

APPENDIX 4.3-1.
DETAILED ZOOPLANKTON DATA FROM MINE AREA LAKES,
2007-2008.

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Table A4.3-1.1. Crustacean zooplankton (individuals/m ³) collected in vertical net tows from Camp, Sheardown, and Mary lakes during the 2007 and 2008 study years.	A4.3-1_1

Table A4.3-1.1. Crustacean zooplankton (individuals/m³) collected in vertical net tows from Camp, Sheardown, and Mary lakes during the 2007 and 2008 study years. Individual abundances may not add up to totals due to rounding.

Waterbody Site ID Sampling Date	Camp Lake								
	JLO-01			JLO-02			JLO-09		
	10-Aug-07	30-Jul-08	17-Sep-07	10-Aug-07	30-Jul-08	17-Sep-07	10-Aug-07	30-Jul-08	17-Sep-07
Cladocera (water fleas)									
<i>Alona guttata</i>	0	0	0	0	0	0	0	0	0
<i>Bosmina longirostris</i>	4	23	13	4	178	78	14	64	69
<i>Chydorus sphaericus</i>	0	0	0	0	0	0	0	0	0
<i>Daphnia longiremis</i>	4	7,962	24	5	4,786	20	5	3,056	17
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	1
Total Cladocera	7	7,986	37	9	4,964	97	20	3,119	87
Copepoda (copepods)									
Calanoida									
<i>Diaptomus minutus</i>	951	2,840	172	198	1,423	681	421	2,165	102
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	0	0
Calanoida copepodite	989	1,537	2,656	198	5,368	3,600	421	1,401	2,050
Total Calanoida	1,940	4,377	2,828	397	6,791	4,281	841	3,565	2,152
Cyclopoida									
<i>Cyclops scutifer</i>	3,783	2,142	2,345	2,041	2,652	4,962	1,647	1,082	1,332
Cyclopoida nauplii	1,145	4,843	1,690	822	8,213	7,687	736	7,512	1,988
Total Cyclopoida	4,928	6,985	4,036	2,863	10,865	12,649	2,383	8,594	3,321
Harpacticoida	0	0	0	0	0	0	0	0	0
Total Copepoda	6,868	11,362	6,864	3,259	17,656	16,930	3,224	12,159	5,473
OVERALL TOTAL	6,875	19,347	6,901	3,268	22,619	17,027	3,244	15,279	5,561

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Camp Lake							Camp Lake						
	Summer (n=6)							Fall (n=3)						
	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)														
<i>Alona guttata</i>	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
<i>Bosmina longirostris</i>	48	19	0	68	28	4	178	53	69	0.5	35	20	13	78
<i>Chydorus sphaericus</i>	0	0	0	0	0	0	0	0	0	0.0	0	0	0	0
<i>Daphnia longiremis</i>	2,636	1,531	22	3,284	1,341	4	7,962	20	20	0.2	4	2	17	24
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0.0	1	0	0	1
Total Cladocera	2,684	1,570	23	3,314	1,353	7	7,986	74	87	0.7	32	19	37	97
Copepoda (copepods)														
Calanoida														
<i>Diaptomus minutus</i>	1,333	1,187	11	1,023	418	198	2,840	319	172	3	316	182	102	681
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calanoida copepodite	1,652	1,195	14	1,895	774	198	5,368	2,769	2,656	28	781	451	2,050	3,600
Total Calanoida	2,985	2,753	25	2,414	986	397	6,791	3,087	2,828	31	1,088	628	2,152	4,281
Cyclopoida														
<i>Cyclops scutifer</i>	2,225	2,091	19	926	378	1,082	3,783	2,880	2,345	29	1,873	1,081	1,332	4,962
Cyclopoida nauplii	3,878	2,994	33	3,453	1,410	736	8,213	3,788	1,988	39	3,379	1,951	1,690	7,687
Total Cyclopoida	6,103	5,956	52	3,328	1,359	2,383	10,865	6,668	4,036	68	5,191	2,997	3,321	12,649
Harpacticoida														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	9,088	9,115	77	5,680	2,319	3,224	17,656	9,756	6,864	99	6,252	3,609	5,473	16,930
OVERALL TOTAL	11,772	11,077	100	8,442	3,447	3,244	22,619	9,829	6,901	100	6,269	3,620	5,561	17,027

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Camp Lake							Sheardown Lake Northwest							
	Overall (n=9)							DLO-01-1				DLO-01-2			
	Mean	Median	% ¹	SD	SE	Min	Max	7-Aug-07	31-Jul-08	17-Sep-07	2-Sep-08	7-Aug-07	31-Jul-08	17-Sep-07	2-Sep-08
Cladocera (water fleas)															
<i>Alona guttata</i>	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
<i>Bosmina longirostris</i>	50	23	0	56	19	4	178	293	66	902	2,017	125	249	868	355
<i>Chydorus sphaericus</i>	0	0	0	0	0	0	0	0	19	0	0	0	0	0	17
<i>Daphnia longiremis</i>	1,764	20	16	2,908	969	4	7,962	93	1,289	2,212	8,703	25	2,558	835	1,929
<i>Holopedium gibberum</i>	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total Cladocera	1,814	87	16	2,927	976	7	7,986	386	1,374	3,114	10,720	157	2,807	1,703	2,300
Copepoda (copepods)															
Calanoida															
<i>Diaptomus minutus</i>	995	681	9	968	323	102	2,840	486	6,064	3,259	4,589	890	9,902	1,458	2,007
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Calanoida copepodite	2,024	1,537	18	1,646	549	198	5,368	36	2,918	6,432	79	13	1,729	49	222
Total Calanoida	3,019	2,828	27	1,985	662	397	6,791	523	8,983	9,691	4,668	903	11,631	1,507	2,228
Cyclopoida															
<i>Cyclops scutifer</i>	2,443	2,142	22	1,233	411	1,082	4,962	2,416	1,933	4,686	514	50	4,359	4,865	577
Cyclopoida nauplii	3,848	1,988	35	3,211	1,070	736	8,213	415	8,338	116	4,391	3,147	7,414	13,890	3,126
Total Cyclopoida	6,291	4,928	57	3,707	1,236	2,383	12,649	2,831	10,271	4,802	4,905	3,197	11,773	18,754	3,703
Harpacticoida															
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	9,311	6,868	84	5,481	1,827	3,224	17,656	3,353	19,254	14,493	9,573	4,099	23,404	20,261	5,931
OVERALL TOTAL	11,125	6,901	100	7,437	2,479	3,244	22,619	3,739	20,628	17,607	20,293	4,256	26,211	21,965	8,232

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Sheardown Lake Northwest											
	DLO-01-4				DLO-01-5				DLO-01-7			
	7-Aug-07	31-Jul-08	17-Sep-07	2-Sep-08	7-Aug-07	31-Jul-08	17-Sep-07	2-Sep-08	7-Aug-07	31-Jul-08	17-Sep-07	2-Sep-08
Cladocera (water fleas)												
<i>Alona guttata</i>	0	0	0	0	0	0	0	0	0	12	0	2
<i>Bosmina longirostris</i>	99	102	326	123	29	19	821	976	60	137	984	246
<i>Chydorus sphaericus</i>	0	13	0	0	0	9	0	0	0	0	0	4
<i>Daphnia longiremis</i>	49	255	396	963	87	2,876	3,182	4,659	91	548	307	1,061
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera	148	369	722	1,086	116	2,903	4,004	5,635	151	697	1,291	1,312
Copepoda (copepods)												
Calanoida												
<i>Diaptomus minutus</i>	2,272	458	10,430	864	304	7,019	3,927	2,525	1,871	5,588	1,030	2,114
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	0	0	0	0	0
Calanoida copepodite	99	204	1,490	99	14	1,061	282	331	60	370	61	246
Total Calanoida	2,371	662	11,920	963	319	8,080	4,209	2,856	1,932	5,957	1,092	2,360
Cyclopoida												
<i>Cyclops scutifer</i>	1,926	917	14,994	123	1,854	3,287	11,010	384	9,356	2,616	3,444	386
Cyclopoida nauplii	1,136	4,533	20,674	1,580	348	3,116	34,084	1,476	3,622	7,532	3,136	2,824
Total Cyclopoida	3,062	5,449	35,668	1,704	2,202	6,403	45,094	1,860	12,978	10,148	6,580	3,210
Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	5,432	6,112	47,589	2,667	2,521	14,483	49,303	4,716	14,909	16,106	7,672	5,571
OVERALL TOTAL	5,581	6,481	48,310	3,753	2,637	17,386	53,307	10,351	15,060	16,802	8,964	6,883

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Sheardown Lake Northwest							Sheardown Lake Northwest						
	Summer (n=10)							Fall (n=10)						
	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)														
<i>Alona guttata</i>	2	0	0	4	1	0	12	0	0	0	1	0	0	2
<i>Bosmina longirostris</i>	118	100	1	90	28	19	293	762	845	4	551	174	123	2,017
<i>Chydorus sphaericus</i>	4	0	0	7	2	0	19	2	0	0	5	2	0	17
<i>Daphnia longiremis</i>	787	174	7	1,089	344	25	2,876	2,425	1,495	12	2,590	819	307	8,703
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera	911	378	8	1,093	346	116	2,903	3,189	2,002	16	3,055	966	722	10,720
Copepoda (copepods)														
Calanoida														
<i>Diaptomus minutus</i>	3,485	2,071	29	3,396	1,074	304	9,902	3,220	2,320	16	2,809	888	864	10,430
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Calanoida copepodite	650	151	5	977	309	13	2,918	929	234	5	1,980	626	49	6,432
Total Calanoida	4,136	2,151	35	4,172	1,319	319	11,631	4,149	2,608	21	3,748	1,185	963	11,920
Cyclopoida														
<i>Cyclops scutifer</i>	2,871	2,174	24	2,567	812	50	9,356	4,098	2,010	21	5,126	1,621	123	14,994
Cyclopoida nauplii	3,960	3,384	33	2,968	939	348	8,338	8,530	3,131	43	11,086	3,506	116	34,084
Total Cyclopoida	6,831	5,926	58	4,109	1,299	2,202	12,978	12,628	4,853	63	15,576	4,926	1,704	45,094
Harpacticoida														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	10,967	10,297	92	7,515	2,377	2,521	23,404	16,778	8,622	84	17,471	5,525	2,667	49,303
OVERALL TOTAL	11,878	10,770	100	8,335	2,636	2,637	26,211	19,966	13,979	100	17,352	5,487	3,753	53,307

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Sheardown Lake Northwest							Sheardown Lake Southeast							
	Overall (n=20)							DLO-02-1				DLO-02-3			
	Mean	Median	% ¹	SD	SE	Min	Max	7-Aug-07	31-Jul-08	13-Sep-07	2-Sep-08	7-Aug-07	31-Jul-08	13-Sep-07	2-Sep-08
Cladocera (water fleas)															
<i>Alona guttata</i>	1	0	0	3	1	0	12	0	0	0	0	0	0	11	0
<i>Bosmina longirostris</i>	440	247	3	507	113	19	2,017	380	2,101	276	135	238	3,126	1,539	1,793
<i>Chydorus sphaericus</i>	3	0	0	6	1	0	19	0	48	0	0	0	42	0	0
<i>Daphnia longiremis</i>	1,606	899	10	2,109	471	25	8,703	1,182	3,883	867	1,183	1,047	11,665	2,241	7,605
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera	2,050	1,302	13	2,520	564	116	10,720	1,562	6,032	1,143	1,318	1,285	14,832	3,791	9,398
Copepoda (copepods)															
Calanoida															
<i>Diaptomus minutus</i>	3,353	2,193	21	3,036	679	304	10,430	122	5,157	138	1,134	738	4,130	1,098	978
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	1	0	0	0	0	0	0	0	14
Calanoida copepodite	790	213	5	1,526	341	13	6,432	14	637	3	142	95	1,060	68	435
Total Calanoida	4,143	2,365	26	3,860	863	319	11,920	136	5,793	141	1,275	833	5,191	1,166	1,426
Cyclopoida															
<i>Cyclops scutifer</i>	3,485	2,174	22	3,995	893	50	14,994	3,042	2,165	933	170	2,688	5,191	3,056	598
Cyclopoida nauplii	6,245	3,142	39	8,239	1,842	116	34,084	2,553	4,520	4,285	2,012	3,426	5,860	7,153	5,432
Total Cyclopoida	9,730	5,177	61	11,479	2,567	1,704	45,094	5,595	6,685	5,218	2,182	6,115	11,051	10,209	6,030
Harpacticoida															
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	13,872	8,622	87	13,425	3,002	2,521	49,303	5,731	12,478	5,359	3,458	6,947	16,242	11,374	7,456
OVERALL TOTAL	15,922	12,706	100	13,883	3,104	2,637	53,307	7,293	18,510	6,503	4,776	8,232	31,074	15,166	16,854

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID	Sheardown Lake Southeast				Sheardown Lake Southeast						
	DLO-02-4				Summer (n=6)						
Sampling Date	7-Aug-07	31-Jul-08	13-Sep-07	2-Sep-08	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)											
<i>Alona guttata</i>	0	2	0	5	0	0	0	1	0	0	2
<i>Bosmina longirostris</i>	87	504	1,245	190	1,073	442	8	1,244	508	87	3,126
<i>Chydorus sphaericus</i>	0	5	0	0	16	2	0	23	9	0	48
<i>Daphnia longiremis</i>	87	698	5,138	1,295	3,094	1,114	24	4,398	1,795	87	11,665
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera	174	1,210	6,383	1,489	4,182	1,423	32	5,604	2,288	174	14,832
Copepoda (copepods)											
Calanoida											
<i>Diaptomus minutus</i>	956	854	453	498	1,993	905	15	2,099	857	122	5,157
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	0	0	0	0
Calanoida copepodite	43	155	45	181	334	125	3	423	173	14	1,060
Total Calanoida	1,000	1,009	498	679	2,327	1,004	18	2,480	1,012	136	5,793
Cyclopoida											
<i>Cyclops scutifer</i>	2,043	2,716	2,580	471	2,974	2,702	23	1,148	469	2,043	5,191
Cyclopoida nauplii	87	5,413	5,704	2,363	3,643	3,973	28	2,131	870	87	5,860
Total Cyclopoida	2,130	8,129	8,285	2,834	6,617	6,400	50	2,946	1,203	2,130	11,051
Harpacticoida											
	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	3,129	9,138	8,783	3,513	8,944	8,043	68	4,773	1,949	3,129	16,242
OVERALL TOTAL	3,303	10,348	15,166	5,002	13,127	9,290	100	10,132	4,136	3,303	31,074

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID	Sheardown Lake Southeast							Sheardown Lake Southeast						
	Fall (n=6)							Overall (n=12)						
Sampling Date	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)														
<i>Alona guttata</i>	3	0	0	5	2	0	11	2	0	0	3	1	0	11
<i>Bosmina longirostris</i>	863	760	8	748	305	135	1,793	968	442	8	985	284	87	3,126
<i>Chydorus sphaericus</i>	0	0	0	0	0	0	0	8	0	0	17	5	0	48
<i>Daphnia longiremis</i>	3,055	1,768	29	2,724	1,112	867	7,605	3,074	1,239	26	3,488	1,007	87	11,665
<i>Holopedium gibberum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cladocera	3,921	2,640	37	3,361	1,372	1,143	9,398	4,052	1,526	34	4,408	1,272	174	14,832
Copepoda (copepods)														
Calanoida														
<i>Diaptomus minutus</i>	716	738	7	410	167	138	1,134	1,355	905	11	1,588	459	122	5,157
<i>Limnocalanus macrurus</i>	2	0	0	6	2	0	14	1	0	0	4	1	0	14
Calanoida copepodite	146	105	1	156	64	3	435	240	118	2	320	92	3	1,060
Total Calanoida	864	922	8	503	205	141	1,426	1,596	1,004	13	1,869	540	136	5,793
Cyclopoida														
<i>Cyclops scutifer</i>	1,301	765	12	1,210	494	170	3,056	2,138	2,372	18	1,424	411	170	5,191
Cyclopoida nauplii	4,492	4,859	42	2,008	820	2,012	7,153	4,067	4,402	34	2,023	584	87	7,153
Total Cyclopoida	5,793	5,624	55	3,095	1,263	2,182	10,209	6,205	6,072	52	2,912	841	2,130	11,051
Harpacticoida														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Copepoda	6,657	6,408	63	3,137	1,281	3,458	11,374	7,801	7,202	66	4,032	1,164	3,129	16,242
OVERALL TOTAL	10,578	10,834	100	5,707	2,330	4,776	16,854	11,852	9,290	100	7,952	2,296	3,303	31,074

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Mary Lake								
	BLO-01			BLO-03			BLO-04		
	9-Aug-07	06-Aug-08	19-Sep-07	14-Aug-07	05-Aug-08	19-Sep-07	14-Aug-07	05-Aug-08	18-Sep-07
Cladocera (water fleas)									
<i>Alona guttata</i>	0	6	0	1	0	0	0	0	0
<i>Bosmina longirostris</i>	4	19	58	509	36	2,196	649	293	803
<i>Chydorus sphaericus</i>	0	2	0	0	0	0	0	0	0
<i>Daphnia longiremis</i>	50	356	306	543	44	1,063	30	317	1,156
<i>Holopedium gibberum</i>	0	15	15	306	21	0	257	253	96
Total Cladocera	54	398	378	1,359	101	3,259	936	863	2,055
Copepoda (copepods)									
Calanoida									
<i>Diaptomus minutus</i>	70	123	160	543	177	647	347	225	899
<i>Limnocalanus macrurus</i>	2	0	0	0	0	0	0	0	0
Calanoida copepodite	109	461	160	2,513	838	46	815	867	482
Total Calanoida	180	584	320	3,056	1,015	694	1,162	1,092	1,381
Cyclopoida									
<i>Cyclops scutifer</i>	380	323	582	2,105	352	925	1,147	867	996
Cyclopoida nauplii	590	1,049	247	1,290	740	3,375	679	1,012	1,156
Total Cyclopoida	970	1,372	829	3,395	1,092	4,300	1,826	1,879	2,152
Harpacticoida	0	0	0	1	0	0	0	0	0
Total Copepoda	1,151	1,956	1,150	6,452	2,107	4,993	2,988	2,970	3,532
OVERALL TOTAL	1,205	2,354	1,528	7,811	2,208	8,253	3,923	3,834	5,588

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Mary Lake						Mary Lake					
	BLO-05			BLO-06		Summer (n=9)						
	14-Aug-07	05-Aug-08	18-Sep-07	14-Aug-07	18-Sep-07	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)												
Alona guttata	0	1	0	0	0	1	0	0	2	1	0	6
Bosmina longirostris	42	31	3,725	7	19	177	36	7	247	82	4	649
Chydorus sphaericus	0	0	0	0	0	0	0	0	1	0	0	2
Daphnia longiremis	47	120	3,506	24	51	170	50	6	188	63	24	543
Holopedium gibberum	104	264	27	17	0	137	104	5	130	43	0	306
Total Cladocera	193	417	7,259	48	69	485	398	18	465	155	48	1,359
Copepoda (copepods)												
Calanoida												
Diaptomus minutus	75	24	1,205	37	537	180	123	7	171	57	24	543
Limnocalanus macrurus	0	0	0	0	0	0	0	0	1	0	0	2
Calanoida copepodite	71	76	1,096	72	148	647	461	24	783	261	71	2,513
Total Calanoida	146	100	2,301	108	685	827	584	30	947	316	100	3,056
Cyclopoida												
Cyclops scutifer	492	74	3,506	477	426	691	477	25	618	206	74	2,105
Cyclopoida nauplii	735	159	767	126	352	709	735	26	388	129	126	1,290
Total Cyclopoida	1,227	233	4,273	602	778	1,400	1,227	52	915	305	233	3,395
Harpacticoida												
	4	0	0	0	0	1	0	0	1	0	0	4
Total Copepoda	1,377	333	6,574	711	1,463	2,227	1,956	82	1,832	611	333	6,452
OVERALL TOTAL	1,570	750	13,832	759	1,533	2,713	2,208	100	2,246	749	750	7,811

¹ percent abundance of the overall total.

Table A4.3-1.1. - Continued -

Waterbody Site ID Sampling Date	Mary Lake							Mary Lake						
	Fall (n=5)							Overall (n=14)						
	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
Cladocera (water fleas)														
<i>Alona guttata</i>	0	0	0	0	0	0	0	1	0	0	2	0	0	6
<i>Bosmina longirostris</i>	1,360	803	22	1,589	711	19	3,725	599	50	15	1,077	288	4	3,725
<i>Chydorus sphaericus</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	2
<i>Daphnia longiremis</i>	1,216	1,063	20	1,365	611	51	3,506	544	213	14	931	249	24	3,506
<i>Holopedium gibberum</i>	28	15	0	40	18	0	96	98	24	2	118	31	0	306
Total Cladocera	2,604	2,055	42	2,906	1,299	69	7,259	1,242	408	32	1,960	524	48	7,259
Copepoda (copepods)														
Calanoida														
<i>Diaptomus minutus</i>	690	647	11	392	175	160	1,205	362	201	9	360	96	24	1,205
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Calanoida copepodite	386	160	6	429	192	46	1,096	554	311	14	671	179	46	2,513
Total Calanoida	1,076	694	18	785	351	320	2,301	916	689	23	870	232	100	3,056
Cyclopoida														
<i>Cyclops scutifer</i>	1,287	925	21	1,263	565	426	3,506	904	537	23	902	241	74	3,506
Cyclopoida nauplii	1,179	767	19	1,279	572	247	3,375	877	738	22	807	216	126	3,375
Total Cyclopoida	2,466	2,152	40	1,750	783	778	4,300	1,781	1,299	45	1,319	352	233	4,300
Harpacticoida														
	0	0	0	0	0	0	0	0	0	0	1	0	0	4
Total Copepoda	3,542	3,532	58	2,310	1,033	1,150	6,574	2,697	2,032	68	2,033	543	333	6,574
OVERALL TOTAL	6,147	5,588	100	5,159	2,307	1,528	13,832	3,939	2,281	100	3,769	1,007	750	13,832

¹ percent abundance of the overall total.

APPENDIX 4.3-2.

**NORTH/SOUTH CONSULTANTS INC. INVERTEBRATE
SAMPLE PROCESSING, IDENTIFICATION, AND DATA
QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)
PROCEDURES.**

Sample Processing

Sorting aquatic samples involves removing aquatic invertebrates from the organic and inorganic material within each sample.

For sample sorting:

- All sorting was conducted with a 3x magnified lamp;
- All sorted samples were checked by a second laboratory technician;
- Any additional invertebrates collected during the quality assurance/quality control (QA/QC) process were combined with the original sample, but counted separately; and
- Sorting efficiency had to be $\geq 95\%$. The QA/QC technician checked on a tray-by-tray basis so that the sample was handled as few times as possible; the QA/QC technician sorted any remaining invertebrates from the tray and recorded the number of missed invertebrates per tray.

Verification of Taxonomic Identification

Samples were identified to the appropriate taxonomic level by a taxonomic specialist.

Data Processing

Data from laboratory data sheets were entered into a Microsoft[®] Excel data template. The data template specified project name, study area, site location, site label, sampling date, sampling method, sieve mesh size in field/laboratory, number of splits, taxonomic list, life stage and enumeration list. A second and a third technician verified all entered data and formulae to original field book and laboratory bench sheets. A final verification was conducted by a senior biologist specializing in lower trophic level ecology.

APPENDIX 4.3-3.
DETAILED INVERTEBRATE DRIFT DATA COLLECTED FROM
MINE AREA STREAMS, 2007-2008.

	<u>Page</u>
Appendix 4.3-3. Densities (individuals/100m ³) and summary statistics for invertebrates collected in drift traps deployed in the tributaries to Camp, Sheardown, and Mary lakes during the 2007 and 2008 study years.....	A4.3-3_1

Appendix 4.3-3. Densities (individuals/100m³) and summary statistics for invertebrates collected in drift traps deployed in the tributaries to Camp, Sheardown, and Mary lakes during the 2007 and 2008 study years.

Waterbody	Camp Lake Tributary 1									Camp Lake Tributary 2								
Season	Summer 2007				Overall 2007 Site	Fall 2007				Summer 2007				Fall 2007				Overall 2007 Site
Site ID	CLT-1			Summer 2007		CLT-1			Fall 2007	CLT-2			Summer 2007	CLT-2			Fall 2007	
Sampling Period	evening	night	morning			morning	evening	night		evening	night	morning		morning	evening	night		
Water Velocity (meters/second)	0.23	0.24	0.17	Mean	0.49	0.49 *	0.49 *	Mean	Mean	0.37	0.27	0.31	Mean	0.37	0.37 ¹	0.37 ¹	Mean	Mean
NEMATODES																		
P. Nemata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.70	5.90	0.00	0.00	0.00	0.00	2.95
ANNELIDS																		
P. Annelida																		
WORMS																		
Cl. Oligochaeta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARTHROPODS																		
P. Arthropoda																		
SPRINGTAILS																		
Collembola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MITES																		
O. Acari	0.00	0.00	0.00	0.00	8.96	0.00	0.00	2.99	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRUSTACEA																		
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hyaellidae																		
<i>Hyaella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pontoporeiidae																		
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSECTS																		
Cl. Insecta																		
BEETLES																		
O. Coleoptera																		
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUE BUGS																		
O. Hemiptera																		
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANTS, WASPS, BEES																		
O. Hymenoptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.85	2.95	0.00	0.00	0.00	0.00	1.47
MAYFLIES																		
O. Ephemeroptera																		
Ephemerellidae																		
<i>Eurylophella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STONEFLIES																		
O. Plecoptera																		
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.13	0.00	0.00	3.04	1.52
CADDISFLIES																		
O. Trichoptera																		
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUE FLIES																		
O. Diptera																		

Appendix 4.3-3. - Continued -

Waterbody	Camp Lake Tributary 1									Camp Lake Tributary 2								
Season	Summer 2007				Fall 2007				Overall 2007 Site	Summer 2007				Fall 2007				Overall 2007 Site
Site ID	CLT-1			Summer 2007	CLT-1			Fall 2007		CLT-2			Summer 2007	CLT-2			Fall 2007	
Sampling Period	evening	night	morning		morning	evening	night			evening	night	morning		morning	evening	night		
Water Velocity (meters/second)	0.23	0.24	0.17	Mean	0.49	0.49 *	0.49 *	Mean	Mean	0.37	0.27	0.31	Mean	0.37	0.37 ¹	0.37 ¹	Mean	Mean
unidentified adult MIDGES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chironomidae																		
unidentified pupa	8.50	8.85	0.00	5.78	0.00	0.00	0.00	0.00	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
unidentified adult	0.00	17.70	98.05	38.58	0.00	0.00	0.00	0.00	19.29	26.69	0.00	8.85	11.85	0.00	0.00	0.00	0.00	5.92
Chironominae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orthocladiinae	42.52	26.55	88.25	52.44	17.92	98.54	8.96	41.81	47.12	17.80	0.00	17.70	11.83	118.64	36.50	63.88	73.01	42.42
Tanypodinae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOSQUITOES																		
Culicidae	0.00	0.00	9.81	3.27	0.00	0.00	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK FLIES																		
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE FLIES																		
Tipulidae	0.00	0.00	0.00	0.00	8.96	8.96	17.92	11.94	5.97	0.00	0.00	0.00	0.00	0.00	0.00	9.13	3.04	1.52
Total Drifting Invertebrates	51.02	53.10	196.11	100.08	35.83	107.50	26.87	56.74	78.41	44.49	0.00	53.10	32.53	127.76	36.50	73.01	79.09	55.81
Taxonomic Richness (Family-level) ^{2,3}	1	1	2	2	3	2	2	3	4	1	0	3	3	2	1	2	3	5

* water velocity not re-measured.
1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody	Camp Lake Tributaries Combined																				
Season	Overall Summer (n=6)							Overall Fall (n=6)							Overall Waterbody (n=12)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
NEMATODES																					
P. Nemata	2.95	0.00	4.45	7.23	2.95	0.00	17.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	0.00	2.20	5.11	1.47	0.00	17.70
ANNELIDS																					
P. Annelida																					
WORMS																					
Cl. Oligochaeta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ARTHROPODS																					
P. Arthropoda																					
SPRINGTAILS																					
Collembola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MITES																					
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	2.20	3.66	1.49	0.00	8.96	0.75	0.00	1.11	2.59	0.75	0.00	8.96
CRUSTACEA																					
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hyaellidae																					
<i>Hyaella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pontoporeiidae																					
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
INSECTS																					
Cl. Insecta																					
BEETLES																					
O. Coleoptera																					
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRUE BUGS																					
O. Hemiptera																					
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ANTS, WASPS, BEES																					
O. Hymenoptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hymenoptera adult	1.47	0.00	2.22	3.61	1.47	0.00	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	1.10	2.55	0.74	0.00	8.85
MAYFLIES																					
O. Ephemeroptera																					
Ephemerellidae																					
<i>Eurylophella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
STONEFLIES																					
O. Plecoptera																					
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	2.24	3.73	1.52	0.00	9.13	0.76	0.00	1.13	2.63	0.76	0.00	9.13
CADDISFLIES																					
O. Trichoptera																					
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRUE FLIES																					
O. Diptera																					

Appendix 4.3-3. - Continued -

Waterbody	Camp Lake Tributaries Combined																				
Season	Overall Summer (n=6)							Overall Fall (n=6)							Overall Waterbody (n=12)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MIDGES																					
Chironomidae																					
unidentified pupa	2.89	0.00	4.36	4.48	1.83	0.00	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45	0.00	2.15	3.38	0.98	0.00	8.85
unidentified adult	25.22	13.27	38.03	37.16	15.17	0.00	98.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.61	0.00	18.79	28.30	8.17	0.00	98.05
Chironominae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orthocladiinae	32.14	22.17	48.47	30.77	12.56	0.00	88.25	57.41	50.19	84.53	44.33	18.10	8.96	118.64	44.77	31.53	66.71	38.70	11.17	0.00	118.64
Tanypodinae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOSQUITOES																					
Culicidae	1.63	0.00	2.46	4.00	1.63	0.00	9.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	1.22	2.83	0.82	0.00	9.81
BLACK FLIES																					
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE FLIES																					
Tipulidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.49	8.96	11.03	6.75	2.76	0.00	17.92	3.75	0.00	5.58	6.00	1.73	0.00	17.92
Total Drifting Invertebrates	66.30	52.06	100.00	66.79	27.27	0.00	196.11	67.91	54.76	100.00	42.13	17.20	26.87	127.76	67.11	52.06	100.00	53.25	15.37	0.00	196.11
Taxonomic Richness (Family-level) ^{2,3}	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	7

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody		Sheardown Lake Tributary 1																								
Season	Spring 2007				Spring 2008				Summer 2007				Summer 2008				Fall 2007				Fall 2008				Overall	Overall
Site ID	SDLT-1			Spring 2007	SDLT-1			Spring 2008	SDLT-1			Summer 2007	SDLT-1			Summer 2008	SDLT-1			Fall 2007	SDLT-1			Fall 2008	2007 Site	2008 Site
Sampling Period	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	Mean	Mean
Water Velocity (meters/second)	0.29	0.32	0.32		0.60	1.07	0.60		0.63	0.61	0.60		0.85	0.85	0.85		0.46	0.46 ¹	0.46 ¹		0.35	0.86	-			
NEMATODES																										
P. Nemata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
ANNELIDS																										
P. Annelida																										
WORMS																										
Cl. Oligochaeta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	2.07	1.38	0.00	0.00	0.00	0.00	1.93	0.00	-	0.96	0.00	0.76
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.73	-	1.87	0.00	0.47
ARTHROPODS																										
P. Arthropoda																										
SPRINGTAILS																										
Collembola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.69	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.26
MITES																										
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
CRUSTACEA																										
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.69	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.26
Hyalellidae																										
<i>Hyalella</i>	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.26
Pontoporeiidae																										
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.26
INSECTS																										
Cl. Insecta																										
BEETLES																										
O. Coleoptera																										
unidentified adult	0.00	0.00	0.00	0.00	0.00	1.92	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.24
TRUE BUGS																										
O. Hemiptera																										
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
ANTS, WASPS, BEES																										
O. Hymenoptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	0.00	0.69	0.00	0.00	0.00	0.00	1.93	0.00	-	0.96	0.00	0.50
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
MAYFLIES																										
O. Ephemeroptera																										
Ephemerellidae																										
<i>Eurylophella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
STONEFLIES																										
O. Plecoptera																										
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
CADDISFLIES																										
O. Trichoptera																										
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
TRUE FLIES																										
O. Diptera																										

Appendix 4.3-3. - Continued -

Waterbody	Sheardown Lake Tributary 1																									
Season	Spring 2007				Spring 2008				Summer 2007				Summer 2008				Fall 2007				Fall 2008				Overall	Overall
Site ID	SDLT-1			Spring 2007	SDLT-1			Spring 2008	SDLT-1			Summer 2007	SDLT-1			Summer 2008	SDLT-1			Fall 2007	SDLT-1			Fall 2008	2007 Site	2008 Site
Sampling Period	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	Mean	Mean
Water Velocity (meters/second)	0.29	0.32	0.32		0.60	1.07	0.60		0.63	0.61	0.60		0.85	0.85	0.85		0.46	0.46 ¹	0.46 ¹		0.35	0.86	-			
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.95	2.98	0.00	0.00	-	0.00	0.99	0.00
MIDGES																										
Chironomidae																										
unidentified pupa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.09	26.62	0.00	11.90	0.00	2.07	2.07	1.38	8.95	0.00	0.00	2.98	0.00	1.87	-	0.93	4.96	0.75
unidentified adult	0.00	0.00	0.00	0.00	0.00	1.92	0.00	0.64	0.00	35.49	0.00	11.83	0.00	6.22	2.07	2.77	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	3.94	1.28
Chironominae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	-	0.93	0.00	0.23
Orthocladiinae	43.66	26.08	35.78	35.18	6.17	0.00	4.12	3.43	9.09	0.00	0.00	3.03	0.00	4.15	4.15	2.77	0.00	17.89	0.00	5.96	11.56	0.00	-	5.78	14.72	3.77
Tanypodinae	0.00	8.69	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.97	0.00
MOSQUITOES																										
Culicidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
BLACK FLIES																										
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
CRANE FLIES																										
Tipulidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
Total Drifting Invertebrates	43.66	34.78	35.78	38.07	6.17	3.85	8.23	6.08	18.18	62.10	0.00	26.76	0.00	16.60	14.52	10.37	8.95	17.89	8.95	11.93	15.42	7.46	-	11.44	25.59	9.03
Taxonomic Richness (Family-level) _{2,3}	1	1	1	1	0	2	3	4	1	1	0	1	0	3	4	5	1	1	1	2	3	2	-	4	2	9

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody Season Site ID Sampling Period Water Velocity (meters/second)	Sheardown Lake Tributary 9					Sheardown Lake Tributary 12												Overall Spring (n=12)							
	Spring 2007			Spring 2007 2007 Site	Overall 2007 Site	Spring 2007			Summer 2007			Fall 2007			Fall 2007 2007 Site	Overall 2007 Site									
	SDLT-9					SDLT-12			SDLT-12			SDLT-12													
	morning	evening	night			morning	evening	night	Mean	morning	evening	night	Mean	morning	evening	night	Mean	Mean	Mean	Median	% Abundanc e	SD	SE	Min	Max
	0.18	0.18	0.29			0.05	0.32	0.20		0.05	0.05	0.05		0.13	0.13 ¹	0.13 ¹									
NEMATODES																									
P. Nemata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	0.00	2.97	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANNELIDS																									
P. Annelida																									
WORMS																									
Cl. Oligochaeta	17.84	0.00	0.00	5.95	5.95	0.00	0.00	8.90	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	0.00	1.20	5.54	1.60	0.00	17.84
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARTHROPODS																									
P. Arthropoda																									
SPRINGTAILS																									
Collembola	0.00	8.92	0.00	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.40	2.58	0.74	0.00	8.92
MITES																									
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRUSTACEA																									
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.44	0.00	2.81	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hyaellidae																									
<i>Hyaella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.09	0.59	0.17	0.00	2.06
Pontoporeiidae																									
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.09	0.59	0.17	0.00	2.06
INSECTS																									
Cl. Insecta																									
BEETLES																									
O. Coleoptera																									
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.09	0.56	0.16	0.00	1.92
TRUE BUGS																									
O. Hemiptera																									
Pleidae adult	8.92	0.00	0.00	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.40	2.58	0.74	0.00	8.92
ANTS, WASPS, BEES																									
O. Hymenoptera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAYFLIES																									
O. Ephemeroptera																									
Ephemerellidae																									
<i>Eurylophella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STONEFLIES																									
O. Plecoptera																									
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CADDISFLIES																									
O. Trichoptera																									
Limnephilidae	8.92	0.00	0.00	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.40	2.58	0.74	0.00	8.92
TRUE FLIES																									

Appendix 4.3-3. - Continued -

Waterbody	Sheardown Lake Tributary 9					Sheardown Lake Tributary 12																			
Season	Spring 2007			Overall		Spring 2007				Summer 2007				Fall 2007			Overall		Overall Spring (n=12)						
Site ID	SDLT-9		Spring 2007	2007 Site		SDLT-12		Spring 2007		SDLT-12		Summer 2007		SDLT-12		Fall 2007	2007 Site		Mean	Median	% Abundance	SD	SE	Min	Max
Sampling Period	morning	evening	night			morning	evening	night		morning	evening	night		morning	evening	night									
Water Velocity (meters/second)	0.18	0.18	0.29	Mean	Mean	0.05	0.32	0.20	Mean	0.05	0.05	0.05	Mean	0.13	0.13 ¹	0.13 ¹	Mean	Mean							
O. Diptera																									
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIDGES																									
Chironomidae																									
unidentified pupa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.09	0.56	0.16	0.00	1.92
Chironominae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Orthocladiinae	562.08	401.49	34.93	332.83	332.83	444.39	214.71	373.71	344.27	8.90	8.90	0.00	5.93	59.09	25.32	0.00	28.14	126.11	178.93	39.72	96.45	209.18	60.39	0.00	562.08
Tanypodinae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.39	2.51	0.72	0.00	8.69
MOSQUITOES																									
Culicidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK FLIES																									
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.90	0.00	0.00	2.97	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE FLIES																									
Tipulidae	8.92	0.00	0.00	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.40	2.58	0.74	0.00	8.92
Total Drifting Invertebrates	606.69	410.41	34.93	350.68	350.68	444.39	214.71	382.60	347.23	17.80	17.80	0.00	11.86	59.09	33.77	0.00	30.95	130.02	185.52	39.72	100.00	217.26	62.72	3.85	606.69
Taxonomic Richness (Family-level) ^{2,3}	5	2	1	6	6	1	1	2	2	2	2	0	3	1	2	0	2	4	-	-	-	-	-	-	9

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody	Sheardown Lake Tributaries Combined																				
Season	Overall Summer (n=9)							Overall Fall (n=8)							Overall Waterbody (n=29)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
NEMATODES																					
P. Nemata	0.99	0.00	6.05	2.97	0.99	0.00	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.35	1.65	0.31	0.00	8.90
ANNELIDS																					
P. Annelida																					
WORMS																					
Cl. Oligochaeta	0.46	0.00	2.82	0.91	0.30	0.00	2.07	0.24	0.00	1.27	0.68	0.24	0.00	1.93	1.13	0.00	1.30	3.65	0.68	0.00	17.84
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	2.46	1.32	0.47	0.00	3.73	0.13	0.00	0.15	0.69	0.13	0.00	3.73
ARTHROPODS																					
P. Arthropoda																					
SPRINGTAILS																					
Collembola	0.23	0.00	1.41	0.69	0.23	0.00	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.44	1.69	0.31	0.00	8.92
MITES																					
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRUSTACEA																					
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	5.57	2.98	1.06	0.00	8.44	0.29	0.00	0.33	1.57	0.29	0.00	8.44
O. Amphipoda	0.23	0.00	1.41	0.69	0.23	0.00	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.08	0.39	0.07	0.00	2.07
Hyalellidae																					
<i>Hyalella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.08	0.38	0.07	0.00	2.06
Pontoporeiidae																					
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.08	0.38	0.07	0.00	2.06
INSECTS																					
Cl. Insecta																					
BEETLES																					
O. Coleoptera																					
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.08	0.36	0.07	0.00	1.92
TRUE BUGS																					
O. Hemiptera																					
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.35	1.66	0.31	0.00	8.92
ANTS, WASPS, BEES																					
O. Hymenoptera	0.23	0.00	1.41	0.69	0.23	0.00	2.07	0.24	0.00	1.27	0.68	0.24	0.00	1.93	0.14	0.00	0.16	0.52	0.10	0.00	2.07
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAYFLIES																					
O. Ephemeroptera																					
Ephemerellidae																					
<i>Eurylophella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STONEFLIES																					
O. Plecoptera																					
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CADDISFLIES																					
O. Trichoptera																					
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.35	1.66	0.31	0.00	8.92
TRUE FLIES																					
O. Diptera																					
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	5.90	3.16	1.12	0.00	8.95	0.31	0.00	0.35	1.66	0.31	0.00	8.95

Appendix 4.3-3. - Continued -

Waterbody	Sheardown Lake Tributaries Combined																				
Season	Overall Summer (n=9)							Overall Fall (n=8)							Overall Waterbody (n=29)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
MIDGES																					
Chironomidae																					
unidentified pupa	4.43	0.00	27.11	8.83	2.94	0.00	26.62	1.35	0.00	7.14	3.14	1.11	0.00	8.95	1.75	0.00	2.01	5.33	0.99	0.00	26.62
unidentified adult	4.87	0.00	29.79	11.67	3.89	0.00	35.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.00	1.81	6.64	1.23	0.00	35.49
Chironominae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	1.23	0.66	0.23	0.00	1.87	0.06	0.00	0.07	0.35	0.06	0.00	1.87
Orthocladiinae	3.91	4.15	23.94	4.15	1.38	0.00	9.09	14.23	5.78	75.15	20.58	7.28	0.00	59.09	79.18	8.90	90.95	156.82	29.12	0.00	562.08
Tanypodinae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.34	1.61	0.30	0.00	8.69
MOSQUITOES																					
Culicidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK FLIES																					
Simuliidae	0.99	0.00	6.05	2.97	0.99	0.00	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.35	1.65	0.31	0.00	8.90
CRANE FLIES																					
Tipulidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.35	1.66	0.31	0.00	8.92
Total Drifting Invertebrates	16.33	16.60	100.00	19.06	6.35	0.00	62.10	18.94	12.18	100.00	19.03	6.73	0.00	59.09	87.06	17.80	100.00	160.70	29.84	0.00	606.69
Taxonomic Richness (Family-level) ^{2,3}	-	-	-	-	-	-	7	-	-	-	-	-	-	6	-	-	-	-	-	-	16

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody Season Site ID Sampling Period Water Velocity (meters/second)	Mary Lake South Tributary 2								Overall 2008 Site Mean
	Spring 2008				Summer 2008				
	MLST-2			Spring 2008 Mean	MLST-2			Summer 2008 Mean	
	morning	evening	night		morning	afternoon	evening		
	0.58	0.58	0.58		0.5	0.5	0.5		
NEMATODES									
P. Nemata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANNELIDS									
P. Annelida									
WORMS									
Cl. Oligochaeta	0.00	0.00	0.00	0.00	1.90	0.00	0.00	0.63	0.32
Other	0.00	0.00	0.00	0.00	0.00	1.90	11.40	4.43	2.22
ARTHROPODS									
P. Arthropoda									
SPRINGTAILS									
Collembola	0.00	0.00	0.00	0.00	0.00	1.90	0.00	0.63	0.32
MITES									
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRUSTACEA									
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hyaellidae									
<i>Hyaella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pontoporeiidae									
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSECTS									
Cl. Insecta									
BEETLES									
O. Coleoptera									
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUE BUGS									
O. Hemiptera									
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ANTS, WASPS, BEES									
O. Hymenoptera	0.00	0.00	1.94	0.65	1.90	5.70	0.00	2.53	1.59
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAYFLIES									
O. Ephemeroptera									
Ephemerellidae									
<i>Eurylophella</i>	0.00	0.00	1.94	0.65	0.00	0.00	0.00	0.00	0.32
STONEFLIES									
O. Plecoptera									
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CADDISFLIES									
O. Trichoptera									
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRUE FLIES									
O. Diptera									
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix 4.3-3. - Continued -

Waterbody	Mary Lake South Tributary 2								
Season	Spring 2008				Summer 2008				Overall
Site ID	MLST-2			Spring 2008	MLST-2			Summer 2008	2008 Site
Sampling Period	morning	evening	night	Mean	morning	afternoon	evening	Mean	Mean
Water Velocity (meters/second)	0.58	0.58	0.58		0.5	0.5	0.5		
MIDGES									
Chironomidae									
unidentified pupa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.63	0.32
Chironominae	0.00	0.00	5.81	1.94	0.00	0.00	1.90	0.63	1.28
Orthocladiinae	0.00	1.94	7.74	3.23	0.00	1.90	9.50	3.80	3.51
Tanypodinae	0.00	1.94	0.00	0.65	0.00	0.00	0.00	0.00	0.32
MOSQUITOES									
Culicidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK FLIES									
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE FLIES									
Tipulidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Drifting Invertebrates	0.00	3.87	17.42	7.10	3.80	11.40	24.69	13.30	10.20
Taxonomic Richness (Family-level) ^{2, 3}	0	1	3	3	2	4	2	5	6

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

Appendix 4.3-3. - Continued -

Waterbody	Mary Lake South Tributary 2																				
Season	Overall Spring (n=3)							Overall Summer (n=3)							Overall Waterbody (n=6)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
NEMATODES																					
P. Nemata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ANNELIDS																					
P. Annelida																					
WORMS																					
Cl. Oligochaeta	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	4.76	1.10	0.63	0.00	1.90	0.32	0.00	3.10	0.78	0.32	0.00	1.90
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.43	1.90	33.33	6.11	3.53	0.00	11.40	2.22	0.00	21.73	4.56	1.86	0.00	11.40
ARTHROPODS																					
P. Arthropoda																					
SPRINGTAILS																					
Collembola	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	4.76	1.10	0.63	0.00	1.90	0.32	0.00	3.10	0.78	0.32	0.00	1.90
MITES																					
O. Acari	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
CRUSTACEA																					
Cl. Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
O. Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Hyalellidae																					
<i>Hyalella</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pontoporeiidae																					
<i>Diporeia</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
INSECTS																					
Cl. Insecta																					
BEETLES																					
O. Coleoptera																					
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRUE BUGS																					
O. Hemiptera																					
Pleidae adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ANTS, WASPS, BEES																					
O. Hymenoptera	0.65	0.00	9.09	1.12	0.65	0.00	1.94	2.53	1.90	19.05	2.90	1.68	0.00	5.70	1.59	0.95	15.58	2.22	0.91	0.00	5.70
Hymenoptera adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MAYFLIES																					
O. Ephemeroptera																					
Ephemerellidae																					
<i>Eurylophella</i>	0.65	0.00	9.09	1.12	0.65	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	3.16	0.79	0.32	0.00	1.94
STONEFLIES																					
O. Plecoptera																					
Nemouridae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
CADDISFLIES																					
O. Trichoptera																					
Limnephilidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TRUE FLIES																					
O. Diptera																					
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Appendix 4.3-3. - Continued -

Waterbody	Mary Lake South Tributary 2																				
Season	Overall Spring (n=3)							Overall Summer (n=3)							Overall Waterbody (n=6)						
Summary Statistic	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max	Mean	Median	% ¹	SD	SE	Min	Max
MIDGES																					
Chironomidae																					
unidentified pupa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
unidentified adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	4.76	1.10	0.63	0.00	1.90	0.32	0.00	3.10	0.78	0.32	0.00	1.90
Chironominae	1.94	0.00	27.27	3.35	1.94	0.00	5.81	0.63	0.00	4.76	1.10	0.63	0.00	1.90	1.28	0.00	12.59	2.34	0.96	0.00	5.81
Orthocladiinae	3.23	1.94	45.45	4.03	2.33	0.00	7.74	3.80	1.90	28.57	5.03	2.90	0.00	9.50	3.51	1.92	34.45	4.09	1.67	0.00	9.50
Tanypodinae	0.65	0.00	9.09	1.12	0.65	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	3.16	0.79	0.32	0.00	1.94
MOSQUITOES																					
Culicidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK FLIES																					
Simuliidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CRANE FLIES																					
Tipulidae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Drifting Invertebrates	7.10	3.87	100.00	9.14	5.28	0.00	17.42	13.30	11.40	100.00	10.58	6.11	3.80	24.69	10.20	7.63	100.00	9.47	3.87	0.00	24.69
Taxonomic Richness (Family-level) ^{2,3}	-	-	-	-	-	-	3	-	-	-	-	-	-	5	-	-	-	-	-	-	6

1 percent abundance of the overall total.
2 number of taxa reported at Family level; if group identified to higher level, then it was assumed that only one Family was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to family-level, not the average number of taxa.

APPENDIX 4.3-4. **ZEAS QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)** **RESULTS: BENTHIC INVERTEBRATES**

	<u>Page</u>
Table A4.3-4.1. Calculation of subsampling error for benthic macroinvertebrate samples from Sheardown Lake, Baffin Island (2008).	A4.3-4_1
Table A4.3-4.2. Percent recovery of benthic macroinvertebrates from samples collected from Sheardown Lake, Baffin Island (2008).	A4.3-4_1
Table A4.3-4.3. Sample fractions sorted from Sheardown Lake, Baffin Island (2008)..	A4.3-4_2

Table A4.3-4.1. Calculation of subsampling error for benthic macroinvertebrate samples from Sheardown Lake, Baffin Island (2008).
Note: min = minimum absolute % error and max = maximum absolute % error.

Station	Whole Organisms	Number of Organisms in Fraction 1	Number of Organisms in Fraction 2	Number of Organisms in Fraction 3	Number of Organisms in Fraction 4	Actual Density ¹	Precision		Accuracy	
							% range		min	max
DD-HAB9-STN1	0	277	286	--	--	563	3.1	--	1.6	--
SDL-HAB4-STN4	0	219	248	--	--	467	11.7	--	6.2	--

¹ whole large organisms excluded in calculations.

Table A4.3-4.2. Percent recovery of benthic macroinvertebrates from samples collected from Sheardown Lake, Baffin Island (2008).

Station	Number of Organisms Recovered (initial sort)	Number of Organisms in Re-sort	Percent Recovery
DD-HAB4-STN1	408	420	97.1%
DLO-01-6-B1	292	309	94.5%
SDLT1-REACH2A-B1	195	209	93.3%
		Average % Recovery	95.0%

Table A4.3-4.3. Sample fractions sorted from Sheardown Lake, Baffin Island (2008). Note: pupae were not counted toward total number of taxa unless they were the sole representative of their taxa group and immatures were not counted toward total number of taxa unless they were the sole representative of their taxa group.

Station	Fraction Sorted (500 um)	Station	Fraction Sorted (500 um)	Station	Fraction Sorted (500 um)
DD-HAB4-STN1	Whole	DLO-01-4-B2	1/8	SDL-HAB4-STN5	1/4
DD-HAB4-STN2	Whole	DLO-01-5-B1	Whole	SDLT1-REACH1-B1	Whole
DD-HAB4-STN3	Whole	DLO-01-6-B1	1/4	SDLT1-REACH1-B2	Whole
DD-HAB9-STN1	Whole ¹	DLO-01-6-B2	Whole	SDLT1-REACH1-B3	Whole
DD-HAB9-STN2	1/2	DLO-01-7-B1	1/2	SDLT1-REACH2A-B1	Whole
DD-HAB9-STN3	Whole	DLO-01-7-B2	1/8	SDLT1-REACH2A-B2	1/2
DLO-01-2-B1	Whole	SDL-HAB4-STN1	Whole	SDLT1-REACH2A-B3	Whole
DLO-01-2-B2	Whole	SDL-HAB4-STN2	1/8	SDLT1-REACH4-B1	1/2
DLO-01-3-B1	Whole	SDL-HAB4-STN3	1/2	SDLT1-REACH4-B2	1/4
DLO-01-4-B1	1/8	SDL-HAB4-STN4	Whole ¹	SDLT1-REACH4-B3	1/4

¹ two halves sorted for subsampling error calculations.

APPENDIX 4.3-5.
DETAILED BENTHIC INVERTEBRATE DATA COLLECTED
FROM MINE AREA LAKES, RIVERS, AND STREAMS,
2005-2008.

Page

Table A4.3-5.1. Raw and summary statistic data for benthic invertebrates collected in Camp, Mary and Sheardown lakes, Mary and Tom rivers, and tributaries to Camp and Sheardown lakes during the 2005 to 2008 study years.	A4.3-5_1
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Table A4.3-5.1. Raw and summary statistic data for benthic invertebrates collected in Camp, Mary and Sheardown lakes, Mary and Tom rivers, and tributaries to Camp and Sheardown lakes during the 2005 to 2008 study years.

Waterbody	Camp Lake (2007)			Camp Lake (2007) Habitat 4 Total (n = 3)							
Site ID	JLO-10										
Habitat Type	4										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>											
P. Nemata	0	35	0	35	12	0	80	20	12	0	35
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	0	0	0	0	0	0	0	0
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake (2007)			Camp Lake (2007) Habitat 4 Total (n = 3)							
Site ID	JLO-10										
Habitat Type	4										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	9	0	9	3	0	20	5	3	0	9
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	0	43	0	43	14	0	100	25	14	0	43
Taxonomic Richness (Genus-level) ²	0	2	0	2 ³	--	--	--	--	--	0	2

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody Site ID Habitat Type Replicate Station	Camp Lake (2007)			Camp Lake (2007)			Camp Lake (2007)		
	JLO-01			JLO-02			JLO-07		
	14			14			14		
	B1	B2	B3	B1	B2	B3	B1	B2	B3
<u>ROUNDWORMS</u>									
P. Nemata	26	157	157	70	0	0	9	52	43
<u>ANNELIDS</u>									
P. Annelida									
WORMS	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0
O. Acari	17	26	26	70	0	0	17	9	0
HARPACTICIDS	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	9	35	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	9	0	0
<u>INSECTS</u>									
Cl. Insecta									
BEETLES	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	35	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	148	652	591	2504	1809	974	652	1061	565
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	1426	1113	278	9	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	278	70	209	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Habitat Type Replicate Station	Camp Lake (2007)			Camp Lake (2007)			Camp Lake (2007)		
	JLO-01			JLO-02			JLO-07		
	14			14			14		
	B1	B2	B3	B1	B2	B3	B1	B2	B3
S.F. Diamesinae	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	104	0	0	0	9	35
<i>Pseudodiamesa</i>	43	26	70	139	70	209	0	43	9
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	9	0	35	278	139	209	0	9	9
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	209	70	139	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	487	852	939	1009	1043	1113	2165	2070	1165
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	9	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	26	9	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	70	0	0	0	26	17
<i>Parakiefferiella</i>	0	0	9	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	9	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	70	70	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	9	9	0
<i>Thienemannimyia</i> complex	0	0	0	0	70	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	730	1722	1843	6226	4452	3200	2896	3296	1843
Taxonomic Richness (Genus-level) ²	6	6	9	12	9	8	8	10	7

- 1 percent abundance of the overall total.
- 2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake (2007)			Camp Lake (2007) Habitat 14 Total (n = 12)							
Site ID	JLO-09										
Habitat Type	14										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>											
P. Nemata	43	70	174	800	67	48	3	62	18	0	174
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	104	17	43	330	28	17	1	31	9	0	104
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	9	0	0	52	4	0	0	10	3	0	35
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	9	0	0	9	1	0	0	3	1	0	9
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	9	1	0	0	3	1	0	9
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	9	0	9	17	1	0	0	3	1	0	9
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	35	3	0	0	10	3	0	35
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	870	513	574	10913	909	652	34	645	186	148	2504
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	2826	236	0	9	494	143	0	1426
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	557	46	0	2	95	28	0	278
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake (2007)			Camp Lake (2007) Habitat 14 Total (n = 12)							
Site ID	JLO-09										
Habitat Type	14										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	35	35	17	235	20	4	1	31	9	0	104
<i>Pseudodiamesa</i>	26	0	43	678	57	43	2	61	18	0	209
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	9	35	730	61	9	2	95	27	0	278
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	417	35	0	1	70	20	0	209
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	878	974	878	13574	1131	991	43	491	142	487	2165
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	9	1	0	0	3	1	0	9
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	9	0	26	70	6	0	0	10	3	0	26
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	9	0	70	191	16	0	1	26	8	0	70
<i>Parakiefferiella</i>	9	0	26	43	4	0	0	8	2	0	26
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	9	0	9	17	1	0	0	3	1	0	9
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	26	35	3	0	0	8	2	0	26
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	139	12	0	0	27	8	0	70
<i>Procladius</i>	0	0	9	26	2	0	0	4	1	0	9
<i>Thienemannimyia</i> complex	0	0	0	70	6	0	0	20	6	0	70
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	2017	1617	1939	31783	2649	1978	100	1497	432	730	6226
Taxonomic Richness (Genus-level) ²	13	6	14	23	--	--	--	--	--	6	14

- 1 percent abundance of the overall total.
- 2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Camp Lake Overall (n = 15)						
Site ID								
Habitat Type								
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS								
P. Nemata	835	56	43	3	60	16	0	174
ANNELIDS								
P. Annelida								
WORMS	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0
ARTHROPODS								
P. Arthropoda								
MITES	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0
O. Acari	330	22	17	1	30	8	0	104
HARPACTICIDS	0	0	0	0	0	0	0	0
O. Harpacticoida	52	3	0	0.2	9	2	0	35
SEED SHRIMPS	0	0	0	0	0	0	0	0
Cl. Ostracoda	9	1	0	0.0	2	1	0	9
SPRINGTAILS	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0
O. Collembola	9	1	0	0.0	2	1	0	9
INSECTS								
Cl. Insecta								
BEETLES	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0
<i>Apatania</i>	17	1	0	0.1	3	1	0	9
F. Limnephilidae	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0
chironomid pupae	35	2	0	0	9	2	0	35
S.F. Chironominae	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	10913	728	591	34	685	177	0	2504
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0
<i>Sergentia</i>	2826	188	0	9	449	116	0	1426
<i>Stempellinella</i>	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	557	37	0	2	87	22	0	278
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Camp Lake Overall (n = 15)							
Site ID									
Habitat Type									
Replicate Station		Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae		0	0	0	0	0	0	0	0
	<i>Diamesa</i>	0	0	0	0	0	0	0	0
	<i>Protanypus</i>	235	16	0	1	28	7	0	104
	<i>Pseudodiamesa</i>	678	45	26	2	59	15	0	209
	<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0
S.F. Orthocladiinae		0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	730	49	9	2	88	23	0	278
	? <i>Acricotopus</i>	0	0	0	0	0	0	0	0
	<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
	<i>Corynoneura</i>	0	0	0	0	0	0	0	0
	<i>Cricotopus</i>	0	0	0	0	0	0	0	0
	<i>Cricotopus/Orthocladius</i>	417	28	0	1	63	16	0	209
	<i>Diplocladius</i>	0	0	0	0	0	0	0	0
	? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0
	<i>Heterotrissocladius</i>	13583	906	939	43	639	165	0	2165
	<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0
	<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	9	1	0	0	2	1	0	9
	? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	70	5	0	0	9	2	0	26
	<i>Metriocnemus</i>	0	0	0	0	0	0	0	0
	<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0
	<i>Paracladius</i>	191	13	0	1	24	6	0	70
	<i>Parakiefferiella</i>	43	3	0	0	7	2	0	26
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	0	0	0	0	0	0	0	0
	<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0
	<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Synorthocladius</i>	0	0	0	0	0	0	0	0
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	0	0	0	0	0	0	0	0
	<i>Tvetenia</i>	0	0	0	0	0	0	0	0
	<i>Zalutschia</i>	17	1	0	0	3	1	0	9
	indeterminate A	0	0	0	0	0	0	0	0
	indeterminate B	35	2	0	0	7	2	0	26
	indeterminate	0	0	0	0	0	0	0	0
S.F. Podonominae		0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	0	0	0	0	0	0	0	0
S.F. Tanypodinae		0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	139	9	0	0	24	6	0	70
	<i>Procladius</i>	26	2	0	0	4	1	0	9
	<i>Thienemannimyia</i> complex	70	5	0	0	18	5	0	70
	indeterminate	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0
	<i>Clinocera</i>	0	0	0	0	0	0	0	0
	Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydridae		0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0
Simuliidae		0	0	0	0	0	0	0	0
F. Tipulidae		0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0
	<i>Tipula</i>	0	0	0	0	0	0	0	0
Total Benthic Invertebrates		31826	2122	1843	100	1717	443	0	6226
Taxonomic Richness (Genus-level) ²		23	--	--	--	--	--	0	14

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody Site ID Habitat Type Replicate Station	Mary Lake (2007)			Mary Lake (2007)			Mary Lake (2007)		
	BLO-01			BLO-05			BLO-06		
	9			9			9		
	B1	B2	B3	B1	B2	B3	B1	B2	B3
<u>ROUNDWORMS</u>									
P. Nemata	43	130	0	43	0	0	217	130	261
<u>ANNELIDS</u>									
P. Annelida									
WORMS	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	43	174	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0
O. Acari	87	0	130	0	0	0	43	0	43
HARPACTICIDS	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	43	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	348	43	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>									
Cl. Insecta									
BEETLES	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	43	0	0	0	0	0
<i>Micropsectra</i>	913	1348	1522	6435	3304	1870	43	43	87
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	43	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	43	261	1913	2870	3130	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	435	261	609	130	348	478	0	0	0
<i>Tanytarsus</i>	0	0	0	87	87	174	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Habitat Type Replicate Station	Mary Lake (2007)			Mary Lake (2007)			Mary Lake (2007)		
	BLO-01			BLO-05			BLO-06		
	9			9			9		
	B1	B2	B3	B1	B2	B3	B1	B2	B3
S.F. Diamesinae	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	43	43	0	43	43	87	87
<i>Pseudodiamesa</i>	0	0	0	0	0	0	43	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	87	87	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	43	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	435	1000	609	87	0	0	391	478	391
<i>Hydrobaenus</i>	0	43	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	87	174	130	0	0	0	435	43	130
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	913	957	783	0	87	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	2957	3957	4087	8870	7304	5870	1217	783	1000
Taxonomic Richness (Genus-level) ²	8	8	8	10	8	8	7	5	6

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Mary Lake (2007) Habitat 9 Total (n = 9)						
Site ID								
Habitat Type								
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>								
P. Nemata	826	92	43	2	98	33	0	261
<u>ANNELIDS</u>								
P. Annelida								
WORMS	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0
indeterminate	217	24	0	1	58	19	0	174
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>								
P. Arthropoda								
MITES	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0
O. Acari	304	34	0	1	48	16	0	130
HARPACTICOIDS	0	0	0	0	0	0	0	0
O. Harpacticoida	43	5	0	0	14	5	0	43
SEED SHRIMPS	0	0	0	0	0	0	0	0
Cl. Ostracoda	391	43	0	1	115	38	0	348
SPRINGTAILS	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0
<u>INSECTS</u>								
Cl. Insecta								
BEETLES	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	43	5	0	0	14	5	0	43
<i>Micropsectra</i>	15565	1729	1348	43	2058	686	43	6435
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	43	5	0	0	14	5	0	43
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0
<i>Sergentia</i>	8217	913	43	23	1335	445	0	3130
<i>Stempellinella</i>	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	2261	251	261	6	231	77	0	609
<i>Tanytarsus</i>	348	39	0	1	63	21	0	174
Tanytarsini indeterminate	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Mary Lake (2007) Habitat 9 Total (n = 9)						
Site ID								
Habitat Type								
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0
<i>Protanypus</i>	348	39	43	1	34	11	0	87
<i>Pseudodiamesa</i>	43	5	0	0	14	5	0	43
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	174	19	0	0	38	13	0	87
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	43	5	0	0	14	5	0	43
<i>Cricotopus/Orthocladus</i>	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	3391	377	391	9	321	107	0	1000
<i>Hydrobaenus</i>	43	5	0	0	14	5	0	43
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0
<i>Orthocladus (Euorthocladus)</i>	0	0	0	0	0	0	0	0
<i>Paracladius</i>	1000	111	87	3	138	46	0	435
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0
<i>Synorthocladus</i>	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
<i>Procladius</i>	2739	304	0	8	438	146	0	957
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	36043	4005	3957	100	2879	960	783	8870
Taxonomic Richness (Genus-level) ²	19 ³	--	--	--	--	--	5	10

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary Lake (2006)			Mary Lake (2006)			Mary Lake (2006) Habitat 14 Total (n = 6)							
Site ID	BLO-01			BLO-05										
Habitat Type	14			14										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS														
P. Nemata	0	9	0	304	122	157	591	99	65	2	121	50	0	304
ANNELIDS														
P. Annelida														
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	70	0	0	70	12	0	0	28	12	0	70
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	9	0	0	0	9	1	0	0	4	1	0	9
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS														
P. Arthropoda														
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	17	17	0	17	87	139	23	17	1	32	13	0	87
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	17	17	3	0	0	7	3	0	17
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	52	296	139	243	730	122	96	3	126	52	0	296
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	35	0	0	0	0	17	52	9	0	0	15	6	0	35
INSECTS														
Cl. Insecta														
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	87	17	0	104	17	0	0	35	14	0	87
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	2157	226	1426	330	226	365	4730	788	348	19	812	332	226	2157
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	35	0	35	6	0	0	14	6	0	35
<i>Micropsectra</i>	504	1913	409	4696	1548	3009	12078	2013	1730	48	1629	665	409	4696
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	70	35	122	696	557	470	1948	325	296	8	284	116	35	696
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	270	1322	339	243	139	226	2539	423	257	10	445	182	139	1322
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary Lake (2006)			Mary Lake (2006)			Mary Lake (2006) Habitat 14 Total (n = 6)							
Site ID	BLO-01			BLO-05										
Habitat Type	14			14										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	17	0	35	17	35	104	17	17	0	16	6	0	35
<i>Pseudodiamesa</i>	0	0	9	52	17	17	96	16	13	0	19	8	0	52
<i>Pseudokiefferiella</i>	0	0	0	0	17	35	52	9	0	0	15	6	0	35
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	226	104	78	104	70	17	600	100	91	2	70	28	17	226
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	17	0	0	17	3	0	0	7	3	0	17
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	17	17	3	0	0	7	3	0	17
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	104	35	61	35	0	0	235	39	35	1	40	16	0	104
<i>Hydrobaenus</i>	0	35	17	0	35	35	122	20	26	0	17	7	0	35
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius</i> (<i>Euorthocladius</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	17	0	0	17	3	0	0	7	3	0	17
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	17	17	35	6	0	0	9	4	0	17
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	87	296	130	0	0	35	548	91	61	2	112	46	0	296
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	17	0	0	17	3	0	0	7	3	0	17
<i>Tipula</i>	0	0	0	17	17	17	52	9	9	0	10	4	0	17
Total Benthic Invertebrates	3452	4009	2670	7017	2991	4817	24957	4159	3730	100	1594	651	2670	7017
Taxonomic Richness (Genus-level) ²	8	11	12	15	15	18	25	--	--	--	--	--	8	18

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary Lake (2007)			Mary Lake (2007)		Mary Lake (2007) Habitat 14 Total (n = 5)							
Site ID	BLO-03			BLO-04		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Habitat Type	14		14										
Replicate Station	B1	B2	B3	B1	B3								
<u>ROUNDWORMS</u>													
P. Nemata	0	43	0	0	0	43	9	0	1	19	9	0	43
<u>ANNELIDS</u>													
P. Annelida													
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>													
P. Arthropoda													
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	0	0	0	0	0	0	0	0	0	0
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>													
Cl. Insecta													
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	217	174	217	0	0	609	122	174	14	113	50	0	217
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	43	0	0	43	9	0	1	19	9	0	43
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued –

Waterbody	Mary Lake (2007)			Mary Lake (2007)		Mary Lake (2007) Habitat 14 Total (n = 5)							
Site ID	BLO-03			BLO-04		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Habitat Type	14			14									
Replicate Station	B1	B2	B3	B1	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	130	43	0	43	0	217	43	43	5	53	24	0	130
<i>Pseudodiamesa</i>	0	0	43	0	0	43	9	0	1	19	9	0	43
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	391	913	609	696	609	3217	643	609	73	188	84	391	913
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius</i> (<i>Euorthocladius</i>)	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	43	43	0	0	0	87	17	0	2	24	11	0	43
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	43	43	43	0	0	130	26	43	3	24	11	0	43
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	826	1261	957	739	609	4391	878	826	100	249	111	609	1261
Taxonomic Richness (Genus-level) ²	5	6	5	2	1	8	--	--	--	--	--	1	6

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary Lake (2006 + 2007) Habitat 14 Total (n = 11)								Mary Lake Overall (n = 20)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>																
P. Nemata	635	58	0	2	99	30	0	304	1461	73	26	2	97	22	0	304
<u>ANNELIDS</u>																
P. Annelida																
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	70	6	0	0	21	6	0	70	70	3	0	0.1	16	3	0	70
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	9	1	0	0	3	1	0	9	226	11	0	0.3	40	9	0	174
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																
P. Arthropoda																
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	139	13	0	0	26	8	0	87	443	22	0	1	38	8	0	130
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	17	2	0	0	5	2	0	17	61	3	0	0.1	10	2	0	43
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	730	66	0	2	110	33	0	296	1122	56	0	2	110	25	0	348
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	52	5	0	0	11	3	0	35	52	3	0	0.1	9	2	0	35
<u>INSECTS</u>																
Cl. Insecta																
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	104	9	0	0	26	8	0	87	104	5	0	0.2	20	4	0	87
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	4730	430	226	16	707	213	0	2157	4730	237	0	7	558	125	0	2157
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	35	3	0	0	10	3	0	35	78	4	0	0	12	3	0	43
<i>Micropsectra</i>	12687	1153	409	43	1519	458	0	4696	28252	1413	709	43	1756	393	0	6435
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	43	2	0	0	10	2	0	43
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	1991	181	43	7	260	78	0	696	10209	510	43	16	962	215	0	3130
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	2539	231	139	9	384	116	0	1322	4800	240	183	7	317	71	0	1322
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	348	17	0	1	45	10	0	174
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Mary Lake (2006 + 2007) Habitat 14 Total (n = 11)							Mary Lake Overall (n = 20)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	322	29	17	1	38	11	0	130	670	33	35	1	36	8	0	130
<i>Pseudodiamesa</i>	139	13	0	0	19	6	0	52	183	9	0	0	17	4	0	52
<i>Pseudokiefferiella</i>	52	5	0	0	11	3	0	35	52	3	0	0	9	2	0	35
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	600	55	17	2	72	22	0	226	774	39	0	1	60	14	0	226
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	17	2	0	0	5	2	0	17	17	1	0	0	4	1	0	17
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	43	2	0	0	10	2	0	43
<i>Cricotopus/Orthocladius</i>	17	2	0	0	5	2	0	17	17	1	0	0	4	1	0	17
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	3452	314	104	12	338	102	0	913	6843	342	391	10	324	72	0	1000
<i>Hydrobaenus</i>	122	11	0	0	16	5	0	35	165	8	0	0	15	3	0	43
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	1000	50	0	2	106	24	0	435
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	17	2	0	0	5	2	0	17	17	1	0	0	4	1	0	17
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	35	3	0	0	7	2	0	17	35	2	0	0	5	1	0	17
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	87	8	0	0	18	5	0	43	87	4	0	0	13	3	0	43
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	678	62	43	2	88	26	0	296	3417	171	39	5	317	71	0	957
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	17	2	0	0	5	2	0	17	17	1	0	0.0	4	1	0	17
<i>Tipula</i>	52	5	0	0	8	2	0	17	52	3	0	0.1	6	1	0	17
Total Benthic Invertebrates	29348	2668	2670	100	2057	620	609	7017	65391	3270	2974	100	2487	556	609	8870
Taxonomic Richness (Genus-level) ²	26	--	--	--	--	--	1	18	30	--	--	--	--	--	1	18

1 percent abundance of the overall total.

2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2008)					Sheardown Lake NW (2008)			Sheardown Lake NW (2008)								
	SDL-HAB 4					DD-Hab 4			Habitat 4 Total (n = 8)								
	4					4			Sum	Mean	Median	% ¹	SD	SE	Min	Max	
	STN 1	STN 2	STN 3	STN 4	STN 5	Stn 1	Stn 2	Stn 3									
<u>ROUNDWORMS</u>																	
P. Nemata	83	7	50	57	21	13	1	10	242	30	17	4	29	10	1	83	
<u>ANNELIDS</u>																	
P. Annelida																	
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	1	0	0	0	0	0	0	7	8	1	0	0	3	1	0	7	
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	7	0	3	10	9	4	4	37	5	4	1	4	1	0	10	
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																	
P. Arthropoda																	
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	16	28	26	20	7	1	16	46	160	20	18	2	14	5	1	46	
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	2	355	54	115	205	149	32	9	920	115	84	14	120	43	2	355	
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>																	
Cl. Insecta																	
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	1	1	1	4	1	0	0	1	0	0	1	
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<i>Micropsectra</i>	0	56	0	0	149	7	14	54	280	35	11	4	52	18	0	149	
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	174	20	16	334	4	0	14	562	70	15	8	121	43	0	334	
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	7	3	2	7	4	3	13	39	5	4	1	4	1	0	13	
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	1	1071	728	56	823	312	59	1	3052	381	186	46	430	152	1	1071	
<i>Tanytarsus</i>	6	243	50	7	92	0	0	0	399	50	7	6	85	30	0	243	
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Habitat Type Replicate Station	Sheardown Lake NW (2008)					Sheardown Lake NW (2008)			Sheardown Lake NW (2008) Habitat 4 Total (n = 8)							
	SDL-HAB 4					DD-Hab 4										
	4					4										
	STN 1	STN 2	STN 3	STN 4	STN 5	Stn 1	Stn 2	Stn 3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	2	7	3	3	0	0	1	0	17	2	2	0	2	1	0	7
<i>Pseudodiamesa</i>	0	0	3	0	0	0	0	0	3	0	0	0	1	0	0	3
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	47	77	160	91	29	28	6	4	441	55	38	7	53	19	4	160
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	7	0	0	0	7	1	0	0	2	1	0	7
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	28	7	17	36	10	1	0	99	12	9	1	13	5	0	36
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	1	0	1	3	0	0	0	1	0	0	1
<i>Paracladius</i>	0	7	13	3	0	0	1	3	27	3	2	0	5	2	0	13
<i>Parakiefferiella</i>	6	0	0	0	0	1	1	0	9	1	0	0	2	1	0	6
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	7	0	7	2	0	0	0	0	16	2	0	0	3	1	0	7
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	7	3	3	7	0	0	0	20	3	1	0	3	1	0	7
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	1	49	7	12	78	48	6	3	203	25	10	3	29	10	1	78
<i>Procladius</i>	0	7	0	1	21	0	0	0	29	4	0	0	7	3	0	21
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	6	0	3	0	0	19	12	13	53	7	5	1	7	3	0	19
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	178	2129	1139	406	1826	609	162	186	6635	829	507	100	783	277	162	2129
Taxonomic Richness (Genus-level) ²	13	16	16	16	15	15	16	15	26 ³	--	--	--	--	--	13	16

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007)		
Site ID	DLO-01-3			DLO-01-4			DLO-01-7			DLO-01-6		
Habitat Type	9			9			9			9		
Replicate Station	B1	B2	B3	B1	B2	B3	B1	B2	B3	B1	B2	B3
ROUNDWORMS												
P. Nemata	0	0	0	139	0	70	35	122	87	87	113	70
ANNELEIDS												
P. Annelida												
WORMS	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	35	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS												
P. Arthropoda												
MITES	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	35	0	0	278	70	261	261	191	165
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	139	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	139	1670	2296	2470	2783	2157	0	35	70	122	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0
INSECTS												
Cl. Insecta												
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	35	0	0	0	35	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	70	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	209	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	1113	2087	974	1948	765	974	70	452	0	104	0	9
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	557	417	209	626	209	17	209	17	35	9	9
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	139	139	765	0	209	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	1948	0	1183	1635	1809	3130	2400	1565	1061	139	35	504
<i>Tanytarsus</i>	696	557	1252	1009	417	209	17	0	17	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007)		
Site ID	DLO-01-3			DLO-01-4			DLO-01-7			DLO-01-6		
Habitat Type	9			9			9			9		
Replicate Station	B1	B2	B3	B1	B2	B3	B1	B2	B3	B1	B2	B3
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	70	0	0	35	0	70	104	70	104	52	52	43
<i>Pseudodiamesa</i>	0	0	0	0	0	0	35	0	17	17	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	35	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	70	0	139	452	70	70	157	1183	104	296	52	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	139	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	70	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	70	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	1739	0	1113	452	1252	2226	1061	1670	887	1704	1435	757
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	9	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius</i> (<i>Euorthocladius</i>)	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	70	0	0	52	104	313	487	252	357
<i>Parakiefferiella</i>	0	0	0	0	70	0	104	0	17	0	9	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	417	0	0	104	417	70	35	70	87
indeterminate A	0	0	70	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	487	139	348	209	417	904	0	35	0	17	0	0
<i>Procladius</i>	209	0	70	1357	70	0	470	348	157	104	78	26
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	6678	5426	8904	10470	8487	10087	4904	6348	3183	3496	2304	2026
Taxonomic Richness (Genus-level) ²	11	8	13	15	11	10	14	15	14	15	12	10

1 percent abundance of the overall total.

2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake NW (2007) Habitat 9 Total (n = 12)							Sheardown Lake NW (2008)							Sheardown Lake NW (2008)			
Site ID									DLO-01-Hab 9							DD-Hab 9			
Habitat Type									9							9			
Replicate Station		Sum	Mean	Median	% ¹	SD	SE	Min	Max	3-B1	4-B1	4-B2	6-B1	6-B2	7-B1	7-B2	Stn 1	Stn 2	Stn 3
S.F. Diamesinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>		600	50	52	1	37	11	0	104	4	0	0	3	0	5	0	6	6	0
<i>Pseudodiamesa</i>		70	6	0	0	11	3	0	35	3	0	0	0	0	9	14	0	0	0
<i>Pseudokiefferiella</i>		35	3	0	0	10	3	0	35	0	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>		2591	216	87	4	331	95	0	1183	2	7	7	14	25	3	42	17	6	14
<i>?Acricotopus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>		139	12	0	0	40	12	0	139	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>		70	6	0	0	20	6	0	70	0	7	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>		70	6	0	0	20	6	0	70	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Eukiefferiella</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>		14296	1191	1183	20	618	178	0	2226	21	0	7	42	9	3	28	46	61	74
<i>Hydrobaenus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Limnophyes sp. A</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>		9	1	0	0	3	1	0	9	0	0	0	7	0	0	0	3	0	0
<i>Metriocnemus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>		1635	136	61	2	171	49	0	487	27	7	0	83	0	37	0	0	0	0
<i>Parakiefferiella</i>		200	17	0	0	34	10	0	104	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>		0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
<i>Pseudosmittia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>		1200	100	52	2	153	44	0	417	1	0	0	7	0	3	0	0	0	0
indeterminate A		70	6	0	0	20	6	0	70	1	0	0	3	0	0	0	0	0	3
indeterminate B		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominæ		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>		2557	213	87	4	281	81	0	904	0	132	125	45	9	11	35	49	78	59
<i>Procladius</i>		2887	241	91	4	379	109	0	1357	73	0	0	10	0	25	7	3	6	9
<i>Thienemannimyia</i> complex		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>		0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	1	0	0
<i>Ormosia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates		72313	6026	5887	100	2970	858	2026	10470	250	1322	1677	1075	397	334	779	816	696	823
Taxonomic Richness (Genus-level) ²		27	--	--	--	--	--	8	15	15	11	13	20	11	16	15	16	14	16

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Sheardown Lake NW (2008) Habitat 9 Total (n = 10)								Sheardown Lake NW (2007 + 2008) Habitat 9 Total (n = 22)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>																
P. Nemata	99	10	5	1	13	4	0	45	821	37	12	1	46	10	0	139
<u>ANNELIDS</u>																
P. Annelida																
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	3	0	0	0	1	0	0	3	3	0	0	0	1	0	0	3
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	35	2	0	0	7	2	0	35
<i>Lumbriculus</i>	19	2	0	0	4	1	0	10	19	1	0	0	3	1	0	10
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																
P. Arthropoda																
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	153	15	11	2	16	5	0	45	1414	64	17	2	97	21	0	278
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	21	2	0	0	3	1	0	7	160	7	0	0	30	6	0	139
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	1065	107	55	13	134	42	15	390	12804	582	70	16	961	205	0	2783
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>																
Cl. Insecta																
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	22	2	2	0	3	1	0	7	92	4	0	0	10	2	0	35
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	70	3	0	0	15	3	0	70
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	170	17	0	2	46	14	0	146	378	17	0	0	53	11	0	209
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	475	47	36	6	45	14	0	132	8970	408	76	11	635	135	0	2087
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	1128	113	69	14	147	47	0	445	3441	156	69	4	194	41	0	626
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	181	18	6	2	28	9	0	77	1433	65	3	2	167	36	0	765
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictoichironomus</i>	2892	289	321	35	153	48	52	525	18301	832	414	23	883	188	0	3130
<i>Tanytarsus</i>	579	58	47	7	55	17	0	181	4753	216	47	6	354	75	0	1252
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued –

Waterbody	Sheardown Lake NW (2008) Habitat 9 Total (n = 10)								Sheardown Lake NW (2007 + 2008) Habitat 9 Total (n = 22)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	25	2	2	0	3	1	0	6	625	28	6	1	36	8	0	104
<i>Pseudodiamesa</i>	25	3	0	0	5	2	0	14	95	4	0	0	9	2	0	35
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	35	2	0	0	7	2	0	35
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	137	14	10	2	12	4	2	42	2728	124	33	3	261	56	0	1183
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	139	6	0	0	30	6	0	139
<i>Cricotopus</i>	7	1	0	0	2	1	0	7	77	3	0	0	15	3	0	70
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	70	3	0	0	15	3	0	70
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	290	29	24	4	26	8	0	74	14586	663	263	18	742	158	0	2226
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	10	1	0	0	2	1	0	7	19	1	0	0	2	1	0	9
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	154	15	0	2	27	9	0	83	1789	81	3	2	139	30	0	487
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	200	9	0	0	26	6	0	104
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	3	0	0	0	1	0	0	3	3	0	0	0	1	0	0	3
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	10	1	0	0	2	1	0	7	1210	55	0	2	122	26	0	417
indeterminate A	7	1	0	0	1	0	0	3	77	3	0	0	15	3	0	70
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	544	54	47	7	46	15	0	132	3101	141	47	4	221	47	0	904
<i>Procladius</i>	133	13	6	2	22	7	0	73	3020	137	26	4	298	64	0	1357
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	10	1	0	0	3	1	0	9	10	0	0	0	2	0	0	9
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	8167	817	798	100	448	142	250	1677	80480	3658	2165	100	3429	731	250	10470
Taxonomic Richness (Genus-level) ²	26	--	--	--	--	--	11	20	31	--	--	--	--	--	8	20

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007) Habitat 14 Total (n = 6)							
Site ID	DLO-01-2			DLO-01-5										
Habitat Type	14			14										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS														
P. Nemata	35	0	0	9	9	9	61	10	9	1	13	5	0	35
ANNELIDS														
P. Annelida														
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS														
P. Arthropoda														
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	26	104	61	35	61	26	313	52	48	3	30	12	26	104
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	26	9	0	0	17	52	9	4	1	11	4	0	26
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INSECTS														
Cl. Insecta														
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	9	0	0	17	0	104	130	22	4	1	41	17	0	104
<i>Tanytarsus</i>	0	0	9	0	0	0	9	1	0	0	4	1	0	9
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2007)			Sheardown Lake NW (2007)			Sheardown Lake NW (2007) Habitat 14 Total (n = 6)								
Site ID	DLO-01-2			DLO-01-5											
Habitat Type	14			14											
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max	
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Protanypus</i>	17	17	0	26	0	26	87	14	17	1	12	5	0	26	
<i>Pseudodiamesa</i>	0	26	26	0	0	0	52	9	0	1	13	5	0	26	
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Abiskomyia</i>	0	9	0	0	0	0	9	1	0	0	4	1	0	9	
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Heterotrissocladius</i>	1339	1217	1000	1513	1643	965	7678	1280	1278	81	273	111	965	1643	
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Paracladius</i>	0	17	9	9	0	17	52	9	9	1	8	3	0	17	
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Zalutschia</i>	0	9	9	9	0	9	35	6	9	0	4	2	0	9	
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Procladius</i>	226	304	270	52	70	52	974	162	148	10	117	48	52	304	
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Dicranota</i>	0	0	0	9	0	0	9	1	0	0	4	1	0	9	
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Benthic Invertebrates	1652	1730	1391	1678	1783	1226	9461	1577	1665	100	219	89	1226	1783	
Taxonomic Richness (Genus-level) ²	6	9	8	9	4	9	13	--	--	--	--	--	4	9	

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2008)			Sheardown Lake (2008) Habitat 14 (n = 3)							
Site ID	DLO-01										
Habitat Type	14										
Replicate Station	2-B1	2-B2	5-B1	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS											
P. Nemata	3	2	0	5	2	2	1	2	1	0	3
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	6	17	4	27	9	6	6	7	4	4	27
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	5	5	2	0	1	3	2	0	5
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2008)			Sheardown Lake (2008) Habitat 14 (n = 3)							
Site ID	DLO-01										
Habitat Type	14										
Replicate Station	2-B1	2-B2	5-B1	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	2	3	2	7	2	2	2	1	1	2	7
<i>Pseudodiamesa</i>	1	1	0	2	1	1	0	1	0	0	2
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	6	1	1	8	3	1	2	3	2	1	8
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	113	103	81	297	99	103	66	16	9	81	297
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	14	10	0	23	8	10	5	7	4	0	23
<i>Paracladius</i>	0	0	1	1	0	0	0	1	0	0	1
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	42	23	8	72	24	23	16	17	10	8	72
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	186	158	102	446	149	158	100	43	25	102	446
Taxonomic Richness (Genus-level) ²	8	8	7	10	--	--	--	--	--	7	8

1 percent abundance of the overall total.

2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Sheardown Lake NW (2007 + 2008) Habitat 14 Total (n = 9)								Sheardown Lake NW Overall (n = 39)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>																
P. Nemata	66	7	3	1	11	4	0	35	1129	29	9	1	39	6	0	139
<u>ANNELIDS</u>																
P. Annelida																
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	12	0	0	0.0	1	0	0	7
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	35	1	0	0.0	6	1	0	35
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	56	1	0	0.1	3	0	0	10
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																
P. Arthropoda																
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	340	38	26	3	32	11	4	104	1914	49	20	2	76	12	0	278
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	160	4	0	0.2	22	4	0	139
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	52	6	0	1	10	3	0	26	13777	353	41	14	764	122	0	2783
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>																
Cl. Insecta																
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	96	2	0	0.1	8	1	0	35
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	70	2	0	0	11	2	0	70
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	378	10	0	0	40	6	0	209
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	9250	237	17	10	512	82	0	2087
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	4004	103	17	4	167	27	0	626
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	1473	38	0	2	128	20	0	765
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	136	15	0	1	34	11	0	104	21488	551	257	22	765	122	0	3130
<i>Tanytarsus</i>	9	1	0	0	3	1	0	9	5161	132	9	5	283	45	0	1252
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake NW (2007 + 2008) Habitat 14 Total (n = 9)								Sheardown Lake NW Overall (n = 39)							
Site ID																
Habitat Type																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	94	10	3	1	11	4	0	26	736	19	3	1	30	5	0	104
<i>Pseudodiaemesa</i>	54	6	0	1	11	4	0	26	152	4	0	0	9	1	0	35
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	35	1	0	0	6	1	0	35
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	17	2	0	0	3	1	0	9	3186	82	14	3	202	32	0	1183
<i>?Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	139	4	0	0	22	4	0	139
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	83	2	0	0	11	2	0	70
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	70	2	0	0	11	2	0	70
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	7975	886	1000	80	629	210	81	1643	22660	581	81	23	694	111	0	2226
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	19	0	0	0	2	0	0	9
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	23	3	0	0	5	2	0	14	26	1	0	0	3	0	0	14
<i>Paracladius</i>	53	6	1	1	7	2	0	17	1869	48	1	2	111	18	0	487
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	209	5	0	0	20	3	0	104
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	19	0	0	0	2	0	0	7
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	35	4	0	0	5	2	0	9	1265	32	0	1	94	15	0	417
indeterminate A	0	0	0	0	0	0	0	0	77	2	0	0	11	2	0	70
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	3304	85	11	3	177	28	0	904
<i>Procladius</i>	1046	116	52	11	116	39	8	304	4095	105	23	4	234	37	0	1357
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	9	1	0	0	3	1	0	9	72	2	0	0.1	4	1	0	19
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	9907	1101	1391	100	735	245	102	1783	97022	2488	1391	100	2924	468	102	10470
Taxonomic Richness (Genus-level) ²	14	--	--	--	--	--	4	9	34	--	--	--	--	--	4	20

- 1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted
in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 4 Total (n = 3)							
Site ID	DLO-02-3										
Habitat Type	4										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS											
P. Nemata	183	104	26	313	104	104	2	78	45	26	183
ANNELEIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	26	17	0	43	14	17	0	13	8	0	26
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	565	26	139	730	243	139	6	284	164	26	565
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	9	9	3	0	0	5	3	0	9
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	61	9	17	87	29	17	1	28	16	9	61
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	148	148	49	0	1	85	49	0	148
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	17	9	35	61	20	17	0	13	8	9	35
<i>Micropsectra</i>	26	61	1913	2000	667	61	16	1080	623	26	1913
<i>Paracladopelma</i>	0	9	0	9	3	0	0	5	3	0	9
<i>Paratanytarsus</i>	0	0	200	200	67	0	2	115	67	0	200
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	17	0	17	6	0	0	10	6	0	17
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	6000	6000	2000	0	47	3464	2000	0	6000
<i>Tanytarsus</i>	9	0	130	139	46	9	1	73	42	0	130
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 4 Total (n = 3)							
Site ID	DLO-02-3										
Habitat Type	4										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	9	0	9	3	0	0	5	3	0	9
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	17	0	565	583	194	17	5	321	186	0	565
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	9	1435	1443	481	9	11	826	477	0	1435
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	9	0	9	3	0	0	5	3	0	9
<i>Parakiefferiella</i>	17	78	17	113	38	17	1	35	20	17	78
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	26	26	17	70	23	26	1	5	3	17	26
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	9	0	383	391	130	9	3	218	126	0	383
<i>Procladius</i>	9	17	261	287	96	17	2	143	83	9	261
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	52	35	52	139	46	52	1	10	6	35	52
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	9	0	0	9	3	0	0	5	3	0	9
Total Benthic Invertebrates	1026	435	11348	12809	4270	1026	100	6137	3543	435	11348
Taxonomic Richness (Genus-level) ²	14	15	17	23	--	--	--	--	--	14	17

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 10 Total (n = 3)							
Site ID	DLO-02-4										
Habitat Type	10										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS											
P. Nemata	0	0	0	0	0	0	0	0	0	0	0
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	139	139	46	0	0	80	46	0	139
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	313	0	313	104	0	1	181	104	0	313
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	139	139	46	0	0	80	46	0	139
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	1739	3026	9322	14087	4696	3026	25	4058	2343	1739	9322
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	209	174	278	661	220	209	1	53	31	174	278
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
<i>?Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	417	0	835	1252	417	417	2	417	241	0	835
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	278	835	10017	11130	3710	835	20	5469	3158	278	10017
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	626	35	1948	2609	870	626	5	979	566	35	1948
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	139	0	557	696	232	139	1	290	167	0	557
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	9739	2783	1252	13774	4591	2783	25	4523	2612	1252	9739
<i>Tanytarsus</i>	626	0	3617	4243	1414	626	8	1933	1116	0	3617
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 10 Total (n = 3)							
Site ID	DLO-02-4										
Habitat Type	10										
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	487	139	626	209	139	1	251	145	0	487
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	70	0	278	348	116	70	1	145	84	0	278
<i>Cricotopus/Orthocladius</i>	70	0	0	70	23	0	0	40	23	0	70
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	348	243	278	870	290	278	2	53	31	243	348
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	104	0	104	35	0	0	60	35	0	104
indeterminate A	0	35	0	35	12	0	0	20	12	0	35
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	904	35	2226	3165	1055	904	6	1103	637	35	2226
<i>Procladius</i>	70	1217	139	1426	475	139	3	644	372	70	1217
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	15235	9287	31165	55687	18562	15235	100	11312	6531	9287	31165
Taxonomic Richness (Genus-level) ²	13	12	15	19	--	--	--	--	--	12	15

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 14 Total (n = 6)							
Site ID	DLO-02-1			DLO-02-2										
Habitat Type	14			14										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>														
P. Nemata	0	0	0	9	0	0	9	1	0	0	4	1	0	9
<u>ANNELIDS</u>														
P. Annelida														
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>														
P. Arthropoda														
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	157	183	122	35	0	35	530	88	78	2	75	31	0	183
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	365	9	0	9	0	70	452	75	9	1	144	59	0	365
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>														
Cl. Insecta														
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	2557	2035	2383	3243	2817	2539	15574	2596	2548	51	408	167	2035	3243
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	226	0	0	0	0	696	922	154	0	3	281	115	0	696
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	9	0	0	0	0	9	1	0	0	4	1	0	9
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	35	0	0	0	0	0	35	6	0	0	14	6	0	35
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	17	9	87	1191	0	2261	3565	594	52	12	940	384	0	2261
<i>Tanytarsus</i>	1757	948	487	35	174	0	3400	567	330	11	682	278	0	1757
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake SE (2007)			Sheardown Lake SE (2007)			Sheardown Lake SE (2007) Habitat 14 Total (n = 6)							
Site ID	DLO-02-1			DLO-02-2										
Habitat Type	14			14										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	17	52	52	35	0	0	157	26	26	1	24	10	0	52
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	17	0	0	0	17	3	0	0	7	3	0	17
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	52	17	17	0	0	70	157	26	17	1	29	12	0	70
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	539	243	835	61	278	104	2061	343	261	7	294	120	61	835
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	17	9	35	0	0	0	61	10	4	0	14	6	0	35
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	991	504	278	417	278	835	3304	551	461	11	298	122	278	991
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	6730	4017	4313	5035	3548	6609	30252	5042	4674	100	1350	551	3548	6730
Taxonomic Richness (Genus-level) ²	12	11	10	9	4	8	15	--	--	--	--	--	4	12

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody								
Sheardown Lake SE Overall (n = 12)								
Site ID								
Habitat Type								
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS								
P. Nemata	322	27	0	0.3	57	17	0	183
ANNELEIDS								
P. Annelida								
WORMS	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0
F. Enchytraeidae	43	4	0	0.0	9	3	0	26
F. Lumbriculidae	0	0	0	0	0	0	0	0
indeterminate	139	12	0	0.1	40	12	0	139
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0
ARTHROPODS								
P. Arthropoda								
MITES	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0
O. Acari	1574	131	78	2	167	48	0	565
HARPACTICIDS	0	0	0	0	0	0	0	0
O. Harpacticoida	148	12	0	0.1	40	12	0	139
SEED SHRIMPS	0	0	0	0	0	0	0	0
Cl. Ostracoda	14626	1219	39	15	2720	785	0	9322
SPRINGTAILS	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0
INSECTS								
Cl. Insecta								
BEETLES	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0
<i>Apatania</i>	809	67	0	1	104	30	0	278
F. Limnephilidae	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0
<i>Chironomus</i>	16826	1402	1435	17	1298	375	0	3243
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	61	5	0	0	11	3	0	35
<i>Micropsectra</i>	14052	1171	143	14	2842	821	0	10017
<i>Paracladopelma</i>	9	1	0	0	3	1	0	9
<i>Paratanytarsus</i>	2817	235	0	3	569	164	0	1948
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0
<i>Sergentia</i>	748	62	0	1	161	46	0	557
<i>Stempellinella</i>	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	23339	1945	639	24	3035	876	0	9739
<i>Tanytarsus</i>	7783	649	152	8	1074	310	0	3617
Tanytarsini indeterminate	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake SE Overall (n = 12)						
Site ID								
Habitat Type								
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0
<i>Protanypus</i>	165	14	0	0	21	6	0	52
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	17	1	0	0	5	1	0	17
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	1365	114	17	1	198	57	0	565
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	348	29	0	0	81	23	0	278
<i>Cricotopus/Orthocladius</i>	70	6	0	0	20	6	0	70
<i>Diplocladius</i>	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	4374	364	261	4	411	119	0	1435
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0
<i>Paracladius</i>	9	1	0	0	3	1	0	9
<i>Parakiefferiella</i>	113	9	0	0	23	7	0	78
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	235	20	13	0	29	9	0	104
indeterminate A	35	3	0	0	10	3	0	35
indeterminate B	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	3557	296	0	4	665	192	0	2226
<i>Procladius</i>	5017	418	278	5	398	115	9	1217
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0
<i>Dicranota</i>	139	12	0	0.1	21	6	0	52
<i>Ormosia</i>	0	0	0	0	0	0	0	0
<i>Tipula</i>	9	1	0	0.0	3	1	0	9
Total Benthic Invertebrates	98748	8229	5822	100	8359	2413	435	31165
Taxonomic Richness (Genus-level) ²	29	--	--	--	--	--	4	17

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Tom River (2006)			Tom River (2006) Habitat IO-01 Total (n = 3)							
Site ID	IO-01 (2006)			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Reach	IO-01										
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	2	2	2	6	2	2	2	0	0	2	2
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	4	0	4	1	0	1	2	1	0	4
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	6	0	8	3	2	2	3	2	0	6
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	8	21	49	78	26	21	22	21	12	8	49
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Tom River (2006)			Tom River (2006) Habitat IO-01 Total (n = 3)							
	IO-01 (2006)										
	IO-01			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	6	35	6	47	16	6	14	17	10	6	35
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	4	0	0	4	1	0	1	2	1	0	4
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	4	0	0	4	1	0	1	2	1	0	4
<i>Diplocladius</i>	0	0	6	6	2	0	2	4	2	0	6
? <i>Eukiefferiella</i>	6	12	0	19	6	6	5	6	4	0	12
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	37	0	0	37	12	0	11	21	12	0	37
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	74	23	97	32	23	28	38	22	0	74
<i>Tvetenia</i>	0	0	21	21	7	0	6	12	7	0	21
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	4	0	0	4	1	0	1	2	1	0	4
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	2	0	2	1	0	1	1	1	0	2
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	2	0	2	1	0	1	1	1	0	2
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	2	8	0	10	3	2	3	4	2	0	8
Total Benthic Invertebrates	76	167	107	351	117	107	100	46	27	76	167
Taxonomic Richness (Genus-level) ²	9	9	5	15 ³	--	--	--	--	--	5	9

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Tom River (2007)			Tom River (2007) Habitat IO-01 Total (n = 3)								Tom River (2006 + 2007) Habitat IO-01 Total (n = 6)							
Site ID	IO-01 (2007)																		
Reach	IO-01																		
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS																			
P. Nemata	0	4	0	4	1	0	0	2	1	0	4	10	2	2	0	2	1	0	4
ANNELIDS																			
P. Annelida																			
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	2	12	2	16	5	2	1	6	3	2	12	21	3	2	1	5	2	0	12
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbriculus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnodrilus udekemianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS																			
P. Arthropoda																			
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	2	1	0	6
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INSECTS																			
Cl. Insecta																			
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agabus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acentrella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apatania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?Grensia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	2	4	0	6	2	2	0	2	1	0	4	85	14	6	3	19	8	0	49
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cryptochironomous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lipiniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micropsectra	4	1827	91	1922	641	91	68	1028	594	4	1827	1922	320	2	60	739	302	0	1827
Paracladopelma	0	41	0	41	14	0	1	24	14	0	41	41	7	0	1	17	7	0	41
Paratanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rheotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sergentia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stictochironomus	0	12	0	12	4	0	0	7	4	0	12	12	2	0	0	5	2	0	12
Tanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Tom River (2007)			Tom River (2007) Habitat IO-01 Total (n = 3)								Tom River (2006 + 2007) Habitat IO-01 Total (n = 6)							
Site ID	IO-01 (2007)																		
Reach	IO-01																		
Replicate Station	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	2	0	0	2	1	0	0	1	1	0	2	49	8	4	2	13	5	0	35
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	2	1	0	4
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	2	2	1	0	0	1	1	0	2	2	0	0	0	1	0	0	2
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	6	0	0	6	2	0	0	4	2	0	6	6	1	0	0	3	1	0	6
<i>Cricotopus</i>	23	4	6	33	11	6	1	10	6	4	23	33	5	2	1	9	4	0	23
<i>Cricotopus/Orthocladius</i>	0	239	4	243	81	4	9	137	79	0	239	247	41	2	8	97	40	0	239
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	3	1	0	6
? <i>Eukiefferiella</i>	16	0	0	16	5	0	1	10	5	0	16	35	6	3	1	7	3	0	16
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	8	330	0	338	113	8	12	188	109	0	330	375	63	4	12	132	54	0	330
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	2	4	0	6	2	2	0	2	1	0	4	6	1	0	0	2	1	0	4
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	4	2	6	2	2	0	2	1	0	4	6	1	0	0	2	1	0	4
<i>Orthocladius</i> (<i>Euorthocladius</i>)	64	4	0	68	23	4	2	36	21	0	64	68	11	0	2	26	11	0	64
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	49	12	2	64	21	12	2	25	14	2	49	161	27	18	5	29	12	0	74
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	21	3	0	1	8	3	0	21
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	2	1	0	4
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	16	2	19	6	2	1	9	5	0	16	19	3	0	1	7	3	0	16
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	2
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	16	2	19	6	2	1	9	5	0	16	21	3	1	1	6	3	0	16
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	10	0	0	10	3	0	0	6	3	0	10	21	3	1	1	5	2	0	10
Total Benthic Invertebrates	190	2532	113	2835	945	190	100	1375	794	113	2532	3186	531	140	100	981	401	76	2532
Taxonomic Richness (Genus-level) ²	11	14	9	19	--	--	--	--	--	9	14	25	--	--	--	--	--	5	14

- 1 percent abundance of the overall total.
- 2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Tom River (2006)			Tom River (2006) Habitat IO-04 Total (n = 3)							
Site ID	IO-04 (2006)										
Reach	IO-04			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	0	2	6	8	3	2	1	3	2	0	6
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	2	2	0	4	1	2	1	1	1	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	4	14	14	33	11	14	4	6	3	4	14
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	2	2	1	0	0	1	1	0	2
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	39	39	19	97	32	39	12	12	7	19	39
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	2	0	2	4	1	2	1	1	1	0	2
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Tom River (2006)			Tom River (2006) Habitat IO-04 Total (n = 3)							
Site ID	IO-04 (2006)										
Reach	IO-04			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	225	153	126	503	168	153	63	51	30	126	225
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	2	0	2	1	0	0	1	1	0	2
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	2	2	1	0	0	1	1	0	2
<i>Cricotopus/Orthocladius</i>	0	0	8	8	3	0	1	5	3	0	8
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	4	8	0	12	4	4	2	4	2	0	8
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	8	0	8	3	0	1	5	3	0	8
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	19	33	41	93	31	33	12	11	7	19	41
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	6	6	12	4	6	2	4	2	0	6
Total Benthic Invertebrates	295	272	227	794	265	272	100	35	20	227	295
Taxonomic Richness (Genus-level) ²	6	11	9	15	--	--	--	--	--	6	11

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Tom River (2007)			Tom River (2007) Habitat IO-04 Total (n = 3)							
Site ID	IO-04 (2007)										
Reach	IO-04			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	0	2	0	2	1	0	1	1	1	0	2
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	2	2	1	0	1	1	1	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	0	0	2	1	0	1	1	1	0	2
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	2	0	0	2	1	0	1	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	2	0	2	1	0	1	1	1	0	2
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	2	2	1	0	1	1	1	0	2
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	2	0	2	1	0	1	1	1	0	2

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Tom River (2007)			Tom River (2007) Habitat IO-04 Total (n = 3)							
	IO-04 (2007)										
	IO-04			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	4	4	1	0	2	2	1	0	4
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	2	2	2	6	2	2	4	0	0	2	2
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	2	0	0	2	1	0	1	1	1	0	2
<i>Corynoneura</i>	4	0	0	4	1	0	2	2	1	0	4
<i>Cricotopus</i>	2	8	0	10	3	2	6	4	2	0	8
<i>Cricotopus/Orthocladius</i>	0	2	0	2	1	0	1	1	1	0	2
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	2	0	2	1	0	1	1	1	0	2
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	39	2	25	66	22	25	38	19	11	2	39
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	23	14	14	52	17	14	30	5	3	14	23
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	2	2	6	10	3	2	6	2	1	2	6
Total Benthic Invertebrates	78	39	56	173	58	56	100	20	11	39	78
Taxonomic Richness (Genus-level) ²	8	10	7	16	--	--	--	--	--	7	10

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Tom River (2006 + 2007) Habitat IO-04 Total (n = 6)								Tom River Overall (n = 12)							
Site ID																
Reach																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>																
P. Nemata	10	2	1	1	2	1	0	6	21	2	2	0.5	2	1	0	6
<u>ANNELIDS</u>																
P. Annelida																
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	6	1	1	1	1	0	0	2	27	2	2	1	3	1	0	12
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																
P. Arthropoda																
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	35	6	3	4	7	3	0	14	43	4	1	1	5	2	0	14
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>																
Cl. Insecta																
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	2	0	0	0	1	0	0	2	2	0	0	0.0	1	0	0	2
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	99	16	10	10	19	8	0	39	184	15	6	4	18	5	0	49
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	4	1	0	0	1	0	0	2	1926	160	0	46	525	152	0	1827
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	41	3	0	1	12	3	0	41
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	4	1	0	0	1	0	0	2	4	0	0	0	1	0	0	2
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	2	0	0	0	1	0	0	2	14	1	0	0	4	1	0	12
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	2	0	0	0	1	0	0	2	2	0	0	0	1	0	0	2

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Tom River (2006 + 2007) Habitat IO-04 Total (n = 6)							Tom River Overall (n = 12)								
Site ID																	
Reach																	
Replicate Station		Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Diamesa</i>	507	85	65	52	97	39	0	225	557	46	5	13	77	22	0	225
	<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	8	1	2	1	1	0	0	2	12	1	0	0	1	0	0	4
S.F. Orthoclaadiinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	2
	<i>Chaetocladius</i>	2	0	0	0	1	0	0	2	2	0	0	0	1	0	0	2
	<i>Corynoneura</i>	4	1	0	0	2	1	0	4	10	1	0	0	2	1	0	6
	<i>Cricotopus</i>	12	2	1	1	3	1	0	8	45	4	1	1	7	2	0	23
	<i>Cricotopus/Orthocladius</i>	10	2	0	1	3	1	0	8	258	21	0	6	69	20	0	239
	<i>Diplocladius</i>	0	0	0	0	0	0	0	0	6	1	0	0	2	1	0	6
	? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	35	3	0	1	6	2	0	16
	<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Hydrobaenus</i>	12	2	0	1	3	1	0	8	388	32	0	9	94	27	0	330
	<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	? <i>Limnophyes sp. A</i>	2	0	0	0	1	0	0	2	8	1	0	0	1	0	0	4
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	6	1	0	0	1	0	0	4
	<i>Orthocladius</i> (<i>Euorthocladius</i>)	66	11	1	7	17	7	0	39	134	11	0	3	21	6	0	64
	<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Rheocricotopus</i>	2	0	0	0	1	0	0	2	2	0	0	0	1	0	0	2
	<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	52	9	7	5	10	4	0	23	212	18	13	5	23	7	0	74
	<i>Tvetenia</i>	8	1	0	1	3	1	0	8	29	2	0	1	6	2	0	21
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	4
S.F. Podonominae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	19	2	0	0	5	1	0	16
S.F. Tanypodinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae		93	15	9	10	18	8	0	41	95	8	0	2	15	4	0	41
F. Tipulidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0	21	2	0	0.5	5	1	0	16
	<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Tipula</i>	23	4	4	2	3	1	0	6	43	4	2	1	4	1	0	10
Total Benthic Invertebrates		967	161	153	100	116	47	39	295	4153	346	140	100	694	200	39	2532
Taxonomic Richness (Genus-level) ²		22	--	--	--	--	--	6	11	30	--	--	--	--	--	5	11

- 1 percent abundance of the overall total.
- 2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat AO-01 Total (n = 3)							
Site ID	AO-01 (2007)										
Reach	AO-01			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	0	0	0	0	0	0	0	0	0	0	0
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	2	2	1	0	1	1	1	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	6	14	6	27	9	6	15	5	3	6	14
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES											
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	8	8	0	16	5	8	9	5	3	0	8
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat AO-01 Total (n = 3)							
Site ID	AO-01 (2007)										
Reach	AO-01			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	2	0	0	2	1	0	1	1	1	0	2
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	6	10	37	54	18	10	31	17	10	6	37
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	4	0	4	1	0	2	2	1	0	4
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	8	2	10	21	7	8	12	4	2	2	10
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	2	2	1	0	1	1	1	0	2
<i>Tokunagaia</i>	8	21	6	35	12	8	20	8	5	6	21
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	6	0	2	8	3	2	5	3	2	0	6
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	2	0	0	2	1	0	1	1	1	0	2
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	2	0	2	1	0	1	1	1	0	2
Total Benthic Invertebrates	47	62	66	175	58	62	100	10	6	47	66
Taxonomic Richness (Genus-level) ²	8	7	7	12 ³	--	--	--	--	--	7	8

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-01 Total (n = 3)							
Site ID	CO-01 (2007)										
Reach	CO-01			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	6	0	2	8	3	2	1	3	2	0	6
<u>ANNELEIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	0	0	2	1	0	0	1	1	0	2
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	4	4	1	0	1	2	1	0	4
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	49	0	235	285	95	49	52	124	72	0	235
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-01 Total (n = 3)							
Site ID	CO-01 (2007)										
Reach	CO-01			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	4	45	6	56	19	6	10	23	13	4	45
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	39	16	33	89	30	33	16	12	7	16	39
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	2	0	16	19	6	2	3	9	5	0	16
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	6	6	2	0	1	4	2	0	6
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	8	8	3	0	1	5	3	0	8
<i>Pseudosmittia</i>	33	0	27	60	20	27	11	18	10	0	33
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	2	2	0	4	1	2	1	1	1	0	2
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	2	8	0	10	3	2	2	4	2	0	8
Total Benthic Invertebrates	140	72	338	551	184	140	100	138	80	72	338
Taxonomic Richness (Genus-level) ²	9	4	9	12	--	--	--	--	--	4	9

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-05 Total (n = 3)							
Site ID	CO-05 (2007)										
Reach	CO-05			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	2	0	0	2	1	0	0	1	1	0	2
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	2	2	1	0	0	1	1	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	0	4	6	2	2	1	2	1	0	4
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	2	2	1	0	0	1	1	0	2
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	4	8	291	303	101	8	33	164	95	4	291
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	6	6	2	0	1	4	2	0	6
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-05 Total (n = 3)							
Site ID	CO-05 (2007)										
Reach	CO-05			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	93	14	4	111	37	14	12	48	28	4	93
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	122	56	95	272	91	95	30	33	19	56	122
<i>Cricotopus/Orthocladius</i>	0	2	4	6	2	2	1	2	1	0	4
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	6	2	29	37	12	6	4	14	8	2	29
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	2	0	2	1	0	0	1	1	0	2
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Orthocladius (Euorthocladius)</i>	19	2	0	21	7	2	2	10	6	0	19
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	45	45	15	0	5	26	15	0	45
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	2	2	1	0	0	1	1	0	2
<i>Pseudosmittia</i>	31	8	43	82	27	31	9	18	10	8	43
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	4	4	8	3	4	1	2	1	0	4
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	6	6	2	0	1	4	2	0	6
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	278	99	542	920	307	278	100	223	129	99	542
Taxonomic Richness (Genus-level) ²	8	9	15	18	--	--	--	--	--	8	15

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Mary River			Mary River (2006) Habitat CO-10 Total (n = 3)							
Site ID	CO-10 (2006)										
Reach	CO-10			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	2	6	6	14	5	6	1	2	1	2	6
ANNELEIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	4	2	6	2	2	1	2	1	0	4
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	14	8	4	27	9	8	3	5	3	4	14
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	10	0	10	3	0	1	6	3	0	10
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	2	0	0	2	1	0	0	1	1	0	2
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	14	6	12	33	11	12	3	4	2	6	14
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2006) Habitat CO-10 Total (n = 3)							
Site ID	CO-10 (2006)										
Reach	CO-10			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	8	8	16	5	8	2	5	3	0	8
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	115	49	2	167	56	49	16	57	33	2	115
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	95	74	0	169	56	74	16	50	29	0	95
<i>Cricotopus/Orthocladius</i>	0	0	39	39	13	0	4	23	13	0	39
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	6	6	2	0	1	4	2	0	6
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	72	0	72	24	0	7	42	24	0	72
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	8	2	10	3	2	1	4	2	0	8
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	23	0	23	8	0	2	13	8	0	23
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	363	16	23	402	134	23	38	198	114	16	363
<i>Tvetenia</i>	4	0	6	10	3	4	1	3	2	0	6
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	4	6	0	10	3	4	1	3	2	0	6
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	6	0	4	10	3	4	1	3	2	0	6
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	8	6	0	14	5	6	1	4	2	0	8
Total Benthic Invertebrates	629	301	115	1045	348	301	100	260	150	115	629
Taxonomic Richness (Genus-level) ²	10	14	11	19	--	--	--	--	--	10	14

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-10 Total (n = 3)							
Site ID	CO-10 (2007)										
Reach	CO-10			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	4	0	0	4	1	0	2	2	1	0	4
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	2	0	2	1	0	1	1	1	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	0	4	6	2	2	2	2	1	0	4
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	2	2	4	1	2	2	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2007) Habitat CO-10 Total (n = 3)							
Site ID	CO-10 (2007)										
Reach	CO-10			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	2	14	16	33	11	14	12	8	5	2	16
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	2	0	0	2	1	0	1	1	1	0	2
<i>Corynoneura</i>	0	2	0	2	1	0	1	1	1	0	2
<i>Cricotopus</i>	19	16	25	60	20	19	22	4	2	16	25
<i>Cricotopus/Orthocladius</i>	0	0	2	2	1	0	1	1	1	0	2
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	2	2	0	4	1	2	2	1	1	0	2
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	2	0	0	2	1	0	1	1	1	0	2
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	4	14	6	25	8	6	9	5	3	4	14
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	47	49	16	113	38	47	41	18	11	16	49
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	4	6	4	14	5	4	5	1	1	4	6
Total Benthic Invertebrates	89	109	76	274	91	89	100	17	10	76	109
Taxonomic Richness (Genus-level) ²	10	8	7	13	--	--	--	--	--	7	10

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

[illegible]

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Mary River (2006 + 2007) Habitat CO-10 Total (n = 6)								Mary River			Mary River (2007) Habitat EO-01 Total (n = 3)							
Site ID										EO-01 (2007)										
Reach										EO-01										
Replicate Station		Sum	Mean	Medi an	% ¹	SD	SE	Min	Max	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>		16	3	0	1	4	2	0	8	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>		0	0	0	0	0	0	0	0	4	0	0	4	1	0	0	2	1	0	4
<i>Pseudokiefferiella</i>		200	33	15	15	44	18	2	115	8	8	0	16	5	8	1	5	3	0	8
S.F. Orthocladiinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>		0	0	0	0	0	0	0	0	25	0	0	25	8	0	1	14	8	0	25
? <i>Acricotopus</i>		0	0	0	0	0	0	0	0	12	33	0	45	15	12	2	17	10	0	33
<i>Chaetocladius</i>		2	0	0	0	1	0	0	2	8	0	0	8	3	0	0	5	3	0	8
<i>Corynoneura</i>		2	0	0	0	1	0	0	2	16	8	0	25	8	8	1	8	5	0	16
<i>Cricotopus</i>		229	38	22	17	37	15	0	95	25	8	6	39	13	8	2	10	6	6	25
<i>Cricotopus/Orthocladius</i>		41	7	0	3	16	6	0	39	16	16	0	33	11	16	1	10	5	0	16
<i>Diplocladius</i>		0	0	0	0	0	0	0	0	0	33	0	33	11	0	1	19	11	0	33
? <i>Eukiefferiella</i>		6	1	0	0	3	1	0	6	0	0	4	4	1	0	0	2	1	0	4
<i>Heterotrissocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>		76	13	1	6	29	12	0	72	107	165	2	274	91	107	11	83	48	2	165
<i>Hydrobaenus sp. 0</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>		2	0	0	0	1	0	0	2	8	0	0	8	3	0	0	5	3	0	8
? <i>Limnophyes sp. A</i>		0	0	0	0	0	0	0	0	4	8	0	12	4	4	1	4	2	0	8
<i>Mesocricotopus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>		0	0	0	0	0	0	0	0	12	66	0	78	26	12	3	35	20	0	66
<i>Orthocladius</i> (<i>Euorthocladius</i>)		25	4	2	2	6	2	0	14	4	0	27	31	10	4	1	14	8	0	27
<i>Paracladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>		0	0	0	0	0	0	0	0	0	91	0	91	30	0	4	52	30	0	91
<i>Paralimnophyes</i>		10	2	0	1	3	1	0	8	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>		23	4	0	2	9	4	0	23	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>		0	0	0	0	0	0	0	0	4	0	0	4	1	0	0	2	1	0	4
<i>Tokunagaia</i>		515	86	35	39	136	56	16	363	45	33	14	93	31	33	4	16	9	14	45
<i>Tvetenia</i>		10	2	0	1	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate		10	2	0	1	3	1	0	6	25	25	4	54	18	25	2	12	7	4	25
S.F. Podonominae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>		0	0	0	0	0	0	0	0	4	8	0	12	4	4	1	4	2	0	8
S.F. Tanypodinae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>		2	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex		0	0	0	0	0	0	0	0	0	8	0	8	3	0	0	5	3	0	8
indeterminate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae		10	2	0	1	3	1	0	6	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>		29	5	5	2	3	1	0	8	8	8	6	23	8	8	1	1	1	6	8
Total Benthic Invertebrates		1320	220	112	100	217	88	76	629	1019	1311	70	2400	800	1019	100	649	375	70	1311
Taxonomic Richness (Genus-level) ²		23	--	--	--	--	--	10	14	25	22	8	31	--	--	--	--	--	8	25

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2006) Habitat GO Total (n = 3)							
Site ID	GO-09 (2006)			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Reach	GO										
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	0	2	4	6	2	2	1	2	1	0	4
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	0	0	0	0	0	0
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	4	0	4	1	0	0	2	1	0	4
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	173	80	91	344	115	91	28	51	29	80	173
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River (2006) Habitat GO Total (n = 3)							
Site ID	GO-09 (2006)										
Reach	GO			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	311	167	241	720	240	241	59	72	42	167	311
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	2	2	0	4	1	2	0	1	1	0	2
<i>Pseudokiefferiella</i>	10	2	4	16	5	4	1	4	2	2	10
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	2	0	2	1	0	0	1	1	0	2
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	4	2	0	6	2	2	1	2	1	0	4
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	27	2	41	70	23	27	6	20	11	2	41
<i>Tvetenia</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	25	0	0	25	8	0	2	14	8	0	25
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	4	0	0	4	1	0	0	2	1	0	4
Total Benthic Invertebrates	563	268	381	1212	404	381	100	149	86	268	563
Taxonomic Richness (Genus-level) ²	10	9	4	14	--	--	--	--	--	4	10

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River			Mary River			Mary River (2007) Habitat GO Total (n = 6)							
Site ID	GO-03 (2007)			GO-09 (2007)										
Reach	GO			GO										
Replicate Station	B1	B2	B3	B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
ROUNDWORMS														
P. Nemata	0	0	0	4	4	2	10	2	1	0	2	1	0	4
ANNELIDS														
P. Annelida														
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	0	0	0	2	2	0	0	0	1	0	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS														
P. Arthropoda														
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	2	0	4	6	0	12	2	1	0	3	1	0	6
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INSECTS														
Cl. Insecta														
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	8	2	8	19	3	1	1	4	2	0	8
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	2	0	2	0	0	0	1	0	0	2
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued –

Waterbody	Mary River			Mary River			Mary River (2007) Habitat GO Total (n = 6)							
Site ID	GO-03 (2007)			GO-09 (2007)			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Reach	GO			GO										
Replicate Station	B1	B2	B3	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	2	0	0	14	2	6	25	4	2	1	6	2	0	14
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	4	6	10	342	287	68	718	120	39	27	154	63	4	342
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	2	0	8	2	6	19	3	2	1	3	1	0	8
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	2	6	2	29	31	0	70	12	4	3	14	6	0	31
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	2	2	0	0	0	1	0	0	2
<i>Diplocladius</i>	0	0	0	2	4	2	8	1	1	0	2	1	0	4
? <i>Eukiefferiella</i>	2	0	0	0	0	14	16	3	0	1	6	2	0	14
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	4	6	2	12	2	1	0	3	1	0	6
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	2	0	2	0	0	0	1	0	0	2
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	68	23	56	144	39	301	631	105	62	24	105	43	23	301
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	2	2	0	0	0	1	0	0	2
<i>Rheocricotopus</i>	0	0	0	0	0	2	2	0	0	0	1	0	0	2
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	64	58	85	241	369	202	1019	170	143	39	124	51	58	369
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	4	0	0	4	4	12	2	2	0	2	1	0	4
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	2	0	0	0	0	2	0	0	0	1	0	0	2
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	2	0	0	2	0	0	0	1	0	0	2
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	2	0	0	2	0	0	0	1	0	0	2
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	4	0	6	4	4	23	41	7	4	2	8	3	0	23
Total Benthic Invertebrates	146	103	159	810	765	647	2631	438	403	100	336	137	103	810
Taxonomic Richness (Genus-level) ²	7	8	5	13	14	15	22	--	--	--	--	--	5	15

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River (2006 + 2007) Habitat GO Total (n = 9)								Mary River Overall (n = 27)							
Site ID																
Reach																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>																
P. Nemata	16	2	2	0	2	1	0	4	148	5	2	2	16	3	0	82
<u>ANNELIDS</u>																
P. Annelida																
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	2	0	0	0	1	0	0	2	52	2	0	1	5	1	0	21
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbriculus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Limnodrilus udekemianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>																
P. Arthropoda																
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	16	2	0	0	2	1	0	6	89	3	2	1	4	1	0	14
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	8	0	0	0.1	2	0	0	8
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	10	0	0	0	2	0	0	10
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	2	0	0	0.0	0	0	0	2
<u>INSECTS</u>																
Cl. Insecta																
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agabus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydroporus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acentrella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apatania	0	0	0	0	0	0	0	0	64	2	0	1	8	2	0	41
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?Grensia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	363	40	8	9	61	20	0	173	406	15	0	4	39	7	0	173
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cryptochironomous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lipiniella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micropsectra	4	0	0	0	1	0	0	2	1825	68	0	20	171	33	0	627
Paracladopelma	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	4
Paratanytarsus	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	6
Rheotanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sergentia	0	0	0	0	0	0	0	0	25	1	0	0	3	1	0	16
Stempellinella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stictochironomus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	16	1	0	0	2	0	0	8

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Mary River (2006 + 2007) Habitat GO Total (n = 9)								Mary River Overall (n = 27)							
Site ID																
Reach																
Replicate Station	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	744	83	6	19	123	41	0	311	763	28	0	8	79	15	0	311
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	4	0	0	0	1	0	0	2	8	0	0	0	1	0	0	4
<i>Pseudokiefferiella</i>	734	82	10	19	134	45	2	342	1171	43	10	13	84	16	0	342
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	25	1	0	0	5	1	0	25
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	45	2	0	0	7	1	0	33
<i>Chaetocladius</i>	21	2	2	1	3	1	0	8	31	1	0	0	2	0	0	8
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	27	1	0	0	3	1	0	16
<i>Cricotopus</i>	70	8	2	2	13	4	0	31	699	26	16	8	34	7	0	122
<i>Cricotopus/Orthocladius</i>	2	0	0	0	1	0	0	2	87	3	0	1	8	2	0	39
<i>Diplocadius</i>	10	1	0	0	1	0	0	4	43	2	0	0	6	1	0	33
? <i>Eukiefferiella</i>	16	2	0	0	5	2	0	14	27	1	0	0	3	1	0	14
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	19	2	2	0	2	1	0	6	425	16	2	5	38	7	0	165
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	12	0	0	0	2	0	0	8
? <i>Limnophyes sp. A</i>	2	0	0	0	1	0	0	2	14	1	0	0	2	0	0	8
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	82	3	0	1	13	2	0	66
<i>Orthocladius</i> (<i>Euorthocladius</i>)	635	71	39	17	98	33	0	301	732	27	4	8	63	12	0	301
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	142	5	0	2	19	4	0	91
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	10	0	0	0	2	0	0	8
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	10	0	0	0	2	0	0	8
<i>Pseudosmittia</i>	2	0	0	0	1	0	0	2	167	6	0	2	13	2	0	43
<i>Rheocricotopus</i>	2	0	0	0	1	0	0	2	2	0	0	0	0	0	0	2
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	4
<i>Tokunagaia</i>	1089	121	64	28	123	41	2	369	1740	64	23	19	104	20	0	369
<i>Tvetenia</i>	2	0	0	0	1	0	0	2	12	0	0	0	1	0	0	6
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	37	4	0	1	8	3	0	25	107	4	0	1	8	1	0	25
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	2	0	0	0	1	0	0	2	14	1	0	0	2	0	0	8
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
<i>Thienemannimyia</i> complex	2	0	0	0	1	0	0	2	10	0	0	0	2	0	0	8
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	2	0	0	0	1	0	0	2	21	1	0	0.2	2	0	0	6
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	6	0	0	0.1	1	0	0	2
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	45	5	4	1	7	2	0	23	109	4	4	1	5	1	0	23
Total Benthic Invertebrates	3843	427	381	100	276	92	103	810	9208	341	159	100	336	65	47	1311
Taxonomic Richness (Genus-level) ²	24	--	--	--	--	--	5	15	43	--	--	--	--	--	4	25

- 1 percent abundance of the overall total.
- 2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 1 (2008) Total (n = 3)							
Site ID	Trib 1 Reach 1 SDLT1-REACH 1 (2008)										
Reach				Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	0	2	4	6	2	2	1	2	1	0	4
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	6	14	4	25	8	6	3	5	3	4	14
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	29	23	60	111	37	29	12	20	11	23	60
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	2	0	2	4	1	2	0	1	1	0	2
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	2	0	2	1	0	0	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	16	19	6	41	14	16	5	7	4	6	19
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 1 (2008) Total (n = 3)							
Site ID		Trib 1 Reach 1										
Reach		SDLT1-REACH 1 (2008)										
Replicate Station		B1	B2	B3	Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae		0	0	0	0	0	0	0	0	0	0	0
	<i>Diamesa</i>	2	0	0	2	1	0	0	1	1	0	2
	<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	52	45	107	204	68	52	23	34	20	45	107
S.F. Orthocladiinae		0	0	0	0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>?Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Cricotopus</i>	85	56	91	231	77	85	26	19	11	56	91
	<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>?Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	2	0	0	2	1	0	0	1	1	0	2
	<i>?Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	0	2	0	2	1	0	0	1	1	0	2
	<i>Orthocladius (Euorthocladius)</i>	2	0	2	4	1	2	0	1	1	0	2
	<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	2	0	0	2	1	0	0	1	1	0	2
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Pseudosmittia</i>	52	35	21	107	36	35	12	15	9	21	52
	<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	0	4	0	4	1	0	0	2	1	0	4
	<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae		0	0	0	0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae		0	0	0	0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Thienemannimyia</i> complex	10	4	2	16	5	4	2	4	2	2	10
	indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0	0	0	0
	<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
	Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae		0	0	0	0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0	0	0	0
Simuliidae		0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae		0	0	0	0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
	<i>Tipula</i>	56	33	43	132	44	43	15	11	7	33	56
Total Benthic Invertebrates		315	241	342	899	300	315	100	52	30	241	342
Taxonomic Richness (Genus-level) ²		13	12	11	17 ³	--	--	--	--	--	11	13

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 2 (2007) Habitat SH Total (n = 3)							
Site ID	ST1-DS (2007)										
Reach	Trib 1 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	6	21	12	39	13	12	3	7	4	6	21
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	43	29	4	76	25	29	6	20	11	4	43
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	10	4	58	72	24	10	5	29	17	4	58
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	2	0	0	2	1	0	0	1	1	0	2
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	4	4	1	0	0	2	1	0	4
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	6	4	8	19	6	6	1	2	1	4	8
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 2 (2007) Habitat SH Total (n = 3)							
Site ID	ST1-DS (2007)										
Reach	Trib 1 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	12	62	103	177	59	62	13	45	26	12	103
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Cricotopus</i>	52	264	140	456	152	140	34	107	62	52	264
<i>Cricotopus/Orthocladius</i>	2	8	0	10	3	2	1	4	2	0	8
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	2	0	4	6	2	2	0	2	1	0	4
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	2	0	4	6	2	2	0	2	1	0	4
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	4	8	4	16	5	4	1	2	1	4	8
<i>Pseudosmittia</i>	14	78	25	118	39	25	9	34	20	14	78
<i>Rheocricotopus</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Synorthocladius</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	10	0	8	19	6	8	1	5	3	0	10
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	8	0	0	8	3	0	1	5	3	0	8
<i>Thienemannimyia</i> complex	16	16	12	45	15	16	3	2	1	12	16
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	4	0	4	1	0	0	2	1	0	4
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	151	49	33	233	78	49	18	64	37	33	151
Total Benthic Invertebrates	342	561	421	1324	441	421	100	111	64	342	561
Taxonomic Richness (Genus-level) ²	16	15	14	21	--	--	--	--	--	14	16

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 2a (2008) Total (n = 3)							
Site ID	Trib 1 Reach 2 SDLT1-REACH 2 (2008)										
Reach				Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	8	25	8	41	14	8	2	10	5	8	25
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	66	8	74	25	8	4	36	21	0	66
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
Lumbriculus	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
Limnodrilus udekemianus	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	39	33	19	91	30	33	5	11	6	19	39
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
Agabus	0	0	0	0	0	0	0	0	0	0	0
Hydroporus	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
Acentrella	2	0	0	2	1	0	0	1	1	0	2
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
Apatania	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
?Grensia	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	2	2	1	0	0	1	1	0	2
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
Atrichopogon	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	2	0	0	2	1	0	0	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
Chironomus	0	0	0	0	0	0	0	0	0	0	0
Cryptochironomous	0	0	0	0	0	0	0	0	0	0	0
Lipiniella	0	0	0	0	0	0	0	0	0	0	0
Micropsectra	0	0	0	0	0	0	0	0	0	0	0
Paracladopelma	0	0	0	0	0	0	0	0	0	0	0
Paratanytarsus	2	8	6	16	5	6	1	3	2	2	8
Rheotanytarsus	4	0	0	4	1	0	0	2	1	0	4
Sergentia	0	0	0	0	0	0	0	0	0	0	0
Stempellinella	0	0	0	0	0	0	0	0	0	0	0
Stictochironomus	0	0	0	0	0	0	0	0	0	0	0
Tanytarsus	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 2a (2008) Total (n = 3)							
Site ID	Trib 1 Reach 2 SDLT1-REACH 2 (2008)										
Reach				Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	74	85	45	204	68	74	10	20	12	45	85
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	157	551	148	856	285	157	44	230	133	148	551
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	8	0	8	3	0	0	5	3	0	8
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	2	33	4	39	13	4	2	17	10	2	33
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	8	0	8	3	0	0	5	3	0	8
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	2	2	1	0	0	1	1	0	2
<i>Pseudosmittia</i>	41	233	23	297	99	41	15	116	67	23	233
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	12	25	8	45	15	12	2	9	5	8	25
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	2	0	0	2	1	0	0	1	1	0	2
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	23	25	16	64	21	23	3	4	2	16	25
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	60	82	43	186	62	60	10	20	11	43	82
Total Benthic Invertebrates	431	1181	334	1946	649	431	100	464	268	334	1181
Taxonomic Richness (Genus-level) ²	14	13	12	18	--	--	--	--	--	13	14

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Trib 1 Reach 2 (2007 + 2008) Total (n = 6)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
<u>ROUNDWORMS</u>									
P. Nemata		80	13	10	2	8	3	6	25
<u>ANNELIDS</u>									
P. Annelida									
WORMS		0	0	0	0	0	0	0	0
Cl. Oligochaeta		0	0	0	0	0	0	0	0
F. Enchytraeidae		151	25	19	5	26	11	0	66
F. Lumbriculidae		0	0	0	0	0	0	0	0
indeterminate		0	0	0	0	0	0	0	0
<i>Lumbriculus</i>		0	0	0	0	0	0	0	0
F. Tubificide		0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>		0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES		0	0	0	0	0	0	0	0
Cl. Arachnida		0	0	0	0	0	0	0	0
O. Acari		163	27	26	5	20	8	4	58
HARPACTICIDS		0	0	0	0	0	0	0	0
O. Harpacticoida		0	0	0	0	0	0	0	0
SEED SHRIMPS		0	0	0	0	0	0	0	0
Cl. Ostracoda		2	0	0	0	1	0	0	2
SPRINGTAILS		0	0	0	0	0	0	0	0
Cl. Entognatha		0	0	0	0	0	0	0	0
O. Collembola		0	0	0	0	0	0	0	0
<u>INSECTS</u>									
Cl. Insecta									
BEETLES		0	0	0	0	0	0	0	0
O. Coleoptera		0	0	0	0	0	0	0	0
F. Dytiscidae		0	0	0	0	0	0	0	0
<i>Agabus</i>		0	0	0	0	0	0	0	0
<i>Hydroporus</i>		0	0	0	0	0	0	0	0
MAYFLIES		0	0	0	0	0	0	0	0
O. Ephemeroptera		0	0	0	0	0	0	0	0
F. Baetidae		0	0	0	0	0	0	0	0
<i>Acentrella</i>		2	0	0	0	1	0	0	2
STONEFLIES		0	0	0	0	0	0	0	0
O. Plecoptera		0	0	0	0	0	0	0	0
F. Capniidae		0	0	0	0	0	0	0	0
immature		0	0	0	0	0	0	0	0
CADDISFLIES		0	0	0	0	0	0	0	0
O. Trichoptera		0	0	0	0	0	0	0	0
F. Apataniidae		0	0	0	0	0	0	0	0
<i>Apatania</i>		0	0	0	0	0	0	0	0
F. Limnephilidae		0	0	0	0	0	0	0	0
<i>?Grensia</i>		4	1	0	0	2	1	0	4
TRUE FLIES		0	0	0	0	0	0	0	0
O. Diptera		0	0	0	0	0	0	0	0
pupae		2	0	0	0	1	0	0	2
BITING-MIDGE		0	0	0	0	0	0	0	0
F. Ceratopogonidae		0	0	0	0	0	0	0	0
<i>Atrichopogon</i>		0	0	0	0	0	0	0	0
MIDGES		0	0	0	0	0	0	0	0
F. Chironomidae		0	0	0	0	0	0	0	0
chironomid pupae		2	0	0	0	1	0	0	2
S.F. Chironominae		0	0	0	0	0	0	0	0
<i>Chironomus</i>		0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>		0	0	0	0	0	0	0	0
<i>Lipiniella</i>		0	0	0	0	0	0	0	0
<i>Micropsectra</i>		0	0	0	0	0	0	0	0
<i>Paracladopelma</i>		0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>		35	6	6	1	2	1	2	8
<i>Rheotanytarsus</i>		4	1	0	0	2	1	0	4
<i>Sergentia</i>		0	0	0	0	0	0	0	0
<i>Stempellinella</i>		0	0	0	0	0	0	0	0
<i>Stictochironomus</i>		0	0	0	0	0	0	0	0
<i>Tanytarsus</i>		0	0	0	0	0	0	0	0
Tanytarsini indeterminate		0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Trib 1 Reach 2 (2007 + 2008) Total (n = 6)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
S.F. Diamesinae		0	0	0	0	0	0	0	0
	<i>Diamesa</i>	0	0	0	0	0	0	0	0
	<i>Protanypus</i>	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	381	64	68	12	32	13	12	103
S.F. Orthocladiinae		0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0
	? <i>Acricotopus</i>	2	0	0	0	1	0	0	2
	<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
	<i>Corynoneura</i>	4	1	0	0	2	1	0	4
	<i>Cricotopus</i>	1311	219	153	40	176	72	52	551
	<i>Cricotopus/Orthocladius</i>	10	2	0	0	3	1	0	8
	<i>Diplocladius</i>	0	0	0	0	0	0	0	0
	? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0
	<i>Heterotrissocladius</i>	6	1	0	0	2	1	0	4
	<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0
	<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	8	1	0	0	3	1	0	8
	? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	0	0	0	0	0	0	0	0
	<i>Orthocladius (Euorthocladius)</i>	45	8	3	1	13	5	0	33
	<i>Paracladius</i>	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	8	1	0	0	3	1	0	8
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	19	3	3	1	3	1	0	8
	<i>Pseudosmittia</i>	414	69	33	13	83	34	14	233
	<i>Rheocricotopus</i>	4	1	0	0	2	1	0	4
	<i>Synorthocladius</i>	4	1	0	0	2	1	0	4
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	64	11	9	2	8	3	0	25
	<i>Tvetenia</i>	0	0	0	0	0	0	0	0
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0
S.F. Podonominae		0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	2	0	0	0	1	0	0	2
S.F. Tanypodinae		0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
	<i>Procladius</i>	8	1	0	0	3	1	0	8
	<i>Thienemannimyia</i> complex	109	18	16	3	5	2	12	25
	indeterminate	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0
	<i>Clinocera</i>	4	1	0	0	2	1	0	4
	Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydridae		0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0
Simuliidae		0	0	0	0	0	0	0	0
F. Tipulidae		0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0
	<i>Tipula</i>	419	70	55	13	43	18	33	151
Total Benthic Invertebrates		3270	545	426	100	322	132	334	1181
Taxonomic Richness (Genus-level) ²		27	--	--	--	--	--	12	16

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary			Sheardown Lake Trib 1 Reach 4 (2007) Habitat SH Total (n = 3)							
Site ID	ST1-US (2007)										
Reach	Trib 1 Reach 4			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
<u>ROUNDWORMS</u>											
P. Nemata	25	198	107	330	110	107	2	87	50	25	198
<u>ANNELIDS</u>											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	33	231	49	313	104	49	2	110	63	33	231
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	16	16	5	0	0	10	5	0	16
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	8	0	16	25	8	8	0	8	5	0	16
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	8	0	16	25	8	8	0	8	5	0	16
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	8	0	0	8	3	0	0	5	3	0	8
<u>INSECTS</u>											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	8	0	8	16	5	8	0	5	3	0	8
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary			Sheardown Lake Trib 1 Reach 4 (2007) Habitat SH Total (n = 3)							
Site ID	ST1-US (2007)										
Reach	Trib 1 Reach 4			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	825	7027	594	8445	2815	825	62	3649	2107	594	7027
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	132	0	132	44	0	1	76	44	0	132
<i>Cricotopus</i>	198	264	297	759	253	264	6	50	29	198	297
<i>Cricotopus/Orthocladius</i>	157	165	16	338	113	157	2	83	48	16	165
<i>Diplocladius</i>	8	0	33	41	14	8	0	17	10	0	33
? <i>Eukiefferiella</i>	165	0	33	198	66	33	1	87	50	0	165
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	33	264	297	99	33	2	144	83	0	264
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	8	99	25	132	44	25	1	48	28	8	99
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	280	1089	157	1526	509	280	11	506	292	157	1089
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	66	8	74	25	8	1	36	21	0	66
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	165	132	231	528	176	165	4	50	29	132	231
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	66	8	74	25	8	1	36	21	0	66
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	8	66	132	206	69	66	2	62	36	8	132
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	8	8	3	0	0	5	3	0	8
Simuliidae	8	0	0	8	3	0	0	5	3	0	8
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	43	2	31	76	25	31	1	21	12	2	43
Total Benthic Invertebrates	1957	9569	2052	13577	4526	2052	100	4368	2522	1957	9569
Taxonomic Richness (Genus-level) ²	16	14	19	22		--	--	--	--	14	19

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 4 (2008) Total (n = 3)							
Site ID	SDLT1-REACH 4 (2008)										
Reach				Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	21	33	82	136	45	33	1	33	19	21	82
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	37	25	82	144	48	37	2	30	18	25	82
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	4	0	8	12	4	4	0	4	2	0	8
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	8	0	8	16	5	8	0	5	3	0	8
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	33	33	11	0	0	19	11	0	33
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	8	8	3	0	0	5	3	0	8
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	8	8	3	0	0	5	3	0	8
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	4	0	0	4	1	0	0	2	1	0	4
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	8	0	0	8	3	0	0	5	3	0	8
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary 1			Sheardown Lake Trib 1 Reach 4 (2008) Total (n = 3)							
Site ID	SDLT1-REACH 4 (2008)			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Reach	B1	B2	B3								
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	16	0	0	16	5	0	0	10	5	0	16
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	748	2173	74	2996	999	748	33	1072	619	74	2173
S.F. Orthoclaadiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	505	184	478	1167	389	478	13	178	103	184	505
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	27	0	115	142	47	27	2	60	35	0	115
? <i>Eukiefferiella</i>	52	0	0	52	17	0	1	30	17	0	52
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	16	0	685	701	234	16	8	391	225	0	685
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	43	14	66	124	41	43	1	26	15	14	66
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	8	0	25	33	11	8	0	13	7	0	25
<i>Orthocladius (Euorthocladius)</i>	348	536	58	942	314	348	10	241	139	58	536
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	35	0	0	35	12	0	0	20	12	0	35
<i>Pseudosmittia</i>	8	0	289	297	99	8	3	164	95	0	289
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	157	336	115	608	203	157	7	117	68	115	336
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	14	0	14	5	0	0	8	5	0	14
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	140	229	1047	1416	472	229	16	500	289	140	1047
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	4	0	0	4	1	0	0	2	1	0	4
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	8	0	8	3	0	0	5	3	0	8
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	78	82	49	210	70	78	2	18	10	49	82
Total Benthic Invertebrates	2270	3635	3233	9138	3046	3233	100	701	405	2270	3635
Taxonomic Richness (Genus-level) ²	20	11	17	24	--	--	--	--	--	11	20

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody								
Sheardown Lake Trib 1 Reach 4 (2007 + 2008) Habitat SH Total (n = 6)								
Site ID								
Reach	Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station								
<u>ROUNDWORMS</u>								
P. Nemata	466	78	58	2	68	28	21	198
<u>ANNELIDS</u>								
P. Annelida								
WORMS	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0
F. Enchytraeidae	458	76	43	2	78	32	25	231
F. Lumbriculidae	0	0	0	0	0	0	0	0
indeterminate	16	3	0	0	7	3	0	16
<i>Lumbriculus</i>	12	2	0	0	3	1	0	8
F. Tubificide	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>								
P. Arthropoda								
MITES	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0
O. Acari	41	7	8	0	6	3	0	16
HARPACTICIDS	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0
Cl. Ostracoda	58	10	4	0	13	5	0	33
SPRINGTAILS	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0
O. Collembola	8	1	0	0	3	1	0	8
<u>INSECTS</u>								
Cl. Insecta								
BEETLES	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0
pupae	8	1	0	0	3	1	0	8
BITING-MIDGE	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	8	1	0	0	3	1	0	8
MIDGES	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0
chironomid pupae	21	3	2	0	4	2	0	8
S.F. Chironominae	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	8	1	0	0	3	1	0	8
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Trib 1 Reach 4 (2007 + 2008) Habitat SH Total (n = 6)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
S.F. Diamesinae		0	0	0	0	0	0	0	0
	<i>Diamesa</i>	16	3	0	0	7	3	0	16
	<i>Protanypus</i>	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	11441	1907	787	50	2603	1063	74	7027
S.F. Orthoclaadiinae		0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0
	? <i>Acricotopus</i>	0	0	0	0	0	0	0	0
	<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
	<i>Corynoneura</i>	132	22	0	1	54	22	0	132
	<i>Cricotopus</i>	1926	321	280	8	139	57	184	505
	<i>Cricotopus/Orthocladius</i>	338	56	8	1	81	33	0	165
	<i>Diplocladius</i>	184	31	18	1	44	18	0	115
	? <i>Eukiefferiella</i>	249	42	16	1	64	26	0	165
	<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0
	<i>Hydrobaenus</i>	998	166	25	4	273	112	0	685
	<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	256	43	34	1	35	14	8	99
	? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	33	5	0	0	10	4	0	25
	<i>Orthocladius (Euorthocladius)</i>	2468	411	314	11	370	151	58	1089
	<i>Paracladius</i>	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	74	12	0	0	26	11	0	66
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	35	6	0	0	14	6	0	35
	<i>Pseudosmittia</i>	297	49	0	1	117	48	0	289
	<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Synorthocladius</i>	0	0	0	0	0	0	0	0
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	1136	189	161	5	82	34	115	336
	<i>Tvetenia</i>	0	0	0	0	0	0	0	0
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0
	indeterminate	89	15	4	0	26	11	0	66
S.F. Podonominae		0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	1623	270	136	7	388	158	8	1047
S.F. Tanypodinae		0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
	<i>Procladius</i>	0	0	0	0	0	0	0	0
	<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0
	<i>Clinocera</i>	0	0	0	0	0	0	0	0
	Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydridae		4	1	0	0	2	1	0	4
Muscidae		8	1	0	0	3	1	0	8
Simuliidae		16	3	0	0	4	2	0	8
F. Tipulidae		0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0
	<i>Tipula</i>	287	48	46	1	30	12	2	82
Total Benthic Invertebrates		22715	3786	2752	100	2913	1189	1957	9569
Taxonomic Richness (Genus-level) ²		30	--	--	--	--	--	11	20

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary (2007)			Sheardown Lake Trib 9 Reach 1 (2007) Habitat SH Total (n = 3)							
Site ID	ST9-US (2007)										
Reach	Trib 9 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	54	33	54	140	47	54	7	12	7	33	54
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	78	16	35	130	43	35	6	32	18	16	78
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	8	33	29	70	23	29	3	13	8	8	33
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	12	12	4	0	1	7	4	0	12
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	2	2	1	0	0	1	1	0	2
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	2	2	1	0	0	1	1	0	2
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	4	4	8	3	4	0	2	1	0	4
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	2	2	1	0	0	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	4	8	10	23	8	8	1	3	2	4	10
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Sheardown Lake Tributary (2007)			Sheardown Lake Trib 9 Reach 1 (2007) Habitat SH Total (n = 3)							
	ST9-US (2007)										
	Trib 9 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	4	0	0	4	1	0	0	2	1	0	4
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	4	12	12	29	10	12	1	5	3	4	12
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	16	25	43	85	28	25	4	14	8	16	43
<i>Corynoneura</i>	8	4	0	12	4	4	1	4	2	0	8
<i>Cricotopus</i>	181	128	89	398	133	128	19	47	27	89	181
<i>Cricotopus/Orthocladius</i>	33	8	31	72	24	31	3	14	8	8	33
<i>Diplocladius</i>	16	4	10	31	10	10	1	6	4	4	16
? <i>Eukiefferiella</i>	16	0	0	16	5	0	1	10	5	0	16
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	58	66	89	212	71	66	10	16	9	58	89
<i>Krenosmittia</i>	0	4	6	10	3	4	0	3	2	0	6
<i>Limnophyes</i>	8	0	4	12	4	4	1	4	2	0	8
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	4	0	2	6	2	2	0	2	1	0	4
<i>Orthocladius (Euorthocladius)</i>	37	45	62	144	48	45	7	13	7	37	62
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	21	12	16	49	16	16	2	4	2	12	21
<i>Rheocricotopus</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	144	247	95	487	162	144	23	78	45	95	247
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	33	8	0	41	14	8	2	17	10	0	33
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	4	8	10	23	8	8	1	3	2	4	10
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	2	2	1	0	0	1	1	0	2
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	4	4	2	10	3	4	0	1	1	2	4
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	2	2	1	0	0	1	1	0	2
Simuliidae	0	0	6	6	2	0	0	4	2	0	6
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	23	29	45	97	32	29	5	12	7	23	45
Total Benthic Invertebrates	761	705	678	2144	715	705	100	42	24	678	761
Taxonomic Richness (Genus-level) ²	22	21	26	31	--	--	--	--	--	21	26

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary			Sheardown Lake Trib 12 Reach 1 (2007) Habitat SH Total (n = 3)							
Site ID	ST12-WQ (DS) (2007)										
Reach	Trib 12 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	6	0	21	27	9	6	1	11	6	0	21
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	2	0	16	19	6	2	1	9	5	0	16
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	4	2	0	6	2	2	0	2	1	0	4
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	2	0	8	10	3	2	0	4	2	0	8
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	2	0	0	2	1	0	0	1	1	0	2
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	2	0	0	2	1	0	0	1	1	0	2
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Sheardown Lake Tributary			Sheardown Lake Trib 12 Reach 1 (2007) Habitat SH Total (n = 3)							
	ST12-WQ (DS) (2007)										
	Trib 12 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	4	0	25	29	10	4	1	13	8	0	25
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>?Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	14	0	49	64	21	14	2	25	15	0	49
<i>Corynoneura</i>	4	0	45	49	16	4	2	25	14	0	45
<i>Cricotopus</i>	39	0	161	200	67	39	8	84	48	0	161
<i>Cricotopus/Orthocladius</i>	16	0	161	177	59	16	7	88	51	0	161
<i>Diplocladius</i>	115	0	425	540	180	115	21	220	127	0	425
<i>?Eukiefferiella</i>	8	0	99	107	36	8	4	55	32	0	99
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	2	0	4	6	2	2	0	2	1	0	4
<i>Hydrobaenus sp. 0</i>	89	0	91	179	60	89	7	52	30	0	91
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	2	0	8	10	3	2	0	4	2	0	8
<i>?Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	8	8	3	0	0	5	3	0	8
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	19	0	132	151	50	19	6	71	41	0	132
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	78	0	602	680	227	78	26	327	189	0	602
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	12	0	95	107	36	12	4	52	30	0	95
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	93	0	78	171	57	78	7	50	29	0	93
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	4	0	0	4	1	0	0	2	1	0	4
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	8	8	3	0	0	5	3	0	8
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	2	0	4	6	2	2	0	2	1	0	4
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	2	0	23	25	8	2	1	13	7	0	23
Total Benthic Invertebrates	526	2	2064	2592	864	526	100	1072	619	2	2064
Taxonomic Richness (Genus-level) ²	23	1	21	25	--	--	--	--	--	1	23

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary			Sheardown Lake Trib 12 Reach 2 (2007) Habitat SH Total (n = 3)							
Site ID	ST12-US (2007)										
Reach	Trib 12 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	0	25	25	49	16	25	2	14	8	0	25
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	0	0	8	8	3	0	0	5	3	0	8
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	8	8	16	5	8	1	5	3	0	8
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	16	25	74	115	38	25	5	31	18	16	74
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	25	41	8	74	25	25	3	16	10	8	41
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	25	25	8	0	1	14	8	0	25
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	16	33	33	82	27	33	3	10	5	16	33
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	8	0	8	3	0	0	5	3	0	8

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Sheardown Lake Tributary			Sheardown Lake Trib 12 Reach 2 (2007) Habitat SH Total (n = 3)							
Site ID	ST12-US (2007)										
Reach	Trib 12 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>?Acricotopus</i>	21	58	8	87	29	21	3	26	15	8	58
<i>Chaetocladius</i>	4	0	0	4	1	0	0	2	1	0	4
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	99	338	190	627	209	190	25	121	70	99	338
<i>Cricotopus/Orthocladius</i>	8	16	41	66	22	16	3	17	10	8	41
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>?Eukiefferiella</i>	12	49	74	136	45	49	5	31	18	12	74
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	8	16	25	49	16	16	2	8	5	8	25
<i>?Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	16	25	16	58	19	16	2	5	3	16	25
<i>Orthocladius (Euorthocladius)</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	33	41	16	91	30	33	4	13	7	16	41
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	4	0	0	4	1	0	0	2	1	0	4
<i>Pseudosmittia</i>	4	25	8	37	12	8	1	11	6	4	25
<i>Rheocricotopus</i>	16	264	223	503	168	223	20	133	77	16	264
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	41	49	91	30	41	4	27	15	0	49
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	25	0	25	8	0	1	14	8	0	25
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	37	16	8	62	21	16	2	15	9	8	37
<i>Thienemannimyia</i> complex	33	25	16	74	25	25	3	8	5	16	33
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	33	173	206	69	33	8	92	53	0	173
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	0	0	0	0	0	0	0	0	0	0	0
Total Benthic Invertebrates	355	1113	1031	2499	833	1031	100	416	240	355	1113
Taxonomic Richness (Genus-level) ²	16	20	20	24	--	--	--	--	--	16	20

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Tributaries Overall (n = 24)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
<u>ROUNDWORMS</u>									
P. Nemata		769	32	21	2	44	9	0	198
<u>ANNELIDS</u>									
P. Annelida									
WORMS		0	0	0	0	0	0	0	0
Cl. Oligochaeta		0	0	0	0	0	0	0	0
F. Enchytraeidae		790	33	16	2	49	10	0	231
F. Lumbriculidae		0	0	0	0	0	0	0	0
indeterminate		33	1	0	0.1	4	1	0	16
<i>Lumbriculus</i>		12	1	0	0.0	2	0	0	8
F. Tubificide		0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>		0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES		0	0	0	0	0	0	0	0
Cl. Arachnida		0	0	0	0	0	0	0	0
O. Acari		507	21	16	1	20	4	0	74
HARPACTICIDS		0	0	0	0	0	0	0	0
O. Harpacticoida		0	0	0	0	0	0	0	0
SEED SHRIMPS		0	0	0	0	0	0	0	0
Cl. Ostracoda		157	7	0	0.5	11	2	0	41
SPRINGTAILS		0	0	0	0	0	0	0	0
Cl. Entognatha		0	0	0	0	0	0	0	0
O. Collembola		10	0	0	0.0	2	0	0	8
<u>INSECTS</u>									
Cl. Insecta									
BEETLES		0	0	0	0	0	0	0	0
O. Coleoptera		0	0	0	0	0	0	0	0
F. Dytiscidae		0	0	0	0	0	0	0	0
<i>Agabus</i>		0	0	0	0	0	0	0	0
<i>Hydroporus</i>		2	0	0	0.0	0	0	0	2
MAYFLIES		0	0	0	0	0	0	0	0
O. Ephemeroptera		0	0	0	0	0	0	0	0
F. Baetidae		0	0	0	0	0	0	0	0
<i>Acentrella</i>		4	0	0	0.0	1	0	0	2
STONEFLIES		0	0	0	0	0	0	0	0
O. Plecoptera		0	0	0	0	0	0	0	0
F. Capniidae		0	0	0	0	0	0	0	0
immature		4	0	0	0.0	1	0	0	2
CADDISFLIES		0	0	0	0	0	0	0	0
O. Trichoptera		0	0	0	0	0	0	0	0
F. Apataniidae		0	0	0	0	0	0	0	0
<i>Apatania</i>		0	0	0	0	0	0	0	0
F. Limnephilidae		0	0	0	0	0	0	0	0
<i>?Grensia</i>		12	1	0	0.0	1	0	0	4
TRUE FLIES		0	0	0	0	0	0	0	0
O. Diptera		0	0	0	0	0	0	0	0
pupae		10	0	0	0	2	0	0	8
BITING-MIDGE		0	0	0	0	0	0	0	0
F. Ceratopogonidae		0	0	0	0	0	0	0	0
<i>Atrichopogon</i>		8	0	0	0.0	2	0	0	8
MIDGES		0	0	0	0	0	0	0	0
F. Chironomidae		0	0	0	0	0	0	0	0
chironomid pupae		29	1	0	0	2	0	0	8
S.F. Chironominae		0	0	0	0	0	0	0	0
<i>Chironomus</i>		0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>		0	0	0	0	0	0	0	0
<i>Lipiniella</i>		0	0	0	0	0	0	0	0
<i>Micropsectra</i>		58	2	0	0	6	1	0	25
<i>Paracladopelma</i>		0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>		118	5	0	0	10	2	0	33
<i>Rheotanytarsus</i>		45	2	0	0	5	1	0	19
<i>Sergentia</i>		0	0	0	0	0	0	0	0
<i>Stempellinella</i>		0	0	0	0	0	0	0	0
<i>Stictochironomus</i>		0	0	0	0	0	0	0	0
<i>Tanytarsus</i>		0	0	0	0	0	0	0	0
Tanytarsini indeterminate		8	0	0	0	2	0	0	8

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Sheardown Lake Tributaries Overall (n = 24)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
S.F. Diamesinae		0	0	0	0	0	0	0	0
	<i>Diamesa</i>	25	1	0	0	3	1	0	16
	<i>Protanypus</i>	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	12085	504	48	35	1469	300	0	7027
S.F. Orthocladiinae		0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0
	? <i>Acricotopus</i>	89	4	0	0	12	3	0	58
	<i>Chaetocladius</i>	153	6	0	0	14	3	0	49
	<i>Corynoneura</i>	198	8	0	1	28	6	0	132
	<i>Cricotopus</i>	4693	196	159	14	148	30	0	551
	<i>Cricotopus/Orthocladius</i>	664	28	5	2	53	11	0	165
	<i>Diplocladius</i>	755	31	0	2	90	18	0	425
	? <i>Eukiefferiella</i>	509	21	0	1	41	8	0	165
	<i>Heterotrissocladius</i>	6	0	0	0	1	0	0	4
	<i>Hydrobaenus</i>	1004	42	0	3	147	30	0	685
	<i>Hydrobaenus</i> sp. 0	392	16	0	1	33	7	0	91
	<i>Krenosmittia</i>	10	0	0	0	1	0	0	6
	<i>Limnophyes</i>	338	14	6	1	24	5	0	99
	? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	107	4	0	0	8	2	0	25
	<i>Orthocladius</i> (<i>Euorthocladius</i>)	2662	111	3	8	248	51	0	1089
	<i>Paracladius</i>	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	175	7	0	1	17	3	0	66
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	58	2	0	0	7	1	0	35
	<i>Pseudosmittia</i>	1056	44	20	3	73	15	0	289
	<i>Rheocricotopus</i>	511	21	0	1	69	14	0	264
	<i>Synorthocladius</i>	4	0	0	0	1	0	0	4
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	2462	103	45	7	142	29	0	602
	<i>Tvetenia</i>	0	0	0	0	0	0	0	0
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0
	indeterminate	237	10	0	1	23	5	0	95
S.F. Podonominae		0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	1843	77	3	5	215	44	0	1047
S.F. Tanypodinae		0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
	<i>Procladius</i>	70	3	0	0	8	2	0	37
	<i>Thienemannimyia</i> complex	206	9	3	1	10	2	0	33
	indeterminate	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0
	<i>Clinocera</i>	23	1	0	0	2	0	0	8
	Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydriidae		4	0	0	0	1	0	0	4
Muscidae		10	0	0	0.0	2	0	0	8
Simuliidae		235	10	0	1	35	7	0	173
F. Tipulidae		0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0
	<i>Tipula</i>	959	40	38	3	35	7	0	151
Total Benthic Invertebrates		34120	1422	692	100	1989	406	2	9569
Taxonomic Richness (Genus-level) ²		47	--	--	--	--	--	1	26

- 1
- percent abundance of the overall total.
- 2
- numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
- 3
- total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake Tributary			Camp Lake Trib 1 Reach 1 (2007) Habitat CL Total (n = 3)							
Site ID	CLT1-DS (2007)										
Reach	Trib 1 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	33	0	4	37	12	4	2	18	10	0	33
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	21	10	111	142	47	21	6	56	32	10	111
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	16	6	29	52	17	16	2	11	7	6	29
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	4	4	1	0	0	2	1	0	4
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	8	2	0	10	3	2	0	4	2	0	8
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	4	2	4	10	3	4	0	1	1	2	4
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	4	2	0	6	2	2	0	2	1	0	4
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	280	0	33	313	104	33	14	153	88	0	280
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	12	0	12	25	8	12	1	7	4	0	12
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	33	0	0	33	11	0	1	19	11	0	33
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Camp Lake Tributary			Camp Lake Trib 1 Reach 1 (2007) Habitat CL Total (n = 3)							
	CLT1-DS (2007)										
	Trib 1 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	25	14	29	68	23	25	3	7	4	14	29
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Corynoneura</i>	58	0	8	66	22	8	3	31	18	0	58
<i>Cricotopus</i>	144	19	111	274	91	111	12	65	38	19	144
<i>Cricotopus/Orthocladius</i>	49	2	29	80	27	29	4	24	14	2	49
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	21	4	4	29	10	4	1	10	5	4	21
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	396	2	54	452	151	54	20	214	124	2	396
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Limnophyes</i>	8	2	21	31	10	8	1	9	5	2	21
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	21	39	70	130	43	39	6	25	14	21	70
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	25	0	0	25	8	0	1	14	8	0	25
<i>Pseudosmittia</i>	70	4	107	181	60	70	8	52	30	4	107
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Thienemanniella</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Tokunagaia</i>	25	39	82	146	49	39	6	30	17	25	82
<i>Tvetenia</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	4	0	0	4	1	0	0	2	1	0	4
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	4	4	1	0	0	2	1	0	4
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	4	4	1	0	0	2	1	0	4
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	47	14	52	113	38	47	5	20	12	14	52
Total Benthic Invertebrates	1305	163	798	2266	755	798	100	572	330	163	1305
Taxonomic Richness (Genus-level) ²	21	14	25	29 ³	--	--	--	--	--	14	25

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake Tributary			Camp Lake Trib 1 Reach 3 (2007) Habitat CL Total (n = 3)							
Site ID	CLT1-US (2007)										
Reach	Trib 1 Reach 3			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	0	0	2	2	1	0	0	1	1	0	2
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	4	6	0	10	3	4	1	3	2	0	6
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	2	0	2	1	0	0	1	1	0	2
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	4	2	6	2	2	0	2	1	0	4
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	2	0	2	1	0	0	1	1	0	2
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Camp Lake Tributary			Camp Lake Trib 1 Reach 3 (2007) Habitat CL Total (n = 3)							
	CLT1-US (2007)										
	Trib 1 Reach 3			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	2	2	1	0	0	1	1	0	2
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	21	0	33	54	18	21	4	17	10	0	33
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	4	4	4	12	4	4	1	0	0	4	4
<i>Corynoneura</i>	0	2	0	2	1	0	0	1	1	0	2
<i>Cricotopus</i>	128	35	39	202	67	39	13	52	30	35	128
<i>Cricotopus/Orthocladius</i>	8	0	0	8	3	0	1	5	3	0	8
<i>Diplocladius</i>	4	0	0	4	1	0	0	2	1	0	4
? <i>Eukiefferiella</i>	0	0	19	19	6	0	1	11	6	0	19
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	16	2	0	19	6	2	1	9	5	0	16
<i>Hydrobaenus sp. 0</i>	58	0	0	58	19	0	4	33	19	0	58
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	8	2	0	10	3	2	1	4	2	0	8
? <i>Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	148	27	245	421	140	148	28	110	63	27	245
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	33	12	0	45	15	12	3	17	10	0	33
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	4	0	0	4	1	0	0	2	1	0	4
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	342	70	80	493	164	80	32	154	89	70	342
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	4	8	0	12	4	4	1	4	2	0	8
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydridae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	4	0	2	6	2	2	0	2	1	0	4
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	72	27	23	122	41	27	8	27	16	23	72
Total Benthic Invertebrates	860	206	452	1518	506	452	100	330	191	206	860
Taxonomic Richness (Genus-level) ²	16	15	11	24	--	--	--	--	--	11	16

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake Tributary			Camp Lake Trib 2 Reach 1 (2007) Habitat CL Total (n = 3)							
Site ID	CLT2-DS (2007)										
Reach	Trib 2 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	0	4	12	16	5	4	1	6	4	0	12
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	10	10	12	33	11	10	3	1	1	10	12
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	4	4	16	25	8	4	2	7	4	4	16
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	4	4	21	29	10	4	2	10	5	4	21
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	2	19	16	37	12	16	3	9	5	2	19
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody	Camp Lake Tributary			Camp Lake Trib 2 Reach 1 (2007) Habitat CL Total (n = 3)							
Site ID	CLT2-DS (2007)										
Reach	Trib 2 Reach 1			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	21	10	29	60	20	21	5	9	5	10	29
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	2	0	0	2	1	0	0	1	1	0	2
<i>Pseudokiefferiella</i>	10	19	25	54	18	19	4	7	4	10	25
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	2	6	8	16	5	6	1	3	2	2	8
<i>Corynoneura</i>	2	6	0	8	3	2	1	3	2	0	6
<i>Cricotopus</i>	25	74	58	157	52	58	12	25	15	25	74
<i>Cricotopus/Orthocladius</i>	10	29	4	43	14	10	3	13	7	4	29
<i>Diplocladius</i>	2	4	0	6	2	2	0	2	1	0	4
? <i>Eukiefferiella</i>	16	33	25	74	25	25	6	8	5	16	33
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	19	72	8	99	33	19	8	34	20	8	72
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	16	16	5	0	1	10	5	0	16
? <i>Limnophyes</i> sp. A	0	6	0	6	2	0	0	4	2	0	6
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	68	97	128	293	98	97	23	30	17	68	128
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Pseudosmittia</i>	2	4	4	10	3	4	1	1	1	2	4
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	64	60	111	235	78	64	18	29	17	60	111
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	2	0	2	1	0	0	1	1	0	2
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	43	14	12	70	23	14	5	17	10	12	43
Total Benthic Invertebrates	307	482	507	1297	432	482	100	109	63	307	507
Taxonomic Richness (Genus-level) ²	17	20	16	22	--	--	--	--	--	16	20

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued –

Waterbody	Camp Lake Tributary			Camp Lake Trib 2 Reach 2 (2007) Habitat CL Total (n = 3)							
Site ID	CLT2-US (2007)										
Reach	Trib 2 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station	B1	B2	B3								
ROUNDWORMS											
P. Nemata	2	8	2	12	4	2	1	4	2	2	8
ANNELIDS											
P. Annelida											
WORMS	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	8	16	2	27	9	8	2	7	4	2	16
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0
ARTHROPODS											
P. Arthropoda											
MITES	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0
O. Acari	2	21	6	29	10	6	3	10	6	2	21
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	0	0	0	0	0	0	0	0	0	0
INSECTS											
Cl. Insecta											
BEETLES	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	0	0	0	0	0	0	0	0	0	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0
immature	2	0	0	2	1	0	0	1	1	0	2
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	0	0	0	0	0	0	0	0	0	0	0
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	4	0	4	1	0	0	2	1	0	4
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID Reach Replicate Station	Camp Lake Tributary			Camp Lake Trib 2 Reach 2 (2007) Habitat CL Total (n = 3)							
	CLT2-US (2007)										
	Trib 2 Reach 2			Sum	Mean	Median	% ¹	SD	SE	Min	Max
	B1	B2	B3								
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	6	6	2	0	1	4	2	0	6
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	23	21	2	45	15	21	4	11	7	2	23
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	39	37	4	80	27	37	7	20	11	4	39
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	105	87	35	227	76	87	21	36	21	35	105
<i>Cricotopus/Orthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Diplocladius</i>	2	0	0	2	1	0	0	1	1	0	2
? <i>Eukiefferiella</i>	45	144	4	194	65	45	18	72	42	4	144
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	2	0	2	4	1	2	0	1	1	0	2
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
? <i>Limnophyes</i> sp. A	6	0	0	6	2	0	1	4	2	0	6
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius (Euorthocladius)</i>	68	37	37	142	47	37	13	18	10	37	68
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	4	0	0	4	1	0	0	2	1	0	4
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	99	132	27	258	86	99	24	54	31	27	132
<i>Tvetenia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	0	0	0	0	0	0	0	0	0	0	0
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	14	27	10	52	17	14	5	9	5	10	27
Total Benthic Invertebrates	423	534	138	1095	365	423	100	204	118	138	534
Taxonomic Richness (Genus-level) ²	15	11	12	17	--	--	--	--	--	11	15

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Camp Lake Tributaries Overall (n = 12)							
Site ID									
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max
Replicate Station									
<u>ROUNDWORMS</u>									
P. Nemata		68	6	2	1	9	3	0	33
<u>ANNELIDS</u>									
P. Annelida									
WORMS		0	0	0	0	0	0	0	0
Cl. Oligochaeta		0	0	0	0	0	0	0	0
F. Enchytraeidae		212	18	10	3	30	9	0	111
F. Lumbriculidae		0	0	0	0	0	0	0	0
indeterminate		2	0	0	0	1	0	0	2
<i>Lumbriculus</i>		0	0	0	0	0	0	0	0
F. Tubificide		0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>		0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES		0	0	0	0	0	0	0	0
Cl. Arachnida		0	0	0	0	0	0	0	0
O. Acari		111	9	5	2	9	3	0	29
HARPACTICIDS		0	0	0	0	0	0	0	0
O. Harpacticoida		4	0	0	0	1	0	0	4
SEED SHRIMPS		0	0	0	0	0	0	0	0
Cl. Ostracoda		10	1	0	0	2	1	0	8
SPRINGTAILS		0	0	0	0	0	0	0	0
Cl. Entognatha		0	0	0	0	0	0	0	0
O. Collembola		0	0	0	0	0	0	0	0
<u>INSECTS</u>									
Cl. Insecta									
BEETLES		0	0	0	0	0	0	0	0
O. Coleoptera		0	0	0	0	0	0	0	0
F. Dytiscidae		0	0	0	0	0	0	0	0
<i>Agabus</i>		0	0	0	0	0	0	0	0
<i>Hydroporus</i>		0	0	0	0	0	0	0	0
MAYFLIES		0	0	0	0	0	0	0	0
O. Ephemeroptera		0	0	0	0	0	0	0	0
F. Baetidae		0	0	0	0	0	0	0	0
<i>Acentrella</i>		0	0	0	0	0	0	0	0
STONEFLIES		0	0	0	0	0	0	0	0
O. Plecoptera		0	0	0	0	0	0	0	0
F. Capniidae		0	0	0	0	0	0	0	0
immature		14	1	0	0	2	0	0	4
CADDISFLIES		0	0	0	0	0	0	0	0
O. Trichoptera		0	0	0	0	0	0	0	0
F. Apataniidae		0	0	0	0	0	0	0	0
<i>Apatania</i>		0	0	0	0	0	0	0	0
F. Limnephilidae		0	0	0	0	0	0	0	0
<i>?Grensia</i>		0	0	0	0	0	0	0	0
TRUE FLIES		0	0	0	0	0	0	0	0
O. Diptera		0	0	0	0	0	0	0	0
pupae		0	0	0	0	0	0	0	0
BITING-MIDGE		0	0	0	0	0	0	0	0
F. Ceratopogonidae		0	0	0	0	0	0	0	0
<i>Atrichopogon</i>		0	0	0	0	0	0	0	0
MIDGES		0	0	0	0	0	0	0	0
F. Chironomidae		0	0	0	0	0	0	0	0
chironomid pupae		35	3	0	1	6	2	0	21
S.F. Chironominae		0	0	0	0	0	0	0	0
<i>Chironomus</i>		0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>		0	0	0	0	0	0	0	0
<i>Lipiniella</i>		0	0	0	0	0	0	0	0
<i>Micropsectra</i>		355	30	1	6	80	23	0	280
<i>Paracladopelma</i>		0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>		25	2	0	0	5	1	0	12
<i>Rheotanytarsus</i>		0	0	0	0	0	0	0	0
<i>Sergentia</i>		0	0	0	0	0	0	0	0
<i>Stempellinella</i>		2	0	0	0	1	0	0	2
<i>Stictochironomus</i>		0	0	0	0	0	0	0	0
<i>Tanytarsus</i>		33	3	0	1	10	3	0	33
Tanytarsini indeterminate		0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Camp Lake Tributaries Overall (n = 12)								
Site ID										
Reach		Sum	Mean	Median	% ¹	SD	SE	Min	Max	
Replicate Station										
S.F. Diamesinae		0	0	0	0	0	0	0	0	
	<i>Diamesa</i>	72	6	1	1	9	3	0	29	
	<i>Protanypus</i>	0	0	0	0	0	0	0	0	
	<i>Pseudodiamesa</i>	2	0	0	0	1	0	0	2	
	<i>Pseudokiefferiella</i>	221	18	21	4	10	3	0	33	
S.F. Orthocladiinae		0	0	0	0	0	0	0	0	
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	
	? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	
	<i>Chaetocladius</i>	113	9	4	2	14	4	0	39	
	<i>Corynoneura</i>	76	6	0	1	16	5	0	58	
	<i>Cricotopus</i>	860	72	66	14	43	12	19	144	
	<i>Cricotopus/Orthocladius</i>	132	11	3	2	16	5	0	49	
	<i>Diplocladius</i>	12	1	0	0	2	0	0	4	
	? <i>Eukiefferiella</i>	315	26	18	5	40	11	0	144	
	<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	
	<i>Hydrobaenus</i>	573	48	5	9	112	32	0	396	
	<i>Hydrobaenus sp. 0</i>	58	5	0	1	17	5	0	58	
	<i>Krenosmittia</i>	4	0	0	0	1	0	0	4	
	<i>Limnophyes</i>	58	5	1	1	7	2	0	21	
	? <i>Limnophyes sp. A</i>	12	1	0	0	2	1	0	6	
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	
	<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	
	<i>Orthocladius (Euorthocladius)</i>	986	82	68	16	65	19	21	245	
	<i>Paracladius</i>	0	0	0	0	0	0	0	0	
	<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	
	<i>Psectrocladius</i>	29	2	0	0	7	2	0	25	
	<i>Pseudosmittia</i>	241	20	4	4	34	10	0	107	
	<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	
	<i>Synorthocladius</i>	8	1	0	0	2	0	0	4	
	<i>Thienemanniella</i>	4	0	0	0	1	0	0	4	
	<i>Tokunagaia</i>	1132	94	75	18	85	24	25	342	
	<i>Tvetenia</i>	4	0	0	0	1	0	0	4	
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0	
	indeterminate A	0	0	0	0	0	0	0	0	
	indeterminate B	0	0	0	0	0	0	0	0	
	indeterminate	0	0	0	0	0	0	0	0	
	S.F. Podonominae		0	0	0	0	0	0	0	0
		<i>Trichotanypus</i>	16	1	0	0	3	1	0	8
	S.F. Tanypodinae		0	0	0	0	0	0	0	0
		<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
<i>Procladius</i>		0	0	0	0	0	0	0	0	
<i>Thienemannimyia</i> complex		0	0	0	0	0	0	0	0	
indeterminate		0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	
F. Empididae		0	0	0	0	0	0	0	0	
	<i>Clinocera</i>	0	0	0	0	0	0	0	0	
	Empididae pupae	4	0	0	0.1	1	0	0	4	
F. Ephydridae		0	0	0	0	0	0	0	0	
Muscidae		0	0	0	0	0	0	0	0	
Simuliidae		8	1	0	0.1	1	0	0	4	
F. Tipulidae		0	0	0	0	0	0	0	0	
	<i>Dicranota</i>	4	0	0	0.1	1	0	0	4	
	<i>Ormosia</i>	0	0	0	0	0	0	0	0	
	<i>Tipula</i>	357	30	25	6	20	6	10	72	
Total Benthic Invertebrates		6175	515	467	100	336	97	138	1305	
Taxonomic Richness (Genus-level) ²		36	--	--	--	--	--	11	25	

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody	Mary River (2005)		Mary River (2005) Habitat E0-01a Total (n = 2)								Mary River (2005)			
Site ID	E2-01	E0-03									C0-01	D0-01	H0-01	A0-01
Reach/Location	E0-01a	E0-01a	Sum	Mean	Median	% ¹	SD	SE	Min	Max	C0-01	Boundary of C0-10 & E0-01	G0	A0-01
ROUNDWORMS														
P. Nemata	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANNELIDS														
P. Annelida														
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	2	0	2	1	1	1	1	1	0	2	12	0	0	2
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	2	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	2	0
ARTHROPODS														
P. Arthropoda														
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HARPACTICOIDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	4	0	4	2	2	2	3	2	0	4	0	2	0	2
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	0	2	2	1	1	1	1	1	0	2	0	0	0	0
INSECTS														
Cl. Insecta														
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	6	0	6	3	3	2	4	3	0	6	4	2	0	2
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	16	6	23	11	11	8	7	5	6	16	19	6	87	16
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	2	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID	Mary River (2005)		Mary River (2005) Habitat E0-01a Total (n = 2)								Mary River (2005)				
	E2-01	E0-03									C0-01	D0-01	H0-01	A0-01	
Reach/Location	E0-01a	E0-01a	Sum	Mean	Median	% ¹	SD	SE	Min	Max	C0-01	Boundary of C0-10 & E0-01		G0	A0-01
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	146	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	16	2	19	9	9	7	10	7	2	16	1357	2	4	2	2
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	21	0	21	10	10	8	15	10	0	21	49	0	0	0	0
<i>Cricotopus/Orthocladius</i>	0	4	4	2	2	2	3	2	0	4	8	2	27	4	4
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnophyes</i>	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius</i> (<i>Euorthocladius</i>)	12	0	12	6	6	5	9	6	0	12	0	0	0	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	8	0	8	4	4	3	6	4	0	8	0	0	0	0	0
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	82	2	85	42	42	31	57	40	2	82	103	6	0	23	23
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	56	10	66	33	33	24	32	23	10	56	49	10	41	103	103
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	10	8	19	9	9	7	1	1	8	10	8	6	0	0	0
Total Benthic Invertebrates	235	35	270	135	135	100	141	100	35	235	1621	37	307	155	155
Taxonomic Richness (Genus-level) ²	10	6	12 ³	--	--	--	--	--	6	10	11	7	5	7	7

1 percent abundance of the overall total.

2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody		Mary River (2005) Overall (n = 6)							
Site ID									
Reach/Location		Sum	Mean	Median	% ¹	SD	SE	Min	Max
<u>ROUNDWORMS</u>									
P. Nemata		0	0	0	0	0	0	0	0
<u>ANNELIDS</u>									
P. Annelida									
WORMS		0	0	0	0	0	0	0	0
Cl. Oligochaeta		0	0	0	0	0	0	0	0
F. Enchytraeidae		16	3	1	1	5	2	0	12
F. Lumbriculidae		2	0	0	0	0	0	0	0
indeterminate		0	0	0	0	0	0	0	0
<i>Lumbriculus</i>		0	0	0	0	0	0	0	0
F. Tubificide		0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>		2	0	0	0	1	0	0	2
<u>ARTHROPODS</u>									
P. Arthropoda									
MITES		0	0	0	0	0	0	0	0
Cl. Arachnida		0	0	0	0	0	0	0	0
O. Acari		0	0	0	0	0	0	0	0
HARPACTICIDS		0	0	0	0	0	0	0	0
O. Harpacticoida		0	0	0	0	0	0	0	0
SEED SHRIMPS		0	0	0	0	0	0	0	0
Cl. Ostracoda		8	1	1	0	2	1	0	4
SPRINGTAILS		0	0	0	0	0	0	0	0
Cl. Entognatha		0	0	0	0	0	0	0	0
O. Collembola		2	0	0	0	1	0	0	2
<u>INSECTS</u>									
Cl. Insecta									
BEETLES		0	0	0	0	0	0	0	0
O. Coleoptera		0	0	0	0	0	0	0	0
F. Dytiscidae		0	0	0	0	0	0	0	0
<i>Agabus</i>		0	0	0	0	0	0	0	0
<i>Hydroporus</i>		0	0	0	0	0	0	0	0
MAYFLIES		0	0	0	0	0	0	0	0
O. Ephemeroptera		0	0	0	0	0	0	0	0
F. Baetidae		0	0	0	0	0	0	0	0
<i>Acentrella</i>		14	2	2	1	2	1	0	6
STONEFLIES		0	0	0	0	0	0	0	0
O. Plecoptera		0	0	0	0	0	0	0	0
F. Capniidae		0	0	0	0	0	0	0	0
immature		0	0	0	0	0	0	0	0
CADDISFLIES		0	0	0	0	0	0	0	0
O. Trichoptera		0	0	0	0	0	0	0	0
F. Apataniidae		0	0	0	0	0	0	0	0
<i>Apatania</i>		0	0	0	0	0	0	0	0
F. Limnephilidae		0	0	0	0	0	0	0	0
<i>?Grensia</i>		0	0	0	0	0	0	0	0
TRUE FLIES		0	0	0	0	0	0	0	0
O. Diptera		0	0	0	0	0	0	0	0
pupae		0	0	0	0	0	0	0	0
BITING-MIDGE		0	0	0	0	0	0	0	0
F. Ceratopogonidae		0	0	0	0	0	0	0	0
<i>Atrichopogon</i>		0	0	0	0	0	0	0	0
MIDGES		0	0	0	0	0	0	0	0
F. Chironomidae		0	0	0	0	0	0	0	0
chironomid pupae		151	25	16	6	31	13	6	87
S.F. Chironominae		0	0	0	0	0	0	0	0
<i>Chironomus</i>		0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>		2	0	0	0	1	0	0	2
<i>Lipiniella</i>		0	0	0	0	0	0	0	0
<i>Micropsectra</i>		0	0	0	0	0	0	0	0
<i>Paracladopelma</i>		0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>		0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>		0	0	0	0	0	0	0	0
<i>Sergentia</i>		0	0	0	0	0	0	0	0
<i>Stempellinella</i>		0	0	0	0	0	0	0	0
<i>Stictochironomus</i>		0	0	0	0	0	0	0	0
<i>Tanytarsus</i>		0	0	0	0	0	0	0	0
Tanytarsini indeterminate		0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody		Mary River (2005) Overall (n = 6)							
Site ID									
Reach/Location		Sum	Mean	Median	% ¹	SD	SE	Min	Max
S.F. Diamesinae		0	0	0	0	0	0	0	0
	<i>Diamesa</i>	146	24	0	6	60	24	0	146
	<i>Protanypus</i>	0	0	0	0	0	0	0	0
	<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0
	<i>Pseudokiefferiella</i>	1384	231	3	58	552	225	2	1357
S.F. Orthoclaadiinae		0	0	0	0	0	0	0	0
	<i>Abiskomyia</i>	0	0	0	0	0	0	0	0
	? <i>Acricotopus</i>	0	0	0	0	0	0	0	0
	<i>Chaetocladius</i>	0	0	0	0	0	0	0	0
	<i>Corynoneura</i>	0	0	0	0	0	0	0	0
	<i>Cricotopus</i>	70	12	0	3	20	8	0	49
	<i>Cricotopus/Orthocladius</i>	45	8	4	2	10	4	0	27
	<i>Diploccladius</i>	0	0	0	0	0	0	0	0
	? <i>Eukiefferiella</i>	0	0	0	0	0	0	0	0
	<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0
	<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0
	<i>Hydrobaenus</i> sp. 0	0	0	0	0	0	0	0	0
	<i>Krenosmittia</i>	0	0	0	0	0	0	0	0
	<i>Limnophyes</i>	6	1	0	0	3	1	0	6
	? <i>Limnophyes</i> sp. A	0	0	0	0	0	0	0	0
	<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Metriocnemus</i>	0	0	0	0	0	0	0	0
	<i>Orthocladius</i> (<i>Euorthocladius</i>)	12	2	0	1	5	2	0	12
	<i>Paracladius</i>	0	0	0	0	0	0	0	0
	<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0
	<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0
	<i>Psectrocladius</i>	0	0	0	0	0	0	0	0
	<i>Pseudosmittia</i>	8	1	0	0	3	1	0	8
	<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0
	<i>Synorthocladius</i>	0	0	0	0	0	0	0	0
	<i>Thienemanniella</i>	0	0	0	0	0	0	0	0
	<i>Tokunagaia</i>	0	0	0	0	0	0	0	0
	<i>Tvetenia</i>	216	36	14	9	45	18	0	103
	<i>Zalutschia</i>	0	0	0	0	0	0	0	0
	indeterminate A	0	0	0	0	0	0	0	0
	indeterminate B	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0
S.F. Podonominae		0	0	0	0	0	0	0	0
	<i>Trichotanypus</i>	0	0	0	0	0	0	0	0
S.F. Tanypodinae		0	0	0	0	0	0	0	0
	<i>Arctopelopia</i>	0	0	0	0	0	0	0	0
	<i>Procladius</i>	0	0	0	0	0	0	0	0
	<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0
	indeterminate	0	0	0	0	0	0	0	0
F. Empididae		0	0	0	0	0	0	0	0
	<i>Clinocera</i>	0	0	0	0	0	0	0	0
	Empididae pupae	0	0	0	0	0	0	0	0
F. Ephydriidae		0	0	0	0	0	0	0	0
Muscidae		0	0	0	0	0	0	0	0
Simuliidae		270	45	45	11	34	14	10	103
F. Tipulidae		0	0	0	0	0	0	0	0
	<i>Dicranota</i>	0	0	0	0	0	0	0	0
	<i>Ormosia</i>	0	0	0	0	0	0	0	0
	<i>Tipula</i>	33	5	7	1	4	2	0	10
Total Benthic Invertebrates		2390	398	195	100	608	248	35	1621
Taxonomic Richness (Genus-level) ²		17	--	--	--	--	--	5	11

1 percent abundance of the overall total.
2 numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.
3 total number of taxa observed to Genus-level.

Table A4.3-5.1. - Continued -

Waterbody Site ID	Camp Lake Tributary (2005)			Camp Lake Tributary (2005) Overall (n = 3)								Sheardown Lake Trib 1 Reach 2 (2005)	
	FS-01	K0-01	J0-01									D1-01	
Reach/Location	Trib 1 Reach 1	Trib 2 Reach 2	Lake Outlet Stream	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Trib 1 Reach 2	% ¹
<u>ROUNDWORMS</u>													
P. Nemata	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ANNELIDS</u>													
P. Annelida													
WORMS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Oligochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Enchytraeidae	4	0	2	6	2	2	1	2	1	0	4	19	3
F. Lumbriculidae	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lumbriculus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Tubificide	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Limnodrilus udekemianus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>ARTHROPODS</u>													
P. Arthropoda													
MITES	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Arachnida	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Acari	0	0	0	0	0	0	0	0	0	0	0	0	0
HARPACTICIDS	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Harpacticoida	0	0	0	0	0	0	0	0	0	0	0	0	0
SEED SHRIMPS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Ostracoda	0	0	0	0	0	0	0	0	0	0	0	2	0
SPRINGTAILS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cl. Entognatha	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Collembola	2	0	0	2	1	0	0	1	1	0	2	0	0
<u>INSECTS</u>													
Cl. Insecta													
BEETLES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Coleoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Dytiscidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Agabus</i>	0	2	0	2	1	0	0	1	1	0	2	0	0
<i>Hydroporus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Ephemeroptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Baetidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Acentrella</i>	2	16	0	19	6	2	3	9	5	0	16	0	0
STONEFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Plecoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Capniidae	0	0	0	0	0	0	0	0	0	0	0	0	0
immature	0	23	0	23	8	0	4	13	8	0	23	0	0
CADDISFLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Trichoptera	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Apataniidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Apatania</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Limnephilidae	0	0	0	0	0	0	0	0	0	0	0	0	0
? <i>Grensia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE FLIES	0	0	0	0	0	0	0	0	0	0	0	0	0
O. Diptera	0	0	0	0	0	0	0	0	0	0	0	0	0
pupae	0	0	0	0	0	0	0	0	0	0	0	0	0
BITING-MIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ceratopogonidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atrichopogon</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
MIDGES	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Chironomidae	0	0	0	0	0	0	0	0	0	0	0	0	0
chironomid pupae	27	8	8	43	14	8	8	11	6	8	27	126	22
S.F. Chironominae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cryptochironomous</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Lipiniella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Micropsectra</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paracladopelma</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paratanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Rheotanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Sergentia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stempellinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stictochironomus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tanytarsus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanytarsini indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0

1 percent abundance of the overall total.

Table A4.3-5.1. - Continued -

Waterbody Site ID	Camp Lake Tributary (2005)			Camp Lake Tributary (2005) Overall (n = 3)								Sheardown Lake Trib 1 Reach 2 (2005)	
	FS-01	K0-01	J0-01									D1-01	
Reach/Location	Trib 1 Reach 1	Trib 2 Reach 2	Lake Outlet Stream	Sum	Mean	Median	% ¹	SD	SE	Min	Max	Trib 1 Reach 2	% ¹
S.F. Diamesinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Diamesa</i>	4	10	6	21	7	6	4	3	2	4	10	0	0
<i>Protanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudodiamesa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudokiefferiella</i>	16	6	0	23	8	6	4	8	5	0	16	82	14
S.F. Orthocladiinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Abiskomyia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Acricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Chaetocladius</i>	0	2	0	2	1	0	0	1	1	0	2	0	0
<i>Corynoneura</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cricotopus</i>	31	0	0	31	10	0	6	18	10	0	31	85	15
<i>Cricotopus/Orthocladius</i>	0	0	2	2	1	0	0	1	1	0	2	0	0
<i>Diplocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>?Eukiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heterotrissocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hydrobaenus sp. 0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Krenosmittia</i>	2	0	0	2	1	0	0	1	1	0	2	0	0
<i>Limnophyes</i>	0	4	0	4	1	0	1	2	1	0	4	0	0
<i>?Limnophyes sp. A</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mesocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Metriocnemus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Orthocladius</i>													
<i>(Euorthocladius)</i>	2	0	0	2	1	0	0	1	1	0	2	0	0
<i>Paracladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Parakiefferiella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paralimnophyes</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Psectrocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pseudosmittia</i>	2	0	0	2	1	0	0	1	1	0	2	41	7
<i>Rheocricotopus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Synorthocladius</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Thienemanniella</i>	2	0	0	2	1	0	0	1	1	0	2	0	0
<i>Tokunagaia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tvetenia</i>	268	6	19	293	98	19	53	148	85	6	268	153	27
<i>Zalutschia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate A	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate B	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Podonominae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trichotanypus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
S.F. Tanypodinae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Arctopelopia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Procladius</i>	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Thienemannimyia</i> complex	0	0	0	0	0	0	0	0	0	0	0	0	0
indeterminate	0	0	0	0	0	0	0	0	0	0	0	8	1
F. Empididae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Clinocera</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
Empididae pupae	0	0	0	0	0	0	0	0	0	0	0	0	0
F. Ephydriidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Muscidae	0	0	0	0	0	0	0	0	0	0	0	0	0
Simuliidae	14	12	2	29	10	12	5	7	4	2	14	8	1
F. Tipulidae	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dicranota</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ormosia</i>	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Tipula</i>	37	12	0	49	16	12	9	19	11	0	37	43	8
Total Benthic Invertebrates	414	103	39	557	186	103	100	201	116	39	414	569	100
Taxonomic Richness (Genus-level) ²	13	10	5	18	--	--	--	--	--	5	13	10	--

1

percent abundance of the overall total.

2

numbers of taxa reported at Genus level; if group identified to higher level, then it was assumed that only one Genus was represented and this possibly resulted in a conservative estimate of number of taxa.

3

total number of taxa observed to Genus-level.

**APPENDIX 4.4-1. DETAILED METHODS FOR ACOUSTIC TAG
IMPLANTATION AND MONITORING AND PRESENTATION OF
DETAILED FLOY® AND ACOUSTIC TAGGING RESULTS.**

	Page
Table A4.4-1.1. Tag and biological information for Arctic char marked with Floy® tags in lakes in the Mine Area, 2006-2008..	A4.4-1_1
Table A4.4-1.2. Summary of Arctic char marked with Floy® tags and recaptured in waterbodies in the Mine Area, 2006-2008.....	A4.4-1_15
Table A4.4-1.3. Movements of acoustically tagged Arctic char within Mine Area lakes during 2007 and 2008..	A4.4-1_16
Table A4.4-1.4. Movements of acoustically tagged Arctic char detected in lakes in the Mary River Mine and Camp Study Area during 2007 and 2008..	A4.4-1_18

Acoustic Tagging Methods

Arctic char selected for acoustic tagging had a minimum fork length of 375 mm and were in good condition to ensure survival following surgery. These fish were collected during experimental gillnetting programs conducted in Camp, Sheardown, Mary, and Angajurjualuk lakes. Tagging candidates were anaesthetized in a solution of clove oil and ethanol according to Peake (1998). The clove oil was first dissolved in ethanol at a ratio of 1:10 (approximately 3 mL clove oil : 27 mL ethanol) and the solution was mixed into approximately 30 L of lake water. Fish were placed in the anaesthetic solution until they could not maintain an upright position in the water and then were placed onto a V-shaped surgical table, ventral side up. As anaesthetized fish are unable to ventilate on their own, fresh water was continually pumped over the gills during the surgical procedure.

A mid-ventral incision, approximately 2 cm in length, was made through the body wall of the fish using a sterilized 30 mm long scalpel. The acoustic transmitter, sterilized in alcohol, was then inserted into the body cavity of the fish, and gently pushed forward to avoid stressing the incision. The incision was closed using three chromic gut sutures (#3) and then the fish was placed in a tank of lake water until they were able to maintain equilibrium and had regained their strength and mobility before being released.

Individually coded model V13 acoustic transmitters supplied by VEMCO Ltd. (Halifax, Nova Scotia; www.vemco.com) were surgically implanted into fish. The transmitters measured 36 mm in length, 13 mm in diameter, weighed 6 g in water, and had a battery life expectancy of about two years. These transmitters emit a pulse train every 50 – 150 seconds to minimize simultaneous pulse train transmissions by other acoustic transmitters in the immediate area.

To monitor movements of acoustically tagged fish in 2007 and 2008, stationary VR2 acoustic receivers, also supplied by VEMCO Ltd., were set at single locations in Camp Lake, the southeast basin of Sheardown Lake, and the north basin of Mary Lake and at three locations in the south basin of Mary Lake (mid-basin, near the Mary River inflow, and near the Mary River outflow). An additional receiver was set in Angajurjualuk Lake near the inflow of Mary River in 2007 only. Receivers were installed from late July to mid- September in 2007 and early May to early September in 2008. Data were downloaded from the receivers within a few days after deployment and again after approximately one month to confirm that they were working properly. All receivers were removed prior to freeze-up to avoid damage from ice and all data were downloaded.

Stationary receivers operate with an omni-directional hydrophone and internal data logger. The omni-directional hydrophone detects the pulse train transmitted from active transmitters within

its range of detection, which may vary depending on conditions (i.e.; range of detection decreases with increasing current and “noise”). At each stationary receiver location, a coated steel cable attached to a king anchor was held vertically in the water column by a large float. Stationary receivers were attached via steel brackets to the cable and lowered into the water using a second float line. A U-bolt attached to the cable approximately 2m off the lake bottom served as a stopper. This set-up allowed each receiver to be held vertically in the water column and allowed for the receivers to be pulled up the anchor cable with relative ease while eliminating the need to pull the anchor. This also ensured that following each download, receivers would be repositioned in the same location and at the same depth. Stationary receivers recorded the transmitter code number, date, and time of detection in an internal data logger until downloaded by an IBM/PC/AT computer. A VR1PC computer interface (VEMCO Ltd.) was used to transfer data between receiver and computer.

Peake, S.J. 1998. Sodium bicarbonate and clove oil as potential anaesthetics for non-salmonid fishes. *North American Journal of Fisheries Management* 18:919-924.

Floy® Tagging Results

The following tables (tables A4.4-1.1 and A4.4-1.2) present detailed biological and recapture information for fish marked with Floy® tags in waterbodies in the Mine Area from 2006-2008.

Table A4.4-1.1. Tag and biological information for Arctic char marked with Floy® tags in lakes in the Mine Area, 2006-2008.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	75619	9-Aug-06	268	CL	459	800
NSC	75620	9-Aug-06	269	CL	360	300
NSC	75621	9-Aug-06	271	CL	310	250
NSC	79843	03-Sep-08	1	SL-NW	391	600
NSC	79844	03-Sep-08	2	SL-NW	309	320
NSC	79845	03-Sep-08	4	SL-NW	338	350
NSC	79846	03-Sep-08	5	SL-NW	276	250
NSC	79847	04-Sep-08	6	SL-SE	395	650
NSC	79848	04-Sep-08	8	SL-SE	430	1200
NSC	79849	04-Sep-08	9	SL-SE	398	700
NSC	79850	04-Sep-08	11	SL-SE	390	675
NSC	83201	30-Jul-07	264	ML-S	373	500
NSC	83202	30-Jul-07	266	ML-S	414	625
NSC	83203	30-Jul-07	267	ML-S	387	550
NSC	83204	30-Jul-07	268	ML-S	392	600
NSC	83205	30-Jul-07	269	ML-S	416	625
NSC	83206	30-Jul-07	270	ML-S	401	600
NSC	83207	30-Jul-07	271	ML-S	395	550
NSC	83208	30-Jul-07	272	ML-S	398	500
NSC	83209	30-Jul-07	273	ML-S	429	700
NSC	83210	30-Jul-07	274	ML-S	413	600
NSC	83211	30-Jul-07	276	ML-S	408	475
NSC	83212	30-Jul-07	277	ML-S	422	550
NSC	83213	30-Jul-07	280	ML-S	392	500
NSC	83214	30-Jul-07	281	ML-S	397	550
NSC	83215	30-Jul-07	282	ML-S	396	600
NSC	83216	30-Jul-07	283	ML-S	240	100
NSC	83217	30-Jul-07	286	ML-S	436	725
NSC	83218	30-Jul-07	288	ML-S	326	400
NSC	83219	30-Jul-07	289	ML-S	403	650
NSC	83220	30-Jul-07	290	ML-S	408	500
NSC	83221	30-Jul-07	291	ML-S	413	575
NSC	83222	30-Jul-07	292	ML-S	497	1100
NSC	83223	30-Jul-07	293	ML-S	357	400
NSC	83224	30-Jul-07	294	ML-S	414	625
NSC	83225	30-Jul-07	298	ML-S	368	450
NSC	83226	30-Jul-07	299	ML-S	421	450
NSC	83227	30-Jul-07	300	ML-S	417	625
NSC	83228	30-Jul-07	301	ML-S	431	625
NSC	83229	30-Jul-07	302	ML-S	430	700
NSC	83230	30-Jul-07	309	ML-S	402	525
NSC	83231	30-Jul-07	310	ML-S	434	575
NSC	83232	30-Jul-07	311.1	ML-S	409	625
NSC	83233	30-Jul-07	312.2	ML-S	410	575

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	83234	30-Jul-07	313	ML-S	283	150
NSC	83235	30-Jul-07	314	ML-S	381	400
NSC	83236	30-Jul-07	315	ML-S	390	550
NSC	83237	30-Jul-07	316	ML-S	455	625
NSC	83238	30-Jul-07	317	ML-S	406	550
NSC	83239	30-Jul-07	318	ML-S	413	625
NSC	83240	30-Jul-07	319	ML-S	412	575
NSC	83241	30-Jul-07	320	ML-S	393	575
NSC	83242	30-Jul-07	321	ML-S	390	500
NSC	83243	30-Jul-07	322	ML-S	390	500
NSC	83244	30-Jul-07	323	ML-S	436	800
NSC	83245	30-Jul-07	324	ML-S	411	625
NSC	83246	30-Jul-07	328	ML-S	413	600
NSC	83247	30-Jul-07	330	ML-S	429	650
NSC	83248	30-Jul-07	331	ML-S	300	250
NSC	83249	30-Jul-07	332	ML-S	376	450
NSC	83250	30-Jul-07	335	ML-S	427	725
NSC	83251	30-Jul-07	336	ML-S	382	600
NSC	83252	30-Jul-07	337	ML-S	408	625
NSC	83253	30-Jul-07	341	ML-S	387	500
NSC	83254	30-Jul-07	342	ML-S	222	100
NSC	83255	30-Jul-07	344	ML-S	321	300
NSC	83256	30-Jul-07	345	ML-S	363	325
NSC	83257	30-Jul-07	346	ML-S	357	400
NSC	83258	30-Jul-07	347	ML-S	373	525
NSC	83259	30-Jul-07	348	ML-S	671	3050
NSC	83260	30-Jul-07	349	ML-S	351	400
NSC	83261	30-Jul-07	350	ML-S	388	400
NSC	83262	30-Jul-07	351	ML-S	378	475
NSC	83263	31-Jul-07	353	AL	382	500
NSC	83264	31-Jul-07	354	AL	440	675
NSC	83265	31-Jul-07	355	AL	412	650
NSC	83266	31-Jul-07	356	AL	403	550
NSC	83267	31-Jul-07	359	AL	368	500
NSC	83268	31-Jul-07	360	AL	374	400
NSC	83269	31-Jul-07	360.1	AL	357	400
NSC	83270	31-Jul-07	361	AL	391	375
NSC	83271	31-Jul-07	362	AL	388	500
NSC	83272	31-Jul-07	363	AL	410	500
NSC	83273	31-Jul-07	364	AL	396	450
NSC	83274	31-Jul-07	365	AL	398	425
NSC	83275	31-Jul-07	366	AL	437	575
NSC	83276	31-Jul-07	367	AL	377	400
NSC	83277	31-Jul-07	368	AL	349	250
NSC	83278	31-Jul-07	369	AL	421	550
NSC	83279	31-Jul-07	371	AL	447	800

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	83280	31-Jul-07	372	AL	364	425
NSC	83281	31-Jul-07	373	AL	391	500
NSC	83282	31-Jul-07	374	AL	401	450
NSC	83283	31-Jul-07	378	AL	412	650
NSC	83284	31-Jul-07	376	AL	334	350
NSC	83285	31-Jul-07	377	AL	438	800
NSC	83286	31-Jul-07	379	AL	357	400
NSC	83287	31-Jul-07	375	AL	446	850
NSC	83288	31-Jul-07	380	AL	441	650
NSC	83289	31-Jul-07	382	AL	428	625
NSC	83290	31-Jul-07	384	AL	372	450
NSC	83291	31-Jul-07	386	AL	324	300
NSC	83292	31-Jul-07	387	AL	417	550
NSC	83293	31-Jul-07	388	AL	348	375
NSC	83294	31-Jul-07	390	AL	347	400
NSC	83295	31-Jul-07	391	AL	392	400
NSC	83296	31-Jul-07	393	AL	411	525
NSC	83297	1-Aug-07	394	AL	418	525
NSC	83298	1-Aug-07	395	AL	397	500
NSC	83299	1-Aug-07	396	AL	516	1300
NSC	83300	1-Aug-07	398	AL	388	450
NSC	83302	1-Aug-07	399	AL	263	125
NSC	83303	1-Aug-07	400	AL	392	500
NSC	83304	1-Aug-07	401	AL	387	425
NSC	83305	1-Aug-07	403	AL	392	400
NSC	83306	1-Aug-07	404	AL	369	400
NSC	83307	1-Aug-07	406	AL	417	525
NSC	83308	1-Aug-07	409	AL	403	525
NSC	83309	1-Aug-07	411	AL	434	575
NSC	83310	1-Aug-07	412	AL	393	525
NSC	83311	1-Aug-07	413	AL	391	500
NSC	83312	1-Aug-07	414	AL	438	625
NSC	83313	1-Aug-07	416	AL	395	475
NSC	83314	1-Aug-07	417	AL	440	625
NSC	83315	1-Aug-07	418	AL	404	500
NSC	83316	1-Aug-07	421	AL	446	700
NSC	83317	1-Aug-07	422	AL	392	475
NSC	83318	1-Aug-07	423	AL	392	475
NSC	83319	1-Aug-07	424	AL	351	300
NSC	83320	1-Aug-07	426	AL	353	200
NSC	83321	1-Aug-07	427	AL	421	450
NSC	83322	1-Aug-07	428	AL	428	700
NSC	83323	1-Aug-07	429	AL	393	475
NSC	83324	1-Aug-07	430	AL	394	500
NSC	83325	1-Aug-07	431	AL	423	475

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	83326	1-Aug-07	432	AL		
NSC	83327	1-Aug-07	433	AL	543	900
NSC	83328	1-Aug-07	434	AL	433	625
NSC	83329	1-Aug-07	435	AL	442	675
NSC	83330	1-Aug-07	436	AL	427	600
NSC	83331	1-Aug-07	437	AL	400	475
NSC	83332	1-Aug-07	438	AL	462	1050
NSC	83333	1-Aug-07	439	AL	423	650
NSC	83334	1-Aug-07	443	AL	434	700
NSC	83335	1-Aug-07	444	AL	382	450
NSC	83336	1-Aug-07	442	AL	433	725
NSC	83337	1-Aug-07	441	AL	444	700
NSC	83338	1-Aug-07	440	AL	500	1200
NSC	83339	1-Aug-07	446	AL	432	650
NSC	83340	1-Aug-07	447	AL	412	450
NSC	83341	1-Aug-07	448	AL	500	1150
NSC	83342	1-Aug-07	449	AL	471	700
NSC	83343	1-Aug-07	450	AL	634	2100
NSC	83344	1-Aug-07	451	AL	368	400
NSC	83345	1-Aug-07	452	AL	400	500
NSC	83346	1-Aug-07	453	AL	412	600
NSC	83347	1-Aug-07	454	AL	432	625
NSC	83348	1-Aug-07	455	AL	514	1450
NSC	83349	1-Aug-07	456	AL	408	550
NSC	83350	1-Aug-07	457	AL	402	400
NSC	85001	23-Jul-07	1	CL	540	1450
NSC	85002	23-Jul-07	2	CL	316	400
NSC	85003	23-Jul-07	5	CL	353	450
NSC	85004	23-Jul-07	6	CL	353	450
NSC	85005	23-Jul-07	7	CL	307	250
NSC	85006	23-Jul-07	8	CL	329	350
NSC	85007	23-Jul-07	9	CL	330	275
NSC	85008	23-Jul-07	10	CL	326	275
NSC	85009	23-Jul-07	11	CL	346	400
NSC	85010	23-Jul-07	12	CL	327	375
NSC	85011	23-Jul-07	13	CL	296	300
NSC	85012	23-Jul-07	14	CL	303	275
NSC	85013	23-Jul-07	16	CL	336	400
NSC	85014	23-Jul-07	18	CL	543	1500
NSC	85015	23-Jul-07	19	CL	252	100
NSC	85016	23-Jul-07	21	CL	301	250
NSC	85017	23-Jul-07	22	CL	627	2850
NSC	85018	23-Jul-07	23	CL	276	125
NSC	85019	23-Jul-07	24	CL	243	150
NSC	85020	23-Jul-07	25	CL	324	275
NSC	85021	23-Jul-07	26	CL	242	175

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85022	23-Jul-07	27	CL	286	225
NSC	85023	23-Jul-07	28	CL	243	175
NSC	85024	23-Jul-07	29	CL	266	175
NSC	85025	24-Jul-07	36	CL	682	3050
NSC	85026	24-Jul-07	37	CL	410	650
NSC	85027	24-Jul-07	41	CL	611	2100
NSC	85028	24-Jul-07	43	CL	321	300
NSC	85029	24-Jul-07	44	CL	312	325
NSC	85030	24-Jul-07	45	CL	330	400
NSC	85031	24-Jul-07	46	CL	309	275
NSC	85032	24-Jul-07	47	CL	576	1875
NSC	85033	24-Jul-07	48	CL	406	625
NSC	85034	24-Jul-07	49	CL	271	150
NSC	85035	24-Jul-07	50	CL	342	425
NSC	85036	24-Jul-07	51	CL	313	325
NSC	85037	24-Jul-07	52	CL	348	425
NSC	85038	24-Jul-07	53	CL	310	425
NSC	85039	24-Jul-07	54	CL	351	425
NSC	85040	24-Jul-07	55	CL	378	500
NSC	85041	24-Jul-07	56	CL	374	425
NSC	85042	24-Jul-07	57	CL	278	250
NSC	85043	24-Jul-07	58	CL	316	300
NSC	85044	24-Jul-07	61	CL	312	350
NSC	85045	24-Jul-07	62	CL	382	500
NSC	85046	24-Jul-07	63	CL	337	400
NSC	85047	24-Jul-07	64	CL	343	325
NSC	85048	24-Jul-07	65	CL	322	375
NSC	85049	24-Jul-07	66	CL	321	350
NSC	85050	24-Jul-07	67	CL	317	325
NSC	85051	24-Jul-07	68	CL	361	500
NSC	85052	24-Jul-07	75	CL	318	350
NSC	85053	24-Jul-07	76	CL	520	1150
NSC	85054	24-Jul-07	77	CL	402	500
NSC	85055	24-Jul-07	78	CL	346	375
NSC	85056	24-Jul-07	79	CL	373	350
NSC	85057	24-Jul-07	80	CL	392	475
NSC	85058	25-Jul-07	83	CL	268	225
NSC	85059	25-Jul-07	85	CL	343	425
NSC	85060	26-Jul-07	106	ML-N	389	625
NSC	85061	25-Jul-07	87	CL	292	275
NSC	85062	25-Jul-07	88	CL	398	475
NSC	85063	25-Jul-07	89	CL	323	375
NSC	85064	25-Jul-07	90	CL	364	375
NSC	85065	25-Jul-07	91	CL	274	175
NSC	85066	26-Jul-07	92	ML-N	333	400

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85067	26-Jul-07	93	ML-N	403	500
NSC	85068	26-Jul-07	94	ML-N	353	500
NSC	85069	26-Jul-07	95	ML-N	340	400
NSC	85070	26-Jul-07	96	ML-N	339	400
NSC	85071	26-Jul-07	108	ML-N	458	850
NSC	85072	26-Jul-07	105	ML-N	341	475
NSC	85074	26-Jul-07	103	ML-N	369	575
NSC	85075	26-Jul-07	104	ML-N	400	650
NSC	85076	26-Jul-07	109	ML-N	386	450
NSC	85077	26-Jul-07	111	ML-N	378	350
NSC	85078	26-Jul-07	112	ML-N	416	675
NSC	85079	26-Jul-07	113	ML-N	398	650
NSC	85080	26-Jul-07	114	ML-N	387	475
NSC	85081	26-Jul-07	115	ML-N	367	525
NSC	85082	26-Jul-07	116	ML-N	394	525
NSC	85083	26-Jul-07	117	ML-N	408	500
NSC	85084	26-Jul-07	118	ML-N	357	475
NSC	85085	26-Jul-07	119	ML-N	394	500
NSC	85086	26-Jul-07	120	ML-N	397	525
NSC	85087	26-Jul-07	121	ML-N	367	450
NSC	85088	26-Jul-07	122	ML-N	372	450
NSC	85089	26-Jul-07	123	ML-N	425	700
NSC	85090	26-Jul-07	124	ML-N	391	600
NSC	85091	26-Jul-07	125	ML-N	423	625
NSC	85092	26-Jul-07	126	ML-N	396	525
NSC	85093	26-Jul-07	127	ML-N	446	575
NSC	85094	26-Jul-07	128	ML-N	408	650
NSC	85095	26-Jul-07	129	ML-N	393	575
NSC	85096	26-Jul-07	130	ML-N	403	625
NSC	85097	26-Jul-07	132.1	ML-N	433	600
NSC	85098	26-Jul-07	132.2	ML-N	402	600
NSC	85099	26-Jul-07	133.2	ML-N	402	425
NSC	85100	26-Jul-07	134.2	ML-N	388	550
NSC	85251	26-Jul-07	135.2	ML-N	361	450
NSC	85252	26-Jul-07	136.2	ML-N	383	450
NSC	85253	26-Jul-07	137.2	ML-N	412	425
NSC	85254	26-Jul-07	138.2	ML-N	356	450
NSC	85255	26-Jul-07	143.2	ML-N	401	500
NSC	85256	26-Jul-07	144.2	ML-N	340	350
NSC	85257	26-Jul-07	145.2	ML-N	432	675
NSC	85258	26-Jul-07	146.2	ML-N	383	550
NSC	85259	26-Jul-07	147.2	ML-N	392	550
NSC	85260	26-Jul-07	151.2	ML-N	403	425
NSC	85261	26-Jul-07	152.2	ML-N	410	425
NSC	85262	26-Jul-07	153.2	ML-N	399	500
NSC	85263	26-Jul-07	154.2	ML-N	407	500

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85264	26-Jul-07	156.2	ML-N	396	525
NSC	85265	26-Jul-07	157.2	ML-N	393	550
NSC	85266	26-Jul-07	158.2	ML-N	362	450
NSC	85267	26-Jul-07	159.2	ML-N	409	700
NSC	85268	26-Jul-07	160.2	ML-N	388	500
NSC	85269	26-Jul-07	161.2	ML-N	421	675
NSC	85270	26-Jul-07	162.2	ML-N	394	500
NSC	85271	26-Jul-07	163.2	ML-N	434	625
NSC	85272	26-Jul-07	164.2	ML-N	388	600
NSC	85273	26-Jul-07	165.2	ML-N	386	475
NSC	85274	26-Jul-07	166.2	ML-N	376	525
NSC	85275	26-Jul-07	167.2	ML-N	333	350
NSC	85276	26-Jul-07	168.2	ML-N	322	400
NSC	85277	26-Jul-07	169.2	ML-N	428	500
NSC	85278	26-Jul-07	170.2	ML-N	353	425
NSC	85280	26-Jul-07	172.2	ML-N	358	425
NSC	85281	26-Jul-07	173.2	ML-N	376	475
NSC	85282	26-Jul-07	176.2	ML-N	394	525
NSC	85283	26-Jul-07	177.2	ML-N	398	500
NSC	85284	26-Jul-07	178.2	ML-N	344	450
NSC	85285	26-Jul-07	180.2	ML-N	352	375
NSC	85286	27-Jul-07	181.2	ML-N	321	325
NSC	85287	27-Jul-07	182.2	ML-N	413	425
NSC	85288	27-Jul-07	184.2	ML-N	408	450
NSC	85289	27-Jul-07	185.2	ML-N	428	700
NSC	85290	27-Jul-07	186.2	ML-N	401	625
NSC	85291	27-Jul-07	187.2	ML-N	397	575
NSC	85292	27-Jul-07	188.2	ML-N	398	500
NSC	85293	27-Jul-07	189.2	ML-N	402	550
NSC	85294	28-Jul-07	190	ML-S	341	450
NSC	85295	28-Jul-07	191	ML-S	363	450
NSC	85296	28-Jul-07	193	ML-S	390	500
NSC	85297	28-Jul-07	194	ML-S	394	675
NSC	85298	28-Jul-07	195	ML-S	468	850
NSC	85299	28-Jul-07	196	ML-S	413	700
NSC	85300	28-Jul-07	197	ML-S	422	525
NSC	85485	3-Aug-07	610	SL-SE	367	450
NSC	85486	3-Aug-07	611	SL-SE	393	600
NSC	85487	3-Aug-07	612	SL-SE	372	500
NSC	85488	3-Aug-07	613	SL-SE	377	450
NSC	85501	28-Jul-07	198	ML-S	383	450
NSC	85502	28-Jul-07	201	ML-S	403	650
NSC	85503	28-Jul-07	202	ML-S	411	600
NSC	85504	28-Jul-07	203	ML-S	389	450
NSC	85505	28-Jul-07	207	ML-S	392	550

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85506	29-Jul-07	208	ML-S	372	500
NSC	85507	29-Jul-07	211	ML-S	391	500
NSC	85508	29-Jul-07	212	ML-S	357	425
NSC	85509	29-Jul-07	215	ML-S	409	600
NSC	85510	29-Jul-07	216	ML-S	384	525
NSC	85511	29-Jul-07	217	ML-S	402	550
NSC	85512	29-Jul-07	219	ML-S	268	200
NSC	85513	29-Jul-07	220	ML-S	417	700
NSC	85514	29-Jul-07	221	ML-S	391	650
NSC	85515	29-Jul-07	222	ML-S	457	825
NSC	85516	29-Jul-07	223	ML-S	372	500
NSC	85517	29-Jul-07	224	ML-S	383	525
NSC	85518	29-Jul-07	225	ML-S	215	75
NSC	85519	29-Jul-07	227	ML-S	207	75
NSC	85520	29-Jul-07	228	ML-S	468	1000
NSC	85521	29-Jul-07	229	ML-S	530	1500
NSC	85522	29-Jul-07	230	ML-S	590	1675
NSC	85523	29-Jul-07	231	ML-S	435	700
NSC	85524	29-Jul-07	232	ML-S	434	725
NSC	85525	29-Jul-07	233	ML-S	402	675
NSC	85526	29-Jul-07	234	ML-S	381	550
NSC	85527	29-Jul-07	235	ML-S	418	575
NSC	85528	29-Jul-07	236	ML-S	358	450
NSC	85529	29-Jul-07	237	ML-S	382	500
NSC	85530	29-Jul-07	238	ML-S	389	500
NSC	85531	29-Jul-07	239	ML-S	354	400
NSC	85532	29-Jul-07	241	ML-S	315	300
NSC	85533	29-Jul-07	242	ML-S	422	725
NSC	85534	29-Jul-07	243	ML-S	407	650
NSC	85535	29-Jul-07	246	ML-S	377	400
NSC	85536	29-Jul-07	247	ML-S	268	150
NSC	85537	29-Jul-07	248	ML-S	643	2550
NSC	85538	29-Jul-07	249	ML-S	388	600
NSC	85539	29-Jul-07	250	ML-S	432	750
NSC	85540	29-Jul-07	251	ML-S	367	500
NSC	85541	30-Jul-07	254	ML-S	350	400
NSC	85542	30-Jul-07	255	ML-S	397	525
NSC	85543	30-Jul-07	256	ML-S	447	625
NSC	85544	30-Jul-07	257	ML-S	363	425
NSC	85545	30-Jul-07	258	ML-S	392	625
NSC	85546	30-Jul-07	259	ML-S	361	450
NSC	85547	30-Jul-07	260	ML-S	427	600
NSC	85548	30-Jul-07	261	ML-S	405	600
NSC	85549	30-Jul-07	262	ML-S	432	550
NSC	85550	30-Jul-07	263	ML-S	392	575
NSC	85904	1-Aug-07	458	AL	403	400

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85905	1-Aug-07	459	AL	353	400
NSC	85906	1-Aug-07	460	AL	380	400
NSC	85907	1-Aug-07	461	AL	378	425
NSC	85908	1-Aug-07	462	AL	423	575
NSC	85909	1-Aug-07	463	AL	340	325
NSC	85910	1-Aug-07	464	AL	413	550
NSC	85911	1-Aug-07	465	AL	381	475
NSC	85912	1-Aug-07	466	AL	517	1200
NSC	85913	1-Aug-07	467	AL	416	750
NSC	85914	1-Aug-07	468	AL	405	600
NSC	85915	1-Aug-07	469	AL	371	400
NSC	85916	1-Aug-07	470	AL	380	425
NSC	85917	1-Aug-07	471	AL	443	750
NSC	85918	1-Aug-07	472	AL	387	500
NSC	85919	1-Aug-07	473	AL	438	750
NSC	85920	1-Aug-07	474	AL	432	700
NSC	85921	1-Aug-07	475	AL	390	375
NSC	85922	1-Aug-07	478	AL	373	500
NSC	85923	1-Aug-07	479.1	AL	356	400
NSC	85924	1-Aug-07	480	AL	321	325
NSC	85925	1-Aug-07	481	AL	379	525
NSC	85926	1-Aug-07	482	AL	394	575
NSC	85927	1-Aug-07	485	AL	546	1800
NSC	85928	1-Aug-07	486	AL	395	400
NSC	85929	1-Aug-07	487	AL	352	400
NSC	85930	1-Aug-07	488	AL	430	500
NSC	85931	1-Aug-07	489	AL	382	400
NSC	85932	1-Aug-07	490	AL	598	4150
NSC	85933	1-Aug-07	491	AL	597	4600
NSC	85934	2-Aug-07	500	SL-NW	382	400
NSC	85935	2-Aug-07	501	SL-NW	413	700
NSC	85936	2-Aug-07	502	SL-NW	475	1000
NSC	85937	2-Aug-07	503	SL-NW	380	500
NSC	85938	2-Aug-07	504	SL-NW	377	475
NSC	85939	2-Aug-07	507	SL-NW	571	1050
NSC	85940	2-Aug-07	508	SL-NW	367	400
NSC	85941	2-Aug-07	509	SL-NW	387	675
NSC	85942	2-Aug-07	510	SL-NW	343	375
NSC	85943	2-Aug-07	511	SL-NW	257	100
NSC	85944	2-Aug-07	512.2	SL-NW	517	1225
NSC	85945	2-Aug-07	513	SL-NW	462	800
NSC	85946	2-Aug-07	516	SL-NW	363	350
NSC	85947	2-Aug-07	517	SL-NW	380	400
NSC	85948	2-Aug-07	520	SL-NW	351	375
NSC	85949	2-Aug-07	521	SL-NW	317	300

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85950	2-Aug-07	522	SL-NW	336	325
NSC	85951	2-Aug-07	523	SL-NW	468	875
NSC	85952	2-Aug-07	524	SL-NW	255	125
NSC	85953	2-Aug-07	526	SL-NW	349	400
NSC	85954	2-Aug-07	527	SL-NW	391	525
NSC	85955	2-Aug-07	528	SL-NW	378	475
NSC	85956	2-Aug-07	529	SL-NW	361	350
NSC	85957	2-Aug-07	531	SL-NW	251	100
NSC	85958	2-Aug-07	532	SL-NW	377	425
NSC	85959	2-Aug-07	533	SL-NW	548	1375
NSC	85960	2-Aug-07	534	SL-NW	382	425
NSC	85961	2-Aug-07	535	SL-NW	400	400
NSC	85962	2-Aug-07	537	SL-NW	350	400
NSC	85963	2-Aug-07	542	SL-NW	587	1800
NSC	85964	2-Aug-07	543	SL-NW	538	1100
NSC	85965	2-Aug-07	544	SL-NW	444	725
NSC	85966	2-Aug-07	545	SL-NW	332	350
NSC	85967	2-Aug-07	546	SL-NW	548	1350
NSC	85968	2-Aug-07	547	SL-NW	340	300
NSC	85969	2-Aug-07	548	SL-NW	401	550
NSC	85970	2-Aug-07	553	SL-NW	384	500
NSC	85971	2-Aug-07	554	SL-NW	273	200
NSC	85972	2-Aug-07	556	SL-NW	450	700
NSC	85973	2-Aug-07	557	SL-NW	385	400
NSC	85974	3-Aug-07	558	SL-NW	391	425
NSC	85975	3-Aug-07	559	SL-NW	327	325
NSC	85976	3-Aug-07	561	SL-NW	234	125
NSC	85977	3-Aug-07	562	SL-NW	260	150
NSC	85978	3-Aug-07	563	SL-NW	268	175
NSC	85979	3-Aug-07	564	SL-NW	361	400
NSC	85980	3-Aug-07	565	SL-NW	530	1175
NSC	85981	3-Aug-07	567	SL-NW	467	750
NSC	85982	3-Aug-07	568	SL-NW	357	475
NSC	85983	3-Aug-07	569	SL-NW	297	300
NSC	85984	3-Aug-07	571	SL-NW	378	500
NSC	85985	3-Aug-07	572	SL-NW	575	1075
NSC	85986	3-Aug-07	575	SL-NW	310	325
NSC	85987	3-Aug-07	576	SL-NW	384	550
NSC	85988	3-Aug-07	577	SL-NW	382	525
NSC	85989	3-Aug-07	578	SL-NW	434	600
NSC	85990	3-Aug-07	579	SL-NW	450	600
NSC	85991	3-Aug-07	580	SL-NW	376	500
NSC	85992	3-Aug-07	581	SL-NW	562	1600
NSC	85993	3-Aug-07	582	SL-NW	370	350
NSC	85994	3-Aug-07	587	SL-SE	363	375
NSC	85995	3-Aug-07	588	SL-SE	386	500

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	85996	3-Aug-07	589	SL-SE	366	450
NSC	85997	3-Aug-07	590	SL-SE	362	425
NSC	85998	3-Aug-07	594	SL-SE	364	500
NSC	85999	3-Aug-07	595	SL-SE	376	500
NSC	86000	3-Aug-07	596	SL-SE	348	475
NSC	86477	3-Aug-07	598	SL-SE	415	700
NSC	86478	3-Aug-07	599	SL-SE	410	700
NSC	86479	3-Aug-07	600	SL-SE	392	700
NSC	86480	3-Aug-07	601	SL-SE	338	375
NSC	86481	3-Aug-07	602	SL-SE	343	400
NSC	86482	3-Aug-07	604	SL-SE	406	600
NSC	86483	3-Aug-07	605	SL-SE	318	250
NSC	86484	3-Aug-07	606	SL-SE	396	600
NSC	88128	04-Sep-08	23	SL-SE	385	675
NSC	88129	04-Sep-08	25	SL-SE	409	700
NSC	88130	04-Sep-08	27	SL-SE	413	800
NSC	88131	04-Sep-08	31	SL-SE	364	460
NSC	88133	04-Sep-08	33	SL-SE	416	675
NSC	88134	04-Sep-08	32	SL-SE	364	450
NSC	88135	04-Sep-08	26	SL-SE	415	850
NSC	88136	04-Sep-08	24	SL-SE	420	700
NSC	88137	04-Sep-08	20	SL-SE	417	750
NSC	88139, 88140	04-Sep-08	22	SL-SE	379	675
NSC	88141	04-Sep-08	19	SL-SE	431	700
NSC	88142	04-Sep-08	21	SL-SE	408	800
NSC	88143	04-Sep-08	17	SL-SE	392	500
NSC	88144	04-Sep-08	16	SL-SE	377	510
NSC	88145	04-Sep-08	15	SL-SE	370	525
NSC	88146	04-Sep-08	14	SL-SE	495	600
NSC	88147	04-Sep-08	13	SL-SE	342	500
NSC	88148	04-Sep-08	12	SL-SE	388	650
NSC	88156	04-Sep-08	52	SL-SE	410	710
NSC	88157	04-Sep-08	50	SL-SE	420	725
NSC	88160	04-Sep-08	49	SL-SE	365	500
NSC	88161	04-Sep-08	48	SL-SE	375	510
NSC	88162	04-Sep-08	47	SL-SE	388	650
NSC	88163	04-Sep-08	46	SL-SE	403	650
NSC	88164	04-Sep-08	45	SL-SE	393	525
NSC	88165	04-Sep-08	44	SL-SE	366	500
NSC	88166	04-Sep-08	43	SL-SE	377	510
NSC	88167	04-Sep-08	42	SL-SE	365	500
NSC	88168	04-Sep-08	41	SL-SE	389	610
NSC	88172	04-Sep-08	37	SL-SE	373	525
NSC	88173	04-Sep-08	34	SL-SE	378	500
NSC	88174	04-Sep-08	36	SL-SE	400	600

Table A4.4-1.1. Continued.

Prefix	Tag No.	Date Tagged	Fish No.	Tagging Location ¹	Fork Length (mm)	Weight (g)
NSC	88175	04-Sep-08	35	SL-SE	378	525
NSC	89101	04-Sep-08	54	SL-SE	355	400
NSC	89102	04-Sep-08	55	SL-SE	338	450
NSC	89103	04-Sep-08	56	SL-SE	380	500
NSC	89104	04-Sep-08	57	SL-SE	418	700
NSC	89105	04-Sep-08	58	SL-SE	410	725
NSC	89106	04-Sep-08	59	SL-SE	428	850
NSC	89107	04-Sep-08	60	SL-SE	410	650
NSC	89108	04-Sep-08	61	SL-SE	363	500
NSC	89109	04-Sep-08	62	SL-SE	345	400
NSC	89111	04-Sep-08	63	SL-SE	380	525
NSC	89113	04-Sep-08	64	SL-SE	385	500
NSC	89114	04-Sep-08	65	SL-SE	384	500
NSC	89117	04-Sep-08	66	SL-SE	315	300
NSC	89118	04-Sep-08	67	SL-SE	385	600
NSC	89119	04-Sep-08	68	SL-SE	375	550
NSC	89120	05-Sep-08	69	CL	350	400
NSC	89121	05-Sep-08	70	CL	385	500
NSC	89122	05-Sep-08	71	CL	391	500
NSC	89123	05-Sep-08	73	CL	745	5600
NSC	89125	05-Sep-08	74	CL	583	2400
NSC	89176	06-Sep-08	75	CL	236	200
NSC	89177	06-Sep-08	76	CL	238	225
NSC	89178	06-Sep-08	77	CL	323	350
NSC	89180	06-Sep-08	80	CL	332	350
NSC	89182	06-Sep-08	81	CL	351	425
NSC	89183	06-Sep-08	83	CL	383	600
NSC	89184	06-Sep-08	84	CL	330	300
NSC	89185	07-Sep-08	87	CL	386	500
NSC	89186	07-Sep-08	88	CL	350	425
NSC	89187	07-Sep-08	89	CL	526	1200
NSC	89188	07-Sep-08	90	CL	430	800
NSC	89189	09-Sep-08	1777	SDLT1	320	250

1 - AL = Angajurjualuk Lake, CL = Camp Lake, ML-N = Mary Lake - North Basin, ML-S = Mary Lake - South Basin, SL-NW = Sheardown Lake – Northwest basin, SL-SE = Sheardown Lake – Southeast basin, SDLT1 = Sheardown Lake Tributary 1

Table A4.4-1.2. Summary of Arctic char marked with Floy® tags and recaptured in waterbodies in the Mine Area, 2006-2008.

Waterbody	Year	No. Fish Tagged	No. Fish Recaptured	Recapture Comments
Angajurjualuk Lake	2007	117	0	
Camp Lake	2006	3	0	
	2007	64	1	Recaptured in hoop net set in CLT2 during fall 2007
	2008	16	0	
Mary Lake - North Basin	2007	77	0	
Mary Lake - South Basin	2007	119	0	
Sheardown Lake ¹	2007	79	1	Recaptured in the same location during fall 2008
	2008	57	0	

1 - One of the fish tagged in the Sheardown Lake watershed in 2008 was captured in a hoop net set at the confluence with Sheardown Lake Tributary #1; all others were captured in gill nets set in the lake

Acoustic Tagging Results

The following tables (tables A4.4-1.3 and A4.4-1.4) present detailed biological and monitoring information for individual fish marked with acoustic tags in waterbodies in the Mine Area from 2007-2008. Detections for individually tagged fish are presented by receiver in Table A4.4-1.4.

Table A4.4-1.3. Movements of acoustically tagged Arctic char within Mine Area lakes during 2007 and 2008.

Acoustic Tag #	Acoustic Code	Floy-tag #	Length (mm)	Weight (g)	Date Tagged	Date Last Detected	Location Tagged	Number of Detections		Interlake / basin Movements	Movement Summary
								2007	2008		
4340	150	85033	406	625	24-Jul-07	10-Sep-08	Camp Lake	835	15325	No	
4341	151	85032	576	1875	24-Jul-07	10-Sep-08	Camp Lake	3234	22429	No	
4342	152	85027	611	2100	24-Jul-07	10-Sep-08	Camp Lake	3403	19768	No	
4347	157	85054	402	500	24-Jul-07	09-Sep-08	Camp Lake	26069	28921	Yes	Moved to ML-N on 23-Aug-07, returned to CL on 7-Jul-08
4348	158	85045	382	500	24-Jul-07	10-Sep-08	Camp Lake	1484	26794	No	
4349	159	85053	520	1150	24-Jul-07	07-Sep-08	Camp Lake	18963	40771	No	
4393	203	85025	682	3050	24-Jul-07	10-Sep-08	Camp Lake	3433	17221	No	
4454	1179	85026	410	650	24-Jul-07	10-Sep-08	Camp Lake	8988	68440	No	
5317	1150	85017	627	2850	23-Jul-07	30-Aug-08	Camp Lake	2759	9872	No	
4345	155	85292	398	500	27-Jul-07	10-Sep-08	Mary Lake - N	22037	10922	Yes	Moved to ML-S sometime between 20-Jul and 20-Aug-08, returned to ML-N by 22-Aug-08
4346	156	85291	397	575	27-Jul-07	10-Sep-08	Mary Lake - N	22536	12754	No	
4350	160	85290	401	625	27-Jul-07	22-Aug-08	Mary Lake - N	13986	12051	Yes	Moved from ML-N to ML-S on 8-Jul-08, returned by 15-Jul-08
4351	161	85071	458	850	26-Jul-07	10-Sep-08	Mary Lake - N	17085	25965	Yes	Moved from ML-N to ML-S on 25-Jul-08, moved between receivers within ML-S until returning to ML-N on 23-Aug-08
4352	162	85503	411	600	28-Jul-07	05-Sep-08	Mary Lake - S	1595	22747	No	Moved between receivers within ML-S
4353	163	85504	389	450	28-Jul-07	10-Sep-08	Mary Lake - S	12083	25087	Yes	Moved to ML-N from 24-Jun to 4-Jul-08 and then returned to ML-S; Moved between receivers in ML-S remainder of the time in 2007 and 2008
4354	164	85505	392	550	28-Jul-07	24-Aug-08	Mary Lake - S	9018	1	No	Only one hit in 2008, on 24-Aug
4355	165	85513	417	700	29-Jul-07	12-Sep-08	Mary Lake - S	13288	21976	No	Moved between receivers within ML-S
4356	166	85522	590	1675	29-Jul-07	12-Sep-08	Mary Lake - S	21261	26167	No	Moved between receivers within ML-S
4357	167	85509	409	600	29-Jul-07	25-Aug-07	Mary Lake - S	9318	0	No	Moved between receivers within ML-S in 2007; not observed in 2008
4358	168	85511	402	550	29-Jul-07	12-Sep-08	Mary Lake - S	28177	53175	No	Moved between receivers within ML-S

Table A4.4-1.3. Continued.

Acoustic Tag #	Acoustic Code	Floy-tag #	Length (mm)	Weight (g)	Date Tagged	Date Last Detected	Location Tagged	Number of Detections		Interlake / basin Movements	Movement Summary
								2007	2008		
4359	169	85521	530	1500	29-Jul-07	12-Sep-08	Mary Lake - S	14458	11221	Yes	Moved to ML-N from 23-Jun to 29-Jun-08, returned to ML-S for ~ half a day on 29-Jun, moved back to ML-N until 12-Jul, returned to ML-S for the remainder of the survey in 2008; Moved between receivers in ML-S the remainder of the time in 07 and 08
4360	170	85520	468	1000	29-Jul-07	08-Sep-08	Mary Lake - S	12398	15832	No	Moved between receivers within ML-S
4384	194	85515	457	825	29-Jul-07	12-Sep-08	Mary Lake - S	16418	10895	No	Moved between receivers within ML-S
4361	171	85936	475	1000	02-Aug-07	07-Sep-07	Sheardown Lake - NW	3033	0	Yes?	There were an additional 354 hits at the Mary Lake @ Mary River Inlet receiver on July 22, 07. This fish was not recorded in Sheardown Lake until Aug, 07. These hits may indicate this fish spent time in Mary River during July. Possibly returned to and remained in the northwest basin of Sheardown Lake in 2008.
4362	172	85935	413	700	02-Aug-07	10-Sep-08	Sheardown Lake - NW	6206	34076	Yes?	Recorded in the SE in Aug-Sep, 07 and 08 and May-June, 08 - in the NW the remainder of the time?
4363	173	85951	468	875	02-Aug-07	15-Aug-08	Sheardown Lake - NW	2	636	Yes?	NW Basin in 2007? SE only from 8-15 Aug 2008, NW basin the rest of the time in 08?
4364	174	85944	517	1225	02-Aug-07	N/A	Sheardown Lake - NW	0	0	No	Stayed in northwest basin both years?
4367	177	85939	571	1050	02-Aug-07	10-Sep-07	Sheardown Lake - NW	3120	0	Yes?	Mainly in SE only during late Aug-Sep 07. Stayed in northwest basin in 2008?
4371	181	85959	548	1375	02-Aug-07	26-Aug-08	Sheardown Lake - NW	2582	472	Yes?	SE basin in Aug both years - NW basin the rest of the time?
4379	189	85963	587	1800	02-Aug-07	12-Aug-08	Sheardown Lake - NW	3317	4097	Yes?	SE from mid to late Aug, 07 and 2-Jul to 12-Aug, 08 - NW rest of the time?
4385	195	85945	462	800	02-Aug-07	N/A	Sheardown Lake - NW	0	0	No	Stayed in northwest basin both years?

Table A4.4-1.4. Movements of acoustically tagged Arctic char detected in lakes in the Mary River Mine and Camp Study Area during 2007 and 2008.

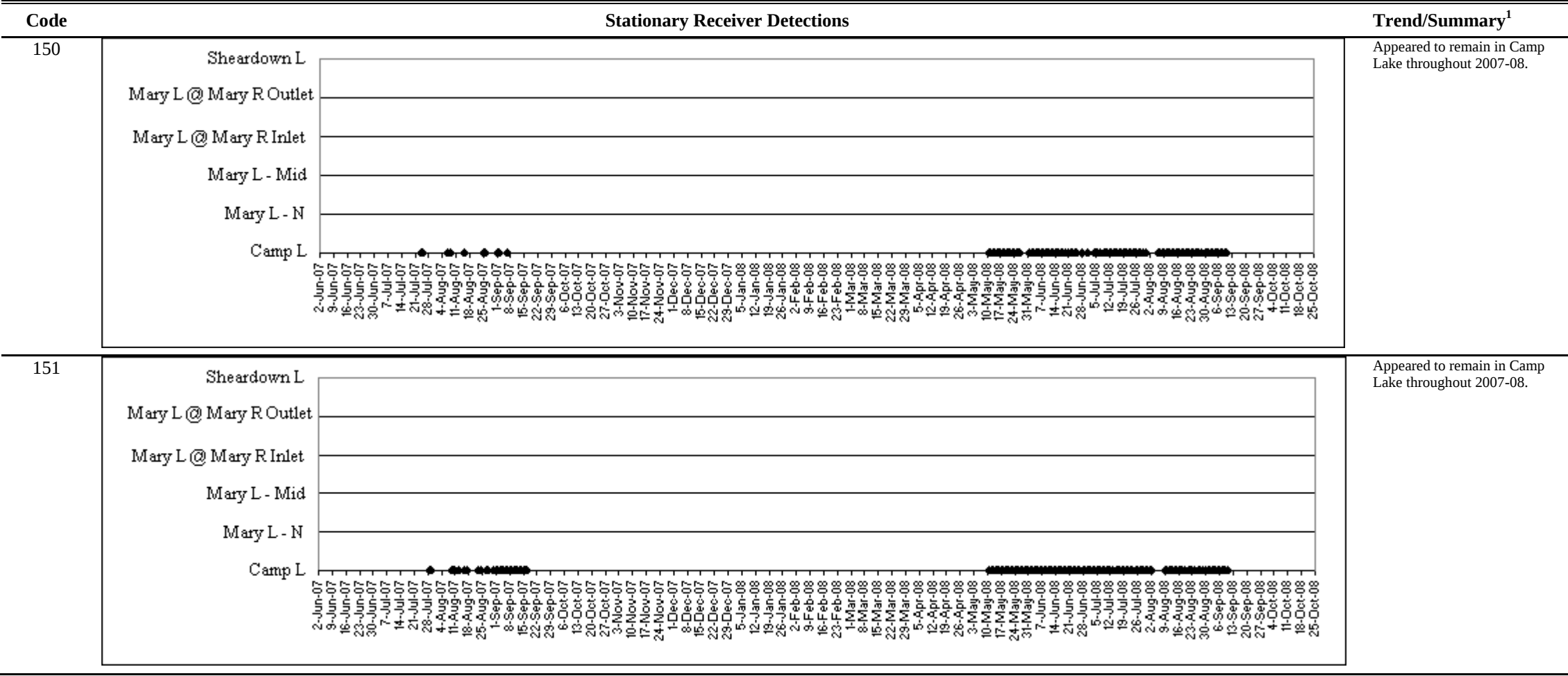


Table A4.4-1.4. Continued.

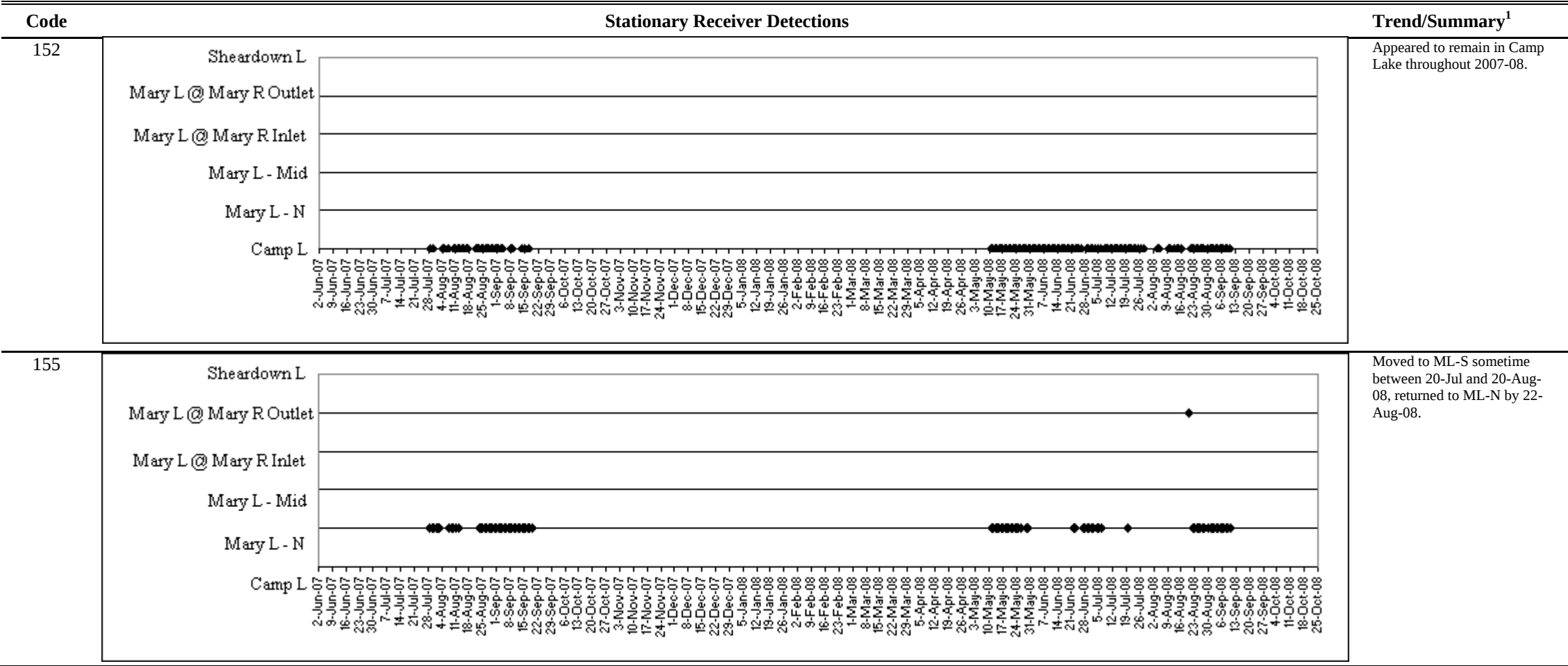


Table A4.4-1.4. Continued.

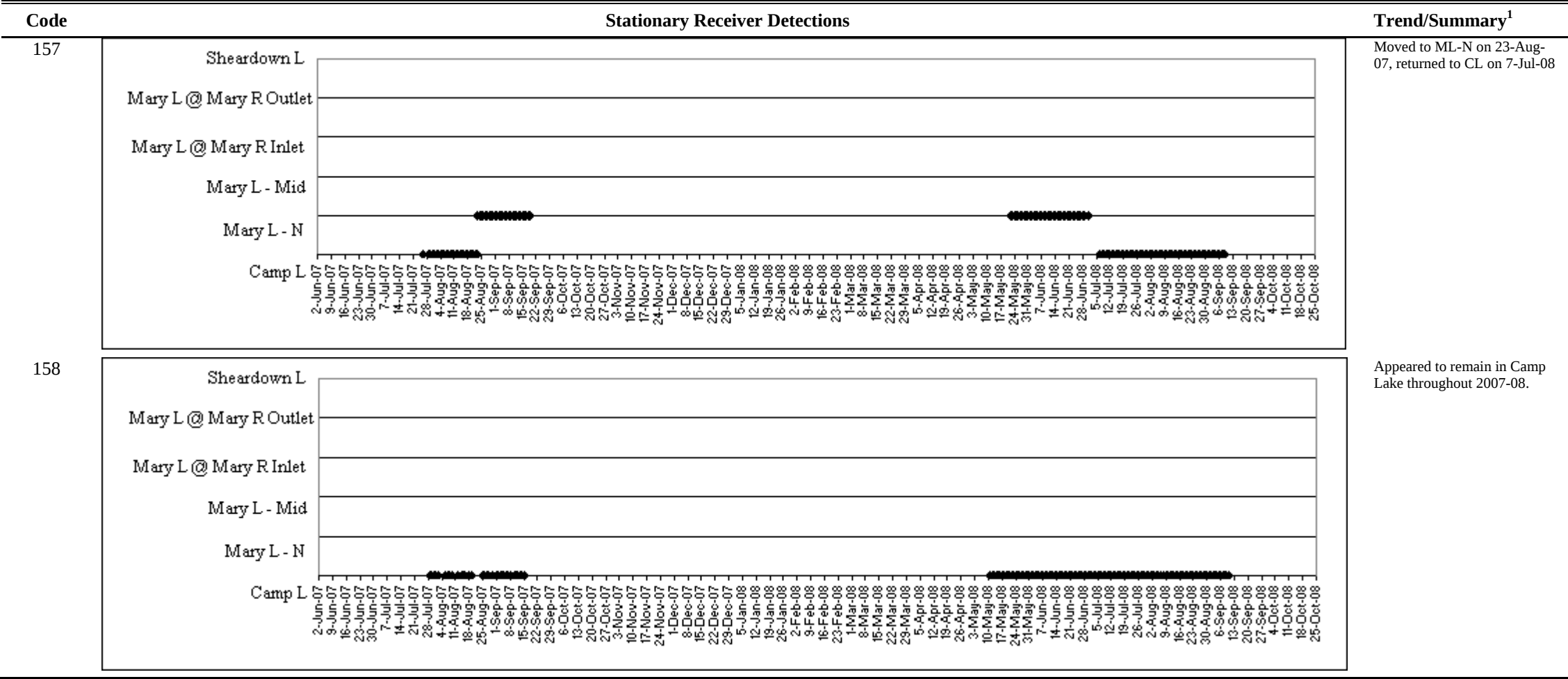


Table A4.4-1.4. Continued.

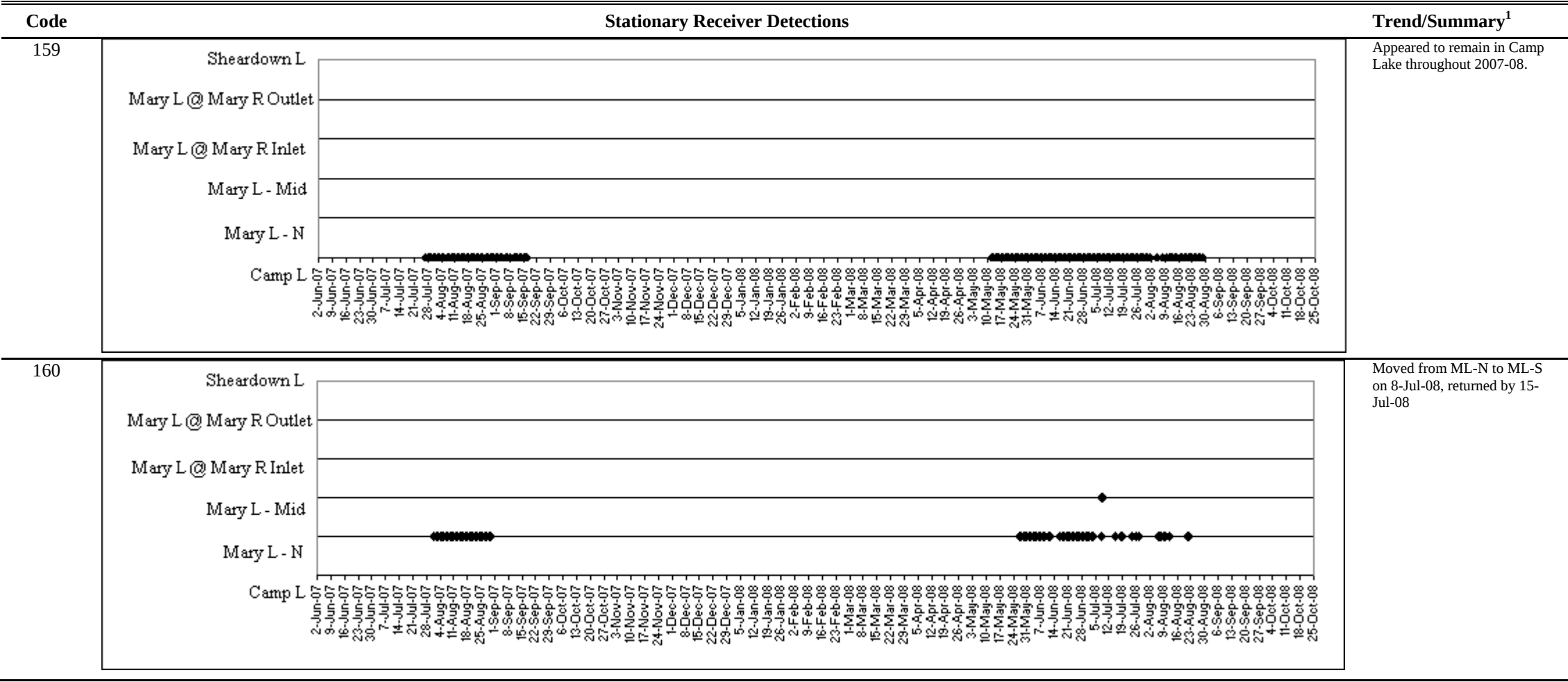


Table A4.4-1.4. Continued.

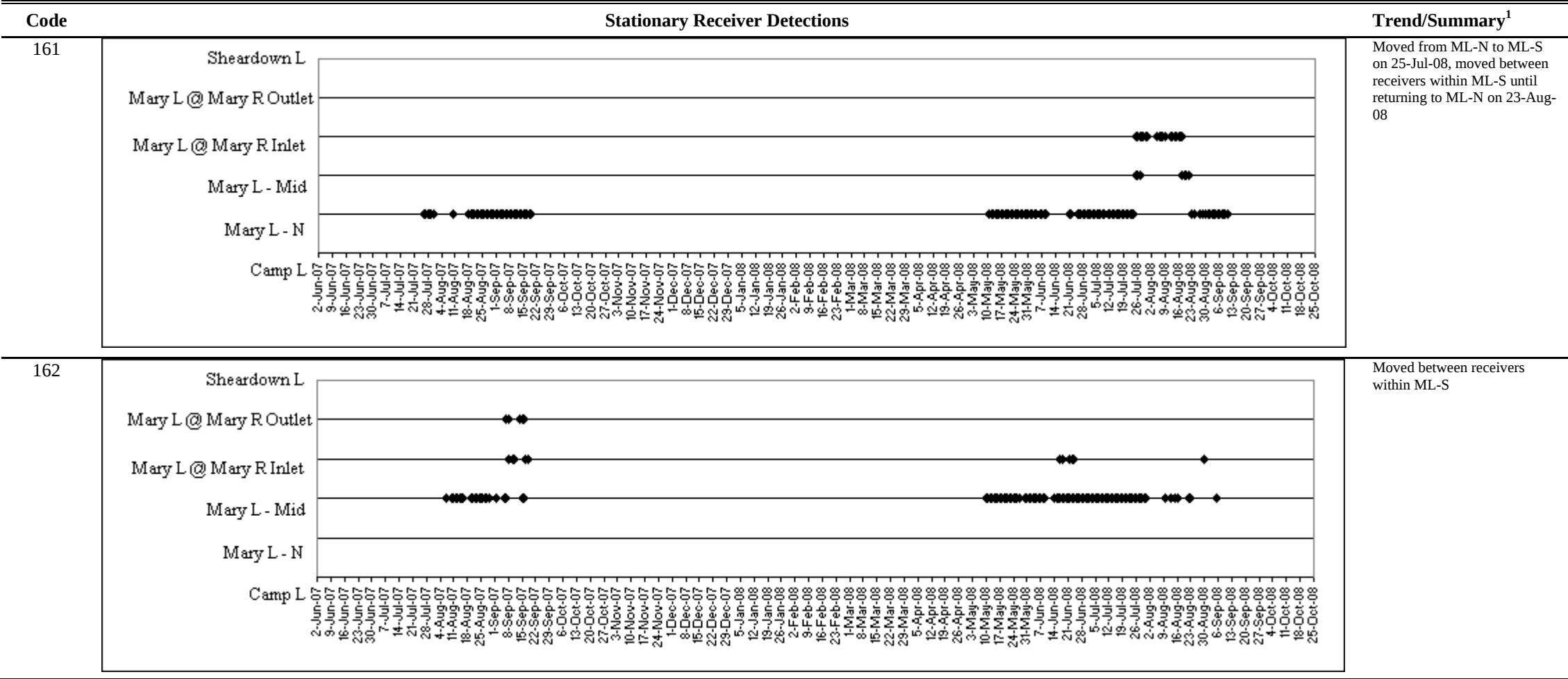


Table A4.4-1.4. Continued.

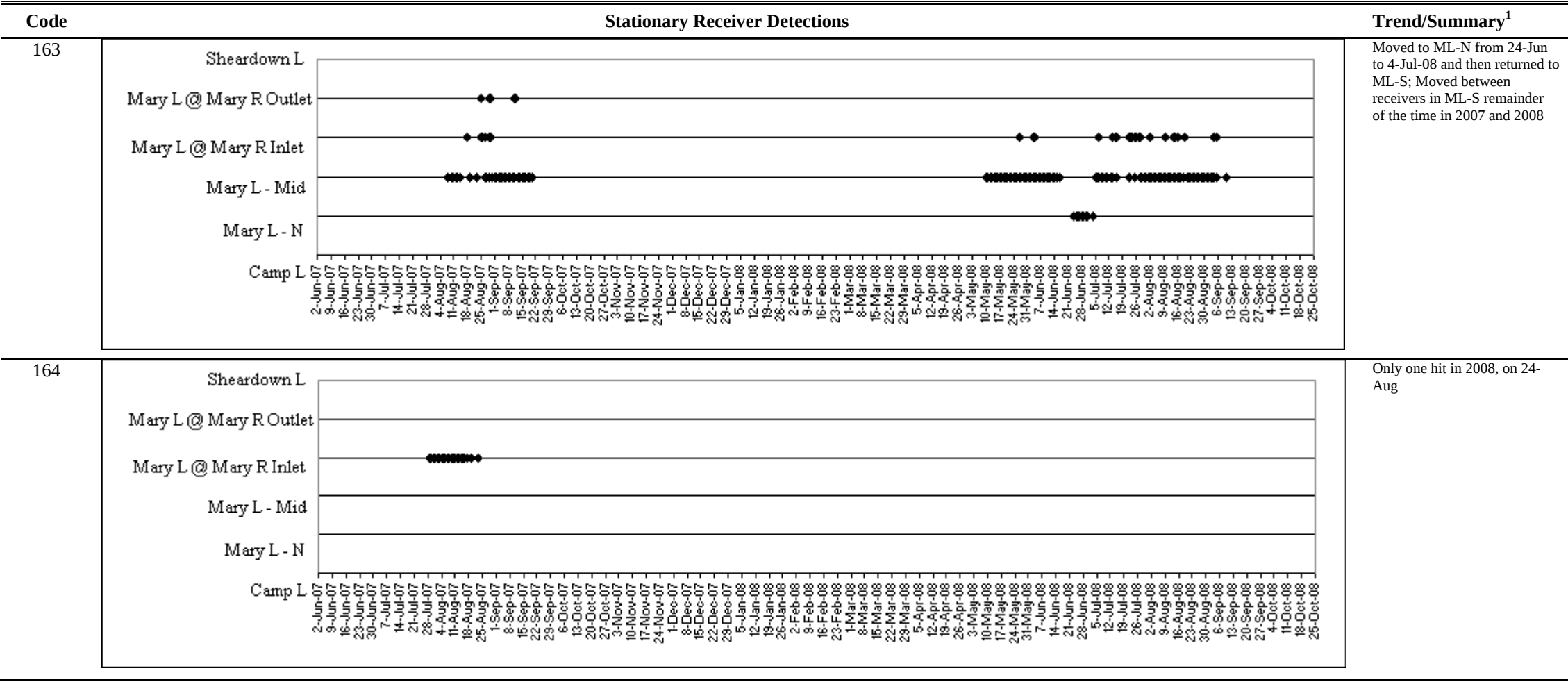


Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹														
165	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L <table><caption>Detection Dates for Code 165</caption><tr><th>Receiver</th><th>Detection Dates (Approximate)</th></tr><tr><td>Sheardown L</td><td>None</td></tr><tr><td>Mary L @ Mary R Outlet</td><td>2007-07-15 to 2007-09-15</td></tr><tr><td>Mary L @ Mary R Inlet</td><td>2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15</td></tr><tr><td>Mary L - Mid</td><td>2008-05-15 to 2008-10-15</td></tr><tr><td>Mary L - N</td><td>None</td></tr><tr><td>Camp L</td><td>None</td></tr></table>	Receiver	Detection Dates (Approximate)	Sheardown L	None	Mary L @ Mary R Outlet	2007-07-15 to 2007-09-15	Mary L @ Mary R Inlet	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15	Mary L - Mid	2008-05-15 to 2008-10-15	Mary L - N	None	Camp L	None	Moved between receivers within ML-S
Receiver	Detection Dates (Approximate)															
Sheardown L	None															
Mary L @ Mary R Outlet	2007-07-15 to 2007-09-15															
Mary L @ Mary R Inlet	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15															
Mary L - Mid	2008-05-15 to 2008-10-15															
Mary L - N	None															
Camp L	None															
166	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L <table><caption>Detection Dates for Code 166</caption><tr><th>Receiver</th><th>Detection Dates (Approximate)</th></tr><tr><td>Sheardown L</td><td>None</td></tr><tr><td>Mary L @ Mary R Outlet</td><td>2007-07-15 to 2007-09-15</td></tr><tr><td>Mary L @ Mary R Inlet</td><td>2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15</td></tr><tr><td>Mary L - Mid</td><td>2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15</td></tr><tr><td>Mary L - N</td><td>None</td></tr><tr><td>Camp L</td><td>None</td></tr></table>	Receiver	Detection Dates (Approximate)	Sheardown L	None	Mary L @ Mary R Outlet	2007-07-15 to 2007-09-15	Mary L @ Mary R Inlet	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15	Mary L - Mid	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15	Mary L - N	None	Camp L	None	Moved between receivers within ML-S
Receiver	Detection Dates (Approximate)															
Sheardown L	None															
Mary L @ Mary R Outlet	2007-07-15 to 2007-09-15															
Mary L @ Mary R Inlet	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15															
Mary L - Mid	2007-07-15 to 2007-09-15; 2008-05-15 to 2008-10-15															
Mary L - N	None															
Camp L	None															

Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
167	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	Moved between receivers within ML-S in 2007; not observed in 2008
168	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	Moved between receivers within ML-S

Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
169	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	Moved to ML-N from 23-Jun to 29-Jun-08, returned to ML-S for ~ half a day on 29-Jun, moved back to ML-N until 12-Jul, returned to ML-S for the remainder of the survey in 2008; Moved between receivers in ML-S the remainder of the time in 07 and 08
170	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	Moved between receivers within ML-S

Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
171	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	There were an additional 354 hits at the Mary Lake @ Mary River Inlet receiver on July 22, 07. This fish was not recorded in Sheardown Lake until Aug, 07. These hits may indicate this fish spent time in Mary River during July. Possibly returned to and remained in the northwest basin of Sheardown Lake in 2008 where it was originally tagged.
172	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L	Recorded in the SE in Aug-Sep, 07 and 08 and May-June, 08 - in the NW the remainder of the time?

Table A4.4-1.4. Continued.

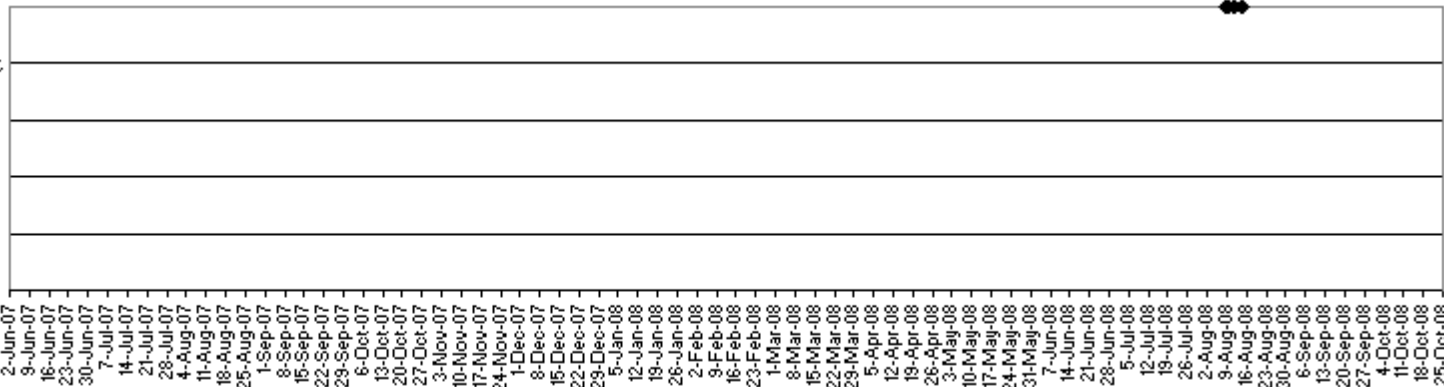
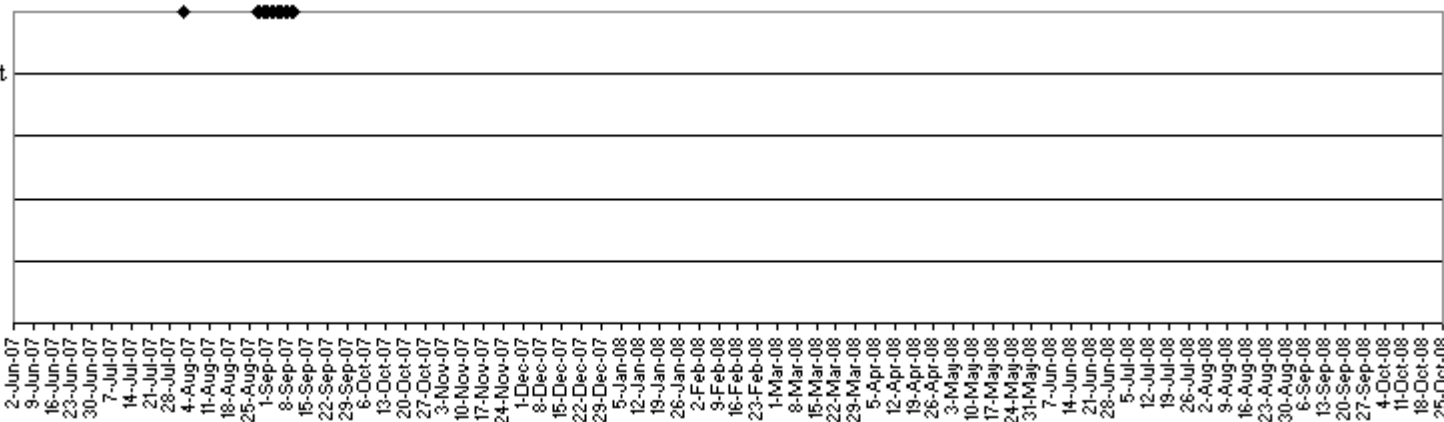
Code	Stationary Receiver Detections	Trend/Summary ¹
173	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 	NW Basin in 2007? SE only from 8-15 Aug 2008, NW basin the rest of the time in 08?
174	No Detections	Stayed in northwest basin both years?
177	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 	Mainly in SE only during late Aug-Sep 07. Stayed in northwest basin in 2008?

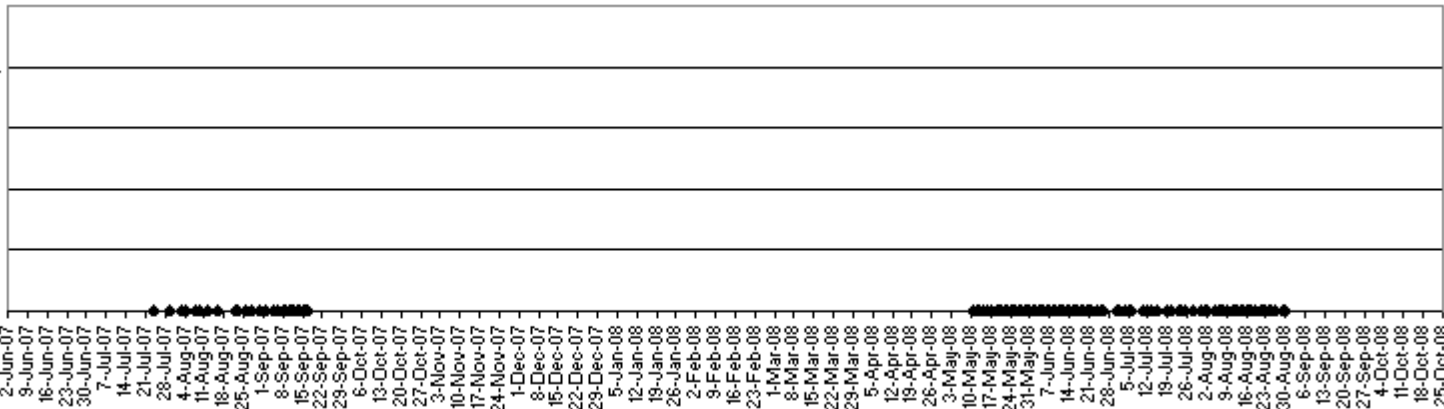
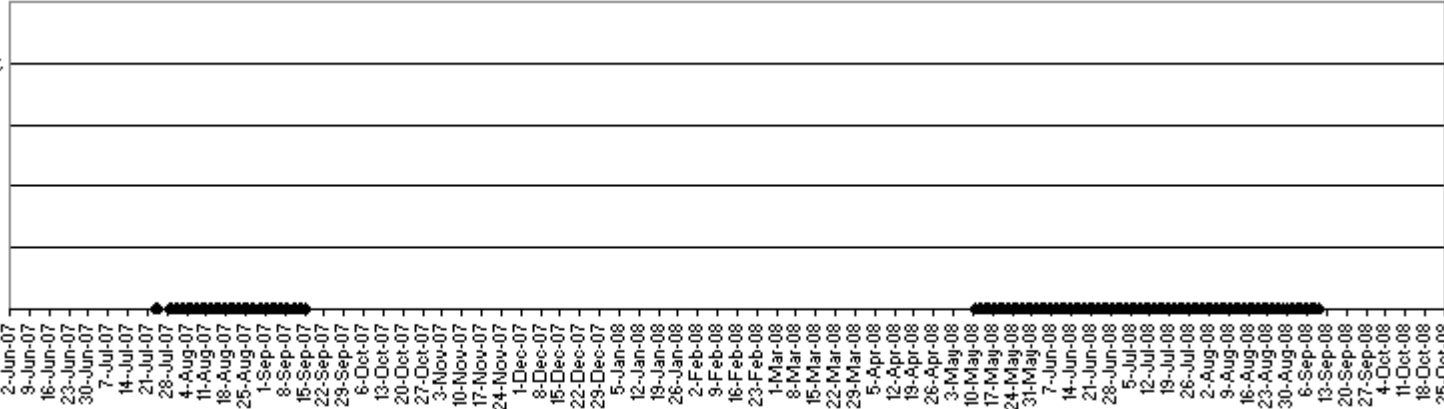
Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
181	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 2-Jun-07 9-Jun-07 16-Jun-07 23-Jun-07 30-Jun-07 7-Jul-07 14-Jul-07 21-Jul-07 28-Jul-07 4-Aug-07 11-Aug-07 18-Aug-07 25-Aug-07 1-Sep-07 8-Sep-07 15-Sep-07 22-Sep-07 29-Sep-07 6-Oct-07 13-Oct-07 20-Oct-07 27-Oct-07 3-Nov-07 10-Nov-07 17-Nov-07 24-Nov-07 1-Dec-07 8-Dec-07 15-Dec-07 22-Dec-07 29-Dec-07 5-Jan-08 12-Jan-08 19-Jan-08 26-Jan-08 2-Feb-08 9-Feb-08 16-Feb-08 23-Feb-08 1-Mar-08 8-Mar-08 15-Mar-08 22-Mar-08 29-Mar-08 5-Apr-08 12-Apr-08 19-Apr-08 26-Apr-08 3-May-08 10-May-08 17-May-08 24-May-08 31-May-08 7-Jun-08 14-Jun-08 21-Jun-08 28-Jun-08 5-Jul-08 12-Jul-08 19-Jul-08 26-Jul-08 2-Aug-08 9-Aug-08 16-Aug-08 23-Aug-08 30-Aug-08 6-Sep-08 13-Sep-08 20-Sep-08 27-Sep-08 4-Oct-08 11-Oct-08 18-Oct-08 25-Oct-08	SE basin in Aug both years - NW basin the rest of the time?
189	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 2-Jun-07 9-Jun-07 16-Jun-07 23-Jun-07 30-Jun-07 7-Jul-07 14-Jul-07 21-Jul-07 28-Jul-07 4-Aug-07 11-Aug-07 18-Aug-07 25-Aug-07 1-Sep-07 8-Sep-07 15-Sep-07 22-Sep-07 29-Sep-07 6-Oct-07 13-Oct-07 20-Oct-07 27-Oct-07 3-Nov-07 10-Nov-07 17-Nov-07 24-Nov-07 1-Dec-07 8-Dec-07 15-Dec-07 22-Dec-07 29-Dec-07 5-Jan-08 12-Jan-08 19-Jan-08 26-Jan-08 2-Feb-08 9-Feb-08 16-Feb-08 23-Feb-08 1-Mar-08 8-Mar-08 15-Mar-08 22-Mar-08 29-Mar-08 5-Apr-08 12-Apr-08 19-Apr-08 26-Apr-08 3-May-08 10-May-08 17-May-08 24-May-08 31-May-08 7-Jun-08 14-Jun-08 21-Jun-08 28-Jun-08 5-Jul-08 12-Jul-08 19-Jul-08 26-Jul-08 2-Aug-08 9-Aug-08 16-Aug-08 23-Aug-08 30-Aug-08 6-Sep-08 13-Sep-08 20-Sep-08 27-Sep-08 4-Oct-08 11-Oct-08 18-Oct-08 25-Oct-08	SE from mid to late Aug, 07 and 2-Jul to 12-Aug, 08 - NW rest of the time?

Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
194	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 2-Jun-07 9-Jun-07 16-Jun-07 23-Jun-07 30-Jun-07 7-Jul-07 14-Jul-07 21-Jul-07 28-Jul-07 4-Aug-07 11-Aug-07 18-Aug-07 25-Aug-07 1-Sep-07 8-Sep-07 15-Sep-07 22-Sep-07 29-Sep-07 6-Oct-07 13-Oct-07 20-Oct-07 27-Oct-07 3-Nov-07 10-Nov-07 17-Nov-07 24-Nov-07 1-Dec-07 8-Dec-07 15-Dec-07 22-Dec-07 29-Dec-07 5-Jan-08 12-Jan-08 19-Jan-08 26-Jan-08 2-Feb-08 9-Feb-08 16-Feb-08 23-Feb-08 1-Mar-08 8-Mar-08 15-Mar-08 22-Mar-08 29-Mar-08 5-Apr-08 12-Apr-08 19-Apr-08 26-Apr-08 3-May-08 10-May-08 17-May-08 24-May-08 31-May-08 7-Jun-08 14-Jun-08 21-Jun-08 28-Jun-08 5-Jul-08 12-Jul-08 19-Jul-08 26-Jul-08 2-Aug-08 9-Aug-08 16-Aug-08 23-Aug-08 30-Aug-08 6-Sep-08 13-Sep-08 20-Sep-08 27-Sep-08 4-Oct-08 11-Oct-08 18-Oct-08 25-Oct-08	Moved between receivers within ML-S
195	No Detections	Stayed in northwest basin both years?
203	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 2-Jun-07 9-Jun-07 16-Jun-07 23-Jun-07 30-Jun-07 7-Jul-07 14-Jul-07 21-Jul-07 28-Jul-07 4-Aug-07 11-Aug-07 18-Aug-07 25-Aug-07 1-Sep-07 8-Sep-07 15-Sep-07 22-Sep-07 29-Sep-07 6-Oct-07 13-Oct-07 20-Oct-07 27-Oct-07 3-Nov-07 10-Nov-07 17-Nov-07 24-Nov-07 1-Dec-07 8-Dec-07 15-Dec-07 22-Dec-07 29-Dec-07 5-Jan-08 12-Jan-08 19-Jan-08 26-Jan-08 2-Feb-08 9-Feb-08 16-Feb-08 23-Feb-08 1-Mar-08 8-Mar-08 15-Mar-08 22-Mar-08 29-Mar-08 5-Apr-08 12-Apr-08 19-Apr-08 26-Apr-08 3-May-08 10-May-08 17-May-08 24-May-08 31-May-08 7-Jun-08 14-Jun-08 21-Jun-08 28-Jun-08 5-Jul-08 12-Jul-08 19-Jul-08 26-Jul-08 2-Aug-08 9-Aug-08 16-Aug-08 23-Aug-08 30-Aug-08 6-Sep-08 13-Sep-08 20-Sep-08 27-Sep-08 4-Oct-08 11-Oct-08 18-Oct-08 25-Oct-08	Appeared to remain in Camp Lake throughout 2007-08.

Table A4.4-1.4. Continued.

Code	Stationary Receiver Detections	Trend/Summary ¹
1150	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 	Appeared to remain in Camp Lake throughout 2007-08.
1179	Sheardown L Mary L @ Mary R Outlet Mary L @ Mary R Inlet Mary L - Mid Mary L - N Camp L 	Appeared to remain in Camp Lake throughout 2007-08.

APPENDIX 4.4-2.

DESCRIPTION OF STRONTIUM ANALYSIS BACKGROUND AND TECHNIQUES AND PRESENTATION OF DETAILED RESULTS.

	Page
Table A4.4-2.1. Biological data for fish analysed for otolith strontium from lakes in the Mine Area, 2007..	A4.4-2_7
Figure A4.4-2.1a. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007..	A4.4-2_8
Figure A4.4-2.1b. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007..	A4.4-2_9
Figure A4.4-2.1c. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007..	A4.4-2_10
Figure A4.4-2.1d. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.....	A4.4-2_11
Figure A4.4-2.1e. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.....	A4.4-2_12
Figure A4.4-2.1f. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.....	A4.4-2_13
Figure A4.4-2.1g. Strontium concentrations in otoliths of fish captured in the northwest basin of Sheardown Lake, 2007.....	A4.4-2_14
Figure A4.4-2.1h. Strontium concentrations in otoliths of fish captured in both basins of Sheardown Lake, 2007.....	A4.4-2_15
Figure A4.4-2.1i. Strontium concentrations in otoliths of fish captured in the southeast basin of Sheardown Lake, 2007.....	A4.4-2_16

Strontium Analysis

Laser ablation microprobe technology (LA-ICP-MS analysis) is used to determine elemental concentrations in the bony structures of fish. Differences in elemental concentration at different locations on the structure can be used to make inferences about fish movements between fresh and marine water and biological cycles such as reproduction. The following sections provide a brief background and methodology describing how this technology is used to investigate anadromous behaviour in fish.

Background

The concentration of strontium in the bony structures of fish has frequently been used to determine the degree of anadromy in fish populations (Bagenal et al. 1973; Behrens-Yamada et al. 1979; Moreau and Barbeau 1979; Gaboury 1980; Radtke 1989; Kalish 1990; MacDonell et al. 1992; Coutant and Chen 1993; Halden et al. 1995, 1996; Babaluk et al. 1997; Stephenson et al. 2005). Marine water contains hundreds of times more strontium than freshwater (Ophel and Judd 1968; Rosenthal et al. 1970) and fish feeding in a marine environment will take up more strontium than fish of the same species feeding in freshwater. The metabolism of strontium and other trace elements is similar to that of calcium in that it is deposited and retained in the bony tissues of the animal during growth (Mugiya 1964; Ophel and Judd 1968; Degens et al. 1969; Eisenberg 1973). Thus, strontium will be deposited at greater or lesser rates within a given fish depending upon diet and whether that individual is feeding in fresh or marine water (Ophel and Judd 1968), such that strontium concentration within layers of the bony structure is not uniform (Radtke et al. 1990; Campana 1999).

Previous investigations assessing anadromy were limited to determining the average concentration of strontium for the entire bony structure, without the ability to determine areas of different concentration within the structure. Therefore, it was not possible to determine when or how many times a given fish moved between fresh and marine waters. Threshold limits of average strontium were developed for some species, and average strontium concentrations in excess of the threshold value were considered to be suggestive of anadromy (Moreau and Barbeau 1979; Stewart and Bernier 1983; Swanson and Kansas 1987; MacDonell et al. 1992). This approach is limited because if the fish remains out of a marine environment for several years, or abandons the marine environment completely, average strontium concentration may decline below the threshold value (because it is deposited at a much lower rate in freshwater), and the fish would be considered non-anadromous even though it had made some use of a marine environment.

More recently, it has become possible to determine strontium concentrations at discrete locations

(“point-in-time”) within the bony structures of a fish (strontium zoning) using particle-induced x-ray emission (PIXE) or laser ablation microprobe technology (LA-ICP-MS) (Kalish 1989; 1990; also see following sections for methodology). Several investigators have used these technologies to examine fish life histories, including characterizing anadromous behaviour (Coote et al. 1991; Halden et al. 1995; Radtke 1995; Halden et al. 1996; Radtke et al. 1996; Veinott et al. 1999; Stephenson et al. 2005).

Otolith Collection and Preparation

Otoliths were removed from a subsample of Arctic char gillnetting mortalities from the south basin of Mary Lake, Angajurjualuk Lake, and both basins of Sheardown Lake during summer, 2007, fish community investigations. Sampled otoliths were placed in labelled coin envelopes and submitted to the University of Manitoba for analyses.

Otoliths from selected fish are embedded in epoxy resin, and a transverse cut is made to create a dorso-ventral cross section through the nucleus of the otolith, exposing all annuli. The posterior half of each cut otolith is re-embedded in a 25 mm diameter acrylic microprobe mount (up to seven otoliths per mount). The exposed otolith surfaces are sequentially ground (with 30 and 9 μm wetted aluminum oxide lapping film), polished (0.3 μm dry aluminum oxide lapping film), and finally ultrasonically cleaned in ultrapure water.

LA-ICP-MS Analysis

To describe the LA-ICP-MS process simply, a laser beam follows a transect across the polished face of the otolith. As the laser moves along, the surface of the otolith is “burned” and elements that compose the otolith are released. Element concentration (strontium and others) is determined using a mass spectrometer. A line scan is then produced by plotting strontium concentration with distance (μm) from the origin of the transect. To produce a line scan that encompasses the duration of a fish’s life, the transect starts at the nucleus of the otolith (formed at birth) and extends to the periphery of the otolith (see Figure 4).

In more technical terms, LA-ICP-MS analysis is done using a Thermo Finnigan Element 2 ICP-MS coupled to a Merchantek LUV 213 Nd-YAG laser. Table 1 describes the instrument parameters used during analysis. For fish otoliths, the optimum conditions used a 30 μm diameter beam travelling at 2 μms^{-1} . This provided good sensitivity at a beam size capable of resolving all but the smallest (~20 - 30 μm) annular growth features in the otoliths. Calcium (as 56 wt.% CaO) is used as an internal standard. The external calibration standard used is NIST glass 610 using the nominal values reported by Pearce et al. (1997). The measured trace element concentrations, standard deviations and detection limits are processed from intensities using

GLITTER (van Achterberg et al. 2001) and exported to Microsoft® Excel and Sigma Plot® for final presentation.

Data Interpretation

Strontium deposition in otoliths roughly occurs in annual cycles due to the cyclic nature of growth in temperate regions, seasonal patterns in feeding rates, migration, and differences in strontium concentration depending upon where a fish was feeding. Inferences regarding fish movement patterns between fresh and marine water can be made by interpreting patterns of strontium deposition in the fish's otolith. In general, fish that remain in freshwater display pulses of strontium increase that corresponds to seasonal feeding bouts, but the pulses tend to be consistent in magnitude throughout the line scan. Results are graphed such that strontium concentration is displayed at increasing distance from the origin of the microprobe scan (i.e., the centre of the otolith). Changes to strontium concentration with increasing age are then identifiable.

Detailed results

Results of strontium analyses from otoliths of Arctic char captured in 2007 are presented in figures A4.4-2.1a-i). Raw biological data for all char analysed for strontium microchemistry are provided in Table A4.4-2.1. In general, patterns of strontium concentration in the otoliths of sampled fish do not indicate any anadromy. Although, without direct comparisons to concentrations from char captured in the nearest downstream marine habitat (Steensby Inlet), anadromy cannot be completely dismissed. Observed patterns from each lake are discussed below.

Six of the char analysed from the south basin of Mary Lake (Fish #204, 210, 275, 303, 307, and 312) showed little to no change in strontium concentrations (figures A4.4-2.1a, b, and c), suggesting that these fish have remained in or near Mary Lake throughout their lives. Five Mary Lake char (Fish # 192, 209, 304, 311, and 334) all showed a small, short duration increase in strontium concentration at a distance of approximately 200-600 µm from the origin of the microprobe scan. It is unknown if these peaks represent a short duration visit to another body of water or an increase in the background levels of strontium during a particular time period. Additional data on fish ages and background strontium levels are required for analysis. The remaining four Mary Lake char all showed much higher strontium concentration peaks of varying duration and distance along the scan. These strontium concentrations, particularly for Fish #308, suggest that these fish have spent at least a portion of their life cycle in a different waterbody. Observed peak concentrations are consistent with those detected in Angajurjualuk

Lake char (figures A4.4-2.1d, e, and f), which is approximately 6 km downstream. These data indicate that movements of some fish between the two lakes may have occurred.

Average concentrations of strontium in otoliths of char from Angajurjualuk Lake are much higher than those observed in Mary Lake (figures A4.4-2.1d, e, and f). In addition, there is more variation in the concentrations in individual fish. The relatively consistent strontium concentration peaks and valleys of approximately 750 and 250 ppm, respectively, suggest some regular or periodic movement of most fish between different waterbodies or perhaps between different areas of this large lake. The strontium concentration pattern of Fish #403 indicates that this fish probably spent the early part of its life cycle in Mary Lake (figures A4.4-2.1d, e, and f). Four char from Angajurjualuk Lake (Fish #381, 420, 476, and 477) had peak concentrations (> 1000 ppm) that were much higher than other sampled fish. These peaks typically occurred early in life and, therefore, do not suggest anadromy. It is unknown where these fish may have spent the early part of their life cycles.

Of the 15 fish sampled from Sheardown Lake, only one captured from the northwest basin (Fish #541) showed a significant change in strontium concentration (from < 100 to approximately 250 ppm) (figures A4.4-2.1g, h, and i). This change was of short duration and may have resulted from brief movements between waterbodies. The remaining 14 fish showed little or no change in strontium concentrations in otoliths, which suggests that they likely remained in Sheardown Lake throughout the majority of their life cycle. The outflow of Sheardown Lake into the Mary River is relatively shallow (approximately 10 cm) throughout most of the open water season, which may limit the accessibility of downstream areas in the catchment by adult Arctic char to only brief, periodic movements.

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Table A4.4-2.1. Biological data for fish analysed for otolith strontium from lakes in the Mine Area, 2007.

Fish ID	Waterbody	Date Captured	Fork Length (mm)	Weight (g)	Sex	Maturity	Age (yrs)
192	ML-S	28-Jul-07	451	800	M	11	12
204	ML-S	28-Jul-07	424	725	M	11	23
209	ML-S	29-Jul-07	440	750	M	6	16
210	ML-S	29-Jul-07	432	700	F	1	19
265	ML-S	30-Jul-07	396	500	M	6	13
275	ML-S	30-Jul-07	418	550	F	1	15
279	ML-S	30-Jul-07	374	500	F	1	15
284	ML-S	30-Jul-07	408	600	F	2	16
303	ML-S	30-Jul-07	548	1425	M	10	13
304	ML-S	30-Jul-07	374	450	F	1	12
307	ML-S	30-Jul-07	413	575	M	7	11
308	ML-S	30-Jul-07	413	500	F	1	13
311	ML-S	30-Jul-07	412	525	M	6	15
312	ML-S	30-Jul-07	372	450	F	5	16
334	ML-S	30-Jul-07	391	525	M	6	18
352	AL	31-Jul-07	283	200	M	6	10
358	AL	31-Jul-07	358	450	F	1	12
370	AL	31-Jul-07	363	350	F	1	13
381	AL	31-Jul-07	368	400	F	1	10
383	AL	31-Jul-07	333	350	F	1	14
389	AL	31-Jul-07	636	2450	M	10	23
392	AL	31-Jul-07	550	1300	F	5	23
397	AL	01-Aug-07	367	475	F	1	20
402	AL	01-Aug-07	581	2100	M	10	13
405	AL	01-Aug-07	350	425	F	1	13
408	AL	01-Aug-07	396	550	F	1	24
420	AL	01-Aug-07	337	400	F	1	13
425	AL	01-Aug-07	512	1100	M	10	18
476	AL	01-Aug-07	358	400	M	6	16
477	AL	01-Aug-07	341	375	M	1	9
518	SL-NW	02-Aug-07	357	350	M	6	16
540	SL-NW	02-Aug-07	341	371	F	1	11
541	SL-NW	02-Aug-07	507	1000	M	10	22
549	SL-NW	02-Aug-07	384	525	M	6	19
550	SL-NW	02-Aug-07	387	450	M	6	21
552	SL-NW	02-Aug-07	354	350	F	2	17
560	SL-NW	03-Aug-07	508	775	F	11	21
566	SL-NW	03-Aug-07	389	475	M	7	18
574	SL-NW	03-Aug-07	492	950	F	1	17
584	SL-NW	03-Aug-07	393	475	M	6	16
591	SL-SE	03-Aug-07	401	600	M	6	17
592	SL-SE	03-Aug-07	352	350	M	6	14
593	SL-SE	03-Aug-07	405	500	F	11	15
597	SL-SE	03-Aug-07	368	425	F	2	16
608	SL-SE	03-Aug-07	335	350	F	1	11

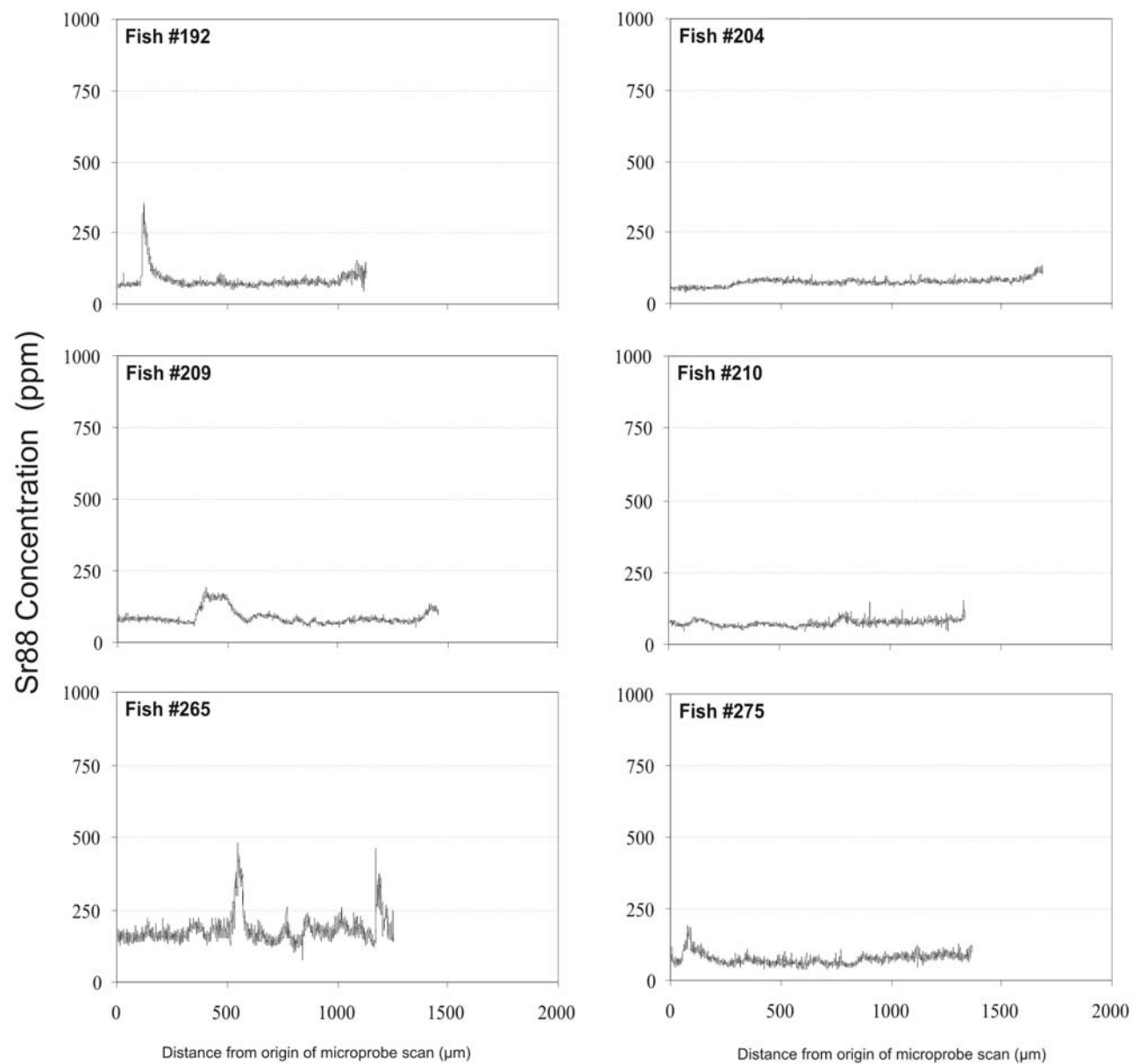


Figure A4.4-2.1a. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007.

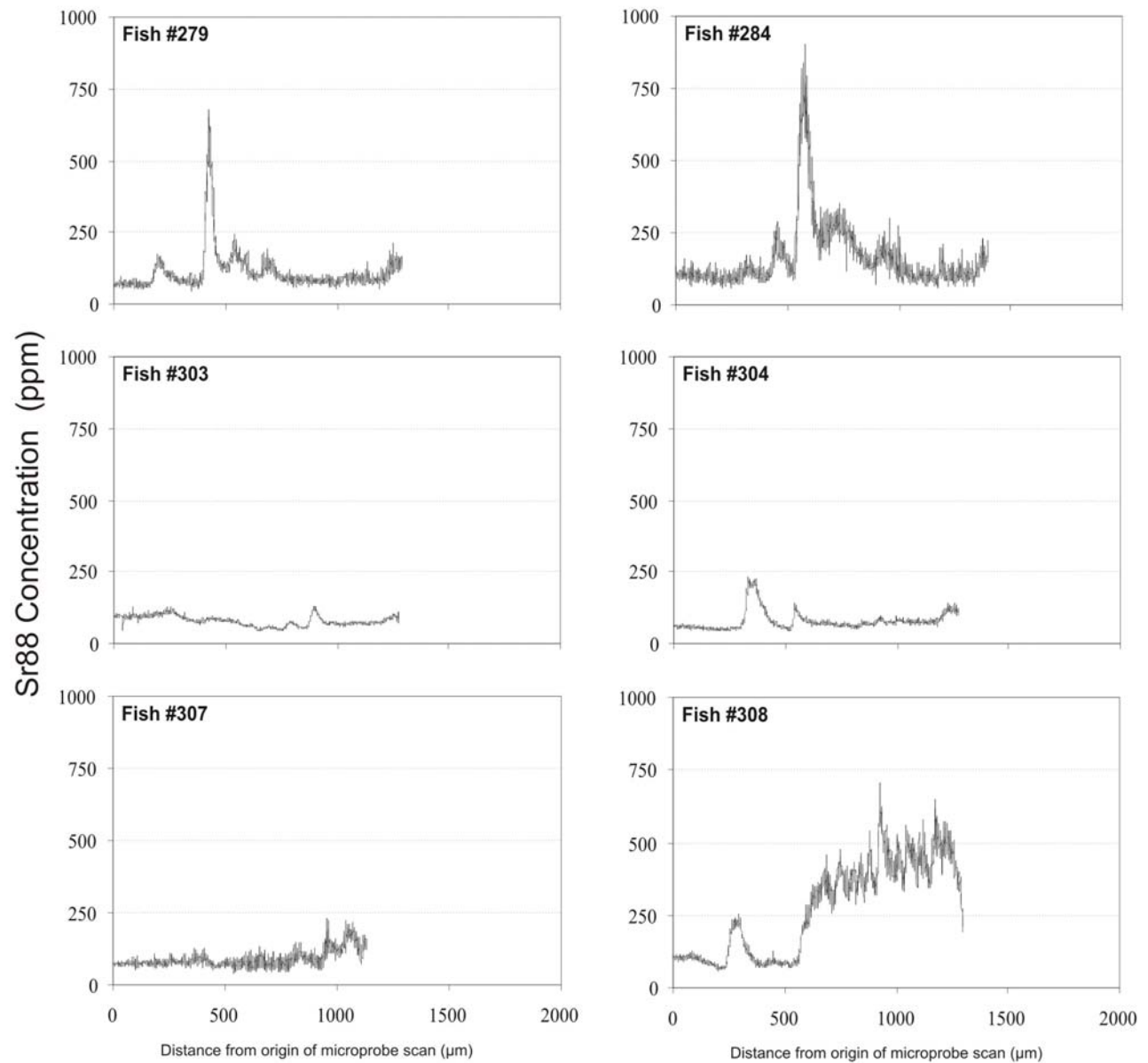


Figure A4.4-2.1b. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007.

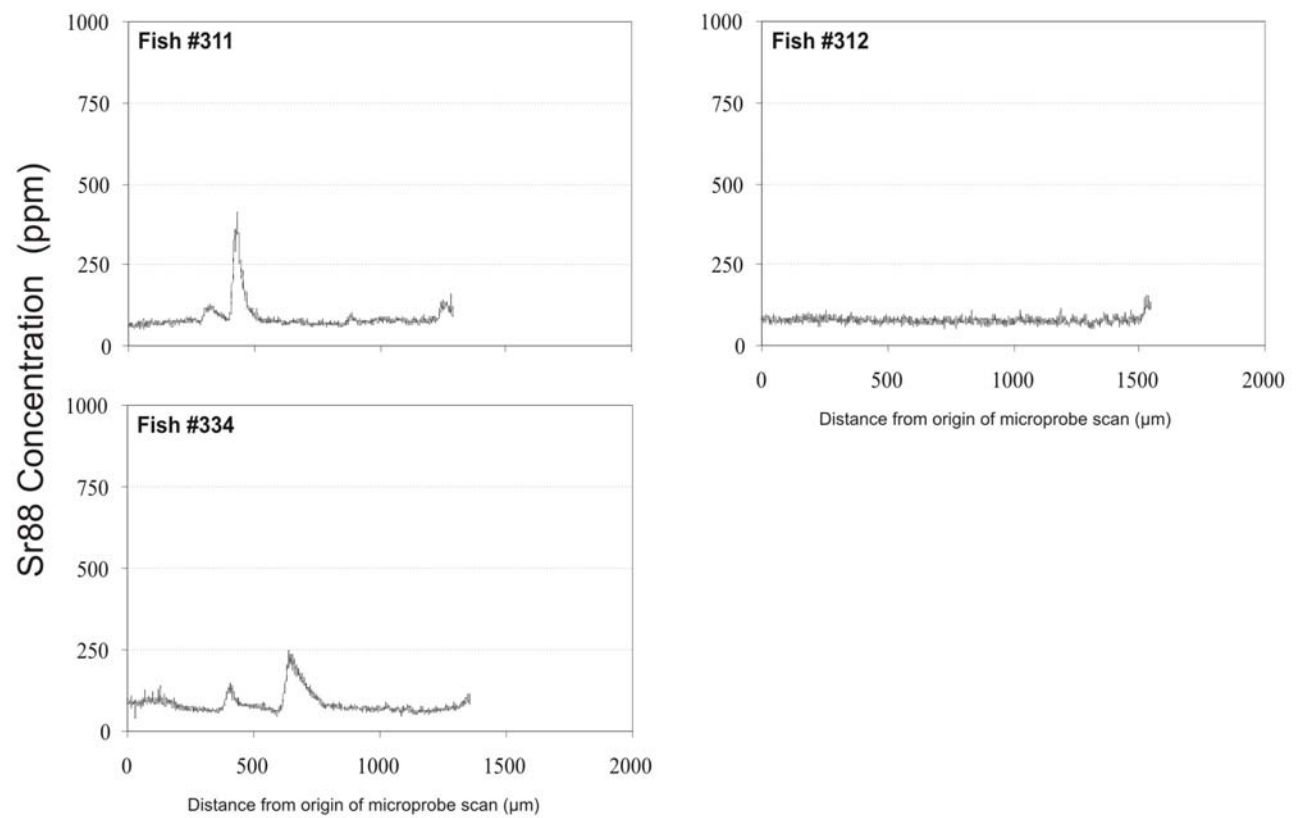


Figure A4.4-2.1c. Strontium concentrations in otoliths of fish captured in the south basin of Mary Lake, 2007.

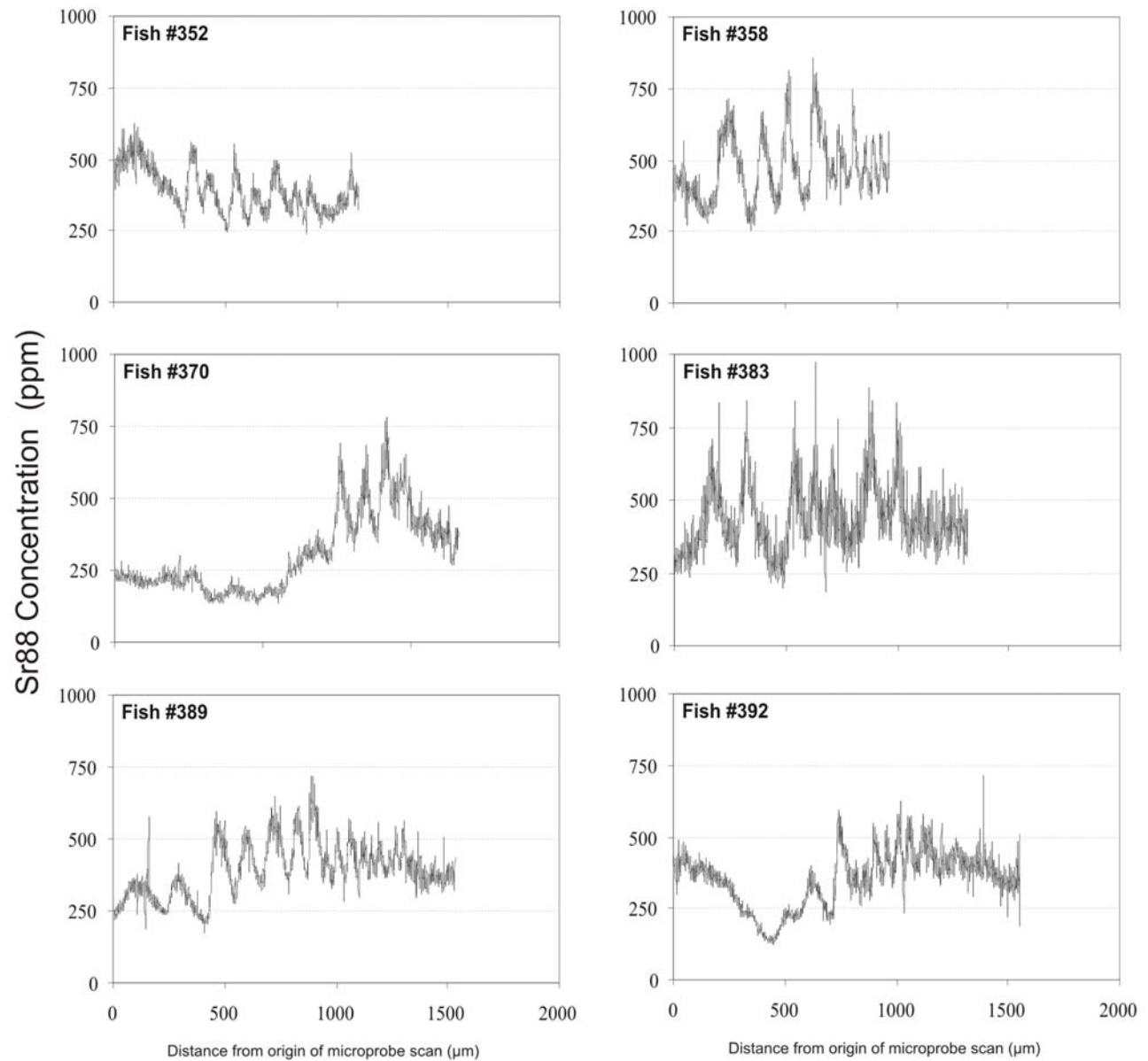


Figure A4.4-2.1d. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.

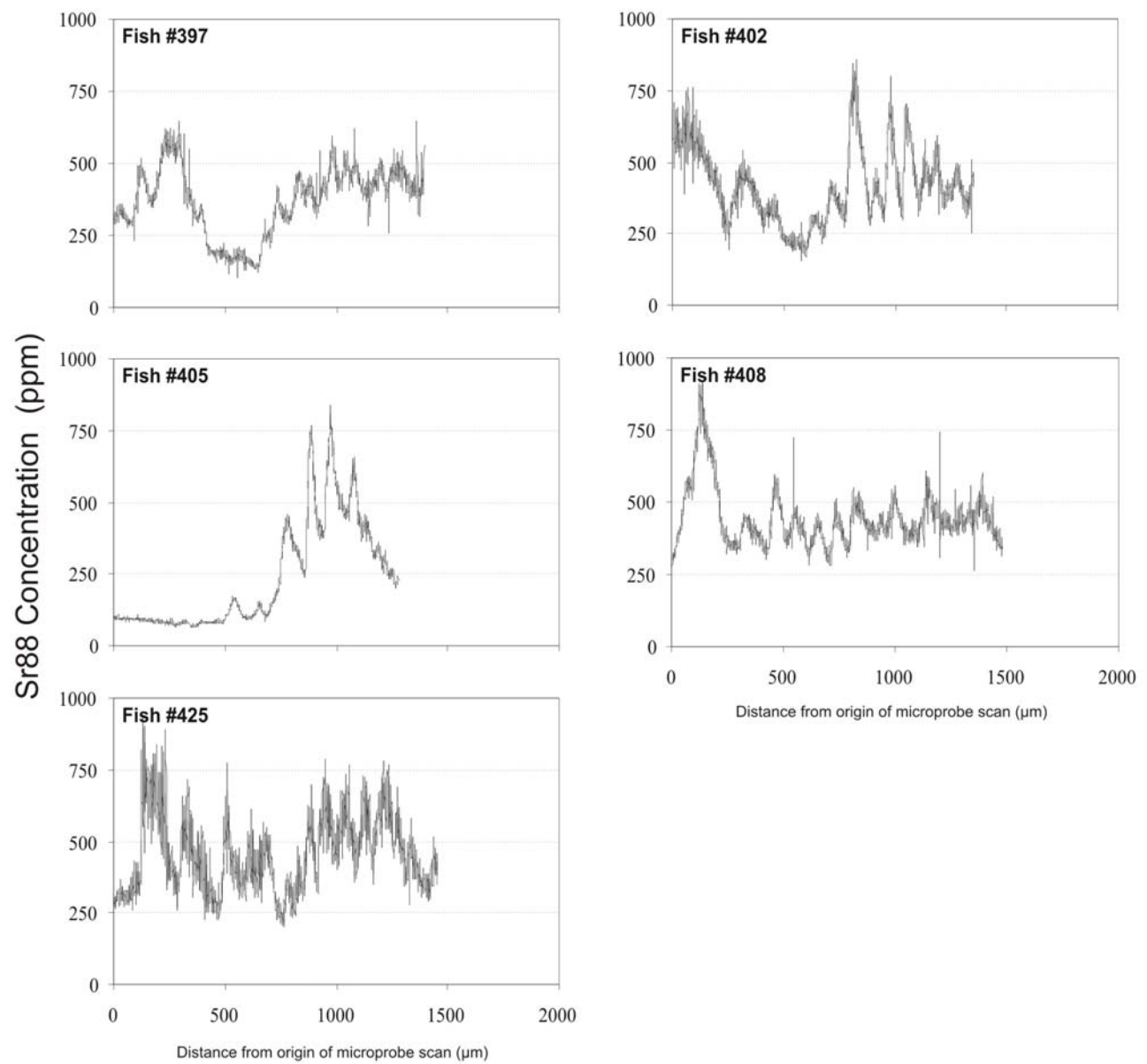


Figure A4.4-2.1e. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.

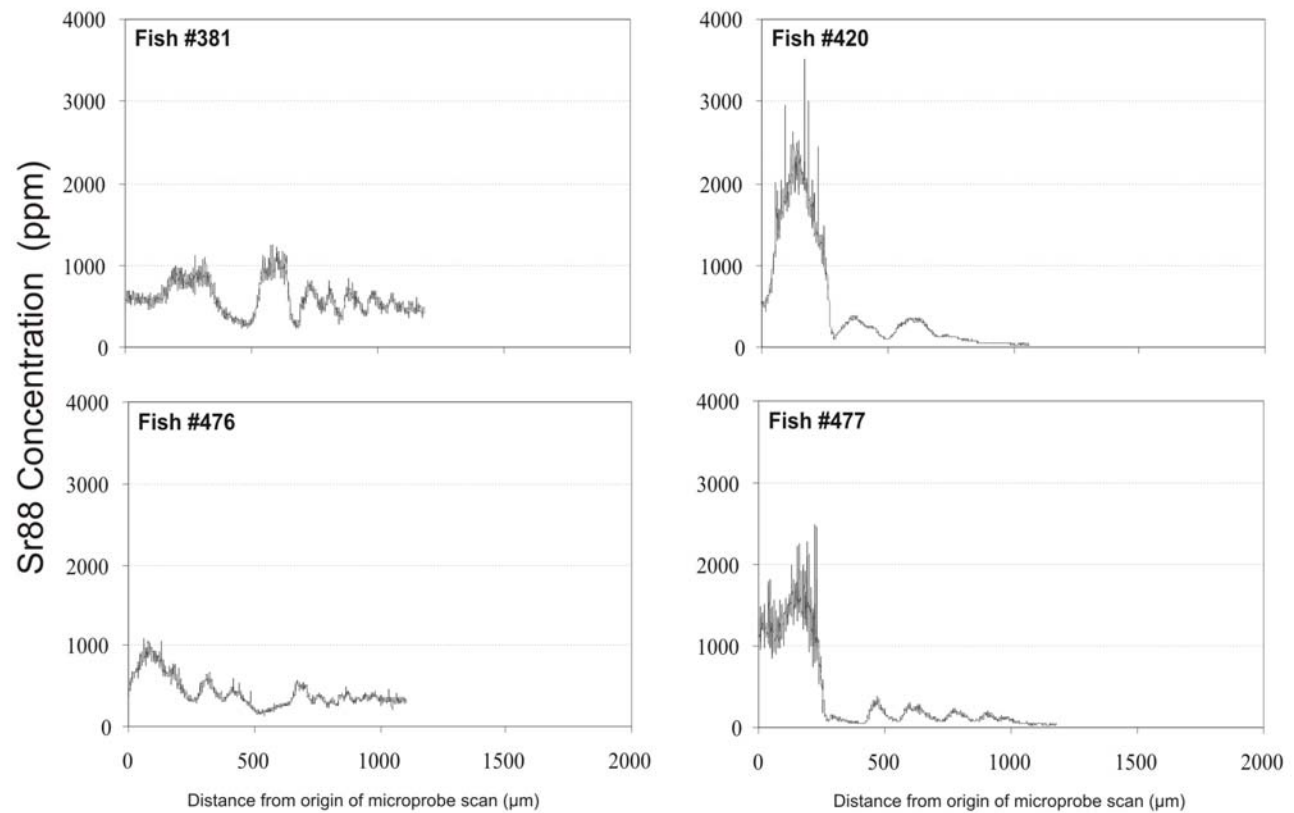


Figure A4.4-2.1f. Strontium concentrations in otoliths of fish captured in Angajurjualuk Lake, 2007.

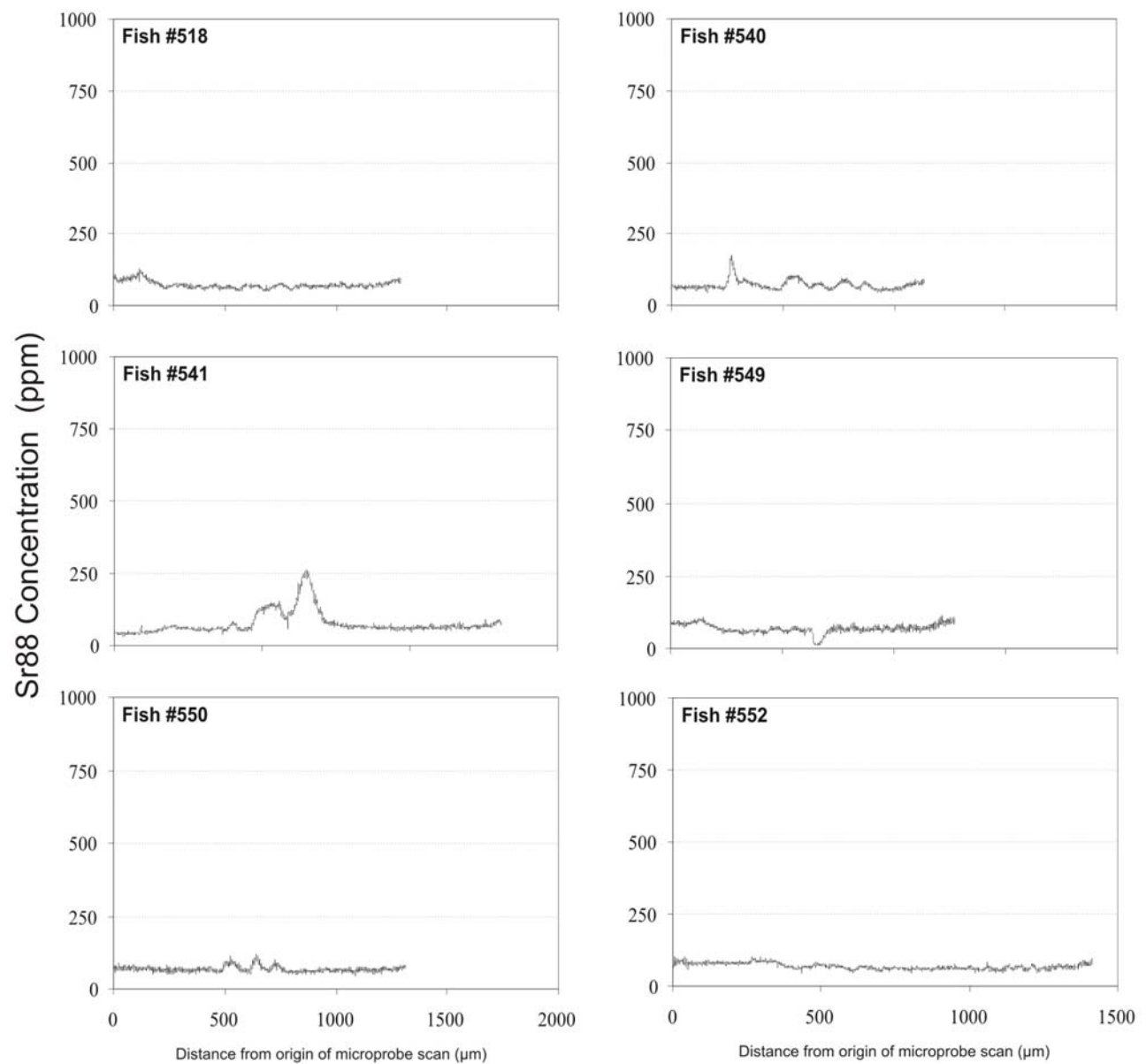


Figure A4.4-2.1g. Strontium concentrations in otoliths of fish captured in the northwest basin of Sheardown Lake, 2007.

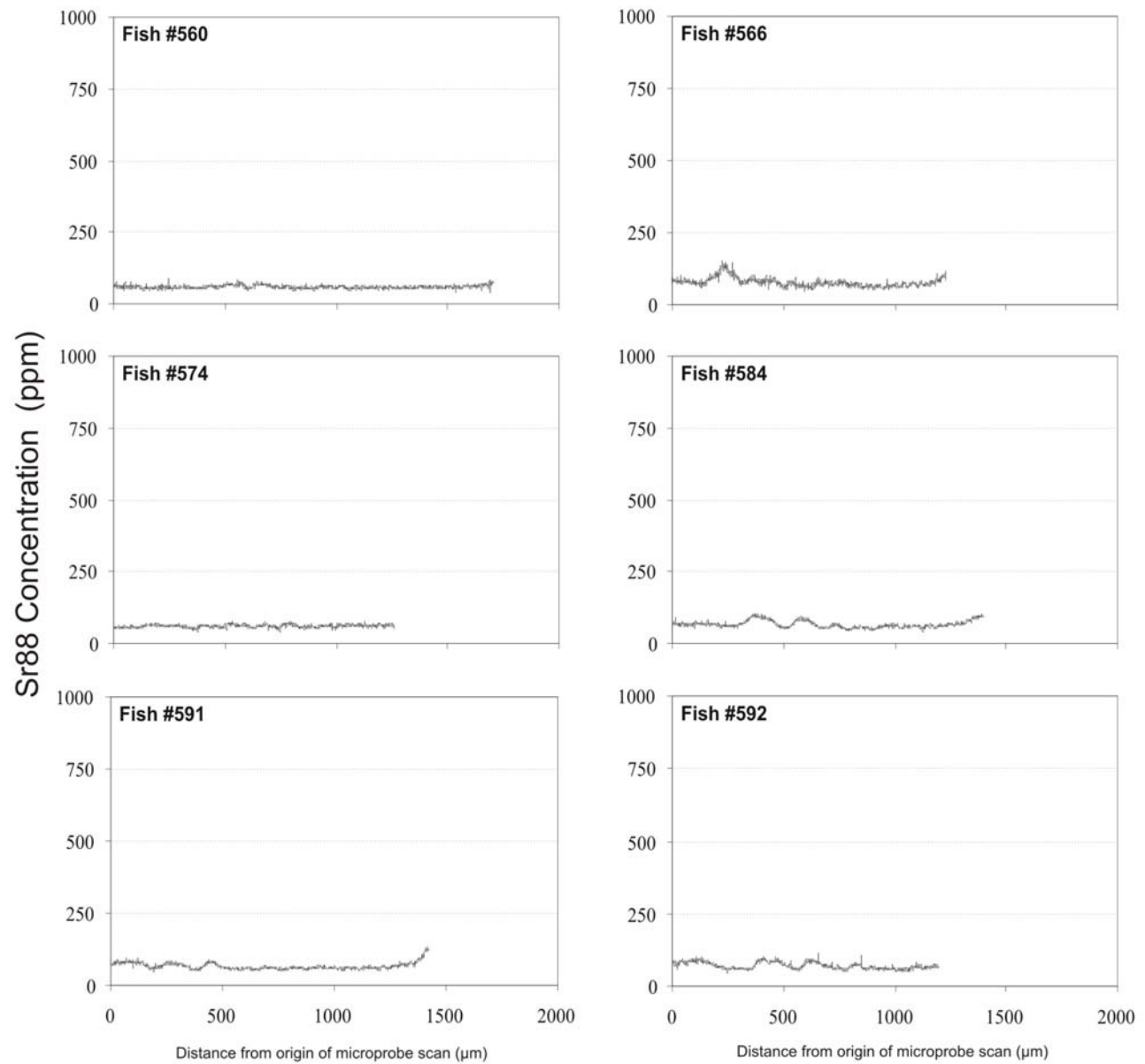


Figure A4.4-2.1h. Strontium concentrations in otoliths of fish captured in both basins of Sheardown Lake, 2007.

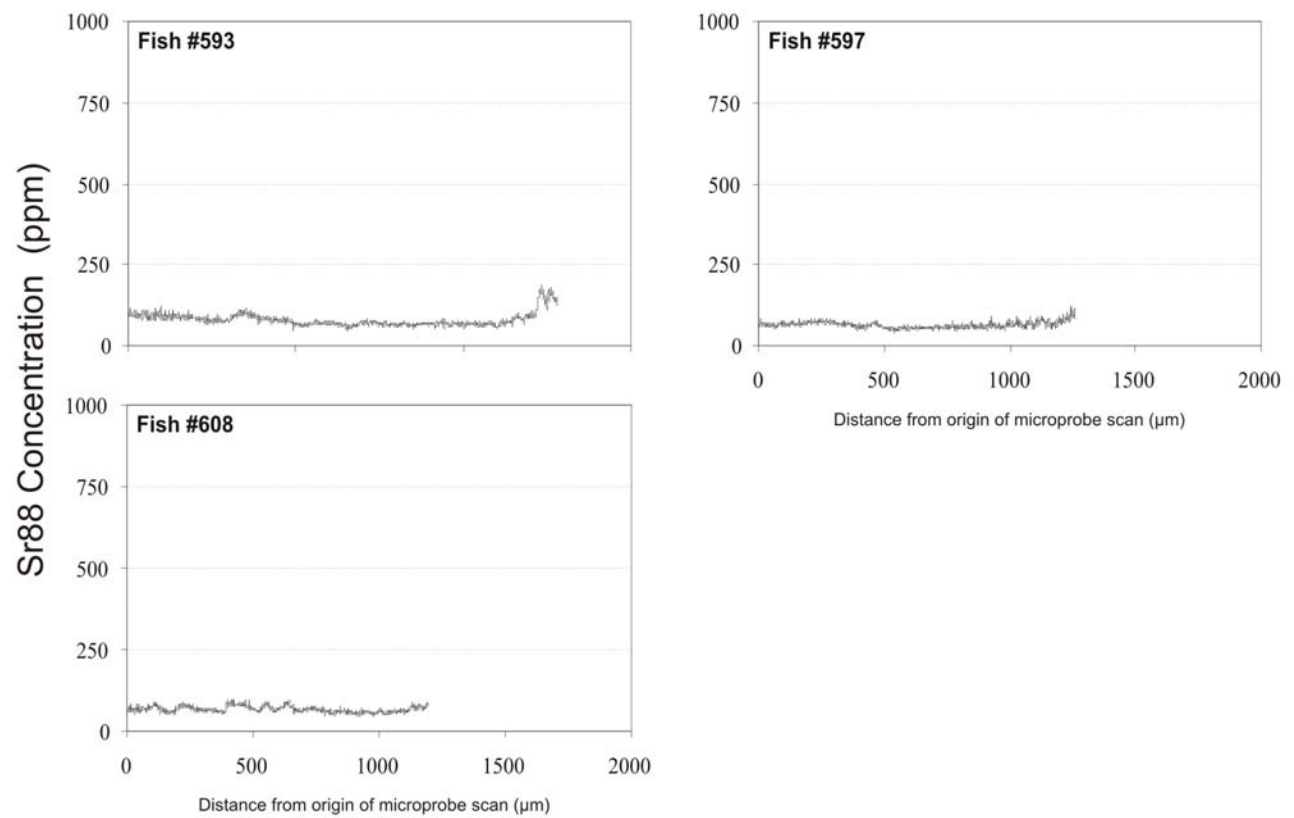


Figure A4.4-2.1i. Strontium concentrations in otoliths of fish captured in the southeast basin of Sheardown Lake, 2007.