93	0.64			
203+196	80		1.15	2.51	0.55	3.73	2.64	1.07
189	81							
208+195	82		4.02	8.78	1.93	0.21	0.15	0.06
207	83	1.25	0.71	1.55	0.34			
194	84		0.45	0.98	0.22	1.27	0.90	0.36
205	85		0.79	1.73	0.38			
206	86	5.28	0.43	0.94	0.21	13.66	9.68	3.92
TOTAL PCB, ng/g		100.00	208.79	455.97	100.00	348.84	247.23	100.00

Surrogate recovery				%		%
14	12	106.38	53.19		118.55	59.28
65	29	43.95	73.25	Peak 28	44.78	74.63
166	62	38.72	77.44		50.56	101.12
204	72	66.1	110.17		61.82	103.03

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree Site	CS-30	CS-30 100 Pearl	% of total	CS-31	CS-31 412 Lee	% of total	CS-32	
Age(yr) <i>red=ring count</i>		13			53 (min)			
Circumference (cm)		71			307			
Lipid extracted (g)		0.1874			0.4167			
PCB Congener	Calib #	PCB ng	PCB ng/g		PCB ng	PCB ng/g		PCB ng
4+10	6				1.42	3.41	0.14	0.43
7	7							
6	8							
8+5	9	44.34	236.61	37.57	19.38	46.51	1.96	18.18
19	13							1.82
18	15							1.89
17	16							
24+27	17							
16+32	18				4.09	9.82	0.41	1.35
26	19	2.09	11.15	1.77	6.8	16.32	0.69	14.26
25	20							2.38
31+28	21							
33+53	22	4.84	25.83	4.10	7.26	17.42	0.73	9.39
51+22	23				3.17	7.61	0.32	3.37
45	24							17.43
46	25							
52	26							5.42
43+49	27	26.38	140.77	22.35	4.98	11.95	0.50	
47+48	28							
44	30				3.35	8.04	0.34	3.23
37+42	31							10.31
41+71+64	32				9.5	22.80	0.96	7.34
40	33				0.98	2.35	0.10	1.61
63	34							
74	35				5.07	12.17	0.51	1.17
70+76	36				22.25	53.40	2.25	3.94
66+95	37	4.24	22.63	3.59	41.83	100.38	4.23	6.17
91	38				7.15	17.16	0.72	
56+60	39				10.18	24.43	1.03	2.67
92+84	40				4.55	10.92	0.46	2.82
101	41	2.4	12.81	2.03	10.19	24.45	1.03	4.05
99	42							
83	43							0.35
97	44				2.26	5.42	0.23	1.1
87	45				4.86	11.66	0.49	1.94
85	46				2.83	6.79	0.29	1.22
77+110	48	2.69	14.35	2.28	12.75	30.60	1.29	6.31
82	49				0.9	2.16	0.09	0.46
151	50				16.78	40.27	1.70	3.14
135+144	51				6.08	14.59	0.62	1.12
149	52							
118	53	4.15	22.15	3.52	40.03	96.06	4.05	9.28
131	54				0.44	1.06	0.04	0.13

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-30	CS-30	% of	CS-31	CS-31	% of	CS-32
Site		100 Pearl	total		412 Lee	total	
Age(yr) <i>red=ring count</i>		13			53 (min)		
Circumference (cm)		71			307		
Lipid extracted (g)		0.1874			0.4167		

PCB Congener	Calib #	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng
146	55				19.31	46.34	1.95	3.11
153++	56				56.06	134.53	5.67	26.43
141	57				18.2	43.68	1.84	4.2
137+176	58				4.33	10.39	0.44	2.56
163+138	59	2.37	12.65	2.01	16.08	38.59	1.63	3.89
158	60				14.47	34.73	1.46	3.37
178	61				2.17	5.21	0.22	0.3
175	63				5.53	13.27	0.56	
187+182	64	2.63	14.03	2.23	67.83	162.78	6.86	11.49
183	65				34.62	83.08	3.50	6.13
128	66				5.21	12.50	0.53	2.24
185	67				7.11	17.06	0.72	1.35
174	68	5.26	28.07	4.46	38.03	91.26	3.85	7.85
177	69	6.09	32.50	5.16	30.56	73.34	3.09	6.07
202+171	70	1	5.34	0.85	16.38	39.31	1.66	2.92
157+200	71							
172+197	73				14.09	33.81	1.43	2.22
180	74	4.96	26.47	4.20	107.63	258.29	10.89	23.3
193	75							
199	76				2.66	6.38	0.27	1.04
170+190	77	4.57	24.39	3.87	81.79	196.28	8.27	21.23
198	78					0.00		
201	79				49.77	119.44	5.04	9.31
203+196	80				51.9	124.55	5.25	10.28
189	81				22.78	54.67	2.30	5.45
208+195	82				32.76	78.62	3.31	7.18
207	83				0.69	1.66	0.07	
194	84				26.02	62.44	2.63	9.03
205	85				2.48	5.95	0.25	1.43
206	86				10.87	26.09	1.10	11.96
TOTAL PCB, ng/g		118.01	629.72	100.00	988.41	2371.99	100.00	328.62

Surrogate recovery			%		%	
14	12	130.61	65.31	99.88	49.94	107.41
65	29	62.78	104.63	36.5	60.83	50.84
166	62	39.77	79.54	17.88	35.76	38.52
204	72	55.94	93.23	35.32	58.87	59.46

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree Site	CS-32 412 Lee	% of total	CS-33	CS-33 406 Lee	% of total	CS-35	CS-35 CSHS	
Age(yr) <i>red=ring count</i>	8			24			19	
Circumference (cm)	68			86			54	
Lipid extracted (g)	0.4051			0.2711			0.8855	
PCB Congener	Calib #	PCB ng/g		PCB ng	PCB ng/g		PCB ng	PCB ng/g
4+10	6	1.06	0.13			97.7	110.33	
7	7							
6	8							
8+5	9	44.88	5.53	27.15	100.15	5.91	46.68	52.72
19	13	4.49	0.55					
18	15	4.67	0.58	1.69	6.23	0.37	21.4	24.17
17	16						21.4	24.17
24+27	17							
16+32	18	3.33	0.41	3.67	13.54	0.80	13.57	15.32
26	19	35.20	4.34	9.92	36.59	2.16	4.41	4.98
25	20	5.88	0.72					
31+28	21							
33+53	22	23.18	2.86	35.11	129.51	7.65		
51+22	23	8.32	1.03	11.62	42.86	2.53	12.97	14.65
45	24	43.03	5.30					
46	25		0.00	1.72	6.34	0.37		
52	26	13.38	1.65					
43+49	27			3.32	12.25	0.72	5.55	6.27
47+48	28							
44	30	7.97	0.98	4.99	18.41	1.09	5.81	6.56
37+42	31	25.45	3.14	2.63	9.70	0.57	2.23	2.52
41+71+64	32	18.12	2.23	3.19	11.77	0.69	10.49	11.85
40	33	3.97	0.49				1.77	2.00
63	34							
74	35	2.89	0.36	2.09	7.71	0.46	3.23	3.65
70+76	36	9.73	1.20	6.78	25.01	1.48	7.16	8.09
66+95	37	15.23	1.88	12.42	45.81	2.70	14.78	16.69
91	38	0.00	0.00					
56+60	39	6.59	0.81	3.92	14.46	0.85	3.44	3.88
92+84	40	6.96	0.86	4.34	16.01	0.95		
101	41	10.00	1.23	9.83	36.26	2.14	4.53	5.12
99	42	0.00						
83	43	0.86	0.11					
97	44	2.72	0.33	1.86	6.86	0.41		
87	45	4.79	0.59	3.76	13.87	0.82		
85	46	3.01	0.37	2	7.38	0.44		
77+110	48	15.58	1.92	10.18	37.55	2.22	1.9	2.15
82	49	1.14	0.14	1	3.69	0.22	0.74	0.84
151	50	7.75	0.96	7.3	26.93	1.59		
135+144	51	2.76	0.34	2.83	10.44	0.62		
149	52		0.00					
118	53	22.91	2.82	19.19	70.79	4.18	5.31	6.00
131	54	0.32	0.04					

Crystal Springs PCB in tree bark

March-April 2003

Tree	CS-32	% of	CS-33	CS-33	% of	CS-35	CS-35
Site	412 Lee	total		406 Lee	total		CSHS
Age(yr) <i>red=ring count</i>	8			24			19
Circumference (cm)	68			86			54
Lipid extracted (g)	0.4051			0.2711			0.8855

PCB Congener	Calib #	PCB ng/g	% of total	PCB ng	PCB ng/g	% of total	PCB ng	PCB ng/g
146	55	7.68	0.95	5.02	18.52	1.09		
153++	56	65.24	8.04	40.02	147.62	8.71	12.72	14.36
141	57	10.37	1.28	6.1	22.50	1.33	1.22	1.38
137+176	58	6.32	0.78	0.82	3.02	0.18		
163+138	59	9.60	1.18	4.89	18.04	1.06	1.18	1.33
158	60	8.32	1.03	2.43	8.96	0.53		
178	61	0.74	0.09	0.79	2.91	0.17		
175	63							
187+182	64	28.36	3.50	14.21	52.42	3.09	26.96	30.45
183	65	15.13	1.87	11.89	43.86	2.59		
128	66	5.53	0.68	7.08	26.12	1.54		
185	67	3.33	0.41	6.3	23.24	1.37		
174	68	19.38	2.39	10.1	37.26	2.20	1.25	1.41
177	69	14.98	1.85	5.52	20.36	1.20		
202+171	70	7.21	0.89	2.38	8.78	0.52	2.53	2.86
157+200	71							
172+197	73	5.48	0.68	4.39	16.19	0.96		
180	74	57.52	7.09	24.16	89.12	5.26	85.13	96.14
193	75							
199	76	2.57	0.32					
170+190	77	52.41	6.46	10.58	39.03	2.30	39.81	44.96
198	78			1.39	5.13	0.30		
201	79	22.98	2.83					
203+196	80	25.38	3.13	10.47	38.62	2.28		
189	81	13.45	1.66	58.82	216.97	12.81		
208+195	82	17.72	2.18	3.44	12.69	0.75		
207	83			1.91	7.05	0.42		
194	84	22.29	2.75	3.51	12.95	0.76		
205	85	3.53	0.44					
206	86	29.52	3.64	30.52	112.58	6.65		

TOTAL PCB, ng/g	811.21	100.00	459.25	1694.02	100.00	455.87	514.82
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Surrogate recovery		%		%		%
14	12	53.71	135.55	67.78	89.28	44.64
65	29	84.73	55.04	91.73	30.79	51.32
166	62	77.04	24.64	49.28	26.96	53.92
204	72	99.10	67.6	112.67 Peak 71	63.53	105.88

RED cells in the PCB sar

Crystal Springs PCB in tree bark

March-April 2003

Tree	% of	CS-37	CS-37	% of
Site	total		Ice House	total
Age(yr) <i>red=ring count</i>			19	
Circumference (cm)			71	
Lipid extracted (g)			0.2211	

PCB Congener	Calib #		PCB ng	PCB ng/g	
146	55		14.02	63.41	2.11
153++	56	2.79	88.96	402.35	13.40
141	57	0.27	17.3	78.25	2.61
137+176	58		2.63	11.90	0.40
163+138	59	0.26	12.33	55.77	1.86
158	60		11.02	49.84	1.66
178	61		1.33	6.02	0.20
175	63		3.78	17.10	0.57
187+182	64	5.91	44.94	203.26	6.77
183	65		26.27	118.82	3.96
128	66		2.01	9.09	0.30
185	67		4.64	20.99	0.70
174	68	0.27	26.21	118.54	3.95
177	69		19.37	87.61	2.92
202+171	70	0.55	11.8	53.37	1.78
157+200	71			0.00	
172+197	73		7.64	34.55	1.15
180	74	18.67	67.27	304.27	10.13
193	75				
199	76		1.28	5.79	0.19
170+190	77	8.73	37.44	169.34	5.64
198	78				0.00
201	79		20.53	92.85	3.09
203+196	80		23.41	105.88	3.53
189	81		14.82	67.03	2.23
208+195	82		17.01	76.93	2.56
207	83		1.07	4.84	0.16
194	84		9.67	43.74	1.46
205	85		0.83	3.75	0.13
206	86		3.62	16.37	0.55

TOTAL PCB, ng/g	100.00	663.88	3002.64	100.00
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Surrogate recovery			%
14	12	76.24	38.12
65	29	30.61	51.02
166	62	29.71	59.42
204	72 Peak 71	68.96	114.93 Peak 71

RED cells in the PCB sar