APPENDIX II-B

Biological Setting

NWT Diamonds Project

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Appendix II - B1
Periphyton Identification and Density (cells/cm^2), Spring 1994

Taxa	Site 28 Panda-Koala 7-Jun-94	Site 26 Koala-Kodiak 8-Jun-94	Site 24 Kodiak-Little 8-Jun-94	Site 13 Airstrip-Larry 9-Jun-94	Site 18 Long-Leslie 10-Jun-94
BACILLARIOPHYTA					
Centrales					
Melosira					
Pennales					
Achnanthes					
Ceratoneis			1534		
Cymbella			1534		
Epithemia			4603	25928	733
Eunotia		3861	1534	3241	9525
Fragilaria				25928	
Frustulia			3069		
Navicula			1534		
Nedium					
Pinnularia					
Stauroneis					
Surirella					1465
Synedra					
Tabellaria	2317	453733	239347	1066272	39564
CHLOROPHYTA					
Oedogoniales					
Bulbochaete					
Ulothricales					
Geminella					5861
Ulothrix			3069	6482	
Zygnematales					
Arthrodesmus					
Cosmarium					
Mougeotia		11585	6137		
Spondylosium					
Staurastrum					
Xanthidium					
Zygnema			12274		
CHRYSOPHYTA					
Ochromonadales					
Dinobryon				58337	
CYANOPHYTA					
Chroococcales					
Agmenellum					
Anacystis					
Nostocales					
Rivularia		28962	23014		
Stigonema					
Oscillatoriales					
Lyngbya		277963	398912	644949	
Oscillatoria		251001	21480	25928	5129
EUGLENOPHYTA					
Euglenales					
Euglena					
PYRROPHYTA					
Peridiniales					
Peridinium					1465

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Appendix II - B1
Periphyton Identification and Density (cells/cm^2), Spring 1994

Taxa	Site 16 Leslie-Moose 10-Jun-94	Site 22 Little-Moose 10-Jun-94	Site 11 Larry-Nero 11-Jun-94	Site 6 Fox 1- Fox 2 11-Jun-94	Site 21 Nancy-Long 21-Jun-94
BACILLARIOPHYTA					
Centrales					
Melosira				1903	
Pennales					
Achnanthes	15998			3331	
Ceratoneis				238	
Cymbella		2758		238	
Epithemia	7999				
Eunotia	11998		5120	1427	
Fragilaria			6051		
Frustulia			466		
Navicula	4000		2793	238	86
Nedium	4000	8275		238	86
Pinnularia				238	
Stauroneis			931		
Surirella			931		
Synedra			1862		
Tabellaria	343954	253759	112175	86120	8102
CHLOROPHYTA					
Oedogoniales					
Bulbochaete				1903	
Ulothricales					
Geminella					345
Ulothrix	7999				
Zygnematales					
Arthrodesmus					
Cosmarium					
Mougeotia				10230	
Spondylosium					
Staurastrum					
Xanthidium					
Zygnema	23997			9516	
CHRYSOPHYTA					
Ochromonadales					
Dinobryon			466		
CYANOPHYTA					
Chroococcales					
Agmenellum				3806	
Anacystis	119984	540618			
Nostocales					
Rivularia	55993	22066			
Stigonema		256518			
Oscillatoriales					
Lyngbya	675910	623365	34909	50673	1465
Oscillatoria	147980	82748	13033	8564	
EUGLENOPHYTA					
Euglenales					
Euglena	4000				
PYRROPHYTA					
Peridiniales					
Peridinium					

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Appendix II - B1
Periphyton Identification and Density (cells/cm^2), Spring 1994

Taxa	Site 30 Grizzly-Panda 13-Jun-94	Site 31 Vulture-Polar 13-Jun-94	Site 36 Ursula N 13-Jun-94	Site 42 South W 13-Jun-94
BACILLARIOPHYTA				
Centrales				
Melosira				
Pennales				
Achnanthes	5586			37650
Ceratoneis	931			
Cymbella				1448
Epithemia				
Eunotia	931	5792		724
Fragilaria				724
Frustulia				
Navicula				724
Nedium	1862		2482	1448
Pinnularia				
Stauroneis				
Surirella				
Synedra				724
Tabellaria	137775	212386	105917	627020
CHLOROPHYTA				
Oedogoniales				
Bulbochaete		19308		
Ulothricales				
Geminella				
Ulothrix				
Zygnematales				
Arthrodesmus				724
Cosmarium				724
Mougeotia				20997
Spondylosium	931			
Staurastrum				724
Xanthidium				724
Zygnema				
CHRYSOPHYTA				
Ochromonadales				
Dinobryon				
CYANOPHYTA				
Chroococcales				
Agmenellum				
Anacystis				
Nostocales				
Rivularia		77231		
Stigonema	26066	150601	23169	8689
Oscillatoriales				
Lyngbya	33513	527102		180286
Oscillatoria	25135	96539	2482	36202
EUGLENOPHYTA				
Euglenales				
Euglena				
PYRROPHYTA				
Peridiniales				
Peridinium				

Appendix II - B1

Periphyton Identification and Density (cells/cm^2), Summer 1994

Taxa	Site 3 Martine-W 8-Aug-94	Site 13 Airstrip-Larry 3-Aug-94	Site 16 Leslie-Moose 8-Aug-94	Site 18 Long-Leslie 8-Aug-94	Site 22 Little-Moose 4-Aug-94
BACILLARIOPHYTA					
Centrales					
Cyclotella				1738	
Melosira					
Pennales					
Achnanthes	18466	47504	47272	12166	34412
Amphora					
Ceratoneis					
Cymatopleura	6155				
Cymbella				1738	3824
Eunotia					15294
Fragilaria			5909	1738	7647
Frustulia					
Navicula			29545		11471
Nedium					3824
Pleurosigma/Gyrosigma			11818		
Rhopalodia					3824
Surirella					3824
Tabellaria	270831	605676	236362	6952	244704
CHLOROPHYTA					
Chlorococcales					
Ankistrodesmus		23752		8400	
Scenedesmus		47504			
Sphaerocystis	49242				
Oedogoniales					
Bulbochaete			11818		7647
Ulothricales					
Ulothrix			11818		
Zygnematales					
Cosmarium			5909	5214	7647
Euastrum	6155				3824
Mougeotia	18466				
Spondylosium		35628	5909		
Staurastrum			11818	1738	3824
Xanthidium	6155				
Zygnema	24621			118181	
CHRYSOPHYTA					
Ochromonadales					
Dinobryon					
CRYPTOPHYTA					
Cryptomonadales					
Cryptomonas					
CYANOPHYTA					
Chroococcales					
Agmenellum	344694	2232689	378178	660422	198822
Anacystis		190016			588818
Nostocales					
Anabaena			35454	29545	
Nostoc					
Rivularia		285024			
Stigonema					198822
Oscillatoriales					
Lyngbya	633991	1080717	1719530	106015	321174
Oscillatoria					
PYRROPHYTA					
Peridiniales					
Peridinium		23752			3824

Appendix II - B1

Periphyton Identification and Density (cells/cm^2), Summer 1994

Taxa	Site 24 Kodiak-Little 3-Aug-94	Site 26 Koala-Kodiak 2-Aug-94	Site 28 Panda-Koala 2-Aug-94	Site 30 Grizzly-Panda 4-Aug-94	Site 31 Vulture-Polar 4-Aug-94
BACILLARIOPHYTA					
Centrales					
Cyclotella		20160			4519
Melosira		10080			
Pennales					
Achnanthes	16800	383045	42985		31631
Amphora		10080			
Ceratoneis		20160		5504	
Cymatopleura				5504	
Cymbella		30240	6141		
Eunotia		30240	18422	16511	9037
Fragilaria	8400	40321	24563	5504	13556
Frustulia	8400	40321	18422	5504	4519
Navicula	8400	20160			18075
Nedium	25200	20160		16511	9037
Pleurosigma/Gyrosigma		40321			
Rhopalodia					
Surirella		10080			
Tabellaria	1881623	1884983	1271138	770492	302751
CHLOROPHYTA					
Chlorococcales					
Ankistrodesmus					
Scenedesmus					
Sphaerocystis			49126		
Oedogoniales					
Bulbochaete				66042	
Ulothricales					
Ulothrix					
Zygnematales					
Cosmarium	16800		6141		4519
Euastrum	8400				
Mougeotia	67201				
Spondylosium					4519
Staurastrum	8400	10080			9037
Xanthidium					
Zygnema			1142182		
CHRYSOPHYTA					
Ochromonadales					
Dinobryon	8400		6141		9037
CRYPTOPHYTA					
Cryptomonadales					
Cryptomonas					4519
CYANOPHYTA					
Chroococcales					
Agmenellum	268803	806410	393009	550352	44403
Anacystis	50401		12282		
Nostocales					
Anabaena	117601	40321			103930
Nostoc	322564				
Rivularia				198127	
Stigonema					
Oscillatoriales					
Lyngbya	478806	1260015	657062	390750	998627
Oscillatoria		322564	159660		
PYRROPHYTA					
Peridiniales					
Peridinium			12282		

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Appendix II - B1
Periphyton Identification and Density (cells/cm^2), Fall 1994

Taxa	Site 30 Grizzly-Panda 11-Sep-94	Site 31 Vulture-Polar 11-Sep-94	Site 24 Kodiak-Little 13-Sep-94	Site 26 Koala-Kodiak 13-Sep-94
BACILLARIOPHYTA				
Centrales				
Cyclotella				
Melosira		62180		81684
Pennales				
Achnanthes	180313	97712	441208	803224
Ceratoneis	24042	8883		
Cymbella	12021	8883	25953	27228
Diatoma				13614
Eunotia	36063	53297		27228
Fragilaria	84146	71063	51907	449261
Frustulia	36063	8883		13614
Navicula	60104	17766	77860	40842
Nitzschia				13614
Pleurosigma/Gyrosigma				
Surirella				13614
Synedra			25953	
Tabellaria	2692667	968233	3763246	1647289
CHLOROPHYTA				
Chlorococcales				
Scenedesmus		35532		
Oedogoniales				
Bulbochaete				
Oedogonium				
Ulothricales				
Geminella	48083			
Zygnematales				
Arthrodesmus	12021			
Cosmarium			25953	40842
Euastrum			25953	
Gonatozygon				
Mougeotia		8883	51907	
Spondylosium	24042		51907	
Staurastrum				
Xanthidium				
Zygnema			181674	
CHRYSOPHYTA				
Ochromonadales				
Dinobryon			25953	40842
CRYPTOPHYTA				
Cryptomonadales				
Cryptomonas				13614
CYANOPHYTA				
Chroococcales				
Agmenellum				108912
Anacystis				217823
Gomphosphaeria	240417			
Nostocales				
Anabaena			233581	
Oscillatoriales				
Lyngbya	1514625	568504	5528079	2641108
Oscillatoria				422033
PYRROPHYTA				
Peridiniales				
Peridinium			25953	

Appendix II - B1
Periphyton Identification and Density (cells/cm^2), Fall 1994

Taxa	Site 28 Panda-Koala 12-Sep-94	Site 16 Leslie-Moose 15-Sep-94	Site 18 Long-Leslie 14-Sep-94	Site 22 Little-Moose 17-Sep-94
BACILLARIOPHYTA				
Centrales				
Cyclotella	11297		78932	
Melosira				
Pennales				
Achnanthes	384088	28271	757747	19465
Ceratoneis				
Cymbella	124264	28271	31573	3244
Diatoma	11297		47359	
Eunotia	11297		15786	
Fragilaria	112967	113083	31573	
Frustulia	22593			3244
Navicula	169450	28271	47359	
Nitzschia				
Pleurosigma/Gyrosigma	11297			
Surirella				
Synedra	11297			
Tabellaria	3140480	1356993	584097	165453
CHLOROPHYTA				
Chlorococcales				
Scenedesmus				12977
Oedogoniales				
Bulbochaete				9733
Oedogonium			47359	
Ulothricales				
Geminella				
Zygnematales				
Arthrodesmus			15786	
Cosmarium	22593	28271		
Euastrum				3244
Gonatozygon	11297			
Mougeotia				
Spondylosium			31573	
Staurastrum	11297	14135		
Xanthidium			15786	
Zygnema				
CHRYSOPHYTA				
Ochromonadales				
Dinobryon		42406	47359	3244
CRYPTOPHYTA				
Cryptomonadales				
Cryptomonas				3244
CYANOPHYTA				
Chroococcales				
Agmenellum		339248	1136621	12977
Anacystis	282417	565414		256290
Gomphosphaeria				
Nostocales				
Anabaena		113083		
Oscillatoriales				
Lyngbya	3897358	2134437	1499709	
Oscillatoria				
PYRROPHYTA				
Peridiniales				
Peridinium			15786	

Appendix II - B1
Stream Periphyton

1993-94 **Data transformation: ln (abundance +1)**

	Summer 1993	Summer 1994
Cyanophyta	11 16	14 30
Bacillariophyta	11 21	13 68
Chlorophyta	9 85	12 11

Anova: Two-Factor Without Replication
Null hypothesis: no significant differences in standing crop between August-93 and August-94 (annual variation).

SUMMARY	Count	Sum	Average	Variance
Cyanophyta	2	25 46	12 73	4 91
Bacillariophyta	2	24 89	12 45	3 05
Chlorophyta	2	21 95	10 98	2 55
Summer 1993	3	32 22	10 74	0 60
Summer 1994	3	40 08	13 36	1 28

ANOVA

Source of Variation	SS	df	MS	F	P-value	Fcrit
Rows	3 55	2	1 77	17 04	**0.06**	19 00
Columns	10 31	1	10 31	99.09	**0.01**	18 51
Error	0 21	2	0 10			
Total	14 06	5				

***RESULT*: Reject null hypothesis**

Appendix II - B1
Stream Periphyton

1994 **Data transformation: ln (abundance +1)**

	Spring	Summer	Fall
Cyanophyta	12 88	14 30	14 81
Bacillariophyta	12 54	13 68	14 70
Chlorophyta	9 24	12 11	11 42
Chrysophyta	8 34	7 77	9 90
Pyrrophyta	4 65	8 29	8 56

Anova: Two-Factor Without Replication
Null hypothesis: no significant differences in standing crop between June, August, and September 1994 (seasonal variation).

SUMMARY	Count	Sum	Average	Variance
Cyanophyta	3	41 99	14 00	1 00
Bacillariophyta	3	40 92	13 64	1 16
Chlorophyta	3	32 76	10 92	2 25
Chrysophyta	3	26 01	8 67	1 22
Pyrrophyta	3	21 50	7 17	4 77
Spring	5	47 65	9 53	11 40
Summer	5	56 14	11 23	9 21
Fall	5	59 39	11 88	7 92

ANOVA

Source of Variation	SS	df	MS	F	P-value	Fcrit
Rows	108.01	4	27 00	35 43	**0.00**	3 84
Columns	14 70	2	7 35	9 65	**0.01**	4 46
Error	6 10	8	0 76			
Total	128 81	14				

***RESULT*: Reject null hypothesis**

Appendix II - B1
Stream Periphyton

1993-94 **Data transformation: Arcsin (square root(relative abundance))**

	Summer 1993	Summer 1994
Cyanophyta	0 72	0 89
Bacillariophyta	0 74	0.61
Chlorophyta	0 35	0 26

Anova: Two-Factor Without Replication
Null hypothesis: no significant differences in community composition between August-93 and August-94 (annual variation).

SUMMARY	Count	Sum	Average	Variance
Cyanophyta	2	1 61	0 80	0 02
Bacillariophyta	2	1 35	0 67	0 01
Chlorophyta	2	0 61	0 30	0 00
Summer 1993	3	1 80	0 60	0 05
Summer 1994	3	1 76	0 59	0 10

ANOVA

Source of Variation	SS	df	MS	F	P-value	Fcrit
Rows	0 27	2	0 13	10 03	**0.09**	19 00
Columns	0 00	1	0 00	0 02	**0.90**	18 51
Error	0 03	2	0 01			
Total	0 29	5				

***RESULT*: Accept null hypothesis**

Appendix II - B1
Stream Periphyton

1994 **Data transformation: Arcsin (square root(relative abundance))**

	Spring	Summer	Fall
Cyanophyta	0 86	0 89	0 80
Bacillariophyta	0 69	0 61	0 75
Chlorophyta	0 12	0 26	0 13
Chrysophyta	0 08	0 03	0 06
Pyrrophyta	0 01	0 04	0 03

Anova: Two-Factor Without Replication
Null hypothesis: no significant differences in community composition between June, August, and September 1994 (seasonal variation).

SUMMARY	Count	Sum	Average	Variance
Cyanophyta	3	2 55	0 85	0 00
Bacillariophyta	3	2 04	0 68	0 00
Chlorophyta	3	0 52	0 17	0 01
Chrysophyta	3	0 17	0 06	0 00
Pyrrophyta	3	0 08	0 03	0 00
Spring	5	1 76	0 35	0 15
Summer	5	1 83	0 37	0 14
Fall	5	1 77	0 35	0 15

ANOVA

Source of Variation	SS	df	MS	F	P-value	Fcrit
Rows	1 74	4	0 44	130 29	**0.00**	3 84
Columns	0 00	2	0 00	0 08	**0.93**	4 46
Error	0 03	8	0 00			
Total	1 77	14				

***RESULT*: Accept null hypothesis**

Appendix II - B1
Stream Periphyton

1994 Data transformation: ln(abundance +1)

Koala watershed	Surrounding watershed
7 75	11 81
13 84	13 73
13 48	
14 43	
11 06	
14 17	
14 40	
12 09	
12 09	
9 22	
12 36	
13 90	

t-Test: Two-Sample Assuming Equal Variances

Null hypothesis: no significant differences in standing crop between the Koala watershed and the surrounding watershed stream sites for June 1994.

	Variable 1	*Variable 2*
Mean	12 40	12 77
Variance	4 59	1 85
Observations	12	2
Pooled Variance	4 36	
Hypothesized Mean Difference	0	
df	12	
t Stat	-0 23	
P(T<=t) one-tail	0 41	
t Critical one-tail	1 78	
P(T<=t) two-tail	0 82	
t Critical two-tail	2 18	

***RESULT*: Accept null hypothesis**

Appendix II-B2

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Appendix II - B2
Phytoplankton Densities (Cells/m^3), June-July 1994

PHYLUM Order *Genera*	Site 7 Fox 1 9-Jul-94	Site 17 Leslie 14-Jul-94	Site 19 Long (S) 14-Jul-94	Site 23 Little 4-Jul-94	Site 25 Kodiak 2-Jul-94	Site 27 Koala 3-Jul-94	Site 29 Panda 28-Jun-94
BACILLARIOPHYTA							
Centrales							
Cyclotella	39 8	8 5	25 6	5 7	5 7		5 7
Melosira						11 4	5 7
Rhizosolenia	278 8						
Pennales							
Cymatopleura						8 5	11 4
Cymbella			2 8				
Fragilaria	91						2 8
Navicula		5 7		5 7			2 8
Tabellaria		17 1			22 8		8 5
CHLOROPHYTA							
Chlorococcales							
Ankistrodesmus	56 9	11 4	14 2	5 7	5 7	2 8	8 5
Botryococcus		45 5					
Crucigenia			11 4				
Elakatothrix	11 4	2 8	11 4				5 7
Selenastrum		2 8					
Tetraedron	11 4			5 7	5 7		
Tetrasporales							
Gloeocystis		37	45 5				
Zygnematales							
Athrodesmus	5 7			5 7			
Cosmarium	11 4						
Spondylosium	5 7		14 2				5 7
CHRYSOPHYTA							
Ochromonadales							
Dinobryon	443 7	39 8	128 1	557 5	586	76 8	1231 7
Mallomonas				11 4			
Rhizochrysidales							
Diceras		5 7	5 7				
CRYPTOPHYTA							
Cryptomonadales							
Chroomonas	17 1	17 1	11 4	5 7		5 7	91
Cryptomonas	51 2		2 8	11 4	34 1	8 5	17 1
CYANOPHYTA							
Chroococcales							
Agmenellum		34 1				295 8	91
Anacystis					113 8		125 2
Gomphosphaeria					369 8		91
Nostocales							
Anabaena	102 4						
Oscillatoriales							
Lyngbya	261 7				159 3		
PYRROPHYTA							
Dinokontae							
Peridinium	39.8	5.7	2.8		11.4	2.8	2.8

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Appendix II - B2
Phytoplankton Identification and Density (Cells/mL), August/September 1994

PHYLUM Order *Genera*	Site 7 Fox 1 28-Aug-94	Site 19 Long (S) 29-Aug-94	Site 20 Long (N) 28-Aug-94	Site 23 Little 20-Aug-94	Site 25 Kodiak 20-Aug-94	Site 27 Koala 18-Aug-94	Site 48 Misery 7-Sep-94
BACILLARIOPHYTA							
Centrales							
Cyclotella	119 5	210 5	122 3	250 3			8 5
Rhizosolenia	37 0					11 4	5 7
Pennales							
Ceratoneis				2 8			
Eunotia				2 8	17 1		
Fragilaria	14 2				11 4		22 8
Frustulia					5 7		
Navicula				5 7	5 7		
Pleurosigma/Gyrosigma					5 7		
Tabellaria	31 2		19 9	634 3	290 1		
CHLOROPHYTA							
Chlorococcales							
Ankistrodesmus	79 6	59 7	68 3	25 6	79 6	8 5	22 8
Botryococcus				22 8			
Dictyosphaerium					68 3		
Elakatothrix				5 7	11 4		
Nephrocytium			11 4				
Oocystis				11 4	34 1		
Quadrigula		22 8	22 8	34 1			
Tetraedron	110 9			8 5	28 4		
Tetrasporales							
Gloeocystis				5 7	51 2		
Volvococales							
Chlamydomonas		2 8					
Zygnematales							
Arthrodesmus					11 4		
Cosmarium	2 8						
Spondylosium	2 8	11 4	2 8	5 7			
Xanthidium					5 7		
CHRYSOPHYTA							
Ochromonadales							
Dinobryon	25 6	85 3	62 6	147 9	11 4	116 6	
Rhizochrysidales							
Diceras			2 8				
CRYPTOPHYTA							
Cryptomonadales							
Chroomonas		22 8	5 7	25 6		119 5	93 9
Cryptomonas	5 7	11 4	2 8	14 2	51 2	25 6	
CYANOPHYTA							
Chroococcales							
Agmenellum	11 4	227 6	273 1	500 6	819 2		
Anacystis		227 6	56 7	256 0	455 1		
Gomphosphaeria				170 7			
Nostocales							
Anabaena	19 9						
Oscillatoriales							
Lyngbya	1058 1	273 1	284 4	244 6	557 5	51 2	
PYRROPHYTA							
Dinokontae							
Peridinium	5.7				5.7	11 4	5 7

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Appendix II - B2
Phytoplankton Identification and Density (Cells/mL) August 1993

PHYLUM Order *Genera*	Site 29 Panda 11-Aug-94	Site 27 Koala 13-Aug-94	Site 25 Kodiak 11-Aug-94	Site 7 Fox 1 8-Aug-94	Site 20 Long (N) 10-Aug-94	Site 19 Long (S) 10-Aug-94
BACILLARIOPHYTA						
Centrales						
Cyclotella				0 1		
Melosira		0 8			0 1	
Pennales						
Asterionella			0 1			0 2
Frustulia						
Stauroneis						
Synedra			0 5	19 8	0 3	0 1
Tabellaria	0 4	1 0	0 2	1 9	0 1	0 1
CHLOROPHYTA						
Chlorococcales						
Ankistrodesmus	7 3	32 9	32 3	39 3	11 5	12 8
Crucigena	0 2	0 1	0 4			0 3
Oocystis	4 1		4 1		0 1	
Quadrigula	1 4	0 6				
Scenedesmus	0 0		0 7			0 1
Tetrasporales						
Elakatothrix	24 7	0 1	3 5		31 2	24 8
Gloeocystis	0 3				0 7	14 8
Zygnematales						
Cosmar/Arthrod	0 6	1 0	1 4	0 4	0 4	0 2
Euastrum					0 2	0 2
Hyalotheca						
Spondylosium	0 4	0 2				0 1
CHRYSOPHYTA						
Chromulina	1580 0	1000 0	1860 0	589 0	1610 0	3880 0
Ochromonadales						
Ochromonas	835 0	1040 0	387 0		691 0	65 8
Dinobryon	0 9	3 5	1 3	0 0	1 0	0 6
Mallomonas	0 1	4 1	0 1		10 3	8 2
Synura						0 1
CRYPTOPHYTA						
Cryptomonadales						
Croomonas	0 9		0 6	73 0	6 2	8 2
Cryptomonas	1 0	2 8	1 4	17 3	1 7	1 4
CYANOPHYTA						
Chroococcales						
Anacystis				1 1	27 3	27 6
Aphanocapsa	0 7	0 2	1 6	0 2		0 3
Aphanothece		0 1	0 6		0 3	0 3
Chroococcus			0 1		0 9	0 2
Coelosphaerium					0 0	
Gloeacapsa	2 1					
Merismopedia	37 3	0 6	21 4	0 3	6 5	3 6
Microcystis	2 8	0 4	1 3		0 2	4 1
Nostocales						
Anabaena		0 2	2 1		0 1	
PYRROPHYTA						
Gymnodinium	9.3	1 6	2.8	23 6	0 3	0.6

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 28 Panda-Koala 10-Jun-94	Site 26 Koala-Kodiak 10-Jun-94	Site 24 Kodiak-Little 14-Jun-94	Site 13 Airstrip-Larry 14-Jun-94
COELENTERATA					
Hydra				5	
NEMATODA		1		30	
TURBELLARIA					
TARDIGRADA					
OLIGOCHAETA					
Lumbriculidae					
Pristina		1			
OSTRACODA					
Candona					
Cypria		1		1	
Cypris					
BRANCHIOPODA					
Anocostraca	J				
Notostraca	J				
ARACHNIDA					
Acarina (parasitic)	A				
Aranea	A	1	1		
Hydracarina	A	2	1	2	13
Oribatidae	A				
COLLEMBOLA	A	1			
Entomobryidae	A				1
Isotomidae	A				
Poduridae	A				
Sminthurus	A				
EPHEMEROPTERA					
Parameletus	N		1		
Unidentified	N				1
PLECOPTERA					
Capnia	N				
Capnia	A		1		
Nemoura	N	9	8	9	
HEMIPTERA	N/A				
Aphididae	A	2			
Coccoidea	A	4	6		
Miridae	A				
TRICHOPTERA					
Amiocentrus	L				
Brachycentrus	L			1	2
Grensia	L				1
Limnephilidae	L				
Limnephilus	L				
Onocosmoecus	L		1		
LEPIDOPTERA	A				
COLEOPTERA	A				
Agabus	L				6
Agabus	A				
Brachyvatus	A				
Carabidae	A		2		
Coccinellidae	A				
Curculionidae	A				

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 28 Panda-Koala 10-Jun-94	Site 26 Koala-Kodiak 10-Jun-94	Site 24 Kodiak-Little 14-Jun-94	Site 13 Airstrip-Larry 14-Jun-94
Hydroporus	A	1	1		
Rhantus	L				
Staphylinidae	A		1		
Uvarus	A		1		
HYMENOPTERA					
Braconidae	A				
Chalcoidea	A				
Encyrtidae	A				
Ichneumonidae	A				1
Tenthredinidae	A			1	
DIPTERA	A				
Ablabesmyia	L				
Aedes hexodontus	L				
Aedes hexodontus	A				
Anopheles					
Bezzia	L				
Canaceidae	A				
Chelifera	L				
Chironomidae	L				
Chironomidae	P/A				6
Chironominae	P/A				
Clinocera	L				
Corynoneura	L				
Corynoneura	P/A	1		1	
Cricotopus	L	1			
Cricotopus	P/A				
Culicidae					
Diamesinae	P/A				
Eukiefferiella	L				
Lasiodiamesa	L				
Lasiodiamesa	P/A				
Micropsectra	L				
Muscidae	A				
Orthocladiinae	L			10	1
Orthocladiinae	P/A				
Orthocladius	P/A				
Paramerina	L				
Paratanytarsus	L	1			
Pentaneurini	L				
Phaenopsectra	L		1		
Polypedilum	P/A				
Potthastia	L			1	
Prionocera	A				
Procladius	L				
Procladius	P/A				16
Prosimulium	L				
Protanypus	L		1		
Psectrocladius	L	2	2	1	2
Psectrocladius	P/A				1
Pseudokiefferiella	L			1	
Pseudokiefferiella	P/A				

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Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 28 Panda-Koala 10-Jun-94	Site 26 Koala-Kodiak 10-Jun-94	Site 24 Kodiak-Little 14-Jun-94	Site 13 Airstrip-Larry 14-Jun-94
Ptychopteridae	A				
Rheotanytarsus	L	3	9	1	1
Rheotanytarsus	P/A				
Scyomyzidae	A				
Simulidae	L	1	1	1	
Simulium	L				
Simulium	A				
Syrphidae	A				
Tanypodinae	L				
Tanytarsini	L				
Tanytarsus	L				
Tanytarsus	P/A				
Tanytarsus sp 1	P/A				
Thienemanniella	L		1		
Tipula	L				1
Trichotanypus	L				
Trichotanypus	P/A				
Zelutshia	P/A	2			
GASTROPODA					
Valvata sincera					
FISH					
Cottus cognatus	J				
Unidentified	L			1	1
Unidentified	E	3			

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 30 Grizzly-Panda 14-Jun-94	Site 6 Fox 1-2 15-Jun-94	Site 21 Nancy-Long 15-Jun-94	Site 11 Larry-Nero 15-Jun-94
COELENTERATA					
Hydra			1		
NEMATODA		4		9	
TURBELLARIA					1
TARDIGRADA			1		
OLIGOCHAETA					
Lumbriculidae		3		1	
Pristina				1	
OSTRACODA					
Candona				30	
Cypria			1	220	1
Cypris			2		
BRANCHIOPODA					
Anocostraca	J			1	
Notostraca	J			815	
ARACHNIDA					
Acarina (parasitic)	A			4	
Aranea	A				
Hydracarina	A	17	21	2	14
Oribatidae	A			60	8
COLLEMBOLA	A				
Entomobryidae	A	1		2	
Isotomidae	A				1
Poduridae	A			2	
Sminthurus	A	8			
EPHEMEROPTERA					
Parameletus	N				
Unidentified	N			31	
PLECOPTERA					
Capnia	N				
Capnia	A				
Nemoura	N	59	11		40
HEMIPTERA	N/A	3			
Aphididae	A				
Coccoidea	A				
Miridae	A				
TRICHOPTERA					
Amiocentrus	L				
Brachycentrus	L				
Grensia	L	8		1	
Limnephilidae	L				
Limnephilus	L	1		25	
Onocosmoecus	L				
LEPIDOPTERA	A				
COLEOPTERA	A				
Agabus	L			5	
Agabus	A				
Brachyvatus	A				
Carabidae	A				
Coccinellidae	A				
Curculionidae	A				

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 30 Grizzly-Panda 14-Jun-94	Site 6 Fox 1-2 15-Jun-94	Site 21 Nancy-Long 15-Jun-94	Site 11 Larry-Nero 15-Jun-94
Hydroporus	A			1	
Rhantus	L				
Staphylinidae	A				
Uvarus	A	1			
HYMENOPTERA					
Braconidae	A		1	1	
Chalcoidea	A				
Encyrtidae	A				
Ichneumonidae	A				
Tenthredinidae	A			1	
DIPTERA	A	1			
Ablabesmyia	L				
Aedes hexodontus	L	105	1	854	1
Aedes hexodontus	A				
Anopheles					
Bezzia	L	3	1	15	
Canaceidae	A				
Chelifera	L				
Chironomidae	L	5	1	29	10
Chironomidae	P/A	4	16	362	
Chironominae	P/A				
Clinocera	L				
Corynoneura	L	4	9	13	91
Corynoneura	P/A				
Cricotopus	L				
Cricotopus	P/A		7	20	
Culicidae					
Diamesinae	P/A				
Eukiefferiella	L	1			
Lasiodiamesa	L			495	7
Lasiodiamesa	P/A			12	
Micropsectra	L			1	
Muscidae	A				
Orthocladiinae	L				
Orthocladiinae	P/A				
Orthocladius	P/A				
Paramerina	L				
Paratanytarsus	L				
Pentaneurini	L	3			
Phaenopsectra	L				
Polypedilum	P/A			64	
Potthastia	L				
Prionocera	A				
Procladius	L	1			
Procladius	P/A			530	1
Prosimulium	L	772	537		
Protanypus	L			135	
Psectrocladius	L	11	7	214	66
Psectrocladius	P/A		2		
Pseudokiefferiella	L				
Pseudokiefferiella	P/A				

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Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 30 Grizzly-Panda 14-Jun-94	Site 6 Fox 1-2 15-Jun-94	Site 21 Nancy-Long 15-Jun-94	Site 11 Larry-Nero 15-Jun-94
Ptychopteridae	A				
Rheotanytarsus	L	3		1	
Rheotanytarsus	P/A				
Scyomyzidae	A				
Simulidae	L				
Simulium	L			3894	
Simulium	A				
Syrphidae	A				
Tanypodinae	L				
Tanytarsini	L				1
Tanytarsus	L			11	
Tanytarsus	P/A			194	
Tanytarsus sp 1	P/A	3		63	
Thienemanniella	L	1			
Tipula	L				
Trichotanypus	L				25
Trichotanypus	P/A				9
Zalutshia	P/A	1			
GASTROPODA					
Valvata sincera					
FISH					
Cottus cognatus	J				
Unidentified	L	1			
Unidentified	E				

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 36 Ursula (N) 15-Jun-94	Site 16 Leslie-Moose 18-Jun-94	Site 31 Vulture-Polar 18-Jun-94	Site 18 Long-Leslie 18-Jun-94
COELENTERATA					
Hydra					1
NEMATODA			10	1	1
TURBELLARIA					
TARDIGRADA					
OLIGOCHAETA					
Lumbriculidae			1		
Pristina					
OSTRACODA					
Candona			10		
Cypria				45	
Cypris				75	30
BRANCHIOPODA					
Anocostraca	J				
Notostraca	J		5		1
ARACHNIDA					
Acarina (parasitic)	A			5	
Aranea	A				
Hydracarina	A			95	4
Oribatidae	A		95		1
COLLEMBOLA	A				
Entomobryidae	A		30		1
Isotomidae	A				
Poduridae	A				
Sminthurus	A				
EPHEMEROPTERA					
Parameletus	N				
Unidentified	N				
PLECOPTERA					
Capnia	N				
Capnia	A				
Nemoura	N		80		
HEMIPTERA	N/A		6		2
Aphididae	A		10		
Coccoidea	A				1
Miridae	A				
TRICHOPTERA					
Amiocentrus	L			1	
Brachycentrus	L		28	1	
Grensia	L		3	2	
Limnephilidae	L			1	
Limnephilus	L	1	5	50	
Onocosmoecus	L				
LEPIDOPTERA	A				
COLEOPTERA	A				
Agabus	L				
Agabus	A				
Brachyvatus	A			1	
Carabidae	A				
Coccinellidae	A				
Curculionidae	A				

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Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 36 Ursula (N) 15-Jun-94	Site 16 Leslie-Moose 18-Jun-94	Site 31 Vulture-Polar 18-Jun-94	Site 18 Long-Leslie 18-Jun-94
Hydroporus	A				
Rhantus	L		1		
Staphylinidae	A			1	
Uvarus	A		1		
HYMENOPTERA					
Braconidae	A		1		
Chalcoidea	A		1	2	2
Encyrtidae	A				1
Ichneumonidae	A				1
Tenthredinidae	A			1	1
DIPTERA	A		1		
Ablabesmyia	L			4	1
Aedes hexodontus	L		1		
Aedes hexodontus	A				
Anopheles					
Bezzia	L		24	1	1
Canaceidae	A		1		
Chelifera	L		5		
Chironomidae	L	27	100	12	1
Chironomidae	P/A				
Chironominae	P/A		65		3
Clinocera	L		5	1	
Corynoneura	L	1		5	2
Corynoneura	P/A			26	1
Cricotopus	L		10	1	
Cricotopus	P/A	1			1
Culicidae					
Diamesinae	P/A		5		
Eukiefferiella	L			11	2
Lasiodiamesa	L				
Lasiodiamesa	P/A				
Micropsectra	L				
Muscidae	A				
Orthocladiinae	L				
Orthocladiinae	P/A		70	7	5
Orthocladius	P/A				1
Paramerina	L			3	1
Paratanytarsus	L				
Pentaneurini	L		5		
Phaenopsectra	L				
Polypedilum	P/A			1	
Potthastia	L				1
Prionocera	A				
Procladius	L				
Procladius	P/A	1	20		1
Prosimulium	L			90	17
Protanypus	L				
Psectrocladius	L	21	25	21	5
Psectrocladius	P/A		15		
Pseudokiefferiella	L		90		
Pseudokiefferiella	P/A		70		

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Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 36 Ursula (N) 15-Jun-94	Site 16 Leslie-Moose 18-Jun-94	Site 31 Vulture-Polar 18-Jun-94	Site 18 Long-Leslie 18-Jun-94
Ptychopteridae	A				
Rheotanytarsus	L			5	
Rheotanytarsus	P/A				1
Scyomyzidae	A				
Simulidae	L		330		
Simulium	L		5	20	1
Simulium	A				
Syrphidae	A		1		
Tanypodinae	L				
Tanytarsini	L				
Tanytarsus	L				
Tanytarsus	P/A				
Tanytarsus sp 1	P/A			1	
Thienemanniella	L				
Tipula	L		1		
Trichotanypus	L	1			
Trichotanypus	P/A				
Zalutshia	P/A		10		1
GASTROPODA					
Valvata sincera			1		1
FISH					
Cottus cognatus	J		1		
Unidentified	L				1
Unidentified	E		1		

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 42 South (W) 19-Jun-94	Site 22 Little-Moose 19-Jun-94
COELENTERATA			
Hydra			4
NEMATODA		1	
TURBELLARIA			
TARDIGRADA			
OLIGOCHAETA			
Lumbriculidae			
Pristina			
OSTRACODA			
Candona			
Cypria			
Cypris			1
BRANCHIOPODA			
Anocostraca	J		
Notostraca	J		
ARACHNIDA			
Acarina (parasitic)	A		
Aranea	A	1	
Hydracarina	A	4	13
Oribatidae	A		
COLLEMBOLA	A		1
Entomobryidae	A		
Isotomidae	A		
Poduridae	A		
Sminthurus	A		
EPHEMEROPTERA			
Parameletus	N		
Unidentified	N	1	
PLECOPTERA			
Capnia	N		
Capnia	A		
Nemoura	N		2
HEMIPTERA	N/A	2	
Aphididae	A	2	1
Coccoidea	A		
Miridae	A		
TRICHOPTERA			
Amiocentrus	L		
Brachycentrus	L	2	4
Grensia	L	2	
Limnephilidae	L		
Limnephilus	L		
Onocosmoecus	L		
LEPIDOPTERA	A	1	
COLEOPTERA	A		
Agabus	L		
Agabus	A	1	
Brachyvatus	A		
Carabidae	A		
Coccinellidae	A		
Curculionidae	A		

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 42 South (W) 19-Jun-94	Site 22 Little-Moose 19-Jun-94
Hydroporus	A	1	
Rhantus	L		
Staphylinidae	A		
Uvarus	A		
HYMENOPTERA			
Braconidae	A	2	
Chalcoidea	A		
Encyrtidae	A		
Ichneumonidae	A	2	
Tenthredinidae	A	3	
DIPTERA	A	8	1
Ablabesmyia	L		3
Aedes hexodontus	L		
Aedes hexodontus	A		1
Anopheles			
Bezzia	L		7
Canaceidae	A		
Chelifera	L		
Chironomidae	L	9	17
Chironomidae	P/A		
Chironominae	P/A	1	3
Clinocera	L	1	
Corynoneura	L	3	2
Corynoneura	P/A	5	
Cricotopus	L		3
Cricotopus	P/A		
Culicidae			
Diamesinae	P/A		
Eukiefferiella	L	1	
Lasiodiamesa	L		
Lasiodiamesa	P/A		
Micropsectra	L		
Muscidae	A		
Orthocladiinae	L		
Orthocladiinae	P/A	7	15
Orthocladius	P/A		
Paramerina	L		3
Paratanytarsus	L		
Pentaneurini	L		
Phaenopsectra	L		
Polypedilum	P/A		
Potthastia	L		
Prionocera	A		
Procladius	L		8
Procladius	P/A		9
Prosimulium	L	1231	19
Protanypus	L		
Psectrocladius	L	2	
Psectrocladius	P/A		2
Pseudokiefferiella	L	1	10
Pseudokiefferiella	P/A	39	6

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), June 1994

TAXA	Stage	Site 42 South (W) 19-Jun-94	Site 22 Little-Moose 19-Jun-94
Ptychopteridae	A		
Rheotanytarsus	L		1
Rheotanytarsus	P/A		
Scyomyzidae	A		
Simulidae	L		
Simulium	L	2	
Simulium	A	1	
Syrphidae	A		
Tanypodinae	L		
Tanytarsini	L		
Tanytarsus	L		
Tanytarsus	P/A	1	
Tanytarsus sp 1	P/A		
Thienemanniella	L	2	
Tipula	L		
Trichotanypus	L		
Trichotanypus	P/A		
Zalutshia	P/A		
GASTROPODA			
Valvata sincera			
FISH			
Cottus cognatus	J		
Unidentified	L		
Unidentified	E		

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 26 Koala-Kodiak 3-Aug-94	Site 28 Panda-Koala 3-Aug-94	Site 24 Kodiak-Little 4-Aug-94	Site 13 Airstrip-Larry 4-Aug-94
COELENTERATA					
Hydra			1	20	
NEMATODA		16			
OLIGOCHAETA					
Limnedrilus				1	
Naididae	J	1	2		
Nais		1			
Unidentified	J	2		20	
CLADOCERA					
Alonella			2		
Chydoridae	J	1			
Eurycercus				60	1
Ophyroxus					
HARPACTICOIDA					
Canthocamptidae					
OSTRACODA					
Candona		1			
Cypria				6	
Cypris				12	
ARACHNIDA					
Hydracarina	A	1	2		1
EPHEMEROPTERA					
Baetis tricaudatus	N			1	6
Ephemerella inermis	A				
Ephemerella inermis	N				
PLECOPTERA					
Nemoura	N		2		
HEMIPTERA					
Psyllidae	A		1	1	
TRICHOPTERA	L		10		
Agraylea	L		4	1	
Brachycentrus	L			14	
Ceraclea	L				
Grensia	L		1		
Mystacides	L				
COLEOPTERA					
Brachyvatus	A				
Hydroporus	L				
DIPTERA					
Chironomidae	L	14	1060	40	8
Chironomidae	P		1		
Corynoneura	L				
Corynoneura	P			1	
Cricotopus	L	1			
Epoicladius	L				
Eukiefferiella	L				
Eukiefferiella	P				
Heterotrissocladius	P				
Lasiodiamesa	L				
Micropsectra	L				
Neozavrelia	P				

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Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 26 Koala-Kodiak 3-Aug-94	Site 28 Panda-Koala 3-Aug-94	Site 24 Kodiak-Little 4-Aug-94	Site 13 Airstrip-Larry 4-Aug-94
Orthocladiinae	L		60		
Orthocladiinae	P			3	
Orthocladius	L		570	21	
Orthocladius	P		14	29	
Phaenopsectra	L	1			
Podonominae	L				
Procladius	L	2		1	4
Psectrocladius	L	8			2
Rheotanytarsus	L				
Simulidae	L				
Simulium	L			180	
Stempellinella	L				
Tanypodinae	L				
Tanytarsini	L		10		
Tanytarsus	L	2			3
Tipula	L	1			
GASTROPODA					
Valvata sincera					

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 30 Grizzly-Panda 5-Aug-94	Site 31 Vulture-Polar 7-Aug-94	Site 3 Martine West 9-Aug-94	Site 16 Leslie-Moose 9-Aug-94
COELENTERATA					
Hydra					
NEMATODA		25			25
OLIGOCHAETA					
Limnedrilus		1			
Naididae	J	15			
Nais					
Unidentified	J				
CLADOCERA					
Alonella					50
Chydoridae	J		1	3	20
Eurycercus					20
Ophyroxus					1580
HARPACTICOIDA					
Canthocamptidae					
OSTRACODA					
Candona		15			
Cypria					20
Cypris					30
ARACHNIDA					
Hydracarina	A	40		1	160
EPHEMEROPTERA					
Baetis tricaudatus	N				
Ephemerella inermis	A	2			
Ephemerella inermis	N				2
PLECOPTERA					
Nemoura	N				
HEMIPTERA					
Psyllidae	A				
TRICHOPTERA	L	10			
Agraylea	L			4	7
Brachycentrus	L				290
Ceraclea	L				2
Grensia	L	4			1
Mystacides	L				
COLEOPTERA					
Brachyvatus	A				
Hydroporus	L				
DIPTERA					
Chironomidae	L	245	6	4	70
Chironomidae	P				
Corynoneura	L	6			
Corynoneura	P				
Cricotopus	L				
Epoicladius	L				
Eukiefferiella	L	2			
Eukiefferiella	P	1			
Heterotrissocladius	P				
Lasiodiamesa	L	1			
Micropsectra	L				
Neozavrelia	P				

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 30 Grizzly-Panda 5-Aug-94	Site 31 Vulture-Polar 7-Aug-94	Site 3 Martine West 9-Aug-94	Site 16 Leslie-Moose 9-Aug-94
Orthocladiinae	L				2
Orthocladiinae	P				
Orthocladius	L	12			1
Orthocladius	P	3			120
Phaenopsectra	L				
Podonominae	L				
Procladius	L	1			
Psectrocladius	L			3	
Rheotanytarsus	L				
Simulidae	L	1			
Simulium	L				80
Stempellinella	L				1
Tanypodinae	L	1			1
Tanytarsini	L				
Tanytarsus	L				
Tipula	L	2			
GASTROPODA					
Valvata sincera					30

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 18 Long-Leslie 9-Aug-94	Site 33 Lac de Gras 11-Aug-94	Site 36 Ursula (N) 11-Aug-94	Site 42 South 11-Aug-94
COELENTERATA					
Hydra			67		
NEMATODA			2		2
OLIGOCHAETA					
Limnedrilus					
Naididae	J		3		
Nais					
Unidentified	J	10	11		
CLADOCERA					
Alonella					
Chydoridae	J	10	1		2
Eurycercus		5			
Ophyroxus					
HARPACTICOIDA					
Canthocamptidae					2
OSTRACODA					
Candona					
Cypria		30	16		
Cypris		20			
ARACHNIDA					
Hydracarina	A		3		
EPHEMEROPTERA					
Baetis tricaudatus	N				
Ephemerella inermis	A				
Ephemerella inermis	N				1
PLECOPTERA					
Nemoura	N				
HEMIPTERA					
Psyllidae	A				
TRICHOPTERA	L		5		
Agraylea	L			3	
Brachycentrus	L	6			
Ceraclea	L				
Grensia	L	1	1		2
Mystacides	L	1			
COLEOPTERA					
Brachyvatus	A			1	
Hydroporus	L	1			
DIPTERA					
Chironomidae	L	170	12	1170	23
Chironomidae	P				
Corynoneura	L				
Corynoneura	P	1			
Cricotopus	L	2		5	
Epoicladius	L		3		
Eukiefferiella	L				
Eukiefferiella	P				
Heterotrissocladius	P			1	
Lasiodiamesa	L				
Micropsectra	L		1		
Neozavrelia	P	2			

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), August 1994

TAXA	Stage	Site 18 Long-Leslie 9-Aug-94	Site 33 Lac de Gras 11-Aug-94	Site 36 Ursula (N) 11-Aug-94	Site 42 South 11-Aug-94
Orthocladiinae	L	2			
Orthocladiinae	P	5			
Orthocladius	L	2			
Orthocladius	P	2			
Phaenopsectra	L				
Podonominae	L				
Procladius	L	1			
Psectrocladius	L	27	2	2	2
Rheotanytarsus	L			1	
Simulidae	L				
Simulium	L				
Stempellinella	L				
Tanypodinae	L	1	1		2
Tanytarsini	L		2		
Tanytarsus	L			1	3
Tipula	L				5
GASTROPODA					
Valvata sincera					

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 13 Airstrip-Larry 17-Sep-94	Site 16 Leslie-Moose 16-Sep-94	Site 18 Long-Leslie 15-Sep-94
COELENTERATA				
Hydra				2
NEMATODA			3	
OLIGOCHAETA				
Naididae	J			
Unidentified	J		3	
CLADOCERA				
Macrothricidae		16	17	
Ophyroxus				7
Chydoridae	J		1	8
Eurycercus			10	
Alona				
HARPACTICOIDA				
Canthocamptidae				
OSTRACODA				
Cypria		11	10	1
Candona				
ARACHNIDA				
Hydracarina	A	11	138	5
Aranaea	A			
COLLEMBOLA				
Sminthurus	A		1	
Isotoma	A		1	
EPHEMEROPTERA				
Ephemerella inermis	N	9	84	
Ephemerella aurivilli	N		2	
Leptophlebiidae	N			
PLECOPTERA				
Nemoura	N		3	
Yugus	N		1	
HEMIPTERA				
Neocorixa	A			
Aphididae	N		1	
Aphididae	A			
TRICHOPTERA				
Phryganeidae				
Agrypnia	L		2	
Limnephilidae	L*			
Grensia	L		8	3
Limnephilus	L			
Hesperophylax	L			
Brachycentridae				
Brachycentrus	L	2	54	1
HYMENOPTERA				
Chalcoidea	A			
Braconidae	A		2	
COLEOPTERA				
Dytiscidae				
Brachyvatus	A		1	
Hydroporus	A			
Staphylinidae	L		1	

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 13 Airstrip-Larry 17-Sep-94	Site 16 Leslie-Moose 16-Sep-94	Site 18 Long-Leslie 15-Sep-94
Staphylinidae	A		1	
DIPTERA	A		1	
Tipulidae	A		4	
Simulidae	P		3	
Simulidae	A		4	
Simulium	L	2	25	
Chironomidae	L*	30	4	50
Chironomidae	P	1		
Chironomidae	A		4	
Tanypodinae	L		1	1
Procladius	L	2	2	1
Paramerina	L		2	
Tanytarsini	L*			
Tanytarsini	A			
Rheotanytarsus	L	5	2	
Tanytarsus	L			
Micropsectra	L			
Chironomini	L*			
Phaenopsectra	L	1		
Orthocladiinae	L*			
Orthocladiinae	A			
Psectrocladius	L		3	1
Eukiefferiella	L		5	1
Eukiefferiella	P		6	
Cricotopus	L			1
Corynoneura	L			1
Diamesinae	A			
Pseudokiefferiella	L	1	54	1
GASTROPODA				
Valvata sincera			1	
Pisidium		1		

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 11 Larry-Nero 21-Sep-94	Site 42 South (W) 19-Sep-94	Site 31 Vulture-Panda 12-Sep-94
COELENTERATA				
Hydra				
NEMATODA				
OLIGOCHAETA				
Naididae	J	1		
Unidentified	J			
CLADOCERA				
Macrothricidae				
Ophyroxus				
Chydoridae	J			2
Eurycercus				
Alona				
HARPACTICOIDA				
Canthocamptidae				
OSTRACODA				
Cypria				
Candona		5		
ARACHNIDA				
Hydracarina	A	1		14
Araneae	A			
COLLEMBOLA				
Sminthurus	A			
Isotoma	A			
EPHEMEROPTERA				
Ephemerella inermis	N		3	2
Ephemerella aurivilli	N			
Leptophlebiidae	N			
PLECOPTERA				
Nemoura	N	3	3	
Yugus	N			
HEMIPTERA				
Neocorixa	A			
Aphididae	N			
Aphididae	A			
TRICHOPTERA				
Phryganeidae				
Agrypnia	L			
Limnephilidae	L*			
Grensia	L			4
Limnephilus	L			
Hesperophylax	L			
Brachycentridae				
Brachycentrus	L	4		5
HYMENOPTERA				
Chalcoidea	A			
Braconidae	A			
COLEOPTERA				
Dytiscidae				
Brachyvatus	A			
Hydroporus	A			
Staphylinidae	L			

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 11 Larry-Nero 21-Sep-94	Site 42 South (W) 19-Sep-94	Site 31 Vulture-Panda 12-Sep-94
Staphylinidae	A			
DIPTERA	A			
Tipulidae	A			
Simulidae	P			
Simulidae	A			
Simulium	L			
Chironomidae	L*	337		72
Chironomidae	P			
Chironomidae	A			
Tanypodinae	L	1	2	
Procladius	L	5		
Paramerina	L	1		
Tanytarsini	L*			3
Tanytarsini	A			
Rheotanytarsus	L	39		4
Tanytarsus	L	2		
Micropsectra	L			
Chironomini	L*			
Phaenopsectra	L	1		
Orthocladiinae	L*			1
Orthocladiinae	A			
Psectrocladius	L	12		
Eukiefferiella	L	26		61
Eukiefferiella	P			
Cricotopus	L			1
Corynoneura	L			11
Diamesinae	A			
Pseudokiefferiella	L	1		
GASTROPODA				
Valvata sincera				
Pisidium				

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 30 Grizzly-Panda 12-Sep-94	Site 21 Nancy-Long 16-Sep-94	Site 18 Long-Leslie 15-Sep-94
COELENTERATA				
Hydra				
NEMATODA				
OLIGOCHAETA				
Naididae	J			
Unidentified	J			
CLADOCERA				
Macrothricidae				
Ophyroxus				
Chydoridae	J			
Eurycercus				
Alona				
HARPACTICOIDA				
Canthocamptidae				
OSTRACODA				
Cypria				
Candona				
ARACHNIDA				
Hydracarina	A			
Aranaea	A			
COLLEMBOLA				
Sminthurus	A			
Isotoma	A			
EPHEMEROPTERA				
Ephemerella inermis	N	22		131
Ephemerella aurivilli	N			
Leptophlebiidae	N		16	24
PLECOPTERA				
Nemoura	N			7
Yugus	N			
HEMIPTERA				
Neocorixa	A			1
Aphididae	N	1		
Aphididae	A			1
TRICHOPTERA				
Phryganeidae				
Agrypnia	L			
Limnephilidae	L*			
Grensia	L			15
Limnephilus	L			1
Hesperophylax	L	1		
Brachycentridae				
Brachycentrus	L		1	10
HYMENOPTERA				
Chalcoidea	A			
Braconidae	A			
COLEOPTERA				
Dytiscidae				
Brachyvatus	A			
Hydroporus	A			
Staphylinidae	L			

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 30 Grizzly-Panda 12-Sep-94	Site 21 Nancy-Long 16-Sep-94	Site 18 Long-Leslie 15-Sep-94
Staphylinidae	A			
DIPTERA	A			
Tipulidae	A			
Simulidae	P			
Simulidae	A			
Simulium	L			1
Chironomidae	L*	25	9	147
Chironomidae	P			
Chironomidae	A			
Tanypodinae	L			2
Procladius	L			
Paramerina	L			
Tanytarsini	L*		3	
Tanytarsini	A			
Rheotanytarsus	L	2	4	
Tanytarsus	L			
Micropsectra	L			1
Chironomini	L*			
Phaenopsectra	L			
Orthocladiinae	L*			
Orthocladiinae	A			
Psectrocladius	L	5	3	5
Eukiefferiella	L	2		
Eukiefferiella	P			
Cricotopus	L			
Corynoneura	L			
Diamesinae	A			
Pseudokiefferiella	L			
GASTROPODA				
Valvata sincera				
Pisidium				3

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Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 33 Lac de Gras 20-Sep-94	Site 24 Kodiak-Little 15-Sep-94
COELENTERATA			
Hydra			
NEMATODA		1	
OLIGOCHAETA			
Naididae	J		
Unidentified	J		
CLADOCERA			
Macrothricidae			
Ophyroxus			
Chydoridae	J		
Eurycercus		8	
Alona			1
HARPACTICOIDA			
Canthocamptidae			
OSTRACODA			
Cypria		129	
Candona			
ARACHNIDA			
Hydracarina	A	87	1
Araneae	A		1
COLLEMBOLA			
Sminthurus	A		
Isotoma	A		
EPHEMEROPTERA			
Ephemerella inermis	N	1	
Ephemerella aurivilli	N		
Leptophlebiidae	N		
PLECOPTERA			
Nemoura	N	17	1
Yugus	N		
HEMIPTERA			
Neocorixa	A		
Aphididae	N	1	
Aphididae	A	1	1
TRICHOPTERA			
Phryganeidae			
Agrypnia	L		
Limnephilidae	L*		
Grensia	L		
Limnephilus	L		
Hesperophylax	L		
Brachycentridae			
Brachycentrus	L	61	1
HYMENOPTERA			
Chalcoidea	A		1
Braconidae	A		
COLEOPTERA			
Dytiscidae			
Brachyvatus	A		
Hydroporus	A		1
Staphylinidae	L		

Appendix II - B3
Larval Drift Identification and Frequency (nos/24 hours), September 1994

TAXA	Stage	Site 33 Lac de Gras 20-Sep-94	Site 24 Kodiak-Little 15-Sep-94
Staphylinidae	A		
DIPTERA	A		
Tipulidae	A		
Simulidae	P		
Simulidae	A		
Simulium	L	1	1
Chironomidae	L*	201	1
Chironomidae	P		
Chironomidae	A		
Tanypodinae	L	11	
Procladius	L	8	
Paramerina	L		
Tanytarsini	L*		
Tanytarsini	A		1
Rheotanytarsus	L	26	
Tanytarsus	L		
Micropsectra	L		
Chironomini	L*		
Phaenopsectra	L		
Orthocladiinae	L*		
Orthocladiinae	A		4
Psectrocladius	L	2	
Eukiefferiella	L		
Eukiefferiella	P		
Cricotopus	L		
Corynoneura	L		
Diamesinae	A		1
Pseudokiefferiella	L	2	1
GASTROPODA			
Valvata sincera			
Pisidium			

Appendix II - B3

Analyses of Variance to Determine if Major Taxonomic Groups of Larval Drift Were Significantly Different in Terms of Community Composition, Density, and Richness (at the 95% Confidence Level)

Null Hypothesis		Tested for	F[1]	Fcrit	Result
No significant difference in community composition...	among sites for each sampling period	Spring-Summer	17.88	2.72	Accept
		Summer-Fall	17.04	2.72	Accept
	among groups of invertebrates in each sampling peno	Spring-Summer	0.05	1.62	**Reject**
		Summer-Fall	0.03	1.62	**Reject**
No significant difference in density...	among sites in each sampling period	Spring-Summer	18.81	2.72	**Reject**
		Summer-Fall	14.34	2.72	**Reject**
	among groups of invertebrates in each sampling peno	Spring-Summer	2.66	1.62	**Reject**
		Summer-Fall	1.37	1.62	Accept
	between seasons	All Sites	1 47	1.90	**Reject**
No significant difference in richness...	between seasons	All Sites	2.02	4.21	**Reject**
	among sites	Both Seasons	2.30	1.90	Accept

(1) If F> Fcrit, the null hypothesis is rejected

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 06 Fox 1-Fox 2 Jun 11-94	Site 11 Larry-Nero Jun 11-94	Site 13 Airstrip-Larry Jun 09-94	Site 16 Leslie-Moose Jun 10-94
ARACHNIDA	*Acarina*	A			21	
	Hydracarina	A			14	62
	Oribatidae	A			38	59
CLADOCERA	NOTOSTRACA	J				
COELENTERATA	*Hydra*				21	17
COLEOPTERA	*Brachyvatus*	A				
	Haliplus	A				3
COLLEMBOLA	*Sminthurus*	A			7	7
DIPTERA	*Aedes hexodontus*	L				
	Bezzia	L				3
	Chelifera	L			3	
	Chironomidae	L	201	260	1397	662
	Chironomini	L				
	Clinocera	L				7
	Corynoneura	L		361	988	114
	Corynoneura	P				
	Cricotopus	L	59	35	489	28
	Cricotopus	P	7			
	Culicoides	L				45
	Demicryptochironomus	L				
	Diamesinae	P/A				
	Dicrotendipes	L				
	Eukiefferiella	L	62	14		153
	Euryhapsis	L		31		52
	Lasiodiamesa	L				
	Macropelopiini	L				
	Micropsectra	L				
	Micropsectra	P				
	Orthocladiinae	L		10	187	340
	Paracladopelma	L				
	Paramerina	L				
	Pentaneurini	L	10	3		191
	Phaenopsectra	L		3	7	
	Procladius	L		7		
	Prosimulium	L				21
	Psectrocladius	L	132	45		
	Pseudokiefferiella	L				166
	Rheotanytarsus	L	49		14	111
	Simulidae	L		3	3	1009
	Simulium	L	3			
	Stempellinella	L				
	Tanypodinae	L	10			94
	Tanytarsini	L	38	45	163	343
	Tanytarsus	L	7	3	156	184
	Thienemanniella	L				
	Tipula	L			7	7
	Zalutshia	P	3			
	Conchapelopia	L				
EPHEMEROPTERA	Unidentified	N		3		10
HARPACTICOIDA	Canthocamptidae		7	142		31
HEMIPTERA	Aphididae					

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 06 Fox 1-Fox 2 Jun 11-94	Site 11 Larry-Nero Jun 11-94	Site 13 Airstrip-Larry Jun 09-94	Site 16 Leslie-Moose Jun 10-94
	Coccoidea	A	3			
MOLLUSCA	*Valvata sincera*					17
NEMATODA	NEMATODA		76	173	10898	3570
OLIGOCHAETA	Lumbriculidae			14		21
	Naididae					
	Pristina			104	45	461
	Unidentified		21	7	121	135
OSTRACODA	*Candona*		10	87	97	107
PLECOPTERA	*Nemoura*	N	7		10	211
	Unidentified				832	
TARDIGRADA	TARDIGRADA(UI)			7		
TRICHOPTERA	*Agraylea*	L	3			10
	Brachycentrus	L			14	14
	Grensia	L				
	Leptoceridae	L				
	Onocosmoecus	L				
	Oxyethira	L				
	Rhyacophila	L		3		3
TURBELLARIA	TURBELLARIA		17	10	21	361

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 18 Long-Leslie Jun 10-94	Site 21 Nancy-Long Jun 13-94	Site 24 Kodiak-Little Jun 08-94	Site 26 Koala-Kodiak Jun 08-94
ARACHNIDA	*Acarina*	A	21		3	
	Hydracarina	A	7	35		
	Oribatidae	A	21		62	
CLADOCERA	NOTOSTRACA	J		3		
COELENTERATA	*Hydra*		109		52	
COLEOPTERA	*Brachyvatus*	A				
	Haliplus	A				
COLLEMBOLA	*Sminthurus*	A				
DIPTERA	*Aedes hexodontus*	L		7		
	Bezzia	L				
	Chelifera	L			28	
	Chironomidae	L	976	464	1626	170
	Chironomini	L	3			
	Clinocera	L	7		7	
	Corynoneura	L	307	329	87	
	Corynoneura	P		17		
	Cricotopus	L	237	274	107	10
	Cricotopus	P				
	Culicoides	L				
	Demicryptochironomus	L			3	
	Diamesinae	P/A	3			
	Dicrotendipes	L			3	
	Eukiefferiella	L	355	83	14	
	Euryhapsis	L				
	Lasiodiamesa	L		7		
	Macropelopiini	L				3
	Micropsectra	L				
	Micropsectra	P		21		
	Orthocladiinae	L	364			
	Paracladopelma	L	64			
	Paramerina	L			59	
	Pentaneurini	L	180			7
	Phaenopsectra	L				
	Procladius	L		3	35	
	Prosimulium	L				
	Psectrocladius	L	173		35	
	Pseudokiefferiella	L				
	Rheotanytarsus	L	16	104	24	101
	Simulidae	L	7		624	3
	Simulium	L		2326		
	Stempellinella	L		153		
	Tanypodinae	L	300	3	45	
	Tanytarsini	L	55	336	66	28
	Tanytarsus	L	16	1456	177	14
	Thienemanniella	L				
	Tipula	L	10		3	
	Zalutshia	P				
	Conchapelopia	L		45		
EPHEMEROPTERA	Unidentified	N	3	3751		
HARPACTICOIDA	Canthocamptidae		730	208	624	3
HEMIPTERA	Aphididae					

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 18 Long-Leslie Jun 10-94	Site 21 Nancy-Long Jun 13-94	Site 24 Kodiak-Little Jun 08-94	Site 26 Koala-Kodiak Jun 08-94
	Coccoidea	A				
MOLLUSCA	*Valvata sincera*		123	13013	7	
NEMATODA	NEMATODA		1804	1945	4763	80
OLIGOCHAETA	Lumbriculidae		7	55		3
	Naididae					
	Pristina			527	7	45
	Unidentified			555	35	
OSTRACODA	*Candona*		69	288	49	21
PLECOPTERA	*Nemoura*	N	10	3	90	7
	Unidentified					
TARDIGRADA	TARDIGRADA(UI)					
TRICHOPTERA	*Agraylea*	L				
	Brachycentrus	L			21	
	Grensia	L				
	Leptoceridae	L		3		
	Onocosmoecus	L		7		
	Oxyethira	L				
	Rhyacophila	L				
TURBELLARIA	TURBELLARIA		922		1106	3

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 28 Panda-Koala Jun 07-94	Site 30 Grizzly-Panda Jun 13-94	Site 31 Vulture-Polar Jun 13-94
ARACHNIDA	*Acarina*	A			
	Hydracarina	A	10	3	10
	Oribatidae	A	3	14	
CLADOCERA	NOTOSTRACA	J			
COELENTERATA	*Hydra*			35	
COLEOPTERA	*Brachyvatus*	A			
	Haliplus	A			
COLLEMBOLA	*Sminthurus*	A		3	
DIPTERA	*Aedes hexodontus*	L			
	Bezzia	L			31
	Chelifera	L			
	Chironomidae	L	24	28	4090
	Chironomini	L			
	Clinocera	L			14
	Corynoneura	L	10	49	537
	Corynoneura	P			
	Cricotopus	L		7	173
	Cricotopus	P	14		14
	Culicoides	L		3	
	Demicryptochironomus	L			
	Diamesinae	P/A			
	Dicrotendipes	L			
	Eukiefferiella	L		35	35
	Euryhapsis	L			
	Lasiodiamesa	L			
	Macropelopiini	L			
	Micropsectra	L			295
	Micropsectra	P			
	Orthocladiinae	L			
	Paracladopelma	L	3		
	Paramerina	L			
	Pentaneurini	L	7	21	107
	Phaenopsectra	L		10	
	Procladius	L		90	17
	Prosimulium	L			3
	Psectrocladius	L		49	35
	Pseudokiefferiella	L			
	Rheotanytarsus	L	83	59	10
	Simulidae	L	10	17	104
	Simulium	L		24	
	Stempellinella	L			
	Tanypodinae	L		49	52
	Tanytarsini	L		87	191
	Tanytarsus	L	3	731	
	Thienemanniella	L			243
	Tipula	L	3	3	3
	Zalutshia	P			
	Conchapelopia	L			
EPHEMEROPTERA	Unidentified	N		35	451
HARPACTICOIDA	Canthocamptidae				260
HEMIPTERA	Aphididae				

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 28 Panda-Koala Jun 07-94	Site 30 Grizzly-Panda Jun 13-94	Site 31 Vulture-Polar Jun 13-94
	Coccoidea	A			
MOLLUSCA	*Valvata sincera*				
NEMATODA	NEMATODA		7	2111	5165
OLIGOCHAETA	Lumbriculidae			166	10
	Naididae			118	
	Pristina			7	780
	Unidentified				52
OSTRACODA	*Candona*			437	243
PLECOPTERA	*Nemoura*	N	17	21	17
	Unidentified				
TARDIGRADA	TARDIGRADA(UI)				3
TRICHOPTERA	*Agraylea*	L			
	Brachycentrus	L	3		
	Grensia	L			
	Leptoceridae	L			
	Onocosmoecus	L			
	Oxyethira	L			21
	Rhyacophila	L			
TURBELLARIA	TURBELLARIA		3	94	

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 33 Slipper-LacdeGras Jun 11-94	Site 36 Ursula (N) Jun 13-94	Site 42 South (W) Jun 13-94
ARACHNIDA	*Acarina*	A	3	35	
	Hydracarina	A	14	17	
	Oribatidae	A	3		
CLADOCERA	NOTOSTRACA	J			
COELENTERATA	*Hydra*		17	3	7
COLEOPTERA	*Brachyvatus*	A		3	
	Haliplus	A			
COLLEMBOLA	*Sminthurus*	A			
DIPTERA	*Aedes hexodontus*	L			
	Bezzia	L			
	Chelifera	L		3	
	Chironomidae	L	364	2662	943
	Chironomini	L			
	Clinocera	L			3
	Corynoneura	L	1040	336	558
	Corynoneura	P			
	Cricotopus	L	76	302	3
	Cricotopus	P			
	Culicoides	L			
	Demicryptochironomus	L			
	Diamesinae	P/A			
	Dicrotendipes	L			
	Eukiefferiella	L	2264	139	21
	Euryhapsis	L			
	Lasiodiamesa	L			
	Macropelopiini	L			
	Micropsectra	L			
	Micropsectra	P			
	Orthocladiinae	L			
	Paracladopelma	L			
	Paramerina	L			
	Pentaneurini	L	73	10	42
	Phaenopsectra	L		14	45
	Procladius	L		21	
	Prosimulium	L			14
	Psectrocladius	L	90	38	10
	Pseudokiefferiella	L			
	Rheotanytarsus	L	42	52	
	Simulidae	L			35
	Simulium	L	90		
	Stempellinella	L		14	45
	Tanypodinae	L	17	3	114
	Tanytarsini	L	3	291	24
	Tanytarsus	L		270	49
	Thienemanniella	L		55	3
	Tipula	L		7	94
	Zalutshia	P			
	Conchapelopia	L			
EPHEMEROPTERA	Unidentified	N	3	347	208
HARPACTICOIDA	Canthocamptidae		7	17	253
HEMIPTERA	Aphididae		7		

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Stream Benthic Invertebrate Identification and Density (nos/m^2), June 1994

Group	Taxa	Stage	Site 33 Slipper-LacdeGras Jun 11-94	Site 36 Ursula (N) Jun 13-94	Site 42 South (W) Jun 13-94
	Coccoidea	A			
MOLLUSCA	*Valvata sincera*				
NEMATODA	NEMATODA		24	617	4437
OLIGOCHAETA	Lumbriculidae			3	3
	Naididae				
	Pristina			55	399
	Unidentified			322	121
OSTRACODA	*Candona*		7	69	478
PLECOPTERA	*Nemoura*	N	263		3
	Unidentified				
TARDIGRADA	TARDIGRADA(UI)				
TRICHOPTERA	*Agraylea*	L			
	Brachycentrus	L	7		3
	Grensia	L		3	
	Leptoceridae	L			
	Onocosmoecus	L			
	Oxyethira	L			
	Rhyacophila	L			
TURBELLARIA	TURBELLARIA		76	3	7

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 13 Airstrip-Larry Aug 03-94	Site 16 Leslie-Moose Aug 08-94	Site 18 Long-Leslie Aug 08-94
ARACHNIDA	*Acarina* (parasitic)	A			
	Hydracarina	A	7		3
CLADOCERA	*Alonella*				149
	Chydoridae	J	347	1802	666
	Eurycercus			7	
	Macrothricidae				
	Ophyroxus			395	14
COELENTERATA	Hydra			69	42
COLEOPTERA	Dytiscidae				
	Haliplus	L			
	Halplidae				
	Hydroporus	L	3		
	Hydroporus	A	3		
DIPTERA	*Bezzia*	L	3		
	Ceratopogonidae				
	Chelifera	L			
	Chironomidae	L*	5477	596	842
	Chironomini	L*			
	Chironomus	L			
	Clinocera	L			
	Corynoneura	P			
	Cricotopus	L	267		28
	Cricotopus	P	94		
	Demicryptochironomus	L			
	Diamesinae				
	Dicranota	L	10		
	Dicrotendipes	L			
	Empididae				
	Eukiefferiella	L	17	45	
	Euryhapsis	L			
	Heterotanytarsus	L	7		
	Hexatoma	L			
	Limnophora	L		3	
	Micropsectra	L	10		
	Micropsectra	P			
	Microtendipes	L			
	Monodiamesa	L			
	Muscidae				
	Oreogoton	L			
	Orthocladiinae	L*	17		83
	Orthocladiinae	P			
	Pagastiella	L			
	Parachironomus	L			
	Paracladopelma	L	3		
	Paramerina	L			
	Phaenopsectra	L	7	52	
	Phaenopsectra	P			
	Potthastia	L	3		

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 13 Airstrip-Larry Aug 03-94	Site 16 Leslie-Moose Aug 08-94	Site 18 Long-Leslie Aug 08-94
	Procladius	L	288	128	
	Procladius	P			
	Psectrocladius	L	42	52	28
	Psectrocladius	P			
	Pseudokiefferiella	L			
	Rheotanytarsus	L	139	59	10
	Rheotanytarsus	P			
	Simulidae	L*			
	Simulium	L			
	Stempellinella	L			
	Tanypodinae	L*	3	3	815
	Tanytarsini	L*	3	97	
DIPTERA (continued)	*Tanytarsus*	L	52	10	7
	Tanytarsus	P			
	Thienemanniella	L			
	Tipula	L	45		31
	Tipulidae				
	Zalutschia	L			
	Corynoneura	L			10
EPHEMEROPTERA	*Baetis tricaudatus*	N	7		
	Ephemerella inermis	N			
	Paraleptophlebia	N			
HARPACTICOIDA	Canthocamptidae		381	35	139
MOLLUSCA	*Valvata sincera*				87
	Lymnaea				
NEMATODA	NEMATODA		2704	177	406
OLIGOCHAETA	Enchytraeidae		496		10
	Limnedrilus		62	21	24
	Lumbriculidae				
	Naididae	J	215	28	69
	Nais			28	7
	Tubificidae	J			
	Vejdovskyella				
	Unidentified	J	6967	104	693
OSTRACODA	*Candona*		631	416	270
	Cypria				21
	Cypris				634
PLECOPTERA	*Nemoura*	N	107		
TRICHOPTERA	*Agraylea*	L			
	Brachycentridae				
	Brachycentrus	L			3
	Grensia	L		3	3
	Hydroptilidae	L			
	Limnephilidae	L			
	Oxyethira	L			
TURBELLARIA	TURBELLARIA				35

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 22 Little-Moose Aug 04-94	Site 24 Kodiak-Little Aug 03-94	Site 26 Koala-Kodiak Aug 02-94
ARACHNIDA	*Acarina* (parasitic)	A			
	Hydracarina	A			7
CLADOCERA	*Alonella*				
	Chydoridae	J	936	468	
	Eurycercus		14	73	
	Macrothricidae				
	Ophyroxus		347		
COELENTERATA	Hydra		139	42	
COLEOPTERA	Dytiscidae				
	Haliplus	L			
	Halplidae				
	Hydroporus	L			
	Hydroporus	A			
DIPTERA	*Bezzia*	L			
	Ceratopogonidae				
	Chelifera	L			
	Chironomidae	L*	24611	1577	14
	Chironomini	L*		3	
	Chironomus	L			
	Clinocera	L	3		
	Corynoneura	P	17		
	Cricotopus	L		69	
	Cricotopus	P			
	Demicryptochironomus	L			
	Diamesinae				
	Dicranota	L			
	Dicrotendipes	L	506	3	
	Empididae				
	Eukiefferiella	L			
	Euryhapsis	L			
	Heterotanytarsus	L			
	Hexatoma	L			
	Limnophora	L			3
	Micropsectra	L	146		
	Micropsectra	P			
	Microtendipes	L			
	Monodiamesa	L			
	Muscidae				
	Oreogoton	L			
	Orthocladiinae	L*	121	3	
	Orthocladiinae	P		52	3
	Pagastiella	L			
	Parachironomus	L			
	Paracladopelma	L			
	Paramerina	L		3	
	Phaenopsectra	L	104		118
	Phaenopsectra	P			
	Potthastia	L		10	

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 22 Little-Moose Aug 04-94	Site 24 Kodiak-Little Aug 03-94	Site 26 Koala-Kodiak Aug 02-94
	Procladius	L	641		121
	Procladius	P			
	Psectrocladius	L	683	1165	444
	Psectrocladius	P			
	Pseudokiefferiella	L		35	
	Rheotanytarsus	L	69	24	3
	Rheotanytarsus	P			
	Simulidae	L*		17	
	Simulium	L			
	Stempellinella	L		222	
	Tanypodinae	L*	35	62	17
	Tanytarsini	L*	347		
DIPTERA (continued)	*Tanytarsus*	L		42	
	Tanytarsus	P			
	Thienemanniella	L			
	Tipula	L	3	28	3
	Tipulidae				
	Zalutschia	L		52	
	Corynoneura	L	52	35	
EPHEMEROPTERA	*Baetis tricaudatus*	N		3	
	Ephemerella inermis	N			
	Paraleptophlebia	N			
HARPACTICOIDA	Canthocamptidae			139	
MOLLUSCA	*Valvata sincera*				
	Lymnaea				
NEMATODA	NEMATODA		329	6066	236
OLIGOCHAETA	Enchytraeidae				
	Limnedrilus				52
	Lumbriculidae				
	Naididae	J	208	485	52
	Nais		17	35	35
	Tubificidae	J			
	Vejdovskyella				
	Unidentified	J	1525	1085	69
OSTRACODA	*Candona*			274	69
	Cypria				
	Cypris		693	354	3
PLECOPTERA	*Nemoura*	N	69	38	
TRICHOPTERA	*Agraylea*	L	69	7	14
	Brachycentridae				
	Brachycentrus	L		35	
	Grensia	L			
	Hydroptilidae	L			
	Limnephilidae	L			
	Oxyethira	L			
TURBELLARIA	TURBELLARIA				

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 28 Panda-Koala Aug 02-94	Site 30 Grizzly-Panda Aug 04-94	Site 31 Vulture-Panda Aug 04-94
ARACHNIDA	*Acarina* (parasitic)	A			
	Hydracarina	A			10
CLADOCERA	*Alonella*		45		
	Chydoridae	J	35	416	208
	Eurycercus		7	121	3
	Macrothricidae				
	Ophyroxus				
COELENTERATA	Hydra		3986		
COLEOPTERA	Dytiscidae				
	Haliplus	L			
	Halplidae				
	Hydroporus	L			
	Hydroporus	A			
DIPTERA	*Bezzia*	L			10
	Ceratopogonidae				
	Chelifera	L			
	Chironomidae	L*	3258	1945	988
	Chironomini	L*			
	Chironomus	L	173		
	Clinocera	L			
	Corynoneura	P			
	Cricotopus	L	2322		
	Cricotopus	P	7		7
	Demicryptochironomus	L			
	Diamesinae				
	Dicranota	L			
	Dicrotendipes	L			3
	Empididae				
	Eukiefferiella	L			
	Euryhapsis	L	69		
	Heterotanytarsus	L			3
	Hexatoma	L			
	Limnophora	L		3	
	Micropsectra	L			17
	Micropsectra	P			
	Microtendipes	L			
	Monodiamesa	L			3
	Muscidae				
	Oreogoton	L			
	Orthocladiinae	L*	901		66
	Orthocladiinae	P	3		
	Pagastiella	L			
	Parachironomus	L			
	Paracladopelma	L			
	Paramerina	L			
	Phaenopsectra	L	7	107	7
	Phaenopsectra	P			
	Potthastia	L	35		3

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 28 Panda-Koala Aug 02-94	Site 30 Grizzly-Panda Aug 04-94	Site 31 Vulture-Panda Aug 04-94
	Procladius	L		166	7
	Procladius	P			
	Psectrocladius	L	347	412	21
	Psectrocladius	P	7		
	Pseudokiefferiella	L			
	Rheotanytarsus	L	35	76	
	Rheotanytarsus	P			
	Simulidae	L*			
	Simulium	L			
	Stempellinella	L			
	Tanypodinae	L*	243	3	114
	Tanytarsini	L*			21
DIPTERA (continued)	*Tanytarsus*	L		35	
	Tanytarsus	P			
	Thienemanniella	L			
	Tipula	L	73	24	3
	Tipulidae				
	Zalutschia	L			
	Corynoneura	L			7
EPHEMEROPTERA	*Baetis tricaudatus*	N	3	3	
	Ephemerella inermis	N			
	Paraleptophlebia	N			10
HARPACTICOIDA	Canthocamptidae		35		69
MOLLUSCA	*Valvata sincera*				
	Lymnaea				
NEMATODA	NEMATODA		867	225	735
OLIGOCHAETA	Enchytraeidae				10
	Limnedrilus		7	107	3
	Lumbriculidae				
	Naididae	J	1075	83	523
	Nais			111	14
	Tubificidae	J		24	
	Vejdovskyella				
	Unidentified	J	4298	523	208
OSTRACODA	*Candona*		35	797	139
	Cypria				
	Cypris		38		55
PLECOPTERA	*Nemoura*	N	3		10
TRICHOPTERA	*Agraylea*	L	35		
	Brachycentridae				
	Brachycentrus	L	3		
	Grensia	L			
	Hydroptilidae	L			
	Limnephilidae	L			
	Oxyethira	L			3
TURBELLARIA	TURBELLARIA				

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 33 Lac de Gras Aug 08-94	Site 36 Ursula (N) Aug 10-94	Site 42 South Aug 10-94
ARACHNIDA	*Acarina* (parasitic)	A			
	Hydracarina	A	10		69
CLADOCERA	*Alonella*				3
	Chydoridae	J	350	1595	3120
	Eurycercus				
	Macrothricidae				
	Ophyroxus		21	832	7
COELENTERATA	Hydra		4489	17	
COLEOPTERA	Dytiscidae				
	Haliplus	L		7	
	Halplidae				
	Hydroporus	L			
	Hydroporus	A			
DIPTERA	*Bezzia*	L			
	Ceratopogonidae				
	Chelifera	L			
	Chironomidae	L*	1404	60245	4090
	Chironomini	L*			
	Chironomus	L			
	Clinocera	L			
	Corynoneura	P	3		7
	Cricotopus	L	107		
	Cricotopus	P			
	Demicryptochironomus	L			
	Diamesinae				
	Dicranota	L			
	Dicrotendipes	L			
	Empididae				
	Eukiefferiella	L			
	Euryhapsis	L			
	Heterotanytarsus	L			
	Hexatoma	L		3	
	Limnophora	L			
	Micropsectra	L		97	7
	Micropsectra	P		3	
	Microtendipes	L			
	Monodiamesa	L			
	Muscidae				
	Oreogoton	L			3
	Orthocladiinae	L*	3		
	Orthocladiinae	P	7		
	Pagastiella	L			
	Parachironomus	L			
	Paracladopelma	L			
	Paramerina	L			
	Phaenopsectra	L			14
	Phaenopsectra	P			
	Potthastia	L			

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Stream Benthic Invertebrate Identification and Density (nos/m^2), August 1994

Group	Taxa	Stage	Site 33 Lac de Gras Aug 08-94	Site 36 Ursula (N) Aug 10-94	Site 42 South Aug 10-94
	Procladius	L			
	Procladius	P			
	Psectrocladius	L	76	218	17
	Psectrocladius	P		76	3
	Pseudokiefferiella	L			
	Rheotanytarsus	L	104	104	3
	Rheotanytarsus	P		21	
	Simulidae	L*			
	Simulium	L			
	Stempellinella	L			
	Tanypodinae	L*	191	66	423
	Tanytarsini	L*			107
DIPTERA (continued)	*Tanytarsus*	L		87	
	Tanytarsus	P			
	Thienemanniella	L	73		
	Tipula	L	3		121
	Tipulidae				
	Zalutschia	L			
	Corynoneura	L	38		73
EPHEMEROPTERA	*Baetis tricaudatus*	N			45
	Ephemerella inermis	N	7		17
	Paraleptophlebia	N			
HARPACTICOIDA	Canthocamptidae		208	416	347
MOLLUSCA	*Valvata sincera*		10		
	Lymnaea		3		
NEMATODA	NEMATODA		149	624	936
OLIGOCHAETA	Enchytraeidae				3
	Limnedrilus		7		
	Lumbriculidae				
	Naididae	J	201	3	90
	Nais				28
	Tubificidae	J			
	Vejdovskyella				
	Unidentified	J	2485	1317	1248
OSTRACODA	*Candona*		780	416	243
	Cypria		35		
	Cypris		340		35
PLECOPTERA	*Nemoura*	N	52		45
TRICHOPTERA	*Agraylea*	L	7		
	Brachycentridae				
	Brachycentrus	L	7		
	Grensia	L			
	Hydroptilidae	L			
	Limnephilidae	L			
	Oxyethira	L			
TURBELLARIA	TURBELLARIA		3		

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Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site11 Larry-Nero Sep 20-94	Site 13 Airstrip-Larry Sep 16-94	Site 16 Leslie-Moose Sep 15-94
ARACHNIDA	*Acarina*	A			
	Hydracarina	A			315
	Oribatidae	A			
CLADOCERA	*Alona*				
	Alonella				
	Chydoridae	J		832	35
	Chydorus				
	Macrothricidae				
	Ophyroxus				
COELENTERATA	*Hydra*				191
DIPTERA	*Bezzia*	L			
	Chelifera	L		7	
	Chironomidae	L	6919	2426	53901
	Corynoneura	L		1005	
	Cricotopus	L	312		
	Cricotopus	P			17
	Demicryptochironomus	L			10
	Dicrotendipes	L			35
	Eukiefferiella	L		111	1387
	Euryhapsis	L			
	Gymnometriocnemus	L			
	Heterotanytarsus	L			
	Heterotrissocladius	L		433	17
	Hexatoma	L			
	Limnophora	L			
	Micropsectra	L			
	Microtendipes	L			
	Oreogoton	L			
	Orthocladiinae	L	107	17	
	Orthocladiinae	P			3
	Orthocladius	L			
	Pagastiella	L			
	Parachironomus	L			
	Paramerina	L			
	Paraphaenocladius	L			38
	Phaenopsectra	L	627	128	
	Potthastia	L		3	14
	Procladius	L	7	45	
	Psectrocladius	L	1373	163	173
	Pseudokiefferiella	L			1387
	Pseudosmittia	L		3	
	Rheotanytarsus	L	73	1317	381
	Rhyacophila	L			146
	Simulidae	L			3
	Stempellinella	L	7		
	Stictochironomus	L			
	Tanypodinae	L		10	2617
	Tanytarsini	L			
	Tanytarsus	L	73	153	225

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Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site11 Larry-Nero Sep 20-94	Site 13 Airstrip-Larry Sep 16-94	Site 16 Leslie-Moose Sep 15-94
	Tipula	L		28	3
	Xenochironomus	L		3	
	Zalutschia	L			
EPHEMEROPTERA	*Baetis tricaudatus*	N			3
	Ephemerella inermis	N			104
HARPACTICOIDA	Canthocamptidae		2496	139	173
MOLLUSCA	*Lymnaea*				
	Pisidium				
	Valvata sincera				45
NEMATODA	NEMATODA		1629	4576	2080
OLIGOCHAETA	Enchytraeidae				104
	Lumbriculus		38	38	17
	Naididae	J	378	763	416
	Nais				
	Unidentified			589	416
OSTRACODA	*Candona*		1872	728	763
	Cypria				
PLECOPTERA	*Nemoura*	N		38	745
	Unidentified				
TARDIGRADA	TARDIGRADA				
TRICHOPTERA	*Agraylea*	L			121
	Agrypnia	L			
	Apatania	L			
	Brachycentrus	L			159
	Grensia	L			
	Oxyethira	L			

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 18 Long-Leslie Sep 14-94	Site 21 Nancy-Long Sep 15-94	Site 22 Little-Moose Sep 17-94
ARACHNIDA	*Acarina*	A	69		
	Hydracarina	A	42		31
	Oribatidae	A			
CLADOCERA	*Alona*				
	Alonella				
	Chydoridae	J	728		208
	Chydorus				
	Macrothricidae				
	Ophyroxus				104
COELENTERATA	*Hydra*				
DIPTERA	*Bezzia*	L			
	Chelifera	L			
	Chironomidae	L	5615	520	14212
	Corynoneura	L	659		
	Cricotopus	L			
	Cricotopus	P			
	Demicryptochironomus	L	7		24
	Dicrotendipes	L	10		55
	Eukiefferiella	L		7	3
	Euryhapsis	L			
	Gymnometriocnemus	L	3		
	Heterotanytarsus	L			
	Heterotrissocladius	L	2010		
	Hexatoma	L		3	
	Limnophora	L			
	Micropsectra	L	322		
	Microtendipes	L			69
	Oreogoton	L	3		
	Orthocladiinae	L			
	Orthocladiinae	P			
	Orthocladius	L			
	Pagastiella	L			
	Parachironomus	L			
	Paramerina	L	3		
	Paraphaenocladius	L			
	Phaenopsectra	L	69	52	614
	Potthastia	L			
	Procladius	L	14	10	950
	Psectrocladius	L	107	568	132
	Pseudokiefferiella	L		7	
	Pseudosmittia	L			
	Rheotanytarsus	L	149	714	187
	Rhyacophila	L			3
	Simulidae	L			
	Stempellinella	L			
	Stictochironomus	L			
	Tanypodinae	L	142	111	80
	Tanytarsini	L			
	Tanytarsus	L	361	159	25755

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 18 Long-Leslie Sep 14-94	Site 21 Nancy-Long Sep 15-94	Site 22 Little-Moose Sep 17-94
	Tipula	L	31		
	Xenochironomus	L			
	Zalutschia	L			
EPHEMEROPTERA	*Baetis tricaudatus*	N			
	Ephemerella inermis	N			
HARPACTICOIDA	Canthocamptidae		1283		208
MOLLUSCA	*Lymnaea*				
	Pisidium		114		
	Valvata sincera		14		
NEMATODA	NEMATODA		11023	139	451
OLIGOCHAETA	Enchytraeidae				
	Lumbriculus		433	3	10
	Naididae	J	7		149
	Nais				
	Unidentified		416	104	69
OSTRACODA	*Candona*		631	28	142
	Cypria				
PLECOPTERA	*Nemoura*	N	17		
	Unidentified				
TARDIGRADA	TARDIGRADA		139		
TRICHOPTERA	*Agraylea*	L			3
	Agrypnia	L			
	Apatania	L	3		
	Brachycentrus	L			
	Grensia	L	3		
	Oxyethira	L			

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 24 Kodiak-Little Sep 13-94	Site 26 Koala-Kodiak Sep 13-94	Site 30 Grizzly-Panda Sep 11-94
ARACHNIDA	*Acarina*	A			
	Hydracarina	A	3		
	Oribatidae	A			
CLADOCERA	*Alona*				
	Alonella				
	Chydoridae	J	69		187
	Chydorus		28		94
	Macrothricidae		14		
	Ophyroxus		3		
COELENTERATA	*Hydra*		3		
DIPTERA	*Bezzia*	L			
	Chelifera	L			
	Chironomidae	L	648	28	704
	Corynoneura	L	31		
	Cricotopus	L	21		10
	Cricotopus	P			
	Demicryptochironomus	L	3		
	Dicrotendipes	L	14		
	Eukiefferiella	L	76		7
	Euryhapsis	L	3		
	Gymnometriocnemus	L			
	Heterotanytarsus	L			
	Heterotrissocladius	L			
	Hexatoma	L			3
	Limnophora	L		3	
	Micropsectra	L	3		
	Microtendipes	L			
	Oreogoton	L			
	Orthocladiinae	L	7		
	Orthocladiinae	P			
	Orthocladius	L			
	Pagastiella	L			
	Parachironomus	L			
	Paramerina	L			
	Paraphaenocladius	L			
	Phaenopsectra	L	3	104	7
	Potthastia	L	17		
	Procladius	L	7	10	3
	Psectrocladius	L	10	156	14
	Pseudokiefferiella	L			
	Pseudosmittia	L			
	Rheotanytarsus	L	21	14	142
	Rhyacophila	L			
	Simulidae	L			
	Stempellinella	L			
	Stictochironomus	L			
	Tanypodinae	L	76		55
	Tanytarsini	L	3		
	Tanytarsus	L	218	14	118

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Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 24 Kodiak-Little Sep 13-94	Site 26 Koala-Kodiak Sep 13-94	Site 30 Grizzly-Panda Sep 11-94
	Tipula	L	31	3	7
	Xenochironomus	L			
	Zalutschia	L	45		
EPHEMEROPTERA	*Baetis tricaudatus*	N			
	Ephemerella inermis	N			
HARPACTICOIDA	Canthocamptidae				
MOLLUSCA	*Lymnaea*				
	Pisidium				
	Valvata sincera				
NEMATODA	NEMATODA		350		596
OLIGOCHAETA	Enchytraeidae		59	3	42
	Lumbriculus			3	28
	Naididae	J	10	42	
	Nais			125	55
	Unidentified		28	28	166
OSTRACODA	*Candona*		17	3	45
	Cypria		59		208
PLECOPTERA	*Nemoura*	N	69		3
	Unidentified				
TARDIGRADA	TARDIGRADA				
TRICHOPTERA	*Agraylea*	L			
	Agrypnia	L			
	Apatania	L			
	Brachycentrus	L	7		
	Grensia	L	3		
	Oxyethira	L			

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 31 Vulture-Panda Sep 11-94	Site 33 Lac de Gras Sep 19-94	Site 36 Ursula (N) Sep 17-94
ARACHNIDA	*Acarina*	A			
	Hydracarina	A		66	3
	Oribatidae	A		3	
CLADOCERA	*Alona*				
	Alonella				
	Chydoridae	J	97	170	
	Chydorus		28	3	
	Macrothricidae				
	Ophyroxus				
COELENTERATA	*Hydra*			3	
DIPTERA	*Bezzia*	L			3
	Chelifera	L			
	Chironomidae	L	225	4212	267
	Corynoneura	L		10	28
	Cricotopus	L	62	1168	
	Cricotopus	P			
	Demicryptochironomus	L			
	Dicrotendipes	L			
	Eukiefferiella	L		49	
	Euryhapsis	L			
	Gymnometriocnemus	L			
	Heterotanytarsus	L		17	7
	Heterotrissocladius	L			
	Hexatoma	L	3		3
	Limnophora	L			
	Micropsectra	L			
	Microtendipes	L			
	Oreogoton	L			
	Orthocladiinae	L			
	Orthocladiinae	P			
	Orthocladius	L			7
	Pagastiella	L	35		
	Parachironomus	L		21	
	Paramerina	L		14	
	Paraphaenocladius	L			
	Phaenopsectra	L	31	3	
	Potthastia	L		7	3
	Procladius	L	10	7	24
	Psectrocladius	L	10	94	180
	Pseudokiefferiella	L			
	Pseudosmittia	L			
	Rheotanytarsus	L	21	97	42
	Rhyacophila	L			
	Simulidae	L		55	
	Stempellinella	L		42	3
	Stictochironomus	L			3
	Tanypodinae	L	73	492	139
	Tanytarsini	L			187
	Tanytarsus	L	274	90	2562

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 31 Vulture-Panda Sep 11-94	Site 33 Lac de Gras Sep 19-94	Site 36 Ursula (N) Sep 17-94
	Tipula	L		21	
	Xenochironomus	L			
	Zalutschia	L			
EPHEMEROPTERA	*Baetis tricaudatus*	N			
	Ephemerella inermis	N	3		
HARPACTICOIDA	Canthocamptidae				
MOLLUSCA	*Lymnaea*			3	
	Pisidium		7		
	Valvata sincera			17	
NEMATODA	NEMATODA		31	458	
OLIGOCHAETA	Enchytraeidae			14	
	Lumbriculus				
	Naididae	J	3	146	
	Nais				21
	Unidentified				
OSTRACODA	*Candona*		10	35	45
	Cypria		3	3	
PLECOPTERA	*Nemoura*	N		371	
	Unidentified				
TARDIGRADA	TARDIGRADA				
TRICHOPTERA	*Agraylea*	L			
	Agrypnia	L			
	Apatania	L			
	Brachycentrus	L	17	24	
	Grensia	L			
	Oxyethira	L	10	3	

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Appendix II - B4

Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 42 South Sep 18-94
ARACHNIDA	*Acarina*	A	
	Hydracarina	A	7
	Oribatidae	A	55
CLADOCERA	*Alona*		3
	Alonella		166
	Chydoridae	J	1106
	Chydorus		
	Macrothricidae		
	Ophyroxus		94
COELENTERATA	*Hydra*		
DIPTERA	*Bezzia*	L	
	Chelifera	L	
	Chironomidae	L	780
	Corynoneura	L	38
	Cricotopus	L	
	Cricotopus	P	
	Demicryptochironomus	L	
	Dicrotendipes	L	
	Eukiefferiella	L	121
	Euryhapsis	L	
	Gymnometriocnemus	L	
	Heterotanytarsus	L	
	Heterotrissocladius	L	3
	Hexatoma	L	
	Limnophora	L	
	Micropsectra	L	69
	Microtendipes	L	
	Oreogoton	L	3
	Orthocladiinae	L	139
	Orthocladiinae	P	
	Orthocladius	L	
	Pagastiella	L	
	Parachironomus	L	
	Paramerina	L	
	Paraphaenocladius	L	
	Phaenopsectra	L	1234
	Potthastia	L	
	Procladius	L	10
	Psectrocladius	L	59
	Pseudokiefferiella	L	
	Pseudosmittia	L	
	Rheotanytarsus	L	3
	Rhyacophila	L	
	Simulidae	L	
	Stempellinella	L	28
	Stictochironomus	L	
	Tanypodinae	L	1251
	Tanytarsini	L	738
	Tanytarsus	L	7231

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Stream Benthic Invertebrate Identification and Density (nos/m^2), September 1994

Group	Taxa	Stage	Site 42 South Sep 18-94
	Tipula	L	80
	Xenochironomus	L	
	Zalutschia	L	
EPHEMEROPTERA	*Baetis tricaudatus*	N	
	Ephemerella inermis	N	250
HARPACTICOIDA	Canthocamptidae		
MOLLUSCA	*Lymnaea*		
	Pisidium		
	Valvata sincera		
NEMATODA	NEMATODA		1809
OLIGOCHAETA	Enchytraeidae		
	Lumbriculus		3
	Naididae	J	
	Nais		184
	Unidentified		520
OSTRACODA	*Candona*		343
	Cypria		3
PLECOPTERA	*Nemoura*	N	38
	Unidentified		28
TARDIGRADA	TARDIGRADA		
TRICHOPTERA	*Agraylea*	L	
	Agrypnia	L	
	Apatania	L	
	Brachycentrus	L	
	Grensia	L	7
	Oxyethira	L	

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Appendix II - B4
Stream Benthos Statistical Analyses

Site Richness Data for Permanent Streams in Three 1994 Sampling Seasons

Site no.	Spring	Summer	Fall
S13	24	32	24
S16	36	22	33
S18	30	27	31
S24	29	32	34
S26	15	18	14
S30	28	19	21
S31	29	30	20
S33	22	29	32
S36	29	19	18
S42	27	27	32

ANOVA: Two-Factor Without Replication

Null Hypothesis: No significant differences in site richness among the three seasons or among permanent sites.

SUMMARY	Count	Sum	Average	Variance
S13	3	80	26 67	21 33
S16	3	91	30 33	54 33
S18	3	88	29 33	4 33
S24	3	95	31 67	6 33
S26	3	47	15 67	4 33
S30	3	68	22 67	22 33
S31	3	79	26 33	30 33
S33	3	83	27 67	26 33
S36	3	66	22 00	37 00
S42	3	86	28 67	8 33
Spring	10	269	26 90	31 21
Summer	10	255	25 50	30 50
Fall	10	259	25 90	53 66

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	618 70	9	68 74	2 95	**0.02**	2 46
Columns	10 40	2	5 20	0 22	**0.80**	3 55
Error	419.60	18	23 31			
Total	1048 70	29				

RESULT: Significant differences in richness among permanent sites for three sampling periods; no significant differences in richness among seasons.

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Appendix II - B4
Stream Benthos Statistical Analyses

Site Density Data for Permanent Streams in Three 1994 Sampling Seasons
Data Transformation: natural logarithm (abundance +1)

Site no.	Spring	Summer	Fall
S13	9 65	9.82	9 51
S16	9 06	8 33	11 10
S18	8 84	8 54	10 10
S24	9 19	9 43	7 58
S30	8 37	8 55	7 82
S31	9 47	8 10	6 86
S33	8 41	9 32	8 95
S36	8.65	11 10	8 17
S42	8 98	9 32	9 71

ANOVA: Two-Factor Without Replication
Null Hypothesis: No significant differences in site densities among the three seasons or among permanent sites.

SUMMARY	Count	Sum	Average	Variance
S13	3	28 99	9.66	0 02
S16	3	28 49	9 50	2 06
S18	3	27 49	9 16	0 69
S24	3	26 20	8 73	1 01
S30	3	24 74	8 25	0 14
S31	3	24 43	8 14	1 70
S33	3	26 68	8 89	0 21
S36	3	27 92	9 31	2 47
S42	3	28 00	9 33	0 13
Spring	10	86 83	8 68	0 93
Summer	10	89 65	8 97	1 18
Fall	10	86 10	8 61	2 32

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	23 08	9	2 56	2 76	**0.03**	2 46
Columns	0 70	2	0 35	0 38	**0.69**	3 55
Error	16 70	18	0 93			
Total	40 48	29				

RESULT: Significant differences in densities among permanent sites for three sampling periods; no significant differences in densities among seasons.

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Appendix II - B4
Stream Benthos Statistical Analyses

Invertebrate Densities for Permanent Streams in Three 1994 Sampling Seasons
Data Transformation: natural logarithm (abundance +1)

Taxa	Spring	Summer	Fall
Arachnida	6 02	4 69	6 34
Coelenterata	5 57	8.45	5 29
Crustacea	8 16	9 79	9 01
Insecta	10 42	11 36	11 52
Mollusca	5 00	4 62	5 31
Nematoda	10 42	9 41	9 95
Oligochaeta	7 98	9 77	8 45
Tardigrada	1 50	0 00	4 94
Turbellaria	7 86	3 67	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in density among taxa or among the three sampling seasons.

SUMMARY	Count	Sum	Average	Variance
Arachnida	3	17 04	5 68	0 77
Coelenterata	3	19 31	6 44	3 05
Crustacea	3	26 96	8 99	0 66
Insecta	3	33 30	11 10	0 35
Mollusca	3	14 93	4 98	0 12
Nematoda	3	29 78	9 93	0 25
Oligochaeta	3	26 20	8 73	0 86
Tardigrada	3	6 44	2 15	6 41
Turbellaria	3	11 53	3 84	15 47
Spring	9	62 92	6 99	7 96
Summer	9	61 76	6 86	14 17
Fall	9	60 80	6 76	11 77

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	215 58	8	26 95	7 75	**0.00**	2 59
Columns	0 25	2	0 13	0 04	**0.96**	3 63
Error	55 66	16	3 48			
Total	271 49	26				

***RESULT*: Significant differences in density among taxa; no significant differences in taxa density among seasons.**

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Appendix II - B4
Stream Benthos Statistical Analyses

Community Composition Data for Permanent Streams in Three 1994 Sampling Seasons
Data Transformation: arcsin (square root (relative abundance)).

Taxa	Spring	Summer	Fall
Arachnida	0 07	0 03	0 06
Coelenterata	0 06	0 18	0 04
Crustacea	0 22	0 37	0 25
Insecta	0 72	0 91	1 04
Mollusca	0 04	0 03	0 04
Nematoda	0 72	0 30	0 40
Oligochaeta	0 20	0 36	0 19
Tardigrada	0 01	0 00	0 03
Turbellaria	0 18	0 02	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in community composition among taxa or among the three seasons.

SUMMARY	Count	Sum	Average	Variance
Arachnida	3	0 17	0 06	0 00
Coelenterata	3	0 28	0 09	0 01
Crustacea	3	0 83	0 28	0 01
Insecta	3	2 67	0 89	0 03
Mollusca	3	0 11	0 04	0 00
Nematoda	3	1 43	0 48	0 05
Oligochaeta	3	0 75	0 25	0 01
Tardigrada	3	0 04	0 01	0 00
Turbellaria	3	0 20	0 07	0 01
Spring	9	2 22	0 25	0 08
Summer	9	2 20	0 24	0 09
Fall	9	2 05	0 23	0 11

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	1 97	8	0 25	18 51	**0 00**	2 59
Columns	0 00	2	0 00	0 07	**0.93**	3 63
Error	0 21	16	0 01			
Total	2 18	26				

RESULT: Significant differences in community composition among taxa; no significant differences in community composition among the three sampling periods.

Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Permanent Streams in Spring 1994
Data Transformation: natural logarithm (abundance +1)

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Tardigrada	0 00	0 00	0 00	0 00	0 00	0 00	1 50	0 00	0 00	0 00
Coelenterata	3 08	2 91	4 70	3 97	0 00	3 57	0 00	2 91	1 50	2 07
Nematoda	9 30	8 18	7 50	8 47	4 39	7 66	8 55	3 23	6 43	8 40
Turbellaria	3 08	5 89	6 83	7 01	1 50	4 55	0 00	4 35	1 50	2 07
Oligochaeta	5 12	6 43	2 07	3 75	3 90	5 68	6 74	0 00	5 95	6 26
Arachnida	4 30	4 81	3 90	4 20	0 00	2 91	2 43	3 08	3 97	0 00
Crustacea	4 59	4 94	6 68	6 51	3 23	6 08	6 22	2 70	4 47	6 60
Insecta	8 36	8 24	8 04	8 02	5 84	7 19	8 77	8 38	8 43	7 71
Mollusca	0.00	2 91	4.82	2.07	0.00	0 00	0.00	0.00	0.00	0.00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in density among taxa or sites.

SUMMARY	Count	Sum	Average	Variance
Tardigrada	10	1 50	0 15	0 22
Coelenterata	10	24 71	2 47	2 50
Nematoda	10	72 09	7 21	3 86
Turbellaria	10	36 77	3 68	5 90
Oligochaeta	10	45 89	4 59	4 74
Arachnida	10	29 61	2 96	2 94
Crustacea	10	52 02	5 20	2 09
Insecta	10	78 97	7 90	0 71
Mollusca	10	9 80	0 98	2 93
S13	9	37 83	4 20	10 26
S16	9	44 30	4 92	7 15
S18	9	44 54	4 95	7 06
S24	9	44 01	4 89	8 03
S26	9	18 86	2 10	5 22
S30	9	37 63	4 18	8 01
S31	9	34 21	3 80	14 03
S33	9	24 64	2 74	7 16
S36	9	32 24	3 58	9 06
S42	9	33.10	3 68	12.43

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	546 63	8	68 33	30 63	**0 00**	2 07
Columns	72 56	9	8 06	3 61	**0.00**	2 01
Error	160 60	72	2 23			
Total	779 79	89				

RESULT: Significant differences in density among taxa in spring; significant differences in density among sites in spring.

Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Permanent Streams in Summer 1994
Data Transformation: natural logarithm (abundance +1)

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Coelenterata	0 00	4 25	3 75	3 75	0 00	0 00	0 00	8 41	2 91	0 00
Nematoda	7 90	5 18	6 01	8 71	5 47	5 42	6 60	5 01	6 44	6 84
Turbellaria	0 00	0 00	3 57	0 00	0 00	0 00	0 00	5 85	0 00	0 00
Oligochaeta	8 95	5 20	6 69	7 38	5 34	6 75	6 63	7 90	7 19	7 22
Crustacea	7 22	7 88	7 55	7 18	4 30	7 20	6 17	7 46	8 09	8 23
Arachnida	2 07	0 00	1 50	0 00	2 07	0 00	2 43	2 43	0 00	4 25
Insecta	8 80	6 96	7 53	8 16	6 61	7 93	7 18	7 64	11 02	8 51
Mollusca	0.00	0.00	4.47	0.00	0 00	0.00	0 00	2.70	0.00	0.00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in density among taxa or sites.

SUMMARY	Count	Sum	Average	Variance
Coelenterata	10	23 07	2 31	8 02
Nematoda	10	63 58	6 36	1 47
Turbellaria	10	9 43	0 94	4 24
Oligochaeta	10	69 26	6 93	1 23
Crustacea	10	71 26	7 13	1 33
Arachnida	10	14 76	1 48	2 11
Insecta	10	80 33	8 03	1 56
Mollusca	10	7 17	0 72	2 46
S13	8	34 94	4 37	17 68
S16	8	29 48	3 68	10 56
S18	8	41 07	5 13	4 68
S24	8	35 18	4 40	15 40
S26	8	23 79	2 97	7 74
S30	8	27 29	3 41	13 78
S31	8	29 01	3 63	11 12
S33	8	47 41	5 93	5 54
S36	8	35 64	4 45	18 51
S42	8	35.06	4.38	14 80

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	690 74	7	98 68	42 02	**0 00**	2 16
Columns	53 77	9	5 97	2 54	**0.01**	2 03
Error	147 96	63	2 35			
Total	892 48	79				

RESULT: Significant differences in density among taxa in summer; significant differences among sites for density in summer.

Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Permanent Streams in Fall 1994
Data Transformation: natural logarithm (abundance +1)

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Coelenterata	0 00	5 26	0 00	1 50	0 00	0 00	0 00	1 50	0 00	0 00
Nematoda	8 43	7 64	9 31	5 86	0 00	6 39	3 47	6 13	0 00	7 50
Tardigrada	0 00	0 00	4 94	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Oligochaeta	7 24	6 86	6 75	4 59	5 31	5 68	1 50	5 08	3 08	6 56
Crustacea	7 44	6 88	7 88	5 26	1 50	6 28	4 94	5 36	3 83	7 45
Arachnids	0 00	5 76	4 72	1 50	0 00	0 00	0 00	4 25	1 50	4 15
Insects	8 68	11 03	9 16	7 19	5 81	6 98	6 66	8 82	8 15	9 40
Mollusca	0 00	3 83	4 86	0 00	0 00	0 00	2 07	3 08	0 00	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in density among taxa or sites.

SUMMARY	Count	Sum	Average	Variance
Coelenterata	10	8 25	0 83	2 81
Nematoda	10	54 73	5 47	10 84
Tardigrada	10	4 94	0 49	2 44
Oligochaeta	10	52 64	5 26	3 33
Crustacea	10	56 81	5 68	3 84
Arachnida	10	21 87	2 19	5 26
Insecta	10	81 88	8 19	2 40
Mollusca	10	13 84	1 38	3 66
S13	8	31 79	3 97	18 26
S16	8	47 25	5 91	10 10
S18	8	47 62	5 95	9 30
S24	8	25 88	3 24	7 91
S26	8	12 62	1 58	6 33
S30	8	25 33	3 17	11 58
S31	8	18 64	2 33	6 27
S33	8	34 22	4 28	7 62
S36	8	16 56	2 07	8 36
S42	8	35 06	4 38	15 25

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	558 51	7	79 79	33 87	**0.00**	2 16
Columns	162 87	9	18 10	7 68	**0 00**	2 03
Error	148 42	63	2 36			
Total	869 79	79				

RESULT: Significant differences in density among taxa in fall; significant differences in density among sites in fall.

Appendix II - B4
Stream Benthos Statistical Analyses

Community Composition Data for Permanent Streams in Spring 1994
Data Transformation: arcsine (square root (relative abundance))

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Tardigrada	0 00	0 00	0 00	0 00	0 00	0 00	0 02	0 00	0 00	0 00
Coelenterata	0 04	0 04	0 13	0 07	0 00	0 09	0 00	0 06	0 02	0 03
Nematoda	0 99	0 70	0 54	0 77	0 41	0 78	0 68	0 07	0 33	0 85
Turbellaria	0 04	0 21	0 37	0 34	0 08	0 15	0 00	0 13	0 02	0 03
Oligochaeta	0 10	0 27	0 03	0 07	0 32	0 26	0 26	0 00	0 26	0 26
Arachnida	0 07	0 12	0 08	0 08	0 00	0 06	0 03	0 07	0 10	0 00
Crustacea	0 08	0 13	0 35	0 27	0 22	0 32	0 20	0 06	0 12	0 31
Insecta	0 55	0 72	0 73	0 59	0 98	0 59	0 78	1 39	1 11	0 56
Mollusca	0 00	0 04	0 13	0 03	0 00	0 00	0 00	0 00	0 00	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in community composition in spring among taxa or among sites.

SUMMARY	Count	Sum	Average	Variance
Tardigrada	10	0 02	0 00	0 00
Coelenterata	10	0 49	0 05	0 00
Nematoda	10	6 12	0 61	0 08
Turbellaria	10	1 38	0 14	0 02
Oligochaeta	10	1 83	0 18	0 01
Arachnida	10	0 61	0 06	0 00
Crustacea	10	2 05	0 21	0 01
Insecta	10	8 00	0 80	0 08
Mollusca	10	0 21	0 02	0 00
S13	9	1 87	0 21	0 12
S16	9	2 23	0 25	0 08
S18	9	2 37	0 26	0 06
S24	9	2 22	0 25	0 08
S26	9	2 01	0 22	0 10
S30	9	2 25	0 25	0 07
S31	9	1 97	0 22	0 09
S33	9	1 78	0 20	0 20
S36	9	1 97	0 22	0 12
S42	9	2 03	0 23	0 09

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	6 40	8	0 80	32 74	**0 00**	2 07
Columns	0 04	9	0 00	0 16	**1 00**	2 01
Error	1 76	72	0 02			
Total	8 19	89				

RESULTS: Significant differences in community composition in spring among taxa; no significant differences in community composition in spring among sites.

Appendix II - B4
Stream Benthos Statistical Analyses

Community Composition Data for Permanent Streams in Summer 1994
Data Transformation: arcsine (square root (relative abundance))

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Coelenterata	0 00	0 13	0 09	0 06	0 00	0 00	0 00	0 67	0 02	0 00
Nematoda	0 39	0 21	0 29	0 77	0 45	0 21	0 49	0 11	0 10	0 29
Turbellaria	0 00	0 00	0 08	0 00	0 00	0 00	0 00	0 17	0 00	0 00
Oligochaeta	0 71	0 21	0 41	0 37	0 42	0 42	0 50	0 50	0 14	0 36
Crustacea	0 28	0 93	0 65	0 33	0 24	0 53	0 39	0 40	0 22	0 62
Arachnida	0 02	0 00	0 03	0 00	0 07	0 00	0 06	0 03	0 00	0 08
Insecta	0 64	0 53	0 65	0 56	0 87	0 82	0 68	0 44	1 29	0 73
Mollusca	0 00	0 00	0 13	0 00	0 00	0 00	0 00	0 03	0 00	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in community composition in summer among taxa or among sites.

SUMMARY	Count	Sum	Average	Variance
Coelenterata	10	0 97	0 10	0 04
Nematoda	10	3 31	0 33	0 04
Turbellaria	10	0 26	0 03	0 00
Oligochaeta	10	4 03	0 40	0 02
Crustacea	10	4 59	0 46	0 05
Arachnida	10	0 28	0 03	0 00
Insecta	10	7 21	0 72	0 06
Mollusca	10	0 17	0 02	0 00
S13	8	2 04	0 25	0 09
S16	8	2 01	0 25	0 11
S18	8	2 32	0 29	0 06
S24	8	2 08	0 26	0 09
S26	8	2 05	0 26	0 10
S30	8	1 98	0 25	0 10
S31	8	2 12	0 27	0 08
S33	8	2 37	0 30	0 06
S36	8	1 77	0 22	0 19
S42	8	2 09	0 26	0 09

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	4 72	7	0 67	21 62	**0 00**	2 16
Columns	0 03	9	0 00	0 12	**1 00**	2 03
Error	1 96	63	0 03			
Total	6 72	79				

RESULTS: Significant differences in community composition in summer among taxa; no significant differences in community composition in summer among sites.

Appendix II - B4
Stream Benthos Statistical Analyses

Community Composition Data for Permanent Streams in Fall 1994
Data Transformation: arcsine (square root (relative abundance))

Taxa	S13	S16	S18	S24	S26	S30	S31	S33	S36	S42
Coelenterata	0 00	0 05	0 00	0 04	0 00	0 00	0 00	0 02	0 00	0 00
Nematoda	0 62	0 18	0 74	0 44	0 00	0 51	0 18	0 25	0 00	0 34
Tardigrada	0 00	0 00	0 08	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Oligochaeta	0 33	0 12	0 19	0 22	0 66	0 35	0 06	0 14	0 08	0 21
Crustacea	0 36	0 12	0 34	0 32	0 08	0 48	0 39	0 17	0 11	0 33
Arachnida	0 00	0 07	0 07	0 04	0 00	0 00	0 00	0 09	0 03	0 06
Insecta	0 72	1 31	0 67	0 96	0 91	0 72	1 12	1 22	1 43	1 03
Mollusca	0 00	0 03	0 07	0 00	0 00	0 00	0 09	0 05	0 00	0 00

Anova: Two-Factor Without Replication
Null Hypothesis: No significant differences in community composition in fall among taxa or among sites.

SUMMARY	Count	Sum	Average	Variance
Coelenterata	10	0 12	0 01	0 00
Nematoda	10	3 25	0 32	0 06
Tardigrada	10	0 08	0 01	0 00
Oligochaeta	10	2 36	0 24	0 03
Crustacea	10	2 70	0 27	0 02
Arachnida	10	0 37	0 04	0 00
Insecta	10	10 09	1 01	0 07
Mollusca	10	0 24	0 02	0 00
S13	8	2 03	0 25	0 09
S16	8	1 87	0 23	0 19
S18	8	2 15	0 27	0 08
S24	8	2 02	0 25	0 11
S26	8	1 64	0 21	0 13
S30	8	2 06	0 26	0 09
S31	8	1 84	0 23	0 15
S33	8	1 94	0 24	0 16
S36	8	1 65	0 21	0 25
S42	8	1 97	0 25	0 12

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	7 93	7	1 13	43 82	**0 00**	2 16
Columns	0 03	9	0 00	0 14	**1 00**	2 03
Error	1 63	63	0 03			
Total	9 59	79				

RESULT: Significant differences in community composition in fall among taxa; no significant differences in community composition in fall among sites.

Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Hard and Soft Substrate Streams in the 1994 Sampling Season
Data Transformation: natural logarithm (abundance +1)

Null Hypothesis: no significant differences in density between hard and soft substrates.

Hard	Soft
9 65	6 22
9 06	9 47
8 84	8 65
9 19	7 14
8 37	8 10
8 41	11 10
8 98	6 29
9 82	6 86
8 33	8 17
8 54	
9 43	
8 55	
9 32	
9 32	
9 51	
11 10	
10 10	
7 58	
7 82	
8 95	
9 71	

t-Test: Two-Sample Assuming Equal Variances

	Hard	Soft
Mean	9 08	8 00
Variance	0 64	2 55
Observations	21 00	9 00
Pooled Variance	1 19	
Hypothesized Mean Difference	0 00	
df	28 00	
t Stat	2 48	
P(T<=t) one-tail	0 01	
t Critical one-tail	1 70	
P(T<=t) two-tail	0 02	
t Critical two-tail	2 05	

RESULT: No significant differences in density between hard and soft surfaces.

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Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Hard and Soft Substrate Streams in the 1994 Sampling Season

Null Hypothesis: No significant differences in richness between hard and soft substrates.

Hard	Soft
24	15
36	29
30	29
29	18
28	30
27	19
22	14
32	20
22	18
27	
32	
19	
27	
29	
24	
33	
31	
34	
21	
32	
32	

t-Test: Two-Sample Assuming Equal Variances

	Hard	Soft
Mean	28 14	21 33
Variance	22 03	39 50
Observations	21 00	9 00
Pooled Variance	27 02	
Hypothesized Mean Difference	0 00	
df	28 00	
t Stat	3 29	
P(T<=t) one-tail	0 00	
t Critical one-tail	1 70	
P(T<=t) two-tail	0 003	
t Critical two-tail	2 05	

RESULT: Significant differences in richness between hard and soft surfaces.

Appendix II - B4
Stream Benthos Statistical Analyses

Site Density Data for the Two Substrate Types in Three 1994 Sampling Seasons
Data Transformation: natural logarithm (abundance +1)

Null Hypothesis: No significant difference in density between the two substrate types in spring, summer, or fall

SPRING

t-Test: Two-Sample Assuming Equal Variances

Hard	Soft		Variable 1	Variable 2
9 65	6 22	Mean	8 93	8 11
9 06	9 47	Variance	0 20	2 87
8 84	8 65	Observations	7 00	3 00
9 19		Pooled Variance	0 87	
8 37		Hypothesized Mean Differenc	0 00	
8 41		df	8 00	
8 98		t Stat	1 27	
		P(T<=t) one-tail	0 12	
		t Critical one-tail	1 86	
		P(T<=t) two tail	0 24	
		t Critical two tail	2.31	

SUMMER

t-Test: Two-Sample Assuming Equal Variances

Hard	Soft		Variable 1	Variable 2
9 82	7 14	Mean	9 04	8 78
8 33	8 10	Variance	0 32	4 26
8 54	11 10	Observations	7 00	3 00
9 43		Pooled Variance	1 30	
8 55		Hypothesized Mean Differenc	0 00	
9 32		df	8 00	
9 32		t Stat	0 34	
		P(T<=t) one-tail	0 37	
		t Critical one-tail	1 86	
		P(T<=t) two tail	0 75	
		t Critical two tail	2.31	

FALL

t-Test: Two-Sample Assuming Equal Variances

Hard	Soft		Variable 1	Variable 2
9 51	6 29	Mean	9 25	7 11
11 10	6 86	Variance	1 55	0 93
10 10	8 17	Observations	7 00	3 00
7 58		Pooled Variance	1 40	
7 82		Hypothesized Mean Differenc	0 00	
8 95		df	8 00	
9 71		t Stat	2 63	
		P(T<=t) one tail	0 02	
		t Critical one tail	1 86	
		P(T<=t) two tail	0 03	
		t Critical two tail	2.31	

RESULTS: No significant differences in density between substrate types in the spring and summer; significant differences in density between substrate types in the fall

Appendix II - B4
Stream Benthos Statistical Analyses

Site Richness Data for the Two Substrate Types in Three 1994 Sampling Seasons

Null Hypothesis: No significant differences in site richness among sites in each season.
T-test: Two-Sample Assuming Unequal Variances

SPRING

Hard	Soft		Variable 1	Variable 2
24	15	Mean	28 00	24 33
36	29	Variance	20 33	65 33
30	29	Observations	7 00	3 00
29		Hypothesized Mean Difference	0 00	
28		df	3 00	
27		t Stat	0 74	
22		P(T<=t) one-tail	0 26	
		t Critical one tail	2 35	
		P(T<=t) two-tail	0 51	
		t Critical two tail	3.18	

SUMMER

Hard	Soft		Variable 1	Variable 2
32	18	Mean	26 86	22 33
22	30	Variance	23 81	44 33
27	19	Observations	7 00	3 00
32		Hypothesized Mean Difference	0 00	
19		df	3 00	
27		t Stat	1 06	
29		P(T<=t) one-tail	0 18	
		t Critical one tail	2 35	
		P(T<=t) two-tail	0 37	
		t Critical two tail	3.18	

FALL

Hard	Soft		Variable 1	Variable 2
24	14	Mean	29 57	17 33
33	20	Variance	24 95	9 33
31	18	Observations	7 00	3 00
34		Hypothesized Mean Difference	0 00	
21		df	6 00	
32		t Stat	4 74	
32		P(T<=t) one tail	0 00	
		t Critical one-tail	1 94	
		P(T<=t) two tail	0 00	
		t Critical two-tail	2.45	

Anova: Two-Factor Without Replication

SUMMARY	Count	Sum	Average	Variance
Spring	2	52 33	26 17	6 72
Summer	2	49 19	24 60	10 23
Fall	2	46 90	23 45	74 89
Hard	3	84 43	28 14	1 86
Soft	3	64.00	21.33	13.00

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	7 43	2	3 71	0 33	**0 75**	19 00
Columns	69 55	1	69 55	6 24	**0 13**	18 51
Error	22 29	2	11 14			
Total	99.27	5				

RESULTS: No significant difference in richness between hard and soft substrates in the spring and summer; significant differences in richness between hard and soft substrates in the fall

Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Three Seasons in 1994
Data transformation: Arcsin(square root(relative abundance))

Benthic Group	Spring	Summer	Fall
ARACHNIDA	0 07	0 02	0 05
CLADOCERA	0 01	0 24	0 14
COELENTERATA	0 05	0 22	0 03
COLEOPTERA	0 01	0 01	0 00
COLLEMBOLA	0 01	0 00	0 00
DIPTERA	0 65	0 93	1 08
EPHEMEROPTERA	0 22	0 02	0 04
HARPACTICOIDA	0 15	0 10	0 15
HEMIPTERA	0 01	0 00	0 00
MOLLUSCA	0 36	0 02	0 03
NEMATODA	0 62	0 27	0 35
OLIGOCHAETA	0 20	0 37	0 17
OSTRACODA	0 14	0 18	0 16
PLECOPTERA	0 12	0 04	0 08
TARDIGRADA	0 01	0 00	0 03
TRICHOPTERA	0 03	0 03	0 04
TURBELLARIA	0.16	0.01	0.00

ANOVA: Two-Factor Without Replication
Null Hypothesis: No significant differences in seasonal community composition, or dominance among taxa for the three sampling periods

SUMMARY	Count	Sum	Average	Variance
ARACHNIDA	3	0 14	0 05	0 00
CLADOCERA	3	0 39	0 13	0 01
COELENTERATA	3	0 30	0 10	0 01
COLEOPTERA	3	0 02	0 01	0 00
COLLEMBOLA	3	0 01	0 00	0 00
DIPTERA	3	2 65	0 88	0 05
EPHEMEROPTERA	3	0 28	0 09	0 01
HARPACTICOIDA	3	0 39	0 13	0 00
HEMIPTERA	3	0 01	0 00	0 00
MOLLUSCA	3	0 42	0 14	0 04
NEMATODA	3	1 24	0 41	0 03
OLIGOCHAETA	3	0 74	0 25	0 01
OSTRACODA	3	0 48	0 16	0 00
PLECOPTERA	3	0 24	0 08	0 00
TARDIGRADA	3	0 04	0 01	0 00
TRICHOPTERA	3	0 10	0 03	0 00
TURBELLARIA	3	0 17	0 06	0 01
Spring	17	2 81	0 17	0 04
Summer	17	2 47	0 15	0 05
Fall	17	2.35	0.14	0.07

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	2 24	16	0 14	12 73	**0 00**	1 97
Columns	0 01	2	0 00	0 30	**0 74**	3 29
Error	0 35	32	0 01			
Total	2 59	50				

***RESULT*. Significant differences in taxa dominance, no significant differences in community composition among seasons**

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Appendix II - B4
Stream Benthos Statistical Analyses

Site Richness Data for Three 1994 Seasons

Site no	Spring	Summer	Fall
S06	20		
S11	23		14
S13	24	32	24
S16	36	22	33
S18	30	27	31
S21	29		14
S22		26	22
S24	29	32	34
S26	15	18	14
S28	15	29	
S30	28	19	21
S31	29	30	20
S33	22	29	32
S36	29	19	18
S42	27	27	32

Anova: Two-Factor Without Replication

Null Hypothesis: no significant differences in site richness among the three seasons or among all sites.

SUMMARY	Count	Sum	Average	Variance
S06	1	20	20 00	
S11	2	37	18 50	40 50
S13	3	80	26 67	21 33
S16	3	91	30 33	54 33
S18	3	88	29 33	4 33
S21	2	43	21 50	112 50
S22	2	48	24 00	8 00
S24	3	95	31 67	6 33
S26	3	47	15 67	4 33
S28	2	44	22 00	98 00
S30	3	68	22 67	22 33
S31	3	79	26 33	30 33
S33	3	83	27 67	26 33
S36	3	66	22 00	37 00
S42	3	86	28 67	8 33
Spring	14	356	25 43	35 34
Summer	12	310	25 83	25 97
Fall	13	309	23 77	60 19

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	2549 33	14	182 10	2 43	**0 02**	2 06
Columns	96 13	2	48 07	0 64	**0.53**	3 34
Error	2102 53	28	75 09			
Total	4748 00	44				

RESULT: Significant differences in richness among permanent sites for three sampling periods; no significant differences in richness among seasons.

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Appendix II - B4
Stream Benthos Statistical Analyses

Site Richness Data for Streams in the Koala Watershed and Streams in Surrounding Watersheds

Null Hypothesis: No significant differences in richness between streams in the Koala watershed and streams in surrounding watersheds.

Koala	Other
20	27
24	29
36	27
30	19
29	32
15	18
28	
22	
23	
29	
15	
29	
32	
22	
27	
32	
29	
19	
29	
26	
18	
30	
24	
33	
31	
34	
21	
32	
14	
14	
22	
14	
20	

t-Test: Two-Sample Assuming Equal Variances

	Koala	Other
Mean	24 94	25 33
Variance	41 87	31 47
Observations	33 00	6 00
Pooled Variance	40 47	
Hypothesized Mean Difference	0 00	
df	37 00	
t Stat	-0 14	
P(T<=t) one-tail	0 44	
t Critical one-tail	1 69	
P(T<=t) two-tail	0 89	
t Critical two-tail	2 03	

RESULTS: No significant differences in richness between streams in the Koala watershed and streams in surrounding watersheds.

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Appendix II - B4
Stream Benthos Statistical Analyses

Density Data for Streams in the Koala Watershed and Streams in Surrounding Watersheds.

Null Hypothesis: No significant differences in density between streams in the Koala Watershed and streams in surrounding watersheds.

Koala	Other
6 59	8 98
9 65	8 65
9 06	9 32
8 84	11 10
9 19	9 71
5 33	8 17
8 37	
8 41	
7 23	
10 17	
6 22	
9 47	
9 82	
8 33	
8 54	
9 43	
9 80	
8 55	
9 32	
10 36	
7 14	
8 10	
9 51	
11 10	
10 10	
7 58	
7 82	
8 95	
9 67	
7 79	
10 68	
6 29	
6 86	

t-Test: Two-Sample Assuming Equal Variances

	Koala	Other
Mean	8 61	9 32
Variance	1 96	1 04
Observations	33 00	6 00
Pooled Variance	1 83	
Hypothesized Mean Difference	0 00	
df	37 00	
t Stat	-1 17	
P(T<=t) one-tail	0 12	
t Critical one-tail	1 69	
P(T<=t) two-tail	0 25	
t Critical two-tail	2 03	

RESULT: No significant differences in density between streams in the Koala Watershed and streams in surrounding watersheds.

APPENDIX II - B4

Community structure analyses were carried out using the program "COMM" developed by D. Piepenburg and U Piatkowski of the University of Kiel, Germany

Site Parameters generated by COMM are

1) SUM total number of individuals in that sample,

2) S total number of species in that sample,

3) S(90%) number of species accounting for 90% of the total sum of individuals,

4) Maximum Dominance (%) percentage of total sum accounted for by the single-most

   abundant species

The indices generated by COMM are

1) Shannon-Weaver (1963)	$H' = -\sum p_i \ln (p_i)$	$0<H\leq H_{max}$
2) Pielou (1966)	$E_p = H'/H'_{max}$	$0<E_p\leq 1$
3) Heip (1974)	$E_H = (e^{H'}-1)/(S-1)$	$0<E_H\leq 1$
4) Simpson (1949)	$E_S = 1-\sum p_i^2$	$0\leq E_S<1$
5) Margalef (1951)	$D = (S-1)/\ln N$	$0<D<S-1/\ln S$

Taxa Parameters generated by COMM are

1) SUM total number of individals of that species

2) Dominance (%) percentage of total number of individuals in the whole population

   accounted for by that species,

3) Presence(%) percentage of stations within that subset at which that species is present,

4) Median

5) Minimum,

6) Maximum,

7) Total Presence (%) percentage of stations, within the entire sample, at which that

species is present,

8) Biological Index (McCloskey 1970) $BI(i) = 100(\sum(X(R(i,j))/BI_{max})$

Where $R(i,j)$ = Rank of species i within j

$X = 10, \quad ,1$

$BI_{max} = 10j$

Appendix II - B4
Invertebrate Taxa Parameters Generated by COMM for Fourteen Streams in the Koala Region, Spring 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ARACHNIDA	*Acarina*	83 2	0 1	35 7	0	20 8	3 5	34 7
	Hydracarina	173 3	0 2	64 3	3	13 9	3 5	62 4
	Oribatidae	201 1	0 2	50	0	20 8	3 5	62 4
CLADOCERA	Notostraca	3 5	0	7 1	0	3 5	3 5	3 5
COELENTERATA	*Hydra*	261 7	0 2	57 1	0	19 1	3 5	109 2
COLEOPTERA	*Brachyvatus*	3 5	0	7 1	0	3 5	3 5	3 5
COLLEMBOLA	*Sminthurus*	17 3	0	21 4	0	6 9	3 5	6 9
DIPTERA	*Aedes hexodontus*	6 9	0	7 1	0	6 9	6 9	6 9
	Bezzia	34 7	0	14 3	0	17 3	3 5	31 2
	Chelifera	34 7	0	21 4	0	3 5	3 5	27 7
	Chironomidae	13867 1	13 2	100	80	563 3	24 3	4090 3
	Chironomini	3 5	0	7 1	0	3 5	3 5	3 5
	Clinocera	38 1	0	35 7	0	6 9	3 5	13 9
	Conchapelopia	45 1	0	7 1	0	45 1	45 1	45 1
	Corynoneura	4715 9	4 5	85 7	44	332 8	10 4	1039 9
	Corynoneura	17 3	0	7 1	0	17 3	17 3	17 3
	Cricotopus	1800 8	1 7	92 9	23	76 3	3 5	488 8
	Cricotopus	34 7	0	21 4	5	13 9	6 9	13 9
	Culicoides	48 5	0	14 3	0	24 3	3 5	45 1
	Demicryptochironomus	3 5	0	7 1	0	3 5	3 5	3 5
	Diamesinae	3 5	0	7 1	0	3 5	3 5	3 5
	Dicrotendipes	3 5	0	7 1	0	3 5	3 5	3 5
	Eukiefferiella	3173 4	3	78 6	17	62 4	13 9	2263 5
	Euryhapsis	83 2	0 1	14 3	1	41 6	31 2	52
	Lasiodiamesa	6 9	0	7 1	0	6 9	6 9	6 9
	Macropelopiini	3 5	0	7 1	0	3 5	3 5	3 5
	Micropsectra	294 6	0 3	7 1	4	294 6	294 6	294 6
	Micropsectra	20 8	0	7 1	0	20 8	20 8	20 8
	Orthocladiinae	901 3	0 9	28 6	11	263 4	10 4	364
	Paracladopelma	67 6	0 1	14 3	0	33 8	3 5	64 1
	Paramerina	58 9	0 1	7 1	0	58 9	58 9	58 9
	Pentaneurini	651 7	0 6	78 6	6	20 8	3 5	190 6
	Phaenopsectra	79 7	0 1	35 7	0	10 4	3 5	45 1
	Procladius	173 3	0 2	42 9	3	19 1	3 5	90 1
	Prosimulium	38 1	0	21 4	0	13 9	3 5	20 8
	Psectrocladius	606 6	0 6	64 3	14	45 1	10 4	173 3
	Pseudokiefferiella	166 4	0 2	7 1	0	166 4	166 4	166 4
	Rheotanytarsus	663 8	0 6	85 7	19	50 3	10 4	110 9
	Simulidae	1816 4	1 7	71 4	16	13 9	3 5	1008 7
	Simulium	2443 8	2 3	28 6	10	57 2	3 5	2325 9
	Stempellinella	211 4	0 2	21 4	0	45 1	13 9	152 5
	Tanypodinae	688 1	0 7	71 4	4	46 8	3 5	299 8
	Tanytarsini	1670 8	1 6	92 9	24	65 9	3 5	343 2
	Tanytarsus	3066	2 9	85 7	23	102 3	3 5	1455 9
	Thienemanniella	301 6	0 3	21 4	1	55 5	3 5	242 6
	Tipula	138 7	0 1	64 3	1	6 9	3 5	93 6
	Zalutschia	3 5	0	7 1	0	3 5	3 5	3 5
EPHEMEROPTERA	Unidentified	4811 3	4 6	64 3	19	34 7	3 5	3750 6
HARPACTICOIDA	Canthocamptidae	2282 6	2 2	78 6	21	142 1	3 5	729 7
HEMIPTERA	Aphididae	6 9	0	7 1	0	6 9	6 9	6 9
	Coccoidea	3 5	0	7 1	0	3 5	3 5	3 5
MOLLUSCA	*Valvata sincera*	13160	12 5	28 6	7	70 2	6 9	13012 6
NEMATODA	Unidentified	35670 3	33 9	100	81	1874 4	6 9	10898 2
OLIGOCHAETA	Lumbriculidae	284 3	0 3	64 3	5	10 4	3 5	166 4
	Naididae	117 9	0 1	7 1	4	117 9	117 9	117 9
	Unidentified	1369 2	1 3	64 3	14	121 3	6 9	554 6
	Pristina	2429 9	2 3	71 4	27	79 7	6 9	779 9

Appendix II - B4
Invertebrate Taxa Parameters Generated by COMM for Fourteen Streams in the Koala Region, Spring 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
OSTRACODA	*Candona*	1962	1 9	92 9	21	86 7	6 9	478 4
PLECOPTERA	*Nemoura*	662 1	0 6	85 7	16	13 9	3 5	263 4
PLECOPTERA	Unidentified	831 9	0 8	7 1	5	831 9	831 9	831 9
TARDIGRADA	Unidentified	10 4	0	14 3	0	5 2	3 5	6 9
TRICHOPTERA	*Agraylea*	13 9	0	14 3	0	6 9	3 5	10 4
	Brachycentrus	62 4	0 1	42 9	0	10 4	3 5	20 8
	Grensia	3 5	0	7 1	0	3 5	3 5	3 5
	Haliplus	3 5	0	7 1	0	3 5	3 5	3 5
	Leptoceridae	3 5	0	7 1	0	3 5	3 5	3 5
	Onocosmoecus	6 9	0	7 1	0	6 9	6 9	6 9
	Oxyethira	20 8	0	7 1	0	20 8	20 8	20 8
	Rhyacophila	6 9	0	14 3	0	3 5	3 5	3 5
TURBELLARIA	Unidentified	2624	2 5	85 7	23	19 1	3 5	1105 8

1 Sum = total number of individuals of that species
2 Dom(%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index indicates the dominance of a taxa within a community

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Invertebrate Taxa Parameters Generated by COMM for Twelve Streams in the Koala Region, Summer 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ARACHNIDA	*Hydracarina*	107 5	0 1	50 0	0	8 7	3 5	69 3
CLADOCERA	*Alonella*	197 6	0 1	25 0	2	45 1	3 5	149 1
	Chydoridae	9941 4	5 3	91 7	58	468 0	34 7	3119 7
	Eurycercus	225 3	0 1	50 0	2	10 4	3 5	121 3
	Ophyroxus	1615 3	0 9	50 0	13	183 7	6 9	831 9
COELENTERATA	*Hydra*	8783 7	4 7	58 3	18	69 3	17 3	4488 9
COLEOPTERA	*Haliplus*	6 9	0 0	8 3	0	6 9	6 9	6 9
	Hydroporus	7 0	0 0	8 3	0	3 5	3 5	3 5
DIPTERA	*Bezzia*	13 9	0 0	16 7	0	6 9	3 5	10 4
	Chironomidae	105047 3	55 9	100 0	86	1760 9	13 9	60244 9
	Chironomini	3 5	0 0	8 3	0	3 5	3 5	3 5
	Chironomus	173 3	0 1	8 3	1	173 3	173 3	173 3
	Clinocera	3 5	0 0	8 3	0	3 5	3 5	3 5
	Corynoneura	242 6	0 1	50 0	0	36 4	3 5	72 8
	Cricotopus	2901 3	1 5	41 7	8	107 5	27 7	2322 4
	Demicryptochironomus	0 0	0 0	0 0	0	0 0	0 0	0 0
	Dicranota	10 4	0 0	8 3	0	10 4	10 4	10 4
	Dicrotendipes	513 0	0 3	25 0	3	3 5	3 5	506 1
	Eukiefferiella	62 4	0 0	16 7	0	31 2	17 3	45 1
	Euryhapsis	69 3	0 0	8 3	0	69 3	69 3	69 3
	Heterotanytarsus	10 4	0 0	16 7	0	5 2	3 5	6 9
	Hexatoma	3 5	0 0	8 3	0	3 5	3 5	3 5
	Limnophora	10 4	0 0	25 0	0	3 5	3 5	3 5
	Lymnaea	3 5	0 0	8 3	0	3 5	3 5	3 5
	Micropsectra	280 8	0 1	41 7	1	17 3	6 9	145 6
	Oreogoton	3 5	0 0	8 3	0	3 5	3 5	3 5
	Orthocladiinae	1261 8	0 6	58 3	6	65 9	3 5	901 3
	Paracladopelma	3 5	0 0	8 3	0	3 5	3 5	3 5
	Paramerina	3 5	0 0	8 3	0	3 5	3 5	3 5
	Phaenopsectra	416 0	0 2	66 7	6	32 9	6 9	117 9
	Potthastia	52 0	0 0	33 3	0	6 9	3 5	34 7
	Procladius	1351 9	0 7	50 0	21	147 3	6 9	641 3
	Psectrocladius	3691 2	1 9	100 0	30	147 3	17 3	1164 7
	Pseudokiefferiella	34 7	0 0	8 3	0	34 7	34 7	34 7
	Rheotanytarsus	648 2	0 3	91 7	2	58 9	3 5	138 6
	Simulidae	17 3	0 0	8 3	0	17 3	17 3	17 3
	Stempellinella	221 9	0 1	8 3	2	221 9	221 9	221 9
	Tanypodinae	1975 8	1 1	100 0	20	64 1	3 5	814 6
	Tanytarsini	575 4	0 3	41 7	7	97 1	3 5	346 6
	Tanytarsus	232 2	0 1	50 0	0	38 1	6 9	86 7
	Thienemenniella	72 8	0 0	8 3	0	72 8	72 8	72 8
	Tipula	336 2	0 2	83 3	2	26 0	3 5	121 3
	Zalutschia	52 0	0 0	8 3	0	52 0	52 0	52 0
EPHEMEROPTERA	*Baetis tricaudatus*	62 4	0 0	41 7	0	3 5	3 5	45 1
	Ephemerella inermis	24 3	0 0	16 7	0	12 1	6 9	17 3
	Paraleptophlebia	10 4	0 0	8 3	0	10 4	10 4	10 4
HARPACTICOIDA	Canthocamptidae	1767 8	0 9	75 0	21	138 6	34 7	416 0
MOLLUSCA	*Valvata sincera*	97 1	0 1	16 7	1	48 5	10 4	86 7
NEMATODA	Unidentified	13452 8	7 2	100 0	59	514 8	149 1	6066 1
OLIGOCHAETA	Enchytraeidae	520 0	0 3	33 3	5	10 4	3 5	495 7
	Limnedrilus	284 2	0 2	66 7	4	22 5	3 5	107 5
	Naididae	3033 1	1 6	100 0	23	145 6	3 5	1074 6
	Nais	273 8	0 1	66 7	3	27 7	6 9	110 9
	Unidentified	20524 2	10 9	100 0	78	1166 4	69 3	6967 3
	Tubificidae	24 3	0 0	8 3	0	24 3	24 3	24 3
OSTRACODA	*Candona*	4069 5	2 2	91 7	47	273 8	34 7	797 3
	Cypria	2208 1	1 2	66 7	20	204 5	3 5	693 3
PLECOPTERA	*Nemoura*	325.8	0.2	58.3	0	45.1	3.5	107.5

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Invertebrate Taxa Parameters Generated by COMM for Twelve Streams in the Koala Region, Summer 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
TRICHOPTERA	*Agraylea*	131 7	0 1	41 7	0	13 9	6 9	69 3
	Brachycentrus	48 5	0 0	33 3	0	5 2	3 5	34 7
	Grensia	6 9	0 0	16 7	0	3 5	3 5	3 5
	Limnephilidae	3 5	0 0	8 3	0	3 5	3 5	3 5
	Oxyethira	3 5	0 0	8 3	0	3 5	3 5	3 5
TURBELLARIA	Unidentified	38 1	0 0	16 7	0	19 1	3 5	34 7

1 Sum = total number of individuals of that species
2 Dom(%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index indicates the dominance of a taxa within a community

Appendix II - B4

Invertebrate Taxa Parameters Generated by COMM for Thirteen Streams in the Koala Region, Summer 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ARACHNIDA	*Acarina*	69 3	0 0	7 7	0	69 3	69 3	69 3
	Hydracarina	468 0	0 2	53 8	0	31 2	3 5	315 4
	Oribatidae	58 9	0 0	15 4	0	29 5	3 5	55 5
CLADOCERA	*Alona*	3 5	0 0	7 7	0	3 5	3 5	3 5
	Alonella	166 4	0 1	7 7	0	166 4	166 4	166 4
	Chydoridae	3431 7	1 7	69 2	35	187 2	34 7	1105 8
	Chydorus	152 5	0 1	30 8	4	27 7	3 5	93 6
	Macrothricidae	13 9	0 0	7 7	0	13 9	13 9	13 9
	Ophyroxus	201 0	0 1	23 1	0	93 6	3 5	104 0
COELENTERATA	*Hydra*	197 6	0 1	23 1	0	3 5	3 5	190 6
DIPTERA	*Bezzia*	3 5	0 0	7 7	0	3 5	3 5	3 5
	Chelifera	6 9	0 0	7 7	0	6 9	6 9	6 9
	Chironomidae	90457 4	45 4	100 0	88	779 9	27 7	53901 5
	Corynoneura	1771 3	0 9	46 2	12	34 7	10 4	1005 2
	Cricotopus	1591 0	0 8	38 5	14	62 4	10 4	1168 2
	Demicryptochironomus	45 1	0 0	30 8	0	8 7	3 5	24 3
	Dicrotendipes	114 4	0 1	30 8	0	24 3	10 4	55 5
	Eukiefferiella	1760 9	0 9	61 5	10	62 4	3 5	1386 5
	Euryhapsis	3 5	0 0	7 7	0	3 5	3 5	3 5
	Gymnometriocnemus	3 5	0 0	7 7	0	3 5	3 5	3 5
	Heterotanytarsus	24 3	0 0	15 4	0	12 1	6 9	17 3
	Heterotrissocladius	2464 6	1 2	30 8	8	225 3	3 5	2010 5
	Hexatoma	13 9	0 0	30 8	0	3 5	3 5	3 5
	Limnophora	3 5	0 0	7 7	0	3 5	3 5	3 5
	Micropsectra	395 2	0 2	23 1	0	69 3	3 5	322 4
	Microtendipes	69 3	0 0	7 7	0	69 3	69 3	69 3
	Oreogoton	6 9	0 0	15 4	0	3 5	3 5	3 5
	Orthocladiinae	273 9	0 1	30 8	2	62 4	6 9	138 6
	Orthocladius	6 9	0 0	7 7	0	6 9	6 9	6 9
	Pagastiella	34 7	0 0	7 7	4	34 7	34 7	34 7
	Parachironomus	20 8	0 0	7 7	0	20 8	20 8	20 8
	Paramerina	17 3	0 0	15 4	0	8 7	3 5	13 9
	Paraphaenocladius	38 1	0 0	7 7	0	38 1	38 1	38 1
	Phaenopsectra	2873 6	1 4	84 6	25	69 3	3 5	1234 0
	Potthastia	45 1	0 0	38 5	0	6 9	3 5	17 3
	Procladius	1098 8	0 6	92 3	10	10 4	3 5	949 8
	Psectrocladius	3040 0	1 5	100 0	27	131 7	10 4	1372 7
	Pseudokiefferiella	1393 5	0 7	15 4	5	696 7	6 9	1386 5
	Pseudosmittia	3 5	0 0	7 7	0	3 5	3 5	3 5
	Rheotanytarsus	3161 3	1 6	100 0	30	97 1	3 5	1317 2
	Simulidae	58 9	0 0	15 4	0	29 5	3 5	55 5
	Stempellinella	79 7	0 0	30 8	0	17 3	3 5	41 6
	Stictochironomus	3 5	0 0	7 7	0	3 5	3 5	3 5
	Tanypodinae	5047 0	2 5	84 6	39	110 9	10 4	2617 1
	Tanytarsini	929 0	0 5	23 1	9	187 2	3 5	738 3
	Tanytarsus	37231 9	18 7	100 0	50	218 4	13 9	25754 9
	Tipula	204 5	0 1	61 5	0	24 3	3 5	79 7
	Xenochironomus	3 5	0 0	7 7	0	3 5	3 5	3 5
	Zalutschia	45 1	0 0	7 7	1	45 1	45 1	45 1
EPHEMEROPTERA	*Baetis tricaudatus*	3 5	0 0	7 7	0	3 5	3 5	3 5
	Ephemerella inermis	357 0	0 2	23 1	1	104 0	3 5	249 6
HARPACTICOIDA	Canthocamptidae	4298 3	2 2	38 5	16	208 0	138 6	2495 8
MOLLUSCA	*Lymnaea*	3 5	0 0	7 7	0	3 5	3 5	3 5
	Pisidium	121 3	0 1	15 4	0	60 7	6 9	114 4
	Valvata sincera	76 3	0 0	23 1	0	17 3	13 9	45 1
NEMATODA	Unidentified	23141 3	11 6	84 6	65	596 2	31 2	11022 9
OLIGOCHAETA	Enchytraeidae	221 9	0 1	38 5	2	41 6	3 5	104 0
	Lumbriculus	575 4	0 3	69 2	2	17 3	3 5	433 3
	Naididae	1913 4	1 0	69 2	19	145 6	3 5	762 6
	Nais	384 8	0 2	30 8	8	90 1	20 8	183 7
	Unidentified	2336 3	1 2	69 2	19	166 4	27 7	589 3
OSTRACODA	*Candona*	4662 2	2 3	100 0	25	45 1	3 5	1871 8
	Cypria	277 3	0.1	38 5	8	3.5	3.5	208 0

Appendix II - B4
Invertebrate Taxa Parameters Generated by COMM for Thirteen Streams in the Koala Region, Summer 1994

Major Group	Taxa	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
PLECOPTERA	*Nemoura*	1282 6	0 6	53 8	12	38 1	3 5	745 3
	Unidentified	27 7	0 0	7 7	0	27 7	27 7	27 7
TARDIGRADA	Unidentified	138 6	0 1	7 7	0	138 6	138 6	138 6
TRICOPTERA	*Agraylea*	124 8	0 1	15 4	0	62 4	3 5	121 3
	Agrypnia	0 0	0 0	0 0	0	0 0	0 0	0 0
	Apatania	3 5	0 0	7 7	0	3 5	3 5	3 5
	Brachycentrus	208 0	0 1	30 8	0	20 8	6 9	159 4
	Grensia	13 9	0 0	23 1	0	3 5	3 5	6 9
	Oxyethira	13 9	0 0	15 4	0	6 9	3 5	10 4
	Rhyacophila	149 1	0 1	15 4	0	74 5	3 5	145 6

1 Sum = total number of individuals of that species
2 Dom(%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index: indicates the dominance of a taxa within a community

Appendix II-B5

of Cc

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Lac de Gras 01			Mike 02			Martine 04		
Sampling Date		Jul 8-94			Jul 9-94			Jul 9-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		15	2500	1000	17	200	100	5	75	75
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		2390			3330			1359		
Conochilus unicornis	colony	1510			1110	142	2547	106	15	15
Unidentified	(soft)	38								
EUBRANCHIOPODA										
Notostraca	J									
CLADOCERA										
Holopedium gibberum		7800	247	145	9324	1887	2812	11	23	1
Daphnia middendorffiana					33	57	57		13	
Daphnia galatea mendotae		3								
Daphnia longiremis		38	5	25						
Bosmina longirostris		8		2				687	3170	1132
Chydorus sphaericum		4						4		
Eurycercus sp.										
Polyphemus pediculus								4		
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M					3			5	
	F	1								
Diaptomus sicilis	M				111	2	75	4	8	
	F	13			333	36	509	15	30	
Diaptomus ashlandi	M						15			
	F			1			17			
Diaptomus spp.	cop. V	8		1	222	8	9	125	23	15
	IV	63			8880	11	87	211	50	23
	III	239			14430	2	17	79		
	II	1006			5550	4	6	53		
	I	1887			2775			42		

of Cc

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Lac de Gras 01			Mike 02			Martine 04		
Sampling Date		Jul 8-94			Jul 9-94			Jul 9-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		15	2500	1000	17	200	100	5	75	75
Taxa	Stage									
Heterocope septentrionalis	M					1	11		25	53
	F				22	3	8		58	78
	cop. V	4			666	123	170		7	2
	IV	4			89	17	58		2	
	III	3			44	7	21			
	II	6		1	11					
	I									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
	I									
Calanoid	nauplius	3397			5550			30		
Cyclopoida										
Cyclops scutifer	M	138	1	1	1110	5		11		
	F	289	17	3	6105	660	1887	23	252	13
Cyclops vernalis	M									
	F									
Cyclops b thomasi	M									
	F									
Cyclops capillatus	M									
	F									
Cyclops spp.	cop.	5913	23	26	54390	3	9	219		
	nauplius				3330	9				
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Fox-3 05			Fox-1 07			Nora 08		
Sampling Date		Jul 11-94			Jul 11-94			Jul 12-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		6	200	200	24	150	150	15	100	100
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		8806			4875			5032	2	
Conochilus unicornis	colony	17298	4246	3774	1258			252	94	585
Unidentified	(soft)									
EUBRANCHIOPODA										
Notostraca	J									
CLADOCERA										
Holopedium gibberum		179	75	23	39	176	226	25	40	34
Daphnia middendorffiana		6	4					31	25	32
Daphnia galatea mendotae					8					
Daphnia longiremis										
Bosmina longirostris		6				1				
Chydorus sphaericum										
Eurycercus sp.										
Polyphemus pediculus										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	3			12	75	50			
	F		1	1	6	63	25			
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M	63	7	2						
	F	189	19	7						
Diaptomus spp.	cop. V	16040	944	698	1179	1044	1107	1510	472	472
	IV	84915	1227	1255	4089	1459	2076	23902	2019	2113
	III	1258	9	1	2437	63	101	17612	396	151
	II	503			550			4906	53	26
	I	283						1384		

of Cc

Appendix II - B5

Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Fox-3 05			Fox-1 07			Nora 08		
Sampling Date		Jul 11-94			Jul 11-94			Jul 12-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		6	200	200	24	150	150	15	100	100
Taxa	Stage									
Heterocope septentnonalis	M	252	75	57	86	176	138	176	87	87
	F	283	57	113	189	176	63	365	57	40
	cop. V	503	123	132	35	44	49	75	66	45
	IV	157	104	85				1	2	4
	III									
	II									
	I									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
	I									
Calanoid	nauplius	126						75		
Cyclopoida										
Cyclops scutifer	M				236	63				2
	F	31	9	14	2437	1183	1573	3271	868	962
Cyclops vernalis	M									
	F									
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	M									
	F					1				2
Cyclops spp.	cop.	944		3	14624		25	67932	77	189
	nauplius				8					
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

of Cc

Appendix II - B5

Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Slipper 09			Nero 10			Larry 12		
Sampling Date		Jul 7-94			Jul 13-94			Jul 6-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz W
Tow distance (m)		14*	100	200	13	200	50	6	200	150
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		81			1306			5032		
Conochilus unicornis	colony	1752	623	1510	1814	64	113			
Unidentified	(soft)									
EUBRANCHIOPODA										
Notostraca	J									
CLADOCERA										
Holopedium gibberum		1348	321	453	17418	2170	2717	3743	1076	1849
Daphnia middendorffiana		270	85	81	464	142	192	3	2	3
Daphnia galatea mendotae		94	8	23	305	1		220	15	20
Daphnia longiremis										
Bosmina longirostris		27	13	30	15		30	6		
Chydorus sphaericum										
Eurycercus sp.										
Polyphemus pediculus										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M		1	4	29	38	11			
	F	40	3	6	58	28	11			
Diaptomus sicilis	M									
	F				15					
Diaptomus ashlandi	M	67	28	13	15	19	8			
	F	674	104	34	290	28	8			
Diaptomus spp.	cop. V	2696	330	208	11032	934	755	252	75	956
	IV	25340	1010	1057	30482	198	2151	24217	868	541
	III	11052	151	170	871		4	8806		50
	II	5931	28		15			63		
	I	674	9		29					

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Slipper 09**			**Nero 10**			**Larry 12**		
Sampling Date		Jul 7-94			Jul 13-94			Jul 6-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz W
Tow distance (m)		14*	100	200	13	200	50	6	200	150
Taxa	Stage									
Heterocope septentnonalis	M	121	27	34	494	42	136	283	30	60
	F	256	57	47	769	75	208	252	55	75
	cop. V	526	198	151	566	75	170	377	62	201
	IV	27	19	8				13	4	8
	III									
	II									
	I									
Epischura nevadensis	M	13								
	F									
	V	54	28	11						
	IV	809	28							
	III	5391	47							
	II	5796	9							
	I	4044	9							
Calanoid	nauplius	1483			1161					
Cyclopoida										
Cyclops scutifer	M	40			145	283	226			
	F	1213	292	283	3919			1981	23	465
Cyclops vernalis	M									
	F									
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	M									
	F									
Cyclops spp.	cop.	12939			9435			11322		25
	nauplius	270	9		2032			629		
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Grizzly 14**		**Moose 15**			**Leslie 17**		
Sampling Date		Jun 30-94		Jul 6-94			Jul 14-94		
Tow Type		Vertical	Horiz.	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		20	300	7	100	100	10	200	125
Taxa	Stage								
ROTIFERA									
Kellicottia longispina				1348			566		
Conochilus unicornis	colony	109		135	2	2	491	15	
Unidentified	(soft)								
EUBRANCHIOPODA									
Notostraca	J								
CLADOCERA									
Holopedium gibberum		944	57	9165	3321	3000	10190	9624	5736
Daphnia middendorffiana		2			2	2	4		5
Daphnia galatea mendotae		1		2426	4	4	2		
Daphnia longiremis									
Bosmina longirostris		2		809	151	774	15		
Chydorus sphaericum		2							
Eurycercus sp.									
Polyphemus pediculus									
COPEPODA									
Calanoida									
Diaptomus pribilofensis	M						19	9	
	F								
Diaptomus sicilis	M	19	6				19		
	F	4	6	54	11		321	9	2
Diaptomus ashlandi	M	3	3	27	55	19	38		15
	F			27	34	32	208	28	30
Diaptomus spp.	cop. V	75	69	297	132	4	264	9	
	IV	66	2	7278	377	23	19247	57	60
	III			9435	21	9	4151		
	II			12131	2		1510		
	I	28		6739			57		

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Grizzly 14**		**Moose 15**			**Leslie 17**		
Sampling Date		Jun 30-94		Jul 6-94			Jul 14-94		
Tow Type		Vertical	Horiz.	Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W
Tow distance (m)		20	300	7	100	100	10	200	125
Taxa	Stage								
Heterocope septentrionalis	M			162	57	6	53	41	50
	F			81	60	13	38	45	44
	cop. V	1		189	28	19	32	10	17
	IV	5	2		4				
	III	42	1						
	II	283	1						
	I	6793	57						
Epischura nevadensis	M								
	F								
	V								
	IV								
	III								
	II								
	I								
Calanoid	nauplius	12549	15	1617			19		
Cyclopoida									
Cyclops scutifer	M	75	13	54	4	2			
	F	566	107	1860	151	151	660	255	226
Cyclops vernalis	M								
	F								
Cyclops b. thomasi	M								
	F								
Cyclops capillatus	M								
	F	1							
Cyclops spp.	cop.			13209	19	6	7171		
	nauplius			1617			944		
Harpacticoida									
Canthocamptus spp.	F								
DECAPODA	zoea								

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Long (S) 19**			**Long (N) 20**			**Little 23**		**Kodiak 25**	
Sampling Date		Jul 14-94			Jul 15-94			Jul 4-94		Jul 2-94	
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz.	Vertical	Horiz.
Tow distance (m)		20	1400	600	16	1700	750	17	200	11	150
Taxa	Stage										
ROTIFERA											
Kellicottia longispina		7548			354			999		1201	
Conochilus unicornis	colony	3019	57	66	118	26	153				
Unidentified	(soft)										
EUBRANCHIOPODA											
Notostraca	J										
CLADOCERA											
Holopedium gibberum		1415	40	69	2241	11	55	222	981	67	50
Daphnia middendorffiana		47	4	7	59	1	7	33	57	17	19
Daphnia galatea mendotae					12			666	255	9	1
Daphnia longiremis											
Bosmina longirostris		849	5	69	307	6	23	9	8	2	9
Chydorus sphaericum											
Eurycercus sp.											
Polyphemus pediculus											
COPEPODA											
Calanoida											
Diaptomus pribilofensis	M										
	F										
Diaptomus sicilis	M	57			12						
	F	302	9	2	1061		1				
Diaptomus ashlandi	M				236		1				
	F						1	44	28	686	
Diaptomus spp.	cop. V	9	1		5897		1	1221	47	343	
	IV	4718	3	2	18870		2	16206	123	3602	
	III	9435	4	6	7076	1	3	3663	9	2059	
	II	6605	1	1	118		1	3996	1	1201	
	I	944			130			888		686	

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Long (S) 19			Long (N) 20			Little 23		Kodiak 25	
Sampling Date		Jul 14-94			Jul 15-94			Jul 4-94		Jul 2-94	
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. W	Vertical	Horiz.	Vertical	Horiz.
Tow distance (m)		20	1400	600	16	1700	750	17	200	11	150
Taxa	Stage										
Heterocope septentrionalis	M	25	2	5	130	1	12	8	10	55	26
	F	34	3	3		1	9	21	14	53	36
	cop. V	123	9	35		2	17	422	434	583	352
	IV	7	1	2			1	89	47	360	390
	III									34	8
	II										
	I										
Epischura nevadensis	M										
	F										
	V										
	IV										
	III										
	II										
	I										
Calanoid	nauplius	755						333		1372	
Cyclopoida											
Cyclops scutifer	M	472		377	944		1	11	1	1029	75
	F	3774	191		7312	32	267	1110	208	2573	616
Cyclops vernalis	M										
	F										
Cyclops b. thomasi	M										
	F										
Cyclops capillatus	M										
	F							1		3	
Cyclops spp.	cop.	36797	1		108503	12	1	13209		25389	
	nauplius		3	6	4718			222	19	172	
Harpacticoida											
Canthocamptus spp.	F									17.2	
DECAPODA	zoea										

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Koala 27**		**Panda 29**		**Vulture 32**		**Ursula (E) 35**		
Sampling Date		Jul 3-94		Jun 29-94		Jul 1-94		Jul 16-94		
Tow Type		Vertical	Horiz.	Vertical	Horiz.	Vertical	Horiz.	Vertical	Horiz. L	Horiz. W
Tow distance (m)		17	200	16	200	25*	250	16	500	200
Taxa	Stage									
ROTIFERA										
Kellicottia longispina				236		75				
Conochilus unicornis	colony			118	19	1359	944	354	94	47
Unidentified	(soft)			12		75				
EUBRANCHIOPODA										
Notostraca	J					1				
CLADOCERA										
Holopedium gibberum		3		1179	85	528	5	519	27	27
Daphnia middendorffiana						166				
Daphnia galatea mendotae							15			
Daphnia longiremis										
Bosmina longirostris		1							5	11
Chydorus sphaericum						8				
Eurycercus sp.										
Polyphemus pediculus										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M									
	F									
Diaptomus sicilis	M			1						
	F			35	47					
Diaptomus ashlandi	M	20	1	94	8			35		
	F	33	4	590	66			71		
Diaptomus spp.	cop. V	16		35	2			1887	5	3
	IV	67		1179				31843	117	387
	III	33		944				1415	2	66
	II	67		826				354		1
	I	89		3892		8		236		

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Koala 27		Panda 29		Vulture 32		Ursula (E) 35		
Sampling Date		Jul 3-94		Jun 29-94		Jul 1-94		Jul 16-94		
Tow Type		Vertical	Horiz.	Vertical	Horiz.	Vertical	Horiz.	Vertical	Horiz. L	Horiz. W
Tow distance (m)		17	200	16	200	25*	250	16	500	200
Taxa	Stage									
Heterocope septentnonalis	M							94	2	5
	F							94	4	11
	cop. V	6	2	94	57			826	45	113
	IV	89	13	944	340	128	113	189	15	47
	III	33	5	189	123	211	151		1	1
	II	7								
	I									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
	I									
Calanoid	nauplius	2220		5779	1	4000	2	236		
Cyclopoida										
Cyclops scutifer	M		12	1179	75	755				
	F		125	1887	557	3321	189	2359	26	47
Cyclops vernalis	M									
	F	22	2							
Cyclops b thomasi	M									
	F									
Cyclops capillatus	M									
	F	1								
Cyclops spp.	cop.		31	8374	38	5359		56610	6	
	nauplius	222								
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Sieve 38**			**Arnie 44**			**Mark 46**		
Sampling Date		Jul 16-94			Aug 5-94			Jul 29-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		8	200	150	3	20	30	5	100	120
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		1415			3774			3019		
Conochilus unicornis	colony	118	142	75					132	16
Unidentified	(soft)									
EUBRANCHIOPODA										
Notostraca	J									
CLADOCERA										
Holopedium gibberum		10379	1679	1635	138	75	57	17738	3906	3176
Daphnia middendorffiana			5	3	4466	4340	9498			
Daphnia galatea mendotae		896	5							
Daphnia longiremis					5661	19	189	6038	491	566
Bosmina longirostris		5			38	1	315	12832	1830	944
Chydorus sphaericum										
Eurycercus sp.									4	
Polyphemus pediculus									32	11
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M		1		3271	2312	5976	642	604	629
	F				3271	1698	3774	4151	377	535
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M									
	F									
Diaptomus spp.	cop. V	4010	236	226	1006	330	692			
	IV	43873	793	465	63					
	III	708								
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Sieve 38			Arnie 44			Mark 46		
Sampling Date		Jul 16-94			Aug 5-94			Jul 29-94		
Tow Type		Vertical	Horiz. L	Horiz. W	Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		8	200	150	3	20	30	5	100	120
Taxa	Stage									
Heterocope septentrionalis	M	613	32	35	75	1	1			
	F	637	55	35	31		1			
	cop. V	354	42	72						
	IV	354	11	23						
	III									
	II									
	I									
Epischura nevadensis	M									2
	F									
	V									
	IV									
	III									
	II									
	I									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M	94	1		189	94	132		4	
	F				440	85			15	142
Cyclops vernalis	M									
	F									
Cyclops b. thomasi	M							264		5
	F							151		2
Cyclops capillatus	M									
	F									
Cyclops spp.	cop.	13917	1		4403	302	440	35098	283	173
	nauplius				2516			377		
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		**Misery 48**			**Bat 51**			**Lac de Gras (Mis) 54**		
Sampling Date		Jul 30-94			Jul 31-94			Jul 31-94		
Tow Type		Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		17	200	300	4	400	700	17	350	750
Taxa	Stage									
ROTIFERA										
Kellicottia longispina					1887			6882		
Conochilus unicornis	colony				425	38	78	555	226	38
Unidentified	(soft)									
EUBRANCHIOPODA										
Notostraca	J									
CLADOCERA										
Holopedium gibberum			2	1	991	113	59	1332	59	98
Daphnia middendorffiana		7	1	14				33	1	1
Daphnia galatea mendotae					5				1	2
Daphnia longiremis		133								
Bosmina longirostris		44	13	10						
Chydorus sphaencum										
Eurycercus sp.										
Polyphemus pediculus										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	11			2406	33	199			
	F	22	4		10850	39	237			
Diaptomus sicilis	M									
	F							22		
Diaptomus ashlandi	M									3
	F									5
Diaptomus spp.	cop. V	777	187	33	14624	509	226	22	86	18
	IV	666	118	20				10545	108	106
	III							7548	27	23
	II							1776	5	
	I							111		

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Misery 48			Bat 51			Lac de Gras (Mis) 54		
Sampling Date		Jul 30-94			Jul 31-94			Jul 31-94		
Tow Type		Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		17	200	300	4	400	700	17	350	750
Taxa	Stage									
Heterocope septentnonalis	M				113	57	20	56	4	3
	F				170	57	19	56	1	2
	cop. V				5	2	1	155	23	28
	IV							11	8	2
	III									
	II									
	I									
Epischura nevadensis	M	56	14	1	14	14	3	11	1	
	F	22	6	1	90	9	7	22	3	2
	V	2		1					27	18
	IV									
	III									
	II									
	I									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M							111	5	5
	F		2					1554	59	43
Cyclops vernalis	M									
	F									
Cyclops b. thomasi	M	111			94					
	F	1443								
Cyclops capillatus	M									
	F									
Cyclops spp.	cop.	37740	4		8020			9324	54	35
	nauplius							111		
Harpacticoida										
Canthocamptus spp.	F									
DECAPODA	zoea									

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Paul (E) 52			Paul (W) 53		
Sampling Date		Aug 1-94			Aug 1-94		
Tow Type		Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		11	400	700	10	400	1000
Taxa	Stage						
ROTIFERA							
Kellicottia longispina					7548	9	4
Conochilus unicornis	colony				9435	1227	1812
Unidentified	(soft)	172			944	17	42
EUBRANCHIOPODA							
Notostraca	J						
CLADOCERA							
Holopedium gibberum		4803	307	566	4	38	
Daphnia middendorffiana							
Daphnia galatea mendotae		2745					
Daphnia longiremis		17155	1227	1860	49062	5661	1170
Bosmina longirostris		22301	873	485	11888	2642	1019
Chydorus sphaericum							
Eurycercus sp.							
Polyphemus pediculus							
COPEPODA							
Calanoida							
Diaptomus pribilofensis	M	3602	259	173	1698	349	1170
	F	5146	495	243	2076	160	830
Diaptomus sicilis	M						
	F						
Diaptomus ashlandi	M						
	F						4
Diaptomus spp.	cop. V	1887	94	108	19	47	23
	IV	17					4
	III	17					
	II						
	I						

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Zooplankton Identification and Density (nos/m^3), Early Summer 1994

Lake Site		Paul (E) 52			Paul (W) 53		
Sampling Date		Aug 1-94			Aug 1-94		
Tow Type		Vertical	Horiz. L	Horiz. L	Vertical	Horiz. L	Horiz. L
Tow distance (m)		11	400	700	10	400	1000
Taxa	Stage						
Heterocope septentrionalis	M	5		1	9		
	F	12		1	6		
	cop. V						
	IV						
	III						
	II						
	I						
Epischura nevadensis	M	926	42	40	811	85	53
	F	395	75	30	1019	94	34
	V				377		
	IV						
	III						
	II						
	I						
Calanoid	nauplius						
Cyclopoida							
Cyclops scutifer	M	2402	9	30	2453	28	15
	F		28	38	1321	66	38
Cyclops vernalis	M						
	F						
Cyclops b. thomasi	M		14	11		9	
	F		14	5		66	30
Cyclops capillatus	M						
	F						
Cyclops spp.	cop.	20585	142	84	16983	434	64
	nauplius				7548		
Harpacticoida							
Canthocamptus spp.	F						
DECAPODA	zoea						

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Lac de Gras (NW) 01			Mike 02*			Martine 04		
Sampling Date		Aug 14-94			Aug 16-94			Aug 16-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		17	300	700	11	200	400	7	30	50
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		666			858			809		
Conochilus unicornis	colony	999	220	73	343	8	9	270	50	15
Unidentified	(soft)	111								
CLADOCERA										
Holopedium gibberum		3774	252	170	1887	69	170	11	1	5
Daphnia middendorffiana					326	75	90	32	44	9
Daphnia galatea mendotae		78	1	1				3	1	
Daphnia longiremis		222	8	3						
Bosmina longirostris		155	14	24				38	13	4
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	56	12	4	2916	189	255	755	138	30
	F	233	1	10	4975	274	410	350	132	83
Diaptomus sicilis	M	11						243	126	226
	F	22			17			863	189	377
Diaptomus ashlandi	M		1						31	11
	F		1	1					189	26
Diaptomus spp.	cop. V	555	21	43	15782	849	552	2965	1258	1396
	IV	888	4		1544			2696	346	75
	III	111						4044		
	II							1348		
	I							2426		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Lac de Gras (NW) 01			Mike 02*			Martine 04		
Sampling Date		Aug 14-94			Aug 16-94			Aug 16-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		17	300	700	11	200	400	7	30	50
Heterocope septentrionalis	M				87	8	15	13	16	11
	F	1			142	8	19	67	84	83
	cop. V									
	IV									
	II									
Epischura nevadensis	M	133	10	9				3	1	
	F	89	5	7				3	1	
	V	100	8	9						
	IV	189	1	2						
	III									
	II									
Calanoid	nauplius							809		
Cyclopoida										
Cyclops scutifer	M	11	1			1				
	F	333	38	3	34	4	14	8		
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M	11								
Cyclops spp.	cop.	1332	24	16	10807		5	1348		
	nauplius				686			809		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Fox-3 05*			Fox-1 07			Nora 8		
Sampling Date		Aug 27-94			Aug 28-94			Aug 26-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		6	50	250	15	150	250	14	350	350
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		944	38		4780	226	33	135		
Conochilus unicornis	colony	189	340	38				135	2	1
Unidentified	(soft)									
CLADOCERA										
Holopedium gibberum		41	91	34		1		20	1	10
Daphnia middendorffiana			6	2	3	1		67	1	
Daphnia galatea mendotae										
Daphnia longiremis										
Bosmina longirostris										1
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	535	302	83	3774	1723	657	1752	232	447
	F	1101	1510	551	6416	1698	91	3639	146	404
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M	3145	830	159						
	F	692	1736	325	13	25			1	
Diaptomus spp.	cop. V	13209	830	264	1006	38	23			
	IV									
	III									
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Fox-3 05*			Fox-1 07			Nora 8		
Sampling Date		Aug 27-94			Aug 28-94			Aug 26-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		6	50	250	15	150	250	14	350	350
Heterocope septentrionalis	M		20	3	67	6		53		
	F	13	64	39	72	11	1	75		
	cop. V									
	IV									
	II									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M							135		
	F		8		252			270	3	2
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	22959	528	136	11070	75	53	5661	97	38
	nauplius	315			11322			5257		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Slipper 09			Nero 10*			Larry 12		
Sampling Date		Aug 15-94			Aug 23-94			Aug 22-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		10	40	100	12	200	250	7	200	250
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		1887			629			8626		
Conochilus unicornis	colony	566	189	132	157	9	8			
Unidentified	(soft)									
CLADOCERA										
Holopedium gibberum		302	57	151	1573	821	679	404	74	181
Daphnia middendorffiana		1566	189	113	1116	160	75	216	21	98
Daphnia galatea mendotae		132	24	4					7	
Daphnia longiremis										
Bosmina longirostris		132	127	85		3	6	27	9	2
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	7737	3349	2170	2673	962	1578	3235	47	287
	F	7171	1179	868	1258	443	476	5661	651	823
Diaptomus sicilis	M									
	F		5			9				
Diaptomus ashlandi	M			2	315	47	38			
	F				1101	274	113			1
Diaptomus spp.	cop. V	10567	283	302	9278	604	340	404		
	IV		189							
	III									
	II				472					
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Slipper 09			Nero 10*			Larry 12		
Sampling Date		Aug 15-94			Aug 23-94			Aug 22-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		10	40	100	12	200	250	7	200	250
Heterocope septentrionalis	M	94	14	32	14	26	16	51	1	3
	F	113	19	13	53	15	26	70	11	17
	cop. V									
	IV									
	II									
Epischura nevadensis	M	585	99	151						
	F	208	354	113						
	V	1132	217	19						
	IV	755	193	75						
	III	189	14							
	II	944								
Calanoid	nauplius	189								
Cyclopoida										
Cyclops scutifer	M							54		2
	F		14		629	19		135		4
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	5661	14	2	13524	179	106	22644	481	506
	nauplius	1698			2202			4852		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Moose 15*			Grizzly 14*			Leslie 17		
Sampling Date		Aug 22-94			Aug 14-94			Aug 21-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		8	150	150	17	200	350	10	100	150
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		944			777			1698		
Conochilus unicornis	colony	71	13	11	111	57	11	189		50
Unidentified	(soft)				111					
CLADOCERA										
Holopedium gibberum		5897	120	491	2886	274	307	2453	2113	1308
Daphnia middendorffiana		21	5	9			2	17	4	5
Daphnia galatea mendotae		2								
Daphnia longiremis										
Bosmina longirostris		1203	868	201				9	6	6
Chydoridae										
Chydorus sphaencum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	307	239	164	1887	406	119	2831	321	340
	F	165	63	201	2109	245	167	1510	434	478
Diaptomus sicilis	M							38	2	3
	F							94	38	13
Diaptomus ashlandi	M	118	8	75					4	
	F	354	16	176				38	4	25
Diaptomus spp.	cop. V	236	63	491	21978	2047	1170	13964	321	113
	IV			13	111					
	III				2331					
	II				111					
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Moose 15*			Grizzly 14*			Leslie 17		
Sampling Date		Aug 22-94			Aug 14-94			Aug 21-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		8	150	150	17	200	350	10	100	150
Heterocope septentrionalis	M	33	8	6	67	5	2	166	4	4
	F	50	13	31	122	23	4	111	28	9
	cop. V				333	32	5			
	IV									
	II							377		
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
Calanoid	nauplius							755		
Cyclopoida										
Cyclops scutifer	M			3	888	151	59			
	F	47		3				19		
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	8963	24	14	4218			37929	94	88
	nauplius	2123			111			8303		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Long (S) 19			Long (N) 20			Little 23*		
Sampling Date		Aug 29-94			Aug 28-94			Aug 20-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		24	750	1000	20	550	1500	16	100	200
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		315			2831					
Conochilus unicornis	colony	8			47	10				
Unidentified	(soft)									
CLADOCERA										
Holopedium gibberum		118	23	6	47	27	4	71	30	21
Daphnia middendorffiana		126	2	2	47	21	10	944	91	59
Daphnia galatea mendotae									15	2
Daphnia longiremis										
Bosmina longirostris		94	4	23	28	7	4	83	11	8
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	4018	574	521	6237	2539	704	10614	1000	925
	F	6762	430	226	4633	1441	390	5897	1661	962
Diaptomus sicilis	M									
	F									1
Diaptomus ashlandi	M							354	19	
	F							236	38	28
Diaptomus spp.	cop. V	3302	10	4	944	137	9	10614	396	292
	IV									
	III									
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Long (S) 19			Long (N) 20			Little 23*		
Sampling Date		Aug 29-94			Aug 28-94			Aug 20-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		24	750	1000	20	550	1500	16	100	200
Heterocope septentrionalis	M	55	3	2	104	41	6	224	8	16
	F	55	5	4	321	34	23	189	26	43
	cop. V									
	IV									
	II									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M									
	F	24					6		38	1
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	14624	23	13	8114	3	11	12973	302	189
	nauplius	157			283			22408		

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Kodiak 25*			Koala 27			Panda 29*		
Sampling Date		Aug 20-94			Aug 18-94			Aug 12-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		11	100	150	17	300	500	17	125	200
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		1544								
Conochilus unicornis	colony	1715	981	503				1998	91	47
Unidentified	(soft)									
CLADOCERA										
Holopedium gibberum		600	202	161	1			4884	1434	1340
Daphnia middendorffiana		1201	98	79						5
Daphnia galatea mendotae								11		
Daphnia longiremis										
Bosmina longirostris		17	8	6	1			11		2
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	2745	283	164				4329	1887	1368
	F	4289	698	189				8436	1721	1519
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M	3431	509	214						
	F	10121	1208	667	67				30	4
Diaptomus spp.	cop. V	9435	736	478	222			15540	543	340
	IV	172						2220		
	III									
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Kodiak 25*			Koala 27			Panda 29*		
Sampling Date		Aug 20-94			Aug 18-94			Aug 12-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		11	100	150	17	300	500	17	125	200
Heterocope septentrionalis	M	103	8	13	1			189	12	8
	F	206	38	20	1			133	41	46
	cop. V									
	IV									
	II									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M	172	2		278	44	15			
	F	3431	15	20	1665	195	140	444	106	57
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	47175	453	289	6549	333	317	666	121	
	nauplius	19213								

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Vulture 32			Ursula (E) 35			Sieve 38		
Sampling Date		Aug 13-94			Aug 30-94			Aug 30-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		17	150	200	16	750	1000	7	150	200
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		666			236			539		
Conochilus unicornis	colony	777	63	66	236	2	6	566	25	
Unidentified	(soft)									
CLADOCERA										
Holopedium gibberum		3885	642	113	1415	53	40	4852	1371	1538
Daphnia middendorffiana		2109	39	5	12				1	
Daphnia galatea mendotae									1	2
Daphnia longiremis										
Bosmina longirostris				1	189	161	17	19		6
Chydoridae										
Chydorus sphaencum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	6660	516	387	1415	118	251	647	491	443
	F	3885	377	198	2005	53	62	1051	679	406
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M				1297	1	13			
	F				1651	5	21			
Diaptomus spp.	cop. V	3885	302	142	5661	8	19	162		
	IV	444			1415					
	III									
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Vulture 32			Ursula (E) 35			Sieve 38		
Sampling Date		Aug 13-94			Aug 30-94			Aug 30-94		
Tow Type		Vertical	Honz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Honz. W	Honz. L
Tow length (m)		17	150	200	16	750	1000	7	150	200
Heterocope septentnonalis	M	144	9	4	39	2	2	5	3	2
	F	178	13	5	79	7	12	19	18	7
	cop. V									
	IV									
	II									
Epischura nevadensis	M									
	F									
	V									
	IV									
	III									
	II									
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M	5661	126	9				189		1
	F				236			54		
Cyclops b. thomasi	M									
	F									
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	8769		3	2241	4	23	701	176	85
	nauplius	222								

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Amie 44*			Mark 46			Misery 48		
Sampling Date		Sep 5-94			Sep 4-94			Sep 7-94		
Tow Type		Vertical	Horiz. W	Honz. L	Vertical	Honz. W	Horiz. L	Vertical	Honz. W	Honz. L
Tow length (m)		2.5	150	250	7	100	200	20	250	400
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		2944		23				377		
Conochilus unicornis	colony	377				8				
Unidentified	(soft)	8								
CLADOCERA										
Holopedium gibberum		15			2157	113	1661	1	1	
Daphnia middendorffiana		106	315	634	27					
Daphnia galatea mendotae		755	6	7						
Daphnia longiremis					620	321	462	660	2	25
Bosmina longirostris		906	4	15	2157	906	415		1	3
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	6038	138	438	1429	1038	311	1227	48	42
	F	3774	239	506	755	36	57	660	8	54
Diaptomus sicilis	M									
	F									
Diaptomus ashlandi	M									
	F									
Diaptomus spp.	cop. V	8		2						
	IV									
	III									
	II									
	I									

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Arnie 44*			Mark 46			Misery 48		
Sampling Date		Sep 5-94			Sep 4-94			Sep 7-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		2.5	150	250	7	100	200	20	250	400
Heterocope septentrionalis	M				11					
	F				11					
	cop. V	8								
	IV									
	II									
Epischura nevadensis	M				3			255	1	5
	F	8			35			75	3	3
	V								2	1
	IV								1	
	III									
	II									
Calanoid	nauplius	75								
Cyclopoida										
Cyclops scutifer	M			2						
	F		6	7	3					
Cyclops b. thomasi	M		3	3	1348	6	5	189		
	F			1	2157	2	6	566		2
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	4831	104	159	539	151	142	3963	1	15
	nauplius	151								

of Cc

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Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Bat 51			Paul (E) 52			Paul (W) 53		
Sampling Date		Sep 3-94			Sep 6-94			Sep 7-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		2.5	300	900	10	150	300	8	200	300
Taxa	Stage									
ROTIFERA										
Kellicottia longispina		302			4906			12737		
Conochilus unicornis	colony	75	2		3585			2359	66	4
Unidentified	(soft)				4151	25		11558	66	25
CLADOCERA										
Holopedium gibberum		75			6	7	1	14	8	3
Daphnia middendorffiana					21	4				
Daphnia galatea mendotae						2	2			
Daphnia longiremis					6416	4718	1585	3538	2434	1157
Bosmina longirostris		604	1		6	277	63	566	670	283
Chydoridae										
Chydorus sphaericum										
COPEPODA										
Calanoida										
Diaptomus pribilofensis	M	3849	100	32	113	62	46	849	142	717
	F	981	40	30	113	33	14	354	311	245
Diaptomus sicilis	M					3	1		2	1
	F					4			5	
Diaptomus ashlandi	M									
	F									
Diaptomus spp.	cop. V			1	19	4		47	1	1
	IV									
	III									
	II									
	I									

Appendix II - B5

Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Bat 51			Paul (E) 52			Paul (W) 53		
Sampling Date		Sep 3-94			Sep 6-94			Sep 7-94		
Tow Type		Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L	Vertical	Horiz. W	Horiz. L
Tow length (m)		2.5	300	900	10	150	300	8	200	300
Heterocope septentrionalis	M	106	33	20						
	F	136	18	9						
	cop. V									
	IV									
	II									
Epischura nevadensis	M	38	2	1		6	3	26	11	6
	F	272	13	16	2	8	4	40	8	5
	V	15	2	1		2	2	9	2	1
	IV									
	III									
	II							24		
Calanoid	nauplius									
Cyclopoida										
Cyclops scutifer	M					1		94	2	5
	F					9	3	377	57	19
Cyclops b. thomasi	M	8			1321	6	5	731	2	4
	F				75	1		283	19	8
Cyclops capillatus	F									
Eucyclops agilis	M									
Cyclops spp.	cop.	377	4	2	1887	315	94	16511	321	113
	nauplius							1887		

Appendix II - B5

Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Lac de Gras (Mis) 54		
Sampling Date		Sep 8-94		
Tow Type		Vertical	Horiz. W	Horiz. L
Tow length (m)		17	200	400
Taxa	Stage			
ROTIFERA				
Kellicottia longispina		2442		
Conochilus unicornis	colony	222	21	9
Unidentified	(soft)	11		
CLADOCERA				
Holopedium gibberum		189	25	20
Daphnia middendorffiana		12	2	
Daphnia galatea mendotae				
Daphnia longiremis		2		12
Bosmina longirostris		56	21	11
Chydoridae				
Chydorus sphaericum				
COPEPODA				
Calanoida				
Diaptomus pribilofensis	M	1998	189	146
	F	1443	208	160
Diaptomus sicilis	M	999	208	137
	F	1776	274	132
Diaptomus ashlandi	M	2220	75	14
	F	2109	66	9
Diaptomus spp.	cop. V	1887	19	28
	IV			
	III			
	II			
	I			

Appendix II - B5

Zooplankton Identification and Density (nos/m^3), Late Summer 1994

Lake Site		Lac de Gras (Mis) 54		
Sampling Date		Sep 8-94		
Tow Type		Vertical	Horiz. W	Horiz. L
Tow length (m)		17	200	400
Heterocope septentrionalis	M	14	9	13
	F	51	5	5
	cop. V			
	IV			
	II			
Epischura nevadensis	M	56	4	1
	F	366	38	13
	V		1	
	IV			
	III			
	II			
Calanoid	nauplius			
Cyclopoida				
Cyclops scutifer	M	666	28	19
	F	999	85	61
Cyclops b. thomasi	M			
	F			
Cyclops capillatus	F			
Eucyclops agilis	M			
Cyclops spp.	cop.	1998	226	94
	nauplius	222		

of Cc

Appendix II - B5
Zooplankton Analyses of Variance (ANOVA) and T-test Results (tested at 95% Confidence Level)

ANOVA

Null Hypothesis		Tested for	F[1]	Fcrit	Result
No significant difference in community composition...	among sites	Early Summer	17.88	2.72	Accept
		Late Summer	17 04	2.72	Accept
No significant difference in density...	among sites	Early Summer	18.81	2.72	**Reject**
		Late Summer	14.34	2.72	**Reject**
	among groups of invertebrates	Early Summer	2.66	1.62	**Reject**
		Late Summer	1.37	1.62	Accept
	between seasons	All Sites	1 47	1.90	**Reject**
No significant difference in richness...	between seasons	All Sites	2.02	4.21	**Reject**
		Both Seasons	2.30	1.90	Accept
	among sites				

(1) If F> Fcrit, the null hypothesis is rejected

T-test

Null Hypothesis		Tested for	T[1]	Tcrit	Result
No significant difference in density...	between watersheds	Early Summer	-1 01	0.32	Accept
		Late Summer	2.97	0.01	**Reject**
No significant difference in richness...	between watersheds	Early Summer	3.07	0.01	**Reject**
		Late Summer	-0.90	0.37	Accept

(1) If T>Tcrit, the null hypothesis is rejected

APPENDIX II - B5

Community structure analyses were carried out using the program "COMM" developed by D Piepenburg and U. Piatkowski of the University of Kiel, Germany.

Site Parameters generated by COMM are

1) SUM total number of individuals in that sample,

2) S total number of species in that sample,

3) S(90%) number of species accounting for 90% of the total sum of individuals,

4) Maximum Dominance (%) percentage of total sum accounted for by the single-most

abundant species

The indices generated by COMM are

1) Shannon-Weaver (1963)	$H' = -\sum p_i \ln (p_i)$	$0<H\leq H_{max}$
2) Pielou (1966)	$E_p = H'/H'_{max}$	$0<E_p\leq 1$
3) Heip (1974)	$E_H = (e^{H'}-1)/(S-1)$	$0<E_H\leq 1$
4) Simpson (1949)	$E_S = 1-\sum p_i^2$	$0\leq E_S<1$
5) Margalef (1951)	$D = (S-1)/\ln N$	$0<D<S-1/\ln S$

Taxa Parameters generated by COMM are

1) SUM total number of individals of that species

2) Dominance (%) percentage of total number of individuals in the whole population

accounted for by that species,

3) Presence(%) percentage of stations within that subset at which that species is present,

4) Median

5) Minimum,

6) Maximum,

7) Total Presence (%) percentage of stations, within the entire sample, at which that

species is present,

8) Biological Index (McCloskey 1970) $BI(i) = 100(\sum(X(R(i,j))/BI_{max})$

Where $R(i,j)$ = Rank of species i within j

$X = 10, \ ,1$

$BI_{max} = 10j$

Appendix II - B5
Zooplankton Taxa Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Early Summer 1994

PHYLA CLASS Order Species	Stage	Sum[1]	Dom (%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ROTIFERA								
Kellicottia longispina		69063 2	3 9	82 1	40	1887 0	75 5	8806 0
Conochilus unicornis		41333 9	2 3	71 4	23	522 8	105 7	17297 5
Unidentified		1240 1	0 1	17 9	0	75 5	11 8	943 5
EUBRANCHIOPODA								
Notostraca	J	0 8	0 0	3 6	0	0 8	0 8	0 8
CRUSTACEA								
CLADOCERA								
Holopedium gibberum		101745 6	5 8	96 4	39	1179 4	3 3	17737 8
Daphnia middendorffiana		5642 4	0 3	57 1	4	33 3	1 9	4465 9
Daphnia galatea mendotae		7390 8	0 4	50 0	5	53 1	0 9	2744 7
Daphnia longiremis		78086 9	4 4	21 4	15	5849 7	37 7	49062 0
Bosmina longirostris		49849 2	2 8	71 4	14	21 0	1 1	22300 9
Chydorus sphaericum		17 0	0 0	14 3	0	3 8	1 9	7 6
Polyphemus pediculus		3 8	0 0	3 6	0	3 8	3 8	3 8
COPEPODA								
Calanoida								
Diaptomus pribilofensis	M	8411 1	0 5	28 6	6	335 3	3 2	3602 4
Diaptomus pribilofensis	F	22329 0	1 3	28 6	9	1066 9	1 3	10850 3
Diaptomus sicilis	M	222 1	0 0	25 0	0	18 9	1 2	111 0
Diaptomus sicilis	F	2174 6	0 1	39 3	1	35 4	3 8	1061 4
Diaptomus ashlandi	M	3879 8	0 2	42 9	2	36 6	2 8	3270 8
Diaptomus ashlandi	F	6104 8	0 3	42 9	4	198 1	22 2	3270 8
Diaptomus spp	V	65451 7	3 7	92 9	30	560 0	7 6	16039 5
Diaptomus spp	IV	360339 0	20 5	85 7	60	8079 2	17 1	84915 0
Diaptomus spp	III	103269 0	5 9	75 0	44	2437 4	17 1	17612 0
Diaptomus spp	II	47158 6	2 7	67 9	29	1006 4	14 5	12130 7
Diaptomus spp	I	20880 1	1 2	67 9	14	283 0	7 6	6739 3
Heterocope septentrionalis	M	2810 0	0 2	67 9	2	94 3	5 2	613 3
Heterocope septentrionalis	F	3368 3	0 2	67 9	4	80 9	5 7	769 3
Heterocope septentrionalis	V	5541 0	0 3	71 4	5	172 0	0 9	825 6
Heterocope septentrionalis	IV	2465 2	0 1	57 1	5	88 8	1 3	943 5
Heterocope septentrionalis	III	557 0	0 0	25 0	3	42 5	2 5	211 3
Heterocope septentrionalis	II	307 1	0 0	14 3	2	8 9	6 3	283 0
Heterocope septentrionalis	I	6793 2	0 4	3 6	3	6793 2	6793 2	6793 2
Epischura nevadensis	M	1832 0	0 1	21 4	2	34 8	11 1	926 3
Epischura nevadensis	F	1547 6	0 1	17 9	1	89 6	22 2	1019 0
Epischura nevadensis	V	433 5	0 0	10 7	0	53 9	2 2	377 4
Epischura nevadensis	IV	808 7	0 0	3 6	0	808 7	808 7	808 7
Epischura nevadensis	III	5391 4	0 3	3 6	2	5391 4	5391 4	5391 4
Epischura nevadensis	II	5795 8	0 3	3 6	2	5795 8	5795 8	5795 8
Epischura nevadensis	I	4043 6	0 2	3 6	1	4043 6	4043 6	4043 6
Calanoid spp	n	40702 2	2 3	60 7	22	1372 4	18 9	12548 5
Cyclopoida								
Cyclops scutifer	M	11449 1	0 6	67 9	11	188 7	11 1	2453 1
Cyclops scutifer	F	48008 1	2 7	78 6	36	1873 5	22 6	7312 1
Cyclops b thomasi	M	469 5	0 0	10 7	3	111 0	94 3	264 2
Cyclops b thomasi	F	1594 0	0 1	7 1	4	797 0	151 0	1443 0
Cyclops vernalis	F	22 2	0 0	3 6	0	22 2	22 2	22 2
Cyclops capillatus	F	6 6	0 0	14 3	0	1 1	0 9	3 4
Cyclops spp	c	598406 6	34 0	92 9	84	13209 0	218 9	108502 5
Cyclops spp	n	24715 0	1 4	53 6	16	629 0	7 9	7548 0
Harpacticoida								
Canthocamptus spp.		17.1	0.0	3.6	0	17.1	17.1	17.1

1 Sum = total number of individuals of a species
2 Dom (%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index: indicates the dominance of a taxa within a community

Appendix II - B5
Zooplankton Taxa Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Late Summer 1994

PHYLA CLASS Order Species	Stage	Sum[1]	Dom(%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ROTIFERA								
Kellicottia longispina		52590 6	5 9	85 7	46	900 6	134 8	12737 3
Conochilus unicornis		14995 4	1 7	78 6	20	252 7	7 9	3585 3
Unidentified		15949 9	1 8	21 4	6	111 0	7 6	11557 9
CRUSTACEA								
CLADOCERA								
Holopedium gibberum		37578 2	4 2	96 4	35	301 9	0 9	5896 9
Daphnia middendorffiana		7968 4	0 9	67 9	12	67 4	2 5	2109 0
Daphnia galatea mendotae		983 0	0 1	25 0	2	11 1	2 2	754 8
Daphnia longiremis		11456 4	1 3	17 9	11	660 5	222 0	6415 8
Bosmina longirostris		6300 2	0 7	71 4	14	69 0	1 1	2156 6
COPEPODA								
Calanoida								
Diaptomus pribilofensis	M	48617 2	5 5	82 1	41	1415 3	7 9	10614 4
Diaptomus pribilofensis	F	45116 2	5 1	82 1	40	1051 3	9 4	7170 6
Diaptomus sicilis	M	9949 9	1 1	35 7	8	334 2	11 1	3430 9
Diaptomus sicilis	F	16909 8	1 9	35 7	14	777 3	22 2	10121 2
Diaptomus ashlandi	M	28249 3	3 2	25 0	19	4009 9	1887 0	6660 0
Diaptomus ashlandi	F	33015 6	3 7	35 7	22	2997 0	12 6	8436 0
Diaptomus spp	V	141670 3	16 0	85 7	55	3133 8	7 6	21978 0
Diaptomus spp	IV	9489 4	1 1	28 6	11	1151 6	111 0	2695 7
Diaptomus spp	III	6485 6	0 7	10 7	6	2331 0	111 0	4043 6
Diaptomus spp	II	1930 6	0 2	10 7	2	471 8	111 0	1347 9
Diaptomus spp	I	2426 1	0 3	3 6	2	2426 1	2426 1	2426 1
Heterocope septentrionalis	M	1640 8	0 2	78 6	5	60 8	1 1	224 1
Heterocope septentrionalis	F	2268 3	0 3	85 7	9	73 6	1 1	320 8
Heterocope septentrionalis	V	340 5	0 0	7 1	1	170 3	7 6	333 0
Heterocope septentrionalis	II	377 4	0 0	3 6	1	377 4	377 4	377 4
Epischura nevadensis	M	1097 5	0 1	28 6	1	46 6	2 7	585 0
Epischura nevadensis	F	1097 2	0 1	35 7	3	57 8	1 9	366 3
Epischura nevadensis	V	1256 6	0 1	14 3	1	57 5	9 4	1132 2
Epischura nevadensis	IV	943 5	0 1	7 1	1	471 8	188 7	754 8
Epischura nevadensis	III	188 7	0 0	3 6	0	188 7	188 7	188 7
Epischura nevadensis	II	967 1	0 1	7 1	1	483 5	23 6	943 5
Calanoid spp	n	1827 7	0 2	14 3	3	471 8	75 5	808 7
Cyclopoida								
Cyclops scutifer	M	8590 9	1 0	39 3	11	188 7	11 1	5661 0
Cyclops scutifer	F	8514 8	1 0	60 7	13	235 9	2 7	3430 9
Cyclops b thomasi	M	3596 2	0 4	17 9	6	731 2	7 6	1347 9
Cyclops b thomasi	F	3081 2	0 3	14 3	6	424 6	75 5	2156 6
Eucyclops agilis	M	11 1	0 0	3 6	0	11 1	11 1	11 1
Cyclops spp	c	278034 0	31 3	100 0	86	6105 0	377 4	47175 0
Cyclops spp.	n	82220.3	9.3	67.9	36	1698.3	111.0	22408.1

1 Sum = total number of individuals of a species
2 Dom (%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index: indicates the dominance of a taxa within a community

Appendix II-B6

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Appendix II - B6

Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		01 Lac de Gras			02 Mike Lake			04 Martine Lake	
Date		July 8-94			July 9-94			July 9-94	
Depth (m)		3 m	8 m	16 m	3 m	9 m	16 m	2 m	4 5 m
Species	**Stage**								
COELENTERATA									
Hydra			59						
NEMATODA		1644	148	785	400	30	444	3289	3896
TURBELLARIA		15			15		15		30
OLIGOCHAETA									
Naididae									
Nais		370			30	30		44	104
Vejdovskyella									
Lumbriculidae									
Limnedrilus		30	30	15	133	30			15
Tubificidae	J								
Enchytraeidae				59			44		
Unidentified	J		59	15					
CLADOCERA									
Eurycercus					30				30
Alonella									
EUBRANCHIOPODA									
Triops									
HARPACTICOIDA									
Canthocamptidae									
OSTRACODA									
Cypria		178	30	222	104	15		30	15
Cypris									
Candona									
ARACHNIDA									
Hydracarina	A	74	30		15	44		44	44
Acarina (parasitic)	A			15					
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L	15	15		15				
Unidentified (tiny)	L					15			
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
Cybister	L								
HEMIPTERA	N								

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Appendix II - B6

Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		01 Lac de Gras			02 Mike Lake			04 Martine Lake	
Date		July 8-94			July 9-94			July 9-94	
Depth (m)		3 m	8 m	16 m	3 m	9 m	16 m	2 m	4 5 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L	104	15					15	
Chironomidae	L	356	163	119	15	15	44	1941	1422
Chironomidae	P								
Chironomini	L								
Chironomus	L								
Corynoneura	L								
Cricotopus	L		15	15			133		30
Cricotopus	P			74					
Demicryptochironomus	L								30
Diamesinae									
Dicrotendipes	L	15			267				44
Eukiefferiella	L	44	74	89	474	296	222	119	193
Eukiefferiella	P								
Gymnometriocnemus	L	104	15		104	44			
Heterotrissocladius	L	104	119	44					
Heterotrissocladius	P			148					
Micropsectra	L						44	30	
Microtendipes	L								
Monodiamesa	L								
Oreogoton	L								
Orthocladiinae	L				74				30
Orthocladiinae	P				44	15		15	
Paracladius	L								
Paracladopelma	L								
Paramerina	L	74	15						30
Paramerina	P								15
Paraphaenocladius	L								
Phaenopsectra	L	741	430		237	267	267	430	578
Phaenopsectra	P	44	44						
Potthastia	L								
Procladius	L	207	370	444	104	356	15	281	207
Procladius	P			30				15	
Protanypus	L	44	15	15	15	15		74	222
Protanypus	P					15			
Psectrocladius	L	148	89	30	770	104	15	370	1259
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L	133	89	133	15	15	30	889	2622
Rheotanytarsus	P							15	30
Stempellinella	L			15					
Stempellinella	P								
Tanypodinae	L								
Tanytarsini	L	15	15						
Tanytarsus	L	30	178	119	252			44	622
Tanytarsus	P							44	74
Thienemanniella	L								15
Tipula	L								
Tipulidae	L								
Zalutschia	L			15					
MOLLUSCA									
Gastropoda									
Valvata sincera		15						30	59
Pelecypoda									
Pisidium		2044	948	311	1926	889	178	755	2311

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Appendix II - B6

Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		05 Fox-3 Lake		07 Fox-1			08 Nora Lake		
Date		July 11-94		July 11-94			July 12-94		
Depth (m)		2 m	6 m	2 5 m	7 m	26 m	4 m	8 m	17 m
Species	**Stage**								
COELENTERATA									
Hydra			30					15	
NEMATODA		326	770	622	30	30	252	726	148
TURBELLARIA			15						
OLIGOCHAETA									
Naididae									
Nais		15	44	74					
Vejdovskyella									
Lumbriculidae									
Limnedrilus			15	104	104	44		30	
Tubificidae	J								
Enchytraeidae				148	30				
Unidentified	J		15	15					
CLADOCERA									
Eurycercus			44				59		
Alonella									
EUBRANCHIOPODA									
Triops									
HARPACTICOIDA									
Canthocamptidae									
OSTRACODA									
Cypria		15		44		15	44	296	44
Cypris									
Candona									
ARACHNIDA									
Hydracarina	A		30		30		104		15
Acarina (parasitic)	A							15	
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L			15			15		
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
Cybister	L								
HEMIPTERA	N								

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Appendix II - B6

Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		05 Fox-3 Lake		07 Fox-1			08 Nora Lake		
Date		July 11-94		July 11-94			July 12-94		
Depth (m)		2 m	6 m	2 5 m	7 m	26 m	4 m	8 m	17 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L								
Chironomidae	L	15	311	148				30	
Chironomidae	P		15						
Chironomini	L		15					15	
Chironomus	L								
Corynoneura	L								
Cricotopus	L						59	15	
Cricotopus	P								
Demicryptochironomus	L						59		
Diamesinae									
Dicrotendipes	L								
Eukiefferiella	L		74	59				30	30
Eukiefferiella	P								
Gymnometriocnemus	L			74	15			59	
Heterotrissocladius	L								
Heterotrissocladius	P								
Micropsectra	L		30				15		
Microtendipes	L						15		
Monodiamesa	L								
Oreogoton	L								
Orthocladiinae	L		30	163	15				
Orthocladiinae	P								
Paracladius	L								
Paracladopelma	L								
Paramerina	L			30		15	30	30	
Paramerina	P								
Paraphaenocladius	L								
Phaenopsectra	L	326	44	992	15			474	15
Phaenopsectra	P								
Potthastia	L								
Procladius	L	89	133	89	104	15	207	607	44
Procladius	P								
Protanypus	L		30	15				30	
Protanypus	P								
Psectrocladius	L		30	44			44	59	
Psectrocladius	P						15		
Pseudodiamesa	L								
Rheotanytarsus	L	30	119				267	119	30
Rheotanytarsus	P								
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L								
Tanytarsini	L	44	44						
Tanytarsus	L	59	133				30	89	148
Tanytarsus	P		15						
Thienemanniella	L								
Tipula	L								
Tipulidae	L								
Zalutschia	L								
MOLLUSCA									
Gastropoda									
Valvata sincera		15					59		
Pelecypoda									
Pisidium		667	533	430	252	30	815	1155	44

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		09 Slipper Lake			10 Nero Lake			12 Larry Lake	
Date		July 7-94			July 13-94			July 6-94	
Depth (m)		2 m	6 m	16 m	1 5 m	8 m	14 m	2 m	8 m
Species	**Stage**								
COELENTERATA									
Hydra									15
NEMATODA		637	533	30	918	148	104	16250	1215
TURBELLARIA		15	15	15		119	30	178	
OLIGOCHAETA									
Naididae									
Nais		74	237		1615	59	15	252	119
Vejdovskyella					444				
Lumbriculidae									
Limnedrilus					30	30		415	15
Tubificidae	J						30		
Enchytraeidae									
Unidentified	J					148		296	
CLADOCERA									
Eurycercus									
Alonella									
EUBRANCHIOPODA									
Triops							15		
HARPACTICOIDA									
Canthocamptidae									
OSTRACODA									
Cypria		133	30	15				770	30
Cypris									
Candona					178	15	15		
ARACHNIDA									
Hydracarina	A	30	59	30	148	59	30	119	15
Acarina (parasitic)	A								
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L						15	44	
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
Cybister	L								
HEMIPTERA	N								

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		09 Slipper Lake			10 Nero Lake			12 Larry Lake	
Date		July 7-94			July 13-94			July 6-94	
Depth (m)		2 m	6 m	16 m	1 5 m	8 m	14 m	2 m	8 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L								
Chironomidae	L		593	30	89	44		6148	44
Chironomidae	P								
Chironomini	L					15			
Chironomus	L		15		326		30	281	
Corynoneura	L								
Cricotopus	L								
Cricotopus	P					30			
Demicryptochironomus	L								
Diamesinae									
Dicrotendipes	L				474	59	133		15
Eukiefferiella	L	119	30	133	15	504	59	59	178
Eukiefferiella	P								
Gymnometriocnemus	L	133	15			15		59	
Heterotrissocladius	L								
Heterotrissocladius	P								
Micropsectra	L		15	15		15			15
Microtendipes	L								
Monodiamesa	L					89			
Oreogoton	L								
Orthocladiinae	L		15			474			30
Orthocladiinae	P			15		15		30	15
Paracladius	L								
Paracladopelma	L								
Paramerina	L	15	30					74	
Paramerina	P								
Paraphaenocladius	L								
Phaenopsectra	L	400		30	222	59	104	859	
Phaenopsectra	P	30							
Potthastia	L								
Procladius	L	311	563	44	89	44	119	755	178
Procladius	P			15					
Protanypus	L								
Protanypus	P								
Psectrocladius	L	44	74	237	89	252	15	370	207
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L				15	163		741	148
Rheotanytarsus	P					15			
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L							30	
Tanytarsini	L		15			30			15
Tanytarsus	L	830	2652	104	637	474	74	326	237
Tanytarsus	P		15		15				15
Thienemanniella	L								
Tipula	L								
Tipulidae	L								
Zalutschia	L								
MOLLUSCA									
Gastropoda									
Valvata sincera		15							
Pelecypoda									
Pisidium		1111	1022	178	1244	711	207	5377	518

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		14 Grizzly Lake			15 Moose Lake		17 Leslie Lake		
Date		June 30-94			July 6-94		July 14-94		
Depth (m)		1 m	5 m	43 m	2 m	9 m	3 m	6 m	11 m
Species	**Stage**								
COELENTERATA									
Hydra									
NEMATODA		207	15	119	4325	104	15		563
TURBELLARIA							15	15	15
OLIGOCHAETA									
Naididae									
Nais		2578			59	30	1081	30	89
Vejdovskyella									
Lumbriculidae									
Limnedrilus		459	30				15	30	
Tubificidae	J								15
Enchytraeldae									
Unidentified	J								
CLADOCERA									
Eurycercus									
Alonella									
EUBRANCHIOPODA									
Triops						15			
HARPACTICOIDA									
Canthocamptidae									
OSTRACODA									
Cypria		30			148				
Cypris									
Candona						15			
ARACHNIDA									
Hydracarina	A	30	30			119	15	15	44
Acarina (parasitic)	A								
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L	15					15	30	15
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
Cybister	L								
HEMIPTERA	N								

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		14 Grizzly Lake			15 Moose Lake		17 Leslie Lake		
Date		June 30-94			July 6-94		July 14-94		
Depth (m)		1 m	5 m	43 m	2 m	9 m	3 m	6 m	11 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L				30	15			
Chironomidae	L	385	44	15	637	74	74		
Chironomidae	P								
Chironomini	L		15						
Chironomus	L								
Corynoneura	L	15							
Cricotopus	L		15						
Cricotopus	P	15			15	15			
Demicryptochironomus	L								
Diamesinae									
Dicrotendipes	L								
Eukiefferiella	L	696	681	15		133	30	74	193
Eukiefferiella	P								
Gymnometriocnemus	L	207				15	15		59
Heterotrissocladius	L								
Heterotrissocladius	P								
Micropsectra	L								
Microtendipes	L								
Monodiamesa	L								
Oreogoton	L								
Orthocladiinae	L	148					15		
Orthocladiinae	P								
Paracladius	L								
Paracladopelma	L						237	119	
Paramerina	L	30						15	
Paramerina	P								
Paraphaenocladius	L								
Phaenopsectra	L	607		193		59	104	133	148
Phaenopsectra	P								59
Potthastia	L								
Procladius	L	133	44			74	178	104	133
Procladius	P								
Protanypus	L		44						
Protanypus	P								
Psectrocladius	L	296	89	30	133	15	237	44	44
Psectrocladius	P	15	104						
Pseudodiamesa	L								
Rheotanytarsus	L	89	15			44	15	15	44
Rheotanytarsus	P								
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L	15							
Tanytarsini	L								
Tanytarsus	L	444	89	15		74	15	30	30
Tanytarsus	P								
Thienemanniella	L								
Tipula	L								
Tipulidae	L								
Zalutschia	L								
MOLLUSCA									
Gastropoda									
Valvata sincera									
Pelecypoda									
Pisidium		1244	207		518	44		104	341

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		19 Long Lake (S)			20 Long Lake (N)			23 Little Lake		
Date		July 14-94			July 15-94			July 4-94		
Depth (m)		3 m	6 m	32 m	2 m	5 m	22 m	2 m	8 m	20 m
Species	**Stage**									
COELENTERATA										
Hydra										
NEMATODA		44	59	178	163	89	15	978	237	133
TURBELLARIA				15				15	15	
OLIGOCHAETA										
Naididae										
Nais			59					59		15
Vejdovskyella										
Lumbriculidae										
Limnedrilus		30	44			30		89		
Tubificidae	J									
Enchytraeidae								15		
Unidentified	J					15				
CLADOCERA										
Eurycercus										
Alonella										
EUBRANCHIOPODA										
Triops										
HARPACTICOIDA										
Canthocamptidae										
OSTRACODA										
Cypria			15		74	15		59		
Cypris										
Candona										
ARACHNIDA										
Hydracarina	A				15			44	44	
Acarina (parasitic)	A								15	
TRICHOPTERA										
Leptoceridae										
Mystacides	L									
Limnephilidae										
Grensia	L				15			15		
Unidentified (tiny)	L									
COLEOPTERA										
Dytiscidae										
Brachyvatus	A									
Cybister	L									
HEMIPTERA	N									

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		19 Long Lake (S)			20 Long Lake (N)			23 Little Lake		
Date		July 14-94			July 15-94			July 4-94		
Depth (m)		3 m	6 m	32 m	2 m	5 m	22 m	2 m	8 m	20 m
Species	**Stage**									
DIPTERA										
Empididae										
Chelifera	L							30		
Chironomidae	L			74	15	59		222	15	74
Chironomidae	P									
Chironomini	L						15	15		15
Chironomus	L		30							30
Corynoneura	L									
Cricotopus	L									
Cricotopus	P									
Demicryptochironomus	L									
Diamesinae										
Dicrotendipes	L									
Eukiefferiella	L	15	15	104		15	770	341	133	30
Eukiefferiella	P									
Gymnometriocnemus	L	30	15			44		44	15	
Heterotrissocladius	L									
Heterotrissocladius	P									
Micropsectra	L									
Microtendipes	L					59				
Monodiamesa	L									
Oreogoton	L									
Orthocladiinae	L					15		44		
Orthocladiinae	P		15						30	
Paracladius	L									
Paracladopelma	L		15	15						
Paramerina	L				15					
Paramerina	P									
Paraphaenocladius	L									
Phaenopsectra	L	741	104	370	252	385	15	444	15	
Phaenopsectra	P	15								
Potthastia	L									
Procladius	L	15	15	15	44	89	44	193	15	74
Procladius	P							15		
Protanypus	L			15		30			15	
Protanypus	P									
Psectrocladius	L				222	207	15	356	89	
Psectrocladius	P									
Pseudodiamesa	L						15			
Rheotanytarsus	L			178	44	15		133	15	30
Rheotanytarsus	P							15		
Stempellinella	L									
Stempellinella	P									
Tanypodinae	L									
Tanytarsini	L							15		
Tanytarsus	L	15		89	15			59	15	15
Tanytarsus	P									
Thienemanniella	L				15					
Tipula	L									
Tipulidae	L							30		
Zalutschia	L									
MOLLUSCA										
Gastropoda										
Valvata sincera			15					44		
Pelecypoda										
Pisidium		119	44	133	133	667	44	1185	400	207

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		25 Kodiak Lake			27 Koala Lake			29 Panda Lake		
Date		July 2-94			July 3-94			June 28-94		
Depth (m)		3 m	6 m	14 m	2 m	9 m	20 m	1 m	10 m	18 m
Species	**Stage**									
COELENTERATA										
Hydra				15						
NEMATODA		29449	2163	104	104	30	44	13643		30
TURBELLARIA								30	15	
OLIGOCHAETA										
Naididae										
Nais		415	252	30	222	15	15	74	89	
Vejdovskyella										
Lumbriculidae										
Limnedrilus		237	74	44	44	30		119		
Tubificidae	J									
Enchytraeidae										
Unidentified	J	178						652	15	
CLADOCERA										
Eurycercus										
Alonella										
EUBRANCHIOPODA										
Triops										
HARPACTICOIDA										
Canthocamptidae			15					296		
OSTRACODA										
Cypria		89		15				15		
Cypris										
Candona										
ARACHNIDA										
Hydracarina	A			30				44	44	44
Acarina (parasitic)	A									
TRICHOPTERA										
Leptoceridae										
Mystacides	L							15		
Limnephilidae										
Grensia	L									
Unidentified (tiny)	L									
COLEOPTERA										
Dytiscidae										
Brachyvatus	A									
Cybister	L									
HEMIPTERA	N								15	

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		25 Kodiak Lake			27 Koala Lake			29 Panda Lake		
Date		July 2-94			July 3-94			June 28-94		
Depth (m)		3 m	6 m	14 m	2 m	9 m	20 m	1 m	10 m	18 m
Species	**Stage**									
DIPTERA										
Empididae										
Chelifera	L				59			385		
Chironomidae	L	533	193	74	15			1733		119
Chironomidae	P				15					
Chironomini	L							15		
Chironomus	L			15						
Corynoneura	L									
Cricotopus	L	30						15		15
Cricotopus	P							15		
Demicryptochironomus	L									
Diamesinae										
Dicrotendipes	L			15	15					
Eukiefferiella	L				44	15		15	163	44
Eukiefferiella	P							15	148	
Gymnometriocnemus	L		15		74		15			
Heterotrissocladius	L									
Heterotrissocladius	P									
Micropsectra	L									
Microtendipes	L		89							
Monodiamesa	L									
Oreogoton	L									
Orthocladiinae	L									15
Orthocladiinae	P									
Paracladius	L									
Paracladopelma	L									
Paramerina	L	89	30						15	30
Paramerina	P		15							
Paraphaenocladius	L									
Phaenopsectra	L	178		15	459	178		133		
Phaenopsectra	P									
Potthastia	L									
Procladius	L	356	104	15	104	44	15	178	74	89
Procladius	P		15	30						
Protanypus	L									
Protanypus	P									
Psectrocladius	L	474	44	30	15	30		296	30	44
Psectrocladius	P									
Pseudodiamesa	L									
Rheotanytarsus	L	148	133					74	15	15
Rheotanytarsus	P									
Stempellinella	L									
Stempellinella	P									
Tanypodinae	L									
Tanytarsini	L									
Tanytarsus	L	2311	370	74				844		44
Tanytarsus	P	59	15							
Thienemanniella	L									
Tipula	L									
Tipulidae	L									
Zalutschia	L									
MOLLUSCA										
Gastropoda										
Valvata sincera										
Pelecypoda										
Pisidium		978	711	311	1541	59	104		104	74

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		32 Vulture Lake			35 Ursula Lake (E)			38 Sieve Lake		44 Arnie Lake
Date		July 1-94			July 16-94			July 16-94		Aug 5-94
Depth (m)		2 m	5 m	35 m	3 m	5 m	17 m	3 m	9 5 m	4 m
Species	**Stage**									
COELENTERATA										
Hydra										
NEMATODA		104	356	44	622	59		3644		104
TURBELLARIA								148		
OLIGOCHAETA										
Naididae										
Nais		133	104			15		104		15
Vejdovskyella										
Lumbriculidae										
Limnedrilus		89	119		30	15		44		
Tubificidae	J		15					74	15	
Enchytraeidae			74							
Unidentified	J				30			148		
CLADOCERA										
Eurycercus		15								
Alonella										
EUBRANCHIOPODA										
Triops										
HARPACTICOIDA										
Canthocamptidae					148					
OSTRACODA										
Cypria		15	163		89	15		15		
Cypris										30
Candona										15
ARACHNIDA										
Hydracarina	A	15		15				15		
Acarina (parasitic)	A									
TRICHOPTERA										
Leptoceridae										
Mystacides	L									
Limnephilidae										
Grensia	L	15						15		
Unidentified (tiny)	L									
COLEOPTERA										
Dytiscidae										
Brachyvatus	A							15		
Cybister	L									
HEMIPTERA	N									

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Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		32 Vulture Lake			35 Ursula Lake (E)			38 Sieve Lake		44 Arnie Lake
Date		July 1-94			July 16-94			July 16-94		Aug 5-94
Depth (m)		2 m	5 m	35 m	3 m	5 m	17 m	3 m	9 5 m	4 m
Species	**Stage**									
DIPTERA										
Empididae										
Chelifera	L									
Chironomidae	L	15	133	30		30		3170	44	459
Chironomidae	P	44	104							
Chironomini	L							59		
Chironomus	L				15	89				133
Corynoneura	L									
Cricotopus	L	15					15	15		
Cricotopus	P	30								
Demicryptochironomus	L							30		
Diamesinae										
Dicrotendipes	L				15					15
Eukiefferiella	L	30	533	711	44	30	133	15		
Eukiefferiella	P									
Gymnometriocnemus	L				30					
Heterotrissocladius	L		15							
Heterotrissocladius	P									
Micropsectra	L		15	30						
Microtendipes	L								15	30
Monodiamesa	L									
Oreogoton	L									
Orthocladiinae	L				15					
Orthocladiinae	P							30		
Paracladius	L									
Paracladopelma	L	15								
Paramerina	L		30		74				15	15
Paramerina	P									
Paraphaenocladius	L									
Phaenopsectra	L		874	74	2103	326	15	178		44
Phaenopsectra	P									
Potthastia	L									
Procladius	L		15	44	178		44	178	15	311
Procladius	P		30							
Protanypus	L		44							
Protanypus	P									
Psectrocladius	L	15	30	15	459	89		59	30	163
Psectrocladius	P		59	30	15					
Pseudodiamesa	L									
Rheotanytarsus	L		193	104	193			148	281	163
Rheotanytarsus	P		133	15				30		
Stempellinella	L		119							
Stempellinella	P		44							
Tanypodinae	L									
Tanytarsini	L									
Tanytarsus	L	30	222	44	119	15	30		133	652
Tanytarsus	P								30	
Thienemanniella	L									
Tipula	L	89								
Tipulidae	L									
Zalutschia	L									1185
MOLLUSCA										
Gastropoda										
Valvata sincera		30	44							
Pelecypoda										
Pisidium		15	711	104	74	74	59	726	296	815

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		46 Mark Lake		48 Misery Lake			51 Bat Lake
Date		July 29-94		July 30-94			July 31-94
Depth (m)		2 m	7 m	3 m	6 m	28 m	4 m
Species	**Stage**						
COELENTERATA							
Hydra							
NEMATODA		207	593	15	104		1155
TURBELLARIA							
OLIGOCHAETA							
Naididae							
Nais		30			15		30
Vejdovskyella							30
Lumbriculidae							
Limnedrilus				30	74		74
Tubificidae	J	44					
Enchytraeidae							
Unidentified	J			15			
CLADOCERA							
Eurycercus		281	15				
Alonella		59					
EUBRANCHIOPODA							
Triops							
HARPACTICOIDA							
Canthocamptidae							
OSTRACODA							
Cypria			30	15	59		
Cypris							
Candona							
ARACHNIDA							
Hydracarina	A	30	44	15	30	15	30
Acarina (parasitic)	A						
TRICHOPTERA							
Leptoceridae							
Mystacides	L						
Limnephilidae							
Grensia	L		15				
Unidentified (tiny)	L						
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
Cybister	L	15					
HEMIPTERA	N						

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		46 Mark Lake		48 Misery Lake			51 Bat Lake
Date		July 29-94		July 30-94			July 31-94
Depth (m)		2 m	7 m	3 m	6 m	28 m	4 m
Species	**Stage**						
DIPTERA							
Empididae							
Chelifera	L						
Chironomidae	L	963	1763	44		30	1126
Chironomidae	P						
Chironomini	L						
Chironomus	L					30	
Corynoneura	L						
Cricotopus	L	15					
Cricotopus	P						
Demicryptochironomus	L						133
Diamesinae							
Dicrotendipes	L						533
Eukiefferiella	L						
Eukiefferiella	P						
Gymnometriocnemus	L	15		30	74		
Heterotrissocladius	L						
Heterotrissocladius	P						
Micropsectra	L		59				15
Microtendipes	L						533
Monodiamesa	L						
Oreogoton	L						
Orthocladiinae	L						
Orthocladiinae	P						
Paracladius	L						
Paracladopelma	L						59
Paramerina	L				15		
Paramerina	P						
Paraphaenocladius	L						
Phaenopsectra	L	15		341	15	15	489
Phaenopsectra	P						
Potthastia	L						
Procladius	L	444	30	148	15	44	518
Procladius	P						
Protanypus	L			15	30		
Protanypus	P						
Psectrocladius	L		44				178
Psectrocladius	P						
Pseudodiamesa	L						
Rheotanytarsus	L	10132	11095				1141
Rheotanytarsus	P		44				
Stempellinella	L						
Stempellinella	P						
Tanypodinae	L						
Tanytarsini	L						
Tanytarsus	L	15	74			15	193
Tanytarsus	P						
Thienemanniella	L						
Tipula	L						
Tipulidae	L						
Zalutschia	L						
MOLLUSCA							
Gastropoda							
Valvata sincera							
Pelecypoda							
Pisidium		1052	237	296	89		1659

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		52 Paul Lake (E)			53 Paul Lake (W)			54 Lac de Gras Lake (Mis Pt)		
Date		Aug 1-94			Aug 1-94			July 31-94		
Depth (m)		3 m	5 m	12 m	3 m	8 m	12 m	3 m	6 m	31 m
Species	**Stage**									
COELENTERATA										
Hydra										
NEMATODA		193	548	178	178	133	59	889	637	178
TURBELLARIA			15			44				
OLIGOCHAETA										
Naididae										
Nais		104	44	59				30	104	15
Vejdovskyella										
Lumbriculidae										
Limnedrilus			74		178			207	89	30
Tubificidae	J		15						44	
Enchytraeidae			15			15			30	
Unidentified	J	15	44						15	
CLADOCERA										
Eurycercus			15							
Alonella										
EUBRANCHIOPODA										
Triops										
HARPACTICOIDA										
Canthocamptidae										
OSTRACODA										
Cypria								193	104	
Cypris										
Candona					15			15	59	
ARACHNIDA										
Hydracarina	A					74			59	
Acarina (parasitic)	A									
TRICHOPTERA										
Leptoceridae										
Mystacides	L									
Limnephilidae										
Grensia	L							15		
Unidentified (tiny)	L									
COLEOPTERA										
Dytiscidae										
Brachyvatus	A									
Cybister	L									
HEMIPTERA	N									

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) June-August 1994

Sample Site		52 Paul Lake (E)			53 Paul Lake (W)			54 Lac de Gras Lake (Mis Pt)		
Date		Aug 1-94			Aug 1-94			July 31-94		
Depth (m)		3 m	5 m	12 m	3 m	8 m	12 m	3 m	6 m	31 m
Species	**Stage**									
DIPTERA										
Empididae										
Chelifera	L	15	119		74	15		30		
Chironomidae	L	207	6148	415		252	74	15		
Chironomidae	P	15	15							
Chironomini	L						15			
Chironomus	L			74						
Corynoneura	L									
Cricotopus	L	15		15						
Cricotopus	P									
Demicryptochironomus	L					15				
Diamesinae										
Dicrotendipes	L	30								
Eukiefferiella	L									
Eukiefferiella	P									
Gymnometriocnemus	L	74	119		119	74		15	44	
Heterotrissocladius	L							104	74	15
Heterotrissocladius	P									
Micropsectra	L		311	15			44	30	30	
Microtendipes	L	193	1822		30					
Monodiamesa	L									
Oreogoton	L							30		
Orthocladiinae	L									
Orthocladiinae	P							30		15
Paracladius	L							15		
Paracladopelma	L									
Paramerina	L	15		15					15	
Paramerina	P									
Paraphaenocladius	L									15
Phaenopsectra	L	163	607	74	1155	815	30	44	267	
Phaenopsectra	P						15			
Potthastia	L		15							
Procladius	L	44	356	133	133	89	44	267	148	133
Procladius	P						15			
Protanypus	L								30	30
Protanypus	P									
Psectrocladius	L			15				104	104	
Psectrocladius	P								15	
Pseudodiamesa	L									
Rheotanytarsus	L		252	104	15	104	104	104	311	
Rheotanytarsus	P							89	59	
Stempellinella	L									
Stempellinella	P									
Tanypodinae	L									
Tanytarsini	L									
Tanytarsus	L	15	311	104	30	44	89	15	30	
Tanytarsus	P			15			30			
Thienemanniella	L									
Tipula	L									
Tipulidae	L									
Zalutschia	L	1037	2089	2103	15	430	311	15		
MOLLUSCA										
Gastropoda										
Valvata sincera		15	59							
Pelecypoda										
Pisidium		370	2178	637	578	696	296	489	844	15

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Appendix II - B6

Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		01 Lac de Gras			02 Mike Lake			Site 04	
Date		Aug 14-94			Aug 16-94			Aug 16-94	
Depth (m)		4 m	8 m	17 m	3 5 m	9 m	17 m	2 5 m	6 5 m
Species	**Stage**								
COELENTERATA									
Hydra									
NEMATODA		1081	2770	2044	30	89	74	326	44
TURBELLARIA					15				
OLIGOCHAETA									
Naididae									
Nais		370		104		30	15	15	30
Vejdovskyella									
Lumbriculidae									
Limnedrilus		59		15				89	
Tubificidae	J	15						15	
Enchytraeidae			1037	859			30		
Unidentified	J	15					30		
CLADOCERA									
Eurycercus		30	44			222		44	15
Alonella									
HARPACTICOIDA									
Canthocamptidae									15
OSTRACODA									
Cypria		267		222	119	15	15	444	30
Cypris									
Candona									
ARACHNIDA									
Hydracarina	A	15	44			15			44
Acarina (parasitic)	A								
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L	15	15	15					
Grensia	P								
Onocosmoecus	L								
Phryganeidae									
Agrypnia	L								
Hydroptilidae									
Agraylea	L								
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
LEPIDOPTERA									
Unidentified	L								

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		01 Lac de Gras			02 Mike Lake			Site 04	
Date		Aug 14-94			Aug 16-94			Aug 16-94	
Depth (m)		4 m	8 m	17 m	3 5 m	9 m	17 m	2 5 m	6 5 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L		15						
Chironomidae	L	1318	1170	1111	119	133		59	119
Chironomidae	P						15		
Chironomini	L								
Chironomus	L								
Corynoneura	L								
Cricotopus	L			178				15	
Cricotopus	P			193					
Demicryptochironomus	L							133	
Diamesinae									
Dicranota	L								
Dicrotendipes	L				59				15
Eukiefferiella	L		30	30					
Gymnometriocnemus	L	119	30	30	44	15	30	30	
Heterotanytarsus	L								
Heteroctrissocladius	L	15	30	59					
Limnophora	L								
Micropsectra	L								889
Microtendipes	L							15	
Orthocladiinae	L						15	15	
Orthocladiinae	P		15	30					
Pagastiella	L								
Parachironomus	P								
Paracladopelma	L							148	44
Paramerina	L	59	15					89	30
Phaenopsectra	L	607	74	59	148	44	444	267	59
Phaenopsectra	P								
Potthastia	L								
Procladius	L	252	415	385	148	119	104	607	385
Procladius	P			15					
Protanypus	L	59	237		44	44			30
Protanypus	P				15	15	15		
Psectrocladius	L	59	652	341	133	370	30	15	104
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L	89	1422	415				518	652
Rheotanytarsus	P			15					
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L	15	15	74					
Tanytarsini	L				15				
Tanytarsus	L	44	119	222			30		4029
Tanytarsus	P								74
Zalutschia	P				30				
MOLLUSCA									
Gastropoda									
Valvata sincera		104						178	
Pelecypoda									
Pisidium		1111	356	533		415	474	815	533

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		05 Fox 3 Lake		07 Fox 1 Lake			08 Nora Lake		
Date		Aug 27-94		Aug 28-94			Aug 26-94		
Depth (m)		4 m	7 m	2m	6m	21m	4m	5m	14 5m
Species	**Stage**								
COELENTERATA									
Hydra									
NEMATODA		178	815	4296	74		222	44	30
TURBELLARIA									
OLIGOCHAETA									
Naididae									
Nais		15	15	356	15		15	30	
Vejdovskyella									
Lumbriculidae									
Limnedrilus		15	30	252		44	30	15	
Tubificidae	J								
Enchytraeidae									
Unidentified	J			444					
CLADOCERA									
Eurycercus		59	296				15	15	
Alonella									
HARPACTICOIDA									
Canthocamptidae									
OSTRACODA									
Cypria		74	459	148				59	
Cypris									
Candona		44							
ARACHNIDA									
Hydracarina	A		74	15					
Acarina (parasitic)	A								
TRICHOPTERA									
Leptoceridae									
Mystacides	L								
Limnephilidae									
Grensia	L			15					
Grensia	P								
Onocosmoecus	L								
Phryganeidae									
Agrypnia	L								
Hydroptilidae									
Agraylea	L								
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
LEPIDOPTERA									
Unidentified	L								

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		05 Fox 3 Lake		07 Fox 1 Lake			08 Nora Lake		
Date		Aug 27-94		Aug 28-94			Aug 26-94		
Depth (m)		4 m	7 m	2m	6m	21m	4m	5m	14 5m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L								
Chironomidae	L	252	504	844	133	15	15		
Chironomidae	P								
Chironomini	L								
Chironomus	L		44						15
Corynoneura	L								
Cricotopus	L								
Cricotopus	P								
Demicryptochironomus	L	44	15				15	15	
Diamesinae									
Dicranota	L								
Dicrotendipes	L		30	104					
Eukiefferiella	L	15	15		15				
Gymnometriocnemus	L			30					
Heterotanytarsus	L								
Heteroctrissocladius	L	44	578						
Limnophora	L								
Micropsectra	L	755	4888						
Microtendipes	L		15						
Orthocladiinae	L								
Orthocladiinae	P								
Pagastiella	L	237	15						
Parachironomus	P								
Paracladopelma	L								
Paramerina	L		44	44					
Phaenopsectra	L	430	15	1141	356		104	163	89
Phaenopsectra	P								
Potthastia	L								
Procladius	L	178	489	311	74	148	30	15	
Procladius	P								
Protanypus	L		15	15					
Protanypus	P								
Psectrocladius	L		74	711	59				
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L	89	30						
Rheotanytarsus	P								
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L								
Tanytarsini	L								
Tanytarsus	L	44	415	44	89		15		
Tanytarsus	P								
Zalutschia	P		15						
MOLLUSCA									
Gastropoda									
Valvata sincera									
Pelecypoda									
Pisidium		637	444	2355	193	133	89	44	

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		09 Slipper Lake			10 Nero Lake			12 Larry Lake	
Date		Aug 15-94			Aug 23-94			Aug 22-94	
Depth (m)		2 5 m	8 m	11 m	4 m	5 m	13 m	1 m	7 m
Species	**Stage**								
COELENTERATA									
Hydra								30	
NEMATODA		193	59	15	281	133	119	1733	2415
TURBELLARIA			15		15				30
OLIGOCHAETA									
Naididae									
Nais		193	119	74	800	44		74	44
Vejdovskyella									
Lumbriculidae									
Limnedrilus		44			104	44		193	89
Tubificidae	J			15	15				
Enchytraeidae			30					44	
Unidentified	J	15			74			607	148
CLADOCERA									
Eurycercus		30			44				
Alonella									
HARPACTICOIDA									
Canthocamptidae								30	
OSTRACODA									
Cypria			44		400	133			148
Cypris									
Candona				89		15		15	
ARACHNIDA									
Hydracarina	A			30	44	119	104	15	59
Acarina (parasitic)	A					15			
TRICHOPTERA									
Leptoceridae									
Mystacides	L	15						30	
Limnephilidae									
Grensia	L				15				
Grensia	P								15
Onocosmoecus	L								
Phryganeidae									
Agrypnia	L				15				
Hydroptilidae									
Agraylea	L								
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A								
LEPIDOPTERA									
Unidentified	L								

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		09 Slipper Lake			10 Nero Lake			12 Larry Lake	
Date		Aug 15-94			Aug 23-94			Aug 22-94	
Depth (m)		2 5 m	8 m	11 m	4 m	5 m	13 m	1 m	7 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L	15						30	15
Chironomidae	L	1437	341		474	430	59	1392	1185
Chironomidae	P								
Chironomini	L								
Chironomus	L								15
Corynoneura	L								
Cricotopus	L				15			15	
Cricotopus	P								
Demicryptochironomus	L								
Diamesinae									
Dicranota	L								
Dicrotendipes	L	44			178	30		237	30
Eukiefferiella	L	15	44	15	89	104	15	15	593
Gymnometriocnemus	L	30	44		15	15	15	30	15
Heterotanytarsus	L								
Heteroctrissocladius	L	30							
Limnophora	L								
Micropsectra	L			15	222	15	15		1866
Microtendipes	L								
Orthocladiinae	L							30	
Orthocladiinae	P							30	30
Pagastiella	L				178				
Parachironomus	P								
Paracladopelma	L								
Paramerina	L	15		15	15	30		15	44
Phaenopsectra	L	89	119		755	59	148	222	30
Phaenopsectra	P								
Potthastia	L								
Procladius	L	133	163	59	222	59	15	415	444
Procladius	P								
Protanypus	L	15	15			59	15		30
Protanypus	P								
Psectrocladius	L		44	15	148	59	15	44	15
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L	44			15	15		30	1511
Rheotanytarsus	P								
Stempellinella	L								
Stempellinella	P								
Tanypodinae	L								
Tanytarsini	L		237	74				44	
Tanytarsus	L	163	267	548	44	15	133	30	963
Tanytarsus	P								
Zalutschia	P			15					
MOLLUSCA									
Gastropoda									
Valvata sincera		30							
Pelecypoda									
Pisidium		1230	637	237	2103	1052	44		267

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		14 Grizzly Lake			15 Moose Lake		17 Leslie Lake		
Date		Aug 13-94			Aug 22-94		Aug 22-94		
Depth (m)		1 m	6 m	37 m	1 5 m	9 m	3 m	5 m	11 m
Species	**Stage**								
COELENTERATA									
Hydra									
NEMATODA		1985	89	30	1629	1822	4296	593	415
TURBELLARIA		15					15		
OLIGOCHAETA									
Naididae									
Nais		89	74		104	44	4118	2740	74
Vejdovskyella									
Lumbriculidae									
Limnedrilus					89	15	385	74	
Tubificidae	J		44		44			15	44
Enchytraeidae		548			444		326	148	
Unidentified	J	415	15			148	370		
CLADOCERA									
Eurycercus					148				
Alonella									
HARPACTICOIDA									
Canthocamptidae		59					74		
OSTRACODA									
Cypria					163	296			
Cypris									
Candona		15					15		
ARACHNIDA									
Hydracarina	A		44				89	15	
Acarina (parasitic)	A								
TRICHOPTERA									
Leptoceridae									
Mystacides	L						15		
Limnephilidae									
Grensia	L		15				44	44	15
Grensia	P								
Onocosmoecus	L								
Phryganeidae									
Agrypnia	L								
Hydroptilidae									
Agraylea	L								
Unidentified (tiny)	L								
COLEOPTERA									
Dytiscidae									
Brachyvatus	A	15							
LEPIDOPTERA									
Unidentified	L								

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Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		14 Grizzly Lake			15 Moose Lake		17 Leslie Lake		
Date		Aug 13-94			Aug 22-94		Aug 22-94		
Depth (m)		1 m	6 m	37 m	1 5 m	9 m	3 m	5 m	11 m
Species	**Stage**								
DIPTERA									
Empididae									
Chelifera	L				148				
Chironomidae	L	1496	15		11110	2755	1378	400	
Chironomidae	P								
Chironomini	L					15			
Chironomus	L								
Corynoneura	L	15							
Cricotopus	L		15		400				
Cricotopus	P								
Demicryptochironomus	L	30			74				
Diamesinae									
Dicranota	L	59							
Dicrotendipes	L	15			207	30			
Eukiefferiella	L	104	15			30	133		15
Gymnometriocnemus	L				15	15	207	163	
Heterotanytarsus	L								
Heteroctrissocladius	L		15	30					
Limnophora	L	44							
Micropsectra	L		15						
Microtendipes	L								
Orthocladiinae	L								
Orthocladiinae	P					44			
Pagastiella	L								
Parachironomus	P				15	15			
Paracladopelma	L								
Paramerina	L				548	44	444	15	
Phaenopsectra	L	933	119	267	459		1541	1081	
Phaenopsectra	P			15					
Potthastia	L								
Procladius	L	15	89	15	237	15	415	237	89
Procladius	P								
Protanypus	L		15	30	15			44	15
Protanypus	P								
Psectrocladius	L	341	44		992	119	518	44	15
Psectrocladius	P								
Pseudodiamesa	L								
Rheotanytarsus	L	59	15		30	74	15		30
Rheotanytarsus	P								
Stempellinella	L					15			
Stempellinella	P								
Tanypodinae	L						30		
Tanytarsini	L								
Tanytarsus	L	59	15			44	30	15	
Tanytarsus	P								
Zalutschia	P								
MOLLUSCA									
Gastropoda									
Valvata sincera					207				
Pelecypoda									
Pisidium		119	326		667	148	3614	1659	696

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		19 Long Lake (S)			20 Long Lake (N)		
Date		Aug 29-94			Aug 29-94		
Depth (m)		4 m	10 m	30 m	3 5 m	8 m	25 m
Species	**Stage**						
COELENTERATA							
Hydra							
NEMATODA		30	104		1022	1126	15
TURBELLARIA						15	30
OLIGOCHAETA							
Naididae							
Nais					30		
Vejdovskyella							
Lumbriculidae							
Limnedrilus						15	
Tubificidae	J		15				
Enchytraeidae		15	15	15	296	178	
Unidentified	J						
CLADOCERA							
Eurycercus							
Alonella							
HARPACTICOIDA							
Canthocamptidae							
OSTRACODA							
Cypria					444	148	
Cypris							
Candona							
ARACHNIDA							
Hydracarina	A						15
Acarina (parasitic)	A						
TRICHOPTERA							
Leptoceridae							
Mystacides	L						
Limnephilidae							
Grensia	L				15		
Grensia	P						
Onocosmoecus	L						
Phryganeidae							
Agrypnia	L						
Hydroptilidae							
Agraylea	L						
Unidentified (tiny)	L						
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
LEPIDOPTERA							
Unidentified	L						

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		19 Long Lake (S)			20 Long Lake (N)		
Date		Aug 29-94			Aug 29-94		
Depth (m)		4 m	10 m	30 m	3 5 m	8 m	25 m
Species	Stage						
DIPTERA							
Empididae							
Chelifera	L						
Chironomidae	L		74	15	2681	356	148
Chironomidae	P						
Chironomini	L						
Chironomus	L						
Corynoneura	L						
Cricotopus	L				15		30
Cricotopus	P						
Demicryptochironomus	L						
Diamesinae							
Dicranota	L						
Dicrotendipes	L	15	44		148	370	15
Eukiefferiella	L	15	74	15	119	15	
Gymnometriocnemus	L	15				30	30
Heterotanytarsus	L					15	
Heteroctrissocladius	L		178	74			
Limnophora	L						
Micropsectra	L						
Microtendipes	L	44	741		963	8221	74
Orthocladiinae	L						
Orthocladiinae	P						
Pagastiella	L						
Parachironomus	P						
Paracladopelma	L						
Paramerina	L		15		163	44	
Phaenopsectra	L			59		104	474
Phaenopsectra	P					15	
Potthastia	L						
Procladius	L	44	74	15	15	237	44
Procladius	P						
Protanypus	L					30	15
Protanypus	P						
Psectrocladius	L		119		74	178	15
Psectrocladius	P						
Pseudodiamesa	L		15				
Rheotanytarsus	L				119	163	
Rheotanytarsus	P						
Stempellinella	L						
Stempellinella	P						
Tanypodinae	L						
Tanytarsini	L						
Tanytarsus	L	30	74	74	193	1037	89
Tanytarsus	P						
Zalutschia	P						
MOLLUSCA							
Gastropoda							
Valvata sincera							
Pelecypoda							
Pisidium		163	415	163	163	356	207

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		23 Little Lake			25 Kodiak Lake		
Date		Aug 21-94			Aug 19-94		
Depth (m)		2 m	5 m	17 m	2 m	9 m	11 m
Species	**Stage**						
COELENTERATA							
Hydra			15		15		
NEMATODA		6607	711	222	3585	89	
TURBELLARIA			119		30		
OLIGOCHAETA							
Naididae							
Nais		518	148		59	59	59
Vejdovskyella							
Lumbriculidae							
Limnedrilus		89	30	15	252	15	
Tubificidae	J	30	30	15	15		15
Enchytraeidae		15	104		1126		
Unidentified	J	459			15		
CLADOCERA							
Eurycercus		178	133		30		
Alonella		474					
HARPACTICOIDA							
Canthocamptidae							
OSTRACODA							
Cypria		148	15		104		
Cypris							
Candona							
ARACHNIDA							
Hydracarina	A	207	148	15	74	15	
Acarina (parasitic)	A	296					
TRICHOPTERA							
Leptoceridae							
Mystacides	L	44			15		
Limnephilidae							
Grensia	L						
Grensia	P						
Onocosmoecus	L						
Phryganeidae							
Agrypnia	L				15		
Hydroptilidae							
Agraylea	L						
Unidentified (tiny)	L						
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
LEPIDOPTERA							
Unidentified	L						15

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		23 Little Lake			26 Kodiak Lake		
Date		Aug 21-94			Aug 19-94		
Depth (m)		2 m	5 m	17 m	2 m	9 m	11 m
Species	**Stage**						
DIPTERA							
Empididae							
Chelifera	L	15			104		
Chironomidae	L	11836	3140	296	3259	207	
Chironomidae	P						
Chironomini	L						
Chironomus	L	74		15			
Corynoneura	L						
Cricotopus	L						
Cricotopus	P						
Demicryptochironomus	L					44	
Diamesinae							
Dicranota	L						
Dicrotendipes	L	1541	74		1644	44	15
Eukiefferiella	L	163	148		1348	15	
Gymnometriocnemus	L	15					15
Heterotanytarsus	L						
Heteroctrissocladius	L						
Limnophora	L						
Micropsectra	L						
Microtendipes	L	178	74				
Orthocladiinae	L						
Orthocladiinae	P						
Pagastiella	L						
Parachironomus	P	133			89		
Paracladopelma	L						
Paramerina	L	222	15		207	15	
Phaenopsectra	L	3348	178	489	652	607	74
Phaenopsectra	P						
Potthastia	L						
Procladius	L	607	104	89	252	207	119
Procladius	P						
Protanypus	L		59				
Protanypus	P						
Psectrocladius	L	104	30	30	119		
Psectrocladius	P						
Pseudodiamesa	L						
Rheotanytarsus	L	681	163		785		
Rheotanytarsus	P						
Stempellinella	L						
Stempellinella	P						
Tanypodinae	L						
Tanytarsini	L				163		
Tanytarsus	L	281	326	59	207	15	59
Tanytarsus	P						
Zalutschia	P						
MOLLUSCA							
Gastropoda							
Valvata sincera		252			44		
Pelecypoda							
Pisidium		3511	963	252	1081	518	119

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		27 Koala Lake			29 Panda Lake		
Date		Aug 18-94			Aug 12-94		
Depth (m)		2 5 m	10 m	18 m	4 m	6 m	17 m
Species	**Stage**						
COELENTERATA							
Hydra		15					
NEMATODA		178	74	15	252	548	59
TURBELLARIA							
OLIGOCHAETA							
Naididae							
Nais					104	104	15
Vejdovskyella							
Lumbriculidae							
Limnedrilus					44		
Tubificidae	J					15	
Enchytraeidae		44				15	
Unidentified	J	15			15	237	
CLADOCERA							
Eurycercus					15		
Alonella							
HARPACTICOIDA							
Canthocamptidae							
OSTRACODA							
Cypria		178	15	15	267	119	193
Cypris							311
Candona							
ARACHNIDA							
Hydracarina	A				44	44	15
Acarina (parasitic)	A						
TRICHOPTERA							
Leptoceridae							
Mystacides	L						
Limnephilidae							
Grensia	L					30	
Grensia	P						
Onocosmoecus	L						
Phryganeidae							
Agrypnia	L						
Hydroptilidae							
Agraylea	L						
Unidentified (tiny)	L					30	
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
LEPIDOPTERA							
Unidentified	L						

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		27 Koala Lake			29 Panda Lake		
Date		Aug 18-94			Aug 12-94		
Depth (m)		2 5 m	10 m	18 m	4 m	6 m	17 m
Species	**Stage**						
DIPTERA							
Empididae							
Chelifera	L						
Chironomidae	L	44			30	15	
Chironomidae	P						
Chironomini	L						
Chironomus	L						
Corynoneura	L						
Cricotopus	L					44	
Cricotopus	P					15	
Demicryptochironomus	L						
Diamesinae							
Dicranota	L						
Dicrotendipes	L				15		
Eukiefferiella	L						
Gymnometriocnemus	L			15		15	
Heterotanytarsus	L						
Heteroctrissocladius	L						
Limnophora	L						
Micropsectra	L						
Microtendipes	L						
Orthocladiinae	L						
Orthocladiinae	P						
Pagastiella	L						
Parachironomus	P						
Paracladopelma	L						
Paramerina	L	30			15		
Phaenopsectra	L				252	119	
Phaenopsectra	P						
Potthastia	L						
Procladius	L				104	119	74
Procladius	P						
Protanypus	L					30	
Protanypus	P					15	
Psectrocladius	L				30	59	
Psectrocladius	P						
Pseudodiamesa	L						
Rheotanytarsus	L				15		
Rheotanytarsus	P						
Stempellinella	L						
Stempellinella	P						
Tanypodinae	L						
Tanytarsini	L						
Tanytarsus	L						
Tanytarsus	P						
Zalutschia	P						
MOLLUSCA							
Gastropoda							
Valvata sincera							
Pelecypoda							
Pisidium		281	119		726	267	59

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		32 Vulture Lake			35 Ursula (E) Lake		
Date		Aug 13-94			Aug 30-94		
Depth (m)		4 m	6 m	36 m	3 m	7 m	17 5 m
Species	**Stage**						
COELENTERATA							
Hydra		15					
NEMATODA		3452	178	15	563	30	30
TURBELLARIA		74					
OLIGOCHAETA							
Naididae							
Nais		89	15	30	15		
Vejdovskyella					15		
Lumbriculidae							
Limnedrilus		44	74				
Tubificidae	J	15					30
Enchytraeidae		222	15		15		
Unidentified	J	148			30		
CLADOCERA							
Eurycercus							
Alonella							
HARPACTICOIDA							
Canthocamptidae					15		
OSTRACODA							
Cypria		252	89		430	15	
Cypris							
Candona							
ARACHNIDA							
Hydracarina	A	15		15	15		
Acarina (parasitic)	A				30		
TRICHOPTERA							
Leptoceridae							
Mystacides	L						
Limnephilidae							
Grensia	L	15					
Grensia	P						
Onocosmoecus	L						
Phryganeidae							
Agrypnia	L						
Hydroptilidae							
Agraylea	L						
Unidentified (tiny)	L						
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
LEPIDOPTERA							
Unidentified	L						

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		32 Vulture Lake			35 Ursula (E) Lake		
Date		Aug 13-94			Aug 30-94		
Depth (m)		4 m	6 m	36 m	3 m	7 m	17 5 m
Species	**Stage**						
DIPTERA							
Empididae							
Chelifera	L						
Chironomidae	L	578	59	44	1852		
Chironomidae	P						
Chironomini	L						
Chironomus	L						
Corynoneura	L						
Cricotopus	L						
Cricotopus	P						
Demicryptochironomus	L						
Diamesinae							
Dicranota	L						
Dicrotendipes	L	148	15		252		
Eukiefferiella	L	15	15		89		
Gymnometriocnemus	L	89					
Heterotanytarsus	L		15		15		
Heteroctrissocladius	L						
Limnophora	L						
Micropsectra	L				89		
Microtendipes	L					15	
Orthocladiinae	L						
Orthocladiinae	P						
Pagastiella	L						
Parachironomus	P						
Paracladopelma	L						
Paramerina	L	74			148		
Phaenopsectra	L	44	207	415			15
Phaenopsectra	P						
Potthastia	L						
Procladius	L	44	15	15	74	15	15
Procladius	P	15					
Protanypus	L	89	15				
Protanypus	P						
Psectrocladius	L	222	178		89		
Psectrocladius	P	44					
Pseudodiamesa	L						
Rheotanytarsus	L	385	119	30	104	30	15
Rheotanytarsus	P						
Stempellinella	L		44				
Stempellinella	P			15			
Tanypodinae	L						
Tanytarsini	L				30		
Tanytarsus	L	163	44		163		
Tanytarsus	P			15			
Zalutschia	P						
MOLLUSCA							
Gastropoda							
Valvata sincera		667	104				
Pelecypoda							
Pisidium		637	30	119	341	30	30

Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		38 Sieve Lake		44 Arnie Lake	46 Mark Lake	
Date		Aug 30-94		Sept 5-94	Sept 4-94	
Depth (m)		2 m	7 5 m	4 m	3 m	8 m
Species	**Stage**					
COELENTERATA						
Hydra		44				
NEMATODA		4400	267	533	1629	15
TURBELLARIA						15
OLIGOCHAETA						
Naididae						
Nais		44		533	15	
Vejdovskyella		489	15	15		
Lumbriculidae						
Limnedrilus				148	15	
Tubificidae	J				15	
Enchytraeidae		222				
Unidentified	J					
CLADOCERA						
Eurycercus						
Alonella						
HARPACTICOIDA						
Canthocamptidae		15				
OSTRACODA						
Cypria		163	30			44
Cypris						
Candona						
ARACHNIDA						
Hydracarina	A	89		104		193
Acarina (parasitic)	A					
TRICHOPTERA						
Leptoceridae						
Mystacides	L	15				
Limnephilidae						
Grensia	L				30	
Grensia	P					
Onocosmoecus	L					
Phryganeidae						
Agrypnia	L					
Hydroptilidae						
Agraylea	L					
Unidentified (tiny)	L					
COLEOPTERA						
Dytiscidae						
Brachyvatus	A					
LEPIDOPTERA						
Unidentified	L					

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Appendix II - B6
Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		38 Sieve Lake		44 Arnie Lake	46 Mark Lake	
Date		Aug 30-94		Sept 5-94	Sept 4-94	
Depth (m)		2 m	7 5 m	4 m	3 m	8 m
Species	**Stage**					
DIPTERA						
Empididae						
Chelifera	L					
Chironomidae	L	2296	30	800		
Chironomidae	P					
Chironomini	L					
Chironomus	L					
Corynoneura	L					
Cricotopus	L	30				
Cricotopus	P					
Demicryptochironomus	L		44	30	30	
Diamesinae						
Dicranota	L					
Dicrotendipes	L	178		148		
Eukiefferiella	L				607	
Gymnometriocnemus	L			30		
Heterotanytarsus	L					
Heteroctrissocladius	L					
Limnophora	L					
Micropsectra	L		15		3407	1081
Microtendipes	L		119	178	15	252
Orthocladiinae	L					
Orthocladiinae	P	74				
Pagastiella	L					
Parachironomus	P					
Paracladopelma	L		15			
Paramerina	L	59			15	
Phaenopsectra	L	15	44		15	
Phaenopsectra	P					
Potthastia	L					
Procladius	L	178	133	1155	533	104
Procladius	P					
Protanypus	L			15		15
Protanypus	P					
Psectrocladius	L	504	15	74	207	
Psectrocladius	P					
Pseudodiamesa	L					
Rheotanytarsus	L	15	178	326	24738	2548
Rheotanytarsus	P					
Stempellinella	L					
Stempellinella	P					
Tanypodinae	L					
Tanytarsini	L	1096	59			
Tanytarsus	L	119	222	4355	89	281
Tanytarsus	P					
Zalutschia	P			1052		
MOLLUSCA						
Gastropoda						
Valvata sincera		15		15		
Pelecypoda						
Pisidium		430	193	1274	3540	459

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Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		48 Misery Lake			51 Bat Lake	52 Paul Lake (E)		
Date		Sept 7-94			Sept 3-94	Sept 6-94		
Depth (m)		4 m	5 m	22 m	3 m	2 5 m	5 m	12 m
Species	**Stage**							
COELENTERATA								
Hydra						237		
NEMATODA		178	30		10962	815	489	15
TURBELLARIA								
OLIGOCHAETA								
Naididae								
Nais		15		30	474	533	44	15
Vejdovskyella					444			
Lumbriculidae								
Limnedrilus		59	15		474	178	89	
Tubificidae	J					237		
Enchytraeidae			15					
Unidentified	J			15		148		
CLADOCERA								
Eurycercus						163		
Alonella								
HARPACTICOIDA								
Canthocamptidae								
OSTRACODA								
Cypria		148	30		296	44	44	15
Cypris								
Candona						59	15	
ARACHNIDA								
Hydracarina	A	44	15		1185	89	119	
Acarina (parasitic)	A							
TRICHOPTERA								
Leptoceridae								
Mystacides	L							
Limnephilidae								
Grensia	L					15		
Grensia	P							
Onocosmoecus	L					44		
Phryganeidae								
Agrypnia	L				15			
Hydroptilidae								
Agraylea	L							
Unidentified (tiny)	L							
COLEOPTERA								
Dytiscidae								
Brachyvatus	A							
LEPIDOPTERA								
Unidentified	L							

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Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		48 Misery Lake			51 Bat Lake	52 Paul Lake (E)		
Date		Sept 7-94			Sept 3-94	Sept 6-94		
Depth (m)		4 m	5 m	22 m	3 m	2 5 m	5 m	12 m
Species	**Stage**							
DIPTERA								
Empididae								
Chelifera	L					148	74	
Chironomidae	L	89	15		4148	1748	2133	59
Chironomidae	P							
Chironomini	L				444			252
Chironomus	L							
Corynoneura	L							
Cricotopus	L							
Cricotopus	P							
Demicryptochironomus	L				148		15	
Diamesinae								
Dicranota	L							
Dicrotendipes	L				2815	2266	44	44
Eukiefferiella	L			15		44	15	
Gymnometriocnemus	L	15	44			30	59	
Heterotanytarsus	L				148			
Heteroctrissocladius	L							
Limnophora	L							
Micropsectra	L	30					15	15
Microtendipes	L				13332			
Orthocladiinae	L							
Orthocladiinae	P							
Pagastiella	L							
Parachironomus	P				741	430	30	311
Paracladopelma	L							
Paramerina	L	15	15		444	222	15	
Phaenopsectra	L	370	193	89	444	1600	918	
Phaenopsectra	P							
Potthastia	L					89		
Procladius	L	267	178	30	2666	504	119	59
Procladius	P							
Protanypus	L		15					
Protanypus	P	15						
Psectrocladius	L	59	44		296	178	30	
Psectrocladius	P							
Pseudodiamesa	L							
Rheotanytarsus	L	59			12295	74	207	400
Rheotanytarsus	P							
Stempellinella	L							
Stempellinella	P							
Tanypodinae	L							
Tanytarsini	L							
Tanytarsus	L	15			2666	44	89	30
Tanytarsus	P							
Zalutschia	P							281
MOLLUSCA								
Gastropoda								
Valvata sincera					148	755	15	
Pelecypoda								
Pisidium		252	341	59	9332	1481	1378	222

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Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		53 Paul Lake (W)			54 Lac de Gras (Mis Pt)		
Date		Sept 7-94			Sept 8-94		
Depth (m)		3 m	5 5 m	10 m	2 m	5 m	22 m
Species	**Stage**						
COELENTERATA							
Hydra					15		
NEMATODA		1778	281	222	1644	296	44
TURBELLARIA			15	15	15		
OLIGOCHAETA							
Naididae							
Nais		2281	15	74	237	59	
Vejdovskyella		593		148			
Lumbriculidae							
Limnedrilus		193				74	30
Tubificidae	J						
Enchytraeidae		444			252		
Unidentified	J	593	59	222	59	15	
CLADOCERA							
Eurycercus		74	30			15	
Alonella							
HARPACTICOIDA							
Canthocamptidae							
OSTRACODA							
Cypria		74	15		44	89	89
Cypris							
Candona			15			15	
ARACHNIDA							
Hydracarina	A		119	148	163	222	
Acarina (parasitic)	A						
TRICHOPTERA							
Leptoceridae							
Mystacides	L						
Limnephilidae							
Grensia	L				15		15
Grensia	P						
Onocosmoecus	L						
Phryganeidae							
Agrypnia	L						
Hydroptilidae							
Agraylea	L		15				
Unidentified (tiny)	L						
COLEOPTERA							
Dytiscidae							
Brachyvatus	A						
LEPIDOPTERA							
Unidentified	L						

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Lake Benthos Identification and Density (nos/m^2) August-Sept. 1994

Sample Site		53 Paul Lake (W)			54 Lac de Gras (Mis Pt)		
Date		Sept 7-94			Sept 8-94		
Depth (m)		3 m	5 5 m	10 m	2 m	5 m	22 m
Species	**Stage**						
DIPTERA							
Empididae							
Chelifera	L	15	74				
Chironomidae	L	7481	89	1141	918	44	370
Chironomidae	P						
Chironomini	L	74					
Chironomus	L			74			
Corynoneura	L						
Cricotopus	L	74		74			
Cricotopus	P						
Demicryptochironomus	L						
Diamesinae							
Dicranota	L						
Dicrotendipes	L	3037					
Eukiefferiella	L	2963	755	444	59	44	89
Gymnometriocnemus	L		44	163	104	193	
Heterotanytarsus	L						
Heteroctrissocladius	L						341
Limnophora	L						
Micropsectra	L	444	3229	5762	1659	1985	785
Microtendipes	L	1407	622	459			15
Orthocladiinae	L						
Orthocladiinae	P						
Pagastiella	L						
Parachironomus	P	148	15	30			
Paracladopelma	L					15	15
Paramerina	L	1259	15	74			
Phaenopsectra	L	1037	430	681	59		74
Phaenopsectra	P						
Potthastia	L						
Procladius	L	1333	119	681	222	222	637
Procladius	P						
Protanypus	L			15	30		74
Protanypus	P						
Psectrocladius	L	1037	30	222	44	148	30
Psectrocladius	P						
Pseudodiamesa	L						
Rheotanytarsus	L	296	15	222		74	30
Rheotanytarsus	P						
Stempellinella	L					30	
Stempellinella	P						
Tanypodinae	L						
Tanytarsini	L						
Tanytarsus	L	1185	281	622	207	44	89
Tanytarsus	P						
Zalutschia	P	222	637	7244	15		
MOLLUSCA							
Gastropoda							
Valvata sincera		3629					
Pelecypoda							
Pisidium		2666	830	844	1111	548	296

APPENDIX II - B6

Community structure analyses were carried out using the program "COMM" developed by D. Piepenburg and U Piatkowski of the University of Kiel, Germany.

Site Parameters generated by COMM are

1) SUM total number of individuals in that sample,

2) S total number of species in that sample,

3) S(90%) number of species accounting for 90% of the total sum of individuals,

4) Maximum Dominance (%) percentage of total sum accounted for by the single-most

abundant species

The indices generated by COMM are

1) Shannon-Weaver (1963)	$H' = -\sum p_i \ln (p_i)$	$0<H\leq H_{max}$
2) Pielou (1966)	$E_p = H'/H'_{max}$	$0<E_p\leq 1$
3) Heip (1974)	$E_H = (e^{H'}-1)/(S-1)$	$0<E_H\leq 1$
4) Simpson (1949)	$E_S = 1-\sum p_i^2$	$0\leq E_S<1$
5) Margalef (1951)	$D = (S-1)/\ln N$	$0<D<S-1/\ln S$

Taxa Parameters generated by COMM are

1) SUM total number of individals of that species

2) Dominance (%) percentage of total number of individuals in the whole population

accounted for by that species,

3) Presence(%) percentage of stations within that subset at which that species is present,

4) Median

5) Minimum,

6) Maximum,

7) Total Presence (%) percentage of stations, within the entire sample, at which that

species is present,

8) Biological Index (McCloskey 1970) $BI(i) = 100(\sum(X(R(i,j))/BI_{max})$

Where $R(i,j)$ = Rank of species i within j

$X = 10, \ ,1$

$BI_{max} = 10j$

Appendix II - B6
Site Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Spring-Early Summer 1994

Station	Depth	Zone[1]	Sum[2]	S[3]	S (90%)[4]	Max Dom[5]	Shannon	Pielou	Help	Simpson	Margalef
1	3	L	6547 3	24	10	31 2	2 168	0 682	0 336	0 817	2 618
1	8	L	2962 6	23	11	32 0	2 357	0 752	0 434	0 846	2 752
1	16	L	2710 7	21	10	29 0	2 349	0 771	0 474	0 857	2 530
2	3	L	5036 3	21	9	38 2	2 130	0 700	0 371	0 805	2 346
2	9	L	2192 1	17	7	40 5	1 901	0 671	0 356	0 772	2 080
4	2	L	8473 0	20	6	38 8	1 873	0 625	0 290	0 772	2 101
4	4 5	L	13924 4	26	7	28 0	2 123	0 652	0 294	0 836	2 620
5	2	L	1599 8	11	5	41 7	1 642	0 685	0 417	0 737	1 355
5	6	L	2517 9	23	12	30 6	2 288	0 730	0 402	0 835	2 809
7	2 5	L	3066 3	17	9	32 4	2 131	0 752	0 464	0 823	1 993
7	7	L	592 4	9	6	42 5	1 699	0 773	0 559	0 749	1 253
8	4	L	2251 5	18	10	36 2	2 201	0 761	0 473	0 823	2 202
8	8	L	3792 1	18	7	30 5	2 033	0 703	0 391	0 821	2 063
9	2	L	3895 8	15	7	28 5	2 020	0 746	0 467	0 826	1 693
9	6	L	5925 2	18	5	44 8	1 747	0 605	0 279	0 741	1 957
10	1 5	L	6547 5	17	9	24 7	2 224	0 785	0 515	0 859	1 821
10	8	L	3584 8	25	13	19 8	2 561	0 796	0 498	0 892	2 932
12	2	L	33433 8	21	6	48 6	1 680	0 552	0 218	0 701	1 920
14	1	L	7658 2	21	9	33 7	2 210	0 726	0 406	0 832	2 236
14	5	L	1421 9	14	8	47 9	1 847	0 700	0 411	0 732	1 791
15	2	L	5866 1	8	3	73 7	0 947	0 456	0 226	0 435	0 807
15	3	L	844 3	16	11	15 8	2 504	0 903	0 749	0 904	2 226
17	3	L	2073 8	16	6	52 1	1 693	0 611	0 296	0 690	1 964
17	6	L	755 3	14	10	17 6	2 352	0 891	0 732	0 886	1 962
17	11	L	1792 3	15	9	31 4	2 154	0 796	0 544	0 834	1 869
19	3	L	1022 0	9	4	72 5	1 070	0 487	0 239	0 457	1 154
19	6	L	444 3	13	10	23 3	2 311	0 901	0 757	0 878	1 968
20	2	L	1021 9	13	7	24 6	2 066	0 806	0 575	0 839	1 732
20	5	L	1733 1	15	8	38 5	1 928	0 712	0 420	0 779	1 877
20	22	L	933 1	8	3	82 6	0 777	0 374	0 168	0 313	1 024
23	2	L	4458 7	25	11	26 6	2 336	0 726	0 389	0 852	2 856
23	8	L	1066 4	15	8	37 5	1 935	0 715	0 423	0 783	2 008
25	3	L	35522 5	15	3	82 9	0 807	0 298	0 089	0 307	1 336
27	2	L	2710 8	13	8	56 8	1 507	0 588	0 293	0 637	1 518
29	1	L	18605 6	21	4	73 3	1 139	0 374	0 106	0 449	2 034
32	2	L	710 8	18	14	18 8	2 543	0 880	0 689	0 898	2 589
32	5	L	4177 1	25	13	20 9	2 593	0 806	0 515	0 891	2 879
35	3	L	4251 4	18	8	49 5	1 812	0 627	0 301	0 715	2 035
35	5	L	755 5	11	7	43 1	1 856	0 774	0 540	0 766	1 509
35	17	L	296 2	6	4	45 0	1 495	0 835	0 692	0 720	0 879
38	3	L	8858 4	22	6	41 1	1 607	0 520	0 190	0 694	2 310
38	3 5	L	873 9	10	6	33 9	1 675	0 728	0 482	0 752	1 329
44	4	L	4147 5	16	7	28 6	2 063	0 744	0 458	0 832	1 801
46	2	L	13317 1	15	3	76 1	0 966	0 357	0 116	0 408	1 474
46	7	L	14042 9	13	2	79 0	0 795	0 310	0 101	0 358	1 257
48	3	L	962 7	11	6	35 4	1 695	0 707	0 445	0 751	1 456
51	4	L	7895 5	17	8	21 0	2 281	0 805	0 549	0 874	1 783
52	3	L	2518 1	17	7	41 2	1 993	0 703	0 396	0 783	2 043
52	5	L	15168 7	22	7	40 5	1 935	0 626	0 282	0 777	2 181
52	12	L	3955 3	15	6	53 2	1 628	0 601	0 292	0 675	1 690
53	3	L	2518 2	12	6	45 9	1 668	0 671	0 391	0 721	1 405
53	8	L	2799 6	14	8	29 1	1 993	0 755	0 487	0 815	1 638
54	3	L	2740 2	22	10	32 4	2 273	0 735	0 415	0 836	2 653
54	6	L	3110 8	22	12	27 1	2 397	0 775	0 475	0 858	2 611
2	16	P	1451 5	12	7	30 6	1 977	0 796	0 566	0 822	1 511
7	26	P	148 0	6	6	30 0	1 696	0 946	0 890	0 800	1 001
8	17	P	518 2	9	7	28 6	1 878	0 855	0 692	0 806	1 280
9	16	P	888 6	14	9	26 7	2 154	0 816	0 586	0 844	1 915
10	14	P	992 4	16	11	20 9	2 417	0 872	0 681	0 888	2 174
12	8	P	3021 8	19	8	40 2	2 022	0 687	0 364	0 787	2 246
14	43	P	385 1	6	4	50 0	1 282	0 716	0 521	0 645	0 840
19	32	P	1185 1	11	7	31 2	1 978	0 825	0 623	0 827	1 413
23	20	P	622 1	10	7	33 3	1 905	0 827	0 635	0 806	1 399
25	6	P	4236 4	16	6	51 1	1 697	0 612	0 297	0 695	1 796
25	14	P	814 6	15	10	38 2	2 143	0 792	0 538	0 811	2 089
27	9	P	399 9	8	6	44 5	1 710	0 822	0 647	0 749	1 168
27	20	P	192 5	5	4	53 9	1 263	0 785	0 634	0 639	0 760
29	10	P	725 7	12	8	22 4	2 126	0 856	0 671	0 855	1 670
29	18	P	562 7	12	9	21 1	2 285	0 920	0 802	0 881	1 737
32	35	P	1258 9	13	8	56 5	1 676	0 653	0 362	0 658	1 681
48	6	P	518 5	11	8	20 0	2 161	0 901	0 768	0 867	1 600
48	28	P	148 0	6	6	30 0	1 696	0 946	0 890	0 800	1 001
53	12	P	1125 8	13	8	27 6	2 078	0 810	0 582	0 828	1 708
54	31	P	444.3	9	6	40.0	1.655	0.753	0.529	0.735	1.312

1 L = Littoral Zone, P = Profundal Zone
2 Sum = total number of individuals of that species
3 S = total number of species in that sample
4 S(90%) = number of species accounting for 90% of the total sum of individuals
5 Max Dom = percentage of total sum accounted for by the single-most abundant species

Appendix II - B6
Site Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Summer-Fall 1994

Station	Depth	Zone[1]	Sum[2]	S[3]	S (90%)[4]	Max Dom[5]	Shannon	Pielou	Help	Simpson	Margalef
1	4	L	5717 9	22	9	23 1	2 232	0 722	0 396	0 852	2 427
1	8	L	8502 7	20	7	32 6	2 041	0 681	0 353	0 821	2 100
1	17	L	6947 5	22	10	29 4	2 313	0 748	0 434	0 854	2 374
2	3 5	L	918 2	13	9	16 1	2 288	0 892	0 738	0 882	1 759
2	9	L	1525 6	13	7	27 2	2 018	0 787	0 543	0 826	1 637
4	2 5	L	3836 5	20	10	21 2	2 377	0 794	0 514	0 880	2 302
4	6 5	L	7139 8	19	5	56 4	1 593	0 541	0 218	0 648	2 029
5	4	L	3110 8	17	9	24 3	2 254	0 795	0 533	0 858	1 989
5	7	L	9332 2	24	8	52 4	1 841	0 579	0 231	0 701	2 516
7	2	L	11124 6	17	7	38 6	1 913	0 675	0 361	0 781	1 717
7	6	L	1007 4	9	6	35 3	1 840	0 838	0 662	0 799	1 157
8	4	L	548 0	10	7	40 5	1 779	0 773	0 547	0 764	1 427
8	5	L	399 8	9	7	40 7	1 818	0 827	0 645	0 776	1 335
9	2 5	L	3777 1	20	7	38 0	1 817	0 607	0 271	0 740	2 307
9	8	L	2177 3	15	9	29 3	2 201	0 813	0 574	0 849	1 822
9	11	L	1214 7	14	7	45 1	1 824	0 691	0 400	0 742	1 830
10	4	L	6280 8	25	11	33 5	2 319	0 721	0 382	0 840	2 744
10	5	L	2444 1	20	10	43 0	2 066	0 689	0 363	0 770	2 435
12	1	L	5347 3	25	8	32 4	2 070	0 643	0 289	0 803	2 796
12	7	L	9998 8	24	8	24 1	2 202	0 693	0 350	0 854	2 497
14	1	L	6429 0	21	7	30 9	2 040	0 670	0 335	0 814	2 281
14	6	L	977 5	18	12	33 3	2 309	0 799	0 533	0 843	2 469
15	1 5	L	17746 3	22	8	62 6	1 584	0 513	0 185	0 592	2 146
15	9	L	5688 0	19	5	48 4	1 496	0 508	0 192	0 658	2 082
17	3	L	18072 2	22	8	23 8	2 115	0 684	0 347	0 835	2 142
17	5	L	7288 0	16	6	37 6	1 817	0 655	0 344	0 773	1 687
17	11	L	1407 2	10	4	49 5	1 420	0 617	0 348	0 660	1 241
19	4	L	370 1	9	7	44 0	1 789	0 814	0 623	0 758	1 353
19	10	L	1955 5	14	8	37 9	1 970	0 747	0 475	0 790	1 715
20	3 5	L	6458 5	16	8	41 5	1 907	0 688	0 382	0 770	1 710
20	8	L	12650 3	20	6	65 0	1 434	0 479	0 168	0 559	2 012
23	2	L	32026 4	28	9	37 0	2 062	0 619	0 254	0 794	2 603
23	5	L	6725 1	22	10	46 7	1 987	0 643	0 300	0 744	2 383
25	2	L	15287 2	27	10	23 4	2 348	0 712	0 364	0 864	2 699
25	9	L	1851 6	13	6	32 8	1 840	0 718	0 442	0 784	1 595
27	2 5	L	785 1	8	5	35 9	1 639	0 788	0 593	0 760	1 050
29	4	L	1925 5	15	7	37 7	1 978	0 730	0 445	0 797	1 851
29	6	L	1836 6	19	10	29 8	2 322	0 788	0 511	0 854	2 395
32	4	L	7554 5	26	11	45 7	2 128	0 653	0 296	0 763	2 800
32	6	L	1229 5	18	11	16 9	2 501	0 865	0 658	0 898	2 390
35	3	L	4369 8	21	9	42 4	2 069	0 680	0 346	0 780	2 386
35	7	L	133 2	6	6	22 2	1 735	0 968	0 934	0 815	1 022
35	17 5	L	133 2	6	6	22 2	1 735	0 968	0 934	0 815	1 022
38	2	L	10487 9	22	8	41 9	1 902	0 615	0 271	0 757	2 268
38	7 5	L	1377 5	15	9	19 4	2 305	0 851	0 645	0 878	1 937
44	4	L	10783 9	18	8	40 4	2 005	0 694	0 378	0 790	1 831
46	3	L	34900 2	16	3	70 9	1 058	0 382	0 125	0 475	1 434
46	8	L	5006 9	11	5	50 9	1 505	0 628	0 351	0 678	1 174
48	4	L	1629 4	16	9	22 7	2 286	0 825	0 589	0 869	2 028
48	5	L	947 9	13	7	35 9	1 898	0 740	0 473	0 787	1 751
51	3	L	63919 5	22	8	20 9	2 238	0 724	0 399	0 858	1 898
52	2 5	L	12176 4	27	13	18 6	2 603	0 790	0 481	0 897	2 764
52	5	L	5954 7	22	7	35 8	1 951	0 631	0 287	0 785	2 416
53	3	L	34337 4	26	13	21 8	2 668	0 819	0 537	0 904	2 394
53	5 5	L	7747 4	24	8	41 7	2 069	0 651	0 301	0 786	2 568
53	10	L	19583 2	23	9	37 0	1 968	0 628	0 280	0 766	2 226
54	2	L	6873 3	20	8	24 1	2 119	0 707	0 385	0 835	2 150
54	5	L	4132 9	19	9	48 0	1 935	0 657	0 329	0 736	2 162
2	17	P	1318 2	14	8	36 0	1 774	0 672	0 377	0 745	1 810
7	21	P	340 6	4	3	43 5	1 131	0 816	0 700	0 639	0 515
8	14 5	P	133 3	3	3	66 7	0 848	0 772	0 668	0 494	0 409
10	13	P	696 1	12	8	21 3	2 107	0 848	0 657	0 853	1 681
14	37	P	385 0	6	4	69 2	1 097	0 612	0 399	0 500	0 840
19	30	P	429 6	8	6	37 9	1 711	0 823	0 648	0 773	1 155
20	25	P	1199 7	14	8	39 5	1 961	0 743	0 469	0 786	1 834
23	17	P	1496 1	11	5	32 7	1 825	0 761	0 520	0 798	1 368
25	11	P	488 9	9	6	24 2	1 908	0 868	0 718	0 826	1 292
27	10	P	207 4	3	2	57 1	0 876	0 797	0 701	0 541	0 375
27	18	P	44 4	3	3	33 3	1 099	1 000	1 000	0 667	0 527
29	17	P	726 0	7	5	42 9	1 516	0 779	0 592	0 721	0 911
32	36	P	710 9	10	6	58 3	1 454	0 631	0 364	0 622	1 371
48	22	P	237 0	6	5	37 5	1 580	0 882	0 771	0 758	0 914
52	12	P	1718 4	13	7	23 3	2 052	0 800	0 565	0 844	1 611
54	22	P	3021.9	17	9	26.0	2.179	0.769	0.490	0.846	1.997

1 L = Littoral Zone, P = Profundal Zone
2 Sum = total number of individuals of that species
3 S = total number of species in that sample
4 S(90%) = number of species accounting for 90% of the total sum of individuals
5 Max Dom = percentage of total sum accounted for by the single-most abundant species

Appendix II - B6

Invertebrate Taxa Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Spring-Early Summer 1994

Major Group	Taxa	Sum[1]	Dom (%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ARACHNIDA	*Acarina*	44 4	0 0	4 1	0	14 8	14 8	14 8
	Hydracarina	1776 9	0 6	56 8	10	29 8	14 8	148 1
CLADOCERA	*Alonella*	59 3	0 0	1 4	1	59 3	59 3	59 3
	Eurycercus	488 8	0 2	10 8	1	29 6	14 8	281 5
COELENTERATA	*Hydra*	133 3	0 0	6 8	0	14 8	14 8	59 3
COLEOPTERA	*Brachyvatus*	14 8	0 0	1 4	0	14 8	14 8	14 8
	Cybister	14 8	0 0	1 4	0	14 8	14 8	14 8
DIPTERA	*Chelifera*	903 5	0 3	17 6	2	29 6	14 8	385 1
	Chironomidae	31003 9	9 9	73 0	37	81 5	14 8	6147 5
	Chironomini	192 5	0 1	13 5	1	14 8	14 8	59 3
	Chironomus	1066 5	0 3	16 2	5	29 6	14 8	325 9
	Corynoneura	14 8	0 0	1 4	0	14 8	14 8	14 8
	Cricotopus	621 9	0 1	21 6	2	14 8	14 8	133 3
	Demicryptochironomus	266 6	0 1	6 8	1	29 6	14 8	133 3
	Dicrotendipes	1629 3	0 5	17 6	4	29 6	14 8	533 3
	Eukiefferiella	7984 1	2 5	63 5	29	74 1	14 8	770 3
	Gymnometriocnemus	1777 5	0 6	44 6	10	44 4	14 8	207 4
	Heterotrissocladius	622 1	0 2	9 5	1	74 1	14 8	118 5
	Micropsectra	725 6	0 2	23 0	2	29 6	14 8	311 1
	Microtendipes	2784 9	0 9	12 2	4	59 3	14 8	1822 0
	Monodiamesa	88 9	0 0	1 4	0	88 9	88 9	88 9
	Oreogoton	29 6	0 0	1 4	0	29 6	29 6	29 6
	Orthocladiinae	1347 5	0 3	18 9	3	29 6	14 8	474 0
	Paracladius	14 8	0 0	1 4	0	14 8	14 8	14 8
	Paracladopelma	459 2	0 1	8 1	3	37 0	14 8	237 0
	Paramerina	784 8	0 2	33 8	2	29 6	14 8	88 9
	Paraphaenocladius	14 8	0 0	1 4	1	14 8	14 8	14 8
	Phaenopsectra	18871 7	6 0	78 4	47	207 4	14 8	2103 5
	Potthastia	14 8	0 0	1 4	0	14 8	14 8	14 8
	Procladius	11020 6	3 5	94 6	47	103 7	14 8	755 5
	Protanypus	740 3	0 2	25 7	4	29 6	14 8	222 2
	Psectrocladius	8546 7	2 7	73 0	28	81 5	14 8	1259 1
	Pseudodiamesa	14 8	0 0	1 4	1	14 8	14 8	14 8
	Rheotanytarsus	31463 0	10 0	67 6	27	103 7	14 8	11095 2
	Stempellinella	177 7	0 0	2 7	0	66 7	14 8	118 5
	Tanypodinae	44 4	0 0	2 7	0	22 2	14 8	29 6
	Tanytarsini	192 4	0 1	10 8	1	14 8	14 8	44 4
	Tanytarsus	14087 2	4 4	77 0	34	74 1	14 8	2651 6
	Thienemanniella	29 6	0 0	2 7	0	14 8	14 8	14 8
	Tipula	88 9	0 0	1 4	1	88 9	88 9	88 9
	Tipulidae	29 6	0 0	1 4	0	29 6	29 6	29 6
	Zalutschia	7199 3	2 3	12 2	8	429 6	14 8	2103 5
EUBRANCHIOPODA	*Triops*	29 6	0 0	2 7	0	14 8	14 8	14 8
HARPACTICOIDA	Canthocamptidae	459 2	0 1	4 1	1	148 1	14 8	296 3
HEMIPTERA	Unidentified	14 8	0 0	1 4	0	14 8	14 8	14 8
MOLLUSCA	*Pisidium*	45240 0	14 6	94 6	81	414 8	14 8	5377 2
	Valvata sincera	399 9	0 1	16 2	1	29 6	14 8	59 3
NEMATODA	Unidentified	96183 0	31 1	93 2	70	177 8	14 8	29448 9
OLIGOCHAETA	Enchytraeidae	429 5	0 1	12 2	2	29 6	14 8	148 1
	Limnedrilus	3362 2	1 1	56 8	17	44 4	14 8	459 2
	Nais	9154 5	3 0	63 5	21	59 3	14 8	2577 5
	Tubificidae	251 7	0 1	10 8	1	22 2	14 8	74 1
	Unidentified	1673 8	0 5	21 6	2	22 2	14 8	651 8
	Vejdovskyella	474 0	0 2	2 7	1	237 0	29 6	444 4
OSTRACODA	*Candona*	325 9	0 1	10 8	0	14 8	14 8	177 8
	Cypria	3214 2	1 0	50 0	11	29 6	14 8	770 3
TRICHOPTERA	*Grensia*	296 0	0 1	23 0	1	14 8	14 8	44 4
	Limnephilidae	0 0	0 0	0 0	0	0 0	0 0	0 0
	Mystacides	14 8	0 0	1 4	0	14 8	14 8	14 8
	Unidentified	14 8	0 0	1 4	0	14 8	14 8	14 8
TURBELLARIA	Unidentified	799 6	0 3	29.7	2	14 8	14 8	177.8

1 Sum = total number of individuals of a species
2 Dom(%) = percentage of total number of individuals in the whole population accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index: indicates the dominance of a taxa within a community

Appendix II - B6
Invertebrate Taxa Parameters Generated by COMM for 28 Lake Sites in the Koala and Adjacent Watersheds, Summer-Fall 1994

Major Group	Taxa	Sum[1]	Dom (%)[2]	Presence[3]	BI[4]	Median	Minimum	Maximum
ARACHNIDA	*Acarina*	340 7	0 1	4 1	0	29 6	14 8	296 3
	Hydracarina	3836 3	0 8	52 7	9	44 4	14 8	1185 1
CLADOCERA	*Alonella*	474 0	0 1	1 4	0	474 0	474 0	474 0
	Eurycercus	1599 6	0 3	27 0	2	44 4	14 8	296 3
COELENTERATA	*Hydra*	385 0	0 1	10 8	1	14 8	14 8	237 0
COLEOPTERA	*Brachyvatus*	14 8	0 0	1 4	0	14 8	14 8	14 8
DIPTERA	*Chelifera*	651 7	0 1	14 9	0	29 6	14 8	148 1
DIPTERA	Chironomidae	74274 0	15 6	78 4	51	385 1	14 8	11835 9
	Chironomini	785 1	0 2	5 4	1	162 9	14 8	444 4
	Chironomus	237 0	0 0	8 1	1	29 6	14 8	74 1
	Corynoneura	14 8	0 0	1 4	0	14 8	14 8	14 8
	Cricotopus	1111 0	0 2	16 2	1	29 6	14 8	400 0
	Demicryptochironomus	636 7	0 1	17 6	2	29 6	14 8	148 1
	Dicranota	59 3	0 0	1 4	0	59 3	59 3	59 3
	Dicrotendipes	13850 0	2 9	44 6	12	59 3	14 8	3036 7
	Eukiefferiella	8354 3	1 8	54 1	10	37 0	14 8	2962 7
	Gymnometriocnemus	1791 8	0 4	48 6	8	29 6	14 8	207 4
	Heteroctrissocladius	1392 4	0 3	14 9	5	44 4	14 8	577 7
	Heterotanytarsus	192 5	0 0	5 4	0	14 8	14 8	148 1
	Limnophora	44 4	0 0	1 4	0	44 4	44 4	44 4
	Micropsectra	27197 3	5 7	29 7	15	600 0	14 8	5762 4
	Microtendipes	26738 2	5 6	25 7	11	177 8	14 8	13332 0
	Orthocaldiinae	281 3	0 0	8 1	0	29 6	14 8	74 1
	Pagastiella	429 6	0 1	4 1	1	177 8	14 8	237 0
	Parachironomus	1955 3	0 4	14 9	2	88 9	14 8	740 7
	Paracladopelma	236 9	0 0	6 8	1	14 8	14 8	148 1
	Paramerina	4547 3	1 0	50 0	3	44 4	14 8	1259 1
	Phaenopsectra	22856 7	4 8	77 0	45	192 6	14 8	3347 8
	Polypedilum	0 0	0 0	0 0	0	0 0	0 0	0 0
	Potthastia	88 9	0 0	1 4	0	88 9	88 9	88 9
	Procladius	17731 3	3 7	94 6	46	125 9	14 8	2666 4
	Protanypus	1169 9	0 2	39 2	4	29 6	14 8	237 0
	Psectrocladius	9169 3	1 9	71 6	18	74 1	14 8	1036 9
	Pseudodiamesa	14 8	0 0	1 4	0	14 8	14 8	14 8
	Rheotanytarsus	49150 7	10 3	60 8	22	88 9	14 8	24738 3
	Stempellinella	103 6	0 0	4 1	0	29 6	14 8	44 4
	Tanypodinae	133 3	0 0	5 4	0	22 2	14 8	74 1
	Tanytarsini	1718 3	0 4	10 8	3	66 7	14 8	1096 2
	Tanytarsus	20620 0	4 3	73 0	25	88 9	14 8	4355 1
	Zalutschia	9510 1	2 0	12 2	5	222 2	14 8	7243 7
HARPACTICOIDA	Canthocamptidae	207 4	0 0	8 1	0	22 2	14 8	74 1
LEPIDOPTERA	Unidentified	14 8	0 0	1 4	0	14 8	14 8	14 8
MOLLUSCA	*Pisidium*	56734 9	11 9	93 2	74	414 8	29 6	9332 4
	Valvata sincera	6162 3	1 3	18 9	5	125 9	14 8	3629 3
NEMATODA	Unidentified	70422 7	14 8	94 6	66	237 0	14 8	10961 9
OLIGOCHAETA	Enchytraeidae	6473 2	1 4	35 1	11	125 9	14 8	1125 8
	Limnedrilus	3436 5	0 7	50 0	7	59 3	14 8	474 0
	Nais	15213 2	3 2	71 6	21	59 3	14 8	4118 1
	Tubificidae	636 6	0 1	25 7	4	14 8	14 8	237 0
	Unidentified	4310 4	0 9	33 8	6	74 1	14 8	607 3
	Vejdovskyella	1718 2	0 4	9 5	1	148 1	14 8	592 5
OSTRACODA	*Candona*	296 2	0 1	13 5	1	14 8	14 8	88 9
	Cypria	6902 6	1 4	62 2	22	111 1	14 8	459 2
TRICHOPTERA	*Agraylea*	14 8	0 0	1 4	0	14 8	14 8	14 8
	Agrypnia	44 4	0 0	4 1	0	14 8	14 8	14 8
	Grensia	340 4	0 1	21 6	1	14 8	14 8	44 4
	Mystacides	133 2	0 0	8 1	0	14 8	14 8	44 4
	Onocosmoecus	44 4	0 0	1 4	0	44 4	44 4	44 4
	Unidentified	29 6	0 0	1 4	0	29 6	29 6	29 6
TURBELLARIA	Unidentified	429 4	0.1	20 3	1	14.8	14 8	118 5

1 Sum = total number of individuals of a species
2 Dom(%) = percentage of total number of individuals in the whole popultaion accounted for by that taxa
3 Presence = percentage of sites within which that taxa is present
4 BI = Biological Index Indicates the dominance of a taxa within a community

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Appendix II - B6
Null Hypotheses Tested using ANOVAs on 1994 Koala Region Benthic Invertebrate Data

Null Hypothesis	Tested For	df[1]	F-ratio[2]	p-value[3]	Result
No significant difference in density between early summer and late summer sampling...	two lake zones	1	0.015	0.900	Accept
No significant difference in density between profundal and littoral zones...	two sampling periods	1	58.667	0.000	**Reject**
No significant difference in diversity between profundal and littoral zones in both sampling periods...	Shannon Diversity Index	1	8.057	0.005	**Reject**
	Simpson Diversity Index	1	6.405	0.012	**Reject**
No significant difference in evenness between profundal and littoral zones...	Pielou Index of Evenness	1	19.200	0.000	**Reject**
	Heip Index of Evenness	1	37.096	0.000	**Reject**
	Margalef Index of Evenness	1	44.553	0.000	**Reject**
No significant difference in evenness between early summer and late summer sampling...	Pielou Index of Evenness	1	0.012	0.913	Accept
	Heip Index of Evenness	1	0.017	0.896	Accept
	Margalef Index of Evenness	1	2.018	0.158	Accept
No significant difference between the Koala watershed and the surrounding watershed...	density	1	0.799	0.373	Accept
	richness	1	0.017	0.897	Accept

1 df = degrees of freedom
2. F-ratio = critical difference
3. p-value = probability of non-significance

Appendix II - B6
Lake Hypotheses Tested using T-tests on the 1994 Benthic Invertebrate Data

Null Hypothesis	Tested For	df[1]	t-ratio[2]	p-value[3]	Result
No significant difference between the littoral and profundal zones...	density	74	4.436	0.000	**REJECT**
	richness	73	4.238	0.000	**REJECT**
	community composition	46	2.690	0.000	**REJECT**

1 df = degrees of freedom
2. t-ratio = critical difference
3. p-value = probability of non-significance

APPENDIX II - B6

Calculation of Critical Depth

The evaluation of water transparency can be made with a Secchi disc The Secchi disc is a weighted black and white disc, 18 cm in diameter Tıansparency, estimated in this way, is the mean of the depths at which the Secchi disc disappears when viewed from the shaded side of the boat and at which it reappears upon raising after it has been lowered beyond visibility. Secchi disc transparency is basically a function of light ıeflected from the surface of the disc and, therefore, is affected by the absorption characteristics of the water and of dissolved and particulate matter contained in the water. Optical properties are dynamic, changing seasonally for individual freshwater ecosystems due to physical, chemical and biotic properties of the water, consequently, critical depths were calculated for both sampling periods.

The critical depth is determined by first calculating the light extinction coefficient

$$K = 1\ 7/D$$

where D is the Secchi depth in metres

The critical depth is then determined using the relationship

$$I = I_o e^{-kzc}$$

where I is light intensity at depth, I_o is initial light intensity, K is extinction coefficient, and Z_c is critical depth.

$$\text{Then, } Z_c = -[\ln(I/I_o)]/K\ .$$

If I is taken as 0 01(I_o) (Pickard and Emery 1982),

$$z_c = 4.605/K = 2.71D$$

Appendix II - B6
Secchi Depths to Determine Critical Depth in Both Sampling Periods, 1994

Site	Site depth	Spring-Early Summer Sampling			Summer-Fall Sampling		
		Secchi depth	Extinct Coefficient	Critical depth	Secchi depth	Extinct Coefficient	Critical depth
1	20	8	0.21	20.0	9	0.19	20.0
2	18	5	0.34	13.5	4	0.43	10.8
4	8	3	0.57	8.0	5	0.34	8.0
5	6	6	0.28	6.0	4	0.43	6.0
7	26	5	0.34	13.5	5.5	0.31	14.9
8	17	5	0.34	13.5	5	0.34	13.5
9	16	4	0.43	10.8	4.5	0.38	12.2
10	14	5	0.34	13.5	3.5	0.49	9.5
12	8	2.5	0.68	6.8	4	0.43	10.8
14	43	6	0.28	16.3	7	0.24	19.0
15	9	7	0.24	9.0	6	0.28	16.3
17	12	7.5	0.23	20.3	4.5	0.38	12.2
19	32	8	0.21	21.7	6	0.28	9.0
20	25	10	0.17	25.0	6.5	0.26	17.6
23	20	3	0.57	8.1	4.5	0.38	12.0
25	14	2	0.85	5.4	4	0.43	8.0
27	18	1	1 70	2.7	2	0.85	5.4
29	18	2	0.85	5.4	4	0.43	10.8
32	36	11	0.15	29.8	9	0.19	24 4
35	17.5	8	0.21	17.5	8	0.21	17.5
38	9.5	4.5	0.38	9.5	4	0.43	9.5
44	4	2.5	0.68	4.0	3	0.57	4.0
46	8	5.5	0.31	8.0	5.5	0.31	8.0
48	28	2	0.85	5.4	5	0.34	13.5
51	4	4	0.43	4.0	3	0.57	4.0
52	12	4.5	0.38	12.0	4	0.43	9.5
53	10	4	0.43	10.0	4.5	0.38	10.0
54	31	8	0.21	21 7	7	0.24	19.0

Appendix II-B7

APPENDIX II-B7

Methods

Fish Habitat Assessment

Streams

Stream surveys were conducted in selected streams in the project area which had sufficient post-freshet flow in 1994 Streams were surveyed during freshet (June), summer (August) and the fall (September) Parameters measured were adopted from the *Stream Survey Field Guide* published by DFO and B C MOE (1989) and B C MOE (1984) and included

- *Habitat Unit Type:* pools, riffles, runs, rapids
- *Substrate Type.* fines, gravel, cobble, boulder, bedrock
- *Cover Composition:* deep pool, boulder, large organic debris, in-stream vegetation, undercut banks
- *Stream dimensions.* length, wetted width, depth, velocity, gradient
- *Water quality* temperature, dissolved oxygen and pH

Lakes

Lake habitat surveys consisted of substrate mapping, temperature/dissolved oxygen profiles and spawning surveys Substrate types were estimated from low altitude aerial observations and were ground-truthed at various sites Habitat zones were mapped for each lake, based on changes in substrate composition These zones were quantified by digitizing surface areas from aerial photos Zones were then evaluated for their capability to support optimal lake trout spawning habitat

Spawning surveys were conducted mid-September on three Lakes (Panda, Fox 1 and Long Lake) to identify important spawning areas These were the only lakes accessible after dark - when lake trout spawn Surveys were conducted after dusk (9 00 p m to 1 00 a m), the shoreline was patrolled with spotlights (one million candle-power) and any fish activity was recorded Small mesh gillnets were set over the spawning shoals for brief durations to obtain information on spawning fish

Fish Collection Methods

Stream Fish

Stream fish surveys were conducted in the spring during freshet (June), mid-summer (August) and fall (September) of 1994 A gas-powered backpack electroshocker was the primary method used to capture fish in streams To improve efficiency in low conductivity waters characteristic of the area, two anodes were used. Barrier nets were used to isolate stream reaches Immobilized fish were caught with dipnets, identified, measured and released outside the barrier nets Gillnets (15 25 m panels of monofilament 2 cm and 3 8 cm stretched measure mesh) were used in streams where the water was too deep to electroshock (>1 m) Minnow traps (standard Gee-type galvanized wire mesh traps with 2 cm funnels) baited with bread and salmon roe were set at various locations in streams Dip nets were used to capture spawning fish and schooling fry Samples of all fish species were collected and preserved for proper laboratory identification Relative abundance of stream fish and, where possible, growth rates of yearlings were determined for each stream for the three sampling periods

Lake Fish

Fish sampling on lakes commenced in late June (at ice break-up) and continued until October (ice-on) Near-shore and far-shore sites were sampled using trapnets and small-mesh gillnets All habitat types within a lake were sampled Fish communities were sampled using trap nets, gillnets, beach seines and baited minnow traps

Index Netting

From June to October 1994, index gillnetting and trapnetting were done on 15 lakes to provide comparative information on species abundance and population structure Six lakes (Long, Leslie, Panda, Koala, Fox 1, Misery) were sampled intensively using a combination of methods including day and night gillnetting, trapnetting and angling and covered most of the open water season These lakes were designated for mine development and required the most information The remaining nine lakes (Mike, Kodiak, Little, Moose, Nema, Buster, 1 Hump, Mark) were sampled using similar methods to obtain baseline data on species presence, population structure, feeding habits and trace metal content Using similar methods in the future provides the basis for long term monitoring

Fish were captured with small-mesh sinking monofilament gillnets with 15 25 m panels of 3 8, 5 1, 6 3 cm stretched mesh in gangs of up to six panels (91 5 m) Small mesh size was used so that most fish would become entangled by protruding body parts (teeth, fins, gill plate) and not "gilled" which causes death by suffocation To further reduce mortality, nets were set for a short duration (0 5 to 1 0 h) Nets were mainly set perpendicular to shore starting at depths of 2 to 3 m Some nets were set entirely in deep water All set locations were mapped

and set times, duration and depths were recorded Evening net sets were made on lakes accessible after dark (Panda, Koala, Fox, Leslie and Long Lake) to sample the diurnal distribution of fish The standard sampling design was as follows Single mesh-size monofilament gillnet gangs (1 5" or 2 0" stretched mesh) were set perpendicular to shore starting at depths of 2 to 3 m to depths down to 35 m, depending on the slope of the lake substrate. Set duration was mainly 1 hour, but ranged from 30 minutes to 24 hours Most gillnetting was done during daylight periods (6 a m to 6 p m) Some night time periods were sampled on lakes that had road access (Panda, Koala, Fox 1) or had suitable islands for a ground station (Long Lake)

Trapnets, constructed of green 6 3 cm polypropylene mesh, and measuring 1 8 m deep with a 25 cm tunnel opening, were attached to shore by a 46 m x 1 8 m lead Trapnets were set perpendicular to shore at a distance of at least 30 m with the crib section completely submerged in the water at depths of 2 to 5 m Sites were chosen where the slope from shore was uniform up to a steep drop-off point Nets were checked every 24 hours, fish were sampled and then released at least 100 m from the trapnet sites Trapnets remained in the same location for several days unless catches were poor or if the same fish were repeatedly captured The advantages of using trapnets are that after assembly they are relatively maintenance-free, apart from catch retrieval In addition, net mortality is relatively low The disadvantages are that setting and pulling are labour intensive that fish may become habituated to the nets over time and avoid entering the house However this is unlikely to be an important factor in these lakes as there were long periods of time between sets

Beach seines, 9 15 m long x 1 2 m deep with 0 9 cm nylon mesh and 1 2 m catch bag mid-length were used along lake shorelines that had suitable sites Sites were selected where a 4 5 m to 9 m set could be made from the shoreline at depths of up to 1 2 m with a bottom free of obstructions that could snag the net All fish were removed from nets and placed in tubs where they were sampled and then released

Standard minnow traps were set at various depths to capture small fish Traps were baited with either salmon roe or bread crusts Traps were checked daily and all fish were identified, measured and then released immediately

Fish Data Collection

All fish captured were held in 50 L tubs filled with lake water No more than ten fish were held in tubs at any one time and water was changed immediately when fish showed signs of sluggishness A water pump was used to aerate the water during warm lake temperatures (greater than about 12°C) All fish were enumerated, identified to species, measured for fork and total length (mm) and weight (g) Fork length was determined as the length from the anterior of the head to the posterior of the tail fin mid-ray (deepest part of the fork) Total length was determined as the length from the anterior of the head to the outermost end of the

tail fin (positioned in-line with body to measure the maximum length attainable) Sex, reproductive status and maturity were determined for spawning fish and fish that succumbed during sampling Scales, finrays or otoliths were collected for aging purposes, fish were marked with a fin clip (adipose, anal or left pectoral fin) and then released if in good condition

In addition, fish caught in the six mark-recapture lakes (Long, Leslie, Panda, Koala, Fox 1, Misery) were tagged with numbered Floy tags Floy tags are vinyl, anchor-type tags with nylon T-bars Tags were inserted at the base of the dorsal fin with a Floy gun (with care being taken to avoid puncturing vertebrae) and adipose fin clips were given as backup marks To avoid the possibility of puncturing the body cavity with the tag applicator, fish less than 30 cm were not tagged All fish were marked with an adipose fin clip

Catch per Unit Effort and Relative Abundance

Index Gillnetting

The length of gillnet and the soak time were recorded for each net set Catch per unit effort (CPUE) was calculated as the number of fish caught per 100 m of gillnet per 24 hours soak time using the following equation

$$\text{CPUE} = \frac{\text{Average number of fish caught per set}}{(\text{Average length per set (m)} / 100\text{ m}) \times (\text{average set time (h)} / 24\text{ h})}$$

Trapnetting

The CPUE for trapnetting was determined for each species and was calculated as the number of fish caught per 24 hours of soak time

$$\text{CPUE} = \frac{\text{Total fish caught}}{\text{Total soak time (hrs)} / 24\text{ h}}$$

Sampling bias on CPUE estimates could not be evaluated for trapnetting because of low sample sizes, and high variability between set locations and sampling seasons

Relative abundance (percent) of fish species within each study lake was calculated using the CPUE

$$\text{Relative abundance (\%)} = \frac{\text{CPUE for Species}}{\text{Total CPUE}}$$

As is the case with CPUE, relative abundance estimates are potentially affected by sample method variation, and was discussed accordingly

Population Estimates

Petersen's mark-recapture method, modified by Chapman (Ricker 1975) was used to obtain population estimates This method estimates population sizes based on the proportion of marked and unmarked fish within a closed population (no immigration or emigration) The mark-recapture method involves the following steps

- intensive fishing by non-destructive methods such as trap or small mesh gillnet
- marking captured fish by tagging or fin-clipping and releasing them into the same waterbody
- allowing a suitable interval to permit homogenous distribution of marked fish into the general population
- repeat fishing by the same methods
- using an appropriate statistical method (e g , Petersen), based on the proportion of marked recaptures to unmarked fish in the catch to estimate the total population of each species and place confidence limits on the estimates
- having a minimum of four recaptured fish before estimating population size

Population Size Calculation

n = (# of fish caught in the second period + 1)(# of fish marked in the first period +1)/(# of recaptures in the second period + 1)

As only fish greater than 300 mm fork length were tagged, population estimates are based on that portion of the population

Notices were posted at Koala Camp to inform anglers of the mark-recapture program and to encourage tag returns

Age Determination and Verification

Left pectoral fin rays were used to age lake trout, burbot and longnose suckers Round whitefish were aged by scales and grayling were aged by scales and subsamples of fin rays Otoliths were used to age fish that died during sampling Aging tissues were analyzed by Inuvik Fisheries Consulting and Age Laboratory in Inuvik, NWT using the appropriate laboratory technique for each procedure

- Scales were cleaned and mounted on a microscope slide The age was determined by the highest number of annuli counted for each fish sampled

- Fin rays were set in epoxy resin and then sectioned (0 05 mm) by an Isomet low speed saw Sections were mounted on a slide with standard mounting medium and annuli counted under a microscope

- Otoliths - two methods were used depending on otolith size

  Small, thin otoliths (i e , trout, whitefish, grayling) were placed in a glass petri dish filled with sufficient wintergreen oil to totally submerse otolith and then viewed under a dissection microscope (wintergreen oil makes the annuli much more discernible)

  Large, thick otoliths (i e , burbot) were broken in half longitudinally, the two halves were sanded then scorched with an alcohol burner The halves are then submerged in vegetable oil and mounted on bases using plasticine Viewed under a dissection scope, annuli are counted from focus to edge of otolith

Age Verification

Left pectoral fin rays were used to age lake trout, burbot and longnose suckers Round whitefish were aged by scales and grayling were aged by scales and sub-samples of fin rays Otoliths were collected from most fish that died during sampling Aging tissues were analyzed by Inuvik Fisheries Consulting and Age Laboratory in Inuvik, NWT using the appropriate laboratory technique for each procedure

Since most fish were released alive, more scales and fin rays were collected than otoliths which are the more accurate tissue for aging slow growing arctic fish (Healey 1978) To verify ages determined from scales and fin rays, direct comparisons were made with ages determined from otoliths taken from the same fish. A large sample size of otoliths from lake trout (n=213) and round whitefish (n=197) were available for direct comparison with fin rays or scales taken from the same fish An insufficient number of otoliths were collected from arctic grayling (n=19), burbot (n=0) and longnose sucker (n=0) to accurately verify ages derived by tissues other than otoliths.

Comparisons were made for various fork length class (50 or 100 mm, depending on sample size) to show if the reliability of age estimates from scales and fin rays, when compared to otoliths, is affected by fish size In addition, five percent of aging samples were sent to an independent aging laboratory for verification

Lake trout

Fin rays and otoliths were collected from lake trout, and comparisons of mean age within each size group were made for both age tissues collected from the same fish Since community composition can affect lake trout growth, data was combined for two types of lake trout communities The first community was

where lake trout occurred with other major species (Long, Leslie, Panda, Koala, Little, Mike, Nema, and Fox 3 Lakes) The second community was where lake trout formed a single species community (Fox 1, Misery, and Larry Lakes)

Round whitefish

A large sample size of round whitefish otoliths were collected as a result of extremely high sampling mortality experience only for this species Since mortality did not appear to be selective towards any specific size, the pool of otoliths collected from the total catch could be representative of the total catch, and therefore could be used to describe the age structure instead of using scale ages To verify this assumption, size distributions were generated for fish that provided otolith tissues and compared to the size distribution of the total catch

Age and Size Distribution

Age and length frequency distributions were plotted for the various capture including index gillnetting (day gillnetting/night gillnetting), trapnetting, and angling It was necessary to separately describe frequency distributions for each method because different sampling methods may be selective towards a specific size range of fish (Lester *et al.* 1990)

Fork length data was divided into 5 cm length classes to arrive at a size distribution representative of the population Fork length is used exclusively to describe length distributions except for burbot, a rounded tail-fin species, where total length is used Peak length class abundance, mean length, and range were described for each species from all lakes The proportion of large fish (greater than 60 cm) and small fish (less than 30 cm) were highlighted for each method

Growth

Growth comparisons between lake trout populations in study lakes were described using age, length and weight data collected in 1994 For each age class, mean length and weight, standard deviation, and sample size were calculated Growth was described for both otolith and fin rays ages, since they usually provide different ages for the same fish, with otolith ages yielding older ages than finrays. The mean length at otolith age for study lakes was then used to compare growth with other populations aged by otoliths in the NWT (Great Slave, Great Bear, Old John, Kaminuriak) and northwestern Ontario (Squeers, Pekagoning, and Greenwater).

A simple index was developed to monitor changes in growth rates over time, using age data from two different length class intervals This index shows the mean age and range of ages for two different 5 cm length classes 200 mm to 250 mm (referred to as age at 225 mm) to represent the juvenile stage, and 400 mm to 450 mm (referred to as age at 425 mm) to represent the adult stage The mean age and range of ages within each length class were used to compare growth in juvenile

and adult members between populations Lake trout growth is shown separately for ages determined from fin rays and otoliths Otolith ages only were used for round whitefish

Since growth responds in predictable ways to changes in fish density (Healey 1978b), this index provides a sound basis for monitoring trends in growth over time Fish reach a certain size class at a certain age and leave after a certain age If population density changes, with other factors such as habitat and food availability remaining unchanged, then the mean age for each length class and length of time to grow through it, is also expected to change Generally the higher the population density, the lower the mean age at length Also, the amount of time to grow through a particular length class should be greater, which is reflected in the standard deviation for the mean age (standard deviation is a reflection of the range of ages within a particular length class)

Condition

Length-weight relationships describe the overall health of a population Condition factor is a numerical expression of the fitness, or plumpness, of fish It can be used to describe the state of a fish population, reflecting the quantity and quality of food within the environment, changes in food availability are expected to result in a change the weight of fish at a given length Condition factor (K) is calculated as follows

$K = W \times 10^5 / L^3$, where W= weight (grams)

L = fork length (mm)

Reproduction

Reproductive status was described for all fish species found in the study area from information collected in 1994 and from available literature where field observations were lacking Life stage dynamics, age at maturity, timing of spawning and fecundity

Feeding Habits

Stomach samples were collected from specimens representing a wide range of size and age classes for each species Samples were preserved in 10% phosphate-buffered formalin and analyzed by Applied Technical Services in Saanichton, B C The analytical procedure is as follows

Each stomach was opened, preservative removed by rinsing contents through an 80 Nitex sieve, and the percent fullness was estimated The contents were blotted on filter paper to remove excess moisture and weighed to the nearest 0 0001 gram Contents were enumerated and, if in good condition, weighed by taxon

The percent digestion was estimated If organisms were highly digested, the weight of each group was estimated from samples of known weight In cases where numbers of some organisms were high, a sub-sample by weight was taken A portion of the sample containing a minimum of 100 individuals of the most abundant organism(s) was separated from the main bulk This subsample was then analyzed and the individual components weighed

The remainder of the sample was then analyzed for low-abundance groups, and the number of the abundant organism(s) were extrapolated using the total weight of the sample

Trace Metal Analysis

In order to document the background levels of metallic trace elements in fish, samples of dorsal muscle and liver tissue were taken from specimens over a wide range of sizes (covering a corresponding range of ages) A total of 13 trace metals were analyzed including arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver and zinc Fish tissues were collected from fish that died during sampling procedures and from donated angler catches Ages of individual fish were determined by examination of otoliths, or other suitable tissues (see Section 1 9 3 2 7) Samples of tissue were extracted in a clean environment, then individually wrapped in Whirlpak bags The samples were rapidly frozen and maintained in this state until submitted for analysis (within one month of capture) to Analytical Services Laboratories (ASL) in Vancouver, B C The analytical procedure is outlined briefly below

Cobalt, chromium, copper, iron, manganese, and nickel. Nitric acid was added to each one-gram tissue sample, which was then subjected to microwave digestion The resulting extract was allowed to cool to room temperature, then bulked to volume with 25 mL of de-ionized/distilled water The digested portion was then analyzed by atomic emission spectrophotometry, to obtain the required detection limit for each element under consideration

Cadmium, lead and silver These elements were analyzed using a graphite furnace

Arsenic and selenium These elements were determined using hydride vapour atomic absorption spectrophotometry (HVAAS)

Mercury This element was analyzed by cold vapour atomic absorption spectrophotometry (CVAAS)

Appendix II-B8

Appendix II - B8
Stream Habitat Characteristics of 15 Streams Surveyed in 1994

	Fox 1-Fox 2			Larry-Nero			Airstrip-Larry			Leslie-Moose			Long-Leslie		
Site #	6			11			13			16			18		
Length (m)	500			530			580			100			80		
Gradient (%)	<1			3			5			8			1		
Sample period	**June**	**Aug.****	**Sept.****	**June**	**Aug.****	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**
Substrate Type															
fines (<2mm)	0			30		30	20	3	2	0	0	1	0	0	<1
gravel (2-64mm)	0			0		0	40	17	10	0	0	1	0	5	<1
cobble (64-256)	20			0		0	20	10	5	20	10	5	5	5	1
boulder (>256mm)	80			70		70	20	75	83	70	85	91	95	85	96
bedrock	0			0		0	0	0	0	10	5	2	0	5	2
Habitat unit type (%)															
pools	100			100		100	40	95	60	20	40	60	70	80	80
riffles	0			0		0	5	5	40	30	60	40	20	20	20
runs	0			0		0	45	0	0	0	0	0	10	0	0
rapids	0			0		0	0	0	0	30	0	0	0	0	0
Stream dimensions															
wetted width (m)	4.20			6.97		4.00	0.95	0.50	1.50	37.00	12.00	3.00	40.00	12.00	2.50
mean depth (m)	0.33			0.38		0.27	0.26	0.30	0.37	0.48	0.27	0.23	0.60	0.21	0.34
mean velocity (m/s)	0.13			0.10		*	0.1	0.01	0.01	0.70	0.27	0.01	0.14	0.08	0.07
temperature (C)	6.0			7.0		2.2	14.1	11.6	4.8	6.6	14.3	4.6	5.0	14.6	7 1
dissolved oxygen (mg/L)	*			*		11.37	11.00	7.20	11.90	*	9.63	11.60	15.50	10.06	11.30
pH	6.67			6.51		6.53	6.05	5.20	6.45	7 14	7.60	6.73	7 14	7.50	7 41
Percent Cover															
total	80			80		50	80	75	85	60	80	90	60	95	99
deep pool	0			10		5	10	40	4	20	15	5	0	5	2
boulder	80			70		95	10	35	90	60	75	90	90	90	97
large organic debris	0			0		0	0	0	0	0	0	0	0	0	0
instream vegetation	0			0		0	0	1	0	0	0	0	0	5	1
overstream vegetation	20			10		0	60	21	4	10	10	5	5	0	0
undercut banks	0			10		0	20	5	2	10	0	0	0	0	0

* meter malfunction
** insufficient water flow to survey

Appendix II - B8
Stream Habitat Characteristics of 15 Streams Surveyed in 1994

	Nancy-Long			Little-Moose			Kodiak-Little			Koala-Kodiak			Panda-Koala		
Site #	21			22			24			26			28		
Length (m)	820			400			50			550			250		
Gradient (%)	1			2			2			1			3		
Sample period	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**
Substrate Type															
fines (<2mm)	95	100	100	0	0	1	0	0	0	0	20	40	0	0	1
gravel (2-64mm)	0	0	0	0	0	0	0	0	2	0	0	0	0	0	<1
cobble (64-256)	0	0	0	0	0	0	10	5	5	5	0	0	5	0	4
boulder (>256mm)	5	0	0	100	100	99	90	95	93	95	80	60	90	90	85
bedrock	0	0	0	0	0	0	0	0	0	0	0	0	5	10	10
Habitat unit type (%)															
pools	100	100	100	100	99	99	30	50	90	90	50	100	20	10	60
riffles	0	0	0	0	1	1	70	50	10	10	50	0	30	90	40
runs	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
rapids	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0
Stream dimensions															
wetted width (m)	2.50	1.00	3.00	60.00	40.00	40.00	30.00	10.00	6.00	30.60	9.60	8.00	11.50	1.00	0.50
mean depth (m)	0.21	0.48	0.25	0.41	0.31	0.24	0.20	0.12	0.18	0.34	0.35	0.23	0.35	0.11	0.13
mean velocity (m/s)	0.04	0.01	0.01	0.29	*	0.01	0.48	0.11	0.05	1.65	0.05	0.01	0.61	0.09	0.02
temperature (C)	7.0	5.0	6.4	8.3	11.5	4.6	4.9	13.2	7 1	5.0	12.1	2.5	8.3	16.2	5.2
dissolved oxygen (mg/L)	*	1.53	11.54	*	9.21	11 13	13.50	9.86	12.31	14.50	10.53	11.64	13.90	9.63	11.28
pH	*	5.50	6.68	6.96	7.50	6.74	6.83	7.70	7.06	6.82	7.50	7 11	6.99	7 40	7.24
Percent Cover															
total	30	60	0	90	97	99	30	90	98	90	90	95	5	90	98
deep pool	60	90	0	20	3	10	20	15	10	0	10	40	0	0	2
boulder	0	0	0	70	75	80	50	60	80	100	85	60	0	100	98
large organic debris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
instream vegetation	0	10	0	0	3	5	0	1	5	0	5	0	0	0	0
overstream vegetation	10	0	0	10	18	5	20	24	5	0	0	0	100	0	0
undercut banks	30	0	0	0	0	0	10	0	0	0	0	1	0	0	0

* meter malfunction
** insufficient water flow to survey

Appendix II - B8
Stream Habitat Characteristics of 15 Streams Surveyed in 1994

	Grizzly-Panda			Vulture-Polar			Slipper-Lac de Gras			Ursula			South		
Site #	30			31			33			36			42		
Length (m)	230			260			300			280			540		
Gradient (%)	3			2			3			2			3		
Sample period	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**	**June**	**Aug.**	**Sept.**
Substrate Type															
fines (<2mm)	0	2	10	0	0	91	0	1	1	70	80	1	10	0	1
gravel (2-64mm)	10	3	0	10	2	0	0	1	1	0	0	0	30	5	3
cobble (64-256)	10	5	5	30	8	1	30	18	18	0	0	0	10	10	6
boulder (>256mm)	70	85	85	60	90	8	70	80	80	30	20	99	50	80	90
bedrock	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Habitat unit type (%)															
pools	90	95	90	50	90	95	20	55	55	90	98	99	80	70	95
riffles	10	5	10	50	10	5	40	30	45	10	2	1	20	20	5
runs	0	0	0	0	0	0	10	15	0	0	0	0	0	5	0
rapids	0	0	0	0	0	0	30	0	0	0	0	0	0	5	0
Stream dimensions															
wetted width (m)	3.80	3.50	3.00	3.00	1.00	3.00	19.00	9.00	6.00	3.80	0.40	0.40	2.40	1.75	2.50
mean depth (m)	0.13	0.13	0.08	0.30	0.20	0.26	0.30	0.26	0.26	0.25	0.13	0.10	0.50	0.32	0.32
mean velocity (m/s)	0.12	0.01	0.11	0.16	*	0.01	0.83	0.26	*	0.19	0.03	0.01	0.08	0.37	0.01
temperature (C)	4.9	16.9	4.1	9.5	14.2	4.9	5.9	17 4	5.1	7.5	11.6	9.1	6.5	15.1	7 4
dissolved oxygen (mg/L)	*	8.92	11 45	*	8.53	*	*	9.09	11 48	*	7.32	9.87	*	8.94	10.41
pH	*	7.00	6.49	*	8.10	7 17	6.90	7 40	6.96	*	6.60	6.09	*	6.90	6.65
Percent Cover															
total	80	80	80	30	90	70	60	90	80	50	60	99	50	70	90
deep pool	40	5	5	30	5	25	20	12	5	30	8	1	0	5	15
boulder	50	80	45	50	80	10	70	80	90	20	90	89	0	75	70
large organic debris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
instream vegetation	0	15	45	0	0	60	0	1	0	0	2	0	0	0	0
overstream vegetation	0	0	5	10	10	0	10	5	5	10	0	0	70	10	10
undercut banks	10	0	0	10	10	5	0	2	0	40	0	0	30	10	5

* meter malfunction
** insufficient water flow to survey

Appendix II-B9

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Appendix II - B9
Catch Statistics for Index Gillnetting and for Trapnetting

a) Catch statistics for index gillnetting during the 1994 sampling season (1.5 and 2.0 inch stretched-mesh gillnets set perpendicular from shore).

Site	Number of sets (n)	Total length (m)	Total Effort (hrs)	Lake Trout			Round Whitefish			Arctic Grayling			Burbot			Longnose Sucker			All species	
				Total #	CPUE[1]	%	Total #	CPUE[1]	%	Total #	CPUE[1]	%	Total #	CPUE[1]	%	Total #	CPUE[1]	%	Total #	CPUE
Long	65	4740	126	153	40	65	77	20	33	6	2	3							236	62
Leslie	48	3109	83	40	18	67	20	9	33										60	27
Panda	25	1951	32	89	85	55	67	64	41	6	6	4							162	154
Koala	15	1204	16	37	69	43	29	54	33	20	37	23	1	2	1				87	163
Fox 1	54	3871	77	118	51	100													118	51
Misery	41	2713	37	48	47	100													48	47
Kodiak	7	427	4	5	54	15	26	279	79	2	21	6							33	354
Fox 3	11	671	6	8	50	21	26	164	68	4	25	11							38	239
Larry	4	366	5	30	151	100													30	151
Little	4	213	4	9	101	33	16	180	59	2	22	7							27	304
Nema	15	1158	15	25	53	36	34	72	49							10	21	14	69	146
Mark	4	366	2							25	328	100							25	328
Mike	16	1158	14	22	52	32	46	109	68										68	161
1 Hump	2	183	3	3	26	18	7	61	41	5	44	29				2	17	12	17	149
Buster	1	91	0.5							6	315	100							6	315
Total	**312**	**22220**	**425**	**587**	**47**	**57**	**348**	**28**	**34**	**76**	**6**	**7**	**1**	**0.1**	**0.1**	**12**	**1**	**1**	**1024**	**81**

[1] CPUE expresses as no. per 24 hrs soak time per 100 m of gillnet

b) Catch statistics for trapnetting during the 1994 sampling season (6-foot box-type trapnet set 30 to 60 m from shore at depths of 2 to 4 m).

Site	Number of sets (n)	Total Effort (hrs)	Lake Trout			Round Whitefish			Arctic Grayling			Burbot			Longnose Sucker			Allspecies	
			Total #	CPUE[2]	%	Total #	CPUE[2]	%	Total #	CPUE[2]	%	Total #	CPUE[2]	%	Total #	CPUE[2]	%	Total #	CPUE
Long	15	2040	69	0.81	51	51	0.60	38	8	0.09	6	8	0.09	6				136	1.6
Leslie	5	360	23	1.53	53	13	0.87	30	4	0.27	9	3	0.20	7				43	2.9
Panda	8	600	81	3.24	63	40	1.60	31	7	0.28	5	1	0.04	1				129	5.2
Koala	4	624	50	1.92	36	42	1.62	30	45	1.73	33	1	0.04	1				138	5.3
Fox 1	6	432	1	0.06	100													1	0.1
Kodiak	1	168	49	7.00	70	19	2.71	27	2	0.29	3							70	10.0
Moose	2	192	18	2.25	32	24	3.00	43	11	1.38	20				3	0.38	5	56	7.0
Mike	2	192	6	0.75	19	24	3.00	75	1	0.13	3				1	0.13	3	32	4.0
Fox 3	1	72	3	1.00	43	4	1.33	57										7	2.3
Total	**44**	**4680**	**300**	**1.54**	**49**	**217**	**1.11**	**35**	**78**	**0.40**	**13**	**13**	**0.07**	**2**	**4**	**0.02**	**1**	**612**	**3.14**

[2] CPUE expressed as no. caught per 24 hrs soak time

Appendix II - B9
Catch Statistics - Summary of Total CPUE for BHP Study Lakes

(a) Summary of total CPUE for NWT Diamonds Project lakes, with corresponding species compositions and lake size variables.

Site	Spec comp	Area (ha)	mean depth (m)	Max depth (m)	CPUE[1]
Kodiak	wf, lt	83	2 1	13	354
Mark	gr	5	1 8	7	328
Buster	gl	1	-	5	315
Little	lt, wf, gr	31	3 2	20	304
Fox 3	wf, lt, gr	26	2 0	7	239
Koala	lt, wf, gr, bb	38	5 9	20	163
Mike	wf, lt	-	-	18	161
Panda	lt, wf, gr	35	3 8	19	154
Larry	lt	23	2 1	8	151
1 Hump	wf, gr, lt, ls	10	4 5	16	149
Nema	rw, lt, ls	77	1 9	9	146
Long	lt, rw, gl	614	7 4	32	62
Fox 1	lt, bb	40	6 9	29	51
Misery	lt	14	7 5	28	47
Leslie	lt, rw	64	2 3	13	27

(b) Summary of CPUE for lake trout from 12 NWT Diamonds Project lakes, with corresponding species compositions and lake size variables

Site	Spec comp	Area (ha)	mean depth (m)	Max depth (m)	CPUE[1]
Larry	lt	23	2 1	8	151
Little	lt, wf, gr	31	3 2	20	101
Panda	lt, wf, gl	35	3 8	19	85
Koala	lt, wf, gl, bb	38	5 9	20	69
Kodiak	wf, lt	83	2 1	13	54
Nema	rw, lt, ls	77	1.9	9	53
Mike	wf, lt	-	-	18	52
Fox 1	lt, bb	40	6 9	29	51
Fox 3	wf, lt, gl	26	2	7	50
Misery	lt	14	7.5	28	47
Long	lt, rw, gr	614	7 4	32	40
1 Hump	wf, gr, lt, ls	10	4 5	16	26
Leslie	lt, rw	64	2 3	13	18

[1] Catch per unit effort (CPUE) refers to index gillnetting results

Appendix II-B10

APPENDIX II-B10

Population Estimate Results for Panda, Koala, and Misery Lakes

Panda Lake

Panda Lake was sampled for periods of about one week in June, August, and September. Population estimates were produced by first using the June sampling period as the marking period and August and September sampling periods as the recapture period, and secondly by using June and August as the marking period and September as the recapture period. The time lapse between the marking period and recapture period was about 40 days for the first estimate, and about 15 days for the second estimate.

Population sizes for lake trout larger than 300 mm fork length, using 2 combinations of mark and recapture periods, were similarly estimated at 247 and 234 fish. The upper and lower range (using a 95% confidence limit) for the population was estimated to be between 163 to 393 lake trout for the first sample period combination and between 234 and 422 lake trout for the second combination.

Koala Lake

Koala Lake was sampled in June, July, August, and September. Population estimates were produced first by using the June sampling period as the marking period and July, August and September sampling periods as the recapture period, and secondly by using June and July as the marking period and August and September as the recapture period. The time between the marking period and recapture period was about 20 days for the first estimate, and about 10 days for the second estimate

Population size for lake trout larger than 300 mm fork length, using 2 combinations of mark and recapture periods, were estimated at 83 and 118 fish The upper and lower range (using a 95% confidence limit) for the population was estimated to be between 43 to 174 lake trout for the first sample period combination and between 59 and 258 lake trout for the second combination. This variation between estimates may be an artifact of the small number of marked and recaptured fish used in the calculations.

Misery Lake

Misery Lake was sampled in August, and September. Population estimates were produced by using the August sampling period as the marking period and the September sampling period as the recapture period The time between the marking period and recapture period was about 26 days

The population size for lake trout larger than 300 mm fork was estimated at 91 fish. The upper and lower range (using a 95% confidence limit) for the population was estimated to be between 43 and 209 lake trout. This wide range may be an artifact of the small number of marked and recaptured fish used in the calculations.

Assumptions for Petersen's Population Estimate

1 Natural mortality should the same for marked fish and unmarked fish

This assumption addresses the fact that unnatural stresses are applied to marked fish during sampling and following release Numerous measurements are taken from individual fish in most marking programs which greatly increases the time that the fish is out of the water. Certain types of tags can hinder fish mobility, reducing the ability to escape predators. Recovery time will vary depending on the species, time of year, the expertise of the sampling crew, and the care given to ensuring a successful release If mortality rates for tagged fish are higher than unmarked fish, the resulting population estimate would be lower than the actual population size.

All fish were sampled by experienced fish handlers Only fish that exhibited healthy, normal behaviour were tagged and released. Fish were held in tubs equipped with aeration devices, and handling time was usually less than one minute Some tagged fish may have been be more vulneiable to predation due to weakness after tagging. To minimize this, fish weie always sampled while the boat was adrift. This ensured that released tagged fish were not concentrated at their point of release, reducing the chance of predators concentrating around one release site before tagged fish become fully recovered from sampling Green Floy tags were affixed to be streamlined with the body of the fish, and should not have hindered their mobility under normal circumstances.

2 The chances of catching marked and unmarked fish should be the same

This condition addresses two possible scenarios that would make marked fish either more or less vulnerable to fishing gear First, marked fish can become wary of repeated capture by learning to avoiding the gear they were originally captured in If marked fish are less vulnerable because of this behaviour, the estimated population would be greater than actual population. Secondly, fish marked with protruding tags may be more vulnerable to entanglement than unmarked fish. Selectivity towards more tagged fish would iesult in an estimated population size that is lower than the actual population size

The main capture methods used to obtain our estimate were trapnetting and gillnetting Periods between trapnetting session were sufficiently long enough to ensure that fish did not become 'trap shy', although this may have occurred within

trapnetting sessions. It is likely that marked fish were more vulnerable to gillnets as the Floy tags are susceptible to getting tangled gillnets, thereby reducing the chance of escape. This was observed to occur very infrequently as most lake trout were entangled by their teeth or the maxillary (posterior jaw bone protuberance).

3 Marked fish do not lose their mark

This condition addresses the possibility that fish may lose their tags and therefore cannot be identified as a marked fish. If fewer marked fish are in the sampled population than is assumed, the estimated population size will be higher than the actual population size.

Floy tags were chosen as they are well-retained well by the fish (for several years) and adipose fins were removed as a back up mark. Some recaptured fish (five in total) had missing tags Without a tag identification number, the date the fish was marked could not be determined and therefore was not counted as a recapture.

4 Marked fish or fishing effort should be randomly distributed

This condition addresses biases resulting from not allowing sufficient time to elapse for marked fish to become randomly distributed into the unmarked population or from sampling effort being confined to relatively small areas.

A sufficient time had passed between sample periods (10 to 40 days) to allow marked fish to redistribute in the lakes. Fish that were recaptured in the same sample period were not counted as recaptured fish for that period. In addition, fish were always sampled while the boat was adrift, which involved positioning the boat at the upwind side of the lake and drifting downwind as fish were sampled. This ensured that released tagged fish were not concentrated at their point of release.

5 All marks are recognized and are reported on recovery

This condition addresses the possibility that marked fish may go unnoticed during capture.

All recaptured fish were readily identifiable by either their tags or fin clips It is not likely that tagged fish were taken without being reported, since anglers at camp were informed of the mark-recapture program and none reported capturing tagged fish. As well, Koala and Panda Lakes were off limits to anglers for safety reasons, while Long, Leslie, Fox 1, and Misery Lakes were far enough away from camp to dissuade anglers from fishing them (Moose, Little, and 3 Hump Lakes were most popular for there close proximity to camp or road-side).

6 Recruitment between sample periods is negligible.

This condition assumes there are no fish recruited into the population between sampling periods. Because population estimates are meant to relate to the population size at the time of marking, recruitment would decrease the chance of catching a marked fish. The effect of recruitment on the population estimate would be a population size estimate that is higher than the actual population size.

Since this was a single-season study, and the time period between marking and recovery was relatively short, the effect of recruitment is expected to be negligible for fish >300 mm

Biases to the above assumptions must be taken into account when assessing the accuracy of the population estimates provided Also inherent in Petersen's method is the assumption that the system is a closed population (no immigration or emigration). No recaptured lake trout were found in lakes other than where they had been originally marked, and only one adult lake trout was captured in connecting streams. Considering these assumptions, the estimates obtained should provide reliable indications of the current population size of lake trout larger than 300 mm

Appendix II-B11

Appendix II - B11
Summary of Age Distribution for Round Whitefish

Summary of age distribution for round whitefish captured in six NWT Diamonds Project lakes. Data is stratified by aging tissue (scales and otoliths) and by capture method (day gillnetting, night gillnetting, and trapnetting).

a) Combined Methods

Age	% frequency		Sample size	
	Scale	Oto	Scale	Oto
	%	%	n	n
3	0.6		2	
4	2.2		7	
5	7.6		24	
6	23.0	2.8	73	5
7	17.0	8.4	54	15
8	22.7	14.5	72	26
9	11 4	6.7	36	12
10	9.8	12.3	31	22
11	3.8	11.2	12	20
12	0.9	12.3	3	22
13	0.3	12.8	1	23
14	0.3	5.6	1	10
15	0.3	3.4	1	6
16		4.5		8
17		2.2		4
18		1.7		3
19				
20		0.6		1
21		0.6		1
22		0.6		1
23				
24				
Total n	100	100	317	179
Mean	7.5	11.2		

b) Day gillnetting

Age	% frequency		Sample size	
	Scale	Oto	Scale	Oto
	%	%	n	n
3				
4	1.6		3	
5	8.8		17	
6	19.7	3.8	38	5
7	18.1	7.5	35	10
8	25.4	15.0	49	20
9	11.4	8.3	22	11
10	9.8	15.0	19	20
11	4.7	11.3	9	15
12		13.5		18
13	0.5	10.5	1	14
14		6.0		8
15		3.0		4
16		3.0		4
17		3.0		4
18				
19				
20				
21				
22				
23				
24				
Total n	100	100	193	133
Mean	7.6	10.7		

c) Night gillneting

Age	% frequency		Sample size	
	Scale	Oto	Scale	Oto
	%	%	n	n
3	6.9		2	
4	13.8		4	
5	3.4		1	
6	31.0		9	
7	10.3	31.3	3	5
8	13.8	25.0	4	4
9	3.4		1	
10	10.3		3	
11		6.3		1
12	3.4	18.8	1	3
13				
14				
15	3.4		1	
16		12.5		2
17				
18		6.3		1
19				
20				
21				
22				
23				
24				
Total n	100	100	29	16
Mean	6.9	10.3		

d) Trapnetting

Age	% frequency		Sample size	
	Scale	Oto	Scale	Oto
	%	%	n	n
3				
4				
5	6.3		6	
6	27.4		26	
7	16.8		16	
8	20.0	6.7	19	2
9	13.7	3.3	13	1
10	9.5	6.7	9	2
11	3.2	13.3	3	4
12	2.1	3.3	2	1
13		30.0		9
14	1 1	6.7	1	2
15		6.7		2
16		6.7		2
17				
18		6.7		2
19				
20		3.3		1
21		3.3		1
22		3.3		1
23				
24				
Total n	100	100	95	30
Mean	7.7	13.6		

Appendix II-B12

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Appendix II - B12
Size Distribution for Round Whitefish

Size distribution for round whitefish with otolith removed and for total catch of round whitefish captured from eight NWT Diamonds Project lakes

Fork length class	Long				Leslie				Panda				Koala				Fork length class
	Otolith		Total catch		Otolith		Total catch		Otolith		Total catch		Otolith		Total catch		
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	
151-200			3	4	5	1	3	1			2	2					151-200
201-250			1	1			3	1			3	3	5	2	7	5	201-250
251-300	14	6	10	14	10	2	8	3	17	7	11	12	7	3	4	3	251-300
301-350	37	16	23	32	10	2	15	6	17	7	16	18	10	4	13	9	301-350
351-400	35	15	44	61	40	8	38	15	39	16	38	42	66	27	65	46	351-400
401-450	14	6	19	26	20	4	28	11	27	11	31	35	12	5	11	8	401-450
451-500					15	3	8	3									451-500
Total	100	43	100	138	100	20	100	40	100	41	100	112	100	41	100	71	Total

Fork length class	Fox 3				Kodiak				Mike				Nema				Fork length class
	Otolith		Total catch		Otolith		Total catch		Otolith		Total catch		Otolith		Total catch		
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	
151-200																	151-200
201-250											1	1					201-250
251-300	4	1	3	1					28	7	31	22	9	3	14	6	251-300
301-350	58	14	57	17	35	8	31	14	32	8	32	23	22	7	19	8	301-350
351-400	38	9	40	12	43	10	49	22	32	8	28	20	47	15	49	21	351-400
401-450					22	5	20	9	8	2	7	5	22	7	19	8	401-450
451-500																	451-500
Total	100	24	100	30	100	23	100	45	100	25	100	71	100	32	100	43	Total

Appendix II-B13

Appendix II - B13
Fork Length Distribution for Various Fish Species

Fork length distribution for lake trout from NWT Diamonds Project lakes captured by a) day gillnetting, b) night gillnetting, and c) trapnetting (n/s = lake was not sampled by that method)

a) day gillnetting

Fork Length class (mm)	Long	Leslie	Panda	Koala	Fox 1	Misery	Kodiak	Larry	Nema	Fox 3	Mike	Moose
50 100												
101-150												
151-200	1		2			1						
201-250	3			9	1	7			2		2	
251-300	2	2	1	3	5	5			2	2	2	
301-350	7	2	4	1	10	13			3	5	4	
351-400	3	4	21	2	22	21	1		2		4	
401-450	11	6	12	3	8	5	2		3	1	4	
451-500	14	3	1	1	1	1	3		7	1	3	
501-550	4	2			1	1	1		3		3	
551-600	2	1	2				3		2		2	
601-650											1	
651-700												
701-750												
751-800												
801-850												
851-900												
Total	47	20	43	19	48	54	10	n/s	24	9	25	n/s
Mean Size	416	420	393	306	363	339	453		427	354	413	

b) Night gillnetting

Fork Length class (mm)	Long	Leslie	Panda	Koala	Fox 1	Misery	Kodiak	Larry	Nema	Fox 3	Mike	Moose
50-100												
101-150												
151-200	26		3		8			2				
201-250	32	10	14	6	11			2				
251-300	7	5	3	4	7			7				
301-350	1	2	6		11			16				
351-400	9	1	13	4	22			16				
401-450	9	1	5	1	13			1				
451-500	14	1	1	3	1							
501-550	9	3						1				
551-600	3	1			1							
601-650	3											
651-700	2											
701-750												
751-800												
801 850												
851-900												
Total	115	24	45	18	74	n/s	n/s	45	n/s	n/s	n/s	n/s
Mean Size	325	320	311	324	326			331				

c) Trapnetting

Fork Length class (mm)	Long	Leslie	Panda	Koala	Fox 1	Misery	Kodiak	Larry	Nema	Fox 3	Mike	Moose
50-100												
101-150												
151-200												
201-250												
251-300		3	1									1
301-350	1	2	7	1								
351-400	3	3	23	10			5				1	4
401-450	15	3	31	27			18				1	5
451-500	20	4	8	8			11				1	2
501-550	9	3	4	1			9				1	1
551-600	10	3	1	1			1				1	2
601-650	5	4	2				1					
651-700	1											
701-750	2											
751-800	1											
801-850												
851-900	1											
Total	68	25	77	48	n/s	n/s	45	n/s	n/s	n/s	5	15
Mean Size	514	462	419	426			463					441

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Appendix II - B13
Fork Length Distribution for Various Fish Species

Fork length distribution for round whitefish from NWT Diamonds Project lakes captured by a) day gillnetting, b) night gillnetting, and c) trapnetting

a) Day Gillnetting (n = 278)

Fork Length class (mm)	Long	Leslie	Panda	Koala	Mike	Little	Kodiak	Fox 3	Nema
151-200	2					6			
201-250			1	1	1	1			
251-300	2	1	3	1	17	3			6
301-350	8	3	5	4	13		2	15	8
351-400	10	12	19	8	12	7	11	11	21
401-450	9	5	12	3	5	4	12		8
451-500		3					3		
501-550									
Total	31	24	40	17	48	21	28	26	43
Mean	358	390	373	359	328	307	376	345	361

b) Night Gillnetting (n = 94)

Fork Length class (mm)	Long	Leslie	Panda	Koala
151-200	2	1	2	
201-250	1	1	2	4
251-300	9	1	6	2
301-350	13		2	
351-400	21		5	5
401-450	9		7	1
451-500				
501-550				
Total	55	3	24	12
Mean	346	227	333	316

c) Trapnetting (n = 218)

Fork Length class (mm)	Long	Leslie	Panda	Koala	Mike	Kodiak	Moose
251-300	3	1	2		5		3
301-350	11	3	11	1	10	7	6
351-400	29	3	18	10	8	7	9
401-450	8	6	9	27		3	8
451-500				8			
501-550							
551-600							
Total	51	13	40	48	23	17	26
Mean	368	379	368	378	338	363	368

Appendix II - B13
Fork Length Distribution for Various Fish Species

Fork length distribution for arctic grayling (n=96) from NWT Diamonds Project lakes captured by various methods

Fork Length class (mm)	Day Gillnetting				Night Gillnetting			Trapnetting				Fork Length class (mm)
	Long	Leslie	Panda	Koala	on	Panda	Koala	Long	Leslie	Panda	Koala	
151-200			1				2					151-200
201-250			2	3		2	3	1			1	201-250
251-300	1			2		2	2	3		3	1	251-300
301-350	1			1	3	1		2	1		12	301-350
351-400		1		3	1	1	3	1	3	4	24	351-400
401-450				1				1			3	401-450
Total	2	1	3	10	4	6	10	8	4	7	41	Total

Fork length distribution for a) burbot captured by trapnetting, and b) longnose sucker captured by gillnetting (GN) and trapnetting (TN)

a) Burbot

Fork Length class (mm)	Long	Leslie	Panda	Koala
351-400			1	
401-450				
451-500				
501-550				
551-600				
601-650	1			
651-700	2	1		
701-750	4	1		1
751-800	1			
Total	8	2	1	1

b) Longnose Sucker

Fork Length class (mm)	Nema (GN)	1 Hump (GN)	Moose (TN)
251-300			1
301-340		1	1
351-400		1	1
401-450	5		
451-500	5		
Total	10	2	3

Appendix II-B14

of Cc

Appendix II - B14
Size Statistics for Lake Trout Captured in NWT Diamonds Project Lakes by Various Methods

Method	Stats	Long Lake			Leslie			Panda			Koala			Fox 1			Misery			Stats.
		Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Stats
Gillnet day	Mean	416	463	842	420	466	854	383	425	624	306	320	371	363	402	534	339	377	437	Mean
	Max	580	645	2150	595	656	2400	565	620	1900	472	449	1200	513	570	1300	525	577	1100	Max
	Min.	173	196	50	285	316	250	184	203	70	225	249	125	217	240	180	178	195	75	Min.
	St. dev.	96	106	466	79	87	502	67	73	324	86	77	309	57	62	207	66	75	212	St. dev.
	(n)	47	47	47	20	20	20	43	43	43	19	17	19	48	48	48	54	54	52	(n)
Gillnet night	Mean	325	360	602	320	356	496	311	342	387	324	359	416	326	361	449				Mean
	Max	681	750	3700	577	646	1875	466	516	910	482	530	1120	562	625	2650				Max
	Min.	156	160	50	204	225	100	180	200	50	215	229	110	174	192	30				Min.
	St. dev.	146	163	739	117	129	510	85	95	250	96	108	310	86	98	354				St. dev.
	(n)	115	115	112	24	24	24	45	44	43	18	18	16	74	74	74				(n)
Trapnet	Mean	514	569	1505	462	509	1278	419	459	775	426	472	712							Mean
	Max	860	920	9000	642	696	3000	619	675	2700	554	605	1500							Max
	Min.	310	335	530	256	287	375	268	294	220	304	336	350							Min.
	St. dev.	99	106	1280	113	124	716	60	64	433	40	43	230							St. dev.
	(n)	68	67	62	25	25	22	77	77	74	48	48	47							(n)
Angling	Mean	442	491	986				430	477	1342	446	493	964							Mean
	Max	562	622	1700				790	880	6400	510	563	1300							Max
	Min.	208	230	110				250	278	150	400	450	670							Min.
	St. dev.	100	111	465				156	174	1919	36	50	224							St. dev.
	(n)	20	20	20				13	13	13	7	4	7							(n)

Method	Stats	Larry			Moose			Mike			Little			Kodiak			Nema			Fox 3			Stats
		Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	
Gillnet day	Mean							413	460	882	443	487	952	453	489	1030	427	472	856	354	390	576	Mean
	Max							602	682	2250	496	544	1200	543	590	2100	595	667	2000	568	619	2000	Max
	Min.							230	252	150	416	454	710	320	355	380	235	262	140	260	287	200	Min.
	St. dev.							106	120	596	31	35	187	69	76	459	105	114	508	92	99	512	St. dev.
	(n)							25	25	25	5	5	5	10	10	10	24	24	24	12	12	12	(n)
Gillnet night	Mean	331	364	435																			Mean
	Max	530	570	1600																			Max
	Min.	162	179	40																			Min.
	St. dev.	66	71	254																			St. dev.
	(n)	45	45	45																			(n)
Trapnet	Mean				441	482	915	485	530	1260				463	506	1013							Mean
	Max				585	637	2050	598	640	2250				612	670	2400							Max
	Min.				290	321	400	368	405	575				351	385	450							Min.
	St. dev.				78	89	472	90	97	625				59	61	330							St. dev.
	(n)				15	15	14	5	5	5				45	45	44							(n)

Appendix II-B15

Appendix II - B15
Size Statistics for Round Whitefish Captured in NWT Diamonds Project Lakes by Various Methods

Method	Stats	Long Lake			Leslie			Panda			Koala			Stats
		Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	
Gillnet day	Mean	358	387	595	390	423	686	373	406	599	359	395	549	Mean
	Max	438	471	1100	476	510	1190	443	485	880	407	441	660	Max
	Min.	185	200	65	271	293	200	236	256	140	245	270	190	Min.
	St. dev.	63	67	235	46	49	226	45	47	175	50	51	119	St. dev.
	(n)	31	31	29	24	23	23	40	36	37	17	17	16	(n)
Gillnet night	Mean	346	376	514	227	247	190	333	345	358	316	343	363	Mean
	Max	425	462	930	290	315	260	425	461	750	405	440	670	Max
	Min.	193	208	80	182	207	80	187	205	60	230	250	120	Min.
	St. dev.	58	62	218	56	59	96	77	83	225	74	79	220	St. dev.
	(n)	55	55	54	3	3	3	24	19	17	12	12	12	(n)
Trapnet	Mean	368	395	607	379	408	677	368	399	576	378	409	567	Mean
	Max	435	470	1000	438	465	1000	428	461	820	430	464	880	Max
	Min.	274	295	210	284	306	250	274	300	330	302	330	360	Min.
	St. dev.	37	40	161	53	56	218	39	43	124	28	30	113	St. dev.
	(n)	51	49	41	13	13	11	40	39	31	42	40	20	(n)

Method	Stats	Moose			Mike			Little			Kodiak			Nema			Fox 3			Stats
		Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	Fork Length (mm)	Total Length (mm)	Weight (g)	
Gillnet day	Mean				328	357	460	307	340	403	376	404	629	361	390	533	345	371	507	Mean
	Max				420	496	900	440	471	980	430	461	1000	420	451	870	385	412	650	Max
	Min.				204	223	90	188	206	60	302	330	340	263	286	160	275	292	250	Min.
	St. dev.				52	61	216	92	101	306	33	36	163	43	46	193	25	27	96	St. dev.
	(n)				48	47	45	21	21	21	28	28	28	43	43	41	30	30	30	(n)
Gillnet night	Mean																			Mean
	Max																			Max
	Min.																			Min.
	St. dev.																			St. dev.
	(n)																			(n)
Trapnet	Mean	368	399	680	338	365	618				363	391	632							Mean
	Max	450	484	1050	394	429	700				412	448	750							Max
	Min.	265	287	420	276	300	520				330	359	420							Min.
	St. dev.	52	55	163	35	39	77				27	29	111							St. dev.
	(n)	26	26	15	23	23	4				17	17	9							(n)

Appendix II-B16

Appendix II-B16
Mean Condition Factor

Mean condition factor by fin ray age for lake trout from 13 NWT Diamonds Project lakes.

	Long			Leslie			Panda			Koala			Fox 1			Misery			
Age	Mean	Stand. Dev	N.	Mean	Stand. Dev	N.	Mean	Stand. Dev	N.	Mean	Stand. Dev	N.	Mean	Stand. Dev	N.	Mean	Stand. Dev	N.	Age
3	**1.26**	0.23	4							**1.24**	0.24	2	**1.20**		1				3
4	**1.04**	0.09	20	**1.83**		1	**1.03**	0.09	6	**1.16**	0.08	2	**1.13**	0.37	7				4
5	**1.07**	0.14	22	**1.26**	0.24	5	**1.06**	0.12	7	**1.17**	0.09	6	**1.30**	0.72	10	**1.10**	0.37	5	5
6	**1.12**	0.30	15	**1.12**	0.11	6	**1.12**	0.06	10	**1.14**	0.20	10	**1.21**	0.37	9	**1.16**	0.32	6	6
7	**1.04**	0.09	5	**1.12**	0.20	4	**1.06**	0.10	12	**1.12**	0.11	3	**1.11**	0.19	16	**1.00**	0.08	2	7
8	**1.07**	0.09	13	**1.18**	0.17	3	**1.04**	0.08	17	**1.05**	0.07	4	**1.16**	0.24	14	**1.02**	0.05	3	8
9	**1.02**	0.12	6	**1.16**	0.09	2	**0.98**	0.18	21	**0.87**	0.09	4	**1.11**	0.12	23	**1.12**	0.13	6	**9**
10	**1.05**	0.14	17	**1.07**	0.10	6	**1.03**	0.15	21	**0.90**	0.12	10	**1.06**	0.11	29	**1.13**	0.07	6	10
11	**1.00**	0.16	32	**1.07**	0.06	6	**1.01**	0.13	15	**0.91**	0.07	11	**0.97**	0.08	35	**1.05**	0.08	6	11
12	**1.04**	0.07	21	**0.92**	0.10	6	**0.95**	0.10	14	**0.97**	0.17	5	**1.02**	0.11	20	**1.08**	0.20	10	12
13	**1.02**	0.08	25	**1.10**	0.13	4	**0.99**	0.10	11	**0.92**	0.11	10	**1.04**	0.09	9	**1.00**	0.06	6	13
14	**1.01**	0.24	22	**1.05**	0.07	10	**0.93**	0.08	9	**0.91**	0.22	6				**1.02**	0.11	7	14
15	**0.97**	0.18	11	**1.01**	0.12	6	**0.87**		1	**0.94**	0.08	4	**0.94**	0.23	3	**0.95**	0.08	8	15
16	**1.02**	0.11	15	**0.90**	0.06	3	**0.97**	0.11	4	**0.90**	0.07	2							16
17	**1.03**	0.17	8	**0.85**	0.17	2	**1.09**	0.08	3	**0.97**	0.16	3							17
18	**0.99**	0.14	7				**1.06**	0.02	2				**1.49**		1	**0.79**		1	18
19	**1.02**		1				**1.11**		1										19
20	**1.17**	0.22	2				**1.30**		1										20
21	**1.13**		1	**0.88**		1													21
22	**1.41**		1																22
23	**1.17**		1	**1.13**		1													23
24	**1.12**		1																24
Total			250			66			155			82			177			66	Total

S.D = Standard deviation.

N.= Number of lake trout.

Appendix II-B16
Mean Condition Factor

Mean condition factor by fin ray age for lake trout from 13 NWT Diamonds Project lakes.

	Fox 3			Kodiak			Larry			Little			Mike			Moose			Nema			
Age	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Mean	Stand. Dev.	N.	Age
3							**1.19**	0.03	2													3
4							**1.06**		1													4
5	**1.14**		1				**1.05**	0.06	3				**1.30**	0.10	2							5
6	**1.11**	0.19	2				**1.09**	0.11	2										**1**		1	6
7	**1.20**	0.02	2	**1.24**		1	**1.12**	0.06	5				**1.14**	0.09	4				**1**	0.05	4	7
8	**1.15**	0.04	3	**1.11**	0.14	4	**1.04**	0.25	6				**1.02**		1	**1.09**	0.07	3	**1**		1	8
9				**1.20**	0.18	3							**1.14**	0.07	4				**1**		1	9
10				**1.20**	0.14	3	**1.06**	0.08	4				**1.11**	0.22	3	**1.28**		1	**1**	0.07	2	10
11	**1.01**	0.13	2	**1.18**	0.07	5	**1.10**	0.07	4				**1.02**	0.10	4	**1.08**	0.01	2	**1**		1	11
12				**1.03**	0.16	10	**1.11**	0.17	6	**1.19**	0.04	2	**0.81**		1	**0.95**	0.02	2				12
13				**1.03**	0.14	7				**0.98**		1	**1.11**	0.09	2	**0.96**	0.08	3	**1**	0.06	3	13
14				**0.91**	0.24	6	**1.13**		1				**0.96**		1	**0.92**		1	**1**	0.15	3	14
15				**0.98**	0.29	3	**1.43**		1				**0.95**	0.15	2	**0.91**		1	**1**	0.04	4	15
16				**0.87**	0.04	6													**1**	0.15	2	16
17				**0.84**		1													**1**		1	17
18				**1.04**		1										**0.96**	0.02	2				18
19				**0.95**	0.09	3							**0.99**		1				**1**		1	19
20																						20
21													**1.00**		1							21
22																						22
23																**1.02**		1				23
24										**1.09**		1										24
Total			10			53			35			4			26			16			24	Total

S.D = Standard deviation

N.= Number of lake trout

Appendix II - B16
Mean Condition Factor

Mean condition factor at otolith age for round whitefish captured in eight NWT Diamonds Project lakes in 1994

Age	Long			Leslie			Panda			Koala			Age
	Mean	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	
6	**1.07**	0.06	3										6
7	**1.08**	0.06	3	**1.09**		1	**1.14**	0.16	5	**1.04**	0.04	2	7
8	**1.11**	0.12	4	**1.07**		1	**1.06**	0.07	4	**0.96**	0.27	2	8
9	**1.17**	0.13	13	**1.15**		1	**1.16**	0.07	3	**1.19**		1	9
10	**1.11**		1				**1.09**	0.07	5	**1.15**		1	10
11	**1.15**		1	**1.12**	0.10	5	**1.12**	0.11	3	**1.04**	0.07	5	11
12	**1.14**	0.03	3	**1.10**	0.07	2	**1.12**	0.04	5	**1.05**	0.06	4	12
13	**1.08**	0.07	6	**1.07**		1	**1.11**	0.10	4	**1.06**	0.12	5	13
14	**1.20**		1				**1.06**	0.09	4	**0.92**	0.03	2	14
15							**1.13**		1	**1.06**	0.13	3	15
Total	**1.13**		35	**1.11**		11	**1.11**		34	**1.04**		25	Total

Age	Kodiak			Nema			Fox 3			Mike			Age
	Mean	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	
6	**0.98**	0.36	2				**1.19**	0.05	2				6
7							**1.30**	0.01	2	**1.15**	0.04	5	7
8	**1.12**	0.06	4	**1.07**	0.03	2	**1.24**	0.03	7	**1.22**	0.18	6	8
9				**1.03**	0.02	3	**1.19**	0.04	6	**1.09**		1	9
10				**1.09**	0.06	6	**1.21**	0.03	5	**1.11**	0.04	5	10
11	**1.21**	0.04	5	**1.12**	0.08	5	**1.16**		1	**1.35**		1	11
12	**1.23**	0.14	2	**1.10**	0.09	7	**1.18**		1	**1.18**	0.07	3	12
13	**1.15**	0.08	7	**1.12**	0.07	5				**1.26**	0.03	2	13
14	**1.12**		1	**1.13**		1							14
15	**1.18**		1	**1.16**		1							15
Total	**1.15**		22	**1.10**		30	**1.21**		24	**1.18**		23	Total

$K = W \times 10^5 / L^3$, where W = weight (grams)

Appendix II-B17

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean fork length by (a) otolith age for lake trout from six NWT Diamonds Project lakes; and by (b) fin ray age for lake trout from 13 lakes in 1994

a) Otolith age

Age	Long			Leslie			Panda			Koala			Fox 1			Misery			Age
	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	
4	185		1																4
5	194		1	275		1							196	1	2				5
6	191	14	5	222	23	2	194		1	224		1	192	17	3	242	19	3	6
7	214	37	6	250	26	4	207	4	2	244	13	6	242	23	6	253	14	2	7
8	242	63	8	228	21	2	270	64	6	233	10	2	266	53	11				8
9	315	110	5	266	29	2	278	64	7				260	17	4				9
10	386	105	2	262	17	3	318	33	3				306	46	7	291	47	3	10
11	351	46	4	330	1	2	336	18	3	278		1	351	12	4	329	6	2	11
12	490	32	3				374	45	2	420		1	371	19	13				12
13	443	145	2										370	8	5	358	12	2	13
14	465	14	2				386	11	4				392	27	3	361	4	2	14
15	482	44	4				396		1				378	21	3	417		1	15
16	564	28	2	540		1				510		1	403		1				16
17	609		1							482		1							17
18																			18
19																			19
20																			20
21	555	78	2																21
22																			22
23	475		1																23
24							790		1										24
>24				536		1	738		1										>24
Total			49			18			31			13			62			15	Total

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean fork length by (b) fin ray age for lake trout from 13 NWT Diamonds Project lakes in 1994

b) Fin ray age

Age	Long			Leslie			Panda			Koala			Fox 1			Misery			Age
	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	
3	177	11	4							225	1	2	180		1				3
4	199	20	20	206		1	202	29	6	226	15	2	198	19	7				4
5	201	22	22	234	20	5	255	74	7	242	12	6	209	24	10	227	12	5	5
6	234	28	15	263	29	6	286	65	10	254	22	10	249	12	9	236	32	6	6
7	277	42	5	287	66	4	337	64	12	300	19	3	291	36	16	264	30	2	7
8	339	48	13	301	43	3	366	30	17	393	9	4	315	36	14	279	16	3	8
9	412	59	6	344	17	2	383	44	21	411	13	4	359	29	23	317	16	6	9
10	433	37	17	359	28	6	387	31	21	408	11	10	372	21	29	335	25	6	10
11	450	42	32	435	40	6	400	21	15	411	17	11	388	29	35	357	20	6	11
12	442	40	21	447	40	6	417	31	14	415	20	5	389	27	20	359	28	10	12
13	473	51	25	394	42	4	418	27	11	425	24	10	405	31	9	389	43	6	13
14	478	50	22	486	53	10	445	25	9	450	26	6				370	14	7	14
15	538	63	11	533	58	6	415		1	446	50	4	415	22	3	393	21	8	15
16	544	51	15	524	36	3	481	49	4	470	14	2							16
17	568	86	8	534	3	2	529	33	3	472	9	3							17
18	552	64	7				590	35	2				562		1	376		1	18
19	555		1				502		1										19
20	592	88	2				790		1										20
21	589		1	635		1													21
22	860		1																22
23	620		1	642		1													23
24	745		1																24
Total			250			66			155			82			177			66	Total

Age	Fox 3			Kodiak			Larry			Little			Mike			Moose			Nema			Age
	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	Mean (mm)	Stand. dev.	Number	
3							194	45	2													3
4							257		1													4
5	260		1				256	24	3				237	10	2							5
6	309	38	2				317	19	2										248		1	6
7	299	23	2	393		1	298	15	5				301	38	4				283	32	4	7
8	324	18	3	378	52	4	342	35	6				340		1	370	31	3	360		1	8
9				403	46	3							415	52	4				327		1	9
10				412	15	3	368	36	4				396	52	3	365		1	364	26	2	10
11	456	8	2	425	11	5	380	19	4				409	47	4	400	26	2	475		1	11
12				444	45	10	412	59	6	439	5	2	550		1	451	16	2				12
13				443	26	7				496		1	435	63	2	432	35	3	448	23	3	13
14				505	56	6	380		1				455		1	485		1	483	50	3	14
15				518	24	3	472		1				557	59	2	560		1	505	59	4	15
16				505	15	6													538	81	2	16
17				526		1													535		1	17
18				473		1										529	8	2				18
19				540	36	3							555		1				547		1	19
20																						20
21													570		1							21
22																						22
23																585		1				23
24										684		1										24
Total			10			53			35			4			26			16			24	Total

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean weight by (a) otolith age for lake trout from six NWT Diamonds Project lakes; and by (b) fin ray age for lake trout from 13 lakes in 1994

Age	Long			Leslie			Panda			Koala			Fox 1			Misery			Age
	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	
4	70		1																4
5	80		1	220		1							63	18	2				5
6	72	15	5	150	14	2	80		1	120		1	137	32	3	150	40	3	6
7	107	54	6	170	59	4	108	4	2	168	31	6	188	95	6	140	28	2	7
8	185	169	8	125	35	2	241	169	6	133	11	2	240	132	11				8
9	433	416	5	215	92	2	276	186	7				180	32	4				9
10	660	467	2	253	58	3	363	110	3				346	140	7	280	115	3	10
11	490	163	4	420		2	430	75	3	350		1	470	48	4	395	7	2	11
12	1513	76	3				530	113	2	630		1	518	54	13				12
13	890	721	2										516	32	5	510	113	2	13
14	950	71	2				645	29	4				593	125	3	495	21	2	14
15	1158	398	4				730		1				580	87	3	630		1	15
16	1875	389	2	1450		1				1300		1	630		1				16
17	2300		1							1120		1							17
18																			18
19																			19
20																			20
21	1550	212	2																21
22																			22
23	850		1																23
24							6400		1										24
>24				1500		1	4750		1										>24
Total			49			18			31			13			62			15	Total

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean weight by fin ray age for lake trout from 13 NWT Diamonds Project lakes in 1994

Age	Long			Leslie			Panda			Koala			Fox 1			Misery			Age
	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	
3	70	14	4							140	28	2	70		1				3
4	85	26	20	160		1	89	46	6	135	35	2	93	51	7				4
5	89	30	22	166	60	5	201	186	7	168	28	6	116	57	10	125	30	5	5
6	145	49	15	213	73	6	297	174	10	192	75	10	184	48	9	148	37	6	6
7	233	116	5	293	197	4	449	222	12	307	67	3	284	105	16	185	49	2	7
8	445	169	13	323	89	3	511	101	17	640	37	4	370	126	14	222	28	3	8
9	735	285	6	475	106	2	541	109	21	605	75	4	518	150	23	360	64	6	9
10	862	203	17	490	77	6	601	140	21	613	104	10	545	78	28	433	112	6	10
11	908	193	32	905	270	6	653	155	15	635	83	11	576	165	35	478	58	6	11
12	910	231	21	829	194	6	699	174	14	694	164	5	604	104	20	496	102	10	12
13	1114	385	25	705	286	4	720	108	11	724	185	10	694	148	9	612	246	6	13
14	1104	272	22	1244	472	10	830	178	9	852	291	6				514	44	7	14
15	1559	718	11	1546	438	6	620		1	863	325	4	657	90	3	578	78	8	15
16	1670	455	15	1300	173	3	1128	430	4	940	156	2							16
17	2063	1271	8	1300	283	2	1633	416	3	1023	194	3							17
18	1733	623	7				2200	424	2				2650		1	420		1	18
19	1750		1				1400		1										19
20	2600	1556	2				6400		1										20
21	2300		1	2250		1													21
22	9000		1																22
23	2800		1	3000		1													23
24	4650		1																24
Total			250			66			155			82			177			66	Total

Age	Fox 3			Kodiak			Larry			Little			Mike			Moose			Nema			Age
	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean (g)	Stand. dev.	Number	Mean	Stand. dev.	Number	
3							95	64	2													3
4							180		1													4
5	200		1				180	56	3				175	35	2							5
6	325	64	2				350	99	2										160		1	6
7	323	67	2	750		1	298	54	5				313	91	4				238	68	4	7
8	393	70	3	620	242	4	405	89	6				400		1	563	160	3	460		1	8
9				777	153	3							834	267	4				370		1	9
10				838	56	3	538	139	4				700	229	3	620		1	510	141	2	10
11	950	71	2	908	53	5	605	66	4				708	203	4	690	127	2	1000		1	11
12				902	211	10	810	400	6	1000	71	2	1350		1	870	71	2				12
13				893	120	7				1200		1	925	318	2	770	132	3	900	87	3	13
14				1127	178	6	620		1				900		1	1050		1	1143	398	3	14
15				1400	608	3	1500		1				1700	778	2	1600		1	1225	520	4	15
16				1125	104	6													1375	389	2	16
17				1220		1													1350		1	17
18				1100		1										1425	35	2				18
19				1513	423	3							1700		1				1450		1	19
20																						20
21													1850		1							21
22																						22
23																2050		1				23
24										3500		1										24
Total			10			53			35			4			26			16			24	Total

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean fork length at otolith age for round whitefish captured in eight NWT Diamonds Project lakes in 1994

Age	Long			Leslie			Panda			Koala			Age
	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	
6	281	27	3										6
7	296	34	3	284		1	301	22	5	263	10	2	7
8	355	21	4	290		1	315	29	4	243	11	2	8
9	346	28	13	375		1	328	52	3	252		1	9
10	344		1				358	13	5	350		1	10
11	344		1	392	36	5	389	30	3	386	11	5	11
12	388	27	3	390	8	2	367	23	5	369	16	4	12
13	402	15	6	438		1	403	18	4	375	6	5	13
14	360		1				405	14	4	395	14	2	14
15							400		1	386	14	3	15
Total			35			11			34			25	Total

Age	Kodiak			Nema			Fox 3			Mike			Age
	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	Mean	Stand. Dev	Sample Size	
6	347	64	2				358	25	2				6
7							332		2	285	26	5	7
8	337	6	4	291	16	2	339	16	7	300	16	6	8
9				305	21	3	322	28	6	340		1	9
10				352	31	6	362	20	5	348	22	5	10
11	384	33	5	358	24	5	381		1	382		1	11
12	359	16	2	390	20	7	370		1	384	4	3	12
13	382	35	7	377	24	5				375	9	2	13
14	401		1	396		1							14
15	380		1	415		1							15
Total			22			30			24			23	Total

Appendix II - B17
Mean Fork Length and Mean Weight by Aging Structure

Mean weight at otolith age for round whitefish captured in eight NWT Diamonds Project lakes in 1994

Age	Long			Leslie			Panda			Koala			Age
	Mean	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	
6	**240**	60	3										6
7	**290**	113	3	**250**		1	**321**	109	5	**190**	14	2	7
8	**494**	61	4	**245**		1	**339**	107	4	**135**	21	2	8
9	**494**	117	13	**605**		1	**440**	229	3	**190**		1	9
10	**450**		1				**498**	33	5	**495**		1	10
11	**350**	170	2	**685**	204	5	**657**	110	3	**597**	47	5	11
12	**667**	121	3	**650**		2	**560**	107	5	**525**	48	4	12
13	**708**	94	6	**900**		1	**721**	71	4	**556**	55	5	13
14	**560**		1				**700**	77	4	**570**	42	2	14
15							**720**		1	**608**	8	3	15
Total			36			11			34			25	Total

Age	Kodiak			Nema			Fox 3			Mike			Age
	Mean	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	**Mean**	Stand. Dev	Sample Size	
6	**390**	71	2				**545**	92	2				6
7							**478**	4	2	**272**	76	5	7
8	**430**	12	4	**265**	35	2	**486**	71	7	**328**	68	6	8
9				**297**	64	3	**403**	93	6	**430**		1	9
10				**487**	139	6	**578**	91	5	**472**	89	5	10
11	**696**	162	5	**526**	139	5	**640**		1	**750**		1	11
12	**565**	7	2	**661**	135	7	**600**		1	**670**	44	3	12
13	**650**	137	7	**604**	114	5				**665**	64	2	13
14	**720**		1	**700**		1							14
15	**650**		1	**830**		1							15
Total			22			30			24			23	Total

Appendix II-B18

Appendix II - B18
Size and Age Statistics for Lake Trout and Round Whitefish

Size and age statistics for juvenile, adult male, and adult female lake trout and round whitefish

a) Lake Trout

Lake		Juveniles					Adult males					Adult females				
		Fork Length (mm)	Weight (g)	Age Fin rays (yr)	Otoliths (yr)	Sample size	Fork Length (mm)	Weight (g)	Age Fin rays (yr)	Otoliths (yr)	Sample size	Fork Length (mm)	Weight (g)	Age Fin rays (yr)	Otoliths (yr)	Sample size
Misery	min	224	110	5	6	8	324	370	10	10	6	349	430	12	13	3
	max	301	320	9	10		417	630	15	15		366	590	14	14	
	mean	257	178	7	7		348	450	12	12		359	500	13	13	
Panda	*min*	*186*	*70*	4	7	21	*370*	*620*	*10*	*14*	1	*343*	*450*	*8*	*9*	7
	max	405	610	10	12		*	*	*	*		790	6400	20	24	
		277	258	7	9		370	620	10	14		432	1423	11	14	
Fox 1	min	174	50	4	5	35	337	440	9	8	27	328	375	8	10	14
	max	342	450	10	12		610	2500	13	15		410	650	13	16	
	mean	253	216	7	8		388	647	10	12		371	533	11	13	
Koala	min	224	120	3	6	11						401	650	11	17	3
	max	420	630	11	12							482	1120	17	17	
	mean	281	211	6	8							431	885	14	17	
Leslie	min	213	100	5	5	15	568	1500	15		1	329	420	10	11	4
	max	*290*	*280*	8	12		*	*	*	*		*540*	*1500*	*17*	*39*	
	mean	256	187	6	8		568	1500	15			434	948	13	19	
Long	min	161	50	4	4	33	376	610	8	9	8	405	620	10	10	19
	max	418	850	12	12		800	5000	37	18		860	9000	22	23	
	mean	255	238	6	8		532	1726	15	14		513	1708	14	16	
						123					43					50

b) Round whitefish

Lake		Juveniles					Adult males					Adult females				
		Fork Length (mm)	Weight (g)	Age Scales (yr)	Otoliths (yr)	Sample size	Fork Length (mm)	Weight (g)	Age Scales (yr)	Otoliths (yr)	Sample size	Fork Length (mm)	Weight (g)	Age Scales (yr)	Otoliths (yr)	Sample size
Koala	min	230	120	4	7	10	309	450	6	9	25	335	420	6	10	16
	max	347	470	10	12		407	660	14	22		419	750	11	18	
Leslie	min	182	80	4	7	5	312	340	6	8	13	312	520	6	7	8
	max	290	260	6	8		438	1000	12	16		476	1190	11	18	
Long	min	193	80	3	6	15	309	300	6	6	24	315	360	5	7	23
	max	371	660	8	11		410	820	9	14		425	890	10	16	
Panda	min	187	60	3	7	11	302	370	5	6	39	300	300	6	8	31
	max	300	350	6	9		422	890	12	20		443	880	11	26	
Fox 3	min	275	250	6	9	1	303	330	5	7	7	320	400	5	7	11
	max	*	*	*	*		377	620	7	10		375	650	9	12	
Kodiak	min						316	370	6	8	14	302	340	5	6	27
	max						412	810	10	13		430	1000	10	16	
Mike	*min*	260	210	6	8	2	280	250	5	7	26	270	210	5	7	25
	max	290	350	8	8		391	750	10	13		414	900	10	12	
Nema	min	263	160	5	9	2	295	270	5	9	22	280	240	5	8	13
	max	291	250	5	9		420	860	9	17		412	870	8	17	

Appendix II-B19

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Appendix II - B19
Fork Length Distribution and Mean Age at Fork Length Class

Fork length distribution and mean age at fork length class for juvenile (Juv), mature male (MM), and mature female (FM) lake trout from a) Long, Leslie, and Panda Lakes; and b) Fox 1 and Misery Lakes Age determined from otoliths

a) Long, Leslie, and Panda Lakes

Fork Length class (mm)	Long lake						Leslie						Panda						Combined Lakes						Fork Length class (mm)
	Juv		MM		FM		Juv		MM		FM		Juv		MM		FM		Juv		MM		FM		
	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	
50-100																									50-100
101-150																									101-150
151-200	9	6											3	7					12	6					151-200
201-250	11	8					8	7					8	8					27	8					201-250
251-300	6	9					7	9	2	9			3	9					16	9	2	9			251-300
301-350	2	10									2	11	11	10			3	10	13	10			5	10	301-350
351-400	4	10	1	11											1	14	9	12	4	10	2	13	9	12	351-400
401-450	2	12	2	12	3	12							2	12			1		4	12	2	12	4	9	401-450
451-500	1	14	1	14	8	17													1	14	1	14	8	17	451-500
501-550			2	15	6	16					2	28									2	15	8	19	501-550
551-600			2	17					1												3	11			551-600
601-650					3	15																	3	15	601-650
651-700																									651-700
701-750																									701-750
751-800			1														1	24			1		1	24	751-800
801-850																									801-850
851-900					1																		1		851-900
Total	35		9		21		15		3		4		27		1		14		77		13		39		Total

b) Fox 1 and Misery Lakes

Fork Length class (mm)	Fox 1						Misery						Combined Lakes						Fork Length class (mm)
	Juv		MM		FM		Juv		MM		FM		Juv		MM		FM		
	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	n	Mean Age	
50-100																			50-100
101-150	1												1						101-150
151-200	6	6											6	6					151-200
201-250	13	8					4	7					17	8					201-250
251-300	13	8					3	7					16	8					251-300
301-350	6	10	4	10	3	10	1	10	4	11	1	13	7	10	8	10	4	11	301-350
351-400	1	15	#	13	10	12			1	14	2	14	1	15	#	13	12	12	351-400
401-450			4	13	3	15			1	15					5	13	3	15	401-450
451-500			1		1	24									1		1	24	451-500
501-550																			501-550
551-600																			551-600
601-650			1												1				601-650
651-700																			651-700
701-750																			701-750
751-800																			751-800
801-850																			801-850
851-900																			851-900
	40		#		17		8		6		3		48		#		20		Total

Appendix II-B20

Appendix II - B20
Age Distribution for Round Whitefish

Age distribution for immature (Imm), mature male (MM), and mature female (FM) round whitefish captured in seven NWT Diamonds Project lakes

	Koala			Leslie			Long			Panda			Fox 3			Mike			Nema			Combined Lakes			
Age	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Imm	MM	FM	Total
6							2	1			1											2	2	0	4
7	2			1	2	2	2	1	1	2	1	1		1	1		4	1				7	9	6	22
8	2			2	3	1	1	3	4	1	1	2		1	3	1	2	4			2	7	10	16	33
9		1			1		4	4	6	1		2	1	2	2		1		1	2		7	11	10	28
10		1	1					1			3	2		2	3		3	2		3	3	0	13	11	24
11		6	3		5	1	1		1		3						1			3	2	1	18	7	26
12	1	3	1		2	1		2	1	1	4				1			3		4	3	2	15	10	27
13		5	3		1			3	3		2	2					2			4	1	0	17	9	26
14		4	1					1			2	2								1		0	8	3	11
15		1	1								1									1		0	3	1	4
16		5	1		2	1			1		1	1										0	8	4	12
17		1									1	1								1	1	0	3	2	5
18		3	1		1	1																0	4	2	6
19																						0	0	0	0
20											1											0	1	0	1
21		1																				0	1	0	1
22		1																				0	1	0	1
23																						0	0	0	0
24																						0	0	0	0
Total	5	32	12	3	17	7	10	16	17	5	21	13	1	6	10	1	13	10	1	19	12	26	124	81	231

Appendix II-B21

Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Mike Lake, 1994

Mike Lake Site 2		lake trout			round whitefish		
		n =		4	n =		10
		mean fl (mm) =		392 0	mean fl (mm) =		325 7
		max fl (mm) =		446 0	max fl (mm) =		391 0
		min fl (mm) =		286 0	min fl (mm) =		270 0
		mean %fullness =		68 8	mean %fullness =		80 5
		mean % digested =		37 5	mean % digested =		45 0
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
COPEPODA							
Heterocope septentrionalis	A	75	41 4	23 6	10		
CLADOCERA							
Eurycercus		100	43 2	61 4	90	86 3	72 1
Holopedium gibberum		25	3 2	4 9			
Daphnia middendorfiiana		50	6 5				
ARACHNIDA							
Acarina (parasitic)	A	25					
HEMIPTERA	A						
Corixidae	A				10		
TRICHOPTERA							
Grensia praeterita	L				60	3 6	12 4
Grensia praeterita	A	25			10		
Unidentified (damaged)	A	25					
COLEOPTERA							
Unidentified (damaged)	A	25					
DIPTERA							
Chironomidae	L				20		
Chironomidae	P	75		1 0	50		
Tanypodinae	P				10		
Procladius	L	50			50		
Procladius	P	75			70	1 3	1 2
Paramerina	L	50			60	1 3	
Paramerina	P	25			50		
Chironomini	P	25			10		
Phaenopsectra	L	25			50		
Tanytarsus	L	25			40		
Psectrocladius	L				90	2 3	
Psectrocladius	P				20		
Eukiefferiella	L				20		
Cricotopus	L				30		
Heterotrissocladius	L	75			70	2 8	
Gymnometriocnemus	L				10		
Protanypus	L	25					
Protanypus	P	25					
Monodiamesa	P	25					
MOLLUSCA							
Pisidium		50	1 5	2 6	30		
MISCELLANEOUS							
Case materials							
Plant							
Mucus							10 8
TOTAL			100 0	100 0		100 0	100 0

[1] A=adult, L=Larvae, P=Pupae

[2] Percent of stomachs analyzed in which organism occurred

Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Fox 3 Lake, 1994

Fox 3 Lake Site 5		lake trout n = 5 mean fl (mm) = 313 8 max fl (mm) = 338 0 min fl (mm) = 282 0 mean %fullness = 16 2 mean % digested = 69 0			round whitefish n = 9 mean fl (mm) = 341 8 max fl (mm) = 385 0 min fl (mm) = 275 0 mean %fullness = 37 8 mean % digested = 60 6			arctic grayling n = 2 mean fl (mm) = 303 5 max fl (mm) = 338 min fl (mm) = 269 mean %fullness = 87 5 mean % digested = 85 0		
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA										
Heterocope septentrionalis	A				11			100	29 1	2 7
CLADOCERA										
Daphnia middendorffiana	A				22	3 5		100	26 0	3 1
Eurycercus	A	40	18 2		44	5 3	2 4	50		
Holopedium gibberum					22	64 9	12 1			
EUBRANCHIOPODA										
Triops longicaudata					11					
ARACHNIDA										
Hydracarina	A							100	8 3	1 0
Acarina (parasitic)	A							50	4 4	
PLECOPTERA										
Unidentified	A	20	4 5	1 2						
HEMIPTERA	A							100	3 6	2 1
TRICHOPTERA										
Limnephilidae	P									
Grensia praeterita	L				56	1 3	2 6			
Grensia praeterita	P	20	9 1	3 2						
Grensia praeterita	A	20	4 5							
Mystacides	L				22					
Unidentified	P							50	1 0	1 7
COLEOPTERA										
Agabus	A	20	4 5	2 0						
Unidentified	A							100	3 6	20 8
HYMENOPTERA										
Unidentified	A							50		
DIPTERA										
Chironomidae	L				11			50		
Chironomidae	P	20	13 6		11			100	9 4	10 6
Procladius	L	20	4 5		33			50		
Procladius	P				11					
Paramerina	L	20	4 5		22			100	4 6	
Paramerina	P	40	9 1					50		
Pheenopsectra	L				11					
Dicrotendipes	L							50		
Parachironomus	L	20	4 5					50		
Rheotanytarsus	L				11					
Tanytarsus	L							50	1 8	
Tanytarsus	P	20	9 1					50		
Psectrocladius	L				11			100	1 4	
Psectrocladius	P							50		
MOLLUSCA										
Valvata sincera					33	3 8	8 7			
Pisidium					33	19 7	50 6			
FISH (bones/flesh)		40	13 6	86 0						
MISCELLANEOUS										
Case materials					78		2 5	50		
Plant					22		1 6	50		
Mucus		60		6 1	44		18 0	50		17 9
Remains[3]					22			100		36 6
TOTAL			100 0	100 0		100 0	100 0		100 0	100 0

[1] A=adult, L=Larvae P=Pupae
[2] Percent of stomachs analyzed in which organism occurred
[3] Parts not identifiable due to digestion

Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Fox 1 Lake, 1994

Fox 1 Lake Site 7		lake trout n = mean fl (mm) = max fl (mm) = min fl (mm) = mean %fullness = mean % digested =		15 317 1 424 0 245 0 57 7 66 3
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA				
Heterocope septentrionalis		73	30 4	10 3
CLADOCERA				
Daphnia	A	13	1 1	
Eurycercus	A	20		
ARACHNIDA				
Acarina (parasitic)		53	4 1	
EPHEMEROPTERA				
Unidentified	N	7		
HEMIPTERA				
Neocorixa	A	20		1 0
TRICHOPTERA				
Limnephilidae	P	7		
Grensia praeterita	L	7		
Grensia praeterita	P	13		2 1
Leptoceridae				
Mystacides	L	7		
COLEOPTERA				
Unidentified	A	7		
Dytiscidae	A	7		
HYMENOPTERA				
Unidentified	A	7		
DIPTERA				
Chironomidae	L	7		
Chironomidae	P	73		21 8
Tanypodinae	L	7	53 4	
Procladius	L	40		
Procladius	P	20		
Conchapelopia	P	20		
Chironomini	L	7		
Polypedilum	P	53		1 2
Tanytarsini			1 3	
Tanytarsus	L	47		
Micropsectra	P	7		
Orthocladiinae	P	20		
Psectrocladius	L	60		
Psectrocladius	P	53	2 3	3 0
Diamesinae	P		5 9	
Protanypus	P			
Dicrotendipes	L	7		
FISH				
Unidentified		20		23 7
Lota lota		7		23 6
MISCELLANEOUS				
Case materials		7		
Fish scales		7		
Mucus		13		
Remains[3]		33		8 9
TOTAL			100 0	100 0

[1] A=adult L=larvae P=pupae

[2] Percent of stomachs analyzed in which organism occurred

[3] Parts not identifiable due to digestion

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Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Larry Lake, 1994

Larry Lake Site 12		lake trout n = 4 mean fl (mm) = 341 0 max fl (mm) = 402 0 min fl (mm) = 285 0 mean %fullness 100 0 mean % digeste 27 5		
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA				
Heterocope septentrionalis	A	25		
CLADOCERA				
Eurycercus		25		
OSTRACODA				
Cypria	A	25		
ARACHNIDA				
Hydracarina		25		
Acarina (parasitic)		50	2 5	
PLECOPTERA				
Yugus	N	25		
TRICHOPTERA	L			
Limnephilus	L	50	2 4	26 2
Grensia praeterita	L	25		
COLEOPTERA				
Agabus	A	25		
Agabus	L	25		3 0
DIPTERA				
Chironomidae	P	25	9 8	1 5
Tanypodinae				
Procladius	L	100		
Procladius	P	25	5 0	2 4
Chironomini	P	25		
Chironomini	L	25		
Neozavrelia	P	50	13 3	2 8
Phaenopsectra	L	25		
Phaenopsectra	P	50	13 4	13 8
Polypedilum	P	25		
Tanytarsus	P	25		
Micropsectra	P	50	30 5	4 0
Orthocladiinae	L	25		
Psectrocladius	L	50		
Heterotanytarsus	P	50	19 1	3 8
Diamesinae	P	25		
Protanypus	P	50		
Monodiamesa	P	25		
FISH				
Lota lota	J	25		14 3
MISCELLANEOUS				
Plant		25		
Case materials		50		24 2
TOTAL		100	100	100

[1] A=adult, L=larvae, P=pupae
[2] Percent of stomachs analyzed in which organism occurred

Appendix II - B21

Summary of Stomach Content Analyses of Fish Collected 1994

Summary of stomach content analyses of fish collected from Moose Lake, 1994

Moose Lake Site 15		round whitefish			arctic grayling		
		n = 2			n = 2		
		mean fl (mm) = 403 0			mean fl (mm) = 409 5		
		max fl (mm) = 406 0			max fl (mm) = 410 0		
		min fl (mm) = 400 0			min fl (mm) = 409 0		
		mean %fullness = 7 5			mean %fullness = 100 0		
		mean %digested = 62 5			mean % digested = 85 0		
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
OSTRACODA							
Cypria	A				50		
ARACHNIDA							
Aranea					50		
Hydracarina					100	2 0	
Acarina (parasitic)					100	8 5	
EPHEMEROPTERA							
Ephemerella	N				50	2 7	19 1
COLEOPTERA							
Dytiscidae					50		
Brachyvatus	A				50		
Carabidae	A				100	1 1	14 0
Cerambicidae	A				50		1 8
Staphylinidae	A				50		
DIPTERA							
Unidentified	A				100	1 4	1 5
Athericidae	P				50	3 5	3 0
Chironomidae	L				100		
Chironomidae	P				100	46 8	36 6
Tanypodinae	L				100		
Procladius	L				50		
Conchapelopia	P	50	2 6		50	2 4	2 1
Chironomini	P				50	19 7	7 7
Polypedilum	P				50	2 2	2 5
Rheotanytarsus	L				50	5 0	
Psectrocladius	L				50	1 6	
Monodiamesa	P				50		1 1
GASTROPODA							
Valvata sincera		100	97 4	41 4			
MISCELLANEOUS							
Plant					100		8 3
Mucus		100		58 2			
TOTAL			100 0	100 0		100 0	100 0

[1] A=adult, L=larvae, P=pupae

[2] *Percent of stomachs analyzed in which organism occurred*

Appendix II - B21

Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Leslie Lake, 1994

Leslie Lake Site 17		lake trout n = 12 mean fl (mm) = 285 3 max fl (mm) = 536 0 min fl (mm) = 223 0 mean %fullness = 51 3 mean % digested = 69 9			round whitefish n = 11 mean fl (mm) = 398 4 max fl (mm) = 476 0 min fl (mm) = 284 0 mean %fullness = 70 9 mean % digested = 58 6		
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA							
Heterocope septentrionalis	A	42	4 6	5 4			
CLADOCERA							
Eurycercus		42		1 6	45	87 1	43 8
Daphnia middendorffiana		25					
Bosmina longirostris		17	94 5	13 5			
ARACHNIDA							
Hydracarina	A				9		
HEMIPTERA							
Corixidae	A	8					
TRICHOPTERA							
Agrypnia	L				9		
Grensia praeterita	L	8			82	9 4	22 0
Unidentified	P	8					
Unidentified	A	8					
COLEOPTERA							
Dytiscidae	A	8					
Agabus	A	17		1 2			
Unidentified	A	8					
DIPTERA							
Chironomidae	P	17					
Procladius	L				9		
Phaenopsectra	L				9		
Rheotanytarsus	L				9		
Tanytarsus	P	8					
Orthocladiinae	L						
Psectrocladius	L	17			18		
Protanypus	P	8					
MOLLUSCA							
Valvata sincera					9		1 8
Pisidium		25			18	2 7	17 3
FISH							
Lota lota		8		20 2			
Unidentified	J	33		7 1			
Unidentified (dam)		58		38 4			
Prosopium cylindraceum	J	8		7 7			
MISCELLANEOUS							
Case materials		8			45		1 8
Plant					9		
Fish scale		33		3 4	9		
Mucus					73		13 1
TOTAL			100 0	100 0		100 0	100 0

[1] A=adult, L=larvae P=pupae, J=juvenile

[2] Percent of stomachs analyzed in which organism occurred

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Summary of Fish Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Long Lake, 1994

Long Lake Site 19		lake trout			round whitefish			arctic grayling		
		n = 18			n = 11			n = 4		
		mean fl (mm) = 377 7			mean fl (mm) = 368 2			mean fl (mm) = 269 0		
		max fl (mm) = 545 0			max fl (mm) = 425 0			max fl (mm) = 315 0		
		min fl (mm) = 182 0			min fl (mm) = 318 0			min fl (mm) = 236 0		
		mean %fullness = 58 3			mean %fullness = 71 8			mean %fullness = 91 3		
		mean % digested = 40 3			mean % digested = 41 7			mean % digested = 92 5		
Food Taxon	Stage[1]	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%
COPEPODA										
Heterocope septentrionalis		50	7 2	3 2	10			75	1 9	5 3
OSTRACODA										
Cypris					10					
CLADOCERA										
Daphnia middendorffiana		44	67 7	29 7	27	85 3	24 2	75	8 6	58 7
Eurycercus		6			18					
EUBRANCHIPODA										
Triops longicaudatus	A	28	1 1	21 3						
ARACHNIDA										
Hydracarina								25		
Acarina (parasitic)			0 2		9			75	4 9	
EPHEMEROPTERA										
Paramelatus	N	6								
PLECOPTERA										
Unidentified		6								
Isogus	N							25		
Capnia	A	11								
HOMOPTERA										
Aphididae	A							25		
Macroveliidae	A							25		
Unidentified	A	11						25		
TRICHOPTERA										
Limnephilidae	P	22		2 8				75		1 6
Limnephilidae	A	6								
Apatania	L				27	1 4	1 0			
Grensia praeterita	L	17	1 0	5 0	64	6 4	4 1	25		1 8
Leptoceridae										
Mystacides	L	6								
COLEOPTERA										
Unidentified	A							75		4 2
Carabidae	A							50		
Cerambycidae	A	6								
Dytiscidae	A	6						50		
Agabus	A	11						25		
HYMENOPTERA										
Unidentified	A	5						50 cont		
LEPIDOPTERA	A							25		
DIPTERA	A							25		
Athericidae	P				10					
Unidentified	P				10					
Unidentified	A							25		
Chironomidae	L	6						50		
Chironomidae	P	50			10			75	2 9	7 9
Tanypodinae	L									
Procladius	L	33			10					
Procladius	P	28			27					
Paramerina	L	22			10					
Paramerina	P	17								
Chironomini	L	6			18					
Chironomini	P				10					
Microtendipes	L				10					
Phaenopsectra	L	11	1 4	1 7						
Phaenopsectra	P	17			27			25		
Pentaneurini	L	6								
Chironomus	L							25		
Cricotopus	L	6								
Cryptochironomus	P	6								
Rheotanytarsus	L				10					
Tanytarsus	L				18					
Micropsectra	P				10					
Orthocladiinae	L				10					
Gymnometriocnemus	L	17			18					
Psectrocladius	L	22			18					
Prodiamesa	L	6								
Protanypus	L	17								
PELECYPODA										
Pisidium		6			18	3 3	7 6			
FISH										
Fish (bones)		17		10 3						
Unidentified		6								
Prosopium cylindraceum		6		1 8						
Salvelinus namaycush		6		2 2						
Lota lota		6								
Cottidae	J	11			10		4 0			
Cottus cognatus		6		1 8						
MISCELLANEOUS										
Case materials		17		7 2	55		16 7	25		
Mucus		22		18 2	18		5 8	25		1 6
Remains[3]								75		7 8
TOTAL			100.0	100.0		100.0	100.0		100.0	100.0

[1] A=adult L=larvae P=pupae N nymph J juvenile

[2] Percent of stomachs analyzed in which organism occurred

[3] Parts not identifiable due to digestion

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Little Lake, 1994

Little Lake		lake trout			round whitefish			arctic grayling		
Site 23		n =		5	n =		7	n =		2
		mean fl (mm) =		452 4	mean fl (mm) =		277 0	mean fl (mm) =		295 0
		max fl (mm) =		544 0	max fl (mm) =		404 0	max fl (mm) =		348 0
		min fl (mm) =		416 0	min fl (mm) =		191 0	min fl (mm) =		242 0
		mean %fullness =		70 0	mean %fullness =		73 6	mean %fullness =		100 0
		mean % digested =		30 0	mean % digested =		27 1	mean % digested =		50 0
Food Taxon	Stage[1]	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%	Occurrence[2] ≥ 1%	Number ≥ 1%	Weight ≥ 1%
COPEPODA										
Heterocope septentrionalis								100	48 9	56 2
CLADOCERA										
Eurycercus		20			57					
Daphnia middendorffiana		40	96 3	9 2	71			100	50 9	40 1
Daphnia galatea					14	2 0				
HEMIPTERA	A									
Corixidae	A							100		
TRICHOPTERA										
Leptoceridae										
Mystacides	L				14					
Phryganeidae										
Agrypnia	L	20	3 2	15 0	29		7 9			
Limnephilidae										
Grensia praeterita	L	20			29			50		
Grensia praeterita	P	20								
COLEOPTERA										
Dytiscidae	A							50		
DIPTERA										
Procladius	L				14			100		
Paramerina	L				29					
Chironomini	L									
Microtendipes	L				14					
Phaenopsectra	L	60			43			100		
Dicrotendipes	L				86		54 2			
Orthocladiinae	P									
Psectrocladius	L				57			100		
Eukiefferiella	L				14					
MOLLUSCA										
Valvata sincera					14					
Pisidium					14					
FISH										
Cottidae	J	20								
Cottus cognatus		60		27 8						
Unidentified	J	20		14 3	14		15 8			
MISCELLANEOUS										
Case materials		0		32 2	86		16 9			
Plant					29		1 7			
Fish scale										
Mucus										
TOTAL			100 0	100 0		100 0	100 0		100 0	100 0

[1] A=adult, L=larvae, P=pupae j=juvenile
[2] Percent of stomachs analyzed in which organism occurred

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Kodiak Lake, 1994

Kodiak Lake Site 25		lake trout			round whitefish			arctic grayling		
		n =		2	n =		9	n =		2
		mean fl (mm) =		394 0	mean fl (mm) =		391 4	mean fl (mm) =		346 0
		max fl (mm) =		468 0	max fl (mm) =		426 0	max fl (mm) =		402 0
		min fl (mm) =		320 0	min fl (mm) =		366 0	min fl (mm) =		290 0
		mean %fullness =		32 5	mean %fullness =		62 8	mean %fullness =		100 0
		mean % digested =		92 5	mean %digested =		54 4	mean % digested =		72 5
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA										
Heterocope								100	50 5	17 2
CLADOCERA										
Daphnia middendorffiana	A							50		
Eurycercus	A				22			50		
EUBRANCHIOPODA										
Triops					11					
ARACHNIDA										
Aranaea	A							50		
Hydracarina	A				22			100	1 2	
Acarina (parasitic)	A							50		
HEMIPTERA	A							50		
TRICHOPTERA										
Grensia	P				44	3 8	5 0	50		
Agrypnia	L				67	30 8	20 6	50		
Agrypnia	P				11					
Unidentified	P				11					
Unidentified	A							50		2 1
COLEOPTERA										
Dytiscidae	L				11					
Dytiscidae	A							50		
Agabus	L				11					
Staphylinidae	A							50		
Unidentified	A							50		1 0
HYMENOPTERA										
Formicidae	A							50		
DIPTERA										
Chelifera	L				11					
Athericidae	A							50		
Chironomidae	P	50	12 5		44			100	14 2	13 9
Procladius	L	50	12 5		33			100	2 1	2 0
Procladius	P				11			50		
Paramerina	L							50		
Chironomini	L				11					
Phaenopsectra	L				11					
Paracladopelma	L				11					
Dicrotendipes	L	50	37 5		11					
Einfeldia	L				11					
Demicryptochironomus	L				11			50		
Rheotanytarsus	L							50		
Tanytarsus	L							50		
Tanytarsus	P	50	12 5					100		
Micropsectra	P							50		
Psectrocladius	L				22			50	23 5	7 2
Psectrocladius	P				11			50	1 5	
Gymnometriocnemus	L				11					
Heterotrissocladius	L				11					
Diamesinae	P									
Prodiamesa	L							50		
MOLLUSCA										
Valvata sincera					33	16 3	15 7			
Pisidium		50	12 5		22	44 0	20 2			
FISH (bones/flesh)		50		22 1						
MISCELLANEOUS										
Case materials					44		28			
Plant		50		8 9				100		
Fish scales										
Mucus		50		68 6	33		9 3			
Remains[3]								50		49 4
TOTAL			100 0	100 0		100 0	100 0		100 0	100 0

[1] A=adult, L=larvae P=pupae

[2] Percent of stomachs analyzed in which organism occurred

[3] Parts not identifiable due to digestion

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Koala Lake, 1994

Koala Lake		lake trout			round whitefish			arctic grayling		
Site 27		n =	2		n =	13		n =	10	
		mean fl (mm) =	240 5		mean fl (mm) =	374 1		mean fl (mm) =	293 4	
		max fl (mm) =	257 0		max fl (mm) =	405 0		max fl (mm) =	391 0	
		min fl (mm) =	224 0		min fl (mm) =	235 0		min fl (mm) =	169 0	
		mean %fullness =	90 0		mean %fullness =	58 8		mean %fullness =	84 0	
		mean % digested =	37 5		mean % digested =	61 1		mean % digested =	84 9	
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
COPEPODA										
Heterocope septentrionalis	A				8	13 4	1 0	20	14	4 1
Cyclops	A							10		
OSTRACODA										
Cypria	A							40	19	
ARACHNIDA										
Aranea	A							20		
Hydracarina		50	68	33 72	8	22 1	1 5	70	3	
Acarina (parasitic)					8			30		
EPHEMEROPTERA										
Ephemerella	N				15					
PLECOPTERA										
Yugus	N				38	1 3	6 0	20		
ORTHOPTERA	A							10		1 8
HEMIPTERA										
Coccoidea	A							20		
Corixidae	A							20		
Aphididae	A				8			10		
Macroveliidae	A				8					
Unidentified damaged	N							10		
Unidentified damaged	A				8			70	2	1 4
TRICHOPTERA										
Leptoceridae										
Mystacides	L	50			8					
Limnephilidae	L				23	1 5	3 4	10		
Limnephilus	L				31	2 6	9 3	10		
Grensia praeterita	L	50			62	13 7	12 7	40	1	5 4
Unidentified	L				8			20	1	3 3
Unidentified	P				8					
COLEOPTERA										
Gyrinidae										
Gyrinus	A							10		
Dytiscidae	A							40		1 6
Brachyvatus	A							20		
Agabus	A				8	1 3	2 9	20		2 0

cont

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Koala Lake, 1994

Agabus	L				38	2 5	5 7				
Carabidae	A							20			
Staphylinidae	A							20			
Curculionidae	A							10			
Chrysomelidae	A							10			
Unidentified damaged	L							20			
Unidentified damaged	A				8	1 3	3 6	70	5	18 6	
Deronectes	A							10	1		
HYMENOPTERA											
Braconidae	A				8	2 1		20			
Unidentified terrestrial	A				15			100	3	2 7	
DIPTERA											
Unidentified damaged	L							10			
Unidentifed terrestrial	A				8	3 2	1 8	30	1	1 2	
Tabanus	L	50		2 24							
Tipulidae	P							10			
Bezzia	L							10			
Chironomidae	L				8						
Chironomidae	P				31	5 4		90	39	18 6	
Tanypodinae	L							10			
Procladius	L	50			23			40	1		
Procladius	P				8			20			
Paramerina	L				38	1 6		10			
Chironomini	L				23			20			
Phaenopsectra	L	100	1		8						
Dicrotendipes	L				8						
Chironomus	L							10			
Tanytarsini	L							10			
Tanytarsus	L				15			10	1		
Orthocladiinae	L				23	1 0		30	1		
Eukiefferiella	L				23			20			
Psectrocladius	L				46	6 3		20	3		
Corynoneura	L							10			
Cricotopus	L							10			
Gymnometriocnemus	L	50	30	31 35							
Diamesinae	P										
Protanypus	L				8						
Protanypus	P				8			10			
Monodiamesa	L				8						
PELECYPODA											
Valvata sincera					23	14 1	10 1				
Pisidium					8						
FISH											
Unidentified (bones/flesh)		50		30 90	8		2 0				
MISCELLANEOUS											
Case materials		50			92		17 0	80		10 1	
Plant/feather								30			
Fish scale					46						
Mucus					15		7 0	50		4 4	
Remains[3]					15		12 1	70		16 4	
TOTAL			100 0	100 0		100 0	100 0		100 0	100 0	

1 A=adult, L=larvae, P=pupae

2 Percent of stomachs analyzed in which organism occurred

3 Parts not identifiable due to digestion

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Panda Lake, 1994

Panda Lake		lake trout			round whitefish			arctic grayling		
Site 29		n =	17		n =	21		n =	7	
		mean fl (mm) =	362 8		mean fl (mm) =	366 2		mean fl (mm) =	224 7	
		max fl (mm) =	441 0		max fl (mm) =	443 0		max fl (mm) =	275 0	
		min fl (mm) =	235 0		min fl (mm) =	287 0		min fl (mm) =	197 0	
		mean %fullness =	80 6		mean %fullness =	62 1		mean %fullness =	92 1	
		mean % digested =	45 3		mean % digested =	50 5		mean % digested =	57 1	
Food Taxon	**Stage1**	**Occurrence2** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence2** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence2** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
COPEPODA										
Heterocope septentrionalis	A	65	13 1	13 0	48	52 6	16 6	100	77 0	69 3
Cyclops	A	6						14		
CLADOCERA										
Eurycercus		6			5			43		
Holopedium gibberum		53	73 8	38 2				14	17 8	5 9
Daphnia middendorffiana		59	1 7					14		
OSTRACODA										
Cypria					19			29		
ARACHNIDA										
Hydracarina		6			10			57		
Acarina (parasitic)		24	1 3		19	1 7		14		
PLECOPTERA										
Unidentified damaged	A	6			5					
HEMIPTERA										
Unidentified								14		
Corixidae		24						14		4 7
Neocorixa	A	41		1 1				29		
TRICHOPTERA										
Leptoceridae					5					
Mystacides	L				10	3 9	3 9			
Limnephilidae	L	6			19			29		
Limnephilidae	A							14		
Limnephilus	L	6			5			14		
Grensia praeterita	L	18			71	3 3	8 5			
Grensia praeterita	P	24		3 5	5			14		1 6
COLEOPTERA										
Unidentified								14		
Haliplus	A	18			5					
Carabidae	A	6						29		
Dytiscidae	A	12						29		1 1
Brachyvatus	A	6			5					
Agabus	L	6								
Agabus	A							14		1 8
Unidentified damaged	L	24			10					
Unidentified damaged	A							14		
HYMENOPTERA										
Braconidae								29		
Chalcoidea								29		

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Panda Lake, 1994

DIPTERA												
Unidentified	A							29				
Tipulidae	L				5							
Empididae	L				5							
Bezzia	L							14				
Chironomidae	L	6			29			14				
Chironomidae	P	35	14	16	19	81	43	100		71		
Tanypodinae	L	12										
Procladius	L	35			57			29				
Procladius	P	29			24	43	37					
Paramerina	L	35			14			14				
Paramerina	P	6										
Chironomini	L	18			10							
Chironomini	P	6										
Phaenopsectra	L				43							
Phaenopsectra	P	6			10							
Dicrotendipes	L	6			24	44	36	14				
Dicrotendipes	P	24	72	171				14				
Parachironomus	L	6										
Heterotanytarsus	P				10							
Rheotanytarsus	L				5			14				
Tanytarsus	L	6										
Tanytarsus	P	6						14				
Orthocladiinae	L	12			5	35		14				
Gymnometriocnemus	L	29			33	34	42					
Gymnometriocnemus	P	29			33		55					
Eukiefferiella	L							14				
Heterotrissocladius	L				5							
Zalutschia	P				19	10						
Abiskomyia	P				10							
Psectrocladius	L	6			10			29				
Diamesinae	L				5							
Potthastia	L				5							
Protanypus	L	35			52		10					
Protanypus	P				38	10		14				
MOLLUSCA												
Valvata sincera					5		27					
Pisidium					43	93	208					
FISH												
Cottidae		12		74								
Unidentified	J	18		15								
MISCELLANEOUS												
Case materials		35		18	71		123	29				
Plant		24			5			29		33		
Fish Scale					10							
Mucus		18		49	29		77	14		11		
Remains[3]		12		42	5		15	14				
TOTAL			100 0	100 0		100 0	100 0		100 0	100 0		

[1] A=adult, L=larvae, P=pupae, j=juvenile

[2] Percent of stomachs analyzed in which organism occurred

[3] Parts not identifiable due to digestion

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of lake trout collected from Mark Lake, 1994

Mark Lake Site 46		n= mean fl= max fl= min fl= = digested=	6 226 5 246 0 205 0 95 83 54 16	
Food Taxon	**Stage[1]**	**Occurrence[2] %**	**Number %**	**Weight %**
CLADOCERA				
Eurycercus		100	98 9	95 6
ARACHNIDA				
Acarina (parasitic)	A	17		
HEMIPTERA	A			
Corixidae	A	100		1 3
TRICHOPTERA				
Unidentified	L	50		
Unidentified	P	33		
COLEOPTERA				
Dytiscidae	A	50		
Brachyvatus	A	50		
Unidentified (damaged)	A	50		
DIPTERA				
Simulidae	A	17		
Chironomidae	L	17		
Chironomidae	P	100		
Procladius	L	50		
Potthastia	L	17		
MISCELLANEOUS				
Case materials		50		
TOTAL			100 00	100 00

[1] A=adult, L=Larvae, P=Pupae

[2] Percent of stomachs analyzed in which organism occurred

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from Misery Lake, 1994

Misery Lake		lake trout		
Site 48		n =		10
		mean fl (mm) =		310 1
		max fl (mm) =		417 0
		min fl (mm) =		224 0
		mean %fullness =		52 5
		mean % digested =		55 0
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
ARACHNIDA				
Hydracarina	A	40	3 6	
HEMIPTERA				
Corixidae	A		16 2	
Neocorixa	A	50	12 5	40 3
TRICHOPTERA				
Limnephilidae				
Grensia praeterita	L	30	2 4	1 3
Grensia praeterita	P	20	16 6	19 9
COLEOPTERA				
Dytiscidae	A	20		1 1
Brachyvatus	A	20		
DIPTERA				
Chironomidae	P	30	1 2	0 1
Tanypodinae	L			
Procladius	L	40		
Procladius	P	20		
Phaenopsectra	L	30	11 0	4 7
Chironomus	L	30	33 7	13 6
Tanytarsini	L			
Tanytarsus	P	10		
Orthocladiinae	L			
Psectrocladius	L	10		
Cricotopus	L	10		
FISH	J	30		2 4
Unidentified (bones/flesh)		10		
MISCELLANEOUS		3		
Case materials		20		10 9
Pebbles		30		
Mucus		40		4 9
TOTAL			100 0	100 0

[1] A=adult, L=larvae, P=pupae, j=juvenile

[2] Percent of stomachs analyzed in which organism occurred

[3] Parts not identifiable due to digestion

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Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of arctic grayling collected from Buster Lake, 1994

Buster Lake Site 46		n= mean fl= max fl= min fl= = digested =	3 329 3 342 0 316 0 88 3 93 0	
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
COPEPODA				
Heterocope	A	100	47 7	4 2
OSTRACODA				
Cypria		67		
ARACHNIDA				
Hydracarina		100	12 1	1 4
PLECOPTERA				
Capnidae	A	33		
HEMIPTERA				
Unidentified	A	33		
Saldidae	A	33		
Corixidae	A	100	1 3	1 8
Corixidae	N	33		
Neocorixa	A	33		
COLEOPTERA				
Unidentified	A	67		2 0
Unidentified	L	33		
Dytiscidae	A	67		
Brachyvatus	A	100	1 3	
Staphylinidae	A	33		
HYMENOPTERA				
Braconidae	A	67		
Chalcoidea	A	33		
TRICHOPTERA				
Limnephilidae	A	33		
Limnephilidae	L	33		
Grensia praeterita	L	33		
DIPTERA				
Unidentified	A	67	5 3	2 7
Bezzia	L	33		
Chironomidae	L	33	1 2	
Chironomidae	P	100	4 6	
Procladius	L	100	1 4	
Paramerina	L	100	2 2	3 8
Dicrotendipes	L	67		
Orthocladiinae	L	33	1 0	
MISCELLANEOUS				
Fish scale		33		
Plant		67		4 8
Remains[3]		100		64 9
Mucus		33		8 3
TOTAL			100 0	100 0

[1] A=adult, L=larvae, P=pupae
[2] Percent of stomachs analyzed in which organism occurred
[3] Parts not identifiable due to digestion

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Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Summary of stomach content analyses of fish collected from 1 Hump Lake, 1994

1 Hump Lake Site 61		lake trout n= 1 mean fl= 338 0 max fl = 338 0 min fl = 338 0 mean %fullness = 40 0 mean %digested = 75 0			round whitefish n = 5 mean fl (mm) = 384 6 max fl (mm) = 412 0 min fl (mm) = 370 0 mean %fullness = 75 0 mean % digested = 27 0			arctic grayling n = 3 mean fl (mm) = 240 6667 max fl (mm) = 340 0 min fl (mm) = 153 0 mean %fullness = 100 0 mean % digested = 58 3		
Food Taxon	**Stage[1]**	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%	**Occurrence[2]** ≥ 1%	**Number** ≥ 1%	**Weight** ≥ 1%
COPEPODA										
Heterocope septentrionalis								100	95 9	57 3
CLADOCERA										
Eurycercus		100	87 1	90 5						
ARACHNIDA										
Hydracarina	A	100						67	1 3	
Acarina (parasitic)	A				40					
HEMIPTERA	A									
Aphididae	A							33		
TRICHOPTERA										
Limnephilidae										
Grensia praeterita	L	100						100	2 0	12 0
COLEOPTERA										
Brachyvatus	A							33		
Unidentified (damaged)	A							33		2 5
HYMENOPTERA										
Ichneumonidae	A							33		
DIPTERA	A							67		
Chironomidae	L	100	3 5							
Chironomidae	P	100	8 8	5 9	80	9 7	4 9	67		
Procladius	L	100			80	7 8	7 6			
Chironomini	L				20					
Phaenopsectra	L				100	55 9	41 5			
Phaenopsectra	P				60					
Dicrotendipes	L				20	14 4	21 4			
Chironomus	L				20					
Tanytarsus	L				20					
Orthocladiinae	L				20					
Psectrocladius	L				60			33		
Psectrocladius	P				20					
Heterotrissocladius	L				20					
Gymnometriocnemus	L				60					
Protanypus	L				80	3 9	5 5			
Protanypus	P				80	6 6	10 9			
Prodiamesa	L				40					
MISCELLANEOUS										
Case materials		100		2 1				100		26 2
Plant					20					
Fish scales					40		4 7			
Mucus					40		2 3			
Remains[3]										
TOTAL			100 0			100 0	100 0		100 0	100 0

[1] A=adult, L=larvae P=pupae
[2] Percent of stomachs analyzed in which organism occurred
[3] Parts not identifiable due to digestion

Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

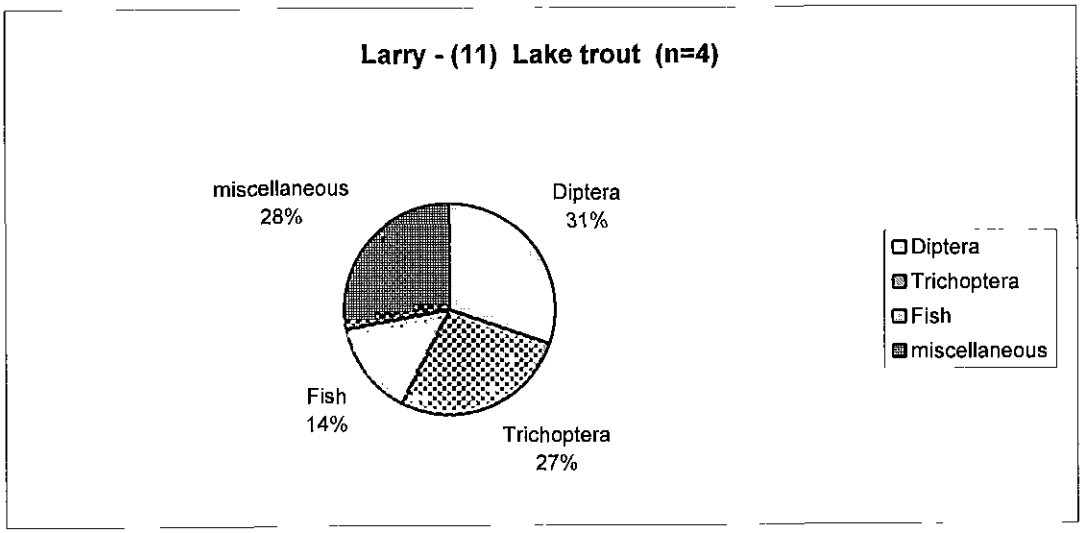
Summary of stomach content analyses of fish collected from Nema Lake, 1994

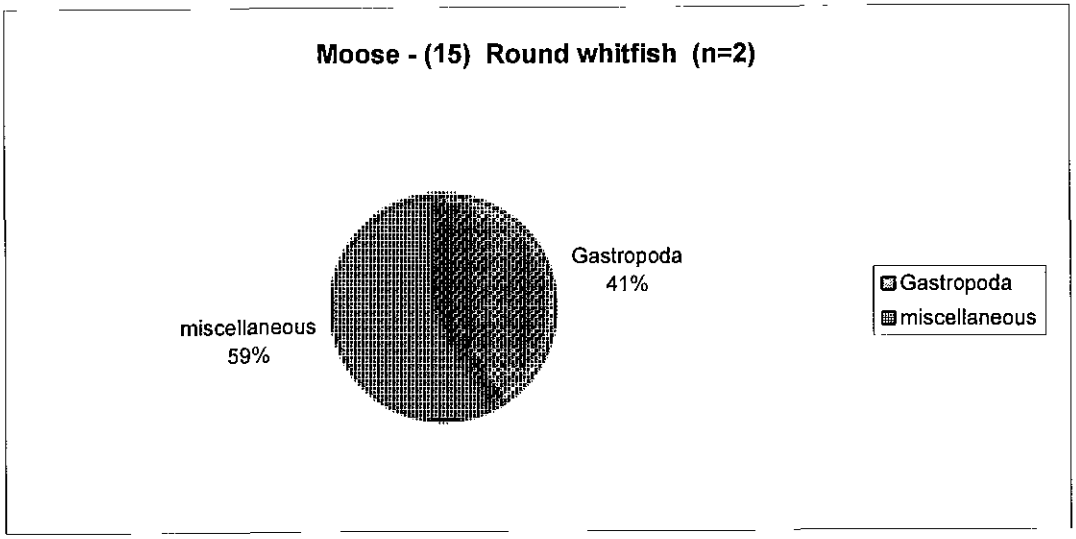
Nema Lake		lake trout			round whitefish		
Site 62		n =		8	n =		18
		mean fl (mm) =		315 4	mean fl (mm) =		367 6
		max fl (mm) =		435 0	max fl (mm) =		595 0
		min fl (mm) =		235 0	min fl (mm) =		291 0
		mean %fullness =		45 0	mean %fullness =		57 8
		mean % digested =		51 9	mean % digested =		36 4
Food Taxon	**Stage[1]**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**	**Occurrence[2] ≥ 1%**	**Number ≥ 1%**	**Weight ≥ 1%**
COPEPODA							
Heterocope septentrionalis	A	50	1 4	1 9	5 6		
Diaptomus		13					
EUBRANCHIOPODA							
Triops longicaudatus		13					
CLADOCERA							
Eurycercus		13			6		
Holopedium gibberum	A	38	50 8	27 3			
Daphnia middendorffiana		50	47 1	37 9	44	93 5	25 1
Bosmina longirostris		25					
ARACHNIDA							
Hydracarina	A				6		
HEMIPTERA	A						
Corixidae	A				8		
TRICHOPTERA							
Limnephilidae							
Grensia praeterita					17		
DIPTERA							
Procladius	L	13			6		
Microtendipes	L				6		
Dicrotendipes	L	25			17		
Rheotanytarsus	L	25					
Gymnometriocnemus					6		
Psectrocladius	L	13			6		
Protanypus							
MOLLUSCA							
Valvata sincera		13			61	5 4	45 1
Pisidium		13			28		24 7
FISH	J	25		8 4			
Cottidae		13		10 8			
Unidentified (bones/flesh)		63		12 9			
MISCELLANEOUS							
Case materials					11		
Plant				0 2	6		
Fish scale				0 0	5 6		
Mucus				0 1	22 2		4 2
Remains[3]				0 0			
TOTAL			100 0	100 0		100 0	100 0

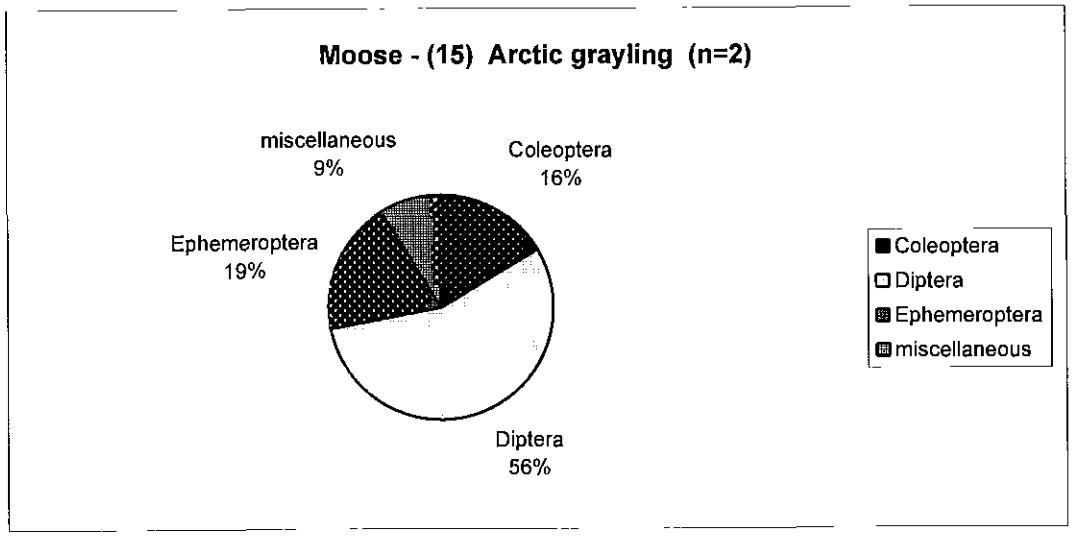
[1] A=adult, l=Larvae, P=pupae, J=juvenile
[2] Percent of stomachs analyzed in which organism occurred
[3] Parts not identifiable due to digestion

Appendix II - B21
Summary of Stomach Content Analyses of Fish Collected in 1994

Percent composition by weight of major groups of organisms from fish stomachs, 1994







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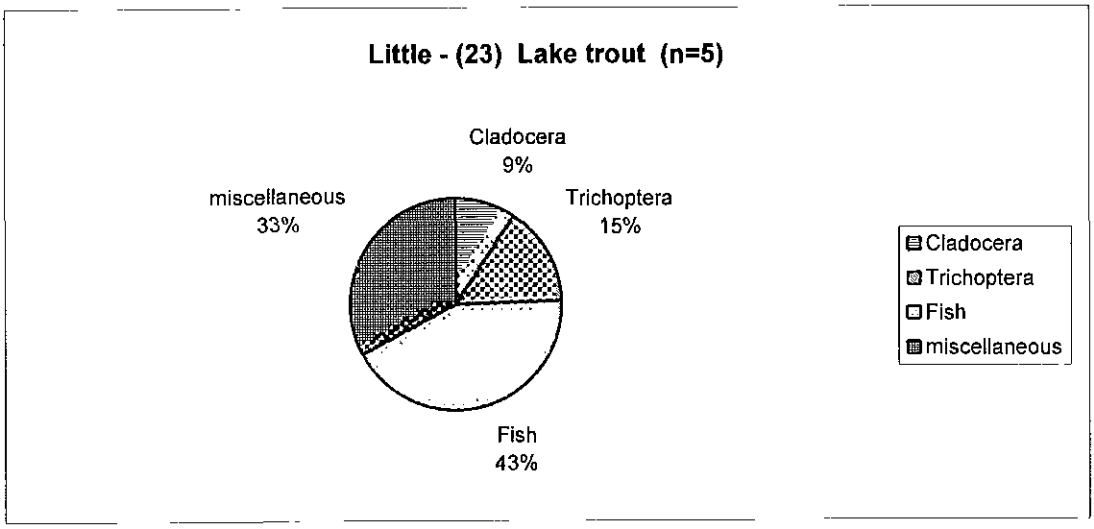
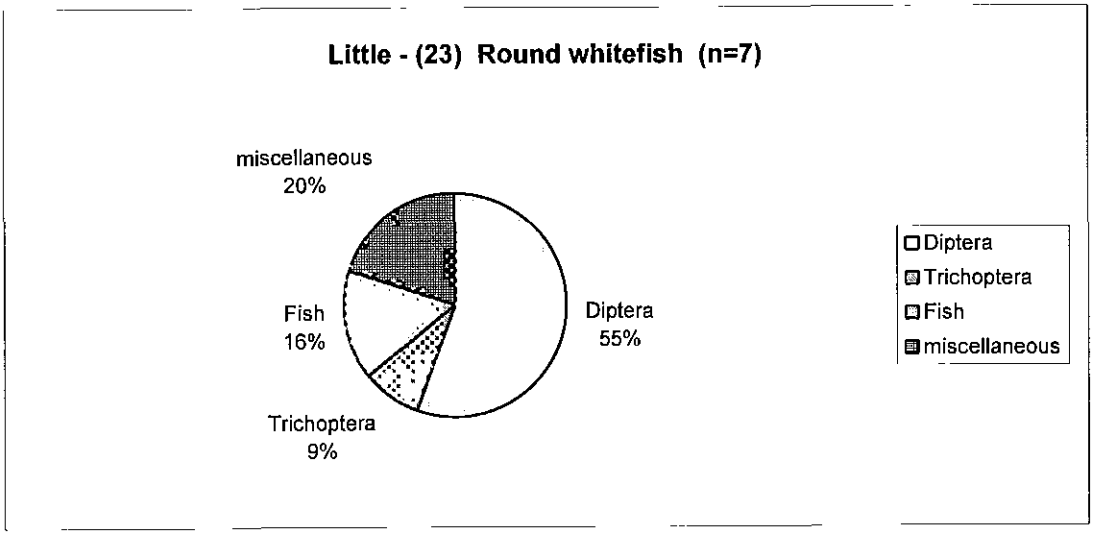
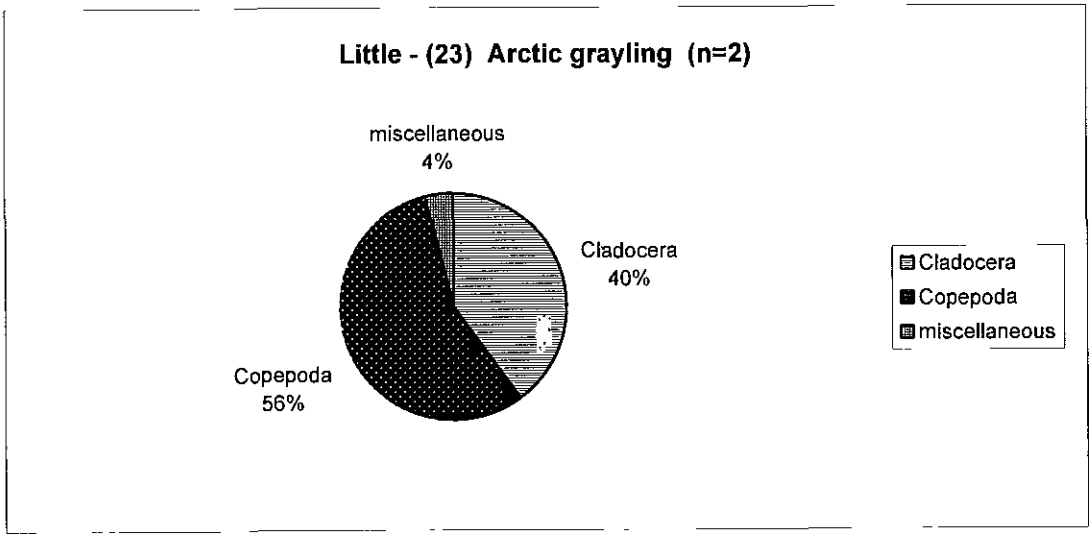
Summary of Stomach Content Analyses of Fish Collected in 1994

Percent composition by weight of major groups of organisms from fish stomach, 1994







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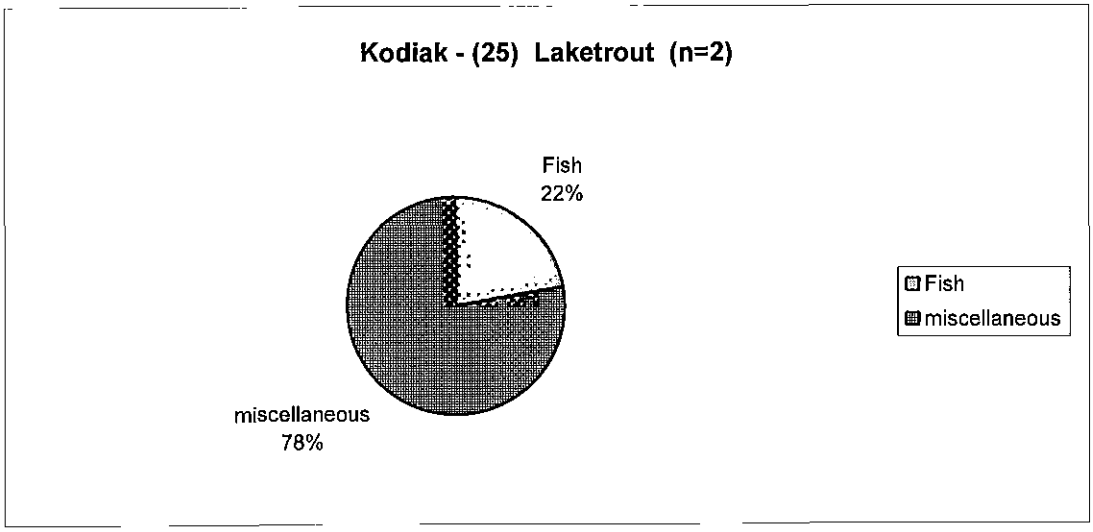
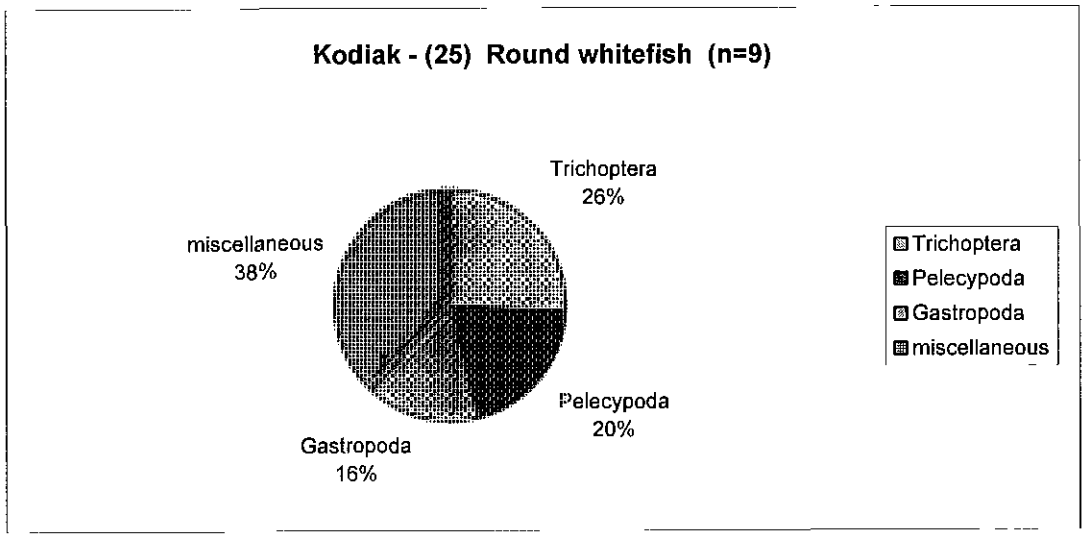
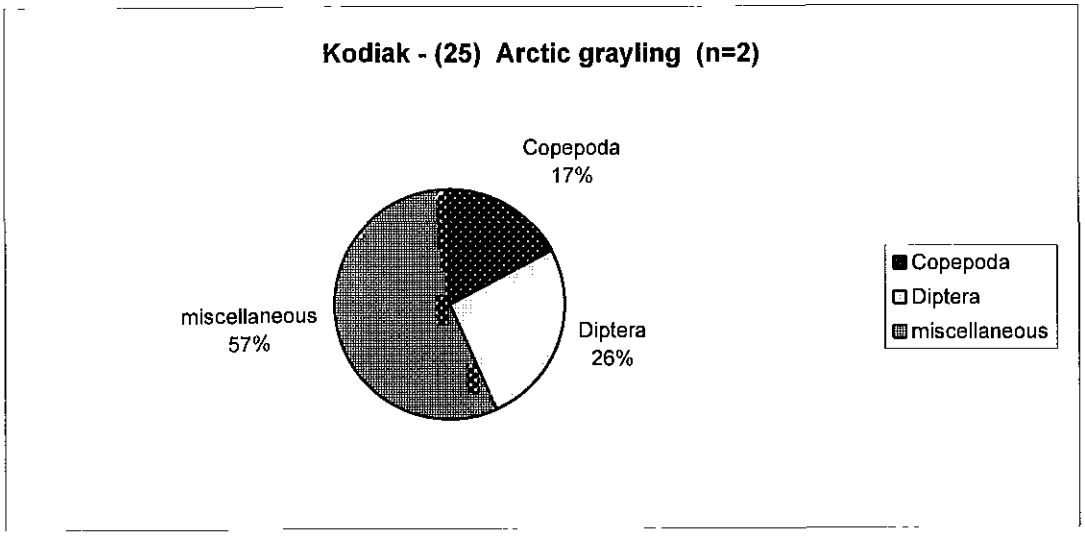
Summary of Stomach Content Analyses of Fish Collected in 1994

Percent composition by weight of major groups of organisms from fish stomachs, 1994







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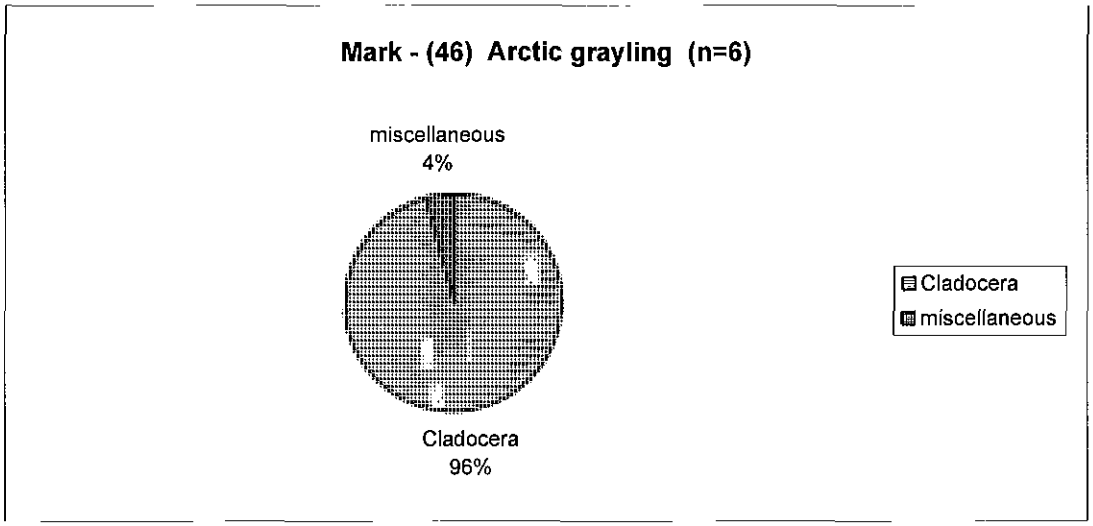
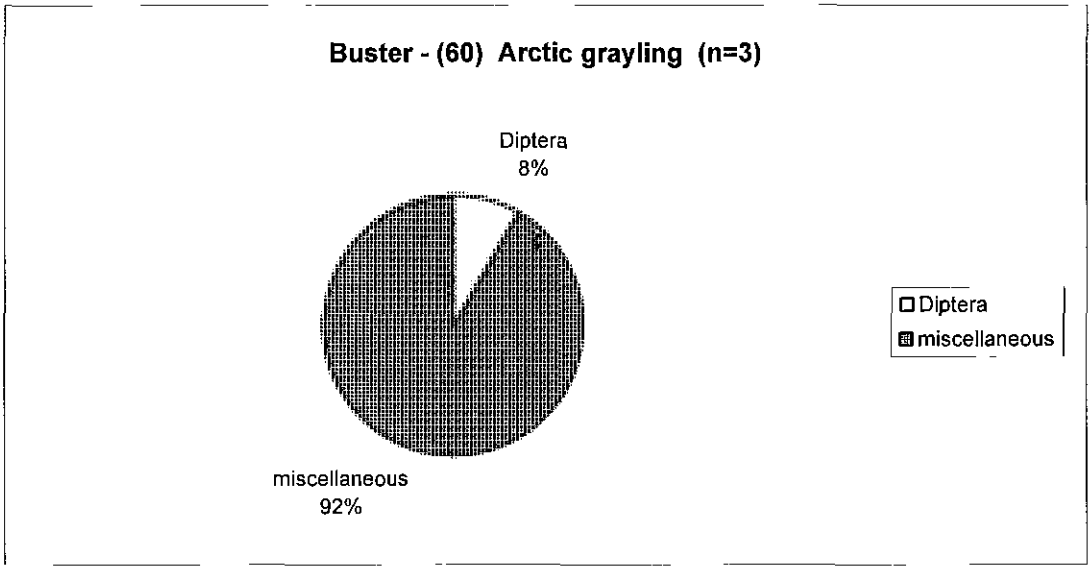
Summary of Stomach Content Analyses of Fish Collected in 1994

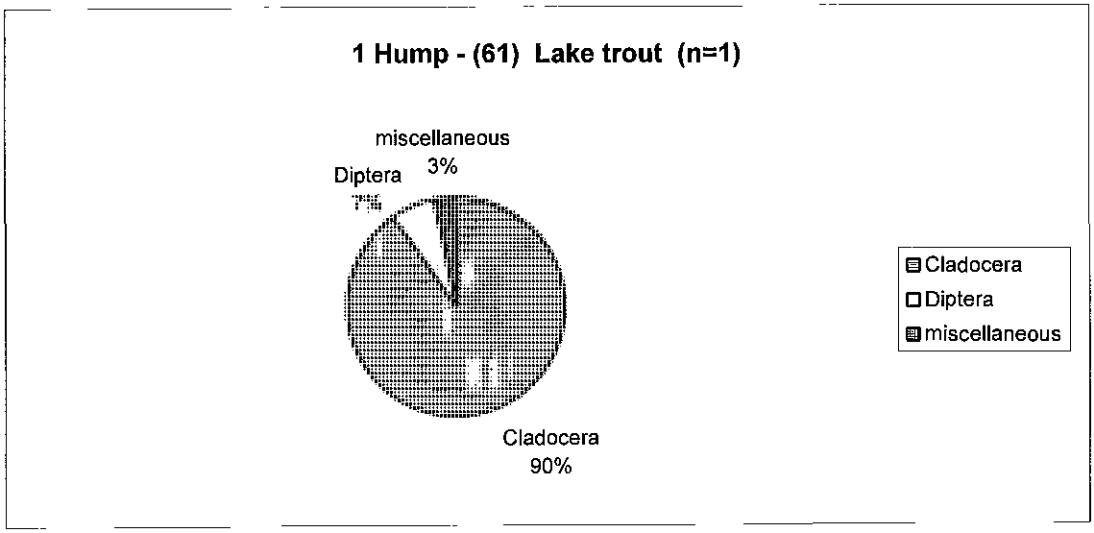
Percent composition by weight of major groups of organisms from fish stomachs, 1994

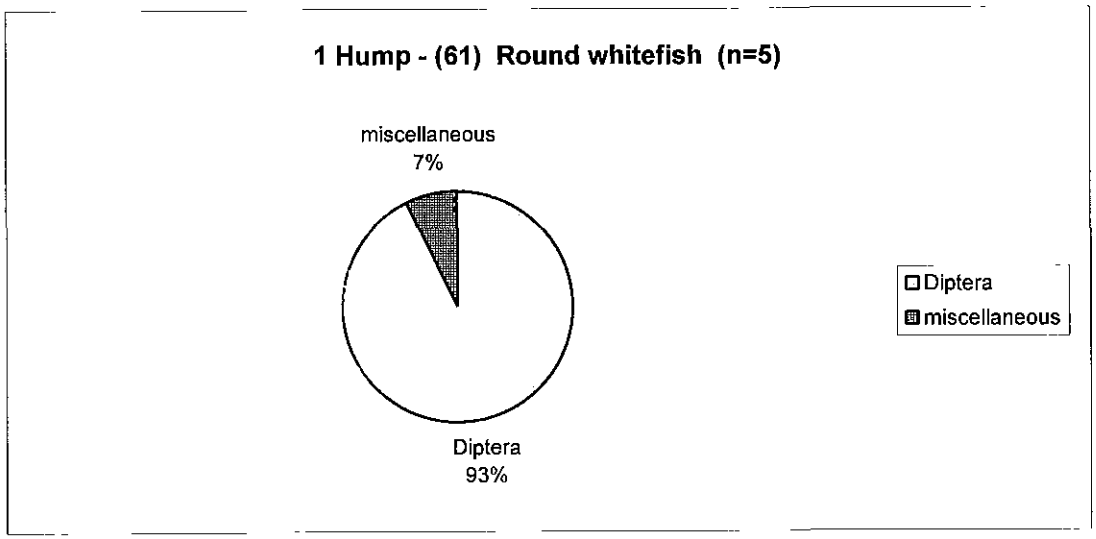


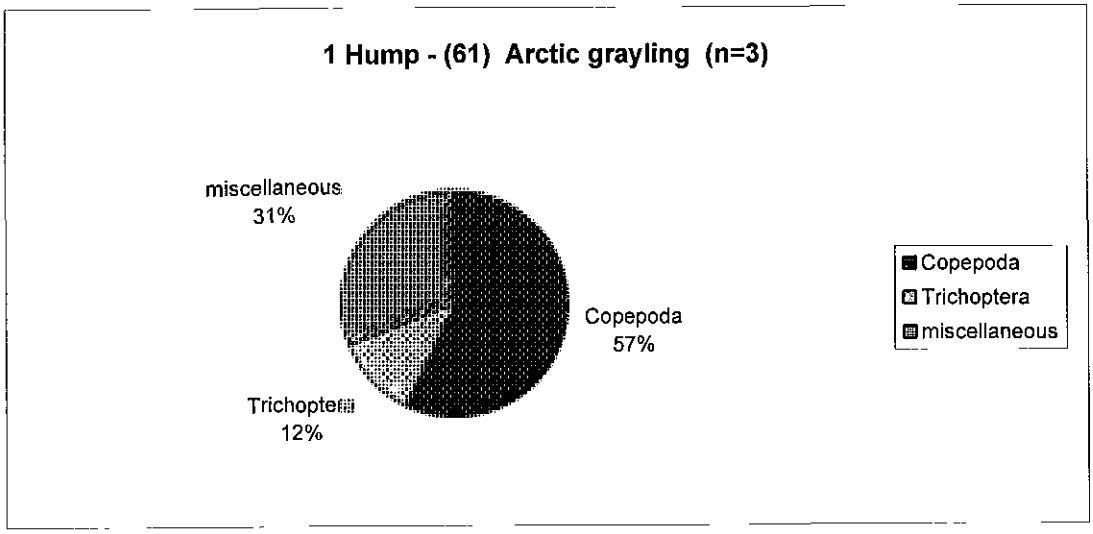


Summary of Stomach Content Analyses of Fish Collected in 1994

Percent composition by weight of major groups of organisms from fish stomachs, 1994







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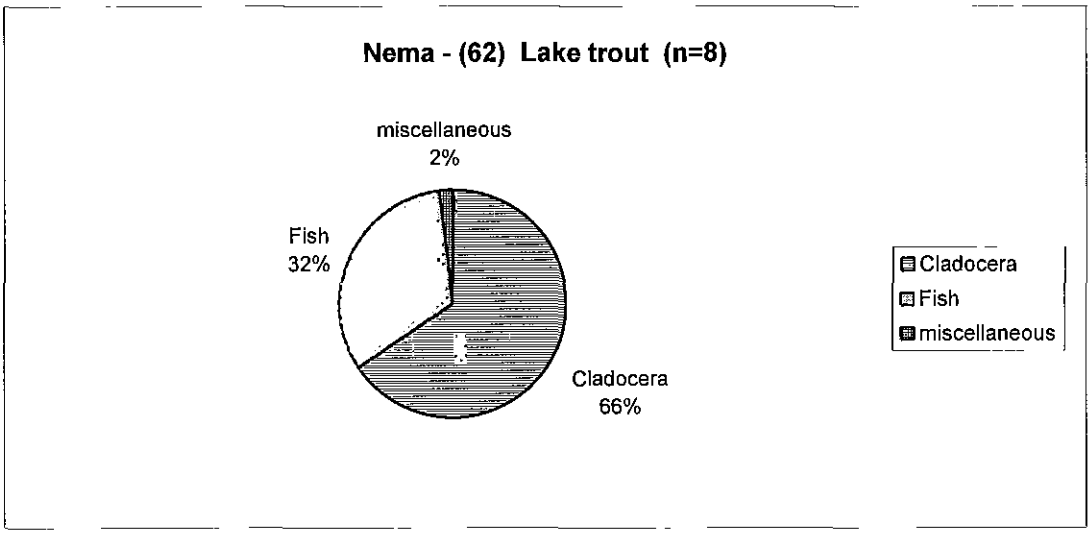
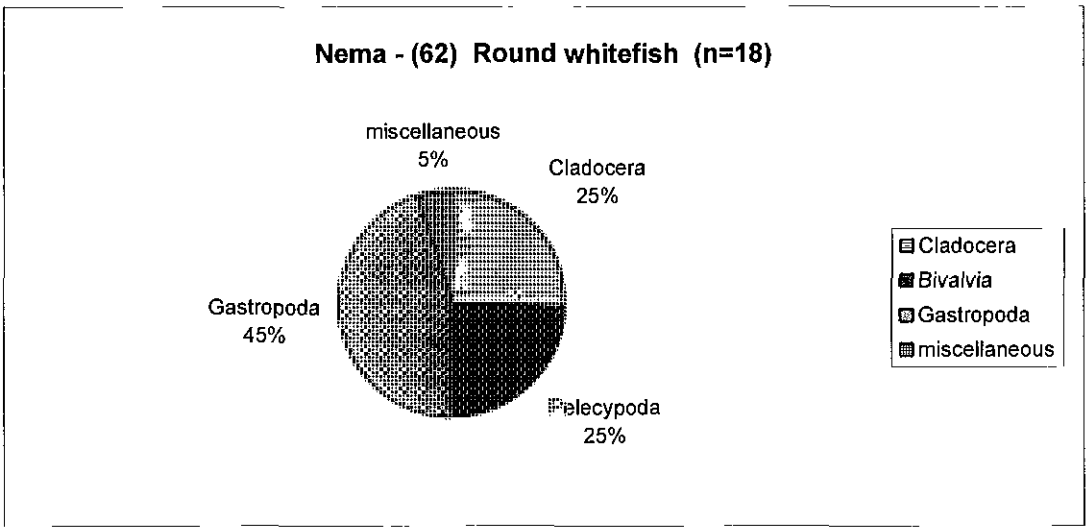
Summary of Stomach Content Analyses of Fish Collected in 1994

Percent composition by weight of major grouips of organisms from fish stomachs, 1994





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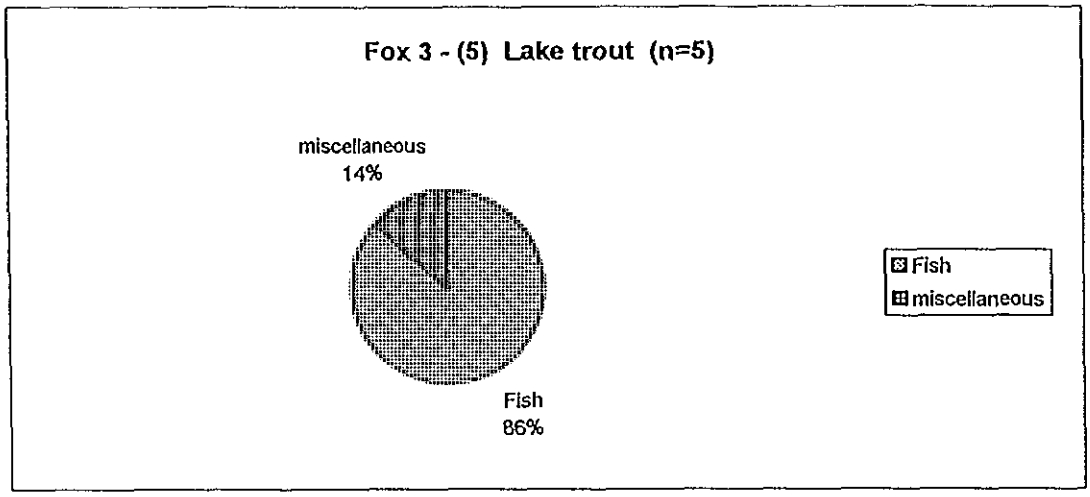
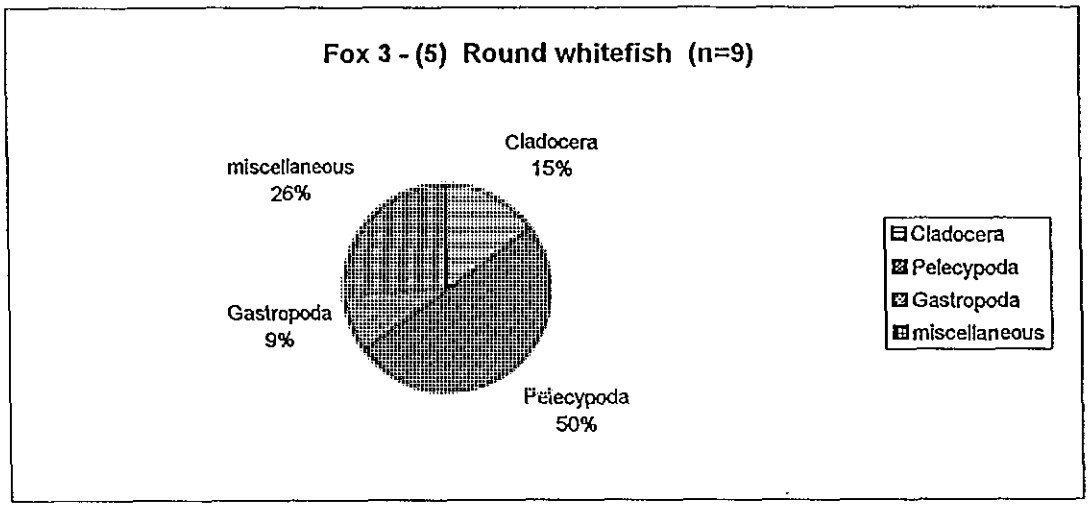
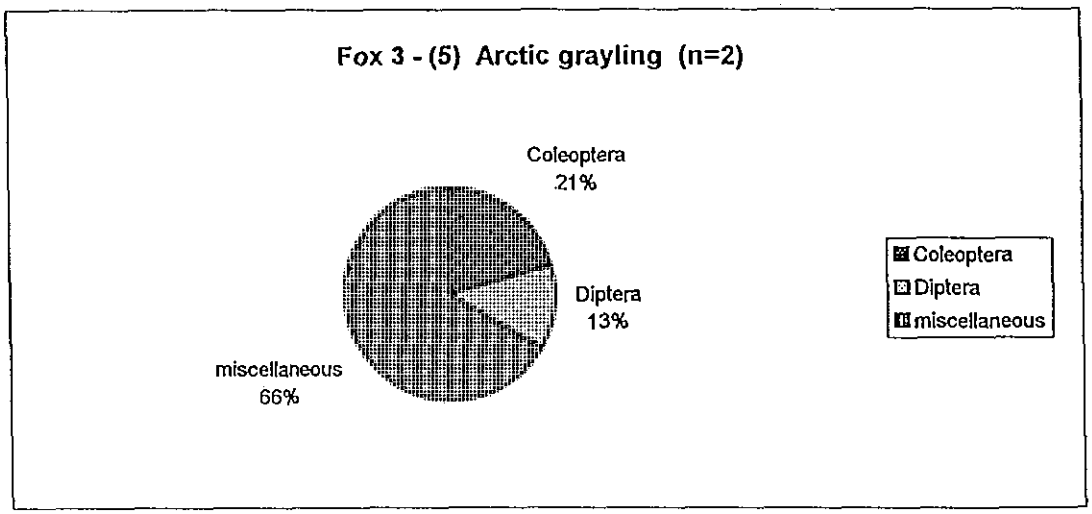
Summary of Stomach Content Analyses of Fish Collected in 1994







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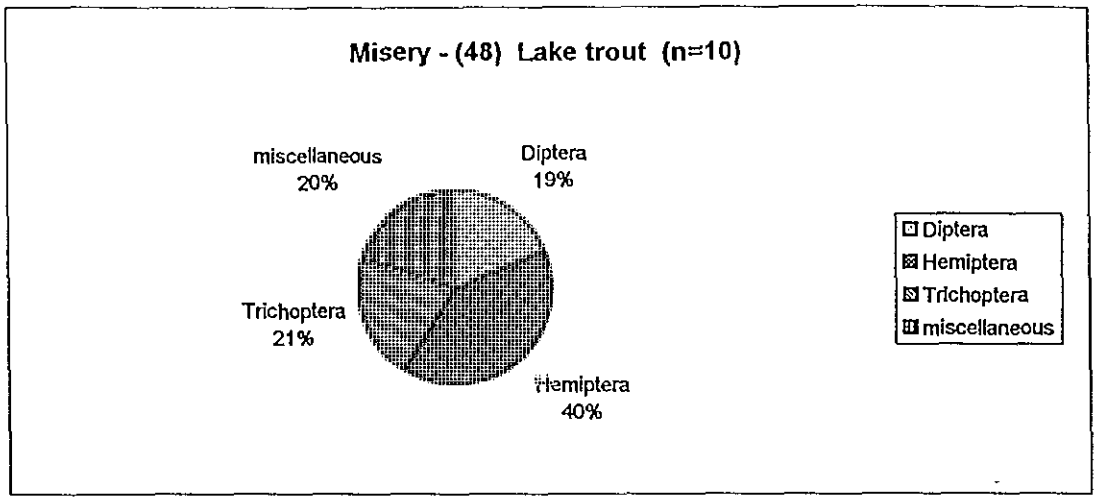
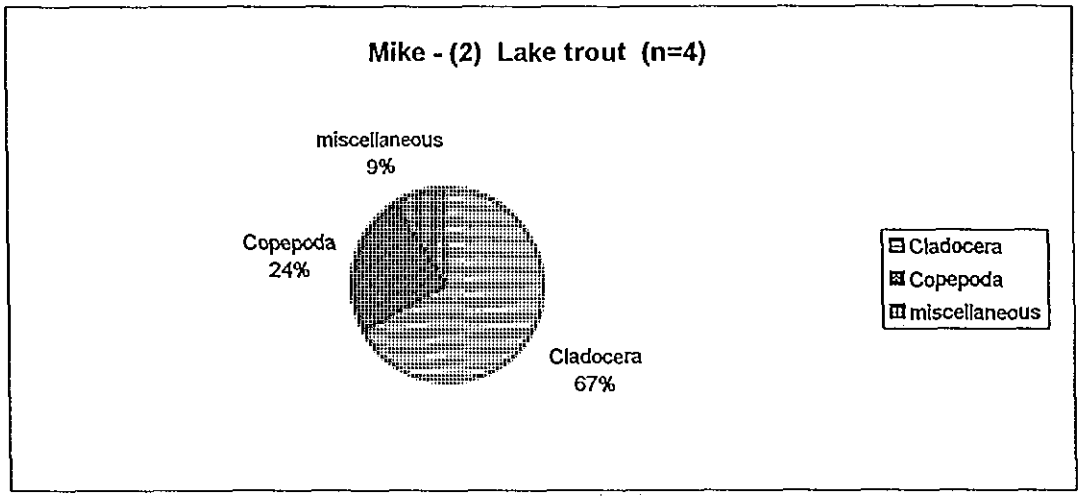
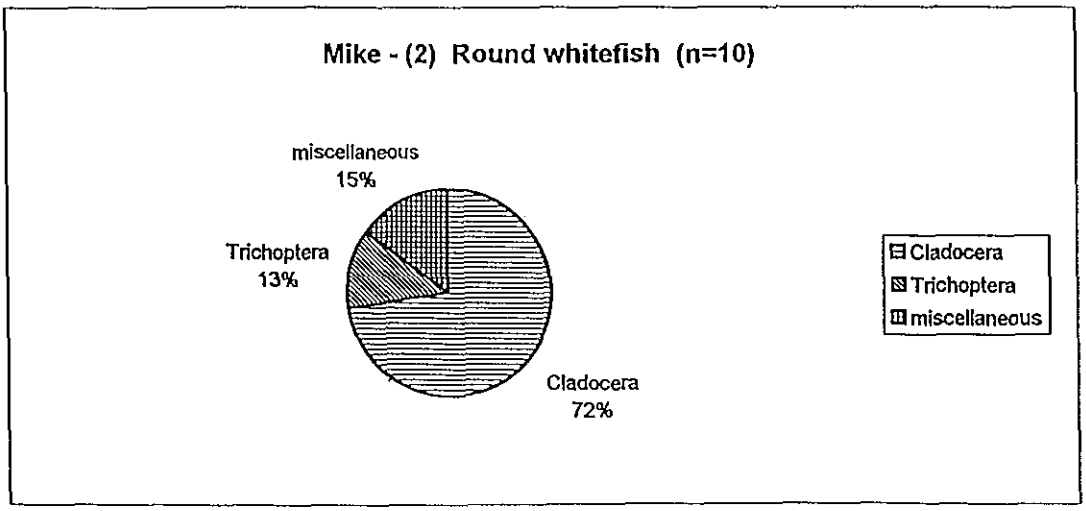
Summary of Stomach Content Analyses of Fish Collected in 1994







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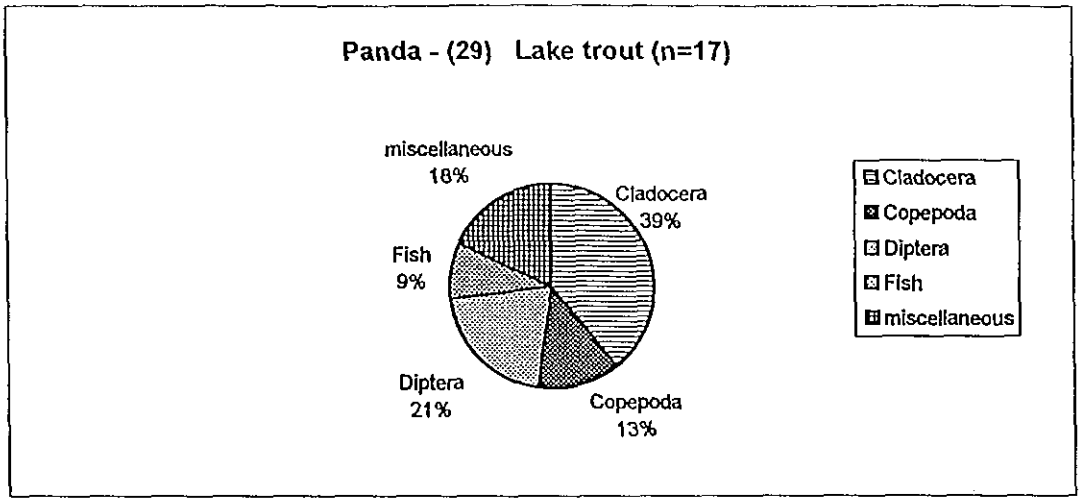
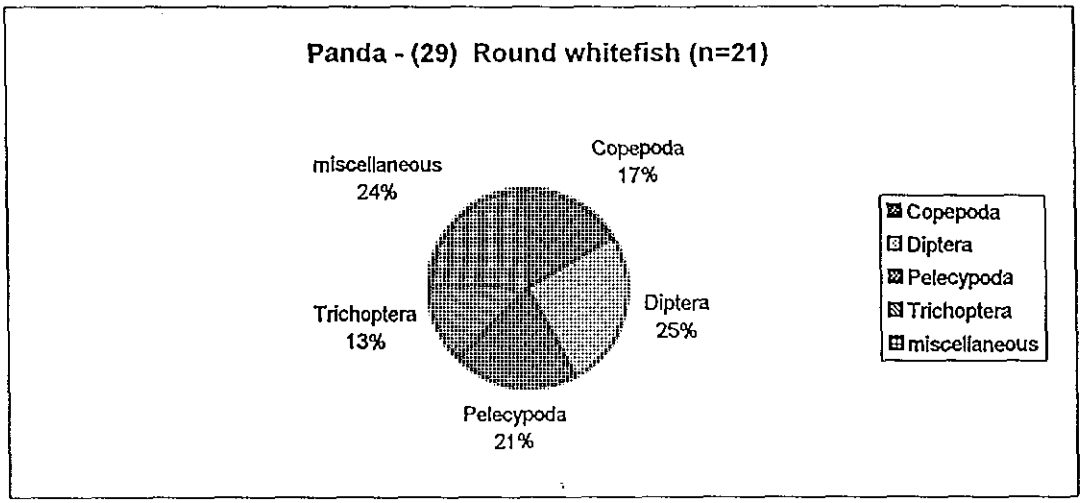
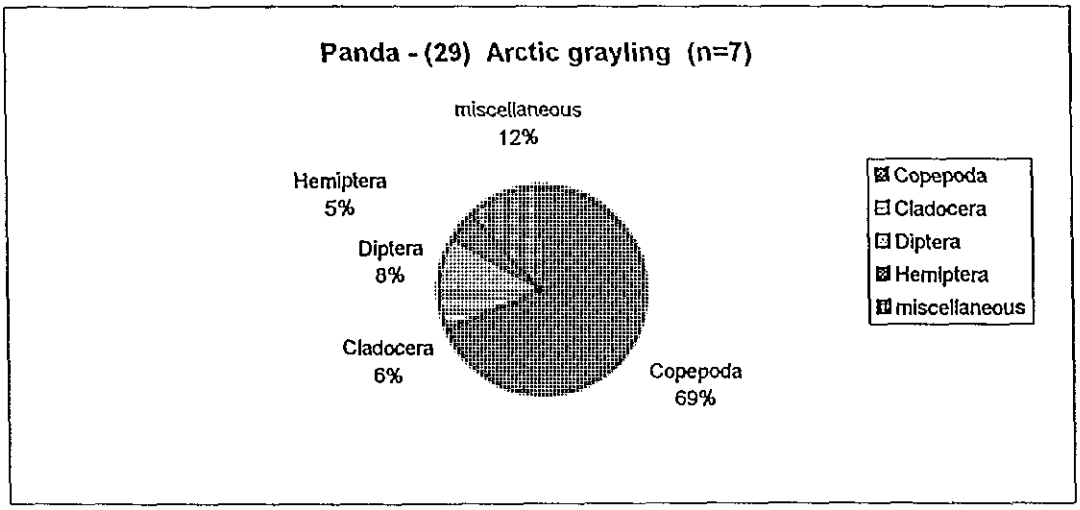
Summary of Stomach Content Analyses of Fish Collected in 1994







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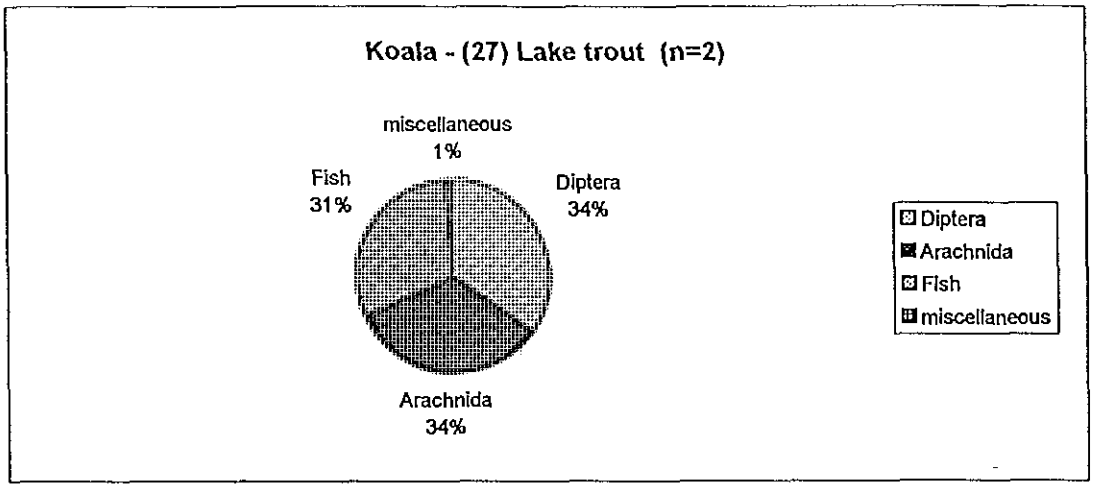

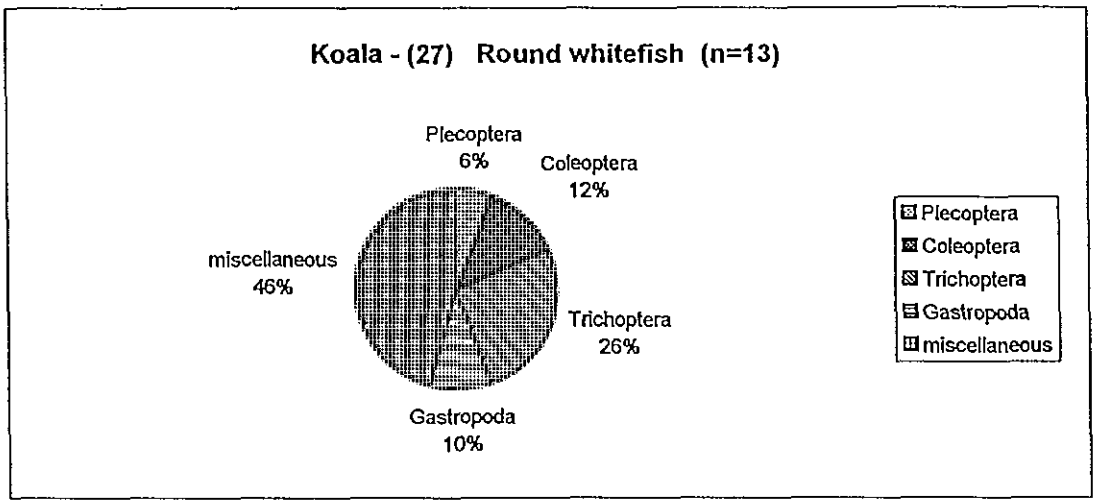

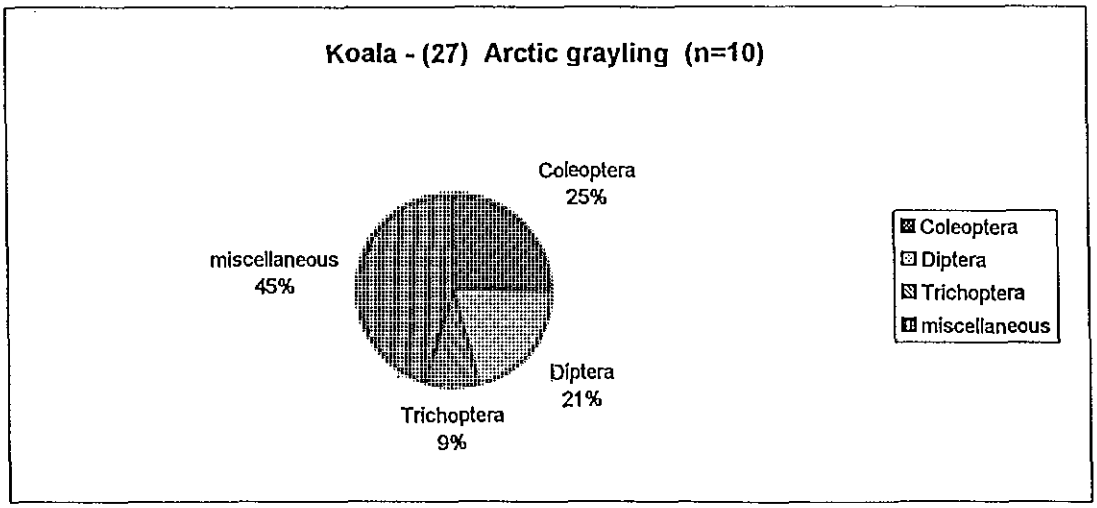

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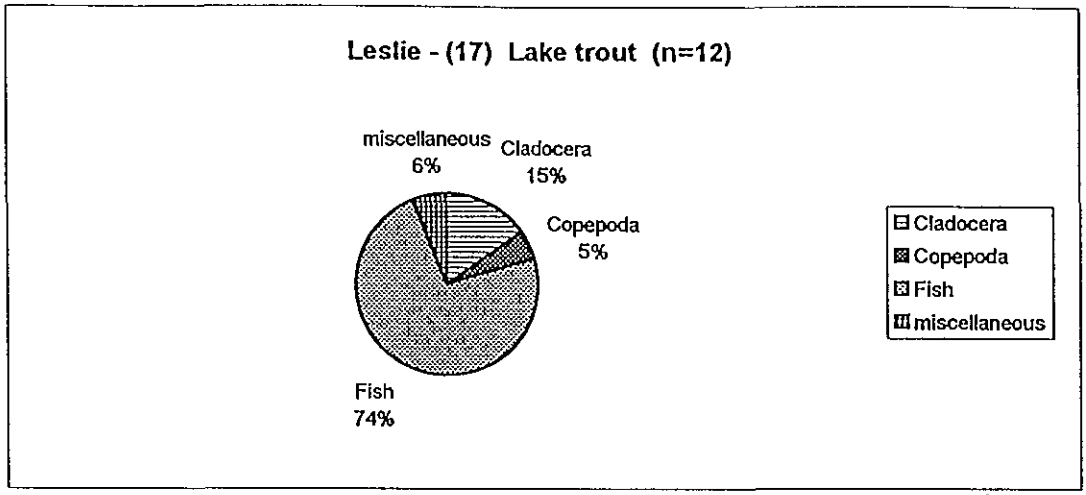
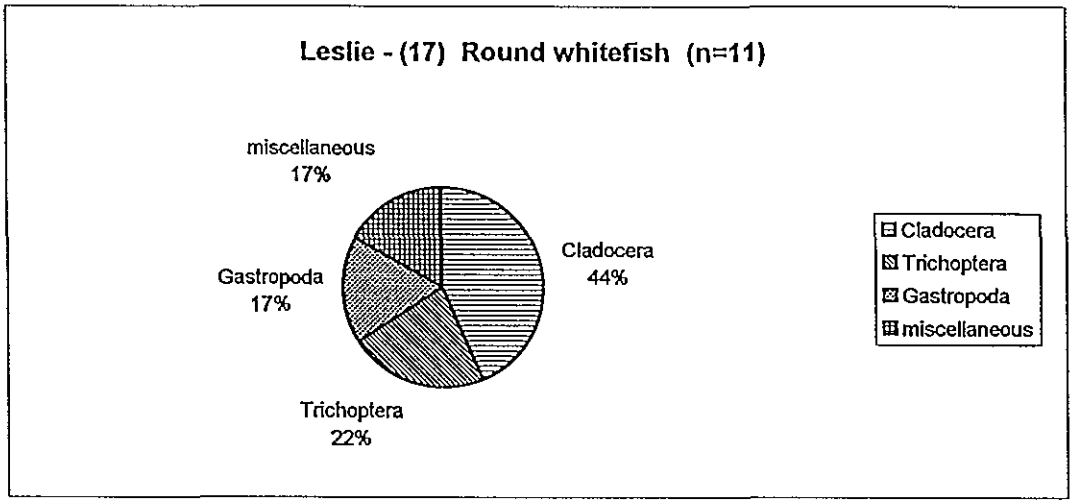
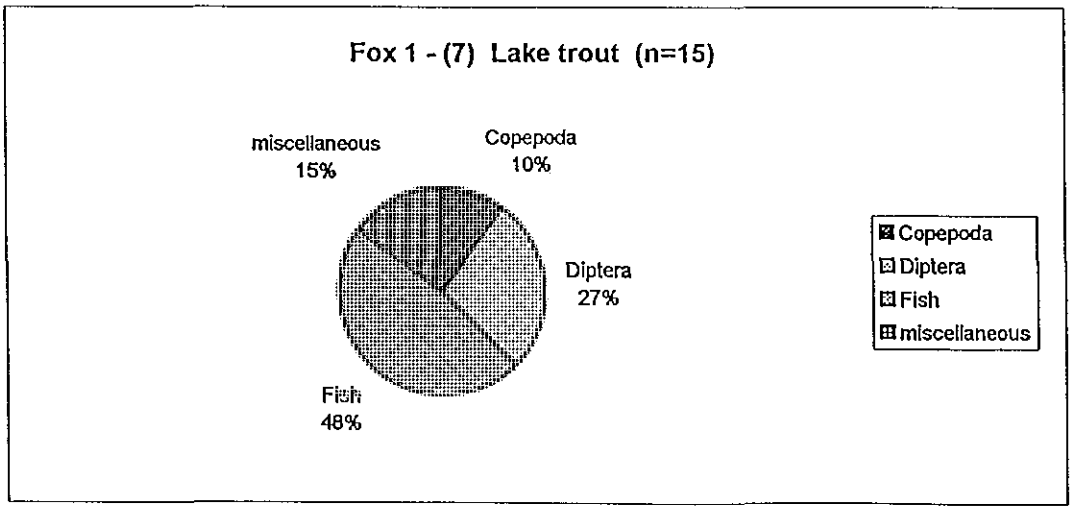
Summary of Stomach Content Analyses of Fish Collected in 1994







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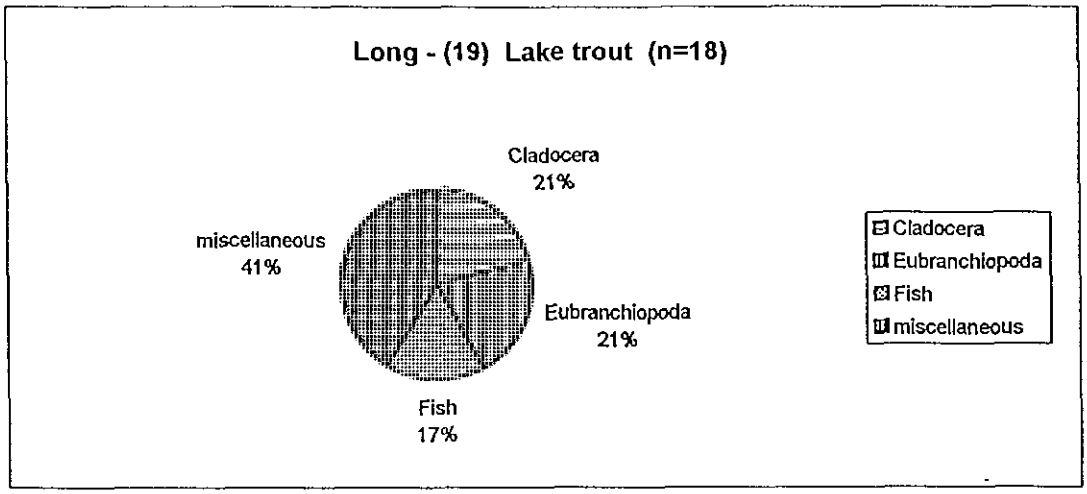
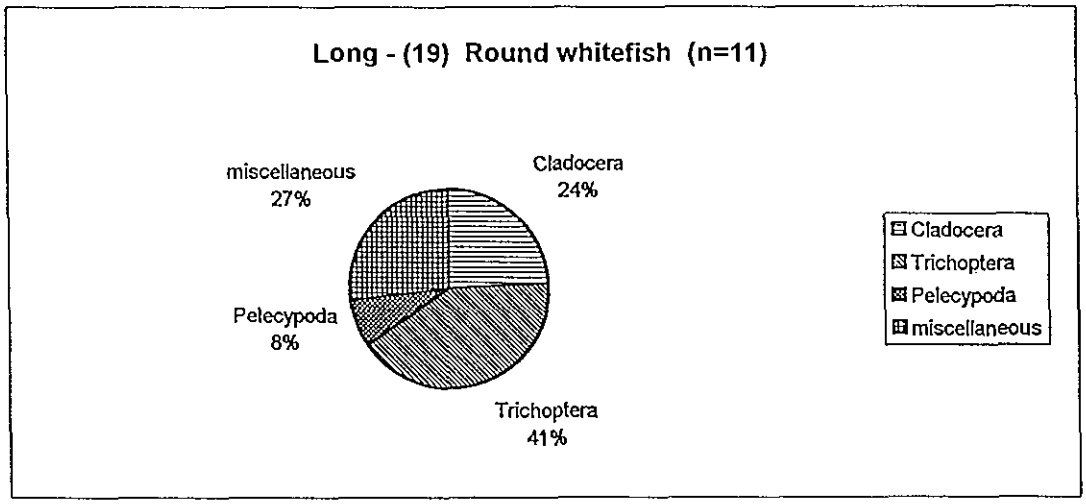
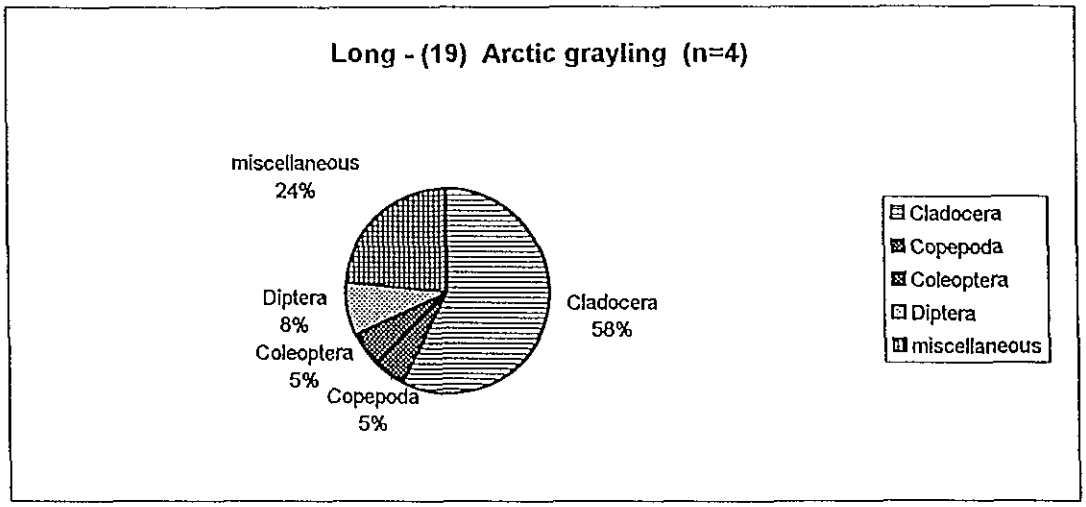
Summary of Stomach Content Analyses of Fish Collected in 1994







Appendix II-B22

Appendix II - B22

Summary of Trace Metal Concentrations in Muscle and Liver Tissue of Fish Collected from NWT Diamonds Project Lakes in 1994

Lake	Site #	Species	Age		Length (mm)		Weight (g)		Tissue		Arsenic T-As			Cadmium T-Cd			Chromium T-Cr			Cobalt T-Co			Copper T-Cu			Iron T-Fe			Lead T-Pb		
			Mean	Range	Mean	Range	Mean	Range		(n)	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.
Long	19	LT	17.0		637		3300		L	1	0.05	0.05	0.05	0.50	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25	14.70	14.70	14.70	466.00	466.00	466.00	0.04	0.04	0.04
Leslie	17	LT	13.4	6-39	319	223-536	454	110-1500	M	*14*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.16	0.30	0.03	4.10	5.10	2.70	0.04	0.21	0.01
									L	*14*	0.05	0.14	0.03	0.44	1.70	0.10	0.39	0.70	0.03	0.39	1.00	0.25	17.71	53.80	5.10	1094.50	4910.00	333.00	0.05	0.31	0.01
		RWF	12.4	7-18	398	284-476	739	250-1190	M	11	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.19	0.30	0.10	4.42	6.90	3.20	0.02	0.07	0.01
									L	11	0.03	0.05	0.03	0.22	0.40	0.10	0.25	0.25	0.25	0.25	0.25	0.25	1.95	3.80	1.40	199.23	910.00	52.90	0.03	0.08	0.01
Panda	29	LT	9.8	6-14	306	223-392	354	120-670	M	*6*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.03	0.25	0.14	0.20	0.10	2.57	3.60	0.03	0.01	0.01	0.01
									L	3	0.03	0.03	0.03	0.48	0.90	0.10	0.25	0.25	0.25	0.25	0.25	0.25	11.84	14.60	10.10	471.60	717.00	347.00	0.01	0.02	0.01
		RWF	11.5	7-17	372	295-443	584	250-880	M	*18*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.17	0.50	0.10	3.64	15.10	1.90	0.01	0.02	0.01
									L	16	0.03	0.03	0.03	0.19	0.60	0.10	0.25	0.25	0.25	0.25	0.25	0.25	2.16	4.00	1.50	159.88	316.00	83.30	0.01	0.01	0.01
		AG	4.0	3-5	205	197-205	103	90-120	M	4	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.33	0.40	0.30	3.00	3.90	2.50	0.01	0.01	0.01
									L	2	0.03	0.03	0.03	0.28	0.30	0.25	0.38	0.50	0.25	0.38	0.50	0.25	2.30	2.70	1.90	133.10	222.00	44.20	0.01	0.01	0.01
Koala	27	LT	10.1	6-17	335	224-482	453	120-1120	M	*5*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.10	0.10	2.90	3.00	2.80	0.01	0.01	0.01
									L	2	0.03	0.03	0.03	0.60	0.90	0.30	0.25	0.25	0.25	0.25	0.25	0.25	18.10	18.80	17.40	1156.00	1440.00	872.00	0.02	0.03	0.01
		RWF	11.4	7-18	346	235-405	454	150-670	M	*8*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.14	0.20	0.10	3.75	5.70	2.20	0.01	0.01	0.01
									L	8	0.04	0.08	0.03	0.49	0.90	0.10	0.25	0.25	0.25	0.53	1.70	0.25	8.88	41.30	1.60	437.50	830.00	137.00	0.02	0.05	0.01
		AG	6.1	3-12	285	169-385	290	60-520	M	*8*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.15	0.40	0.10	3.10	3.80	2.10	0.01	0.01	0.01
									L	7	0.03	0.03	0.03	0.88	1.70	0.50	0.25	0.25	0.25	0.30	0.50	0.25	7.18	11.40	1.70	150.32	307.00	89.80	0.01	0.03	0.01
		BB	No age data		193		90		M	1	0.12	0.12	0.12	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.10	0.10	2.20	2.20	2.20	0.01	0.01	0.01
Fox 1	7	LT	9.8	7-13	333	248-424	458	150-830	M	4	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.22	0.30	0.20	5.72	8.10	3.50	0.02	0.04	0.01
									L	4	0.09	0.14	0.03	0.54	0.80	0.25	0.31	0.50	0.25	0.31	0.50	0.25	25.33	38.90	16.00	624.00	952.00	368.00	0.06	0.09	0.05
Misery	48	LT	9.4	6-15	301	224-417	319	110-630	M	6	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.18	0.30	0.10	3.18	6.00	2.10	0.01	0.01	0.01
									L	8	0.11	0.19	0.06	0.61	2.30	0.20	0.28	0.50	0.25	0.28	0.50	0.25	25.20	72.50	7.20	684.38	2600.00	197.00	0.03	0.09	0.01
Mike	2	LT	13.0		446		780		M	*1*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.30	0.30	0.30	3.70	4.00	3.40	0.05	0.05	0.05
									L	1	0.03	0.03	0.03	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25	0.25	13.60	13.60	13.60	318.00	318.00	318.00	0.06	0.06	0.06
Larry	12	LT	9.8	4-14	321	162-397	414	50-600	M	*10*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.22	0.40	0.20	4.18	7.00	2.70	0.02	0.07	0.01
									L	10	0.17	1.62	0.03	0.52	1.40	0.10	0.32	1.00	0.25	0.32	1.00	0.25	16.21	37.10	4.30	552.91	1390.00	143.00	0.03	0.06	0.01
Little	23	LT	16.2	15-18	443	416-496	952	710-1200	M	5	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.20	0.10	4.63	5.11	3.90	0.02	0.04	0.01
									L	5	0.03	0.03	0.03	0.46	0.70	0.20	0.38	0.90	0.25	0.25	0.25	0.25	11.06	20.80	7.40	724.20	6842.00	592.00	0.04	0.06	0.02
		RWF	14.2	6-28	297	195-404	376	70-815	M	5	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.21	0.30	0.10	3.94	5.00	3.30	0.01	0.01	0.01
									L	2	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	1.60	2.00	1.20	191.00	249.00	133.00	0.01	0.01	0.01
		AG	6.5	6-7	259	242-275	218	180-255	M	2	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.15	0.20	0.10	4.40	4.50	4.30	0.01	0.01	0.01
									L	2	0.03	0.03	0.03	0.15	0.20	0.10	0.25	0.25	0.25	0.25	0.25	0.25	3.05	3.40	2.70	48.95	55.10	42.80	0.04	0.07	0.01
Mark	48	AG	4.8	4-5	229	205-246	146	110-180	M	*5*	0.04	0.12	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.23	0.30	0.10	3.45	4.10	2.70	0.01	0.01	0.01
									L	4	0.08	0.10	0.06	0.33	0.40	0.30	0.25	0.25	0.25	0.25	0.25	0.25	2.50	3.00	2.00	96.53	137.00	75.00	0.04	0.07	0.01
1 Hump	61	LT	8.0		338		405		M	1	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.10	0.10	4.20	4.20	4.20	0.01	0.01	0.01
									L	1	0.03	0.03	0.03	0.40	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.25	18.10	18.10	18.10	399.00	399.00	399.00	0.01	0.01	0.01
		LS	12.0		354		760		M	*1*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.20	0.20	0.20	3.25	3.60	2.90	0.01	0.01	0.01
		RWF	9.0	6-10	371	303-412	577	270-780	M	6	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.15	0.20	0.10	3.03	3.70	2.40	0.01	0.01	0.01
									L	6	0.03	0.03	0.03	0.13	0.30	0.10	0.25	0.25	0.25	0.25	0.25	0.25	2.00	2.40	1.50	48.31	134.00	65.10	0.01	0.02	0.01
		AG	4.0	2-7	241	153-340	233	50-500	M	3	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.18	0.30	0.10	2.48	3.00	2.20	0.01	0.01	0.01
									L	1	0.03	0.03	0.03	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25	0.25	2.30	2.30	2.30	67.40	67.40	67.40	0.04	0.04	0.04
		LC	3.0	2-3	145	132-159	33	31-35	M	2	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.40	0.40	0.40	5.35	5.80	4.90	0.01	0.01	0.01
Nema	62	LT	9.9	6-15	315	235-435	368	140-850	M	*8*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.18	0.30	0.10	4.76	6.50	3.00	0.01	0.02	0.01
									L	8	0.05	0.09	0.03	0.36	0.70	0.25	0.25	0.25	0.25	0.29	0.60	0.25	11.06	23.30	4.50	675.38	2300.00	290.00	0.05	0.30	0.01
		RWF	11.3	7-17	368	302-412	561	290-870	M	*10*	0.03	0.03	0.03	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.30	0.20	5.63	7.60	4.50	0.01	0.01	0.01
									L	*10*	0.10	0.16	0.06	0.15	0.25	0.10	0.27	0.50	0.25	0.27	0.50	0.25	2.91	5.70	1.70	209.82	313.00	110.00	0.03	0.07	0.01

Note
An italicized sample number indicates that laboratory replicates are included in data but not in the sample number.
All data which were less than the detection limit were replaced by a value at the midpoint between zero and the detection limit.
Values are espressed as milligrams per wet kilogram (ppm - wet weight).
M = Muscle (from the dorsal section supplied or dissected from the whole fish).
L = Liver

of Cc

Appendix II - B22

Summary of Trace Metal Concentrations in Muscle and Liver Tissue of Fish Collected from NWT Diamonds Project Lakes in 1994

Lake	Site #	Species	Age		Length (mm)		Weight (g)		Tissue		Manganese T-Mn			Mercury T-Hg			Nickel T-Ni			Selenium T-Se			Silver T-Ag			Zinc T-Zn		
			Mean	Range	Mean	Range	Mean	Range		(n)	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.
Long	19	LT	17.0		637		3300		L	1	1.40	1.40	1.40	0.57	0.57	0.57	0.25	0.25	0.25	2.73	2.73	2.73	0.10	0.10	0.10	39.90	39.90	39.90
Leslie	17	LT	13.4	6-39	319	223-536	454	10-1500	M	*14*	0.16	0.30	0.10	0.14	0.48	0.04	0.25	0.25	0.25	0.20	0.25	0.15	0.10	0.10	0.03	4.30	5.30	3.10
									L	*14*	2.65	4.70	1.30	0.36	2.11	0.07	0.56	1.70	0.25	2.77	8.98	1.23	0.24	0.50	0.10	53.43	88.80	38.70
		RWF	12.4	7-18	398	284-476	739	50-1190	M	11	0.20	0.30	0.05	0.07	0.10	0.03	0.25	0.25	0.25	0.37	0.56	0.23	0.10	0.10	0.10	4.49	6.30	3.60
									L	11	2.84	5.30	1.60	0.11	0.20	0.05	0.30	0.70	0.25	1.48	2.79	1.03	0.11	0.25	0.10	26.23	49.90	22.90
Panda	29	LT	9.8	6-14	306	223-392	354	120-670	M	*6*	0.13	0.20	0.03	0.16	0.03	0.13	0.25	0.25	0.25	0.03	0.03	0.03	0.10	0.10	0.03	3.87	5.80	2.90
									L	3	1.40	2.00	0.90	0.14	0.18	0.09	0.25	0.25	0.25	1.16	2.04	0.08	0.10	0.10	0.10	35.80	42.20	29.50
		RWF	11.5	7-17	372	295-443	584	250-880	M	*18*	0.67	6.80	0.10	0.10	0.30	0.03	0.25	0.25	0.25	0.38	0.56	0.20	0.10	0.10	0.10	5.24	33.90	2.90
									L	16	2.53	3.40	1.80	0.15	0.27	0.04	0.27	0.50	0.25	0.98	1.27	0.75	0.10	0.10	0.10	24.72	33.20	22.50
		AG	4.0	3-5	205	197-205	103	90-120	M	4	0.05	0.05	0.05	0.02	0.03	0.02	0.25	0.25	0.25	0.20	0.21	0.19	0.10	0.10	0.10	7.50	9.00	5.90
									L	2	1.80	1.80	1.80	0.10	0.18	0.02	0.38	0.50	0.25	1.05	1.16	0.93	0.30	0.50	0.10	24.50	25.00	24.00
Koala	27	LT	10.1	6-17	335	224-482	453	20-1120	M	*5*	0.07	0.10	0.05	0.39	0.86	0.38	0.25	0.25	0.25	0.20	0.19	0.19	0.10	0.10	0.10	3.94	3.20	2.80
									L	2	1.55	1.70	1.40	0.77	0.92	0.61	0.25	0.25	0.25	1.84	1.98	1.63	0.10	0.10	0.10	42.95	46.80	39.10
		RWF	11.4	7-18	346	235-405	454	150-670	M	*8*	0.26	0.60	0.10	0.19	0.34	0.06	0.25	0.25	0.25	0.37	0.55	0.15	0.10	0.10	0.10	3.38	5.10	2.70
									L	8	2.45	3.00	1.60	0.54	1.09	0.19	0.25	0.25	0.25	1.49	1.89	1.20	0.15	0.40	0.10	30.08	60.90	18.20
		AG	6.1	3-12	285	159-385	290	60-520	M	*8*	0.16	0.20	0.05	0.12	0.28	0.05	0.25	0.25	0.25	0.15	0.19	0.11	0.10	0.10	0.10	5.18	10.10	3.10
									L	7	2.32	3.20	1.90	0.31	0.90	0.06	0.30	0.50	0.25	1.18	2.28	0.73	0.13	0.25	0.10	35.24	51.40	23.00
		BB	No age data		193		90		M	1	0.10	0.10	0.10	0.13	0.13	0.13	0.25	0.25	0.25	0.17	0.17	0.17	0.10	0.10	0.10	4.30	4.30	4.30
Fox 1	7	LT	9.8	7-13	333	248-424	458	150-830	M	4	0.22	0.50	0.10	0.11	0.31	0.04	0.25	0.25	0.25	0.25	0.32	0.22	0.10	0.10	0.10	5.26	6.10	4.40
									L	4	1.80	2.00	1.60	0.23	0.61	0.05	0.31	0.50	0.25	1.57	1.87	1.40	0.20	0.50	0.10	61.33	100.00	45.30
Misery	48	LT	9.4	6-15	301	224-417	319	110-630	M	6	0.13	0.30	0.05	0.07	0.08	0.05	0.25	0.25	0.25	0.44	0.49	0.37	0.17	0.50	0.10	5.92	7.70	4.50
									L	8	1.91	3.10	1.40	0.10	0.31	0.05	0.41	0.80	0.25	1.79	2.91	1.18	0.49	1.20	0.10	60.58	97.40	42.90
Mike	2	LT	13.0		446		780		M	*1*	0.25	0.30	0.20	0.45	0.46	0.44	0.25	0.25	0.25	0.26	0.26	0.25	0.10	0.10	0.10	3.90	3.90	3.90
									L	1	2.50	2.50	2.50	0.35	0.35	0.35	0.60	0.60	0.60	2.69	2.69	2.69	0.10	0.10	0.10	42.70	42.70	42.70
Larry	12	LT	9.8	4-14	321	162-397	414	50-600	M	*10*	0.21	0.30	0.10	0.11	0.18	0.04	0.25	0.25	0.25	0.24	0.28	0.18	0.10	0.10	0.10	6.53	12.10	3.70
									L	10	1.36	2.00	0.90	0.11	0.32	0.03	0.34	1.00	0.25	1.55	2.10	0.84	0.26	1.00	0.10	39.03	52.40	24.20
Little	23	LT	16.2	15-18	443	416-496	952	10-1200	M	5	0.25	0.40	0.10	0.33	0.41	0.26	0.25	0.25	0.25	0.22	0.26	0.20	0.10	0.10	0.10	4.08	5.10	3.50
									L	5	1.94	4.40	1.00	0.27	0.41	0.20	0.62	2.10	0.25	1.49	1.88	1.19	0.12	0.20	0.10	38.30	44.20	30.80
		RWF	14.2	6-28	297	195-404	376	70-815	M	5	0.29	0.50	0.20	0.10	0.21	0.04	0.25	0.25	0.25	0.30	0.42	0.20	0.10	0.10	0.10	5.43	9.40	3.30
									L	2	2.25	2.60	1.90	0.15	0.15	0.15	0.43	0.60	0.25	0.97	1.10	0.03	0.10	0.10	0.10	21.55	22.90	20.20
		AG	6.5	6-7	259	242-275	218	180-255	M	2	0.25	0.30	0.20	0.05	0.05	0.04	0.25	0.25	0.25	0.18	0.20	0.15	0.10	0.10	0.10	6.00	6.60	5.40
									L	2	1.45	1.50	1.40	0.06	0.06	0.06	0.25	0.25	0.25	0.94	0.96	0.92	0.10	0.10	0.10	27.00	28.10	25.90
Mark	46	AG	4.8	4-5	229	205-246	145	110-180	M	*5*	0.22	0.30	0.10	0.06	0.07	0.05	0.25	0.25	0.25	0.25	0.29	0.24	0.10	0.10	0.10	4.82	6.60	3.80
									L	4	2.78	3.10	2.50	0.07	0.09	0.05	0.25	0.25	0.25	0.97	1.16	0.83	0.10	0.10	0.10	24.40	26.50	23.10
1 Hump	61	LT	8.0		338		405		M	1	0.10	0.10	0.10	0.09	0.09	0.09	0.25	0.25	0.25	0.35	0.35	0.35	0.10	0.10	0.10	3.30	3.30	3.30
									L	1	1.90	1.90	1.90	0.13	0.13	0.13	0.25	0.25	0.25	2.32	2.32	2.32	0.20	0.20	0.20	40.60	40.60	40.60
		LS	12.0		354		760		M	*1*	0.90	1.20	0.60	0.04	0.04	0.04	0.25	0.25	0.25	0.44	0.46	0.42	0.10	0.10	0.10	3.75	3.80	3.70
		RWF	9.0	6-10	371	303-412	577	270-780	M	6	0.47	0.70	0.30	0.06	0.07	0.04	0.25	0.25	0.25	0.79	0.98	0.49	0.10	0.10	0.10	3.77	4.90	3.10
									L	6	2.98	4.00	2.00	0.10	0.14	0.06	0.25	0.25	0.25	1.76	2.16	1.50	0.10	0.10	0.10	21.72	25.00	19.20
		AG	4.0	2-7	241	153-340	233	50-500	M	3	0.21	0.30	0.05	0.04	0.06	0.03	0.25	0.25	0.25	0.25	0.30	0.23	0.10	0.10	0.10	5.60	9.20	3.60
									L	1	3.40	3.40	3.40	0.06	0.06	0.06	0.25	0.25	0.25	1.00	1.00	1.00	0.10	0.10	0.10	27.00	27.00	27.00
		LC	3.0	2-3	145	132-159	33	31-35	M	2	0.85	1.30	0.40	0.14	0.19	0.08	0.25	0.25	0.25	0.52	0.57	0.47	0.10	0.10	0.10	17.95	19.60	16.30
Nema	62	LT	9.9	6-15	315	235-435	368	140-850	M	*8*	0.17	0.30	0.10	0.20	0.53	0.09	0.25	0.25	0.25	0.21	0.26	0.16	0.10	0.10	0.10	4.56	5.40	4.20
									L	8	1.91	2.40	1.50	0.26	1.08	0.08	0.31	0.50	0.25	1.36	2.70	0.84	0.14	0.25	0.10	41.01	71.60	33.40
		RWF	11.3	7-17	366	302-412	561	290-870	M	*10*	0.20	0.30	0.05	0.13	0.25	0.06	0.25	0.25	0.25	0.28	0.34	0.24	0.10	0.10	0.10	4.95	7.10	3.90
									L	*10*	2.06	2.70	1.60	0.14	0.27	0.06	0.32	0.50	0.25	0.96	1.22	0.73	0.16	0.50	0.10	25.59	29.20	21.80

Note
An italicized sample number indicates that laboratory replicates are included in data but not in the sample number.
All data which were less than the detection limit were replaced by a value at the midpoint between zero and the detection limit.
Values are espressed as milligrams per wet kilogram (ppm - wet weight).
M = Muscle (from the dorsal section supplied or dissected from the whole fish).
L = Liver